

# Navien

## Condensing 98%



Navien America is an official energy star partner for tankless water heater.

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Navien Condensing Tankless Water Heaters



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The Ultimate in Energy Efficiency with Hi-Tech Comfort

<sup>°</sup>7-CREATOR  
**Navien** Navien America Inc.

# Navien Condensing Tankless Water Heaters

## Why Choose Navien?



### Endless Hot Water Supply

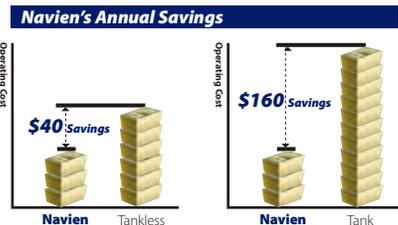
Navien Condensing Tankless Water Heaters provide an unlimited amount of hot water at a steady temperature, whenever you need it, for as long as you need it.



### Ultra Condensing Efficiency

Because this product boasts the industry's highest efficiency rating (98%) means customers can cash in on low annual operating costs as well as receive the best payback, compared with conventional tankless or tank-type water heaters. Navien's Condensing Tankless also enjoys the highest gallons-per-minute (GPM) when comparing input BTUs.

\* Base on DOE operating cost and AGA Sept/07 Natural gas price.



### Eco-Navien Technology

Navien utilizes an ultra-efficient burner, which uses less gas, resulting in a reduction of harmful emissions—better for you, better for the environment.



### Extended Lifecycle

Navien utilizes dual stainless-steel heat exchangers, providing 20 times more resistance to erosion and condensation damage than the copper exchangers used in other brands.

Navien heat exchangers operate with mid-temperature water, minimizing possible damage caused by lime build-up, making the whole unit more efficient.



## Easy Venting

The high efficiency of Navien's Condensing Tankless results in lower exhaust temperatures, allowing for the use of PVC or other plastic venting materials.

- PVC venting offers a significant savings in cost and makes installation a breeze.
- Three-inch PVC venting runs up to 100ft with 6 elbows;  
allows for installation up to and above an altitude of 4,500ft, without additional devices.

## Built-in Circulation Pump with Mini Buffer Tank ("A" Model only)

- Delivers hot water to fixtures quickly resulting in water conservation.
- No minimum flow rate: get hot water even at very low flow rates of 0.1 or 0.2 GPM.
- Eliminates any hot/cold/hot stacking, the so-called "Cold Water Sandwich".
- Saves additional money and time by eliminating the pump purchase cost and on-site installation costs.
- Prevents heat exchanger from freezing.

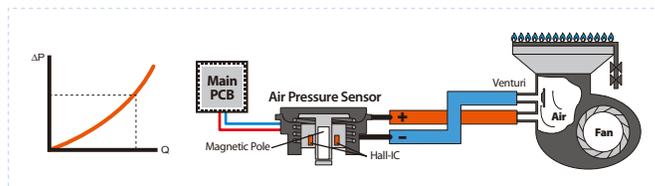
## Advanced Technology

### 1 Enhanced Safety with Dual Microprocessors

Navien's two microprocessors offer better control and safer operation by continuously cross monitoring each other's performance to assure proper operation at all times. These two microprocessors not only control the burner for ideal combustion but also maintain the steady hot water temperature.

### 2 Optimal and Stable Combustion with APS and GPS

**APS** (Air Pressure Sensor) maximizes combustion efficiency by sensing and controlling the air required for optimal combustion—even in high-wind locations and installations with long vent runs.



**GPS** (Gas Pressure Sensor) offers stable combustion by sensing gas pressure and controlling the fan speed to maintain optimal combustion, even under a wide range of gas-pressure changes.

### 3 Triple-Layered, Pre-Mixed Burner

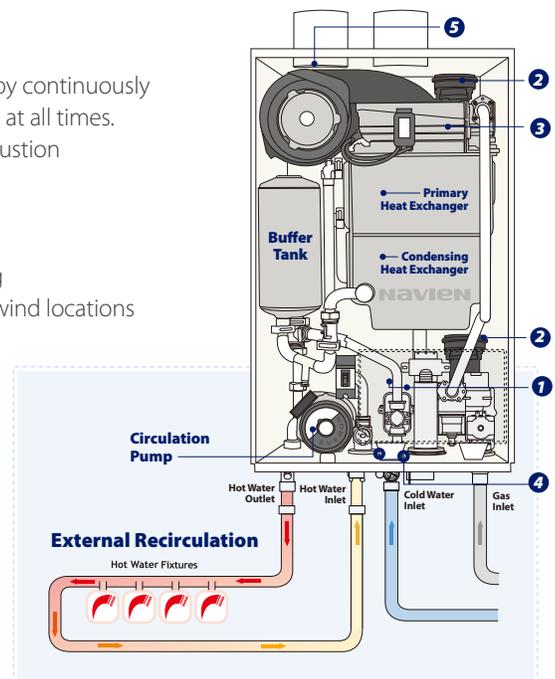
Controls flame by pre-mixing optimal ratio of gas and air before combustion, reducing emissions and enhancing heat efficiency.

### 4 Leak Detector

Built-in leak detector prevents damage to water heater as well as personal property.

### 5 Air intake filter

An air intake filter prevents foreign substances, such as dust or insects, from entering the system, freeing the burner from elements that would normally cause unstable combustion or energy inefficiency.



## Remote Control

- Advanced water heater diagnosis capability and error feedback
- Touch activated backlight function and Easy-to-Use button type control
- Built-in recirculation timer for water and energy savings
- Key-pad lock button prevents inadvertent temperature changes
- temperature adjustment in 1°F increments between 98-120°F



## Navien's 98 Ready Link® Cascade System

Navien's 98 Ready Link® System is the best alternative for large volumes of hot water.

With its easy venting and installation, up to 98 compact-sized Navien Water Heaters can be set up as an one system.

Unlike tank-type water heaters, sudden hot-water cutoffs can be avoided.

- Produces large volumes of hot water; can link up to 98 units.
- Energy efficient; heats water on demand.
- Easy wiring link—simple connection
- Common venting available without additional devices.
- Low exhaust temperature allows for cost-efficient PVC venting.



## Hot-Water Flow Chart

GPM	Temp. Rise	35	40	45	50	55	60	65	70	75
CR-180 / CC-180		8.4	7.3	6.5	5.9	5.3	4.9	4.5	4.2	3.9
CR-210 / CC-210		9.8	8.6	7.6	6.8	6.2	5.7	5.3	4.9	4.6
CR-240 / CC-240		11.2	9.7	8.7	7.8	7.1	6.5	6.0	5.6	5.2

## Right Model?

Model	Cold Water Temperature	40 °F	55 °F	70 °F
CR-180/CC-180		<b>4.6 GPM</b>	<b>5.9 GPM</b>	<b>8.5 GPM</b>
CR-210/CC-210		<b>5.3 GPM</b>	<b>6.9 GPM</b>	<b>9.8 GPM</b>
CR-240/CC-240		<b>6.0 GPM</b>	<b>7.8 GPM</b>	<b>11.1 GPM</b>

Above GPM rates and shower capabilities are based on a standard 2.5 GPM shower head and a shower temperature of 105 °F. The cold water supply temperature may change with the seasons. Use the winter water temperatures to make your selection.

## Specifications

Navien America Inc. offers a complete line of condensing water heaters for residential, commercial and combination space heating applications.

Item		Model	CR-180, CR-180A CC-180, CC-180A	CR-210, CR-210A CC-210, CC-210A	CR-240, CR-240A CC-240, CC-240A
Heat Capacity (Input)	Natural Gas		Min: 15,000 Btu/h	Min: 17,000 Btu/h	Min: 17,000 Btu/h
			Max: 150,000 Btu/h	Max: 175,000 Btu/h	Max: 199,000 Btu/h
	LP Gas		Min: 15,000 Btu/h	Min: 17,000 Btu/h	Min: 17,000 Btu/h
			Max: 150,000 Btu/h	Max: 175,000 Btu/h	Max: 199,000 Btu/h
Thermal Efficiency			98.8 %	98 %	97.3 %
Energy Factor (DOE)			0.98	0.95	0.95
Dimensions (W x H x D)			17" x 28" x 14"	17" x 28" x 15"	17" x 28" x 15"
Weight	CR/CC-A		77 lbs	86 lbs	86 lbs
	CR/CC		67 lbs	77 lbs	77 lbs
Installation Type			Indoor Wall-Hung		
Venting Type			Direct Vent		
Ignition			Electronic Ignition		
Water Pressure (min-max)			15 - 150 PSI		
Gas Supply Pressure (from source; min-max)			NG: 3" WC ~ 10.5" WC / LP: 8" WC ~ 13.5" WC		
Minimum Flow Rate to activate Water Heater			For "A" Model 0 GPM (no minimum flow rate requirement), Otherwise 0.5 GPM		
Connection Sizes	Cold Water Inlet		3/4" NP		
	Hot Water Outlet		3/4" NP		
	Gas Inlet		3/4" NP		
Power Supply	Main Supply		120VAC, 60Hz 200W (max 2A)		
Heat Exchangers			Primary Heat Exchanger: Stainless Steel		
			Condensing Heat Exchanger: Stainless Steel		
Venting (0" Clearance)	Exhaust (ø3")		PVC, Navien Stainless Steel or Special Gas Vent Type BH Class IIA (PVC) in Canada		
	Intake (ø3")		PVC, Flex Aluminum, Flex Stainless Steel, ABS,		

\* Navien America reserves the right to change specifications at anytime without prior notice.

## Model Description Legend

Model	Description
CR	Condensing Residential (potable domestic hot water only) Maximum Temperature: 140°F
CC	Condensing Commercial (potable domestic hot water and space heating and commercial applications) Maximum Temperature: 185°F
A	With Circulation Pump and 0.5 US gallon (2 liter) Mini-Buffer Tank

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Tankless Water Heaters



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