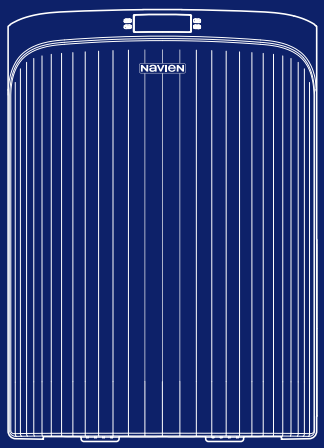
NAVIEN

Installation & Operation Manual

WEC Series Tankless Electric Water Treatment System

Model | **WEC600**



System Tested and Certified by NSF International against NSF/ANSI Standard 42 for the reduction of Chlorine, Taste and Odor.

Certified to NSF/ANSI/CAN 61-G & 372

The WEC600 is certified by IAPMO R&T to IAPMO Z601-94% for scale reduction.

Intertek
5023321
CONFORMS TO UL STD.979
CERTIFIED TO CSA STD. C22.2 NO.68

FCC ID : 2A6XC-WEC

⚠ WARNING

- **To prevent DEATH, SERIOUS INJURY, or PROPERTY DAMAGE, please read, understand, and follow the warnings and instructions in this manual.**
- **Installation and service must be performed by a qualified installer or service agency.**
- **Keep this manual near the WEC for future reference whenever maintenance or service is required.**
- **Be sure to check and follow the applicable plumbing codes and ordinances when installing this product. Check with your public works department for applicable local plumbing and sanitation codes. Follow local codes if they differ from the standards used in this manual.**

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Important Safety Information

The Safety Alert Symbol is used in this manual to alert you to potential personal injury hazards. Obey all safety messages that follow these symbols to avoid death, serious injury, or property damage.

The following signal words are used in this manual:

⚠ DANGER

Indicates a hazardous situation that if not avoided will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation that if not avoided could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation that if not avoided could result in minor or moderate injury.

NOTICE

Indicates information considered important but not hazard-related (such as property damage).

⚠ DANGER

Grounding instructions

This appliance must be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance to electric current. This appliance is equipped with a cord having an appliance-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is installed and grounded in accordance with all local codes and ordinances.

Check with a qualified electrician if you are in doubt whether the appliance is properly grounded. Do NOT modify the plug provided with the appliance; if it does not fit the outlet, have the appropriate outlet installed by a qualified electrician.

⚠ WARNING

Electric Shock Hazards

- Always plug the product into a properly grounded 120 V, 60 Hz GFCI-protected outlet.
- Do not use a damaged power plug or a loose outlet. If the power cord is damaged, have it replaced by a qualified technician.
- Do not forcefully bend the power cord or apply pressure to the product with a heavy object.
- Do not use a power strip or extension cord.
- Do not modify the power cord.
- Do not arbitrarily plug and unplug the power cord.
- If the power plug comes into contact with water, dry thoroughly before use.
- Do not touch the power plug with wet hands.
- Under no circumstances should you ever simply unplug the power cord. To properly power OFF the WEC using the main panel, press and hold the [Power] button for more than 3 seconds to turn off. If the WEC is powered off using the [Power] button and not unplugged, the WEC will still periodically flush the NDI modules (every 24 hours from last use) to remain ready for use.
- To turn ON the product, press and hold the [Power] button on the main panel for more than 3 seconds.
- Make sure to unplug the power plug while repairing or inspecting the product or replacing parts.

⚠ WARNING

Initial installation

- Before installing the WEC, ensure that the incoming feedwater connection to the WEC is from a municipal water source according to the specifications in the manual. Note that failure to test the water quality prior to installation may void the Navien Limited Warranty.
- Only an authorized professional should install this product.
- Only install the product on a flat and level floor.
- Do not install the product outdoors.
- Do not install the product in a place where it may get wet or may be exposed to the elements.
- Install the product in a place where it is protected from freezing.
- Do not install the product near an electric heater.
- Do not use or store flammable gas or substances near the product.
- A sufficient air gap is required when installing a drain line. Refer to "2.8 Connecting the Drain Lines" on page 19 for more information.
- Do not remove the inlet/outlet caps on the product until you have connected it to the pipe.

⚠ WARNING

When using the product

- If the product produces a strange sound, burning smell, or smoke, immediately unplug the power plug and request repairs.
- Do not disassemble the product by yourself.
- Replace the filter cartridges according to the replacement cycle (Sediment Pre-Filter, Post Carbon Block [C/B] Filter).
- Refill the Navien CIP solution according to the use cycle. When refilling the CIP solution, be careful not to splash the solution on your skin, eyes, or clothes. Do not use substances other than Navien CIP Solution.
- Do not allow children to touch the product or play with it.
- Do not apply excessive force or impact to the product.
- Do not store any objects on the top of the product.

Reminder: When the product has not been used for an extended period (vacation, travel, etc.).

Turn OFF the product by pressing and holding the [Power] button on the main panel for more than 3 seconds. Do not unplug the product's power cord to turn off the product. When powered off, the unit may periodically regenerate to protect the system.

NOTICE

Keep caps on plumbing connections (inlet and outlet ports) installed until ready to install. Do not expose the internal components to air for more than 4 hours, doing so may cause biofouling, damaging the unit and reducing the efficiency.

⚠ WARNING

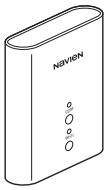
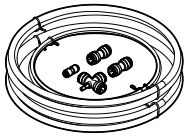
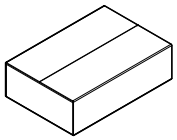
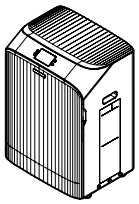
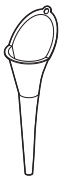
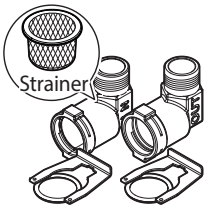
California Prop 65

This product can expose you to chemicals including lead, lead compounds, and carbon bisulfide which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.

1. About the WEC

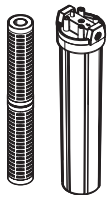
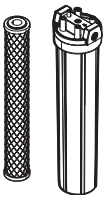
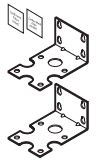
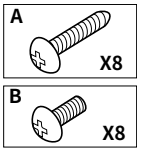
1.1 Included Items

1.1.1 Product Box

			
Installation & Operation Manual, User's Information Manual, and Quick Installation Manual for Installer		NaviLink Lite	½"OD 98.5"* LLDPE** Tubing 2ea, ½"Fitting 2ea, ¼"OD 98.5" LLDPE Tubing 1ea, ¼"Fitting 1ea, and ½"-¼" Cross Fitting 1ea
			
Installation Kit	WEC Series (Main Product)	Funnel	1"Male NPT Elbow Adapter Inlet***/ Outlet (2ea), O-Ring P30 (2ea), and L-Clip 32 (2ea)

* Before installing the tubing to the WEC, unroll the tubing and then cut it to an appropriate length.
** LLDPE (Linear Low-Density Polyethylene)
***A strainer is installed in the inlet adapter.

1.1.2 Installation Kit

				
Sediment Pre-Filter Cartridge (Pleated type) and Housing	Post Carbon Block (C/B) Filter Cartridge and Housing	Filter Housing Wrench	Mounting Bracket (2ea) and Label (2ea)	Screw Kit A: M5 x 25 mm (8ea) B: M6 x 19.5 mm (8ea)

1.2 Not Included Items


GXXX002436 - 1 Gal (Pack of 2)

GXXX002437 - 1 Gal (Pack of 4)

NOTICE

- The CIP solution is not included with the WEC unit and must be purchased separately through a Navien-authorized professional.
- To ensure proper operation of the WEC, regular replenishment of the CIP solution is required.
- If the CIP solution is not replenished, the internal cleaning (CIP) mode may not function correctly, which could result in permanent performance degradation.
- Failure to replenish the CIP solution may result in improper installation, maintenance, or operation, and may void Navien's limited warranty.
- CIP Solution Part Numbers: GXXX002436 (1 Gal x 2), GXXX002437 (1 Gal x 4)

1.3 Specifications

The following tables list the specifications for the WEC series.

⚠ WARNING

- NEVER attempt to use this product to treat non-potable water sources, including microbiologically unsafe water or water of unknown quality as this may result in illness, severe injury, or death.
- The use of this product is intended for removal of hardness and TDS from potable water supplies only.
- It is highly recommended to test incoming feedwater prior to installing WEC to ensure feedwater requirements are met in accordance with the below specifications. Failure to test the water quality prior to installation may void the Navien Limited Warranty.

Feedwater Requirement [1)]

Item	WEC600
Total Dissolved Solids (TDS)	≤ 1,000 ppm
Temperature	37.4–100.4°F (3–38°C)
Pressure	36.3–74 psi (250–510 kPa) [2)]
pH	6.5–8.5
Iron total	≤ 0.3 ppm
Turbidity	≤ 0.5 NTU
Total hardness (as $CaCO_3$)	≤ 600 ppm
Alkalinity (as $CaCO_3$)	≤ 350 ppm

[1)] The WEC system
[2)] Install a pressure regulator in areas where the water pressure exceeds 74 psi (510 kPa).

Technical Specification

Item	WEC600
Power consumption	0.55 kW
Power supply	AC 120 V / 60 Hz
	4.5 A
Power output spec.	DC 300 V
Dimensions (W×D×H)	22.4 x 16.9 x 31.4 in. (570 x 430 x 800 mm)
Weight	132 lb (60 kg)
Salt removal rate	50–87% [1)]
Recovery rate	63–93% [2)]
Installation pressure	≤ 74 psi (510 kPa) [3)]
Pressure drop at rated service flow	≤ 15 psi (103 kPa)
Operating ambient temperature range	40–100.4°F (4.4–38°C)
CIP tank	1.6 Gallon (6.1 L) [4)]
Installation location	Indoor [5)]

Item	WEC600
Certifications [6]	NSF/ANSI 42, NSF/ANSI 61-G, NSF/ANSI 372, IAPMO Z601, cETLus [7], FCC
Included accessory	NaviLink Lite [8]

[1] For more detailed information, refer to the Performance Data Sheet (PDS).
The WEC600 supports Performance Mode. Refer to "2.10 Performance Mode" on page 21.
[2] 5.3 GPM (20 LPM) in continuous operation
[3] For more information, refer to "2.4 Installation Diagram" on page 12.
[4] The amount of CIP solution used during operation varies based on water demand and feedwater quality. For additional details, refer to "4.2 Refilling the CIP Solution" on page 46.
[5] Only install in locations where the product will not be exposed to freezing temperatures, direct sunlight, water, or exposed to the elements.
[6] For the WEC only
[7] The WEC has been tested and certified by Intertek in accordance with CSA STD C22.2 No. 68.
[8] For more information, refer to the NaviLink Lite's User Manual.

Performance Data Sheet (PDS) – Brine Solution

Outlet TDS		Inlet TDS (ppm)										
		100	200	300	400	500	600	700	800	900	1000	over 1000
Flow Rate (GPM)	2	25	40	55	70	75	75	90	110	160	200	By-pass
	4	35	50	60	85	90	95	180	250	340	480	
	6	55	60	70	95	115	250	330	440	520	620	
	8	55	70	95	130	235	320	410	500	610	750	
	10	60	80	115	195	285	380	470	570	680	790	
	over 10	By-pass										

Performance Data Sheet (PDS) – Test Water [1]

Outlet TDS		Inlet TDS (ppm)										
		100	200	300	400	500	600	700	800	900	1000	over 1000
Flow Rate (GPM)	2	30	50	70	90	100	105	125	150	205	250	By-pass
	4	40	60	75	105	115	125	215	290	385	530	
	6	60	70	85	115	140	280	365	480	565	670	
	8	60	80	110	150	260	350	445	540	655	800	
	10	65	90	130	215	310	410	505	610	725	840	
	over 10	By-pass										

[1] The test water was prepared with the following characteristics:
Ca^{2+} 32%, K^{+} 2%, Mg^{2+} 6%, Na^{+} 5%, Cl^{-} 17%, NO_3^{-} 7%, SO_4^{2-} 27%, Others 4%

NOTICE

TDS removal performance may fluctuate due to abrupt water quality changes, temperature changes, high flow rates, inadequate system management, system drying, biofouling, and prolonged usage. Regular maintenance and proper management are essential for optimal performance.

Sediment Pre-Filter Specification

Item		Description
Housing	Dimensions	Ø5.1 x 22.2 in. (Ø130 x 564 mm)
	Weight	4.76 lb (2.16 kg)
Cartridge	Dimensions	Ø2.72 x 19.96 in. (Ø69 x 507 mm)
	Weight	0.97 lb (0.44 kg)
	Pore size	10 µm
	Replacement cycle	A replacement notification, every 6 months, or as needed based on feedwater quality and usage [1)]

[1)] For more information, refer to "4.1 Replacing the Filter Cartridges" on page 42.

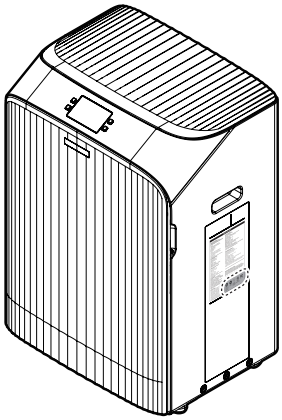
Post Carbon Block (C/B) Filter Specification

Item		Description
Housing	Dimensions	Ø5.1 x 22.2 in. (Ø130 x 564 mm)
	Weight	4.76 lb (2.16 kg)
Cartridge	Dimensions	Ø2.76 x 20.04 in. (Ø70 x 509 mm)
	Weight	1.5 lb (0.68 kg)
	Pore size	1 µm
	Replacement cycle	A replacement notification, every 6 months, or as needed based on product water quality and usage [1)]

[1)] For more information, refer to "4.1 Replacing the Filter Cartridges" on page 42.

1.4 Certification

Certification marks must be attached to the water treatment as shown below. The data plate can be found on the right side of the unit.



- System tested and certified by NSF International against NSF/ANSI standard 42 for chlorine, taste, odor and Certified to NSF/ANSI standard 61-G & 372.

Note System is certified to NSF/ANSI 372 and conforms with the lead content requirements for "lead free" plumbing as defined by California, Vermont, Maryland, and Louisiana state laws and the U.S. Safe Drinking Water Act.

- System tested and certified by Intertek according to UL STD.979, CSA STD C22.2 No.68 and FCC.
- The WEC600 is certified by IAPMO R&T to IAPMO Z601-94% for scale reduction.

FCC Information to User

This device complies with Part 15 of the FCC Rules and with Innovation, Science and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

NOTICE

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NSF

System Tested and Certified by NSF International against NSF/ANSI Standard 42 for the reduction of Chlorine, Taste and Odor.

NSF

Certified to NSF/ANSI/CAN 61-G & 372

NSF

This Post Carbon Block Cartridge / 30036427 is Tested and Certified by NSF International against NSF/ANSI Standard 42 for materials and structural integrity requirements.

COMPONENT

Post Carbon Block Cartridge / 30036427 is not related to performance reduction claims

Note Sediment pre-filter and adapters are only NSF372 certified.

UPC

The WEC600 is certified by IAPMO R&T to IAPMO Z601-94% for scale reduction.

ETL C US LISTED

Intertek

5023321

CONFORMS TO UL STD.979

CERTIFIED TO CSA STD. C22.2 NO.68

FC

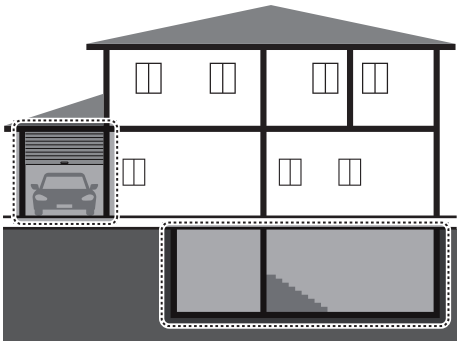
FCC ID : 2A6XC-WEC

2. Installing the WEC

2.1 Choosing an Installation Location

Only install the WEC in an area that allows access for service and maintenance, including access to utility connections, piping, and filter housings.

Only install on a flat, level floor. Interior locations protected from the elements like the garage, basement, or other storage areas are recommended.



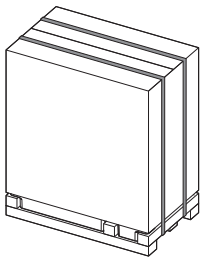
NOTICE

- Do not install the product outdoors. Only install in locations where the product will not be exposed to freezing temperatures, direct sunlight, water, or exposed to the elements.
- The WEC produces drainwater while operating. Provide proper access to drain for disposing of drainwater.

2.2 Unpacking the Product

Refer to the following figures to unpack the product from its packaging.

1



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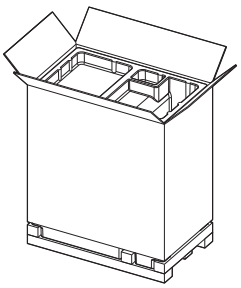

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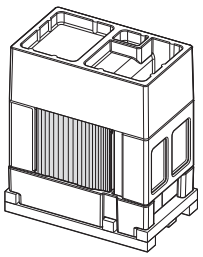

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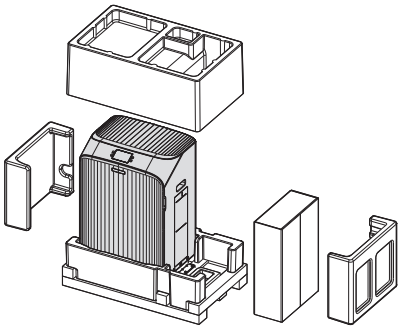

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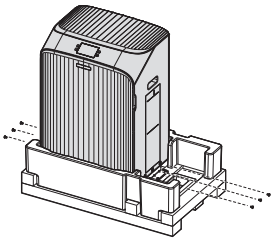

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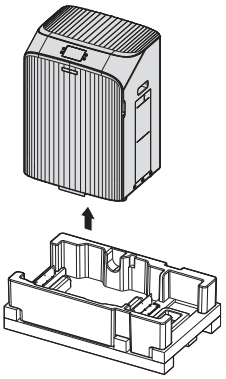
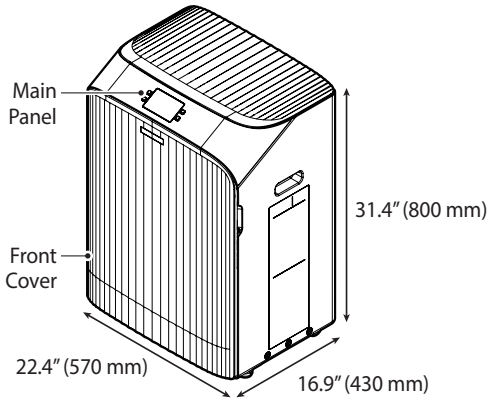
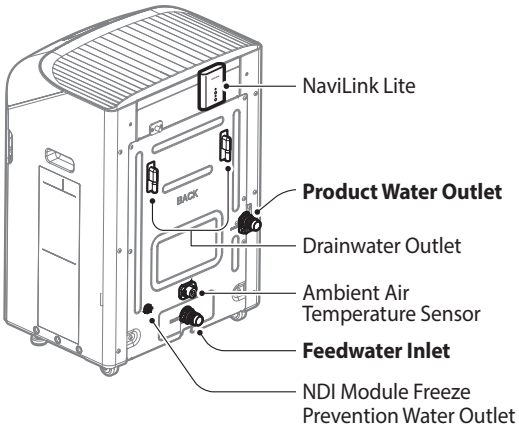


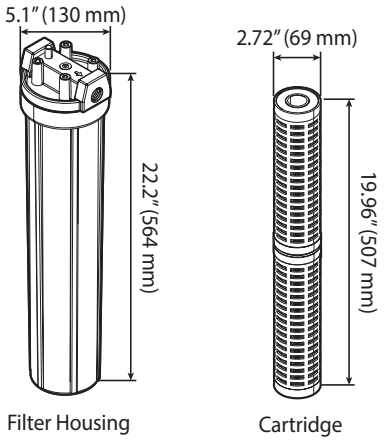
2.3 System Overview

WEC Series

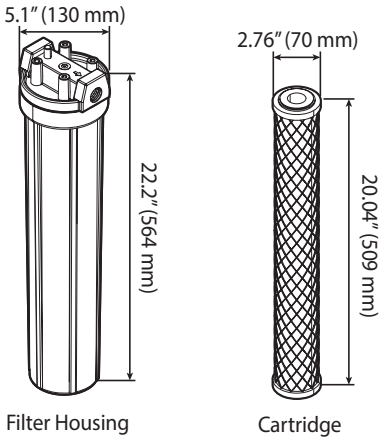




Sediment Pre-Filter



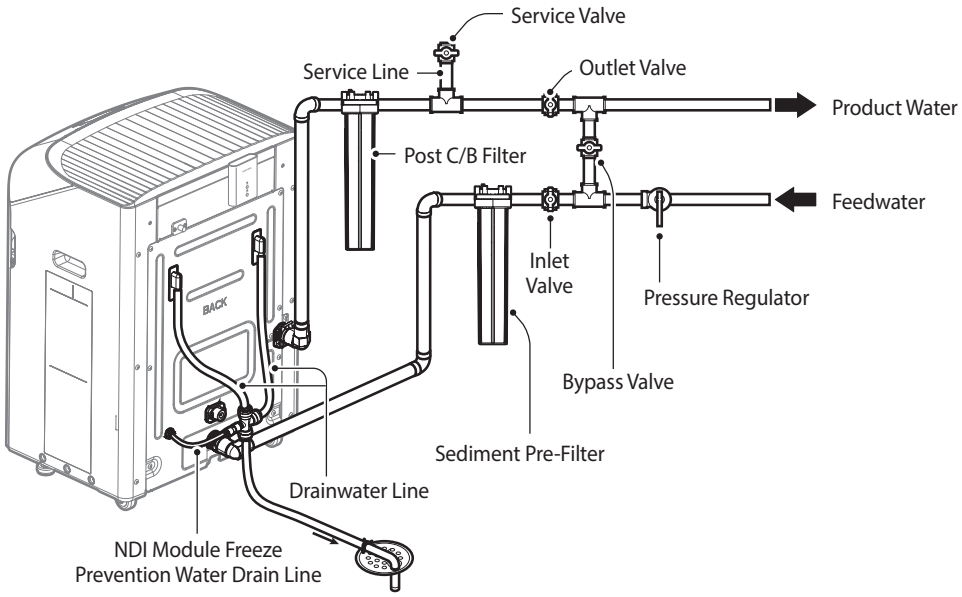
Post Carbon Block (C/B) Filter



2.4 Installation Diagram

2.4.1 Typical Installation Diagram

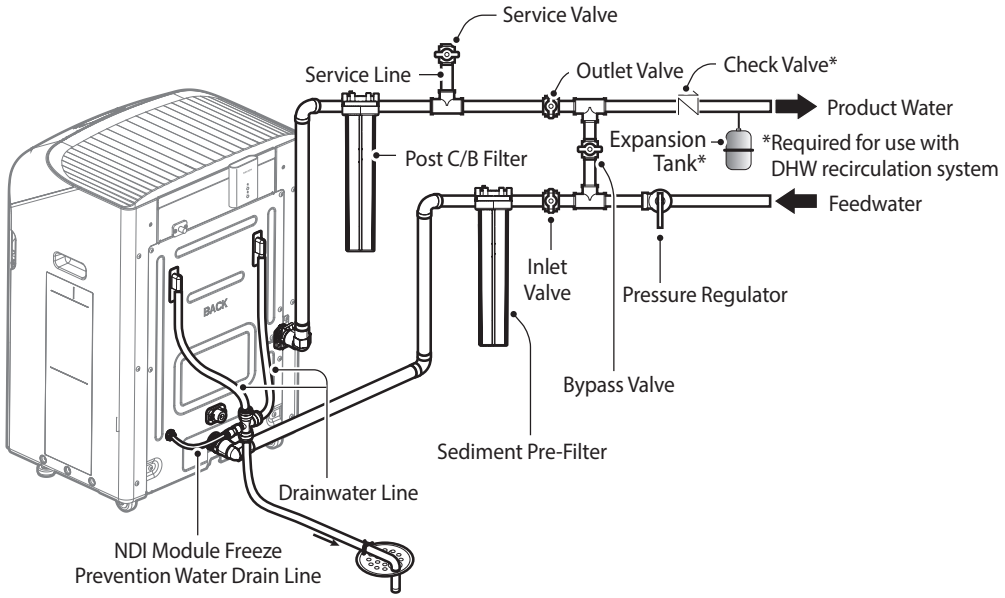
The following installation diagram depicts a typical installation. The installation of the bypass valve is necessary for addressing potential service and product related issues. This will allow isolation and continued water flow when servicing and installing the system or when replacing the filter. For proper configuration, refer to the following diagram.



2.4.2 Installation Diagram with a DHW Recirculation System

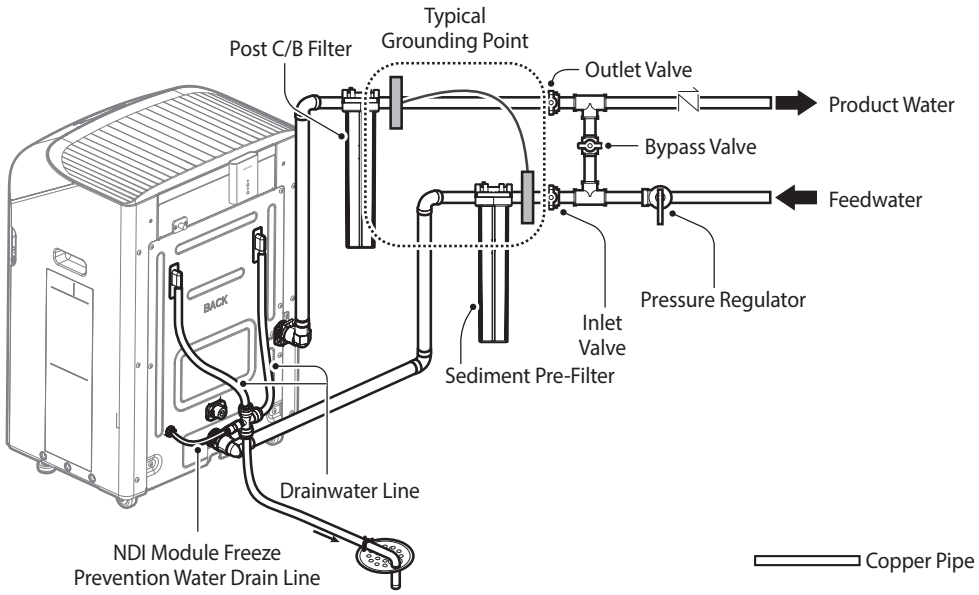
When the WEC is used with a DHW recirculation system, a check valve and expansion tank is required to be placed downstream on the feedwater line before the water heater to prevent backflow (illustration is for reference purposes only).

Note If backpressure is applied to the product due to backflow, drain the water through the NDI module freeze prevention water drain line to release pressure (it operates for up to 1 hour). If the backpressure persists, an error may occur.

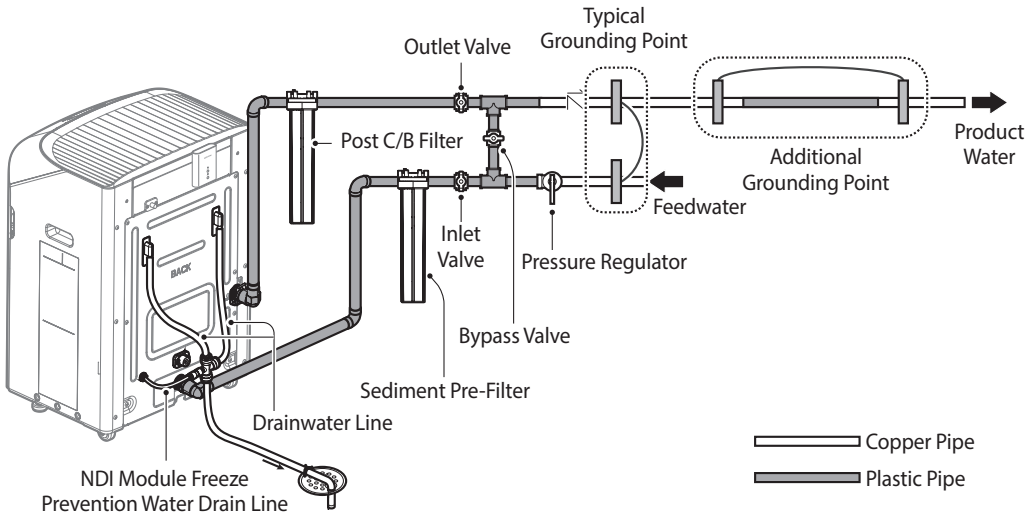


2.4.3 Typical Grounding Diagram

To prevent pipe corrosion, grounding must be performed; when a WEC product is installed, the section where the WEC is mounted becomes electrically insulated, so ground both ends of the pipe where the WEC system is installed, specifically the inlet side of the sediment filter and the outlet side of the carbon block filter; if any section of the piping uses plastic material, additional grounding is required for those sections, and all additional grounding must comply with NEC (National Electrical Code) 250.104 standards.



[Typical Grounding Diagram]



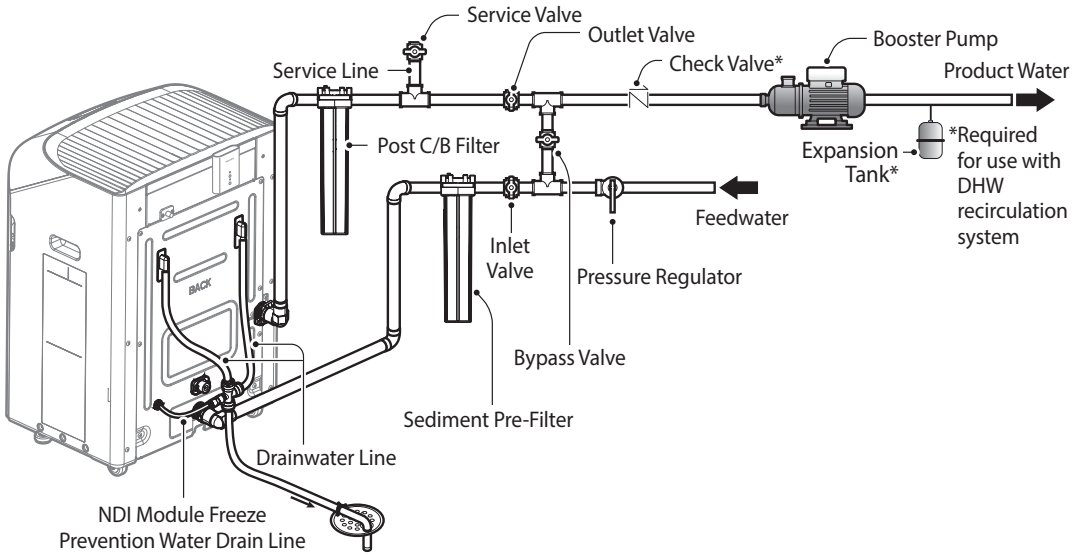
[Additional Grounding Diagram]

2.4.4 Installation Diagram with a Booster Pump (if needed)

To increase pressure at the Point of Use (POU), an additional booster pump may be installed if needed. The booster pump must be a flow-sensing, automatic-operating type, and its shut-off pressure (maximum pressure at zero flow) must not exceed 8.5 bar (128 psi).

To prevent excessive pressure from being applied to the WEC system, the booster pump must be installed downstream of the final stage of the WEC system, which is the carbon block filter.

Additionally, a check valve must be installed between the carbon block filter and the booster pump to prevent reverse pressure from the pump from being applied back into the WEC system.



NOTICE

Only an authorized professional should install this product in accordance with all local plumbing and electrical codes. To prevent property damage:

- Always use the installation checklist during installation.
- Place the O-ring into the inlet and outlet connectors located on the rear side of the WEC. Next, attach the provided adapters to the inlet and outlet connectors, and insert the L-clip into the adapters. Ensure that the O-ring is present and properly positioned.
- Refer to the following table for the appropriate pipe size for each connection.

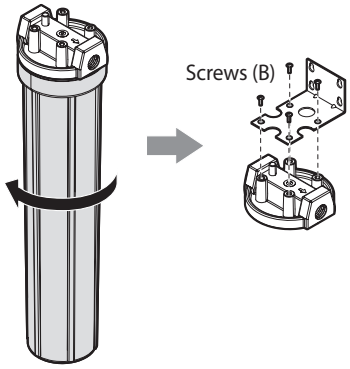
Parts	Pipe Size
Feedwater inlet	1″ NPT male (Adapter)
Product water outlet	
Drainwater outlet	½″ Nipple shape
NDI module freeze prevention water outlet	¼″ Push-fit
Sediment pre-filter	¾″ NPT female
Post carbon block (C/B) filter	¾″ NPT female

- Regulator installation is required at 74 psi (510 kPa) or higher inlet water pressure. Set the regulator not to exceed 74 psi (510 kPa).
- To prevent water hammer, install a water hammer arrestor in a location recommended by a plumbing professional.
- In cases where the feedwater surpasses the EPA Turbidity Standard (which is ≤ 0.3 NTU at 95% and ≤1 NTU), it is necessary to install an additional filter upstream of the Sediment Pre-Filter. We strongly recommend seeking technical advice from a professional before proceeding with this installation. In case the feedwater has a total iron content of over 0.3 ppm, it is recommended to install an iron filter before the sediment pre-filter that comes with the WEC system. The sediment pre-filter must be installed onto the (point-of-entry) POE line **before** the WEC. **DO NOT** directly connect the sediment pre-filter to the inlet of the WEC.
- The sediment pre-filter and post carbon block (C/B) filter must be installed properly.

2.5 Installing the Sediment Pre-Filter

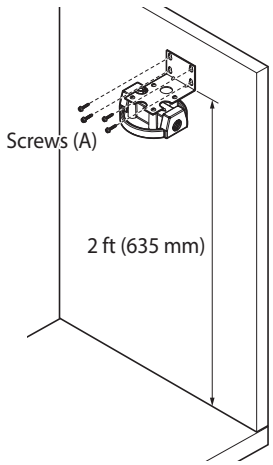
Note The sediment pre-filter must be installed at the front end of the feedwater inlet.

1. Unscrew the filter housing from the filter housing head (using the supplied filter housing wrench). Secure the mounting bracket to the top of the filter housing head using the provided screws (B).



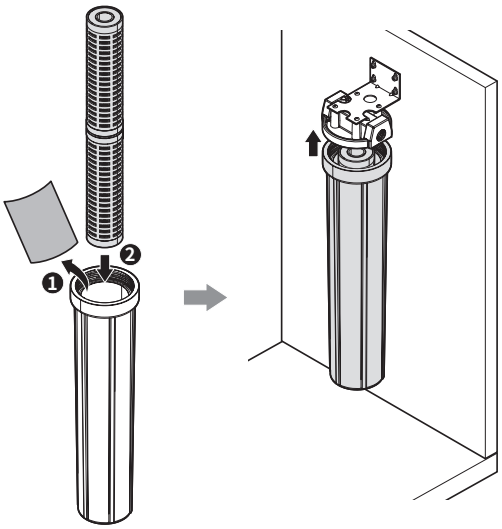
2. Attach the bracket to the wall using the provided screws (A).

   Note Ensure that the bracket installed at a minimum distance of 2 ft (635 mm) from the floor.

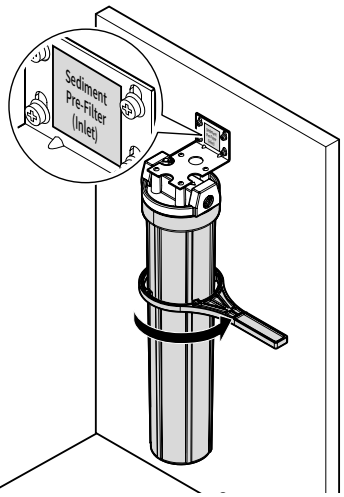


3. Insert the cartridge into the sediment pre-filter housing and screw the filter housing head using the supplied filter housing wrench.

> **NOTICE**
>
> Remove the Quick Guide from the filter before proceeding with installation. Failure to do so may cause excessive pressure loss and a reduced water flow rate.



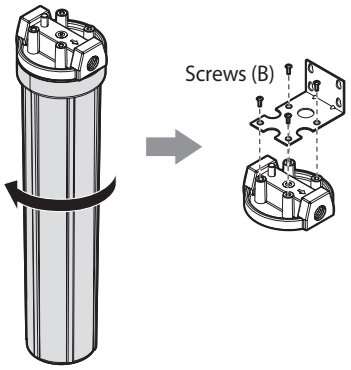
4. After screwing the filter housing, apply the included [Sediment pre-filter(Inlet)] label to the mounting bracket for easy identification.



2.6 Installing the Post Carbon Block (C/B) Filter

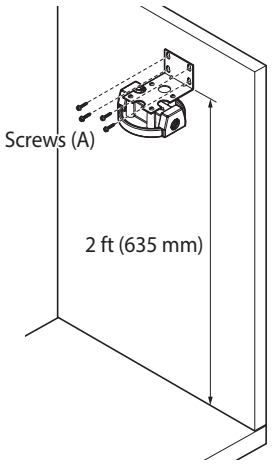
Note The post carbon block (C/B) filter must be installed at the rear end of the product water outlet.

1. Unscrew the filter housing from the filter housing head (using the supplied filter housing wrench). Secure the mounting bracket to the top of the filter housing head using the provided screws (B).



2. Attach the bracket to the wall using the provided screws (A).

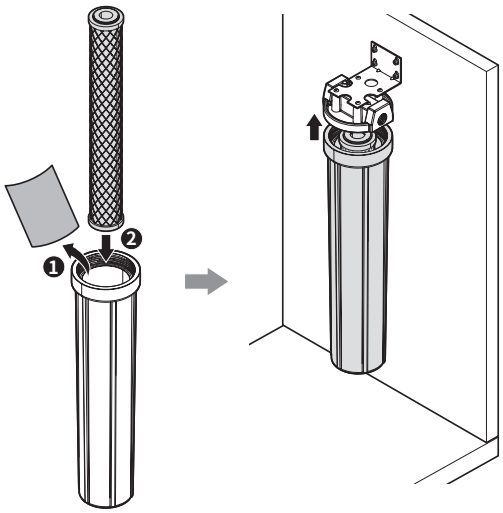
Note Ensure that the bracket installed at a minimum distance of 2 ft (635 mm) from the floor.



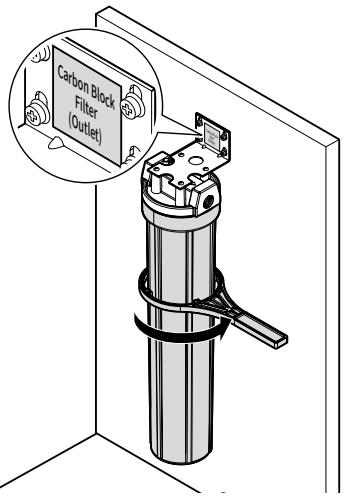
3. Insert the cartridge into the post carbon block (C/B) filter housing and screw the filter housing head using the supplied filter housing wrench.

NOTICE

Remove the Quick Guide from the filter before proceeding with installation. Failure to do so may cause excessive pressure loss and a reduced water flow rate.



4. After screwing the filter housing, apply the included [Carbon Block Filter(Outlet)] label to the mounting bracket for easy identification.

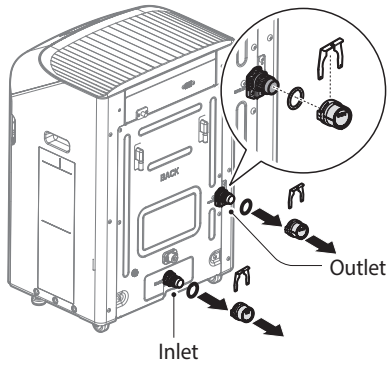


2.7 Installing the Inlet and Outlet Water Lines

NOTICE

- Do not over-tighten the water connections to the filters. These connections may leak or could distort the housing.
- Align and support all plumbing so as to prevent stress from being put on the inlet and outlet water lines. Stress from misaligned or unsupported plumbing may damage the valves.
- Use a bucket or a water tray when discharging any remaining water in the WEC.
- To prevent water leaks and product damage, shut off the water supply line before connecting it to the product.
- A strainer is installed in the inlet adapter. Check if the strainer is properly installed and install it.
- If the strainer is clogged with foreign substances, remove the adapter and clean it.

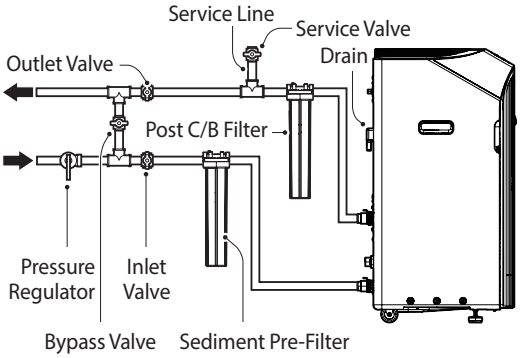
1. Remove the L clips from the caps, and then take out the caps and O-rings on the inlet and outlet.



NOTICE

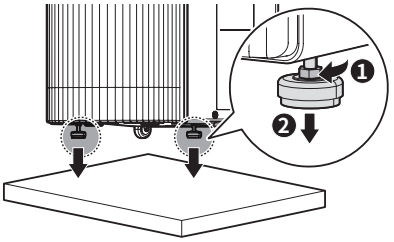
When removing the cap, some residual water may come out of the unit. Use a dry cloth or towel to cover the cap while removing it.

2. Install the filters, inlet and outlet valves, bypass valve and regulator (if needed) on the water lines as shown in the following diagram.



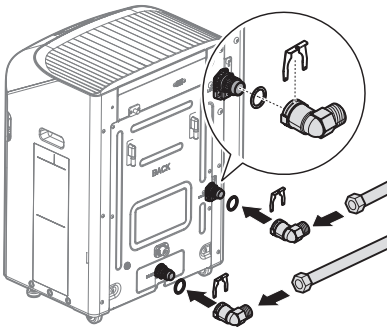
Note

- A bypass line and valves must be installed for use during maintenance or service.
- Place the WEC on the flat and level floor, and adjust the leveling feet of the WEC so that they make contact with the floor.

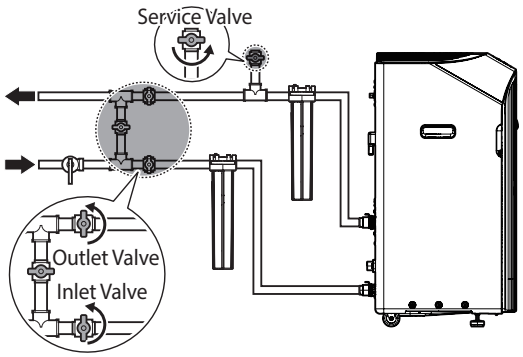


- Provide approximately 2 ft (635 mm) of space to open the front cover and perform maintenance work.

3. (1) Connect the water lines to the corresponding inlet and outlet adapter. (2) Place O-rings over the inlet and outlet connection on the WEC. (3) Install the inlet/outlet adapters to the correct connection ensuring the O-ring remains in place. Secure the adapters to the connection using the L clips provided. (4) Verify connections before use.



4. After installation is complete, check for leaks. Refer to "2.14 Purging and Leak Detection" on page 25.



NOTICE

Depending on seismic activity in your area, consider strapping the WEC to the wall to prevent the unit from falling over in the event of an earthquake.

2.8 Connecting the Drain Lines

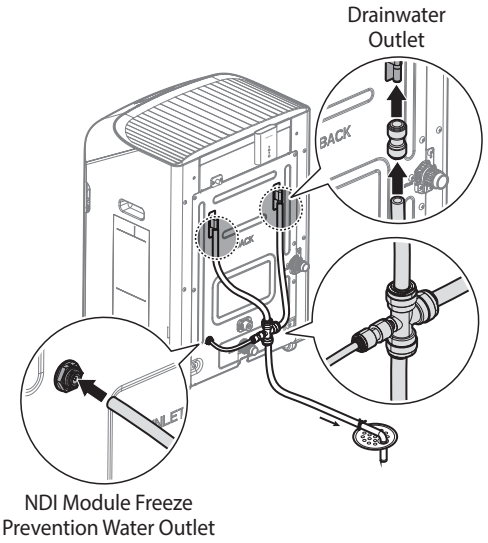
NOTICE

- Drainwater and NDI module freeze prevention water lines must be installed in accordance with local plumbing regulations.
- Check the height and length limit of the drain line.
  - height ≤ 10 ft (3 m)
  - length ≤ 197 in. (5 m)

1. Unroll and straighten the LLDPE ½" and ¼" tubes before cutting it to the desired length.
2. Connect the ½" fittings to both drainwater outlet on the back of the WEC and connect the ½" tubes to the fitting.
3. Connect the ¼" tube to the NDI module freeze prevention water outlet on the back.

⚠ WARNING

- Drain water is not for consumption. Avoid getting drain water on skin or in eyes.
- There must be an air gap between the drain lines and floor drain to prevent water backup. Also, use an L-shaped pipe at the end of the drain lines to avoid water splashing.
- Do not cap or plug the drain lines. Blocked drain lines can damage the WEC.
- Install the WEC in a way that does not apply backflow or backpressure.
- The drain lines must have a downward slope to drain properly.

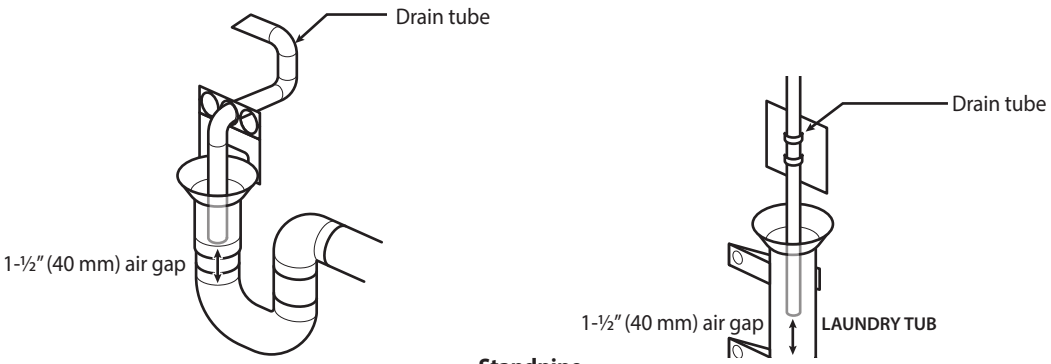


Drain Types

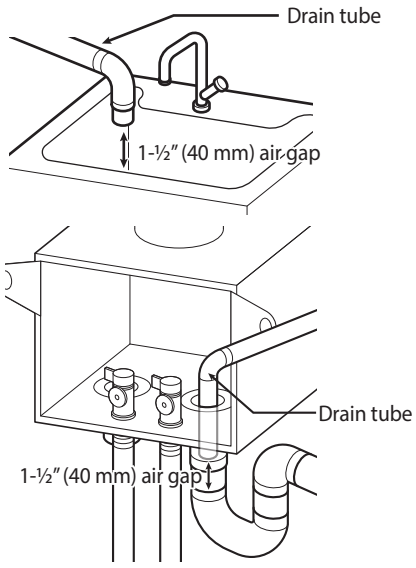
Note

- When installing a floor drain, be sure to use a cross fitting. Citric acid injection errors may occur continuously. (E051,052,083)
- An air gap is required to prevent back flow of drainwater into the WEC. To create an air gap, secure the drain tubes in place and leave an air gap of 1-½" (40 mm) between the end of the tubes and the drain. Do not put the ends of the drain tubes into the drain.
- The drain should have a downward slope of at least 2% (¼" per foot).

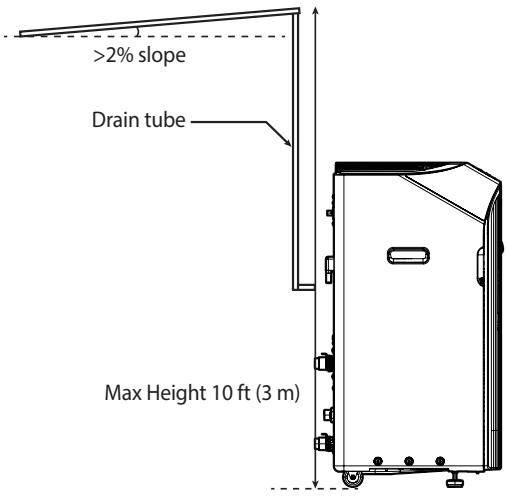
Floor Drain
(Use only cross fitting)



Standpipe



Laundry Tub



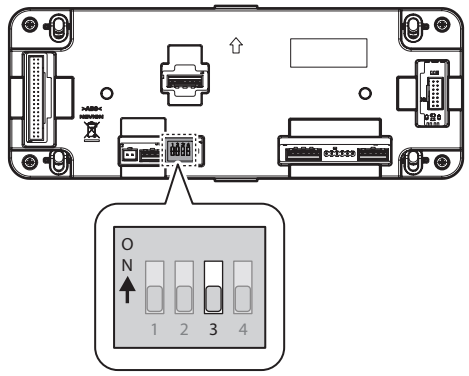
Upward Installation

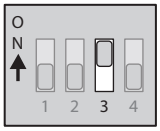
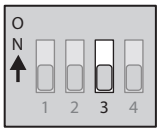
2.9 Installing a Neutralization Kit

If required by local code, install a neutralization kit for the Navien WEC drain line to prevent corrosion of drainage systems and public sewage systems by controlling the pH level.

When using the neutralization kit, replace the neutralizer media as needed. The replacement cycle depends on the frequency of WEC use. Check the pH of the treated drain water during each service period and replace the depleted media if necessary.

To activate the neutralizer function, set switch #3 to the ON position on the DIP switches located on the back of the main panel. After setting the switch, unplug the WEC and then plug it back on. For detailed installation instructions, refer to the instruction manual included in the neutralizer accessory kit.



DIP Switch	Switch Status	Description
3-ON		Activate the neutralizer function
3-OFF		Default

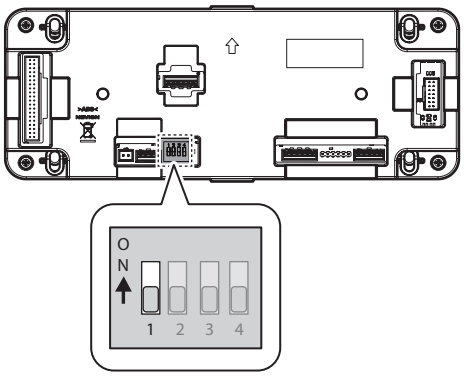
2.10 Performance Mode

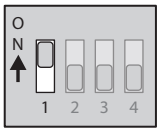
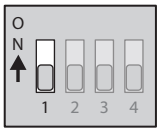
Depending on the application, the TDS control performance for a specific range can be set to its maximum level. This mode is applicable under conditions of 400 ppm or lower and 6 GPM or less. For more detailed information, refer to the performance data sheet below.

To activate the Performance Mode function, set switch #1 to the On position on the DIP switches located on the back of the main panel. After setting the switch, unplug the WEC and then plug it back on.

Brine Solution

Outlet TDS		Inlet TDS (ppm)			
		100	200	300	400
Flow Rate (GPM)	2	5	20	35	50
	4	15	35	50	65
	6	20	45	65	85



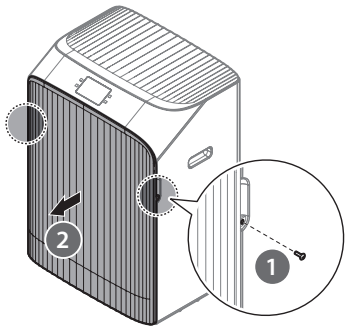
DIP Switch	Switch Status	Description
1-ON		Activate the Performance Mode function
1-OFF		Default

2.11 Filling the Navien CIP Solution

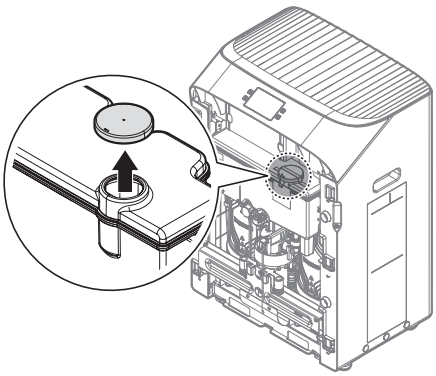
⚠ WARNING

- Always wear the proper personal protective equipment and follow all safety precautions on the Safety Data Sheet when handling CIP solution to prevent serious injury or death.
- Be careful not to let the CIP solution spill or overflow when filling the CIP tank. If the solution overflows, it may cause the product or its components to corrode.

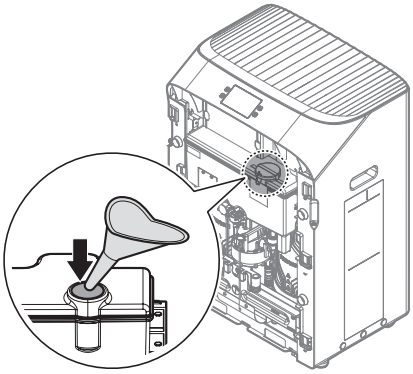
1. Remove the screws on both sides of the front cover and remove the front cover.



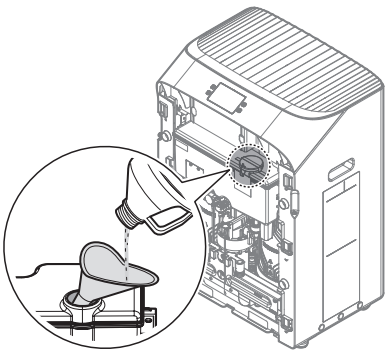
2. Remove the lid on the CIP tank.



3. Insert a funnel into the CIP tank inlet.



4. Fill the CIP tank with CIP solution using the funnel.

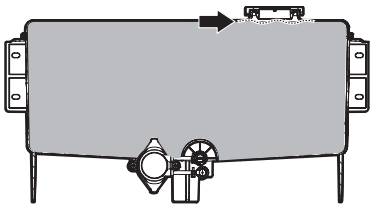


Note After using the funnel, wash it with water to remove any remaining CIP solution.

⚠ WARNING

- Since the Navien CIP solution is corrosive, it may cause damage to the WEC or cause the WEC to malfunction if it is spilled. Always fill the CIP solution slowly and carefully using a plastic funnel to prevent spills..
- If the Navien CIP solution contacts the product or the floor, promptly wipe it with a clean and wet towel.
- Keep CIP in its original container and close it tightly after use.
- Do not use if any solids are visible in the CIP Solution.
- If CIP contacts your skin or eyes, wash with water for several minutes. If ingested, rinse your mouth with water. Avoid breathing in mist or vapors. If symptoms occur, seek medical advice or attention immediately.
- Keep out of reach of children.

5. Fill the CIP tank with the CIP solution as shown below, and then, remove the container and close the lid of the CIP tank.

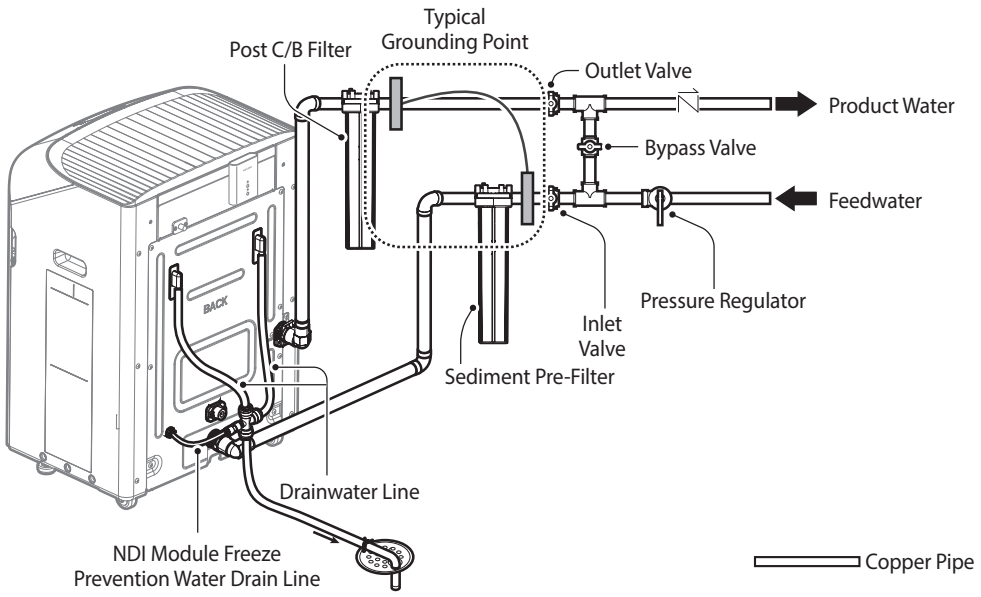


6. Close the front cover and tighten both screws.

2.12 Installation Checklist

After installing the WEC, review the following checklist. You should be able to answer "Yes" to all of the items in the checklist. If not, review the appropriate sections to complete the installation. To troubleshoot any operational problems, refer to "5. Troubleshooting" on page 50.

Installing the WEC	Yes	No
Have you installed the WEC in an appropriate location?		
Have you installed a water bypass for service or maintenance?		
Are the drain tubes properly installed, including an air gap, and the length does NOT exceed 197 in. (5 m)? And, the height does NOT exceed 10 ft (3 m)?		
Have you installed the NDI module freeze prevention water drain line?		
Have you adjusted the leveling feet to make the WEC unit level?		
Have you installed the NaviLink Lite?		
Is the CIP tank full?		
Is the power cord plugged into a properly installed and grounded outlet that meets all local codes and ordinances?		
Is the system inlet correctly hooked up to the cold-water line?		
Have you checked if the feedwater pressure is set within specification?		
Have you installed the sediment pre-filter and post carbon block (C/B) filter properly?		
Is a check valve and expansion tank installed for DHW recirculation systems or storage tank water heaters?		
Are the piping sections at the sediment filter inlet and the carbon block filter outlet properly grounded, and have additional grounding points been installed for any plastic sections as required?		

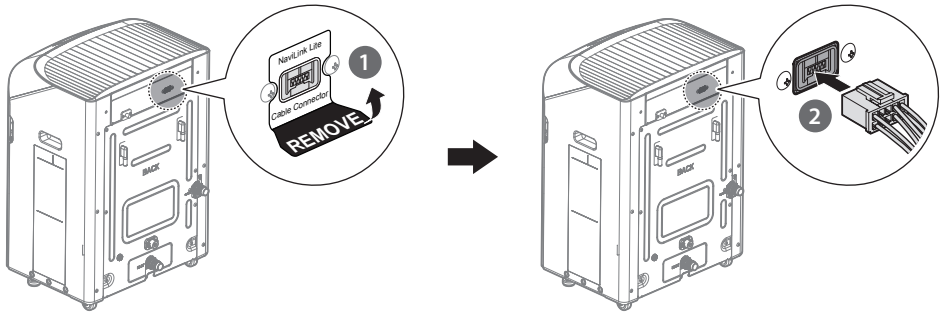


2.13 NaviLink Lite

NaviLink Lite allows you to check the information displayed on the product in real time using your smartphone. For more information, refer to the NaviLink Lite's User Manual.

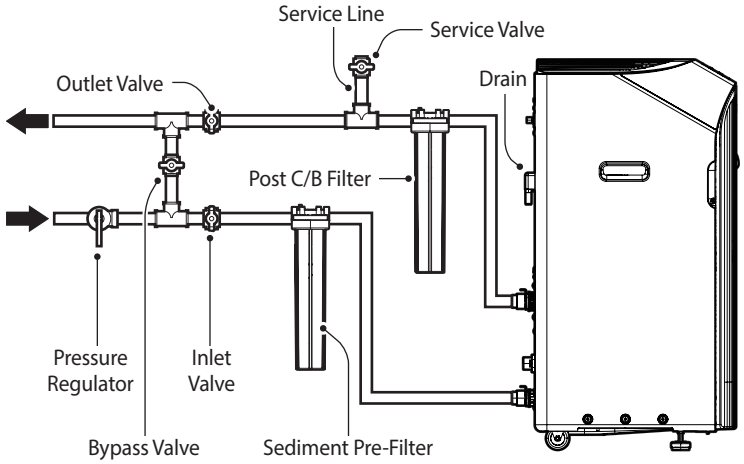
Note

- You can download the NaviLink app from the Google Play Store or the Apple App Store.
- Remove the sticker label on the NaviLink Lite connector before connecting the NaviLink Lite cable.



2.14 Purging and Leak Detection

1. Make sure the WEC is unplugged and the inlet, outlet, bypass and service valves are all closed.

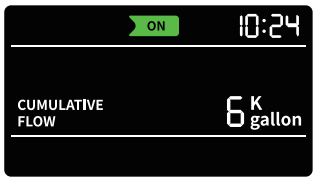


2. Half-open the outlet valve and cold-water faucet closest to the WEC.
3. Slowly open the inlet valve to half-open to fill the filters and WEC. While filling, press the red release button on top of the filters to purge any air inside the filter housing.
4. Fully open the inlet valve and close the outlet valve.
5. Check all water lines going into the WEC system for leaks.

NOTICE

- If there are any water leaks, unplug the WEC and close the inlet and outlet valves. Then, check the WEC and the water lines for damage, including all O-rings.
- Do not plug the unit in or apply power until water connections are properly installed, water is filled, and air is purged from the system.

6. If there are no water leaks, fully open the outlet valve and cold-water faucet.
7. Plug the WEC into a properly grounded outlet. The WEC will enter Install Check Mode automatically. Once Install Check Mode is complete, the WEC will enter the standby state.



NOTICE

- Water must be flowing to the WEC while Install Check Mode is running.
- For more information about Install Check Mode, refer to "3.2 Initial WEC Startup" on page 29.

8. When the WEC is in the standby state, close the cold-water faucet valve.

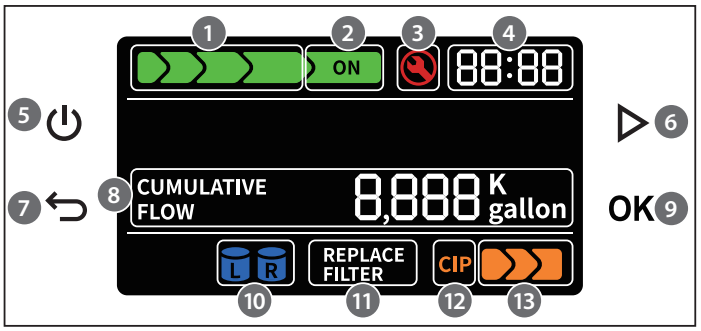
3. Operating the WEC

3.1 Using the Main Panel

The icons and digital display on the main panel provide important information required for the WEC's operation. You can turn the WEC on or off and set the values required for operation.

Note Remove the protective film from the main panel before use.

3.1.1 About the Main Panel



1		**Startup** Shows the status of the unit before it is ready for operation and install-check process.	2	ON	**Boot Complete** The product is ready for operation.
3		**Inspection/Check** Appears when a product error occurs.	4	88:88	**Time** Displays the current time.
5		**Power button** Turn the main panel on or off.	6		**Next button** • Switch between menu items or set the time. • Use to increase or advance values of a setting.
7		**Back button** Returns to the previous state.	8	CUMULATIVE FLOW 8,888 K gallon	**Product Water Volume** Indicates the accumulated product water volume.
9	OK	**OK button** Normal Mode: User info	10	L R	**Product/Regeneration Operation** • **Solid Light**: Product operation • **Blinking**: Regeneration operation
11	REPLACE FILTER	**Replace Filter** • **Solid Light**: Filter cartridge must be replaced. • **Blinking**: Filter cartridge is recommended to be replaced.	12	CIP	**CIP** • **Solid Light**: CIP operation • **Blinking**: Refill CIP solution
13		**CIP&STR Progress** Indicates the status of the CIP&STR cycle.			

3.1.2 Button Functions

			
[Power] button	**[Next] button**	**[Back] button**	**[OK] button**

Depending on how you press the button, you can perform several functions.

Refer to the following table for detailed information on what each button does.

Short Press	Description
[Next]	• Switch between menu items (01, 02, 03…). • Set the time (increase value on screen).
[Back]	Return to the previous screen (menu, state).
[OK]	• Select a menu item. • Stop the audible alert. • Normal Mode: switch between user information screens.

Long Press (more than 3 seconds)	Description
[Power] Long press	Power the WEC ON and OFF. **Note** When the power is off, the internal bypass valve will be opened to provide feedwater.
[Back] Long press	Skip the Initial Regeneration and CIP Mode steps.
[Next] Long press	Set the time and the CIP operation time.
[OK] Long press	Display the feedwater TDS, product water TDS, and cumulative treated water volume after CIP.
[Back]+[OK] Long press	Enter Install Check Mode.
[Back]+[Next] Long press	Enter Installer Setting Mode. • View the status Info, perform forced flushing, forced CIP and error reset, etc.
[Back]+[OK]+[Next] Long press	Enter Reset Mode. • You can reset the filter cartridge period and the CIP tank level.
[Back] Long press + [Power] Short press 3 times (Activated when the main panel is off and the NDI module performance stops)	Enter Factory Reset Mode. • Reset to the factory default state. • All saved data is deleted and initialized.

Note
- If the WEC is powered OFF using the main panel, the WEC will still periodically flush the NDI modules (every 24 hours) to remain ready for use.
- In the event of power loss for over 30 minutes, the time must be set again.

3.2 Initial WEC Startup

The initial WEC startup checks if each valve is operating properly. When the Initial WEC Startup is in progress, the cold-water faucet nearest to the WEC must be open to allow water to flow through the unit.

Install Check Mode

- When the WEC unit is powered on for the first time (or after factory reset), the unit will automatically enter Install Check Mode.
- If Install Check Mode does not automatically initiate after powering on, press and hold the [Back] and [OK] buttons simultaneously for 3 seconds.

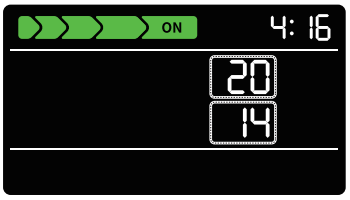
Note

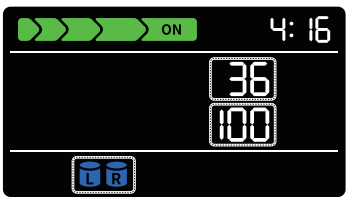
- Follow the Operation Steps on page 21 for Install Check Mode (steps 20-36).
- If an error occurs, press and hold the [Back] and [OK] buttons simultaneously for 3 seconds to dismiss the error.
- Upon initial installation of the WEC, error code E083 may occur due to residual air pressure inside of the product. Dismiss the error and proceed with Install Check Mode again. If the error occurs again even after trying to enter Install Check Mode 2 or 3 times, refer to "5.1 Error Codes" on page 50.
- Errors related to: Water Outage (E002, E003), Apparatus (E020 - E027), or Install Check Mode (E070 - E082) can be dismissed by manually entering Install Check Mode. Press and hold the [Back] and [OK] button simultaneously for 3 seconds.
- Expect Install Check Mode to take at least 15 minutes and may take longer depending on the installation environment to complete.

About Install Check Mode Displays

Follow the operation steps on page 31 for Install Check Mode (steps 20-39).

Note In steps tSE, Cts and Hrd, the values should be set in accordance with the description for each item. All other items are preconfigured and operate automatically.

Item	Description	Display
Install Check Mode (steps 20-36)	• Indicates the Install Check Mode step. • Indicates the progress time. • When checked, it automatically moves on to the next step. • On step 36, ensure the anti-freeze valve is open. You MUST press the [OK] button to move to the next step. • If no errors occur and the [OK] button is pressed in a timely manner at step 36, these steps should take approximately 15 minutes.	

Item	Description	Display
Setting the time (step tSE)	• The value that you are editing should be blinking: 1. Hours 2. Tens of minutes 3. Ones of minutes • Use the [Next] button to increase the value of the blinking section. • Press the [OK] button to move to the next section. • After setting the time, press the [OK] button to confirm the setting. • Once the setting is completed, the configuration will proceed to the CIP operation time setting.	 Indication: Sections in order 1. Hours 2. Tens of minutes 3. Ones of minutes
Setting the CIP operation time (step Cts)	• The value that you are editing should be blinking: 1. Hours 2. Tens of minutes 3. Ones of minutes • Use the [Next] button to increase the value of the blinking section. • Press the [OK] button to move to the next section. • After setting minutes, press the [OK] button to confirm. • Once the setting is completed, the configuration will proceed to the Hardness setting.	 Indication: CIP logo blinking Sections in order 1. Hours 2. Tens of minutes 3. Ones of minutes
Setting the hardness (step Hrd)	• The value that you are editing should blinking: 1. Hundreds digit 2. Tens digit 3. Ones digit • Use the [Next] button to increase the value of the blinking section. • Press the [OK] button to move to the next digit. • Repeat the same steps for all remaining digits. • After setting Ones digit, press the [OK] button, to confirm the setting and exit. • Once the setting is completed, the system will proceed to the initial regeneration mode (steps 37-39).	 Indication: CIP logo & progress bar, HRD solid light
Initial regeneration (steps 37-39)	• Indicates initial regeneration step. • Indicates residual time of initial regeneration step. • If no errors occur, this should take approximately 4 minutes.	

Operation Steps

After power is applied for the first time, it will automatically proceed when entering Install Check Mode, and will proceed step-by-step as shown in the table below.

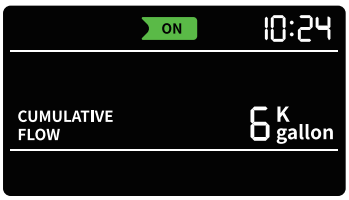
No.	Description
20	Check the valve's operation and prevent seizure.
21	Check whether feedwater is supplied after product installation is completed.
22	Check if the cold faucet nearest to the WEC is open.
23	Check if the main valve and bypass valve are closed.
24	Determine if the main valve and bypass valve are closed.
25	Check if the main valve is open.
26	Check if the bypass valve is open.
27	Check if the product water valve is closed.
28	Check if the regeneration valve is closed.
29	Check if the left regeneration valve is open.
30	Check if the right regeneration valve is open.
31	Check if the left product water valve is open.
32	Check if the right product water valve is open.
33	Check if the CIP pump is working.
34	Check if the circulation pump is working.
35	Flush the CIP solution used in the pump checking step.
36	a. Check if the anti-freezing valve is open. When the valve is opened, you can see the water flowing through the drain line. b. After checking visually, you MUST press the [OK] button to move to the next step.
tSE, Cts	Enter the current time and the time required for automatic CIP operation.
Hrd	Enter the measured inlet water hardness value. The CIP cycle is adjusted according to the hardness level.
37	Left NDI module regeneration
38	Right NDI module regeneration
39	Left/Right NDI module flushing

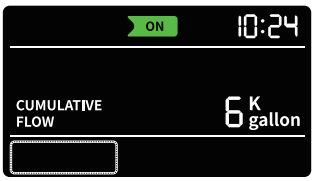
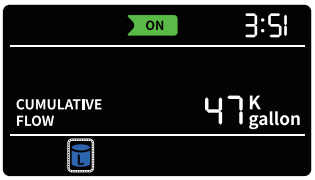
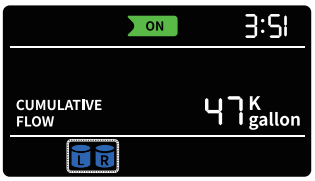
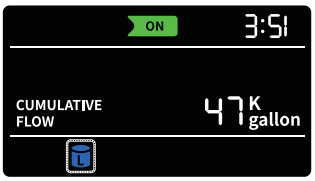
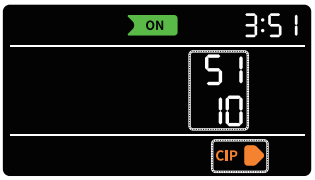
3.3 Powering ON and OFF

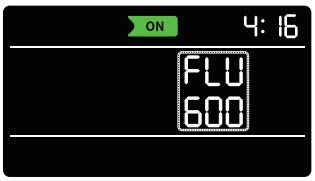
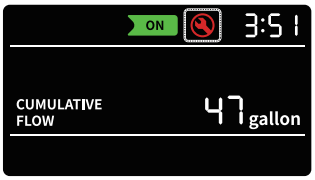
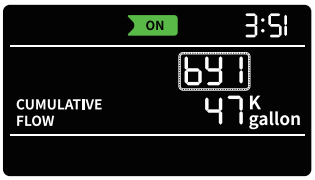
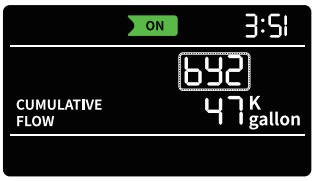
3.3.1 Powering ON Mode

To power on from off mode, press and hold the [Power] button for 3 seconds. The "ON" indicator and the user information will be displayed.

This mode includes various states during WEC operation, which are described in the following table.



Display	State	Description
 No sign	Standby state	The device is ready to treat water when needed.
 Solid Light: one module	Product state	During this state, water is being used, and one of the modules will be treating it.
 Solid Light: one module Blinking: one module	Product and Regeneration state	During this state, water is being used, and one of the modules will be treating it. The other module has reached capacity and is regenerating.
 Blinking: one module	Regeneration state	The device is ready to treat water when needed. One of the modules has reached capacity and is regenerating.
 Solid Light: CIP + CIP progress	Regeneration Line CIP state [1]	This state is for descaling the regeneration line. There are a total of 5 steps, which are displayed at the top of the screen, and the remaining time for each step is displayed at the bottom of the screen. This state takes approximately 17 minutes.

Display	State	Description
 Solid Light: CIP + CIP progress	CIP state [1]	This state is for descaling the unit's internal scale. There are a total of 14 steps, which are displayed at the top of the screen, and the remaining time for each step is displayed at the bottom of the screen. This state takes approximately 2 hours.
	CIP Flushing state [1]	This state is for flushing in case of an error during the CIP state. FLU is displayed at the top and the remaining time is displayed at the bottom of the screen.
 Solid Light: inspection/check icon	Soft error state	This state indicates that there is an issue with the unit, however, it does not significantly affect the product's operation. During this state, product water can still be used. **Note** When a low-level error occurs, contact Technical Support at 1-800-519-8794.
 Solid Light: inspection/check icon	Error state [1]	This state indicates that there is an issue with the unit and it is unable to operate. An error code is displayed. **Note** When an error occurs, refer to "5. Troubleshooting" on page 50 for a detailed explanation or contact Technical Support at 1-800-519-8794.
	Module protection state (High feedwater TDS) [1]	This state is to protect the module when the feedwater TDS is higher than 1000 ppm.
	Module protection state (High feedwater temperature) [1]	This state is to protect the module when the feedwater temperature is high.

[1] During this state, feedwater is supplied through the internal bypass valve, not the NDI modules.

3.3.2 Powering OFF Mode

Powering Off Mode can be accessed by pressing the [Power] button for 3 seconds. The user information will disappear, and the time will be the only indicator remaining.

If the Powering Off Mode is activated, feedwater will still be provided to the home if water is used.

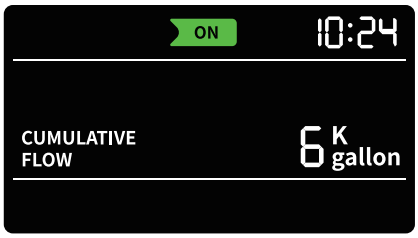
Note Under no circumstances should you ever simply unplug the power cord. The WEC will still periodically flush the NDI modules (every 24 hours from last used) to remain ready for use.

3.4 Viewing User Information

You can view detailed user information during the following operation:

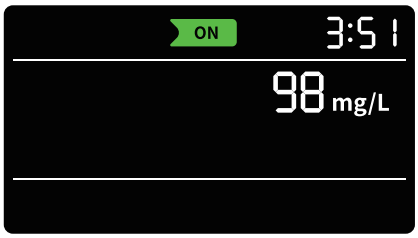
- After the Install Check is complete: you can view this information in the standby state.
- From any menu, press the [Back] button multiple times until reaching this screen.

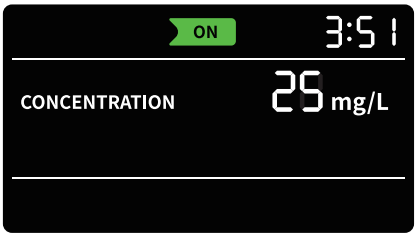
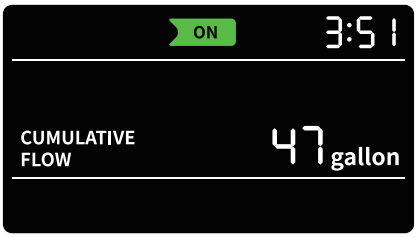
Refer to the following table for information provided in this state.

No.	Item Description	Display
1	The cumulative treated water volume since installation or factory reset	

To view additional user information:

- Press and hold the [OK] button for more than 3 seconds in the Stand-by, Product, Product/Regeneration, or Regeneration state (these are the only 4 cases) to view the information shown in the following table.
- Feedwater TDS, product water TDS, and the cumulative treated water volume after CIP will automatically switch on the main panel every 3 seconds.

No.	Item Description	Display
2	Feedwater TDS	

No.	Item Description	Display
3	Product Water TDS **Note** TDS below 25 ppm is displayed as 25 ppm.	
4	The cumulative treated water volume since last performed CIP	

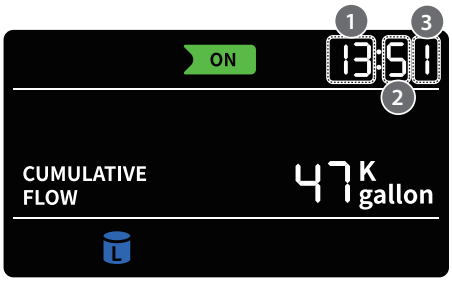
Note The screen on the main panel switches automatically every 3 seconds and returns to the User Information state.

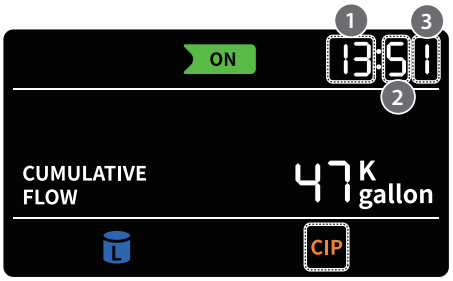
3.5 Setting the Time

You can set the time (both the real time and CIP operation time) in Time Setting Mode.

To set the time:

- Press and hold the [Next] button for more than 3 seconds in Normal Operation, Installation Check, or CIP Mode.
- The digital clock should be blinking.

Task	Item Description	Display
Setting the time	• Press and hold the [Next] button for at least 3 seconds during one of the modes to make the digital clock start blinking. • Press the [OK] button to start editing the real time. The value that you are editing should be blinking: 1. Hours 2. Tens of minutes 3. Ones of minutes • Use the [Next] button to increase the value of the blinking section. • Press the [OK] button to move to the next section. • After setting the time, press the [OK] button to confirm the setting. • To return to the previous step, press the [Back] button. • To exit without saving the changes, press the [Back] button in the hours setting mode.	 Indication: Sections in order 1. Hours 2. Tens of minutes 3. Ones of minutes

Task	Item Description	Display
Setting the CIP operation time	• Press and hold the [Next] button for at least 3 seconds during one of the modes to make the digital clock start blinking. • Press the [Next] button, and the CIP logo will start blinking. • Press the [OK] button to start editing the preferred CIP operation time. The value that you are editing should be blinking: 1. Hours 2. Tens of minutes 3. Ones of minutes • Use the [Next] button to increase the value of the blinking section. • Press the [OK] button to move to the next section. • After setting minutes, press the [OK] button to confirm the setting and exit. • To return to the previous step, press the [Back] button. • To exit without saving the changes, press the [Back] button in the hours setting mode.	 Indication: CIP logo blinking Sections in order 1. Hours 2. Tens of minutes 3. Ones of minutes

Note
- If the [Back] button is pressed or there is no button input for 5 minutes, the clock reverts to the Stand-by state.
- When the [OK] button is pressed, the setting value is saved and reverts to the Stand-by state.

3.6 Setting the ECO Mode (Water-Saving Mode)

This mode is intended to reduce the volume of drain water discharged during the regeneration process. When activated, it conserves water by limiting the amount released to the drain. However, under certain conditions, the system may supply product water with temporarily elevated Total Dissolved Solids (TDS).

Task	Item Description	Display
Setting the ECO Mode	• Press and hold the [Next] button for at least 3 seconds. • Press the [Next] button twice to select "ECO". The display will show as in the figure. • You can turn ECO Mode on or off by pressing the [OK] button. (OFF: disabled, ON: enabled) • Pressing the [Back] button will activate the mode you selected and return you to the previous step.	 on: ECO Mode is on.  oFF: ECO Mode is off.

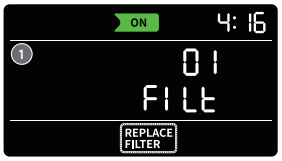
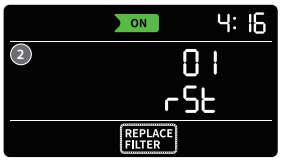
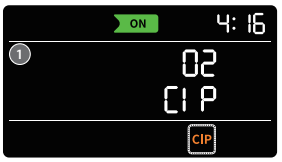
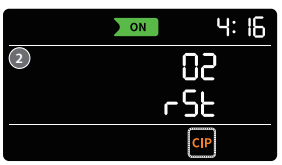
Note By default, ECO Mode is OFF.

3.7 Filter and CIP Reset

This mode is used to reset the remaining tank amount after refill and initializing the period of use after replacing the filter cartridge.

To enter Reset Mode:

- Press and hold the [Back], [OK], and [Next] buttons simultaneously for 3 seconds while in Normal Operation, Installation Check, or CIP Mode. The display will indicate "01", or "02".
- Use the [Next] button to reach the different menu options described in the table below.

No.	Option	Instruction	Display/Indication
1	Initialization of filter replacement period	After entering Reset Mode: • Press the [Next] button for option "01". The display will show as in the figure ①. • When the figure ① is displayed, press the [OK] button and the display will take you to the figure ②. • Press [OK] button on the figure ②. The system will reset the filter period and return to the previous state. Refer to "4.1 Replacing the Filter Cartridges" on page 42.	 Blinking: REPLACE FILTER icon  Solid Light: REPLACE FILTER icon
2	Initialization of remaining CIP solution amount	After entering Reset Mode: • Press the [Next] button for option "02". The display will show as in the figure ①. • When the figure ① is displayed, press the [OK] button and the display will go to the figure ②. • Press [OK] button on the figure ②. The system will reset the CIP solution amount and return to the previous state. Refer to "4.2 Refilling the CIP Solution" on page 46.	 Blinking: CIP icon  Solid Light: CIP icon

Note If the [Back] button is pressed or there is no button input for 5 minutes, it will return to the previous state.

Entering Factory Reset Mode

Factory Reset Mode is used to delete all the saved data.

- Press and hold the [Back] button and press the [OK] button shortly three times in the state that the panel is off and NDI modules performance stops.
- Indicates Factory Reset Mode (FCt).

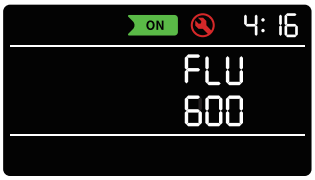
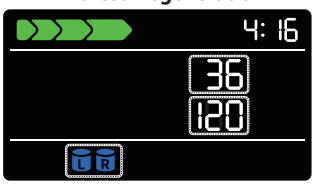
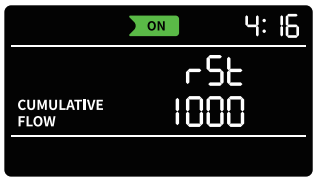
Note Reset to the Factory Default State and enter Install Test Mode.

3.8 Using Installer Setting Mode

This mode is used to achieve various functions, as shown in the following table.

- Press and hold the [Back] and [Next] buttons simultaneously for 3 seconds while in Normal Operation, Installation Check, or CIP Mode.
- Use the [Next] button to reach the different menu options described in the table below.

No.	Option	Instruction
1	**Status Information** 	• Press the [OK] button to select the option 01 to access status information • Press the [Next] button to reach the different items (S01, S02, S03… S31) and below the selected item indicate the value of the item.
2	**Technical Information** 	• Press the [OK] button to view the technical information. If you need more information, contact Technical Support at 1-800-519-8794.
3	**Service Mode** 	Press the [OK] button to select the option 03 to access Service Mode (only stand-by state, error has occurred or CIP state). **Note** This mode is used to release internal pressure from the unit before servicing. The regeneration solenoid valve will open, discharging internal pressure. Ensure that the inlet and outlet valves are closed and the drain lines are properly connected.
4	**STR Mode** 	• Press the [OK] button to select the option 04. • Displays STR state steps (total 8 steps) and remaining time. **Note** Once started, the STR process cannot be stopped. This will take 2 hours.
5	**Test Frozen Valve** 	• Press the [OK] button to select the option 05 to access test frozen valve (only in Normal Mode or if an error has not occurred). • Press the [OK] button to open or close the frozen valve. • Displays Frz and on (valve open) or off (valve close).

No.	Option	Instruction
6	**Forced Flushing** 	• Press the [OK] button to select the option 06 to start a forced flushing (only in Stand-by state, if an error has occurred or CIP state). • Displays FLU and remaining time (600 sec). **Note** Once started, flushing can be skipped by continuously pressing the [Back] button.
7	**Forced Regeneration** 	• Press the [OK] button to select the option 07 to start a forced regeneration (only in Stand-by state, if an error has occurred or CIP state). • Displays initial regeneration steps (37-39) and remaining time (120 sec*2 cycle).
8	**Forced CIP** 	• Press the [OK] button to select the option 08 to start CIP manually (only in Stand-by state, if an error has occurred or CIP state). • Displays CIP state steps (total 14 steps) and remaining time. **Note** Once started, the CIP process cannot be stopped. This will take 2 hours. Steps can be skipped by continuously pressing the [Back] button.
9	**Reset Accumulated Product Water Amount** 	• Press the [OK] button to select the option 09. • Confirm accumulated product water amount and reset by pressing the [OK] button.
10	**Error History Mode** 	• Press the [OK] button to select the option 10 to access Error History Mode. • Use the [Next] button to move through history (The most recently occurred error is 00, and errors are recorded in the order of 01, 02, 03, ..., 09 by time). • Display history error and elapsed time, and the elapsed time indicates the time passed between the selected error and the previous error. • Press the [OK] button to return to Normal Operation, Installation Check, or CIP Mode.
11	**Error Reset** 	• Press the [OK] button to select the option 11. • Press the [OK] button again to clear the error displayed on screen.

3.9 Additional Modes

CIP (Clean-In-Place) Mode

The WEC operates in CIP mode approximately once every ten days, during which it may temporarily discharge acidic wastewater.

Note The CIP cycle frequency varies depending on usage.

During CIP operation, wastewater with a pH of 5.5 or lower is discharged at a rate of 1.8 GPM for approximately 13 minutes. When disposing of the CIP wastewater from the WEC, comply with applicable local codes and regulations to ensure the use of proper disposal methods.

When the main panel is turned on and one of the following conditions is satisfied, CIP Mode is automatically performed.

- The CIP (Clean-in-Place) process involves cleaning the interior surfaces of the flow path, modules, and fittings with a weak acid solution. It is typically done to remove product residues, microorganisms, and other contaminants to maintain hygiene and product quality standards. In this scenario, CIP occurs every 2200 gallons and typically lasts for a set duration to ensure thorough cleaning. This will take 2 hours.
- It is usually performed whenever a module has reached capacity. The duration of a flush can vary depending on the water usage. Unlike CIP, regeneration does not involve a weak acid agent. On the other hand, flushing refers to the process of quickly passing a volume of water through modules to remove debris or contaminants.
- If the WEC is not used for 10 days, CIP will activate automatically when the unit is connected to a power supply.

Note

- When the neutralizer function is used, CIP Mode will take about 4 hours. (Refer to "2.9 Installing a Neutralization Kit" on page 21 to activate the neutralizer function.)
- When using water during CIP Mode operation, there is no restriction on water usage because feedwater is supplied through the internal bypass valve.
- During CIP operation, some noise may occur due to the operation of the circulation pump.
- The CIP cycle is automatically adjusted based on the conditions of the feedwater. It may be reduced from the cumulative usage mentioned above.

Auto Flushing Mode

Regardless of whether the unit is **powered ON or Powering OFF Mode**, if there is no water usage for 24 hours, the internal flow path will automatically be flushed and cleaned every 24 hours.

Note The WEC must be connected to a power supply for Auto Flushing Mode to operate.

Regeneration Mode

The regeneration process involves a minor water flow to the drain. This is to dispose of the hardness and minerals that were removed from the water.

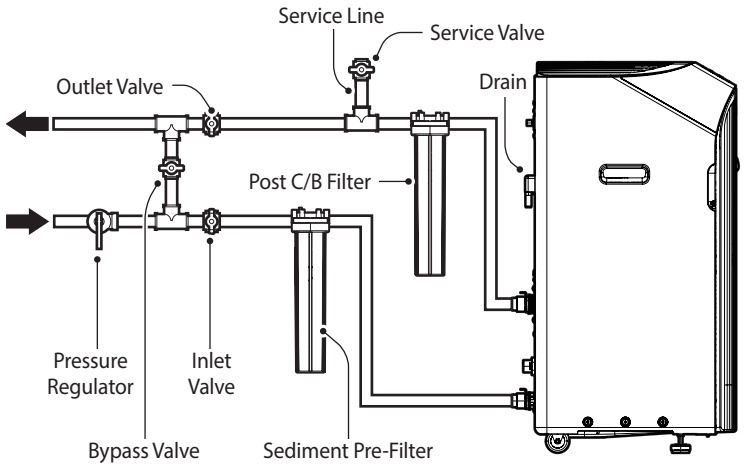
Error Mode

When an issue is detected, an error code will be displayed on the main panel, the unit will open the internal bypass valve and feedwater will be supplied.

NOTICE

To prevent property damage if the unit is leaking:

- Close the inlet and outlet valves.
- Open the bypass valve (manual valve upstream of WEC).



Note
- When an error occurs, refer to "5. Troubleshooting" on page 50 for a detailed explanation.
- If you receive an error code, contact Technical Support at 1-800-519-8794.

STR (Sterilization) Mode

This mode removes odors by sterilizing the inside of the product when it is contaminated by feedwater, such as microbiologically unsafe or unknown quality adequate disinfection, or when the product has been unused for an extended period.

Note When using water during STR Mode operation, there are no restrictions on water usage, as the feedwater is supplied through the bypass line outside the product.

NDI Module Freeze Prevention Mode

This system features a freeze prevention mode to prevent the NDI module from freezing in cold weather. The NDI module freeze prevention mode activates when the ambient or incoming water temperature falls below a set threshold, indicating abnormal conditions. It continuously drains water through a dedicated line, which may increase water consumption. The mode deactivates when the temperature rises above the threshold.

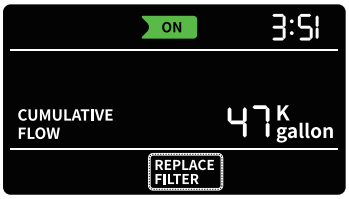
NOTICE

Water consumption may increase when this mode is active. Check the ambient temperature of the product and take appropriate action to resolve the issue and to prevent damage to the WEC or the piping.

4. Maintaining the WEC Series

4.1 Replacing the Filter Cartridges

When the filter cartridges need to be replaced, the REPLACE FILTER icon will light up or blink, and a notification sound will occur.

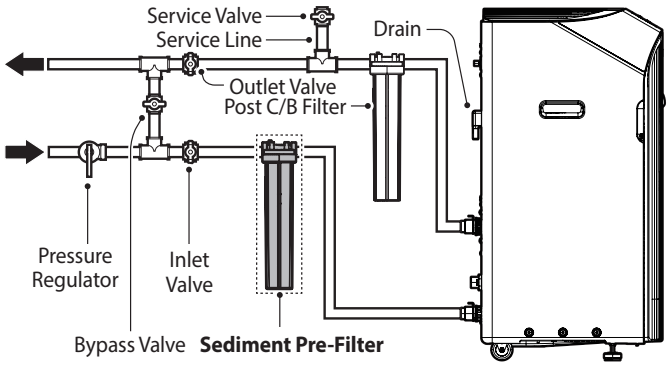


Note

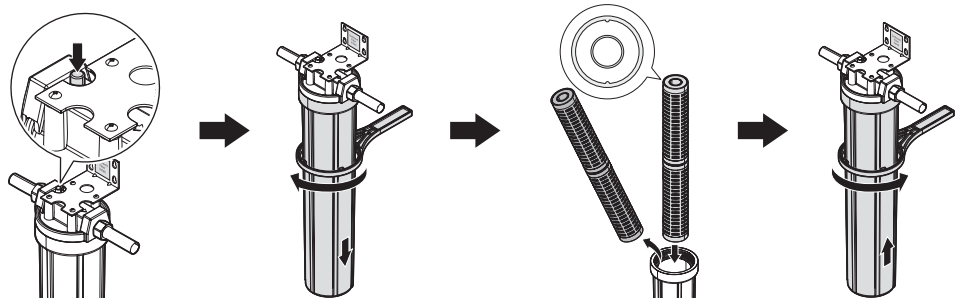
- When the REPLACE FILTER icon is blinking, it is recommended to replace the filter cartridges.
- When the REPLACE FILTER icon remains lit, it is necessary to replace the filter cartridges.

4.1.1 Replacing the Sediment Pre-Filter Cartridge

Refer to the following diagram for the location of the sediment pre-filter.



Refer to the following for changing the cartridge in the sediment pre-filter.



NOTICE

Failure to replace components on schedule may result in contaminated water supply and impact system performance.

- It is recommended to replace every 6 months or sooner.
- Filter replacement may be required before the indicator "Replace Filter" appears on the display due to feedwater quality. Loss of pressure or flow at the fixtures may indicate the need for filter replacement (Cartridge Part List No. 30030964*).
- Make sure to close the service valve after the sediment pre-filter cartridge replacement is completed. If the service valve remains open, this may cause a decrease in the product water flow rate.
- The sediment pre-filter must be installed between the inlet valve and the feedwater inlet to the WEC.

1. Unplug the WEC power cord from the wall outlet (WEC power off).

   Note If the power is not turned off, an error will occur and the filter cannot be replaced.

2. Close the inlet and outlet valves.
3. Open the bypass valve.
4. Release the pressure inside the filter by pressing the red pressure release button on top of the sediment pre-filter housing cover.

   Note If the sediment pre-filter housing cover does not have a pressure release button, close the bypass valve and open the outlet valve and open the closest cold water faucet or service valve. Close the outlet valve, open the bypass valve, and close the cold water faucet once the pressure has been released. Do NOT drain all of the water from the plumbing.

5. Remove the sediment pre-filter housing with the filter housing wrench.
6. Remove and discard the used cartridge.
7. Clean inside of the sediment pre-filter housing.
8. Install the new cartridge. Make sure the top gaskets are in place.
9. Make sure the cartridge is centered in the sediment pre-filter housing and tighten using the filter housing wrench.
10. Close the bypass and service valves and open the inlet and outlet valves.
11. Press the red pressure release button on top of the sediment pre-filter housing to purge the air inside the sediment pre-filter housing.
12. Plug the WEC power cord into the wall outlet (WEC power on). The WEC will start in Auto Flushing Mode immediately and purge any excessive air. Once completed, the WEC will be on standby.
13. After replacing the filter cartridge, reset the use period for the sediment pre-filter.
    (Press and hold the [Back], [OK], and [Next] buttons simultaneously for 3 seconds. For more details, refer to "3.7 Filter and CIP Reset" on page 37.)

Note

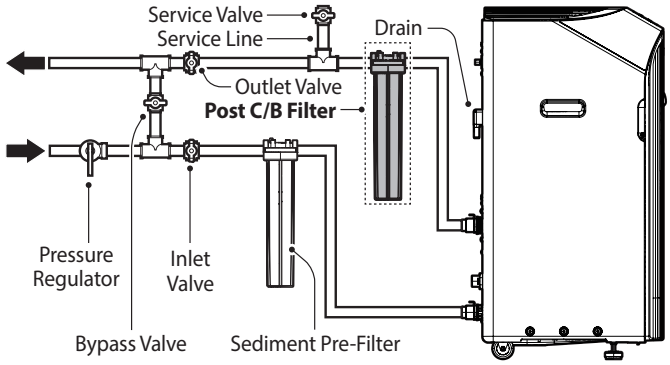
- For further information and to purchase replacement components, visit https://www.navieninc.com/where-to-buy.
- Sediment pre-filter and adapters are only NSF372 certified.

NOTICE

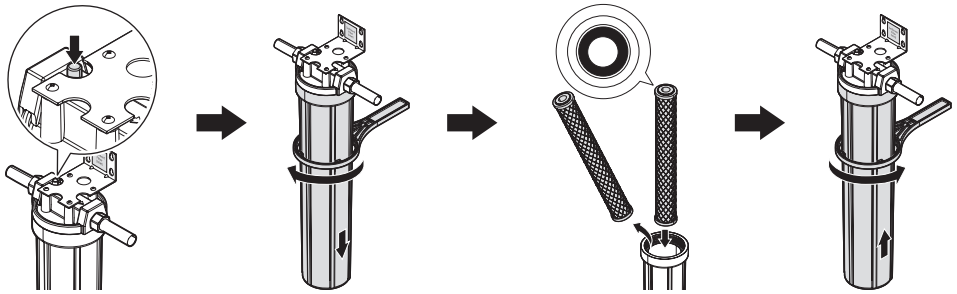
Avoid exposing the internal components to air for more than 4 hours, as this can cause biofouling, damage to the unit, and reduce its efficiency.

4.1.2 Replacing the Post Carbon Block (C/B) Filter Cartridge

Refer to the following diagram for the location of the post carbon block (C/B) filter.



Refer to the following for changing the cartridge in the post carbon block (C/B) filter.



NOTICE

Failure to replace components on schedule may result in contaminated water supply, impacting the system performance.

- It is recommended to replace every 6 months or sooner.
- Filter replacement may be required before the indicator "Replace Filter" appears on the display due to feedwater quality. Loss of pressure or flow at the fixtures may indicate the need for filter replacement (Cartridge Part List No. 30039595*).
- Make sure to close the service valve after the Post Carbon Block (C/B) Filter cartridge replacement is completed. If the service valve remains open, this may cause a decrease in the product water flow rate.
- The post carbon block (C/B) filter must be installed between the product water outlet and the tee for the service valve.

1. Unplug the WEC power cord from the wall outlet (WEC power off).

   Note If the power is not turned off, an error will occur and the filter cannot be replaced.

2. Close the inlet and outlet valves.

3. Open the bypass valve.

4. Release the pressure inside the filter by pressing the red pressure release button on top of the post carbon block (C/B) filter housing cover.

   Note If the post carbon block (C/B) filter housing cover does not have a pressure release button, close the bypass valve and open the outlet valve and open the closest cold water faucet. Close the outlet valve, open the bypass valve, and close the cold water faucet once the pressure has been released. Do NOT drain all of the water from the plumbing.

5. Remove the post carbon block (C/B) filter housing with the filter housing wrench.
6. Remove and discard the used cartridge.
7. Clean inside of the post carbon block (C/B) housing.
8. Install the new cartridge. Make sure the top gaskets are in place.
9. Make sure the cartridge is centered in the post carbon block (C/B) filter housing and tighten using the filter housing wrench.
10. Close the bypass and outlet valves and open the inlet and service valves.
11. Press the red pressure release button on top of the post carbon block (C/B) filter housing to purge the air inside the post carbon block (C/B) filter housing.
12. When using the service line for flushing the post carbon block (C/B) filter, open the service valve and allow the water to drain for 3 minutes.

    Note The post carbon block (C/B) filter cartridge may contain fine black powder. These particles will be flushed out of the filter during this step.

13. Close the bypass and service valves and open the inlet and outlet valves.
14. Plug the WEC power cord into the wall outlet (WEC power on). The WEC will start in Auto Flushing Mode immediately and purge any excessive air. Once completed, the WEC will be on standby.
15. After replacing the filter cartridge, reset the use period for the post carbon block (C/B) filter.
    (Press and hold the [Back], [OK], and [Next] buttons simultaneously for 3 seconds. For more details, refer to "3.7 Filter and CIP Reset" on page 37.)

Note

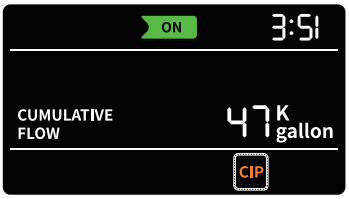
- For further information and to purchase replacement components, visit https://www.navieninc.com/where-to-buy.
- This post carbon block (C/B) cartridge is not related to performance reduction claims.

NOTICE

Avoid exposing the internal components to air for more than 4 hours, as this can cause biofouling, damage to the unit, and reduce its efficiency.

4.2 Refilling the CIP Solution

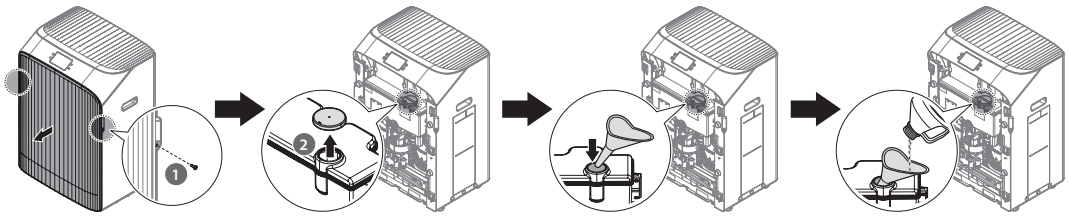
When the CIP Solution needs to be refilled, the CIP icon will blink and a notification sound will occur.



⚠ WARNING

- Since the Navien CIP solution is corrosive, it may cause damage to the WEC or cause the WEC to malfunction if it is spilled. Always fill the CIP solution slowly and carefully using a plastic funnel to prevent spills.
- If the Navien CIP solution contacts the product or the floor, promptly wipe it with a clean and wet towel.
- Keep CIP in its original container and close it tightly after use.
- Do not use if any solids are visible in the CIP Solution.
- If CIP contacts your skin or eyes, wash with water for several minutes. If ingested, rinse your mouth with water. Avoid breathing in mist or vapors. If symptoms occur, seek medical advice or attention immediately.
- Keep out of reach of children.

Refer to the following for filling the CIP solution.



NOTICE

- If the CIP solution is insufficient, the CIP will not function properly, the quality of the water cannot be ensured, and the flow will decrease.
- The CIP cycle is adjusted automatically based on the conditions of the feedwater. The CIP solution refilling cycle could be less than 6 months based on feedwater quality and usage.
- Rinse the plastic funnel before use.

⚠ WARNING

- Always wear the proper personal protective equipment and follow all safety precautions on the safety data sheet when handling CIP solution to prevent serious injury or death.
- Do not add any type of cleaning agent other than citric acid to the CIP tank.

1. Remove the screws on both sides of the front cover and remove the front cover.
2. Remove the lid on the CIP tank.
3. Insert a funnel into the CIP tank inlet.
4. Fill the CIP tank with CIP solution using the funnel.

   Note After using the funnel, clean the funnel properly to remove any remaining CIP solution.

5. Fill the CIP tank with the CIP solution, and then, remove the container and close the lid of the CIP tank.
6. Close the front cover and tighten both screws.
7. After refilling the CIP solution, reset the fill level of the CIP solution by pressing and holding the [Back], [OK], and [Next] buttons simultaneously for 3 seconds. For more details, refer to "3.7 Filter and CIP Reset" on page 37.

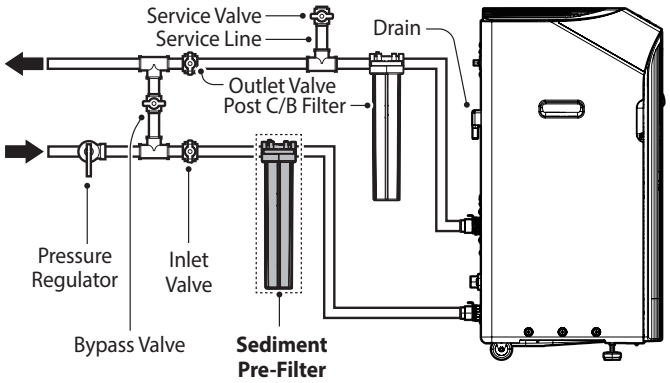
Note For further information and to purchase replacement components, visit https://www.navieninc.com/where-to-buy.

4.3 STR (Sterilization) Mode Operation

When internal sterilization of the product is required, the product enters STR (Sterilization) mode.

Note When using water during STR Mode operation, there are no restrictions on water usage, as the feedwater is supplied through the bypass valve.

Refer to the following diagram for the location of the sediment pre-filter.



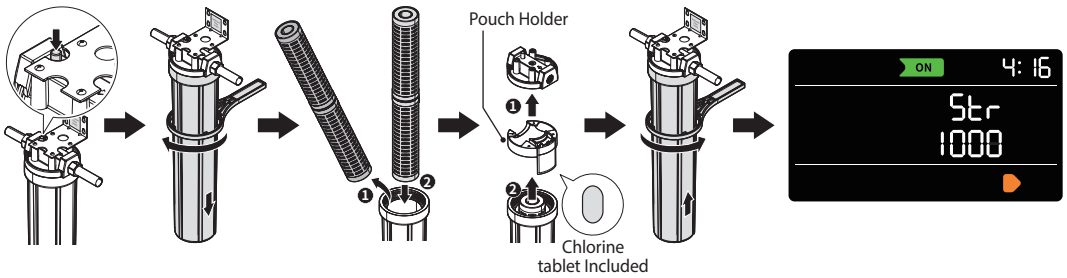
Refer to the following for inserting the Chlorine tablet into the sediment pre-filter.

Note STR Mode operation is a service that must be performed by a certified professional.

⚠ WARNING

To prevent serious injury:

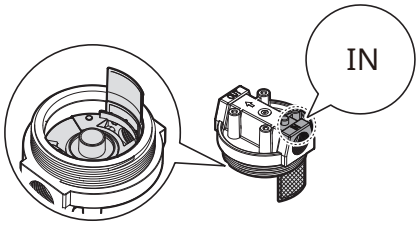
- Always wear impervious gloves and goggles when handling dry chlorine tablets. Dust from chlorine tablets can be highly caustic to mucous membranes and eyes. Moisture in your eye, mouth or nose and any dust can form hydrochloric acid and cause irritation or tissue damage.
- Do not use the Forced CIP Mode (Option 08 of section 3.8, Forced CIP) immediately after completing the STR mode. (CIP is reset after the STR mode.)
- Do not add any type of detergent, including chlorine tablets, into the CIP tank.
- Do not manually stop the STR mode. If it is stopped manually, restart and complete the STR mode.



1. Press and hold the [Back] and [Next] buttons simultaneously for 3 seconds to enter Installer Setting mode and enter STR mode to clean the inside of the product. For more details, refer to "3.8 Using Installer Setting Mode" on page 38.
2. "St0" is displayed on the main panel and flushing is performed for 2 minutes.
3. After "St0" is displayed, "Sin" will appear on the main panel. At this stage, be sure to close the inlet and outlet valves.
4. Open the bypass valve.
5. Release the pressure inside the filter by pressing the red pressure release button on top of the sediment pre-filter housing cover.
6. Remove the sediment pre-filter housing with the filter housing wrench.
7. Remove and discard the used cartridge.
8. Clean inside of the sediment pre-filter housing.
9. Install the new cartridge. Make sure the top gaskets are in place.

10. Insert the pouch holder containing the chlorine tablet into the sediment pre-filter housing cover.

Note When installing the pouch holder, refer to the Service Manual for detailed instructions.



11. Make sure the cartridge is centered in the filter housing and tighten using the filter housing wrench.
12. Open the inlet valve.
13. After completing all the above steps, press the [OK] button to proceed from the "Sin" state to the next state.
14. Following this, the product is sterilized as the system progresses automatically through states St1 to St8.
15. When STR mode ends, reset the usage period for the sediment filter. For more details, refer to "3.7 Filter and CIP Reset" on page 37.

5. Troubleshooting

5.1 Error Codes

⚠ WARNING

Do not touch the power plug with wet hands.

When an error code appears on the main panel, refer to the following table for possible causes and corrections.

Items	Error Name	Error Code	Solution
Water leakage	Water leakage	001	• Check the product for leaks. - If there are leaks, close the inlet valve and open the bypass valve to prevent water from entering the product and use feedwater instead, then call an authorized professional for service. • If there are no leaks, dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
Water outage	Water outage	002	• Check if the customer's house is supplied with water. - If supplied, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared. • If water is not available, wait until supplied and dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Water outage during CIP	003	
High water pressure	High water pressure	010	• Check the pressure of the feedwater. - If above 74 psi (510 kPa), install a pressure regulator. • If below 74 psi (510 kPa), dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.

<table>
<tr><th>Items</th><th>Error Name</th><th>Error Code</th><th>Solution</th></tr>
<tr><td rowspan="4">Apparatus</td><td>Product flow path clogged (Bypass valve or water outage)</td><td>020</td><td rowspan="4">• Check if the customer's house is supplied with water.
- If water is not available, wait until supplied and clear the error using one of the following methods.
• Check the inlet pressure is between 36.3 - 74 psi (250 - 510 kPa).
- if the inlet pressure is lower than the range, increase the pressure and adjust it to within the range.
• If the inlet pressure is 36.3 - 74 psi (250 - 510 kPa), dismiss the error using one of the following methods.
- Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38).
- Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29).
- If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.</td></tr>
<tr><td>Product water line clogged (Product water solenoid valve or main solenoid valve)</td><td>026
027</td></tr>
<tr><td>Bypass line clogged (Bypass valve)</td><td>023</td></tr>
<tr><td>Regeneration line clogged (Regeneration solenoid valve)</td><td>024
025</td></tr>
<tr><td>Regeneration line open (Regeneration solenoid valve)</td><td>021
022</td><td>• Check the inlet pressure is between 36.3 - 74 psi (250 - 510 kPa).
- If the inlet pressure is lower than the range, increase the pressure and adjust it to within the range.
• Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). to clear the error, then check if water flows from the drain outlet in Standby state.
• If water comes out of the drain outlet and the error occurs again, dismiss the error using one of the following methods.
- Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38).
- Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29).
- If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.</td></tr>
<tr><td>Performance</td><td>Abnormal NDI module performance or TDS sensor relay</td><td>041
042</td><td>If an error occurs, clear the error using one of the following methods.
• Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38).
• If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.</td></tr>
</table>

Items	Error Name	Error Code	Solution
CIP	Main CIP or TDS sensor relay	051	• Check the connection of CIP dosing pump and outlet TDS sensors. • Check the remaining amount of the CIP solution tank. - When the solution is insufficient: Refill the solution. • Check for air in CIP line. Purge air and reset. • If the solution is sufficient, dismiss the error using one of the following methods. - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - If CIP does not complete and error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Regeneration line CIP	052	
Sensor	Flow sensor	060 061	• Check the connection of specified sensor. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Pressure sensor	065	
	Temperature sensor	066	
	Ambient air temperature sensor	067	
	TDS sensor	062 063 064	• Check the connection of TDS sensor. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.

Items	Error Name	Error Code	Solution
Install Check Mode	Water connection	070	• Check if the customer's house is supplied with water. - If water is available, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared. • If water is not available, wait until supplied and dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Abnormal faucet opening	071	• Check if the nearest cold-water faucet connected to the WEC is open and cold water is flowing. • If the faucet is open and cold-water comes out, dismiss the error using one of the following methods. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Abnormal close of the bypass valve	072	
	Abnormal close of the main valve	073	
	Abnormal open of the main valve	074	
	Abnormal open of the bypass valve	075	
	Abnormal close of the product water valve	076	
	Abnormal close of the regeneration valve	077 078	• Check the drain line. - Make sure there is no water flowing from the drain line. • Dismiss the error using one of the following methods. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.

Items	Error Name	Error Code	Solution
Install Check Mode	Abnormal open of the regeneration valve	079 080	• Check the drain line. - Check whether water flows through the drain line. • Check the pressure. - Make sure the inlet pressure is within the product specifications. • Dismiss the error using one of the following methods. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Abnormal open of the product water valve	081 082	• Check if the nearest cold-water faucet connected to the WEC is open and cold water is flowing. • If the faucet is open and cold-water comes out, dismiss the error using one of the following methods. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Abnormal operation of CIP check	083	• Check the connection of CIP dosing pump and outlet TDS sensors. • Check the remaining amount of the CIP solution tank. - When the solution is insufficient: Refill the solution. • If the solution is sufficient, dismiss the error using one of the following methods. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.

Items	Error Name	Error Code	Solution
Install Check Mode	Abnormal operation of circulation pump check	084	• Check the circulation pump. - When the pump operates normally, some vibration and noise occur. • If the circulation pump does not work, dismiss the error using one of the following methods. - Enter Install Check Mode (Refer to "3.2 Initial WEC Startup" on page 29). - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
Electronics	Main valve	090	• Check the connection of the specified valve and switch. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Unplug the power cord and plug it back in. - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Bypass valve	091	
	Product water valve	092 093	
	Regeneration valve	094 095	
	Circulation valve	096 097	
	CIP pump	098	
	Circulation pump valve	099	
	Anti-freezing valve	100	
Main panel	Abnormal RTC	105	• Check the connection of main panel. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Abnormal panel key	106	• Check the connection of main panel. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Abnormal EEPROM	107	

Items	Error Name	Error Code	Solution
Main panel	Abnormal memory	615	• Check the connection of main panel. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
Power board	Overheat	110	Dismiss the error using one of the following methods. • Automatic error reset. • Unplug the power cord and plug it back in. • If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Over voltage at DC-Link	111	
	Over current at converter	112	
	Over current at module	113 114	
	IGBT	115	
	Over voltage inverter	116	
	Under voltage inverter	117	
	Over frequency inverter	118	
	Under frequency inverter	119	
	AD offset	120	Dismiss the error using one of the following methods. • Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). • Unplug the power cord and plug it back in. • If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Heat Sink sensor	122	• Check the connection of heat sink sensor. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.

Items	Error Name	Error Code	Solution
Power board	Fan	123	• Check the connection of fan. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Enter Error Code Reset (ErSt) from Installer Setting Mode (Refer to "3.8 Using Installer Setting Mode" on page 38). - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Security-chip	124	Dismiss the error using one of the following methods. • Unplug the power cord and plug it back in. • If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
	Power board communication	130	• Check the connection of main panel and power board. - If not connected, connect it. • If connected, dismiss the error using one of the following methods. - Automatic error reset. - Unplug the power cord and plug it back in. - If the error occurs again, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.

5.2 Understanding Notification

Notification (audible alerts + display on panel) occurs to indicate an issue that requires your attention.

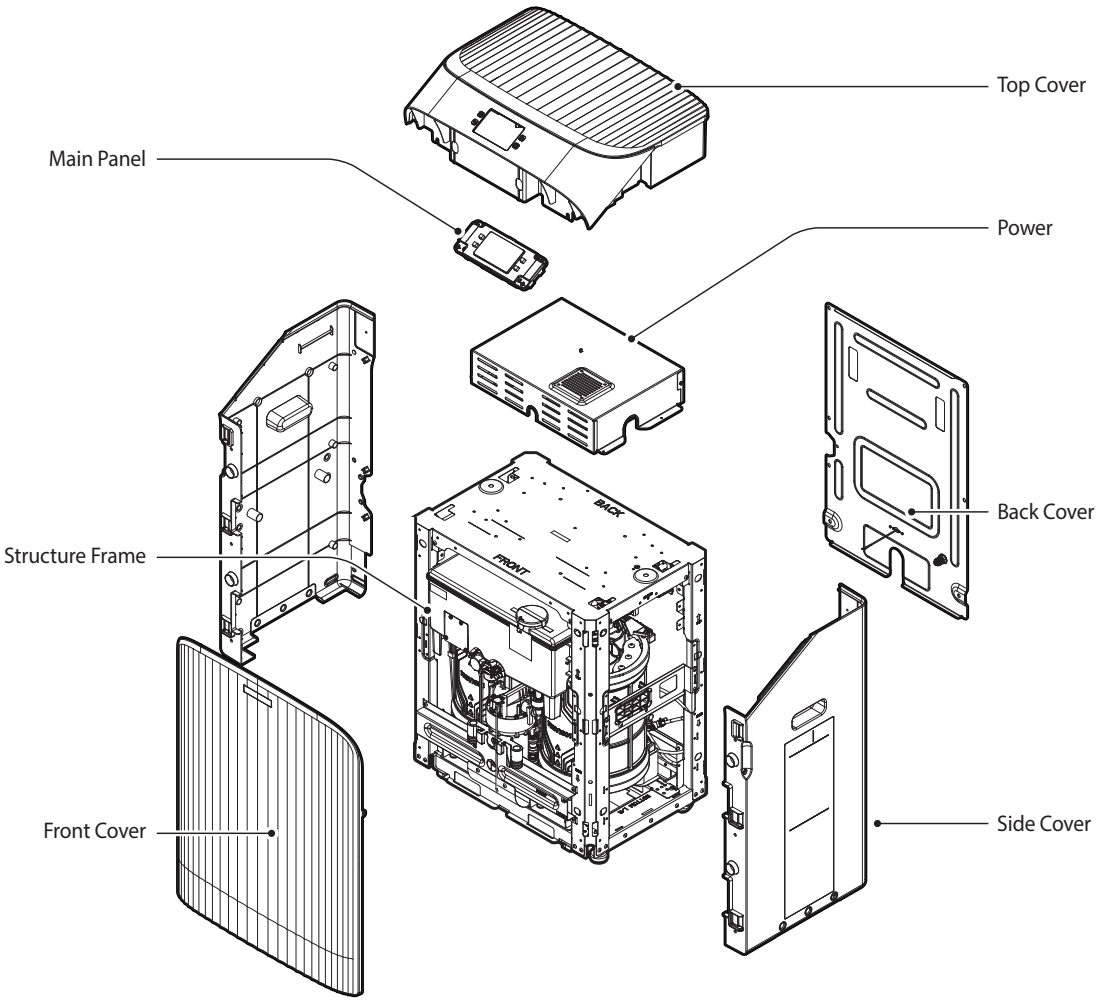
Note
- Pressing the [OK] button will only stop the audible alert, but will not address the issue.
- The unit generates an audible alert for 1 minute at 1-second intervals, stops for 10 minutes, and repeats.

Notification occurs in the following situations:
- When the Navien CIP solution needs to be refilled
- When the filter cartridge needs to be replaced
- When an error occurs

Notification will stop in the following situations:
- When the Navien CIP solution has been refilled (refer to "3.7 Filter and CIP Reset" on page 37)
- When the filter cartridge has been replaced (refer to "3.7 Filter and CIP Reset" on page 37)
- When an error is cleared and reset (refer to "3.8 Using Installer Setting Mode" on page 38)

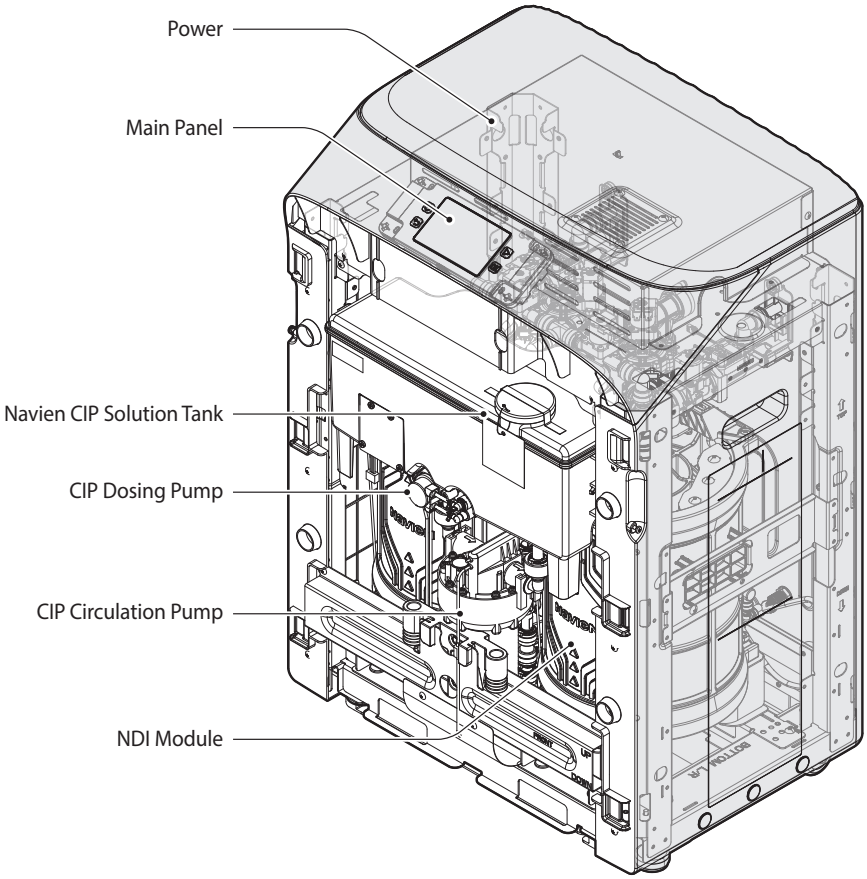
6. Components

6.1 Exterior Parts

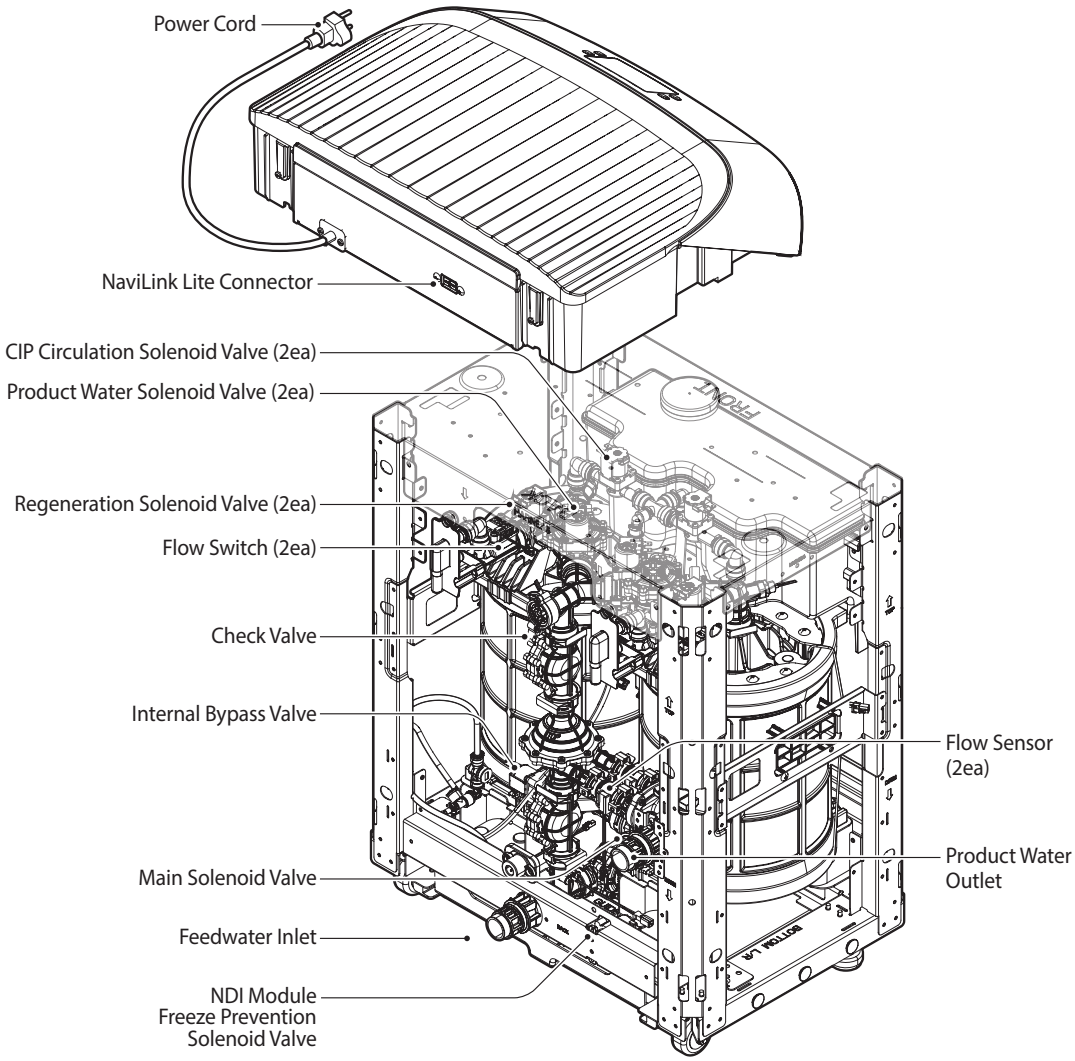


6.2 Internal Parts

Front

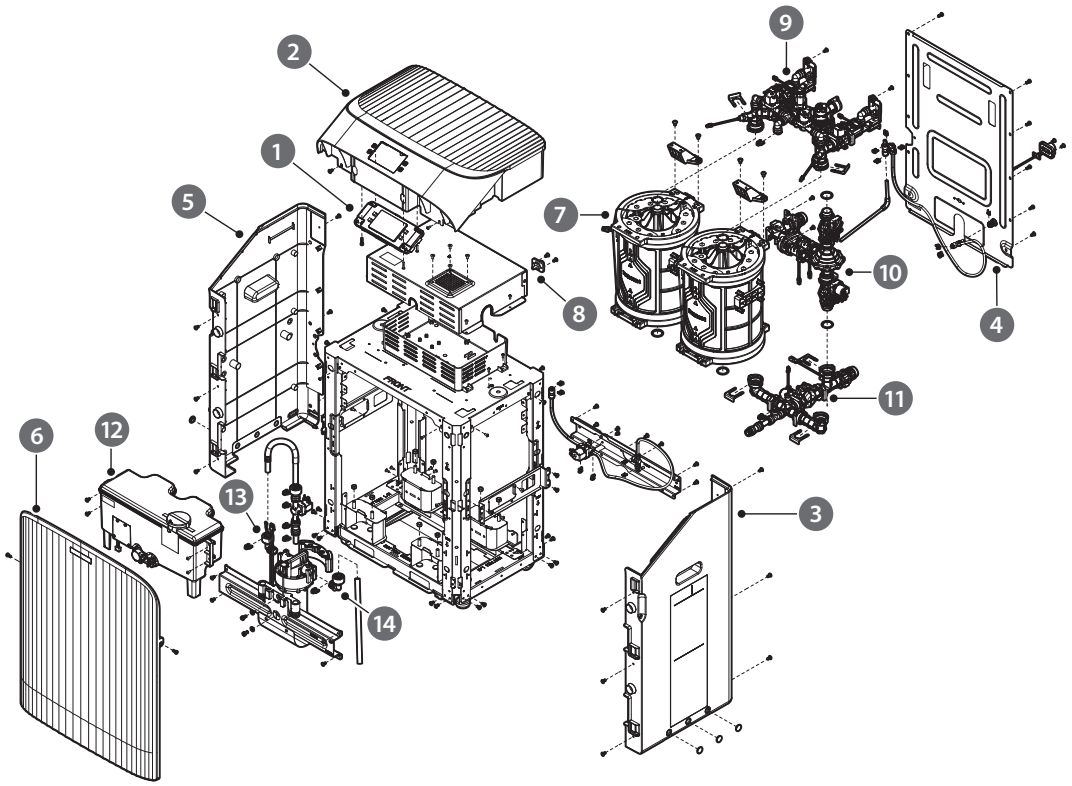


Back


Power Cord
NaviLink Lite Connector
CIP Circulation Solenoid Valve (2ea)
Product Water Solenoid Valve (2ea)
Regeneration Solenoid Valve (2ea)
Flow Switch (2ea)
Check Valve
Internal Bypass Valve
Main Solenoid Valve
Feedwater Inlet
NDI Module
Freeze Prevention
Solenoid Valve
Flow Sensor
(2ea)
Product Water
Outlet
FRONT
BOTTOM L/R

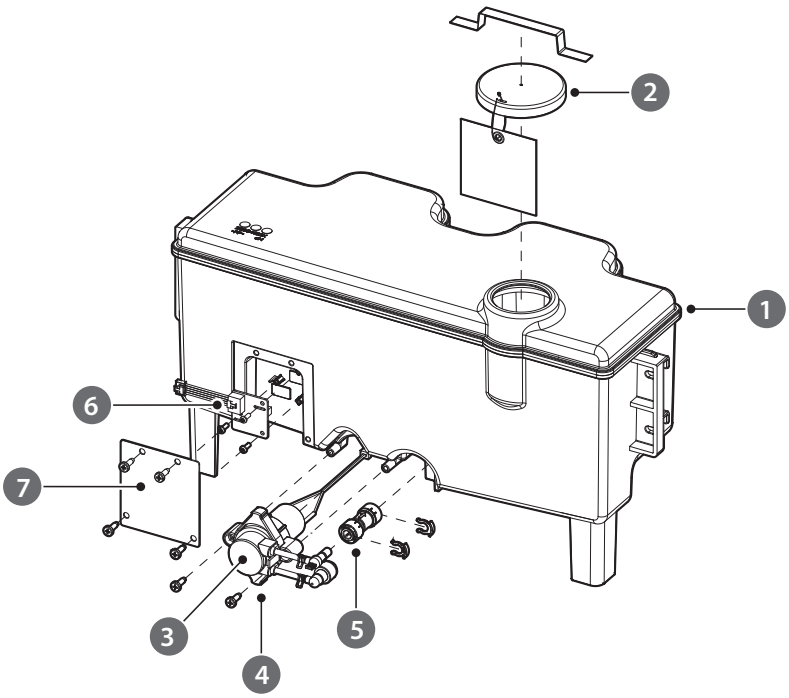
7. Exploded View and Part List

7.1 WEC Series



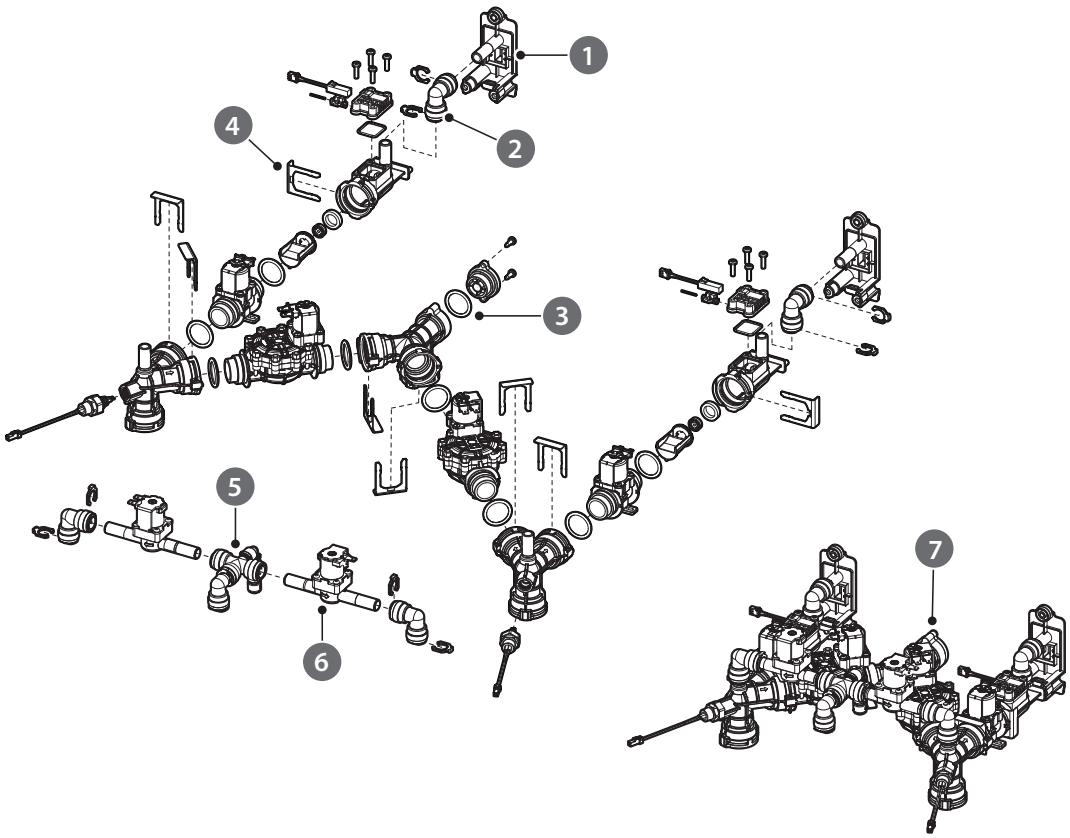
#	Description	Part #
1	Main panel assembly	30027160*
2	Top cover	30026626*
3	Right side cover	20052354*
4	Back cover	20052344*
5	Left side cover	20052355*
6	Front cover	20052356*
7	NDI module	30026926*
8	Power assembly	30025788*
9	Product/regeneration water pipe assembly	30026594*
10	Outlet water pipe assembly	30026595*
11	Inlet water pipe assembly	30026590*
12	CIP tank assembly	30026608*
13	Circulation pump adapter (½" OD)	30026820*
14	Circulation pump	30026819*

7.2 CIP Tank Assembly



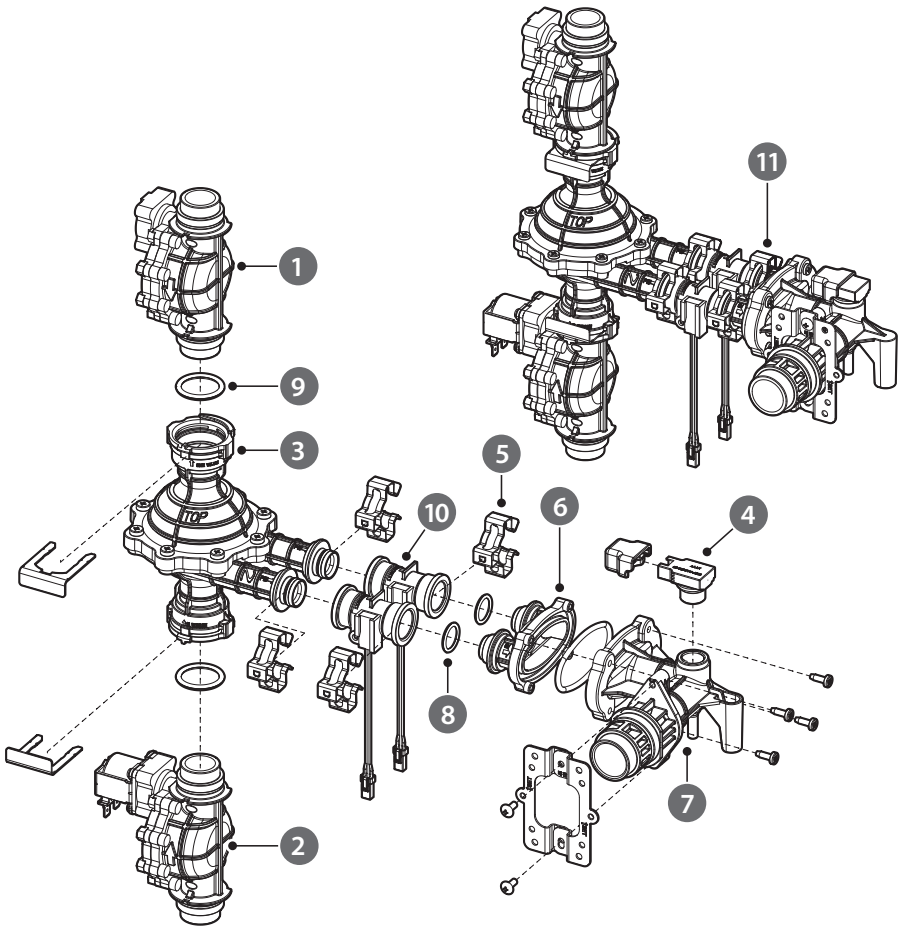
#	Description	Part #
1	CIP tank assembly	30026608*
2	Lid	20052377*
3	CIP dosing pump	30026883*
4	Pump cover	20064158*
5	Connector check fitting (¼" OD)	30033244*
6	CIP solution level sensor	30021794*
7	Decorative film	20064684*

7.3 Product/Regeneration Water Pipe Assembly



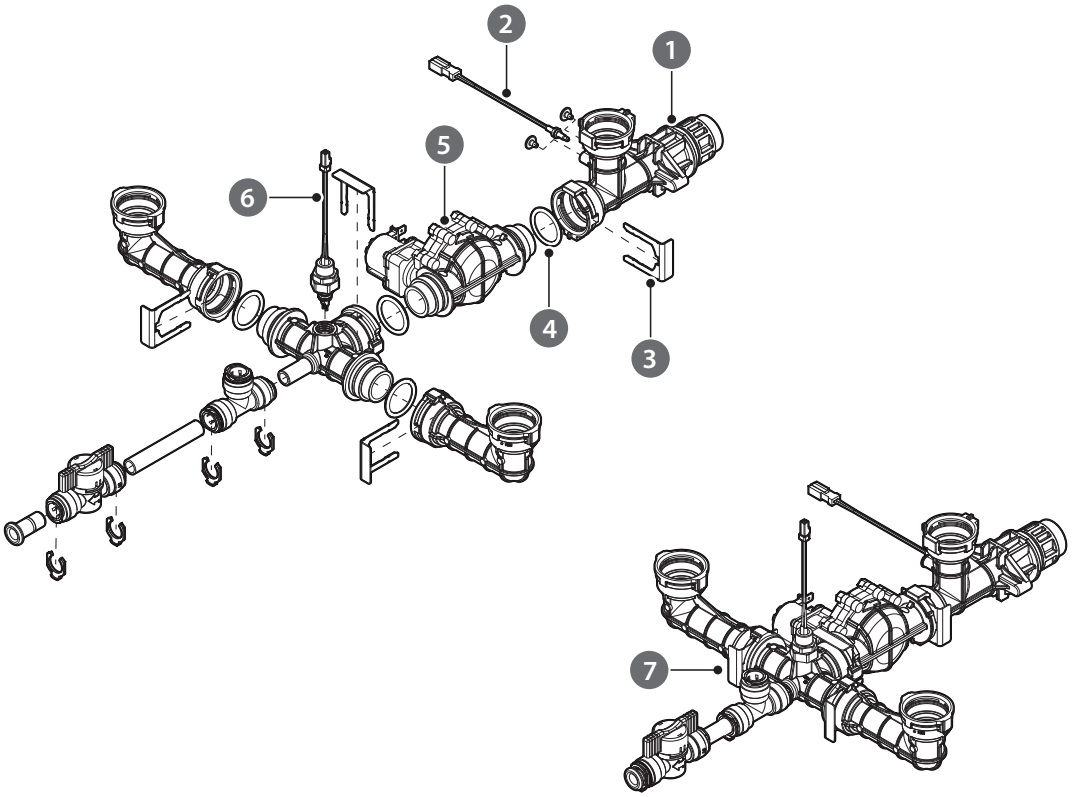
#	Description	Part #
1	Drain outlet	20052907*
2	Elbow fitting (½" OD)	30026876*
3	O-ring P26	20054009*
4	L-Clip 26	20030608*
5	CIP fitting assembly	30028485*
6	Solenoid valve (CIP)	30026823*
7	Product/regeneration water pipe assembly	30026594*

7.4 Outlet Water Pipe Assembly



#	Description	Part #
1	Check valve	30026589*
2	Solenoid valve (bypass)	30025592*
3	Manifold	30032989*
4	Pressure sensor	30022672*
5	D-Clip 25	20007859*
6	Flow sensor cover	20052320*
7	Outlet adapter	20064145*
8	O-ring P16	20076336*
9	O-ring P26	20054009*
10	Flow sensor	30029090*
11	Outlet water pipe assembly	30026595*

7.5 Inlet Water Pipe Assembly



#	Description	Part #
1	Inlet adapter (1" OD)	20064146*
2	Temperature sensor	30033189*
3	L-Clip 26	20030608*
4	O-ring P26	20054009*
5	Solenoid valve	30026316A
6	TDS sensor	30029086*
7	Inlet water pipe assembly	30026590*

8. Limited Warranty

Congratulations on the purchase of your Navien WEC Tankless Electric Water Treatment system. Thank you for choosing Navien to support your water care needs.

Navien, Inc. warrants that the Products identified below are free from manufacturing defects in materials and workmanship.

Effective Limited Warranty Coverage

Navien products include a limited warranty covering parts, starting from the original purchase date. This Limited Warranty covers manufacturing defects and workmanship when installed by authorized professionals and operated according to the Installation & Operation Manual, as specified in the limited warranty document. Improper installation or use will void this limited warranty. The original purchase date must be submitted to Navien, and proof of the date must be provided upon request. This Limited Warranty remains valid to the original purchaser, with limited transferability to subsequent owners, but only while the Product remains at original installation site.

What's Covered

Subject to the foregoing terms, Navien will repair or replace the covered Product, any part, or component that is defective in materials or workmanship during the limited warranty period(s). Under this limited warranty, Navien will furnish replacement part(s) for installation by authorized professionals at no charge for the part(s) to replace any product part that fails due to a manufacturing defect under normal use and maintenance. Navien will repair or replace the covered Product or any part or component (as available), that is defective in manufacturing or workmanship for a period of up to five (5) years for parts and up to a limited warranty, subject to terms. If the Product part is not available, Navien will, at its option, a) provide a suitable part or b) provide a credit in the amount of the then factory selling price for a new suitable substitute part to be used by the end-user's towards the retail purchase price of a new Navien product. Any new Product purchase shall be at the sole expense of the end-user including, but not limited to, all shipping, removal, and installation costs and expenses.

All repair parts must be genuine Navien parts unless otherwise authorized by Navien. All repairs and replacements must be performed by authorized professionals or service companies.

During the limited warranty period, replacement of the Product, parts, or components must be approved by Navien. Navien does not authorize any person or company to assume any obligation or liability in connection with approving replacement of the Product, parts, or components on behalf of Navien. The replacement Product, parts, or components, will be warranted only for the unexpired portion of the limited warranty period for the original component or product.

Limited Warranty Period

Residential

Non-Registered		Registered	
NDI Module	Other Parts	NDI Module	Other Parts
300,000 gallons (1,135,624 liters)	3 years	500,000 gallons (1,892,706 liters)	5 years

Residential means use of the Product solely for personal, family, or household purposes at a dwelling unit used primarily as a residence. If the application is not clearly Residential, Navien may classify the application as Commercial based on the installation site, intended use, and operating conditions.

Commercial

Non-Registered		Registered	
NDI Module	Other Parts	NDI Module	Other Parts
100,000 gallons (378,541 liters)	1 years	200,000 gallons (757,082 liters)	2 years

Commercial means any use of the Product in connection with a business, trade, profession, institutional facility, multi-tenant common area, or revenue-generating activity, including providing treated water to employees, customers, tenants, guests, or the public.

If the Product is registered within sixty (60) days from the date of purchase, the base limited warranty term shall be extended from "Non-Registered" to "Registered" terms in the table above. Any Product not properly registered within sixty (60) days of the purchase date shall be subject to the "Non-Registered" base limited warranty. Proof of the purchase date must be provided upon request. If proof of the purchase date is unavailable, the purchase date will be deemed to be six (6) months after the Product's manufacture date. To register the unit online, go to: https://www.navieninc.com/register to complete Product registration and receive an email confirmation for your records. Or fill out, stamp, and mail, the attached limited warranty registration card.

How to Get Service

You must contact the original installer of your Product. Your installer will need to contact Navien to report the issue. If the original installer cannot be identified or you no longer choose to use that service provider, you may choose any service provider who is authorized to complete the necessary repair. Your service provider will need to contact Navien's Technical Support team at 800-519-8794 or an authorized Navien distributor prior to commencing any limited warranty service. The installer and/or service provider must comply with Navien's limited warranty and return policy procedures as available on the Navien website. Proof of the date of purchase must be provided to Navien. At Navien's request, the defective Product or part must be returned to Navien. If proof of purchase date is unavailable, six months after the unit's manufacture date will be used.

Additional terms and conditions are continued on the reverse side.

Customer Name :

Customer Address :

Telephone : Fax :

Email :

Installer Name : License No :

Installer Address :

Place of Purchase :

Model No :

Serial No :

Date of Purchase :

SKIP THE STAMP!

Use your camera to scan this QR code and register your unit online.

PLACE STAMP HERE

Navien, Inc.
20 Goodyear, Irvine, CA 92618
Tel : 1-800-519-8794
Fax : 949-420-0430
www.navieninc.com

For instant warranty registration, please register your product online at www.navieninc.com

What's Not Covered

Navien's Limited Warranty shall be void in the event of an occurrence of any of the following:

- Improper installation, failure to install in strict compliance with the Installation Manual procedures, installation by unauthorized installer, and installation in violation of applicable rules, laws, or building codes.
- Product purchased through the internet, other e-commerce channels, or any installer that obtained the Product from a supplier or distributor not authorized by Navien.
- Failure to perform regular maintenance, misuse, operation at settings other than those recommended or specified, and non-compliance with instructions or guidelines set forth in the WEC Series product manuals.
- Modification or alteration of the Product in any manner, including but not limited to, removal of any component or part, addition of any nonapproved components, relocating or moving the product from its original installation site or any accidental or intentional damage to the product.
- Installation for non-recommended uses.
- Any damage caused by local adverse conditions including but not limited to feedwater conditions.
- Damage or problems caused by water pressure issues, electrical surges, direct sunlight, flooding, fire, extreme external temperatures, and any other cause of damage not directly caused by a manufacturing defect.
- Installer failure to fully comply with the Limited Warranty Service and Return Policy procedures as is available on the Navien website. Such policies include but are not limited to the Installer's failure to first contact Navien Technical Support while in front of the product for purposes of troubleshooting the identified problem or issue.
- Performance issues due to incorrect sizing of the WEC, exposure to direct sunlight, or improper installation of the water supply line, electrical components, or other system parts.
- Damage, malfunction, or failure caused by external factors such as abuse, negligence, accidents, fire, flood, freezing, wind, lightning, moisture intrusion, biological growth, or other acts of God.
- Operating the WEC with inadequate pretreatment due to failure to properly maintain the sediment pre-filter and post carbon block (C/B) filter.
- Operating the WEC when it is not supplied with Navien CIP solution.
- Operating the WEC outside of the specified water pressure or temperature range listed on the rating plate.
- Installation at any location outside the United States and Canada.
- Removal or alteration of the rating plate.
- Vibration and noise caused by anything other than normal operation of the product.
- Replacement of fuses and replacement or resetting of circuit breakers.
- To maintain the validity of the limited warranty, professional water quality testing must be conducted before installing the WEC. The feedwater quality must fall within the product's specified operational limits.
- This Limited Warranty does not cover failures due to buyer negligence in managing CIP solution and sediment pre-filter and post carbon block (C/B) filter.
- Moving the product from the original installation site. (In the unlikely event that the product needs to be moved, be sure to contact Navien Technical Team in advance.)

Exceptions of Limited Warranty

This Limited Warranty is subject further to the terms and conditions set forth herein and as may be further specified in the Terms and Conditions page located on the Navien website at www.navieninc.com. WITH THE EXCEPTION OF THIS LIMITED WARRANTY, NAVIEN DISCLAIMS ANY OBLIGATION OR LIABILITY WITH RESPECT TO THE PRODUCTS OR THEIR SALE AND USE, AND NAVIEN NEITHER ASSUMES NOR AUTHORIZES THE ASSUMPTION OF, ANY OBLIGATION OR LIABILITY IN CONNECTION WITH THE PRODUCTS. THIS DISCLAIMER INCLUDES ANY OTHER WARRANTIES, EXPRESS, IMPLIED OR

STATUTORY RESPECTING THE PRODUCTS OR ANY PARTS OR COMPONENTS THEREOF, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Navien's total liability for any claim arising hereunder shall not exceed the purchase price which you paid for the Product. NAVIEN SHALL NOT IN ANY EVENT BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL OR LIQUIDATED DAMAGES OR PENALTIES, INCLUDING CLAIMS FOR LOST REVENUE, PROFITS OR BUSINESS OPPORTUNITIES, EVEN IF NAVIEN HAD OR SHOULD HAVE HAD ANY KNOWLEDGE, ACTUAL OR CONSTRUCTIVE, OF THE POSSIBILITY OF SUCH DAMAGES.

State Law and the Limited Warranty

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Retain this document for future reference.

For instant warranty registration, please register your product online at www.navieninc.com

Installation & Operation Manual

WEC Series Tankless Electric Water Treatment System

Getting Service

If your water treatment requires service:

- All repairs require pre-authorization by Technical Support.
- Request for your installer or any licensed professional to contact Technical Support at 1-800-519-8794 Option 2 once at the installation site: www.navieninc.com.
- A short list of independent service providers in your area can be found on the website: www.navieninc.com/installers.

When you contact Technical Support, please have the following information at hand:

- Model number
- Serial number
- Date purchased
- Installation location
- Error code, if any appears on the main panel display.

Version: 1.0 (December, 2025)

NAVIEN

800.519.8794 | www.navieninc.com
20 Goodyear Irvine, CA 92618