



## Model NRC661 Series Residential Condensing Tankless Water Heater Specification Sheet

- **Standard Input**- Gas consumption ranges from 15,000 BTU/h to 120,000 BTU/h
- **Capacity Range**- Flow rates from 0.5 GPM up to 6.6 GPM
- **Compact Design**- ANSI Z21.10.3/CSA 4.3 certified design that can be wall-mounted outdoors.
- **Durable Steel Casing with Polyester Coating**
- **Venting Options** - Available as an Outdoor (requires no venting) or indoor Direct Vent (-DV) model which includes special plastic flue adapters that are compatible with both 3" Schedule 40 and 80 PVC/CPVC pipe. The DV model can be converted to a non-direct vent (SV) model with the use of a conversion Kit (#SV-CK-3)
- **Direct Electronic Ignition**
- **Energy Factor**- 0.91 (NG) 0.93 (LP)
- **Thermal Efficiency** - Fully condensing, 93% efficient for use with natural gas or propane
- **Temperature Controls** - Includes built in display that can preset the output temperature to either 120°F, 135°F, or 140°F
- **Power Cord Installation Kit** - 6' power cord is included with -DV models only
- **Safety Devices**- Flame Sensor, Overheat Prevention Device, Lighting Protection Device, Freeze Protection, Condensate Overfill, Fan Rotation Detector
- **Additional Features** - Temperature Lockout, High Elevation Adjustment, Built-in display window
- **12-Year\*\* Limited Heat Exchanger Warranty for Standard Residential Use**
- **5-Year Limited Parts Warranty**
- **1-Year Reasonable Labor Warranty**
- **Approvals**- CSA, UPC\*\*, NSF, Low NOx Approved by SCAQMD [ $<14\text{ng/j}$  or 20ppm]



OD Model



DV Model

### Model

NRC661 - \_\_\_\_

☐ OD (Outdoor Vent)

☐ DV (Direct Vent)

### Accessories

☐ Horizontal Hood Termination (#PVT-HL)

☐ 3" PVC Termination (#VK3-H-PVC)

☐ Birdscreen for 3" PVC/CPVC (#VT3-PVCS)

☐ Condensate Neutralizer (#NC-1)

☐ Isolation Valves (#IK-WV-200-1 (-LF))

☐ SV Conversion Kit (#SV-CK-3)

☐ Outdoor Recess Box (#RB-510)

☐ Remote Controller (#RC-7651M)

☐ Remote Controller Cord (#RC-CORD10)

☐ Remote Controller Cord (#RC-CORD26)

☐ Pipe Cover (#PC-15)



\*12 Years replacement on the heat exchanger when the product is used in a single family dwelling. 3 Years replacement on heat exchanger when the product is used for commercial capacity, if it is used in other than a single family dwelling, or if the product is supplied with pre-heated or circulated water (an aquastat being the minimum pump control requirement). Refer to the Noritz Limited Warranty for complete coverage details.

\*\*This product complies with California AB 1953 Low Lead Law and Section 1417(d) of the Safe Drinking Water Act.

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**Technical Drawings:**

- SIDE VIEW:** Shows a side profile of the unit with dimensions: 0.4" (10mm) top flange, 6.7" (170mm) main body width, 3.5" (90mm) base width, 1.1" (28mm) base offset, 1.2" (31mm) top vent offset, 0.8" (21mm) top vent offset, 22.3" (567mm) main body height, and 0.4" (10mm) base flange.
- FRONT VIEW:** Shows the front of the unit with dimensions: 13.8" (350mm) top flange, 13.1" (334mm) main body width, 5.9" (150mm) base width, 4.9" (125mm) base offset, 20.5" (520mm) main body height, 23.6" (600mm) total height, 2.2" (56mm) top vent offset, 1.4" (36mm) top vent offset, 1.1" (28mm) base offset, and a status indicator.
- OD Model:** A detailed view of the OD Model showing dimensions: 13.8" (350mm) top flange, 13.1" (334mm) main body width, 8.5" (217mm) base width, 2.2" (56mm) top vent offset, 1.4" (36mm) top vent offset, 1.1" (28mm) base offset, and a status indicator.
- BOTTOM VIEW:** Shows the bottom of the unit with dimensions: 0.4" (10mm) top flange, 6.7" (170mm) main body width, 3.5" (90mm) base width, 1.1" (28mm) base offset, 1.2" (31mm) top vent offset, 0.8" (21mm) top vent offset, 22.3" (567mm) main body height, and 0.4" (10mm) base flange.
- VIEW FROM TOP:** Shows the top of the unit with dimensions: 297" (11.7") main body width, 253" (10.0") base width, 103" (4.1") top vent offset, 96" (3.8") top vent offset, 31" (1.2") top vent offset, 87" (3.4") top vent offset, 45" (1.8") top vent offset, 21" (0.8") top vent offset, 40" (1.6") top vent offset, 97" (3.8") top vent offset, and a wiring throughway.

**HEIGHT OF EACH FITTING FROM BOTTOM OF CASE**

|                  | NRC661-DV   | NRC661-OD   |
|------------------|-------------|-------------|
| CONDENSATE DRAIN | 0.8" (20mm) | 0.8" (20mm) |
| HOT WATER OUTLET | 1.8" (45mm) | 1.8" (45mm) |
| COLD WATER INLET | 2.3" (58mm) | 2.3" (58mm) |
| GAS INLET        | 2.0" (50mm) | 2.0" (50mm) |

|                       |     |     |     |     |     |     |     |     |     |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Temperature Rise (°F) | 30  | 40  | 45  | 50  | 60  | 70  | 80  | 90  | 100 |
| Flow Rate (GPM)       | 6.6 | 5.8 | 5.3 | 4.6 | 3.8 | 3.3 | 2.9 | 2.6 | 2.3 |

The graph shows the relationship between flow rate and pressure loss for a 1/2 inch diameter pipe. The x-axis represents flow rate in GPM, ranging from 0.0 to 8.0. The left y-axis represents pressure loss in psi, ranging from 0 to 40. The right y-axis represents pressure loss in feet of head, ranging from 0 to 90. The curve starts at (0,0) and increases quadratically, reaching approximately 30 psi at 6.5 GPM.

| Flow rate [GPM] | Pressure loss [psi] | Pressure loss [Ft. of head] |
|-----------------|---------------------|-----------------------------|
| 0.0             | 0.0                 | 0.0                         |
| 1.0             | 0.5                 | 1.5                         |
| 2.0             | 2.0                 | 6.0                         |
| 3.0             | 4.5                 | 13.5                        |
| 4.0             | 8.0                 | 24.0                        |
| 5.0             | 12.5                | 37.5                        |
| 6.0             | 18.0                | 54.0                        |
| 6.5             | 30.0                | 90.0                        |

|                                                      |                  |                                                                          |                                        |
|------------------------------------------------------|------------------|--------------------------------------------------------------------------|----------------------------------------|
| Model Name                                           |                  | NRC661-OD                                                                | NRC661-DV                              |
| Weight                                               |                  | 36 (pounds)                                                              | 38 (pounds)                            |
| Water Holding Capacity                               |                  | 0.2 Gallon (0.9 L)                                                       |                                        |
| Connection Sizes                                     | Water Inlet      | 3/4"                                                                     |                                        |
|                                                      | Hot Water Outlet | 3/4"                                                                     |                                        |
|                                                      | Gas Inlet        | 1/2"                                                                     |                                        |
|                                                      | Condensate Drain | 1/2"                                                                     |                                        |
| Power                                                | Supply           | 120VAC (60Hz), less than 4 amperes                                       |                                        |
|                                                      | Consumption      | NG: 43W LP: 42W Freeze Prevention 139W                                   | NG: 54W LP: 56W Freeze Prevention 138W |
| Freeze Protection                                    |                  | Outdoor: -4°F                                                            | Indoor: -30°F                          |
| Temperature Settings with Optional Remote Controller | °F Mode          | 100-140°F (In 5°F intervals) (9 Options)                                 |                                        |
|                                                      | °C Mode          | 37-48°C (In 1°C intervals), 50, 55, 60°C (In 5°C intervals) (15 Options) |                                        |
| Default Temperature Options                          | °F Mode          | 120, 135, 140°F (Default is 120°F)                                       |                                        |
|                                                      | °C Mode          | 50, 57, 60°C (Default is 50°C)                                           |                                        |