



# The All New Commercial State Force™ 90+





# Maximum Product Performance

- Introducing the new Force™ 90+. It's more efficient, smarter and easier to service than any previous "small footprint" State commercial models.
- New features include:
  - Higher Efficiencies
  - Top-Fired Burner System
  - Dual Anodes
  - New Electronic Control System
  - Direct Vent
  - Higher Commercial Temperature Setting





## Features & Benefits

- 96% thermal efficiency ➤ Ultra efficiency
- Top-fired burner system ➤ Quiet operation
- Dual anodes ➤ Long-lasting tank protection
- New control system ➤ Eye-level, user-friendly display with plain English diagnostics
- Flexible venting ➤ Power-vent or power direct-vent installation





## Designed For Efficiency & Durability

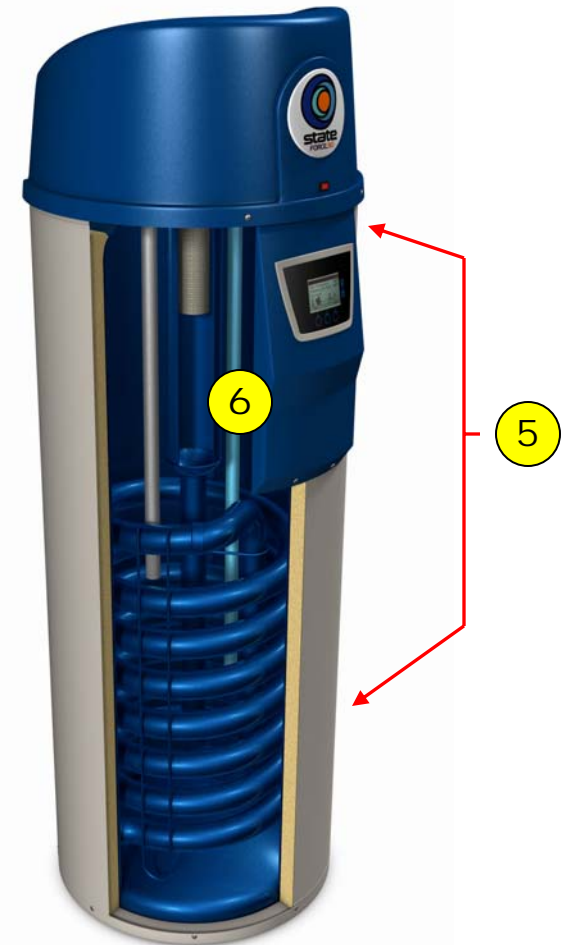
- ① **Advanced Electronic Control**
  - Allows precise temperature control, provides unit operating information and system diagnostics—all in plain English
- ② **Premium-Grade Glass Lining**
  - Provides superior protection against leaks
- ③ **Dual Anode Rods**
  - Provide the highest quality “commercial grade” defense against future leaks
- ④ **Low-NOx Burner**
  - “Eco-friendly” operation complies with Southern California and Texas Low-NOx standards.





## Designed For Efficiency & Durability

- ⑤ Side Mounted Recirculating Connections
  - Conveniently located for combination hot water/space heating or hot water/radiant floor heating applications
- PEXAN™ Dip Tube for Long Life
- ⑥
  - A rugged cross-link polymer for superior resistance to thermal oxidation, designed to maximize hot water delivery.



# Designed For Efficiency & Durability



- 7 Fully Submerged Coil Heat Exchanger
  - Helical configuration maximizes heat transfer area of 96% thermal efficiency and superior hot water output.
- 8 On/Off Control
  - Helps simplify service and allows total shutdown during vacation by cutting all power to the water heater with a flick of a switch.





# Force™ 90+ Specifications

- Maximum Thermal Efficiency
  - 96%
- Easy to install
  - Connects to ½” gas line
  - Vents using standard PVC
  - Small footprint – 22”
- Fuel Flexibility
  - Available in Natural Gas or Propane



MODEL	GALLON CAPACITY	RECOVERY-GALLONS PER HOUR AT 100°F	BTU INPUT	HEIGHT	DIAMETER
SHE50100NE	50	116	100,000	70-5/8”	22”

*SHE50100NE available in natural gas or propane*



## Force™ 90 & Force™ 90+ offer Excellent Commercial Efficiency in a Small Footprint



Model	Thermal Efficiency
Force™ 90+/SHE50100NE 50-Gallon/100,000 BTU	96%
Force™ 90/SHE5076NE 50-Gallon/76,000 BTU	90%
Typical 70-Gallon/120,000 BTU Commercial Gas Model	80%
Typical Commercial Tankless Units	80%-84%



# Advanced Control System



- Large LCD display
- Status of operation, including history
- Precise temperature control
- Self-diagnostics with plain English display

# Advanced Control System

## Control Benefits:

- Large backlit LCD gives “Plain English” instructions and information
- Provides precise temperature control
- Delivers unit operating information
- Provides current operation mode
  - Tank temperature and operating set point
- Easy to navigate menu
- Makes service and repair easier



# Advanced Control System



How it makes service & repair easier:

- If service is ever required, the control alerts the user of the fault and provides plain English diagnostics to assist in correcting the issue
- Provides detailed heater status information for: blower, igniter, gas valve, flame detection, air inlet restrictions, exhaust vent restrictions, acceptable gas supply pressure



# Advanced Control System



How it makes service & repair easier:

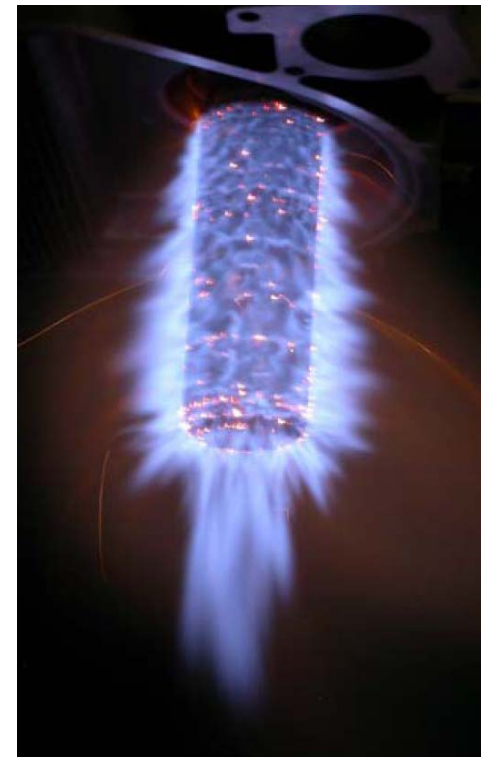
- Precise temperature setting with actual tank temperature at upper and lower probes
- Maintains a constant log of the number of cycles and burner operating time
- Monitors and reports on 32 different potential operating faults. Communicates the details of the fault and gives diagnostic information
- Maintains a log of any fault occurrence and the time a fault occurred





# Top-Fired Burner System

- The new Premier® Power-Vent DV burner and blower system provides dual benefits
  - Added efficiency
  - Reduced noise levels with NO muffler required





# Literature – Launch Support

**STATE SUPER HIGH EFFICIENCY GAS WATER HEATERS** 96% Thermal Efficiency

RESIDENTIAL PREMIER® POWER-VENT DV • COMMERCIAL FORCE 90+™

- 96% Thermal Efficiency
- 100,000 BTU Input
- 164-Gallon First Hour Delivery
- 129 GPH Recovery
- 22" Diameter Footprint
- Easy To Install

4 Page Color Brochure



## FORCE 90+™

96% Efficient  
Power Direct-Vent Commercial Gas Water Heater

The 100,000 BTU Force 90+™ light-duty commercial gas water heater is equipped with a fully submerged, spiral-shaped condensing heat exchanger and 50 gallons of storage capacity. This design provides much greater heat transfer surface than a standard straight flue tube, resulting in 96% thermal efficiency and higher hot water output than comparable 80% efficient water heaters. With a 22" diameter, the Force 90+™ can be installed in less space than a 75-gallon unit yet delivers greater recovery and lower operating costs.



### Power Direct-Vent Design for Installation Versatility

- Modular blower, with 120V, 60Hz electrical system (5 amps or less)
- Combined horizontal and vertical vent runs terminating through outside wall, using Schedule 40 PVC pipe as follows:
  - 2" pipe allows vent runs up to 20 equivalent feet
  - 3" pipe allows vent runs up to 60 equivalent feet
  - 4" pipe allows vent runs up to 120 equivalent feet

### Available in Natural Gas or Propane

### Side-Mounted Taps for Recirculating Systems

- Hot and cold "side taps" allow the Force 90+™ to be used for "combination" systems for water heating plus space heating, radiant floor heating or other applications requiring a recirculating hot water loop
- Plugs for recirculating taps are factory installed

### Advanced Electronic Control

- Large LCD display
- Precise temperature control
- Advanced diagnostics

### Glass Lined Tank with Two Magnesium Anode Rods

- Provides superior protection against corrosion
- Commercial-grade glass lining protects all "water side" tank surfaces plus inside of internal heat exchanger exposed to condensate

### Top-Fired Low-NOx Burner

- Reduces NOx emissions up to 33%, complies with Southern California and Texas requirements

### Factory-Installed Temperature and Pressure Relief Valve

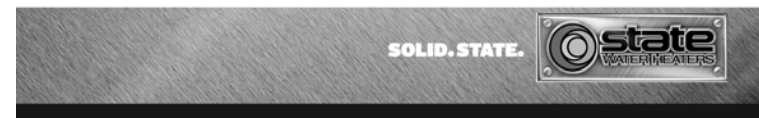
Maximum Hydrostatic Working Pressure: 150 psi

### Meets ASHRAE/IESNA 90.1 (latest standard)

- Design-certified by UL (Underwriters Laboratories) according to ANSI Z21.10.3-CSA4.3 standards governing storage-type water heaters

### Three-Year Limited Tank Warranty

- Consult written warranty shipped with water heater or contact State for complete warranty information



2 Page Spec Sheet



# Online Launch Support

To access all launch material on this or any State product launch visit [www.statenewproducts.com](http://www.statenewproducts.com) or [www.statewaterheaters.com](http://www.statewaterheaters.com)





***Solid. State.***

