

## VERTEX® 96% THERMAL EFFICIENCY

### CONTINUOUS HOT WATER VERSATILE POWER DIRECT VENT

Today's homes demand more hot water than ever before, and the 96% efficient Vertex power direct vent gas water heaters offer unprecedented levels of performance to meet the need. The fully condensing Vertex design is so advanced, it delivers hot water shower after shower...at a continuous flow of over 4 gallons per minute.\*

#### ENERGY STAR® QUALIFIED

#### HELICAL INTERNAL HEAT EXCHANGER

- Spiral heat exchanger keeps hot combustion gases in the tank longer to lengthen the heat transfer cycle
- Positioned in the center of the tank for more even heat distribution
- Operates at 96% thermal efficiency, which saves money on operating costs compared to a standard 80% efficient gas water heater

#### POWER DIRECT VENT DESIGN

- Top fired burner
- Combined vertical and horizontal runs terminating through an outside wall using ULC S636 PVC, CPVC or polypropylene pipe
- 2" pipe, vents up to 45 equivalent feet
- 3" pipe, vents up to 128 equivalent feet

#### CONDENSING DESIGN

- 96% efficient condensing design
- Equipped with condensate drain tee

#### SIDE-MOUNTED HOT AND COLD RECIRCULATING TAPS

- Allows Vertex to be installed as part of combination space heating/water heating applications

#### INTELLIGENT CONTROL SYSTEM WITH TOUCH SCREEN DISPLAY

- Exclusive touch display control system
- Precise temperature control
- Advanced diagnostics

#### POWERED ANODES STANDARD

- Provides long-lasting tank protection in varying water conditions
- Powered anodes are non-sacrificial
- Automatically adjusts output needed to properly protect the tank

#### BLUE DIAMOND® GLASS COATING

- Provides superior corrosion resistance compared to industry standard glass lining

#### CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

#### AVAILABLE IN NATURAL GAS OR PROPANE

#### MAXIMUM HYDROSTATIC WORKING PRESSURE: 150 PSI

#### CODE COMPLIANCE

- Meets the thermal efficiency and standby loss requirements of NRCan and current edition of ASHRAE/IESNA 90.1

#### DESIGN-CERTIFIED BY CSA INTERNATIONAL

- Certified at 300 PSI test pressure and 150 PSI working pressure. Listed according to ANSI Z21.10.3 - CSA 4.3 standards governing storage tank-type water heaters

#### WARRANTY

- 6 year limited tank warranty
- 6 year limited parts warranty

For complete information, consult written warranty or A. O. Smith

Model GDHE-50 \*4.31 GPM continuous flow, based on 65°F inlet water temperature, 110°F outlet temperature.



MODEL SHOWN GDHE-75



## PERFORMANCE

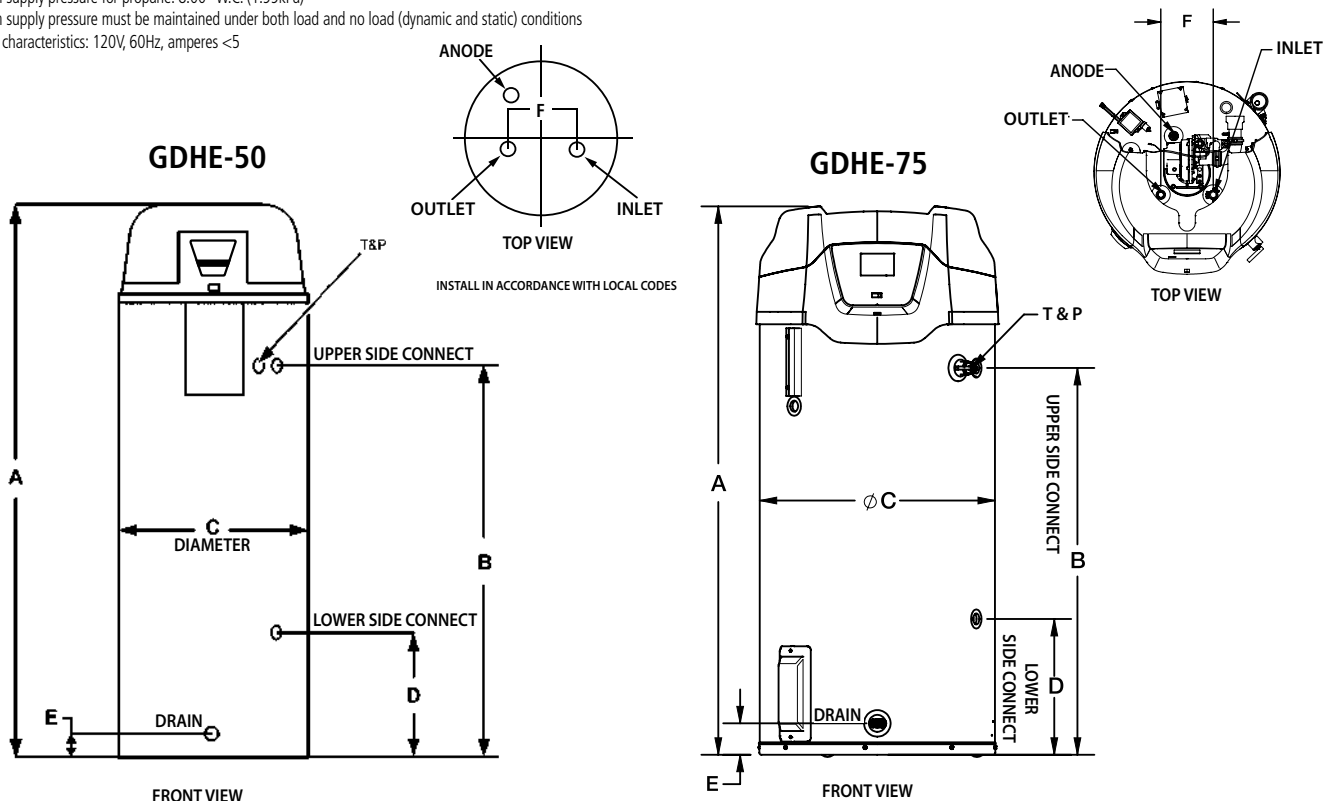
| MODEL              | SERIES  | CAPACITY |     | MAXIMUM CERTIFIED ALTITUDE | INPUT   | RECOVERY RATE AT 90°F TEMPERATURE RISE | THERMAL EFFICIENCY | BC COMPLIANT |
|--------------------|---------|----------|-----|----------------------------|---------|--|--------------------|--------------|
|                    |         | USG      | L   |                            |         |  |                    |              |
| <b>NATURAL GAS</b> |         |          |     |                            |         |  |                    |              |
| GDHE-50            | 300/301 | 50       | 189 | 10,100 (3,078)             | 100,000 | 128 (485)                              | 96%                | √            |
| GDHE-75            | 300/301 | 75       | 284 | 10,100 (3,078)             | 100,000 | 128 (485)                              | 96%                | √            |

Available in Propane (LP) gas. Specify when ordering Propane (LP) gas.  
 Natural gas models are series 140. Propane models are series 141.  
 Optional Condensate Neutralizer Kit available (Part Number 9007959005).

## DIMENSIONS & SHIPPING WEIGHT

| MODEL              | HEIGHT TO TOP OF TANK | HEIGHT TO T&P | HEIGHT TO UPPER SIDE CONNECTION | TANK DIAMETER | HEIGHT TO LOWER SIDE CONNECTION | HEIGHT TO DRAIN VALVE | OUTLET TO INLET | TOP WATER CONNECTIONS | SIDE WATER CONNECTIONS | GAS CONNECTION | SHIPPING WEIGHT |
|--------------------|-----------------------|---------------|---------------------------------|---------------|---------------------------------|-----------------------|-----------------|-----------------------|------------------------|----------------|-----------------|
|                    | A<br>IN (CM)          | B<br>IN (CM)  | B<br>IN (CM)                    | C<br>IN (CM)  | D<br>IN (CM)                    | E<br>IN (CM)          | F<br>IN (CM)    | IN<br>NPT             | IN<br>NPT              | IN<br>NPT      | LB (KG)         |
| <b>NATURAL GAS</b> |                       |               |                                 |               |                                 |                       |                 |                       |                        |                |                 |
| GDHE-50            | 66 ¾ (170)            | 49 ¼ (125)    | 49 ¼ (125)                      | 22 (56)       | 15 ¾ (40)                       | 3 (8)                 | 8 (20)          | ¾                     | ¾                      | ½              | 255 (116)       |
| GDHE-75            | 65 ¼ (166)            | 45 ⅝ (116)    | 45 ⅝ (116)                      | 27 ¾ (71)     | 16 (41)                         | 3 ¾ (10)              | 8 (20)          | 1                     | ¾                      | ½              | 382 (173)       |

Inlet and outlet connections: ¾" male for GDHE-50 and 1" for GDHE-75  
 Circulation loop connections: ¾" female  
 Gas inlet: ½"  
 Maximum supply pressure: 14" W.C. (3.48kPa)  
 Minimum supply pressure for natural gas: 3.50" W.C. (.87kPa)  
 Minimum supply pressure for propane: 8.00" W.C. (1.99kPa)  
 Minimum supply pressure must be maintained under both load and no load (dynamic and static) conditions  
 Electrical characteristics: 120V, 60Hz, amperes <5



For Technical Information call 888-599-2837. A. O. Smith Enterprises Ltd. reserves the right to make product changes or improvements without prior notice.