WEC Series

NAVIEN

NEW WEC
Point-of-entry Saltless, Tankless, Electric Water Treatment System

Advanced electro-membrane technology effectively reduces scale and contaminants for an enhanced water supply

Meet the WEC: water treatment, reinvented

No salt. No tank. Just a compact electric solution for smarter water treatment

The Navien WEC Series uses advanced electro-membrane technology in an appliance-style device to filter and treat water to reduce hardness minerals, total dissolved solids (TDS) and other contaminants, providing softened* water to the entire home without added minerals or ion exchange media. The WEC is simple to install, easy to maintain and built for long-term performance.

What is TDS?

TDS is simply the minerals, salts, metals, and other tiny particles dissolved in your home's water. They're invisible, but their presence can noticeably impact your daily life. When TDS levels get too high, practical problems can occur like unpleasant tasting drinking water, cloudy or discolored ice, and residue that builds up on dishes, fixtures, and inside your plumbing and appliances.

Although a high TDS reading alone doesn't automatically mean your water is unsafe, it could indicate other contaminants worth investigating. By greatly reducing the TDS levels in the water supply, the WEC helps protect plumbing and appliances and delivers improved water for use around the home.

*This product reduces the concentration of hardness minerals but does not necessarily produce soft water, defined as having <1 gpg hardness.

FEATURED FINALIST 2024

reddot winner 2023

Removes major contaminants effectively with advanced electric technology

- Electro-membrane design uses positive and negative electrodes to significantly reduce total dissolved solids (TDS), hardness, hard metals, and chlorine
- Zero plastic-bottle waste, zero sodium discharge, and low-energy operation

Continuous whole-house filtered water on-demand

- Dual modules provide conditioned water for the entire home any time it's needed, without regeneration downtime
- Conditioned water is distributed throughout the entire water supply for enhanced appliance operation, and cleaning

Minimal maintenance and built-in self-cleaning innovation

- Features Clean-In-Place (CIP) technology: a pre-programmable, self-cleaning function that removes accumulated contaminants from the module membranes
- CIP solution refilled between 6 months (may vary) based on household water usage

Clean water and enhanced skin and hair care

- Effectively and efficiently filters out harmful substances like chlorine, heavy metals, calcium and magnesium, ensuring better clean water for skin and hair
- Reduces TDS and hardness without the slippery feel of soft water

Protects surfaces, plumbing and appliances

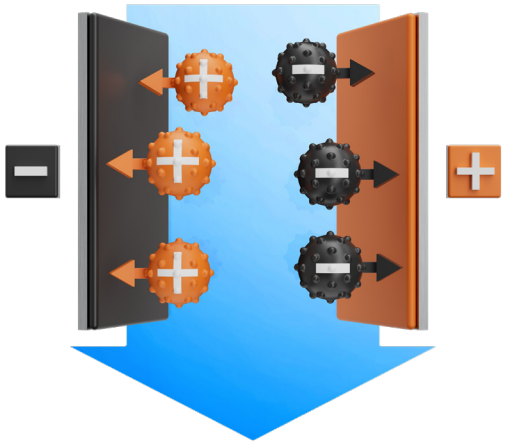
- Substantially prevents spots on silverware, glass, tile, countertops, stainless steel, and other metal surfaces
- Protects whole-house plumbing system, pipes and appliances against scale buildup
- Reduces hard-scale minerals that can damage fabrics during laundry cycles

How the WEC works

Phase 1: Adsorption

During the adsorption phase, water enters a module and an electric current is applied. Adsorptive membranes within the module attract positive and negatively charged contaminants in the water, causing the contaminants to stick to the membranes as the treated water flows out to a fixture.

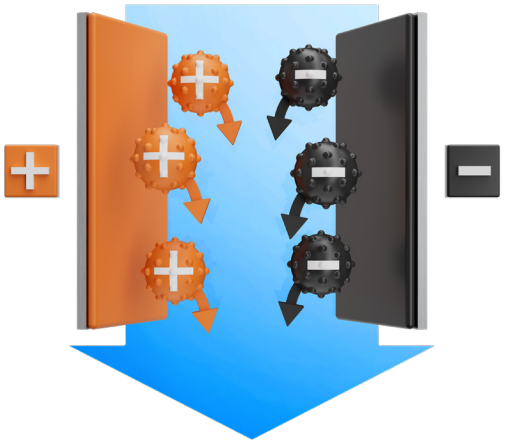
Adsorption

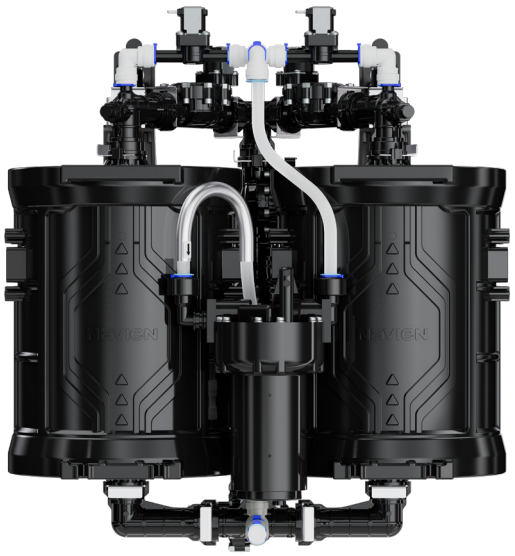


Phase 2: Regeneration

Regeneration happens when the membranes are saturated with contaminants. Reversing the polarity of the electrical current releases the contaminants from the membranes, allowing them to be flushed from the module through the wastewater line.

Regeneration



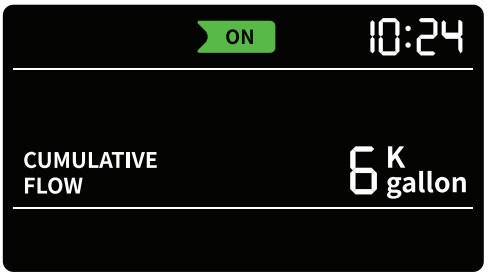


The dual NDI module design of the WEC allows for at least one module to always be available to condition water should the other module be going through its regeneration phase.

The digital display panel's intuitive design ensures easy setup and viewing of operational data

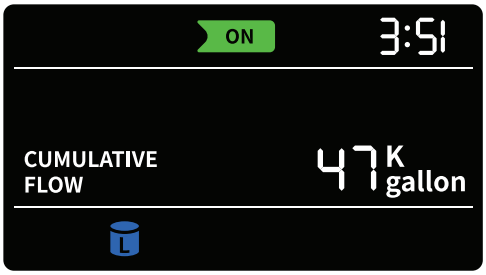
The user-friendly icons and digital display menu guide you through all aspects of start-up, normal operation modes, user information and troubleshooting.

Standby state



The device is ready to treat water with the next flow demand.

Regeneration state



During this state, water is not in use, however, one of the modules has reached capacity and is currently regenerating.

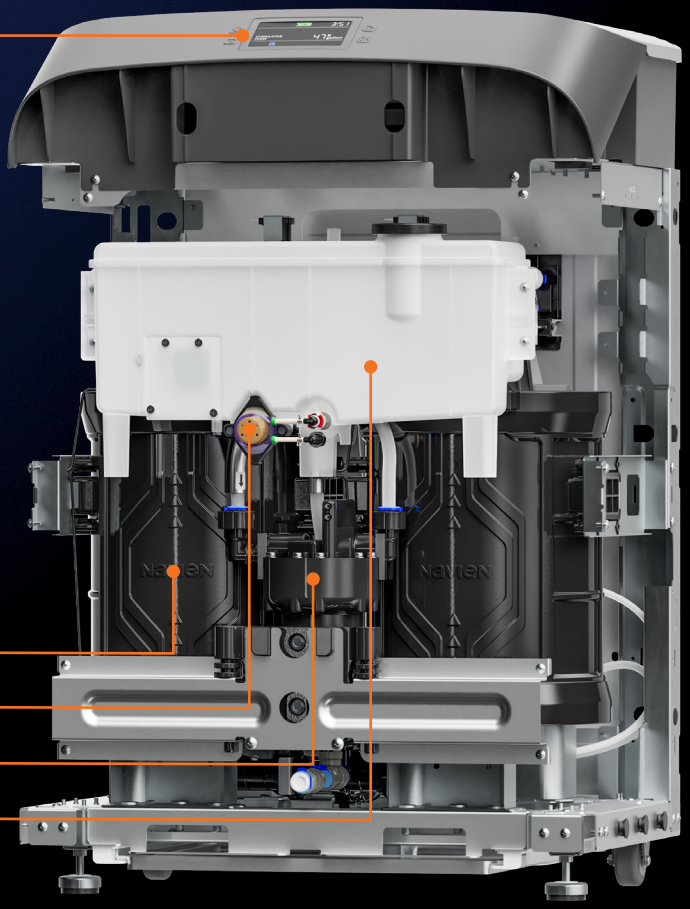
The WEC is certified under IAPMO Z601, which means it has been independently tested and proven to reduce scale by at least 70% under controlled conditions. In testing, the WEC removed up to 94% of scale. This certification applies to products designed for residential use and water heating systems, confirming their measurable performance in real-world-relevant applications. Even if you're not familiar with the standard, it serves as an indicator of quality and transparency in a market where performance claims are often difficult to verify.

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

Inside the WEC

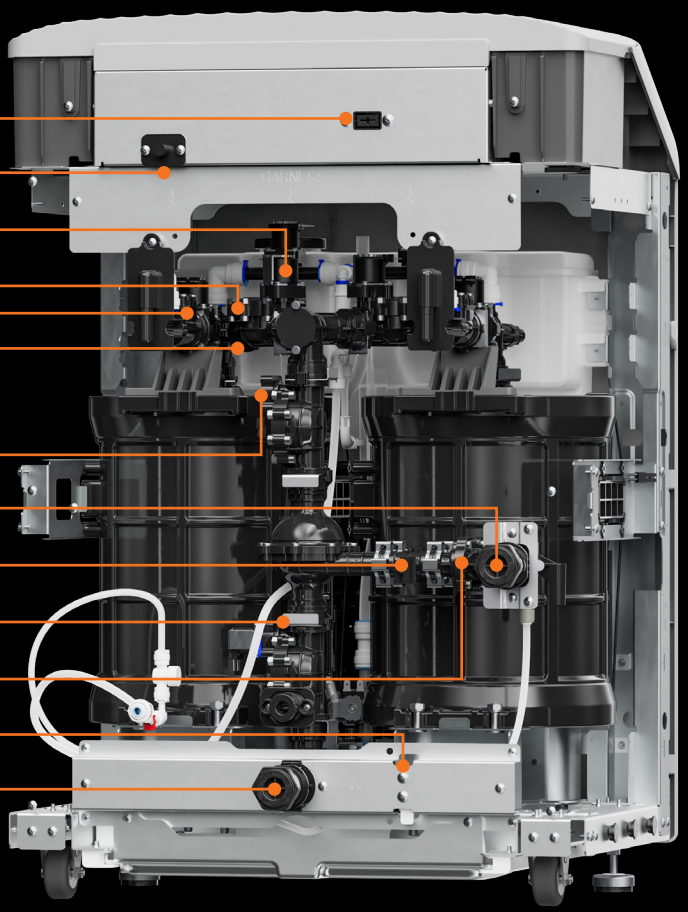
Navien designed the WEC for serviceability. All top and side panels are easily removed for faster access to components

Front side



- Main panel
- NDI module
- CIP dosing pump
- CIP circulation pump
- Navien CIP solution tank

Back side



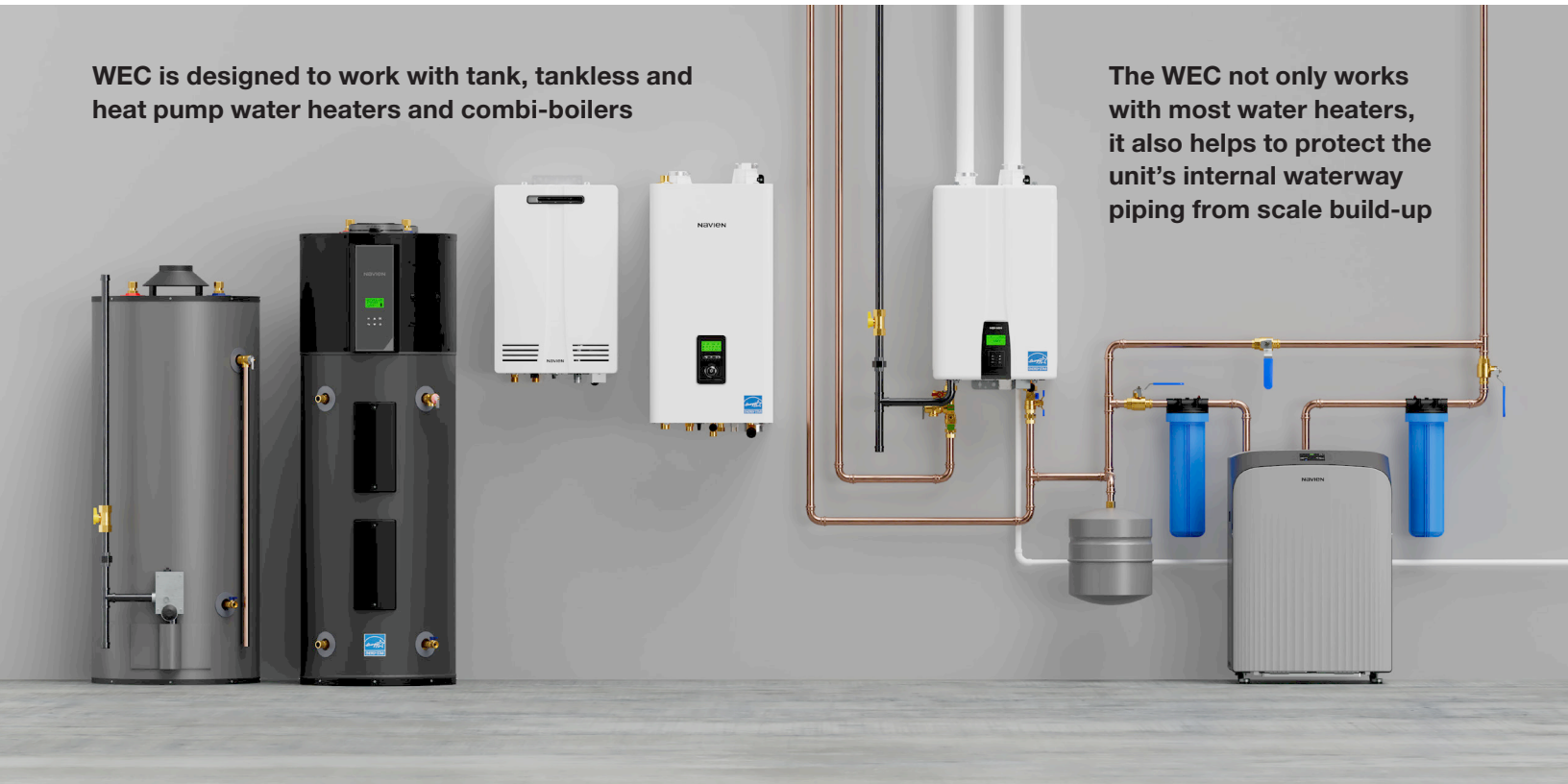
- NaviLink Lite™ connector
- Power cord connection
- CIP circulation solenoid valve (2 each)
- Product water solenoid valve (2 each)
- Regeneration solenoid valve (2 each)
- Flow switch (2 each)
- Check valve
- Product water outlet
- Flow sensor (2 each)
- Bypass solenoid valve
- Main solenoid valve
- NDI module freeze prevention solenoid valve
- Feedwater inlet

The complete solution for whole-house water

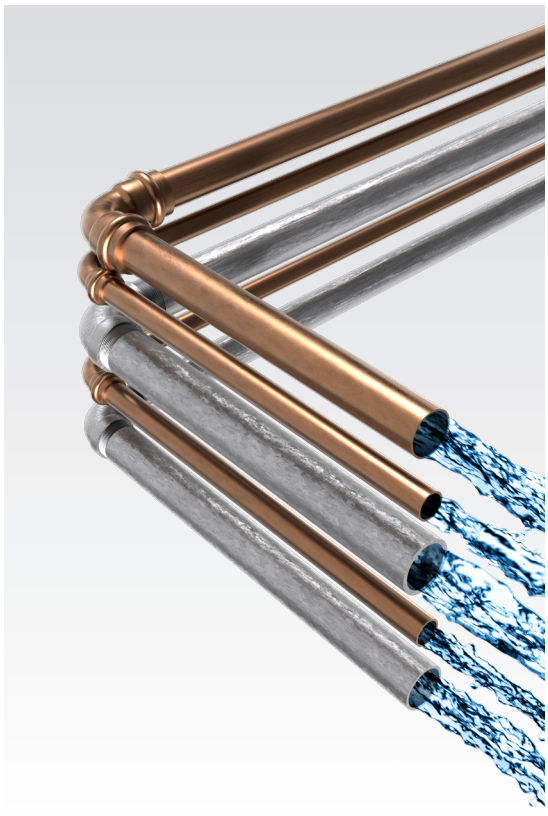
A clear difference in water treatment technology for contractors and homeowners. Creating a better water system for your customers that is simple to install, easy to maintain, and built for long-term performance

WEC is designed to work with tank, tankless and heat pump water heaters and combi-boilers

The WEC not only works with most water heaters, it also helps to protect the unit's internal waterway piping from scale build-up



The WEC total package



Parts included

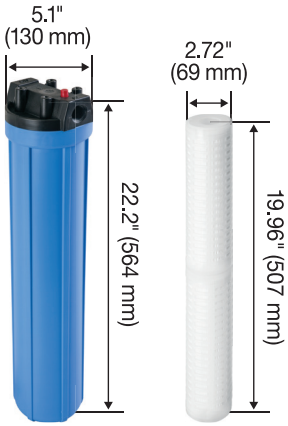
- Manuals & installation kit
- NaviLink Lite™ Wi-Fi remote monitoring
- 1" male NPT elbow adapters, L-Clips
- Sediment pre-filter, Post Carbon Block filter, wrench, mounting brackets and 1" to 3/4" NPT straight adapters

WEC400/WEC600 Series

Sediment Pre-filter and Post Carbon Block filters

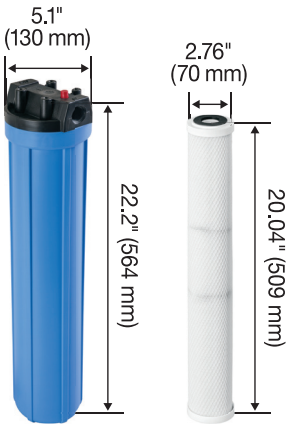
The Sediment pre-filter removes larger suspended particles, down to 10 microns, from the supply water before entering the WEC.

The Post Carbon Block filter is designed to remove fine particles, while also improving odor. Both filters are included.



Sediment pre-filter housing and cartridge

Replacement Sediment filter cartridge
30030964



Post Carbon Block filter housing and cartridge

Replacement Post Carbon Block filter cartridge
30039595

Wi-Fi remote monitoring

The WEC comes standard with the NaviLink Lite™ Wi-Fi remote monitoring system which works with smartphones and tablets. NaviLink Lite™ enables real-time monitoring of WEC product data including daily water usage and the quality of incoming/outgoing water.

Customer support and advanced training make Navien a smart choice for home comfort solutions

Besides supplying the most innovative and energy efficient systems for residential and commercial applications, Navien provides extensive field support, webinars and training events for builders, architects and contractors. Our customer support network operates daily, providing quick answers to installation and operational questions.

Replacement Navien CIP solution

1 gallon bottle (pictured)
2 bottles: GXXX002436
4 bottles: GXXX002437

Feedwater requirements[1]

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]	
pH	6.5–8.5	
Iron total	≤ 0.3 ppm	
Turbidity	≤ 0.5 NTU	
Total hardness (as $CaCO_3$)	≤ 150 ppm	≤ 350 ppm
Alkalinity (as $CaCO_3$)	≤ 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 specifications

Item	WEC400	WEC600
Power consumption	0.22 kW	0.55 kW
Power supply	AC 120 V, 60 Hz	
	2 A	4.5 A
Power output specifications	DC 200V	DC 300V
Dimensions (W×D×H)	22.4 x 16.9 x 31.4 inch (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 temp. range	40–100.4°F (4.4–38°C)	
Maximum flow rate	10 GPM (37.8 LPM)	
Navien CIP Solution tank	1.6 Gallon (6.1 L)[5]	
Installation location	Indoor[6]	
Certifications[7]	NSF/ANSI 42, NSF/ANSI 61-G, NSF/ANSI 372, cETLus[8], FCC, IAPMO Z601[9]	
Included accessory	NaviLink Lite™[10]	

[1] 300 ppm, 5.3 GPM (20 LPM), 68°F (20°C).
[2] 500 ppm, 5.3 GPM (20 LPM), 68°F (20°C).
[3] 5.3 GPM (20 LPM) in continuous operation.
[4] For more information, refer to section "2.4 Installation Diagram", page 11, 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 "4.2 Refilling the CIP Solution", page 41, Installation & Operation Manual.
[6] 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] The WEC has been tested and certified by Intertek in accordance with CSA STD C22.2 No. 68.
[9] WEC600 Model.
[10] For more information, refer to the NaviLink Lite's User Manual.

Filter specifications

Item		Sediment Pre-filter	Post Carbon Block (C/B) Filter
Housing	Dimensions	Ø5.1 x 22.2 in (Ø130 x 564 mm)	Ø5.1 x 22.2 in (Ø130 x 564 mm)
	Weight	4.76 lb (2.16 kg)	4.76 lb (2.16 kg)
Cartridge	Dimensions	Ø2.72 x 19.96 in (Ø69 x 507 mm)	Ø2.76 x 20.04 in (Ø70 x 509 mm)
	Weight	0.97 lb (0.44 kg)	1.5 lb (0.68 kg)
	Pore size	10 µm	1 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 section "4.1 Replacing the Filter Cartridges", on page 37, Installation & Operation Manual.

Limited warranty period

Product	Labor	Parts	
		Non-registered	Registered
WEC Series (residential)	1 year	3 years	5 years

We are @Navieninc everywhere

Navien, Inc. navieninc.com 800-519-8794
20 Goodyear, Irvine, CA 92618

Navien Canada, Inc. navieninc.ca 800-519-8794
555 Hanlan Rd., Unit 7, Vaughan, ON L4L 4R8