

Water Purifier

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High purity water purifiers with various water treatment processes and production volume for different laboratory needs

■ Pure water and ultra pure water

Besides H₂O, tap water contains various impurities which need to be removed to prevent interfering with research and experiment operations. Water in which impurities such as inorganic ions and organic substances remain are expressed in mg / L (ppm) or less, and is referred to as pure water. Water which is further purified is expressed in units of ppb, ppt and is referred to as ultra pure water.

■ High purity water purifier can meet wide range of laboratory needs

For example, Type1 / A4 level pure water can cover all applications from Type1 to Type4 (ASTM D 1193) / A1 to A4 (JIS K 0557) levels. Yamato Scientific's water purifier is designed to produce Type1 / A4 level of both distilled water and deionized water. Meanwhile, models which can produce higher-level ultra pure water such as TOC reduction water and pyrogen-reduced water are also available. Customers can choose based on their specific needs.

■ Auto Still® water purifier

Auto Still water purifiers are a combination of ion exchange through filters and distillation to produce the desired type of water quality. Deionized water is produced through various types of filters from raw water while distilled water is produced by heating up and cooling down process.

Series	Models
Super Auto Still ®	WG270
Auto Still ®	WG250B / WG1000 WG203 WA570 / WA730 WS200 / WS220

■ Pure Line® water purifier

Non-heating ultra pure water purifiers in combination with reverse osmosis membrane, ion exchange resin, activated carbon and filters.

Series	Models
Pure Line ®	WE200 WL200 / WL220 / WL220T

■ Labo Cube® water purifier

Space-saving water purifier that can be installed under a fume hood or sink, or on a table; either as a benchtop unit or on movable casters for easy mobility.

Series	Models
Labo Cube ®	WL320A / WL320B



Labo Cube® WL320 installation example

JIS K 0557 (Japanese Industrial Standards)

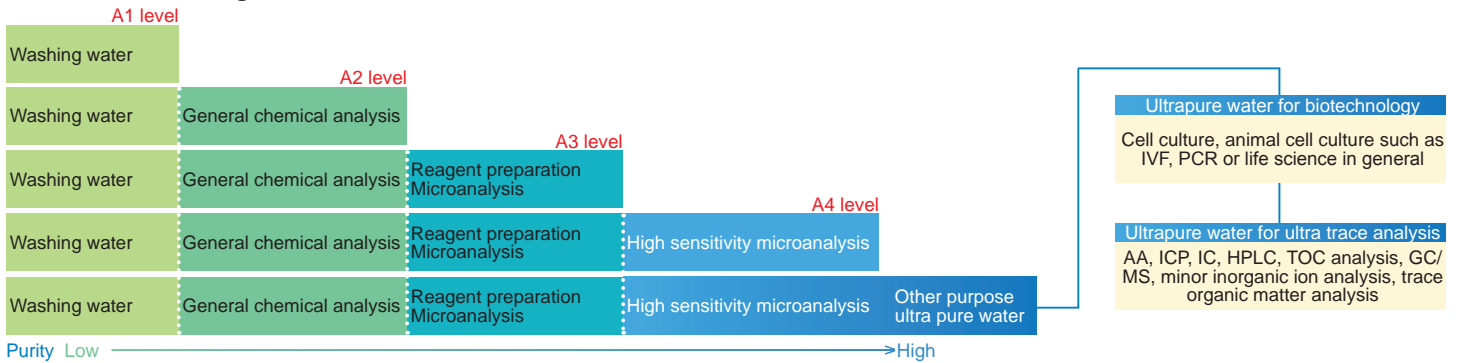
Item*1	A1	A2	A3	A4
Electrical conductivity μS/cm (25°C)	<5	<1*2*3	<1*2	<1*2
Total organic carbon (TOC) μgC/L	<1000	<500	<200	<50
Zinc μgZn/L	<0.5	<0.5	<0.1	<0.1
Total silica μgSi ₂ /L	-	<50	<5.0	<2.5
Chloride ion μgCl ⁻ /L	<10	<2	<1	<1
Sulfate ion μgSO ₄ ²⁻ /L	<10	<2	<1	<1

- *1. Select water type according to test method or individual water provision
 *2. Measured by directly introducing water delivery port into electrical conductivity
 *3. When connected directly to final ion-exchange device and introducing water delivery port into electrical conductivity, electrical conductivity is 0.01mS/m (or 0.1μS/cm) (at 25°C)

ASTM D1193 (American Society for Testing and Materials)

	Type I	Type II	Type III	Type IV
Electrical conductivity μS/cm at 25°C	<0.056	<1.0	<0.25	<5.0
Electrical resistivity MΩ•cm at 25°C	>18	>1.0	>4.0	>0.2
pH at 25°C	-	-	-	5.0 to 8.0
Total organic carbon (TOC) μg/L	<50	<50	<200	no limit
Sodium μg/L	<1	<5	<10	<50
Chlorides μg/L	<1	<5	<10	<50
Total silica μg/L	<3	<3	<500	no limit

Purified Water Usage



Water purifier portfolio and usage









Type	Series	Model	Water purifying method	Purified water				Usage (based on JIS K 0557)			
				Distilled water	Deionized water	Distilled water	Deionized water	A1	A2	A3	A4
Super high class	Super Auto Still®	WG270	Ion-exchange→Distillation →UV lamp→Filtration	○	○	T2 A4	T1 A4	■ ●	■ ●	■ ●	■ ●
High class	Auto Still®	WG250B/WG1000	Ion-exchange→Distillation →Filtration	○	○	T2 A4	T1 A4	■ ●	■ ●	■ ●	■ ●
Standard	Auto Still®	WG203	Ion-exchange→Distillation	○	○	T2 A4	T1 A4	■ ●	■ ●	■ ●	●
Large capacity Low running cost	Auto Still®	WA570/WA730	Distillation→Ion-exchange →Filtration	○	○	T4 A1	T1 A4	■ ●	●	●	●
Compact	Auto Still®	WS200/WS220	Distillation	○	-	T4 A1	-	■			
Standard	Pure Line®	WE200	RO membrane →Ion-exchange→Filtration	-	○	-	T1 A4	●	●	●	●
Economic	Pure Line®	WL200/WL220/ WL220T	Ion-exchange→Filtration	-	○	-	T2 A3	●	●	●	
Long life	Labo Cube®	WL320A/WL320B	Ion-exchange→Filtration	-	○	-	T2 A4	●	●	●	●

■ :Distilled water ● :Deionized water

Attention

- Do not bend the drain hose
- Drain hose should be lower than the unit's drain port. It is recommended to attach water supply hose to tap water with sink.
- May pose high risk if feeding water hose is connected to tap water without sink as water leakage or hose damage may occur
- When sink is separate from the faucet, please use optional water supply port unit.
- Compared to standard water hose, water supply port unit is designed to prevent loosening from faucet when water pressure changes. Raw water pressure is kept the same with the use of the water supply port unit.
- Raw water pressure should be within specified pressure range.
- Avoid flammable or explosive gas atmosphere. Unit is not explosion-proof

Water Purifier Overview

Model	Distilled water production (L/hr.) Water quality	Deionized water collection (L/min.) Water quality	Tank / Storage space (L)	Power supply	Series / Water Purification Process
 WG270	1.8 Type2 / A4	0.5~1.0 Type1 / A4	Polyethylene tank 20	AC115V AC220V	Super Auto Still® Raw water → Membrane filter → Ion exchange → Membrane filter → Deionized water Distillation → Membrane filter → Distilled water
 WG250B/1000	1.8 (WG250B) 5.0 (WG1000) Type2 / A4	0.5~1.0 Type1 / A4	Polyethylene tank 30 (WG250B) 100 (WG1000)	AC115V/AC220V (WG250B) AC220V (WG1000)	Auto Still® Raw water → Membrane filter → Ion exchange → Membrane filter → Deionized water Distillation → Membrane filter → Distilled water
 WG203	1.8 Type2 / A4	1.0 Type1 / A4	Polyethylene tank 20	AC115V AC220V	Auto Still® Raw water → Membrane filter → Ion exchange → Deionized water Distillation → Distilled water
 WA570/730	5 (WA570) 10 (WA730) Type 4 / A1	1.4~1.5 Type1 / A4	Polyethylene tank 60	AC220V	Auto Still® Raw water → Membrane filter → Distillation → Ion exchange → Membrane filter → Deionized water Distillation → Membrane filter → Distilled water
 WS200/220	1.8 Type 4 / A1	-	Polyethylene tank 20	AC115V AC220V	Auto Still® Raw water → Distillation → Distilled water
 WE200	-	0.5~1.0 Type1 / A4	-	AC100V~240V	Pure Line® Raw water → Membrane filter → RO → Ion exchange → Membrane filter → Deionized water
 WL200/220/220T	-	1.0 Type2 / A3	Polyethylene tank 3 (WL220T)	AC100V~240V	Pure Line® Raw water → Ion exchange → Membrane filter → Deionized water
 WL320A/320B	-	1.0 Type2 / A4	-	AC100V~240V	Labo Cube® Raw water → Membrane filter → Ion exchange → Membrane filter → Deionized water

Features

Auto Still®

Model	Water quality monitor	Water quality abnormal alarm	Empty boiling prevention device	Heater overheat detection	Leakage detection	Water outage detection	Water pump idling prevention	Purity water volume setting	Cartridge exchange reminder
WG270	●	●	●	●	●	●	●	●	●
WG250B/1000	●	●	●	●	●	●	●	●	●
WG203	●	●	●	●	●	●	●	●	●
WA570/730	●	●	●	●	●	●	●	●	●
WS200/220			●						

Pure Line® and Labo Cube®

Model	Water quality display	RO membrane self clean	Water temp. display	Validation correspondence	Cartridge exchange reminder
WE200	●	●	●	●	●
WL200/220/220T	●			●	●
WL320A/320B	●			●	●

High Performance Water Purifier - Super Auto Still®

WG270

Production capacity

1.8L/h

Treatment process

Ion exchange
→ Distillation

Purified Water

Deionized water /
Distilled water

Water quality

Type 1 / A4 level
Deionized water

Type 2 / A4 level
Distilled water



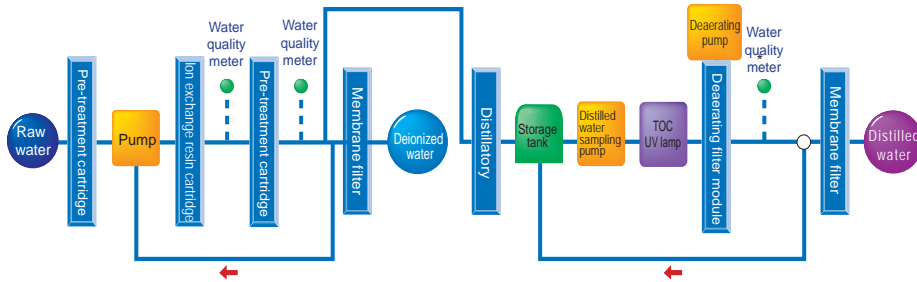
By adopting Yamato's TOC reduction system, distilled water in the storage tank is always kept at Type 2 / A4 level.

- Equipped with Ion exchange water system, TOC reduction UV lamp and Yamato's original TOC (Total Organic Carbon) degradation system
- Capacity of distilled water storage tank: 20L
- Easy to read panel display
- Displays replacement of consumables and its exchange history
- Water sampling tray is equipped with a drainage system to eliminate concerns about discharge of overflowing water
- Feed and drain can be connected on both sides
- Standard equipped with membrane filter (0.1µm hollow fiber membrane) to protect pure water production from contamination
- Easy maintenance as most consumables can be easily attached and detached

Specifications

Model	WG270
Purified water	Deionized water: A4 / Type1 Distilled water: A4 / Type 2
Water purifying method	Ion exchange → High-purity cartridge → Distillation → UV sterilizing → Deaeration → Filtration
Feed water / Drain method	Connection to a tap water faucet with a one-touch coupler water supply resin hose. / Drain water connector on both sides for the connection of a drain hose
Distilled water production	~1.8L/h
Delivery rate	0.5L/min.~1.0L/min. Water capacity setting / continuous water sampling switching system
Setting range of production	0.1~20L Fixed-quantity water sampling / consecutive water sampling
Condenser	Hard glass
Heater	1.4kW Ceramic heater
Pre-treatment cartridge	0.1µm diameter hollow fiber + activated carbon (PWF-1)
Ion-exchange resin cartridge	3L ion-exchange resin cartridge (CPC-N) & 3L High-purity cartridge (CPC-H)
Distilled water storage tank	20L polyethylene tank
Filtration	0.1µm diameter membrane filter for distilled water & deionized water
Deaerating filter of distilled tanking water	MHF membrane (built-in type)
Vacuum pump for deaeration	Diaphragm vacuum pump
TOC reduction UV lamp	UV lamp
Ion exchange water circulation pump	Electromagnetic pump
Leakage detection	Sampling water electromagnetic valve shut down function by water leakage sensor
Water sampling tray	Drawer type, Forced drainage function, load bearing 10kg
Water level sensor	Five-step reed switch (also used for distilling controlling function)
Water feed pressure	0.5~5x100kPa (0.5~5kgf/cm ²)
Power source (50/60Hz)	AC115V 13A, AC220V 7A
External dimensions	W600 x D660 x H780mm
Weight	~55kg
Water level display	LED display
Water quality display	LCD display (conductivity / resistivity)
Other display	Replace consumable parts (process cartridge, ion exchange resin, high purity cartridge, UV lamp x 2, MHF module membrane filter), alarm display, consumable parts replacement history, error log, language switching, maintenance indication
Accessories	Supply/drain water hoses, hose clamp, pre-treatment cartridge, ion exchange resin cartridge (CPC-N), high purity cartridge (CPC-H), membrane filter, seal tape

Treatment Process



Control Panel



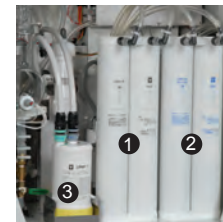
Water Quality Analysis

Item	ASTM D 1193 Standard Type 1	JIS K 0057 Standard A4	Deionized water		Distilled water			
			Measured value	Level	Measured value	Level		
Electrical conductivity ($\mu\text{S/cm}$)	<0.056	<1	0.055	Type 1	A4	0.76	Type 2	A4
Organic carbon ($\mu\text{g/l}$)	<50	<50	16	Type 1	A4	50	Type 1	A4
Zinc ($\mu\text{g Zn/l}$)	-	<0.1	<0.01	-	A4	<0.01	-	A4
Silica ($\mu\text{g SiO}_2/\text{l}$)	<3	<2.5	<0.1	Type 1	A4	1.5	Type 1	A4
Chloride ion ($\mu\text{Cl/l}$)	<1	<1	<0.1	Type 1	A4	<0.1	Type 1	A4
Sulfate ion ($\mu\text{g SO}_4^{2-}/\text{l}$)	-	<1	<0.1	-	A4	<0.1	-	A4
Total level				Type 1	A4		Type 2	A4

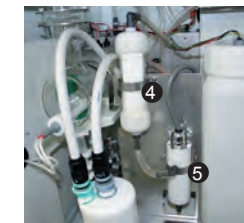
*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

Structure



- (1) Ion exchange resin cartridge CPC-N
- (2) High purity cartridge CPC-H
- (3) Pre-treatment cartridge PWF-1



- (4) Deaerating filter module
- (5) TOC reduction UV lamp unit

Optional items



Stand



Water sampling hose unit
Hose length 2m, 0.1 μm
with membrane filter



Water supply port unit



Drain Trap

Product code	Product name	
253174	Stand W603 x D683 x H870mm	AS250
253204	Water intake hose unit	OWG24
253686	Water supply port unit	OWH10
253769	Pressure reducing valve for raw water	OWG42
253211	Drain Trap	OWI10

Consumable Parts



Pre-treatment cartridge



Ion exchange resin cartridge



High purity cartridge



Membrane filter



TOC reduction UV lamp



Deaerating filter



Tank air vent filter

Product code	Product name	
253099	Pre-treatment cartridge	PWF-1
CPCN30010	Ion exchange resin cartridge	CPC-N
CPCNS30011	High purity cartridge	CPC-H
9020010004	Membrane filter (2pcs set)	MFRL727
253250	TOC reduction UV lamp	UV-Y1
253249	Deaerating filter module	DGF-1
9020020001	Tank air vent filter	AVF-1 (4210)
253251	TOC measurement UV lamp	UV-Y2

Attention

- Avoid tangling the drain hose
- Attach water supply hoses to the faucet with sink
- When sink is separate from the faucet, please use optional Water Supply Port Unit

- Raw water pressure should be within specified pressure range
- Avoid flammable or explosive gas atmosphere

Water Purifier - Auto Still®

WG250B/1000

Distilled water production 1.8L/h (WG250B) 5L/h (WG1000)

Treatment process Ion exchange→Distillation→Filtration

Purified water Deionized water Distilled water

Water quality Type1 / A4 Deionized water Type2 / A4 Distilled water

Low TOC standard models



WG250B



WG1000

- Pre-treatment cartridge removes bacteria, trihalomethane, residual chlorine, organic and dust
- High performance ion-exchange resin cartridge (CPC-S, 4L) achieves high purity water with low electric conductivity and TOC
- Multi-functional control and display panel
- Standard equipped with membrane filter at water feeding port
- Large distilled water tank with capacity of 30L (WG250B) and 100L (WG1000)
- Easy to use slide out type water sampling tray with drainage eliminates concerns about overflowing water discharge

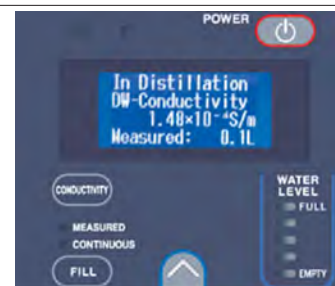
Specifications

Model	WG250B	WG1000
Water purifying method	Ion exchange→Distillation→Filtration	
Water feeding	One-touch coupler connecting resin hose / free hose connecting	
Water drain method	Left / right selection connecting / hose connecting	
Purified water	Deionized water and distilled water	
Distilled water production	~1.8L/h	~5L/h
Distilled water delivery rate	0.5~1L/min	
Deionized water delivery rate	0.5~1L/min	
Range of production	0.1~30L / continuous water collection	0.1~100L / continuous water collection
Condenser	Hard glass	
Heater	Ceramic heater 1.4kW	Ceramic heater 1.9kW x 2
Pre-treatment cartridge	0.1µm hollow fiber + activated carbon (PWF-1)	
Ion-exchange resin cartridge	CPC-S 4L x 1pc. (activated carbon high-purity cartridge)	CPC-S 4L x 2pcs.(activated carbon high-purity cartridge)
Final filtration	0.1µm membrane filter x 2	
Leakage detection	Water leakage detector forcefully shuts off feed water solenoid valve when water leakage detected	
Distilled water tank capacity	30L polyethylene tank	100L polyethylene tank
Distilled water UV sterilization	Optional	
Water sampling tray	Slide out type, load-bearing capacity 10kg, for 5L beaker	Slide out type, load-bearing capacity 20kg, for 10L tank
Multi-purpose distilled water sampling port	Right side of main unit	
Water level sensor	Lead switch, five level detection	
Raw water pressure range	0.5~5 x 100kPa (0.5~5kgf/cm ²)	
Power source (50/60 Hz)	AC115V 13A / AC220V 6.8A	Single phase AC220V 18A
External dimension*1	W600 x D660 x H980mm	W600 x D660 x 1850mm
Weight	~60kg	~120kg
Water level display	LED display	
Water quality display	Digital (conductivity or resistivity)	
Other display	Replacement of consumable parts (ion-exchange resin cartridge, pre-treatment cartridge, UV sterilizing lamp*2, membrane filter), error message, log of consumables replacement (20 logs each), error log, Japanese or English display, maintenance requirement display	
Included accessories	Feed /drain water hose, connecting hose assembly, cleaning agent, preprocess cartridge, ion-exchange resin cartridge, membrane filter, hose clamp, seal tape	

*1. Protrusions not included

*2. Optional

Control Panel



Membrane Filter (Standard)



Maintenance



WG1000 interior

Pre-process cartridge and ion-exchange resin cartridge can be easily attached and detached



Easy to use tray for product water intake

Water Quality Analysis

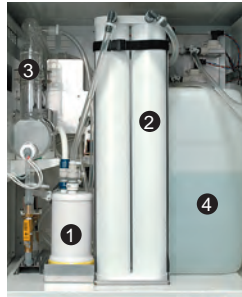
Item	ASTM D 1193 Type1	JIS K 0557 A4	WG250B						WG1000					
			Deionized water			Distilled water			Deionized water			Distilled water		
			Measured value	ASTM D 1193	JIS K 0557	Measured value	ASTM D 1193	JIS K 0557	Measured value	ASTM D 1193	JIS K 0557	Measured value	ASTM D 1193	JIS K 0557
Electrical conductivity (μS/cm)	<0.056	<1	0.055	Type1	A4	0.81	Type2	A4	0.056	Type1	A4	0.7	Type2	A4
Total organic carbon (μg/l)	<50	<50	4	Type1	A4	33	Type1	A4	10	Type1	A4	20	Type1	A4
Zinc (μgZn/l)	-	<0.1	<0.01	-	A4	<0.01	-	A4	<0.01	-	A4	<0.01	-	A4
Silica (μgSiO ₂ /l)	<3	<2.5	<0.1	Type1	A4	<1.0	Type1	A4	<1.0	Type1	A4	<1.0	Type1	A4
Chloride ion (μ Cl ⁻ /l)	<1	<1	<0.1	Type1	A4	<0.1	Type1	A4	<0.1	Type1	A4	<0.1	Type1	A4
Sulfate ion (μSO ₄ ⁻ /l)	-	<1	<0.1	-	A4	<0.1	-	A4	<0.1	-	A4	<0.1	-	A4
Total level				Type1	A4		Type2	A4		Type1	A4		Type2	A4

*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

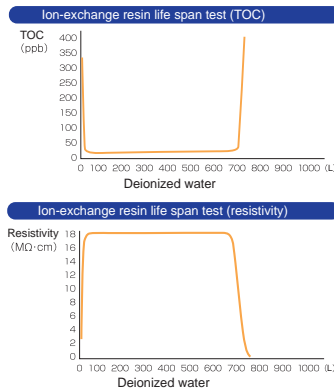
High Quality Ion-exchange Resin Cartridge (CPC-S)

25% more resin than previous products. Activated carbon added to high-quality ion-exchange resin achieves lower TOC.

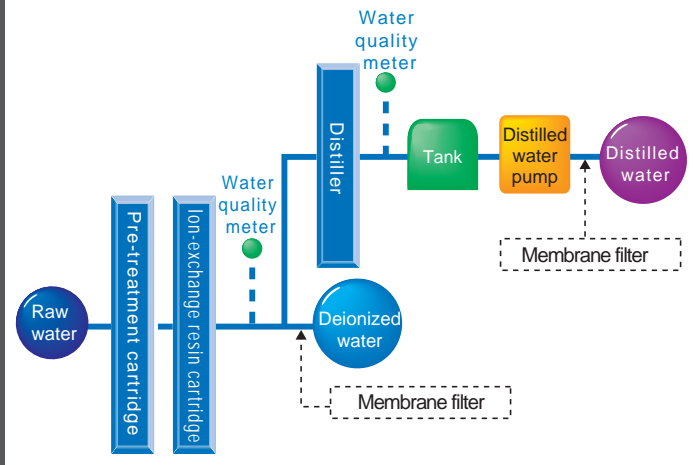


Automatic drainage function of the boiler water prevents scale adhesion and achieves higher water quality.

- (1) High performance pre-treatment cartridge (PWF-1) removes trihalomethane and achieves higher water quality
- (2) Ion-exchange resin cartridge (CPC-S)
- (3) Distilling boiler
- (4) Distilled water tank



Treatment Process



Optional items

Product code	Description
253174	Stand AS250 (External dimension: W603 x D683 x H870mm)
253204	Product water hose OWG24 hose length 2m
253686	Feed water connection unit OWH10
253769	Raw water pressure reducing valve OWG42
253202	UV sterilizing lamp OWG20 (for WG250B) *
253203	UV sterilizing lamp OWG22 (for WG1000) *
253211	Drain trap OWI10 (for WG250B) *
253212	Drain trap OWI20 (for WG1000) *

* Please specify when ordering main unit.

Consumable parts

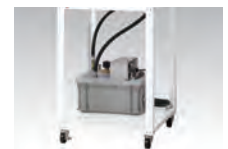
Product code	Description
253099	Pre-treatment cartridge PWF-1
253080	Ion-exchange resin cartridge CPC-S
9020010004	Membrane filter (2 pcs. / set) MFRL727
9020020001	Air vent filter for tank AVF-1(4210)
253773	UV sterilizing lamp OWG28



Product water hose (OWG24)



Feed water connection (OWH10)



Drain trap OWI10+stand AS250



Pre-process cartridge PWF-1



Membrane filter MFRL727



Ion-exchange resin cartridge CPC-S



Air vent filter for tank AVF-1

Attention

- Handle drain hose carefully.
- Attach water supply hose to a faucet with a sink.
- When the sink is remote from the faucet, use optional water supply port unit.

- Keep original water pressure within the specified pressure range.
- Never use in flammable or explosive gas atmosphere.

Small Capacity Water Purifier - Auto Still®

WG203

Production capacity 1.8L/h

Treatment process Ion-exchange→Distillation

Purified water Deionized water Distilled water

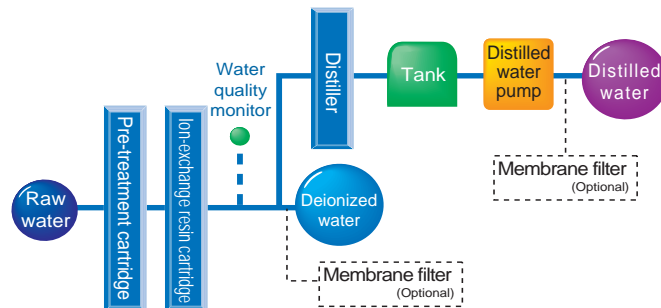
Water quality Type 1 / A4 level Deionized water Type 2 / A4 level Distilled water

Low cost high purity water purifier



- Pre-treatment cartridge removes bacteria, trihalomethane, residual chlorine, organic and dust
- High performance ion-exchange resin cartridge (CPC-S, 4L) brings high purity water with low electric conductivity and TOC
- Optional membrane filter at water sampling port
- Displays replacement of consumables
- Feed / Drain water connectors on both sides

Treatment Process



Water Quality Analysis

Item	ASTM D 1193 Standard Type 1	JIS K 0057 Standard A4	Deionized water			Distilled water		
			Measured value	Level		Measured value	Level	
Electrical conductivity (µS/cm)	<0.056	<1	0.055	Type 1	A4	0.81	Type 2	A4
Total organic carbon (TOC) (µgC/L)	<50	<50	4	Type 1	A4	33	Type 1	A4
Zinc (µgZn/l)	-	<0.1	<0.01	-	A4	<0.01	-	A4
Silica (µgSiO ₂ /L)	<3	<2.5	<1.0	Type 1	A4	<1.0	Type 1	A4
Chloride ion (µgCl ⁻ /L)	<1	<1	<1.0	Type 1	A4	<0.1	Type 1	A4
Sulfate ion (µgSO ₄ ⁻² /L)	-	<1	<0.1	-	A4	<0.1	-	A4
Total level				Type 1	A4		Type 2	A4

*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

Specifications

Model	WG203
Water purifying method	Ion-exchange→Distillation
Water feeding	One-touch coupler water connection, with water stop valve
Water discharging	Left / right selection for connecting hose
Distilled water production	~1.8L/h
Distilled water delivery rate	~1L/min
Deionized water delivery rate	~1L/min
Range of production	Continuous production
Condenser	Hard glass
Heater	Ceramic heater 1.4kW
Pre-treatment cartridge	0.1µm diameter hollow fiber + activated carbon
Ion-exchange resin cartridge	CPC-S 4L x 1pc. (activated carbon high-purity cartridge)
Distilled / deionized water filter	Optional
Leakage indication	Water supply solenoid valve forcibly shut off when water leakage detected
Distilled water tank capacity	20L polyethylene tank
Distilled water UV sterilization	--
Water sampling tray	--
Multi-purpose distilled water sampling port	Right side of main unit, 1pc.
Water level sensor	2 steps reed switch
Raw water pressure range	0.5~5 x 100kPa (0.5~5kgf/cm ²)
Power source (50/60 Hz)	AC115V 12A, AC220V 6.5A
External dimension*	W600 x D575 x H780mm
Weight	~48kg
Water level display	Communication pipe water level indication
Water quality display	5 steps conductivity LED indication
Other display	Replacement of consumable parts (ion-exchange resin cartridge)
Accessories	Feed / drain water hose, connecting hose assembly, pre-treatment cartridge, ion-exchange resin cartridge, hose clamp

* Protrusions not included.

Optional items

Product code	Product name
253174	Stand AS250 (W603 x D683 x H870mm)
253204	Water sampling hose OWG24 hoselength 2m
253686	Water supply port unit OWH10
253769	Raw water pressure reducing valve OWG42
253211	*Drain trap OWI10

* Please specify when ordering main unit.



Stand



Water supply port unit



Drain trap + Stand

Consumable parts

Product code	Product name
253099	Pre-treatment cartridge PWF-1
253080	Ion-exchange resin cartridge CPC-S
9020010004	Membrane filter (2 pcs. / set) MFRL727
9020020001	Tank air vent filter AVF-1 (4210)



Pre-treatment cartridge



Ion-exchange cartridge



Membrane filter



Tank air vent filter



Attention

- Avoid tangling the drain hose
- Attach water supply hoses to the faucet with sink
- When sink is separate from the faucet, please use optional Water Supply Port Unit
- Raw water pressure should be within specified pressure range
- Avoid flammable or explosive gas atmosphere

Large Capacity Water Purifier - Auto Still®

WA570/730

Production capacity 5~10L/h

Treatment process Distillation→Ion exchange→Filtration

Purified Water

Deionized water / Distilled water

Water quality Type1 / A4 Deionized water Type 4 / A1 Distilled water

Low cost, large capacity water purifier.



- ASTM D1193 Type1 / JIS K 0557 A4 level high purity water with reduced TOC value
- Employs microprocessor which automatically controls all processes from supplying of water, ion exchange and distillation to storage
- Equipped with high performance pre-treatment cartridge (activated charcoal + 0.1µm hollow fiber membrane) for high quality water
- Standard equipped with 0.1µm hollow fiber membrane filter at water sampling ports which protects pure water delivery from contamination
- Initial distilled water drainage, automatic boiler cleaning and drainage device for stable quality of distilled water
- Safety device includes low-water boiling prevention, overheat prevention, water leak detector, earth leakage circuit breaker

Specifications

Model		WA570	WA730
Water purifying method		Distillation→ion-exchange→filtration	
Purified water		Distilled water / deionized water	
Distilled water production		~5L/h	~10L/h
Pure water delivery rate		Distilled water: ~1.4/1.6L/min (50/60Hz) Deionized water: ~1.4/1.5L/min (50/60Hz)	
Distiller	Boiler	Stainless steel (SUS304)	
	Condenser	Stainless steel (SUS304)	
	Pipe heater	1.9kW x 2	2.55kW x 3
Distilled water storage tank		60L Polyethylene tank	
Raw water filter		Pre-treatment cartridge (activated charcoal + 0.1µm hollow fiber membrane)	
Pure water filter		Membrane filter (MFRL730) (0.1µm hollow fiber membrane)	
Ion-exchange cartridge		One-touch fitting cartridge (CPC-N) (Mixed bed, resin 3L)	
Water quality display		Automatic temperature compensation, digital display Switchable between electrical conductivity and resistivity 0.05~300 x 10 ⁻⁴ S/m (0.05~300µs/cm)·25°C (Electrical conductivity display) 0.1~18 x 10 ⁴ Ω·m (0.1~18MΩ·cm)·25°C (Resistivity display) (display resistivity by 1~18 integer numbers)	
Distilled water level indication		5 levels by LED display	
Setting range of production		0.1~99.9L (0.1L unit)	
Water feeding pump		Magnet pump	
Raw water pressure range		1~5 x 100kPa (1~5kgf/cm ²)	
Power source (50/60Hz)		Single phase AC220V, 17.5A	Three phase AC220V, 18A
External dimensions *		W903 x D603 x H1430mm	
Weight		~120kg	
Accessories		Supply / drain water hoses, pre-treatment cartridge, ion-exchange resin cartridge, membrane filter	

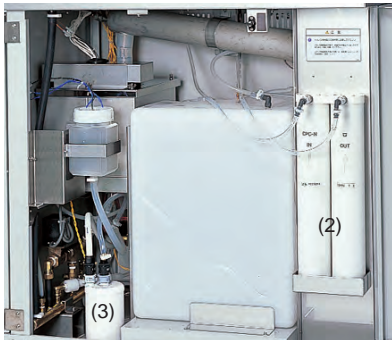
* Protrusions not included.

Structure



Water sampling tray
Large stainless steel sink with a splashing preventive mechanism

(1) Membrane filter MFRL730



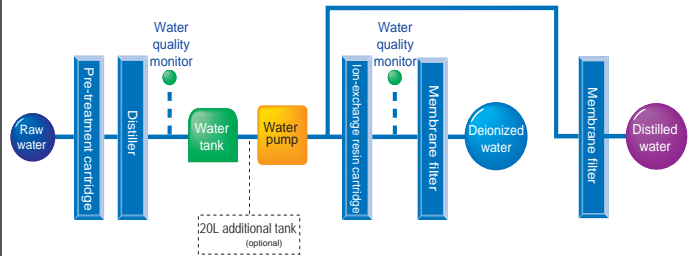
Easy to replace 2 in 1 ion-exchange resin cartridge
(2) Ion-exchange resin cartridge CPC-N
(3) Pre-treatment cartridge PWF-1

Control Panel



Digital water quality monitor displays quality of deionized water and distilled water

Treatment Process



Water Quality Analysis

Item	ASTM D1193				Deionized water			Distilled water		
	Type 1	Type 2	Type 3	Type 4	Measured value	Level		Measured value	Level	
						ASTM D1193	JIS K 0557		ASTM D1193	JIS K 0557
Electrical conductivity(μS/cm)	<0.056	<1.0	<0.25	<5.0	0.055	Type 1	A4	1.49	Type 4	A1
Organic carbon (μg /l)	<50	<50	<200	no limit	42	Type 1	A4	64	Type 3	A3
Zinc (μg Zn/l)	-	-	-	-	0.021	-	A4	0.013	-	A4
Silica (μg SiO ₂ /l)	<3	<3	<500	no limit	<0.1	Type 1	A4	0.7	Type 1	A4
Chloride ion (μ Cl /l)	<1	<5	<10	<50	<0.1	Type 1	A4	<0.1	Type 1	A4
Sulfate ion (μg SO ²⁻ /l)	-	-	-	-	<0.1	-	A4	1	-	A4
Total level						Type 1	A4		Type 4	A1

*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

Optional items

Product code	Product name	
253686	Water supply port unit	OWH10
253208	In-take hose joint set	OWF
CPCNS30011	High purity cartridge	CPC-H
253212	Drain trap	OWI20 WA570
253215	Drain trap	OWI50 WA730



Water supply port unit



High purity cartridge

Consumable parts

Product code	Product name	
253099	Pre-treatment cartridge	PWF-1
CPCN30010	Ion-exchange resin cartridge	CPC-N
9020010006	Membrane filter	MFRL730



Pre-treatment cartridge



Ion-exchange resin cartridge

⚠ Attention

- Avoid tangling the drain hose
- Attach water supply hoses to the faucet with sink
- When sink is separate from the faucet, please use optional Water Supply Port Unit
- Raw water pressure should be within specified pressure range
- Avoid flammable or explosive gas atmosphere

Compact Water Purifier - Auto Still®

WS200/220

Production capacity

1.8L/h

Treatment process

Distillation

Purified water

Distilled water

Water quality

Type4 / A1

Simple and economical water purifier designed for distilled water production

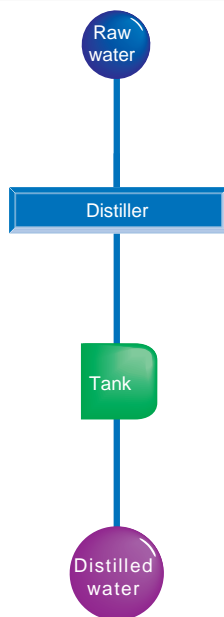
- Space saving and compact
- By adopting splash prevention design, impurities are prevented from mixing with the distilled water, resulting to a stable water quality
- Designed with empty boiling prevention and overheat prevention functions
- Suitable as washing water for cleaning tools, glassware, etc.



WS200

WS220

Treatment Process



Specifications

Model		WS200	WS220
Water purifying method		Distillation	
Purified water		Distilled water	
Distilled water production		~1.8L/h	
Distilled water delivery rate		~2.2L/min.	
Raw water pressure range		1~3 x 100kPa (1~3kg/cm ²)	
Safety device		Auto adjustment of cooling water volume Empty boiling / overheat / splash prevention	
Distiller	Boiler	Stainless steel	Hard glass
	Condenser	Hard glass	Hard glass
	Heater	Pipe heater	Built-in quartz glass outer cover
Distilled water storage tank		20L polyethylene tank	
Power source		AC115V 13A / AC220V 6.8A	
External dimensions*		W500 x D400 x H974mm	
Weight		~40kg	

*Protrusions not included

Optional items

Product code	Description
253176	Stand AS22
253686	Water feeding unit OWH10
253211	Drain trap OWH10

⚠ Attention

- Handle carefully the drain hose.
- Attach the water supply hose to a faucet with a sink.
- When the sink is remote from the faucet, use the optional water supply port unit.
- Keep the original water pressure within the specified pressure range.
- Never use in flammable or explosive gas atmosphere.

Benchtop Water Purifier - Pure Line®

WE200

Treatment process

Ion-exchange

Purified water

Deionized water

Water quality

Type 1 / A4



Type 1 (ASTM D 1193) / A4 (JIS K 0057) level purity benchtop water purifier

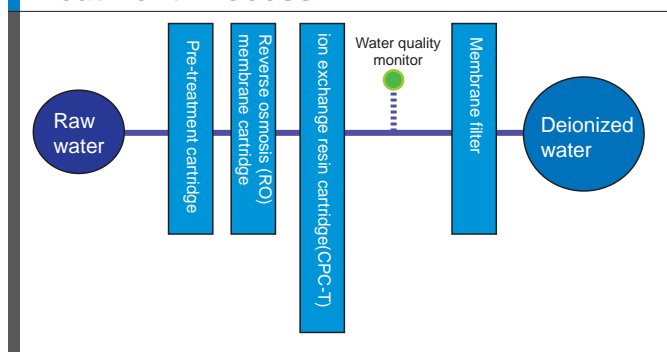
- Suitable for high sensitivity trace analysis
- Lower running cost
- By adopting reverse osmosis (RO) membrane cartridge set, life span of consumables has been expanded significantly
- Benchtop type, space saving
- Easy water sampling by attaching to water faucet
- Easy to operate digital display
- Displays replacement of consumables and its exchange history
- Standard equipped with membrane filter to protect pure water production from contamination
- Electromagnetic valve equipped at sampling water port for leakage prevention
- Universal power supply: works with 100-240VAC

Specifications

Model	WE200
Purified water	Deionized water: compliant with ASTM D 1193 Type1 / JIS K0557 A4
Water purifying method	RO membrane→ion exchange→filtration
Pure water delivery rate	0.5~1.0L/min continuous production
Raw water filter	Pre-treatment cartridge (activated charcoal + 0.1µm hollow fiber membrane)
Filtration	Reverse osmosis membrane RO
Ion-exchange resin cartridge	2L ion exchange resin containing activated charcoal (CPC-T)
Final filtration	0.1µm membrane filter
Leakage detection	Water supply solenoid valve forcibly shut off when leak is detected
Raw water press range	0.13~0.5MPa (1.3~5.0kgf/cm ²)
Raw water temperature range	10~30°C
Water sampling port	250mm above floor, RC1/4 (connected with membrane filter)
Drainage port	ø10 rigid tube
Drainage rate	Maximum 2L/min.
Safety device	Water cut-off error, water quality sensor error, controller error, pressure limit error, leak error, flow alarm/error, earth leakage circuit breaker
Power source (50/60Hz)	Single phase AC100~240V 1.3A or less
External dimensions (mm)	W350 x D430 x H 470
Weight	~30kg
Water quality display	7-segment LED display (conductivity / resistivity / water temperature)
Other display	Consumables replacement display (ion exchange resin, pre-treatment cartridge, reverse osmosis (RO) membrane, membrane filter), warning / error display
Accessories	Supply / drain water hoses, pre-treatment cartridge, reverse osmosis (RO) membrane cartridge set, ion-exchange cartridge CPC-T, membrane filter, power cord, seal tape

*This unit must be connected to drainage facility.

Treatment Process



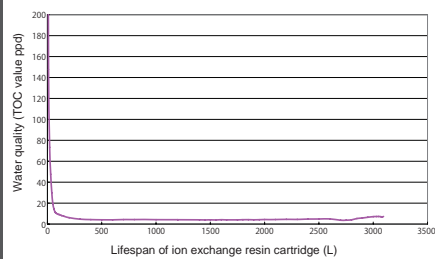
Water Quality Analysis

Item	ASTM D 1193 Standard Type 1	JIS K 0057 Standard A4	Measured value	ASTM D 1193 level	JIS K 0057 level
Electrical conductivity ($\mu\text{S}/\text{cm}$)	<0.056	<1	0.055	Type 1	A4
Organic carbon ($\mu\text{g}/\text{l}$)	<50	<50	5	Type 1	A4
Zinc ($\mu\text{g Zn}/\text{l}$)	-	<0.1	<0.1	-	A4
Silica ($\mu\text{g SiO}_2/\text{l}$)	<3	<2.5	0.5	Type 1	A4
Chloride ion ($\mu\text{ Cl }/\text{l}$)	<1	<1	<0.5	Type 1	A4
Sulfate ion ($\mu\text{ SO}_4^{2-}/\text{l}$)	-	<1	<1.0	-	A4
Total level				Type 1	A4

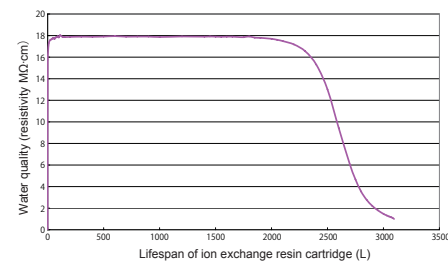
*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

■ Ion exchange resin lifespan test (TOC value)



■ Ion exchange resin lifespan test (resistivity value)



■ Optional items



Water sampling stand



Foot switch

Product code	Product name
253266	Water sampling stand (supplied in connection kit) OWL40
253278	External alarm output terminal OWE10
253279	Remote water sampling terminal OWE12
253280	Foot switch OWE14
253686	Water supply port unit OWH10

■ Consumable parts



Pre-treatment cartridge



Reverse osmosis (RO) membrane cartridge set



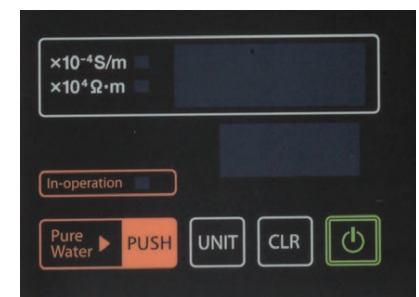
Ion-exchange resin cartridge CPC-T



Membrane filter

Product code	Product name
253099	Pre-treatment cartridge
253257	Reverse osmosis (RO) membrane cartridge set
253256	Ion-exchange resin cartridge CPC-T
9020010004	Membrane filter

Control Panel



Supply / Drain Port (Back of main unit)



Water Purifier - Pure Line®

WL200/220/220T

Treatment process: Ion-exchange Purified water: Deionized water Water quality: Type2 / A3

Economical, space saving benchtop water purifier which connects directly to tap water.



- Collecting deionized water is as simple as connecting to a faucet
- Benchtop, space-saving design
- Digital display for easy operation
- Deionized water compliant with ASTM D1193 Type 2 / JIS K 0557 A3 level, suitable for trace analysis
- Displays replacement of consumables
- Standard equipped with membrane filter (WL200/220)
- A solenoid valve at the water sampling port prevents water leakage from final membrane filter
- WL220T is equipped with constant temperature control and pure water tank. Constant temperature and deionized water delivery to pure water tank controlled by electromagnetic valve

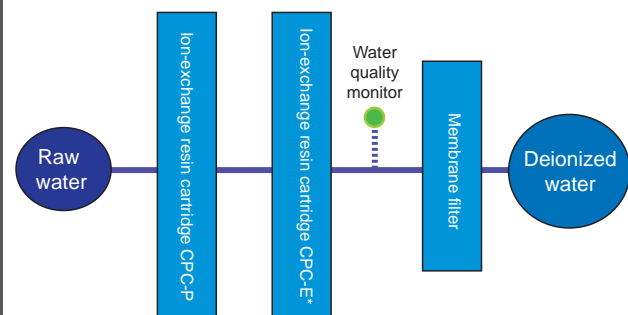
Specifications

Model	WL200	WL220	WL220T
Water purifying method	Ion-exchange (controlled by key)		Ion-exchange (manual)
Raw water supply	One touch coupler water connection resin hose		
Deionized water production	~1L/min. (continuously produced)		~1L/min. (by natural fall)
Ion-exchange resin cartridge	2L ion-exchange resin with activated carbon (CPC-P) x 1pc.	2L ion-exchange resin with activated carbon (CPC-P) x 1pc. 2L ion-exchange resin (CPC-E) x 1pc.	
Final filtration	0.1µm (membrane filter)		N/A
Pure water tank	N/A		3L polyethylene tank
Water leakage detection	Solenoid valve forced shutdown of water supply by detecting water leakage		
Raw water pressure range	0.5~5x100kPa (0.5~5 kgf/cm ²)		
Sampling port	250mm above floor RC1/4 (membrane filter connection)		ø9 nipple (hose connection)
Safety device	Circuit breaker, water leakage indicator, pressure reducing valve, water quality abnormal alarm		
Power source (50/60Hz)	AC100~240V <0.2A		
External dimensions*	W350xD350xH450mm		
Weight	14kg	16kg	17kg
Water quality display	7 segments LED display (conductivity / resistivity)		
Other display	Display of consumables replacement (CPC-P and CPC-E: should be replaced simultaneously to prevent degradation of water quality, membrane filter), alarm display (water leakage alarm)		
Accessories	Raw water supply hose, power cord (2m), Ion-exchange resin CPC-P (WL200 only), Ion-exchange resin CPC-P+CPC-E (WL220/ WL220T), membrane filter (WL200/220), Y-shaped water supply hose with strainer 4m (WL220T), constant temperature and humidity chamber hose ø9xø13 3m (WL220T), hook (WL220T), seal tape		

*Protrusions not included.

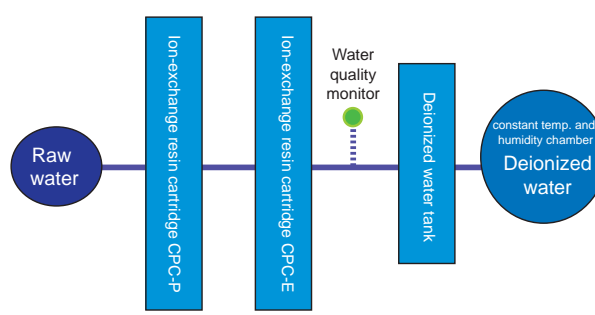
Treatment Process

WL200/220



*CPC-E only for WL220

WL220T



WL220T used only for constant temperature and pure water tank, no water sampling port in the front.

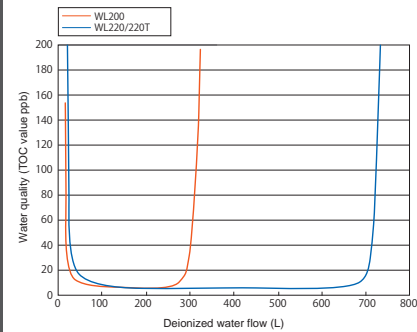
Water Quality Analysis

Item	ASTM D 1193 Standard Type 2	JIS K 0557 A3 level	WL200			WL220		
			Measured value	Level		Measured value	Level	
				ASTM D 1193	JIS K 0557		ASTM D 1193	JIS K 0557
Electrical conductivity ($\mu\text{S}/\text{cm}$)	<1	<1	0.055	Type1	A4	0.055	Type1	A4
Organic carbon ($\mu\text{g}/\text{l}$)	<50	<200	19.6	Type1	A4	19.0	Type1	A4
Zinc ($\mu\text{g Zn}/\text{l}$)	-	<0.1	<0.1	-	A4	<0.1	-	A4
Silica ($\mu\text{g SiO}_2/\text{l}$)	<3	<5	<3	Type2	A3	<3	Type2	A3
Chloride ion ($\mu\text{g Cl}^-/\text{l}$)	<5	<1	<0.5	Type1	A4	<0.5	Type1	A4
Sulfate ion ($\mu\text{g SO}_4^{2-}/\text{l}$)	-	<1	<1.0	-	A4	<1.0	-	A4
Total level				Type2	A3		Type2	A3

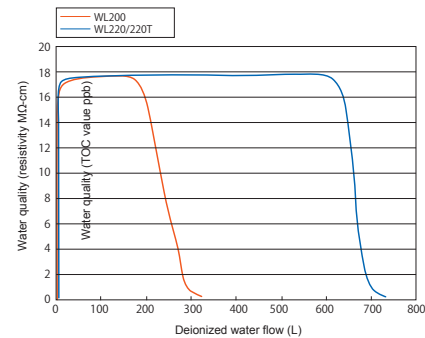
*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

Ion exchange resin lifespan test (TOC value)



Ion exchange resin lifespan test (resistivity value)



Optional items

Product code	Description	Applicable model
253686	Water supply port unit OWH10	WL200/220/220T
253769	Pressure reducing valve for raw water OWG42	WL200/220/220T
253261	CPC-E connection set (CPC-E included) OWL36	WL200
253267	*Pre-process cartridge connection set OWL38	WL200/220
253266	*Water sampling stand with connection set OWL40	WL200/220
253268	*External alarm output terminal OWL42	WL200/220/220T
253269	*Remote water sampling function OWL44	WL200/220
253270	Remote water sampling function with sampling switch OWL46	WL200/220
253272	Input terminal for remote water sampling with solenoid valve OWL48	WL220T
253271	Shelf plate OWL50	WL220T
253273	Power cord (4m) OWL52	WL200/220

* Please specify when ordering main unit.



Shelf plate (OWL50): used when WL220T is placed on top of the constant temperature control plate



Water supply port unit OWH10

Consumables



Membrane filter



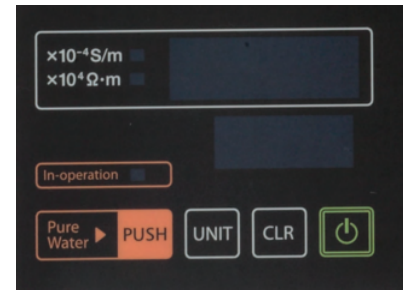
CPC-P Ion exchange resin cartridge



CPC-E Ion exchange resin cartridge

Product code	Description
253254	Ion exchange resin cartridge CPC-P
253262	Ion exchange resin cartridge CPC-P+CPC-E
9020010004	Membrane filter x 2pcs.

Control Panel



WL220T has no PUSH key and POWER key

Structure



WL220



WL220T

WL320A/320B

Treatment process

Ion-exchange

Purified water

Deionized water

Water quality

Type2 / A4

Space-saving water purifier ideal for washing; can be installed under a fume hood or sink, or on a table



WL320B

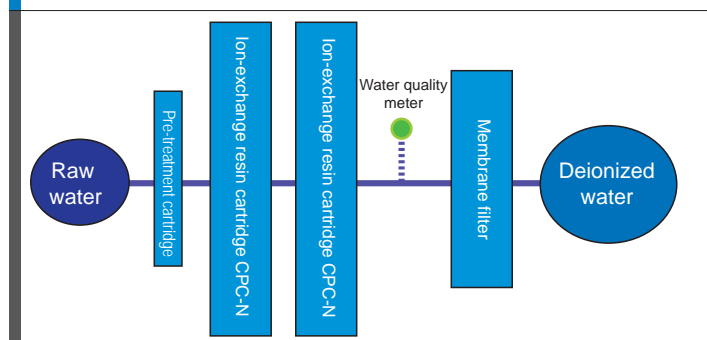
- Deionized water compliant with ASTM D1193 Type2 / JIS K 0557 A4 level, suitable for high sensitivity trace analysis
- Easy operating digital display
- Standard equipped with membrane filter at water feeding port
- Equipped with water leak detection function that stops water supply in case water leak occurs, by activating the electric leakage breaker
- Displays replacement of consumables

Specifications

Model	WL320A	WL320B
Type	Benchtop	Built-in caster
Purified water	Deionized water ASTM D 1193 Type2 / JIS K 0557 A4	
Water purifying method	Ion-exchange	
Water feeding	One touch coupler connecting resin hose	
Deionized water delivery rate	~1L/min (continuously)	
Pre-treatment cartridge	0.1µm hollow fiber + activated carbon (PWF-1)	
Ion-exchange resin cartridge	Ion-exchange cartridge (CPC-N) 3Lx2	
Leakage detection	Water leakage detector forcefully shuts off feed water solenoid valve when water leakage detected	
Ion-exchange water delivery port	Water sampling stand	
Raw water pressure range	0.5~5x100kPa (0.5~5kgf / cm ²)	
Power source	AC100~240V <0.2A	
External dimensions*	W400xD320xH600mm	
Weight	Main unit: ~30kg, water sampling stand: 5kg	
Water quality display	LED digital display (conductivity / resistivity)	
Other display	Replacement of consumables (pre-treatment cartridge, ion-exchange resin, membrane filter), alarm indication (water leakage)	
Accessories	Water supply hose, pre-treatment cartridge, ion-exchange cartridge CPC-N, membrane filter, water sampling stand, purified water sampling hose	
Legs	Rubber legs	Movable caster

* Protrusions not included

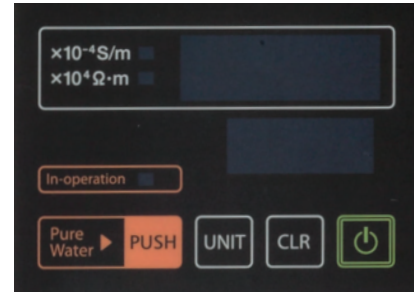
Treatment Process



Installation Example



Control Panel



Pre-treatment Cartridge Ion-exchange Resin Cartridge



- (1) Pre-treatment cartridge PWF-1
- (2) Ion-exchange resin cartridge CPC-N

Water Quality Analysis

Item	ASTM D 1193 Standard Type 1	JIS K 0057 Standard A4	Measured value	ASTM D 1193 level	JIS K 0057 level
Electrical conductivity ($\mu\text{S}/\text{cm}$)	<0.056	<1	<1	Type 2	A4
Organic carbon ($\mu\text{g}/\text{l}$)	<50	<50	46	Type 1	A4
Zinc ($\mu\text{g Zn}/\text{l}$)	-	<0.1	<0.01	-	A4
Silica ($\mu\text{g SiO}_2/\text{l}$)	<3	<2.5	0.1	Type 1	A4
Chloride ion ($\mu\text{Cl}/\text{l}$)	<1	<1	<0.1	Type 1	A4
Sulfate ion ($\mu\text{g SO}_4^{2-}/\text{l}$)	-	<1	<0.1	-	A4
Total level				Type 2	A4

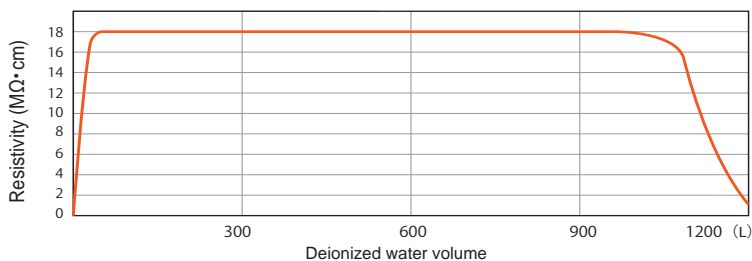
*Quality of raw water may cause different results.

*For water quality comparison JIS K 0057 ↔ ASTM D 1193 refer to page 115 of the general catalog.

Structure



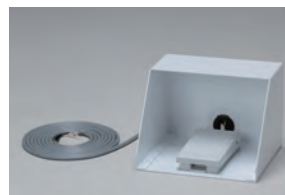
Ion-exchange Resin Life Span Test (resistivity)



Optional items / consumables

Product code	Description
253277	Fume hood / sink installation kit OWL60
253686	Water supply port unit OWH10
253099	Pre-treatment cartridge PWF-1
CPCN30010	Ion-exchange resin cartridge CPC-N
9020010004	Membrane filter (2 pcs. set) MFRL727
253276	Remote water sampling function (with foot switch) OWL58
253275	Remote water sampling function (without foot switch) OWL58

Note: When combined with fume hood or installed under the sink, the following are required: WL320 + 253277 + 253276 (with foot switch)



Foot switch (optional)

Dimensions (mm)

