

# KD **navien**®

## Condensing Tankless Gas Water Heater



*The Ultimate in Energy Efficiency  
with High-Tech Comfort!*



**High Efficiency Solutions**

**KD navien**®  
www.NavienAmerica.com

**Navien®**

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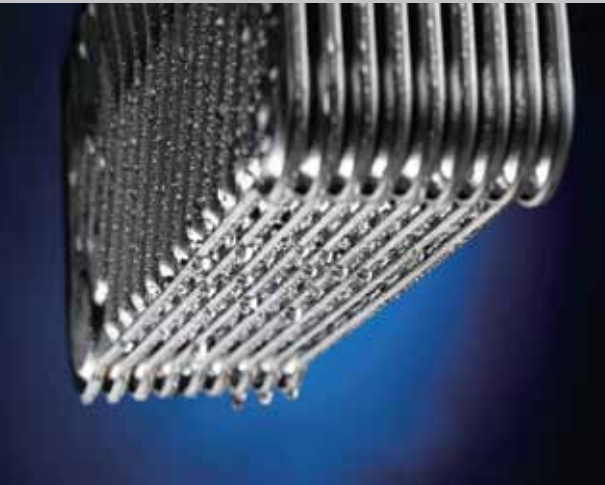
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## Navien Condensing Tankless Gas Water Heater

# Why Choose Navien?



**Navien's Condensing Technology**  
Condensation is created inside Navien's condensing heat exchanger from 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 providing the most economical tankless water heater on the market today.

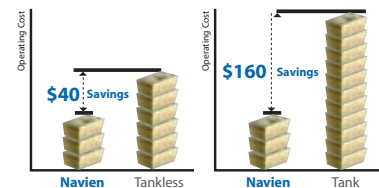
With Navien Condensing Technology, you get the best of both worlds: the **Best Value** and "**Ultra Condensing Efficiency**", which offers substantial savings and contributes to a green-friendly environment. Plus, the installation and venting processes are easy, cost effective, and **Navien's products are simply the best in quality and performance.**

### Ultra Condensing Efficiency

Navien's condensing efficiency boasts one of the industry's highest ratings of 0.96 D.O.E energy factor . Customers can take advantage of the low annual operating costs and receive the best value and payback, compared with conventional tankless or tank-type water heaters.

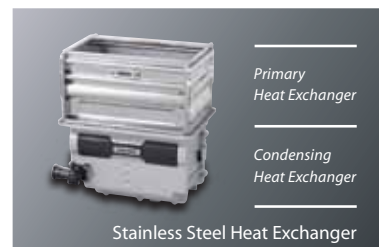
*(Based on DOE operating cost and AGA Sept/07 Natural gas price.)*

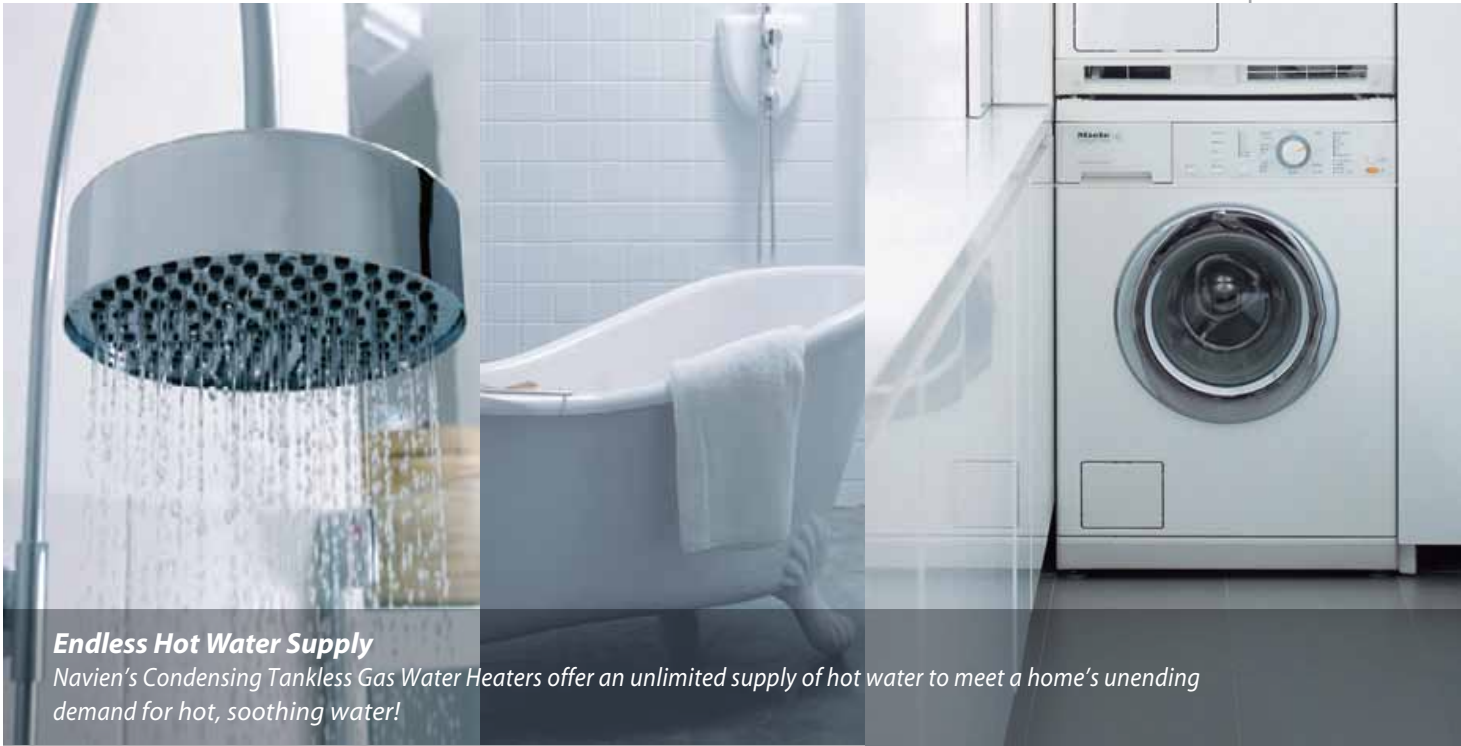
### Navien's Annual Savings



### Extended Lifecycle

Navien utilizes dual stainless steel heat exchangers, providing a longer life-expectancy and more resistance to erosion than copper heat exchangers used in other water heaters. Navien's stainless steel heat exchangers operate with relatively low water temperatures, minimizing damage from hard water conditions and maintains a high efficiency level.





**Endless Hot Water Supply**

Navien's Condensing Tankless Gas Water Heaters offer an unlimited supply of hot water to meet a home's unending demand for hot, soothing water!

**Inexpensive PVC Venting Solution**

The high efficiency of Navien's Condensing Tankless Water Heater results in lower exhaust temperatures, allowing for the use of 3" Sch 40 PVC venting.

- PVC venting offers a significant cost savings when compared with other venting materials.
- PVC venting is lightweight and easily slides together, reducing installation time and making it easy to run a 100 feet of venting. (Each elbow deduct 5' off of venting length.)

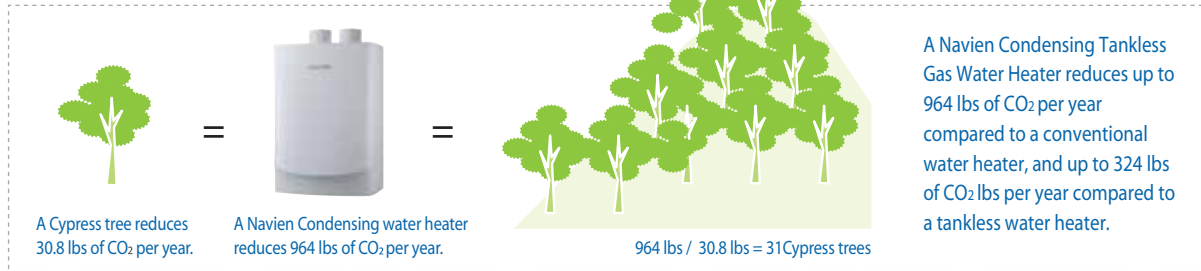
**Navien Technology is Eco Friendly**

- Navien's condensing technology uses less gas than conventional water heaters resulting in lower CO emissions.
- The Eco Pre-mixed Burner dramatically reduces NOx emission levels, making it the lowest emission levels in the industry.



Eco Pre-mixed Burner

**Each Navien Unit Installed Equates to 31 Cypress Trees.**



## Optional Circulation Pump and Mini Buffer Tank (Model "A")

- No minimum flow rate required with optional internal circulation mode.
- Minimize hot/cold/hot stacking, the so called "Cold Water Sandwich".
- Save on installation cost's with optional circulation pump and buffer tank.
- The **Ready-Link® Cascading System** can combine "A" models units and non "A" model units together to save money on installation costs and conserve water.

## Advanced Technology

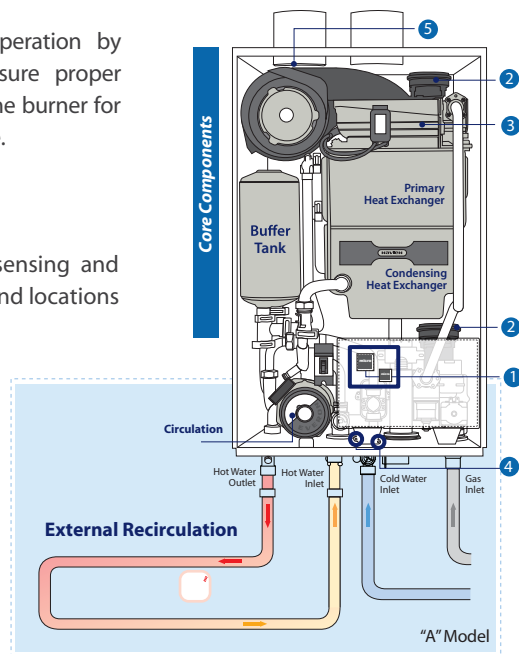
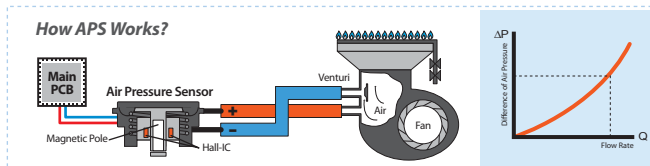
### 1 Enhanced Safety with Dual Microprocessors

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 Three-phased, Pre-Mixed Burner

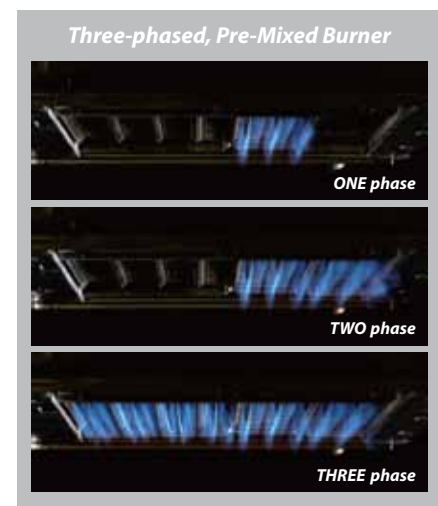
Controls flame by pre-mixing optimal ratio of gas and air before combustion, reducing emissions and enhancing heat efficiency.

### 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 debris from entering the system freeing the burner from elements that would normally cause unstable combustion and reduced energy efficiency.





## Space Saving Design

Navien's condensing tankless water heater's compact, wall mount design occupies approximately 80% less space than a traditional 50 gallon tank-type water heater\*.

Navien's compact design adds free space that can be used to store other house hold items.

\*(Navien NR/NP 240A compared with AO Smith GVP-50, Dec 2010)



## Navien's Ready Link® Cascade System

Navien's Ready Link® System is the best alternative for large volumes of hot water. With its easy venting and installation, unlimited Navien Water Heaters can be set up as one system. Unlike tank-type water heaters, sudden hot-water cutoffs can be avoided.

- **Abundant Hot Water Supply:** 16 units can be linked as one group within the system and several groups can be linked-up into one system.
- **Energy Saving:** industry's most efficient multi-unit system with an exceptional rating of 0.96 DOE energy factor.
- **Easy Wiring Connection:** simple wiring link without complicated communication cables and controllers.
- **Easy Ventilating:** built in APS for longer vent pipe.
- **Low Maintenance Cost:** even if one unit of the system fails, the rest will operate without any problems.
- **Full Modulation System:** units activate individually as the demand for hot water increases.



*\* The design of the product may change without prior notice to improve the quality or performance.*

## Intelligent Remote Control (Included with every Navien Tankless Water Heater)

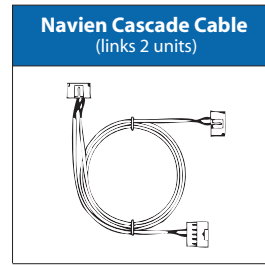
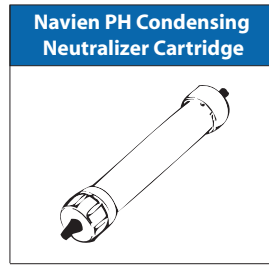
- Temperature adjustment in 1°F increments between 98-120°F
- Touch activated backlight function
- Easy-to-Use button type control
- Built-in recirculation timer for water and energy savings
- Key-pad lock button prevents inadvertent temperature changes
- Advanced water heater diagnosis capability and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



Remote Control  
NR - 10DU















## Additional Accessories



## Right Model?

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

| Ground Water Temp.                   |  40 °F          |  55 °F          |  70 °F           |
|--------------------------------------|--|--|---|
| Model                                |  |  |   |
| NR-180 / NR-180A                     |  <b>4.3 GPM</b> |  <b>5.6 GPM</b> |  <b>8.0 GPM</b>  |
| NR-210 / NR-210A                     |  <b>5.2 GPM</b> |  <b>6.7 GPM</b> |  <b>9.6 GPM</b>  |
| NR-240 / NR-240A<br>NP-240 / NP-240A |  <b>5.7 GPM</b> |  <b>7.4 GPM</b> |  <b>10.6 GPM</b> |

## Model Description Legend

| Model | Description  |
|-------|--|
| NR    | Navien Regular (potable domestic hot water only) Maximum Temperature: 140°F                        |
| NP    | Navien Premium (potable domestic hot water and commercial applications) Maximum Temperature: 185°F |
| A     | With Circulation Pump and 0.5 US gallon (2 liter) Mini-Buffer Tank                                 |

## Hot-Water Flow Chart

Temperature: 105°F

| Model                                | 35 °F   | 40 °F   | 45 °F   | 50 °F   | 55 °F   | 60 °F   | 65 °F   | 70 °F    |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|----------|
| NR-180 / NR-180A                     | 4.0 GPM | 4.3 GPM | 4.7 GPM | 5.1 GPM | 5.6 GPM | 6.2 GPM | 7.0 GPM | 8.0 GPM  |
| NR-210 / NR-210A                     | 4.8 GPM | 5.2 GPM | 5.6 GPM | 6.1 GPM | 6.7 GPM | 7.4 GPM | 8.4 GPM | 9.6 GPM  |
| NR-240 / NR-240A<br>NP-240 / NP-240A | 5.3 GPM | 5.7 GPM | 6.2 GPM | 6.7 GPM | 7.4 GPM | 8.2 GPM | 9.3 GPM | 10.6 GPM |

## Specifications

Navien America offers a complete line of Condensing Water Heaters for residential and commercial applications.

| Item  | Model            | NR-180A / NR-180  | NR-210A / NR-210     | NR-240A / NR-240<br>NP-240A / NP-240 |
|---|------------------|---|----------------------|--------------------------------------|
| Heat Capacity (Input)                         |                  | Min: 15,000 Btu/hr  | Min: 17,000 Btu/hr   | Min: 20,000 Btu/hr                   |
|   |                  | Max: 150,000 Btu/hr   | Max: 180,000 Btu/hr  | Max: 199,000 Btu/hr                  |
| Energy Factor (DOE)                           | Natural Gas      | 0.94 / 0.96   | 0.94 / 0.95          | 0.95 / 0.95                          |
|   | Propane Gas      | 0.94 / 0.97   | 0.94 / 0.97          | 0.95 / 0.97                          |
| Dimensions (W x H x D)                        |                  | 17" x 28" x 14"   | 17" x 28" x 15"      | 17" x 28" x 15"                      |
| Weight  | NR-A / NP-A      | 77 lbs  | 86 lbs               | 86 lbs                               |
|   | NR / NP          | 67 lbs  | 77 lbs               | 77 lbs                               |
| Installation Type                             |                  | Indoor / Outdoor Wall-Hung  |                      |                                      |
| Venting Type                                  |                  | Forced Draft Direct Vent  |                      |                                      |
| Ignition                                      |                  | Electronic Ignition   |                      |                                      |
| Water Pressure (min-max)                      |                  | 15 - 150 PSI  |                      |                                      |
| Gas Supply Pressure<br>(from source: min-max) | Natural Gas      | 5.0"W.C. ~ 10.5"W.C.  |                      |                                      |
|   | Propane Gas      | 9.0"W.C. ~ 13.5"W.C.  | 8.0"W.C. ~ 13.5"W.C. |                                      |
| Minimum Flow Rate to Activate Water Heater    |                  | For "A" Model 0GPM (no minimum flow rate requirement), Otherwise 0.5GPM |                      |                                      |
| Connection Sizes                              | Cold Water Inlet | 3/4" NPT  |                      |                                      |
|   | Hot Water Outlet | 3/4" NPT  |                      |                                      |
|   | Gas Inlet        | 3/4" NPT  |                      |                                      |
| Power Supply                                  | Main Supply      | 120VAC, 60Hz 200W (max 2A)  |                      |                                      |
| Heat Exchangers                               |                  | Primary Heat Exchanger: Stainless Steel                                 |                      |                                      |
|   |                  | Condensing Heat Exchanger: Stainless Steel                              |                      |                                      |
| Venting<br>(0" Clearance)                     | Exhaust (ø3")    | SCH 40 3" PVC, 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

| Item                       | Warranty Period | NR Series    | NP Series               |                        |
|----------------------------|-----------------|--------------|-------------------------|------------------------|
|                            |                 | DHW use only | Residential Application | Commercial Application |
| Heat Exchanger             |                 | 15 years     | 15 years                | 10 years               |
| Other Parts and Components |                 | 5 years      | 5 years                 | 3 years                |
| Labor                      |                 | 1 year       | 1 year                  | 1 year                 |



CALL US

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