

# KD NAVIEN®

## Condensing Combi Gas Boiler/Water Heater

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Condensing  
Combi Gas Boiler/Water Heater



The New **Green** Solution  
for Hydronic Heating!



ASME Models are Energy Star Qualified



### High Efficiency Solutions

KD NAVIEN®  
www.NavienAmerica.com

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## Navien 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 Condensing Combi Gas Boiler/Water Heater

## The New Green Solution for Hydronic Heating



Stainless Steel Heat Exchanger



*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. Navien's Condensing Combination Water Heater has a BTU input of up to 199,000 to fit any project.



## Navien Condensing Combi Gas Boiler/Water Heater

# Why Choose Navien?



### Superb Condensing Efficiency & PVC Venting

Navien's Condensing Combi Gas Boiler/Water Heater is equipped with dual stainless steel heat exchangers, making it efficient and economical. The Combi offers a low cost PVC venting solution for faster, simplified installations. PVC is durable and easy to assemble. Installers and contractors will also appreciate the Combi's ability to vent up to 100 feet with a maximum of six elbows.\*

\*Each elbow deduct 5' off of venting length

### Where Technology Meets Ecology, Combination Water Heater

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

### Highest Volume of Water, Cascade System

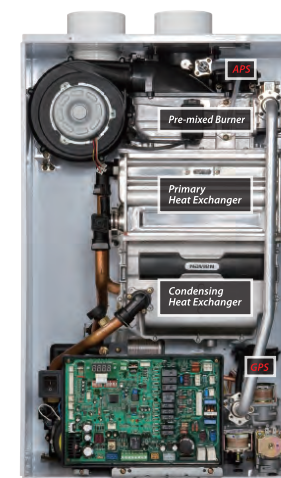
Navien's Combi Gas Boiler/Water Heaters is more than capable of supplying hot water on demand and consistently due to the unit's distinctive technology, including its multi-temperature sensors, water-flow sensor and sensitive auto-burner control.



**The Ultimate in Energy Efficiency with Precision Technology**

### Hydronic Heating Benefits

- Clean** Little chance to cause dust or lower humidity because there is no air movement.
- Silent** Offers silent heating because no blowers are needed for forced circulation.
- Comfort** Keeps floors warm but indoor air fresh, making people feel warm and comfortable.
- Coverage** Radiant heat makes heating from floor to ceiling possible.
- Economical** Radiant heat in the floors can transmit warmth throughout the house hours after turning off the heater.



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

### Eco-friendly, Premixed Burner

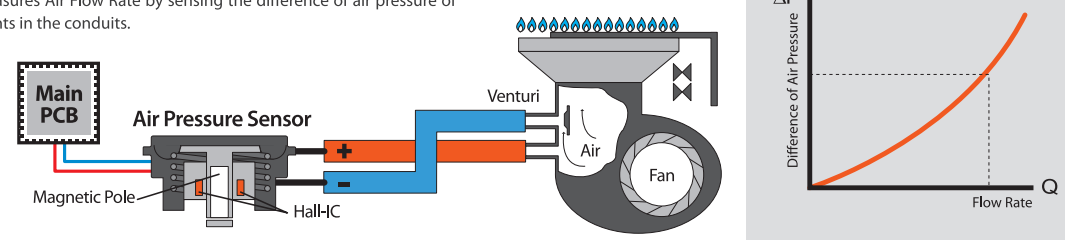
High grade stainless steel burner uses pre-mixed air and gas ratio providing a 10% to 100% firing rate. The Eco Pre-mixed Burner generates at least 20% less CO<sub>2</sub> and about 75% less harmful air pollutants, such as NO<sub>x</sub>, than other conventional water heaters.

## Advanced Safety Operation, Gas-Air Ratio Control

Navien's Gas-Air Ratio Control (GARC) System highly advanced control system modulates both the air and gas ratios required for optimal combustion. The ingenious built-in CO monitoring system will shut the Combi unit down in the event of excessive CO gases build up that can cause a hazardous condition.

### How APS Works?

APS measures Air Flow Rate by sensing the difference of air pressure of two points in the conduits.



## Auto Sensing & Adaptive Heating, ASA Control System

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

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 Combi 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 the weather.

## Automatic Water Filling System

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

## Powerful Anti-Freeze Feature

The Combi's built-in Control System is designed to keep the unit's plumbing frost free in winter conditions.



## Intelligent Remote Control System (Included in every unit)

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



## Specifications

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



Item	Model	CH-180 ASME	CH-210 ASME	CH-240 ASME
<b>Heat Capacity (Input)</b>		Min: 17,000 Btu/hr	Min: 20,000 Btu/hr	Min: 20,000 Btu/hr
		Max: 150,000 Btu/hr	Max: 175,000 Btu/hr	Max: 199,000 Btu/hr
<b>Flow Rate (DHW)</b>	45°F Rise	6.2 GPM	7.3 GPM	8.4 GPM
	77°F Rise	3.6 GPM	4.3 GPM	4.9 GPM
<b>Dimensions (W x H x D)</b>		17" x 28" x 12"	17" x 28" x 12"	17" x 28" x 12"
<b>CA-AFUE</b>	Natural Gas	91%	91%	91%
	Propane Gas	92%	91%	91%
<b>Weight</b>		74 lbs	84 lbs	84 lbs
<b>Installation Type</b>		Indoor / Outdoor Wall-Hung		
<b>Venting Type</b>		Direct Vent		
<b>Ignition</b>		Electronic Ignition		
<b>DHW Pressure (min-max)</b>		15 - 150 PSI		
<b>Heating Pressure (min-max)</b>		7 - 30 PSI		
<b>Gas Supply Pressure (from source: min-max)</b>	Natural Gas	5.5" W.C. ~ 10.5" W.C.		
	Propane Gas	10.5" W.C. ~ 13.5" W.C.		
<b>Minimum Flow Rate (DHW)</b>		0.5 GPM		
<b>Connection Sizes</b>	Heating Supply / Return	1" NPT		
	DHW Inlet / Outlet	3/4" NPT		
	Auto Feeder	1/2" NPT		
	Gas Inlet	3/4" NPT		
<b>Power Supply</b>	Main Supply	120VAC, 200W (max 2A)		
<b>Heat Exchangers</b>		Primary Heat Exchanger: Stainless Steel		
		Condensing Heat Exchanger: Stainless Steel		
<b>Venting (0" Clearance)</b>	Exhaust (ø3")	SCH 40 3" PVC, SCH 40 3" Polypropylene, SCH 80 3" CPVC		
	Intake (ø3")	PVC, Flex Aluminum, Flex Stainless Steel, ABS		

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 (800) 519-8794