

WEC Series

 **navien**

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

Advanced eco-friendly technology
protects the water supply system
and generates clean drinking water
for the home



Introducing the WEC tankless electric water treatment system

Protects pipes, appliances and plumbing fixtures, and generates clean drinkable water that's great for skin, hair, clothes and dishes. A compact, whole-house, high-efficiency eco-friendly unit.

WEC's innovative water treatment technology is a sensible choice for contractors, builders, homeowners and the environment alike.





Advanced electro-membrane technology



- Utilizes positive and negative electrodes to significantly reduce total dissolved solids (TDS), hardness, hard metals, and chlorine
- Unlike traditional salt-based water softeners, the WEC is environmentally friendly, producing salt-free wastewater

Continuous whole-house filtered water on-demand



- Dual modules provide filtered drinking water for the entire home any time it's needed, with limited filtering downtime
- Filtered water can be used with Navien water heaters, boilers, and HVAC products

Minimal maintenance and built-in self-cleaning innovation



- WEC requires minimal maintenance that varies based on water usage
- Features Clean-In-Place (CIP) technology: a pre-programmable, self-cleaning function that removes accumulated contaminants from the module membranes

Clean drinking water and enhanced skin care



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

Protects surfaces, plumbing and appliances



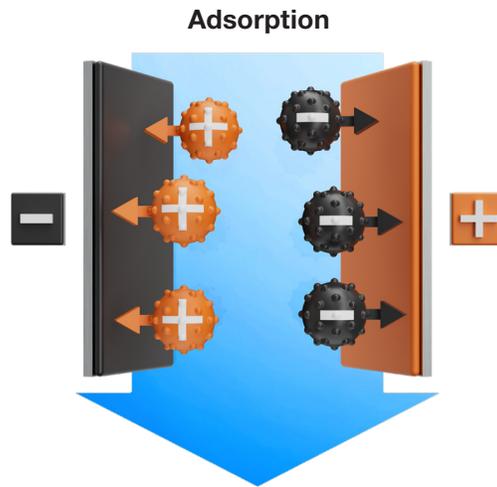
- Substantially prevents spots on silverware, glass, tile, countertops, stainless steel, and other metal surfaces
- Protects pipes and appliances against scale buildup
- Reduces hard-scale minerals that can damage fabrics during laundry cycles

How the WEC works

Phase 1: Adsorption

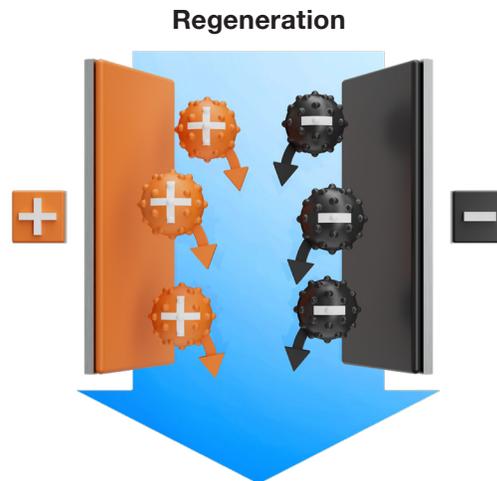
During the adsorption phase, water enters a module and an electric current is applied.

Adsorptive membranes within the module attract positive and negatively charged contaminants in the water, causing the contaminants to stick to the membranes as the conditioned water flows out to a fixture.



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.



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

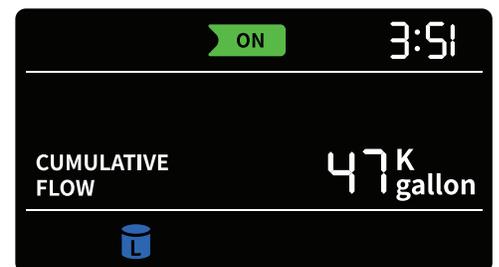
The user-friendly icons and digital display menu guide you through all aspects of start-up, normal operation modes, user information and troubleshooting.

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.



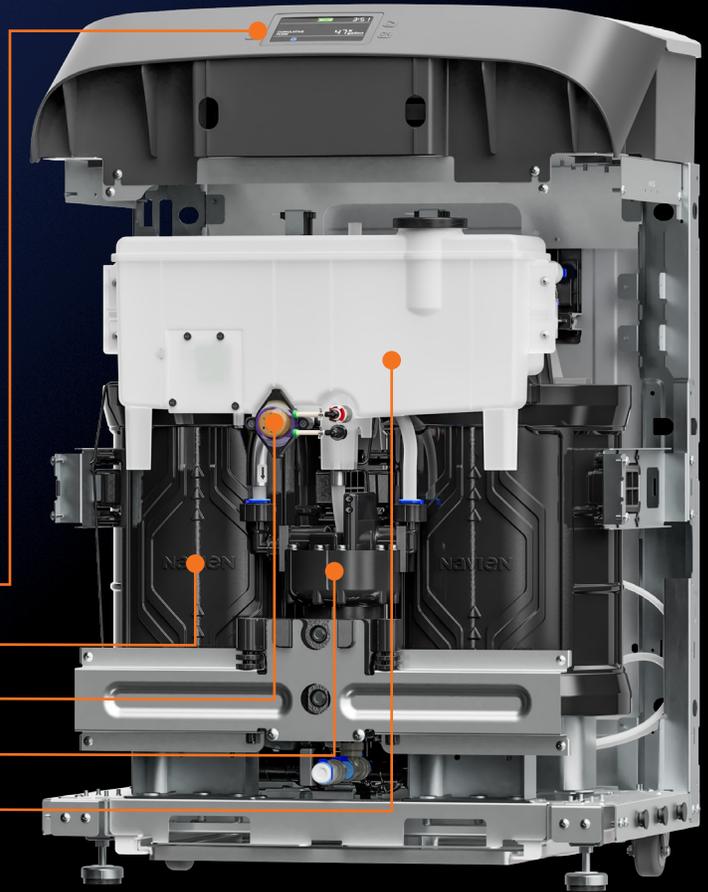
The WEC600 is certified by IAPMO R&T to IAPMO Z601-94% for scale reduction.

Inside the WEC

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

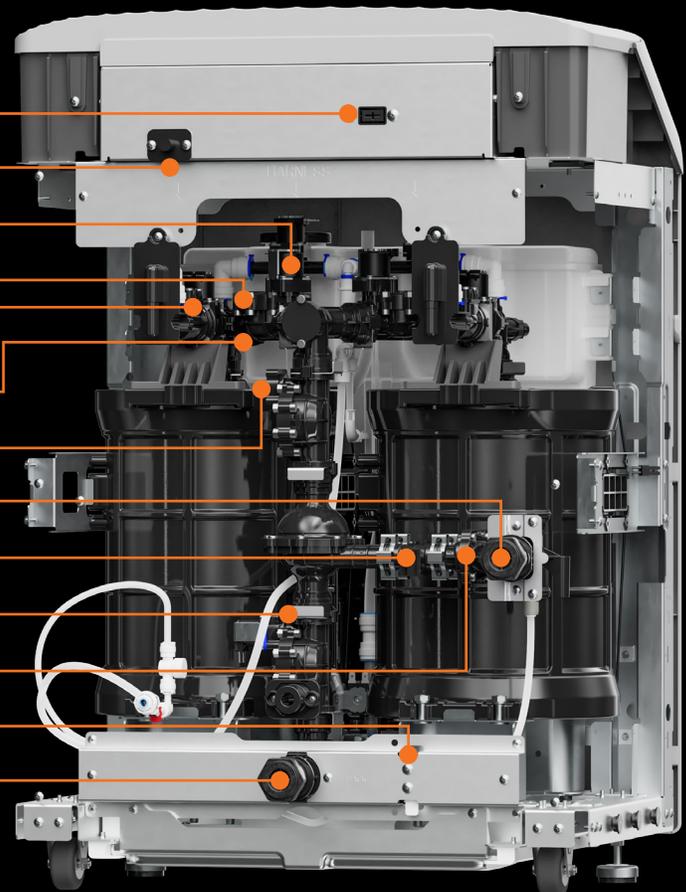
Front side

- 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

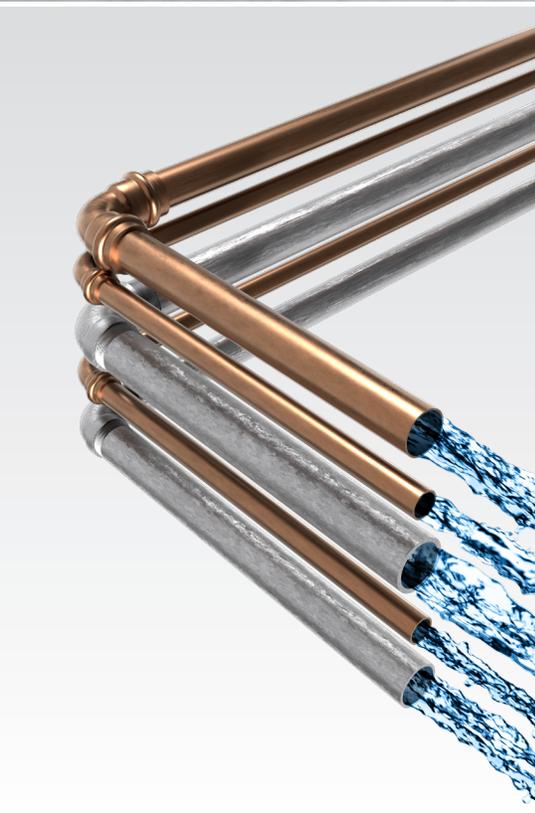


WEC...The clear difference in water treatment



Better water for everyone, everything, everywhere in the home

Salt-free, drinkable water with significantly reduced total dissolved solids delivers an optimized water experience anywhere in the home.



WEC works with tank and tankless water heaters or combi-boilers

The WEC not only works well with most water heaters, it also protects the units' internal waterways and piping.



WEC versus Whole-house Water Softeners



Advantages over water softeners

- No need for heavy salt bags
- WEC removes up to 90% of total dissolved solids; water softeners do not
- WEC's wastewater doesn't contain harmful chloride, unlike water softeners, which are harmful to the environment

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.

Sediment and Post Carbon Block (C/B) filters are included with all WEC units

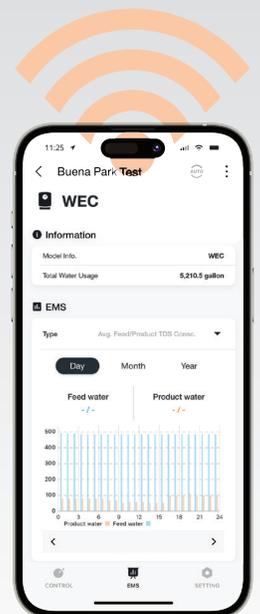
The Sediment filter removes larger suspended particles, down to 10 microns, from the supply water before entering the WEC.

The Post Carbon Block (C/B) filter is designed to remove fine particles, while also improving taste and odor.



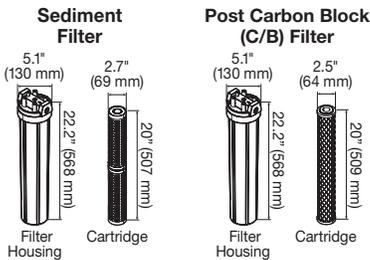
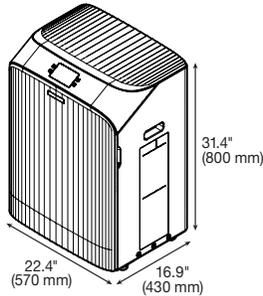
Wi-Fi remote monitoring compatibility

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.



Dimensions

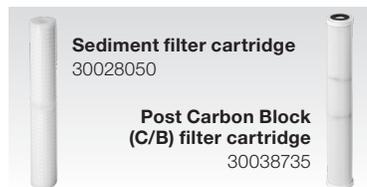
WEC400/WEC600 Series



Parts Included

- Manuals and installation kit
- Navilink Lite™ Wi-Fi remote monitoring
- 1" male NPT elbow adapters, L-Clips
- Sediment filter, Post Carbon Block (C/B) filter, wrench, mounting brackets and 1"-3/4" NPT straight adapters

Replacement Items



We are @Navieninc everywhere



Feedwater Requirements¹

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

¹The WEC system.

²Install 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 (WxDxH)	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 temperature 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	

¹300 ppm, 5.3 GPM (20 LPM).

²500 ppm, 5.3 GPM (20 LPM).

³5.3 GPM (20 LPM) in continuous operation.

⁴For more information, refer to section "2.5 Installation Diagram", page 11, Installation & Operation Manual.

⁵The 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 40, Installation & Operation Manual.

⁶Only install in locations where the product will not be exposed to freezing temperatures, direct sunlight, water, or exposed to the elements.

⁷For the WEC only

⁸The WEC has been tested and certified by Intertek in accordance with CSA STD C22.2 No. 68.

⁹WEC600 Model.

Sediment Filter Specifications

Item	Description
Housing	Dimensions: Ø5.1 x 22.2 in (Ø130 x 568 mm)
	Weight: 4.76 lb (2.16 kg)
Cartridge	Dimensions: Ø2.7 x 20 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

¹For more information, refer to section "4.1.1 Replacing the Sediment Filter Cartridge", page 36, Installation & Operation Manual.

Post Carbon Block (C/B) Filter Specifications

Item	Description
Housing	Dimensions: Ø5.1 x 22.2 in (Ø130 x 568 mm)
	Weight: 4.76 lb (2.16 kg)
Cartridge	Dimensions: Ø2.5 x 20 in (Ø64 x 509 mm)
	Weight: 1.5 lb (0.68 kg)
	Pore size: 1 µm
	Replacement cycle: A replacement notification or 6 months or as needed based on product water quality and usage ¹

¹For more information refer to section "4.12 Replacing the Post Carbon Block (C/B) Cartridge", page 38, Installation & Operation Manual.

Limited Warranty Period

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

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

