Navien

User's Information Manual

WEC Series Tankless Electric Water Treatment System





- 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.

A 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



- 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.

A 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 "Connecting the Drain Lines" in the Installation & Operation Manual for more information.
- Do not remove the inlet/outlet cap on the product until you have connected it to the pipe.

▲ CAUTION

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.

A 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.
- If you have any problems while using the product, please contact Navien Technical Support at 1-800-519-8794.
- STR (Sterilization) Mode operation is a service that must be performed by a certified professional.

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.

A 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 Description of the WEC

The Navien water treatment is available in 2 models: WEC400 and WEC600.

This product is a point-of-entry (POE) water treatment system that improves municipal water quality by reducing total dissolved solids (TDS), ions, and hardness through a specialized adsorption process. Water flows through the dual NDI modules, where charged particles are captured by electrodes, lowering the concentration of dissolved solids and hardness. The system automatically reverses polarity to flush out captured particles, ensuring on-demand filtered water that is less corrosive and better suited for home use. Reducing ions may change the taste of water.

NOTICE

You may notice tiny specks of activated carbon in the treated water. These are microscopic pieces of a specially treated carbon material used in our filtration process to enhance water quality. These particles pose no known health concerns.

Product Features:

- The WEC system is a continuous operating system and does not have a holding tank.
- It provides treated water by reducing ions from municipal water.
- The NDI modules consist of porous carbon electrodes with bipolar exchange membranes with low pressure-drop and high recovery, for optimal structure and control.
 - Eco-friendly: Low-power consumption and salt free
 - TDS reduction: removes cations and anions
 - Optimal clean water: provides clean treated water that retains essential minerals while significantly reducing corrosiveness and scale build-up
- It has an automatic Clean-In-Place (CIP) function, so self-cleaning is performed periodically.
 - CIP and Regeneration Line CIP provides an enhanced cleaning system
 - It has a time reservation function to proceed at the desired time
- The product and components have been certified to meet NSF safety standards.

- The WEC can be easily installed.
 - Pin-type connector: Simple and quick to install.
 - Automatic installation check mode
- · Luxurious and compact design
 - Red Dot Design Award 2023 winner

Product Functions:

- The NDI modules are responsible for treating water. These modules are activated by the control system when water usage is detected. When water flow at the application site stops, the control system automatically stops the water treatment process.
- The NDI modules significantly reduce hardness and minerals from the feedwater, delivering filtered water.
- The NDI modules require periodic regeneration to maintain their capacity. The WEC comes equipped with two such modules. This ensures that while one is in the process of regeneration or standby, the other can continue to treat water uninterrupted.
- During regeneration, a small amount of water flows to the drain to flush out the hardness and minerals removed from the water.
- The system uses a food-grade Navien CIP Solution to automatically clean the modules at a user-set time. After cleaning, the used solution is safely discarded in the drain water.

Product Operation:

- The WEC automatically starts working as soon as the flow sensor registers water usage.
- The two NDI modules alternate in their operation, ensuring a constant supply of treated water.
- Similarly, the draining process is alternated between the modules during operation.
- Once the preset cumulative usage threshold is achieved, the CIP cleaning process commences automatically, with feedwater being supplied via the bypass.
- After CIP, the system resumes treated water supply.
- Any error code will be displayed on the main panel. For resolution, users are advised to refer to the "Troubleshooting" section in the Installation & Operation Manual.

1.2 Specifications

The following tables list the specifications for the WEC series.

A 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 Requirement¹⁾

Item	WEC400	WEC600	
Total Dissolved Solids (TDS)	≤ 300 ppm	≤ 500 ppm	
Temperature	37.4 - 100.4°F (3 - 38°C)		
Pressure	36.3 - 67 psi (250 - 460 kPa) 2)		
рН	6.5 - 8.5		
Iron total	≤ 0.3 ppm		
Turbidity	≤ 0.5 NTU		
Total hardness (as CaCO ₃)	≤ 150 ppm	≤ 350 ppm	
Alkalinity (as CaCO₃)	≤ 100 ppm	≤ 200 ppm	

¹⁾ The WEC system

²⁾ Install a pressure regulator in areas where the water pressure exceeds 67 psi (460 kPa).

Technical Specification

ltem	WEC400	WEC600	
Power consumption	0.22 kW	0.55 kW	
Power supply	AC 120 V / 60 Hz		
	2 A	4.5 A	
Power output spec.	DC 200 V	DC 300 V	
Dimensions (W×D×H)	22.4 x 16.9 x 31.4 in. (570 x 430 x 800 mm)		
Weight	120 lb (54.7 kg)	132 lb (60 kg)	
Rated salt removal rate	≥ 60% ¹⁾	≥ 75% ²⁾	
Rated recovery rate	≥ 85% ³⁾		
Installation pressure	≤ 67 psi (460 kPa) 4)		
Pressure drop at rated service flow	≤ 15 psi (103 kPa)		
Operating ambient temperature range	40 - 100.4°F (4.4–38°C)		
Rated service flow	5.3 GPM (20 LPM)		
CIP tank	1.6 Gallon (6.1 L) ⁵⁾		

Item	WEC400	WEC600	
Installation location	Indoor 6		
Certifications 7)	NSF/ANSI 42, NSF/ANSI 61-G, NSF/ANSI 372, IAPMO Z601 ⁸⁾ , cETLus ⁹⁾ , FCC		
Included accessory	NaviLink Lite 10		

¹⁾ 300ppm, 5.3 GPM (20 LPM), 68°F (20°C)

²⁾ 500ppm, 5.3 GPM (20 LPM), 68°F (20°C)

³⁾ 5.3 GPM (20 LPM) in continuous operation

⁴⁾ For more information, refer to "Installation Diagram" section in the Installation & Operation Manual.

⁵⁾ The amount of CIP solution used during operation varies based on water demand and feedwater quality. For additional details, refer to "3.2 Refilling the CIP Solution" on page 28.

Only install in locations where the product will not be exposed to freezing temperatures, direct sunlight, water, or exposed to the elements.

7) For the WEC only

⁸⁾ WEC600 Model

⁹⁾ The WEC has been tested and certified by Intertek in accordance with CSA STD C22.2 No. 68.

¹⁰⁾ For more information, refer to the NaviLink Lite's User Manual.



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 568 mm)	
Housing	Weight	4.76 lb (2.16 kg)	
	Dimensions	Ø2.7 x 20 in. (Ø69 x 507 mm)	
	Weight	0.97 lb (0.44 kg)	
Cartridge	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 "3.1 Replacing the Filter Cartridges" on page 24.

Post Carbon Block (C/B) Filter Specification

	Item	Description
Housing	Dimensions	Ø5.1 x 22.2 in. (Ø130 x 568 mm)
Housing	Weight	4.76 lb (2.16 kg)
	Dimensions	Ø2.7 x 20 in. (Ø70 x 509 mm)
	Weight	1.5 lb (0.68 kg)
Cartridge	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 "3.1 Replacing the Filter Cartridges" on page 24.

1.3 System Overview

1.3.1 Product

Front



Back



1.3.2 Included Items



1.3.3 Navien CIP Solution





The separate start up package includes the Navien CIP solution.

1.4 Dimensions

WEC Series

The following diagram shows the dimensions of the WEC series.



Post Carbon Block (C/B) Filter

The following diagram shows the dimensions of the post carbon block (C/B) filter housing and cartridge.



Sediment Pre-Filter

The following diagram shows the dimensions of the sediment pre-filter housing and cartridge.



1.5 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.



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



Note

Sediment pre-filter and adapters are only NSF372 certified.







2. Operating the WEC

2.1 Plugging and Unplugging the Device

The length of the power cord is 1.8 meters. NaviLink Lite is connected to the top behind the product.



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	1" NPT female	
Post carbon block (C/B) filter	1" NPT female	

- Regulator installation is required at 67 psi (460 kPa) or higher inlet water pressure. Set the regulator not to exceed 67 psi (460 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 prefilter 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.

2.2 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.



Remove the protective film from the main panel before use.

2.2.1 About the Main Panel

			B,E PLACE TER 11	3 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	⊳ б ок 9
1	$\rangle \rangle \rangle$	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	۹	Inspection/Check Appears when a product error occurs.	4	88:88	Time Displays the current time.
5	ር	Power button Turn the main panel on or off.	6	\triangleright	 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 6	LUMULATIVE 8,888 K LOW 8,888 gallor	Product Water Volume Indicates the accumulated product water volume.
9	OK	OK button Normal Mode: User info	10		 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.			

2.2.2 Button Functions

Ċ	\triangleright	Ś	OK
[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 the WEC ON and OFF.		
[Power] Long press	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.		



• 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.

2.3 Powering ON and OFF

2.3.1 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
CUMULATIVE E gallon	Standby state	The device is ready to treat water when needed.
ON 3:51 CUMULATIVE FLOW H 7 K gallon Solid Light: one module	Product state	During this state, water is being used, and one of the modules will be treating it.
CUMULATIVE FLOW 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.
CUMULATIVE	Regeneration state	The device is ready to treat water when needed. One of the modules has reached capacity and is regenerating.
ON 3:5 5 10 CIP 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.
۹: ۲۵ ۲۱ ۲ ۵۵۵	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.
ON Image: Constraint of the section	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 "4. Troubleshooting" on page 30 for a detailed explanation or contact Technical Support at 1-800-519-8794.
CUMULATIVE HJ gallon	Module protection state (High feedwater TDS) ¹⁾	This state is to protect the module when the feedwater TDS is higher than 1000 ppm.
ON 3:51 <u> <u> </u> </u>	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.

2.3.2 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.





2.4 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	CUMULATIVE CUMULATIVE CUMULATIVE CUMULATIVE	

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	ON 3:5 98 mg/L
3	Product Water TDS Note TDS below 25 ppm is displayed as 25 ppm.	CONCENTRATION 3:5 1 CONCENTRATION
4	The cumulative treated water volume since last performed CIP	CUMULATIVE HJgallon

Note

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

2.5 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: Hours Tens of minutes 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. 	CUMULATIVE FLOW Indication: Sections in order 1. Hours 2. Tens of minutes 3. Ones of minutes
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: Hours Tens of minutes 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. 	CUMULATIVE FLOW Indication: CIP logo blinking Sections in order 1. Hours 2. Tens of minutes 3. Ones of minutes

• 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.

2.6 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 4: 15 ECO ON 4: 15 ON 4: 16 ECO ECO ECO OFF: ECO Mode is off.



By default, ECO Mode is OFF.

2.7 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 go 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 "3.1 Replacing the Filter Cartridges" on page 24. 	Image: second

No.	Option	Instruction	Display/Indication
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 take you 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 "3.2 Refilling the CIP Solution" on page 28. 	0N 4: 15 1 02 [] P [] CIP CIP Blinking: CIP icon 4: 16 2 02 - SE CIP CIP CIP Solid Light: CIP icon



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

2.8 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.



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 2 weeks, CIP will activate automatically when the unit is connected to a power supply.



- When using water during CIP Mode operation, there is no restriction on water usage because feedwater is supplied through 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.



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).





- When an error occurs, refer to "4. Troubleshooting" on page 30 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 non-tap water, such as groundwater or well water, or when the product has been unused for an extended period.



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.

2.9 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.



- 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.



3. Maintaining the WEC Series

3.1 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.



3.1.1 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 prefilter housing cover.
 - If the sediment pre-filter housing cover does not have a pressure release button, close the bypass Note 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 "2.7 Filter and CIP Reset" on page 20.)
 - 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

Note

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.

3.1.2 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).



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.



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 "2.7 Filter and CIP Reset" on page 20.)
 - 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

Note

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.

3.2 Refilling the CIP Solution

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

A 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 "2.7 Filter and CIP Reset" on page 20.



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

4. Troubleshooting

4.1 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. 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.
Water outage	Water outage	002 003	 Check that the inlet and outlet valves are opened and the bypass valve is closed. Check if there is a water outage in the neighborhood. If supplied, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.
High water pressure	High water pressure	010	 The error occurs when the inlet water pressure is above 67 psi (460 kPa). Contact a qualified plumber and have a pressure regulator installed. If the error occurs again even after the pressure regulator is installed, call an authorized professional for service and open the bypass valve to use feedwater until the error is cleared.



If you encounter an error that is not mentioned in this table, contact Technical Support at 1-800-519-8794.

4.2 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 a 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 "2.7 Filter and CIP Reset" on page 20)
- When the filter cartridge has been replaced (refer to "2.7 Filter and CIP Reset" on page 20)
- When an error is cleared and reset (refer to "Using Installer Setting Mode" in the Installation & Operation Manual).

5. 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 labor and 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

companies.

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. The end-user must pay for any and all shipping and handling charges and other costs of limited warranty service for the replacement part(s). 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. Navien will pay labor charges for the repair subject to Navien's prior written approval and in accordance with Navien's schedule of approved labor allowances for a period of one (1) year from the date of installation for the original owner only. 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 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

Due du ete	Labor	Parts	
Products	Labor	Non-Registered	Registered
WEC Series (Residential)	1 year	3 years	5 years

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. To register the unit online, go to: <u>https://www.navieninc.com/register</u> 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 :		
Customer Address .		
Telephone :	Fax:	
Email :		
Installer Name :	License No :	
Installer Address :		
Place of Purchase :		
Model No :		
Serial No :		
Date of Purchase :		





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 noncompliance 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 the 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 OF 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 ONNECTION 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

User's Information 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.

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