### **Navien** Condensing Combi Gas Water Heaters







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## **Navien** Condensing combi Gas Water Heaters





### **Navien's Condensing Technology**

To help explain "condensing technology," imagine the condensation on a glass of ice water. This condensation is created inside Navien's condensing heat exchanger (secondary heat exchanger) from the incoming cold water cooling the hot gases inside the unit. Navien's state-of-the-art, stainless steel condensing heat exchanger then traps this condensation and uses it, making the whole process incredibly efficient and economical.

This condensation (or vapors and gases) would normally escape through the vents in a conventional water heater. But with Navien's cutting-edge technology, our Combi Water Heaters reuse the condensation, providing you with the most efficient and economical Combi Water Heater on the market today.



### **Navien's Condensing Combi Water Heaters** An Ideal Green Solution for Domestic and Hydronic Heating

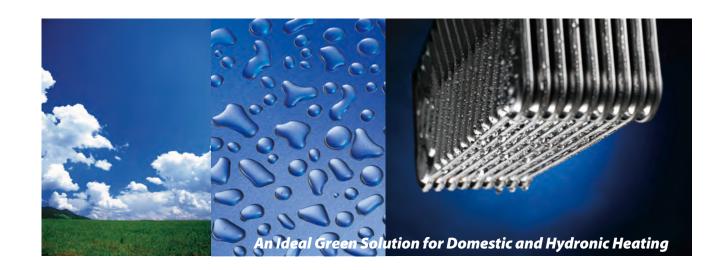




Navien's fin-type stainless steel heat exchanger, stainless steel condensing heat exchanger and premixed burner is what makes this unit so unique.

Ideal for domestic water heating and space-heating applications, such as in-floor radiant heating, base-board heating, and fan assistance air handler heating applications, the Condensing Combination Water Heater from Navien has a BTU input of up to 199,000 to fit any project.

# Navien Condensing Combi Water Heaters Why Choose Navien?



### **Superb Condensing Efficiency & PVC Venting**

Navien's Condensing Combi Water Heater is equipped with dual stainless steel heat exchangers, making it 98% efficient.

Its PVC venting also lowers the cost of installation and simplifies the process significantly. PVC is inexpensive, durable and easy to assemble, but installers and contractors will also appreciate the Combi's ability to vent up to 100 feet with a maximum of six elbows\*.



### Where Technology Meets Ecology, Combination Water Heater

Navien's Condensing Combi Water Heaters are the ideal solution for those customers who need both domestic hot water and a space heating application. Unlike conventional boilers, Navien's Combi Water Heater heats water only when needed, making it environmentally sound as well as cost efficient.

### **Highest Volume of Water, Cascade System**

Navien's Combi Water Heater is more than capable of supplying hot water on demand and consistently due to the unit's distinctive technology, including its multi-temperature sensor, water-flow sensor and sensitive auto-burner control. When combined with Navien's Condensing 98% Tankless Water Heater, larger families can receive ample volumes of hot water and both units will run on demand, saving energy and money.



Cascade System with Navien's Condensing 98% Tankless Water Heaters Available



### Extended Life, Stainless Steel Heat Exchanger

Stainless steel for the Combi's integrated primary and secondary heat exchangers prevents corrosion and ensures a longer lifespan over copper parts.

Stainless steel components also maintain consistency, even during long periods of use, and aid in efficiency by capturing as much condensation as possible.

Hydronic heating is made possible thanks to the stainless steel's capacity to keep temperatures low.

### Eco-Friendly, Eco Pre-mixed Burner

High grade stainless steel burner uses pre-mixed air and gas ratio providing a 10% to 100% firing rate.

The Eco Pre-mixed Burner generates at least 20% less CO<sub>2</sub> and about 75% less harmful air pollutants such as NOx than other conventional water heaters.



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<sup>\*</sup> Each elbow deduct 5' off of venting length

### **Auto Sensing & Adaptive Heating, ASA Control System**

The Combination's ASA Control System maintains a consistent, comfortable temperature throughout the home at all times, even taking into account the home's design as well as outside temperatures.

The secret to this system involves a built-in thermostat which senses even the slightest temperature changes. The Combi's space-heating application calculates the amount of heat required based on the difference between the return-water temperature and the indoor temperature, then automatically adjusts and controls the temperature accordingly.



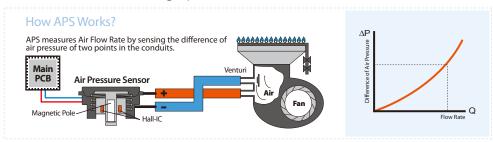
### Weather Compensation Heating, K-Factor Heating

An outdoor sensor can be connected to Navien's Condensing Comi Water Heater. With this device the unit can automatically regulate the heating temperature according to changes in the temperature outdoors, allowing for precise indoor heat regardless of what the weather is doing outside.

### **Advanced Safety Operation, Gas-Air Ratio Control**

Navien's Gas-Air Ratio Control (GARC) System is incredibly resourceful because it controls not only the gas, but also air rates required for optimal combustion. The GARC System is the reason extended lines for venting are permitted on the unit; ideal combustion is maintained thanks to accurate sensing and control of the rate of air and gas needed.

This ingenious system also prevents CO poisoning from unfavorable wind conditions, maintaining stable combustion, even when gas pressure is low or erratic.



### **Automatic Water Filling System**

Navien Condensing Combi Water Heater automatically fills water into space heating pipes when the unit senses water shortage in pipes.

#### **Powerful Anti-Frozen Feature**

If the system is plugged in, the unit and pipes are safe from extremely declining temperature in mid-winter.



### **Diverse Features, Remote Control**

- Aesthetic Appearance Suitable for Any Household's Interior Design
- High-Precision Water Temperature Control in 1°F Increment
- 24 Hour Time Scheduling for Space Heating
- Easy-to-Use Button Type Control
- Easy LED Reading



### **Specifications**

Applications: Under-Floor Heating System, Base Board Heating, Radiator or Fan Heating, Air-Handler Hydro Heating System and More.

Item		Model	CH-180	CH-210	CH-240	
Heat Capacity	y (Input)	Natural Gas	Min: 17,000 BTU	Min: 20,000 BTU	Min: 20,000 BTU	
			Max: 150,000 BTU	Max: 175,000 BTU	Max: 199,000 BTU	
Flow Rate		45°F Rise	5.4 GPM	6.3 GPM	7.2 GPM	
		77°F Rise	3.2 GPM	3.7 GPM	4.2 GPM	
Dimensions (W x H x D )		17"×28"×12"	17"×28"×12"	17"×28"×12"		
CA-AFUE			91%	91%	92%	
Weight			81 lbs	90 lbs	90 lbs	
Installation Type			Indoor Wall-Hung			
Venting Type			Forced Draft Direct Vent			
Ignition			Electronic Ignition			
Water Pressure (min-max)			15 - 150 PSI			
Gas Supply Pressure (from source: min-max)			NG: 5" WC ~ 10.5" WC			
Minimum Flow Rate			0.5 GPM			
Connection	Heating Supp	ly / Heating Return	1"NPT			
Sizes Cold Water Inlet / Hot Water Outlet  Gas Inlet		3/4" NPT				
		3/4" NPT				

<sup>\*</sup> Navien America reserves the right to change specifications at anytime without prior notice

### **Warranty Period**

Item	Warranty Period	Item	Warranty Period
Heat Exchanger	10 years	Other Parts	5 years



CALL US Toll Free 1 - 800 - 519 - 8794