

# Cyclone<sup>®</sup> Xi<sup>™</sup>

Commercial Gas Water Heaters





## Think Tank

For years, A. O. Smith has set the industry standard for performance and quality in heavy-duty commercial applications. The latest enhancement to the groundbreaking Cyclone family, Cyclone® Xi™ has taken water heater functionality, performance and design to a whole new level.

Now with a broader line to choose from, high thermal efficiency, superior tank protection and the **new intelligent control system**, the Cyclone Xi is not only the benchmark in the high efficiency commercial water heating category—it's simply the smartest water heater ever made.

CYCLONE Xi™

# AT A GLANCE



- **Intelligent Control System with LCD display**

*iCOMM™ compatible and can be monitored from remote locations. Call 1.888.WATER02 for more information. iCOMM system available for BTX-100 and BTH-120-BTH-500 models*



- **Models ranging from 50-gallon / 76,000 BTU to 130-gallon / 500,000 BTU with up to 96% thermal efficiency**
- **Venting flexibility for versatility and easy serviceability**
- **Industry-first powered anodes for superior tank protection**
- **Exclusive PermaGlas® Ultra Coat™ glass lining**

## Total Control TC

### Cyclone Xi® LCD

The intelligent control system, with easy to navigate menu, provides precise temperature control and unit operating information.



- **Detailed heater status information: blower, igniter, igniter current, gas valve, flame detection, air inlet restrictions, exhaust vent restrictions, acceptable gas supply pressure**
- **Precise temperature setting with actual tank temperature at upper and lower probes**
- **Alerts the user to any potential corrosion-related leak**
- **Maintains constant log of the number of cycles and burner operating time**
- **Communicates fault details and gives diagnostic information**
- **Maintains a log of any fault occurrence and the time a fault occurred**

## Powered Anodes\* PA

The A. O. Smith powered anode system provides the most modern and innovative technology available to provide long-lasting tank protection.

*\*Not on 76,000 and 100,000 BTU models*

- **Non-sacrificial anode does not require maintenance or inspection**
- **Provides superior tank protection to traditional aluminum or magnesium anodes**
- **Power level adjusts to changes in water conditions for optimum protection**
- **Offers superior protection in various water conditions**
  - Better protection in water with low conductivity
  - Eliminates the occurrence of hydrogen sulfide gas production (rotten egg odor)

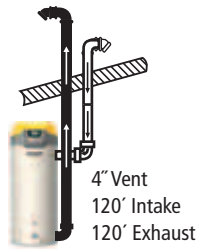
# COMMERCIAL WATER HEATERS

## The Breadth Of Innovation

### UNRIVALED VENTING VERSATILITY

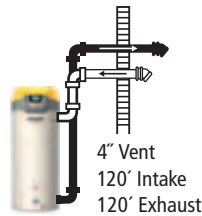
The Cyclone® Xi™ features power-vent and power direct-vent design, allowing clean uncontaminated air to be drawn directly into the unit with the flue gas products vented conventionally through the ceiling or directly through the wall to the outside.

Sealed Direct Vent Vertical



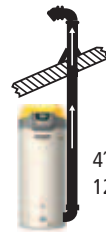
3" Vent  
50' Intake  
50' Exhaust

Sealed Direct Vent Sidewall



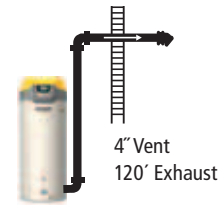
3" Vent  
50' Intake  
50' Exhaust

Indoor Conventional Vertical



3" Vent  
50' Exhaust

Indoor Conventional Sidewall



3" Vent  
50' Exhaust

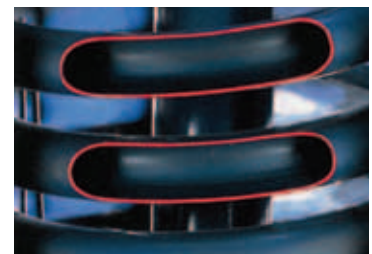
Chart applies to BTH-120 through BTH-250 models only • 4" PVC required on BTH 300-500 for up to 70 equivalent feet of venting

### EASIER TO INSTALL

Because installation space today is almost always at a premium, we've designed the Cyclone to install in an absolute minimum of space. The exhaust outlet and fresh air intakes are positioned so the water heater can be placed either in a corner or against a wall.

### ADVANCED GLASS LINING TECHNOLOGY

Exclusive PermaGlas® Ultra Coat™ glass lining protects all Cyclone water heaters. PermaGlas Ultra Coat provides superior protection for all inner tank surfaces, as well as for the inside of the heat exchanger, which would otherwise be vulnerable to corrosion from flue gas condensate. The innovative helical coil minimizes weld points to extend tank life.



### STRENGTH IN NUMBERS

Cyclone Xi water heaters can be installed in manifolded multiples to serve the highest demand applications in place of boiler systems. For example, four BTH-500s can be manifolded to provide total storage of 520 gallons with an input of 2,000,000 BTU.

## The Innovation That Started It All

### REVOLUTIONARY HEAT EXCHANGER AND BURNER SYSTEMS

The helical internal heat exchanger in all Cyclone models swirls the hot gases, like a cyclone, against the heat exchanger walls. This cyclonic action produces an extra-high rate of heat transfer, resulting in extra-high thermal efficiency. All Cyclone Xi models employ an ingenious top-mounted down-fire pre-mix burner, resulting in even higher efficiencies.

*This exclusive design delivers 95% thermal efficiency on the BTH-120 through BTH-250 and with the BTH-500. The BTX-100, BTH-300 and BTH-400 boost efficiency to up to 96%.*



### CYCLONE® Xi™ MODELS USE THE LATEST IN BURNER TECHNOLOGY

- A. The pre-mixed burner design delivers maximum efficiency.
- B. When the mixture is ignited by the hot surface igniter, a swirling flame shoots downward into the submerged central combustion chamber.
- C. The resulting hot flue gases are then forced at high velocity through a helical heat exchanger coil.
- D. The spiral shape of the coil keeps the hot gases swirling against the heat exchanger walls, resulting in extra-high thermal efficiency.

## Cyclone® HE

The light-commercial Cyclone HE is designed to produce more hot water than any comparable commercial gas water heater available today. The power-vent Cyclone HE combines the power of 76,000 BTU input with 90% thermal efficiency. The Cyclone HE is perfect for drive-through or fast food restaurants, offices and other light-duty applications. It provides the technology and performance that lives up to the A. O. Smith standard.



Model	Gallon Capacity	BTU/ Hr. Input		First Hour Delivery		Recovery In GPH @ 100° Rise $\Delta$		Height (Inches)	Diameter (Inches)
		Natural	LP	Natural	LP	Natural	LP		
BTX-80*	50	76,000	NA	118	NA	83	NA	70 <sup>5</sup> / <sub>8</sub>	22
BTX-100	50	100,000	100,000	164	164	116	116	68 <sup>1</sup> / <sub>2</sub>	22
BTH-120	60	120,000	120,000	180	180	138	138	55 <sup>1</sup> / <sub>2</sub>	27 <sup>3</sup> / <sub>4</sub>
BTH-150	100	150,000	150,000	243	243	173	173	75 <sup>1</sup> / <sub>2</sub>	27 <sup>3</sup> / <sub>4</sub>
BTH-199	100	199,000	199,000	300	300	230	230	75 <sup>1</sup> / <sub>2</sub>	27 <sup>3</sup> / <sub>4</sub>
BTH-250	100	250,000	250,000	358	358	288	288	75 <sup>1</sup> / <sub>2</sub>	27 <sup>3</sup> / <sub>4</sub>
BTH-300	130	300,000	300,000	440	440	349	349	75 <sup>1</sup> / <sub>2</sub>	33 <sup>1</sup> / <sub>8</sub>
BTH-400	130	399,900	399,900	557	557	466	466	75 <sup>1</sup> / <sub>2</sub>	33 <sup>1</sup> / <sub>8</sub>
BTH-500	130	499,900	499,900	667	667	576	576	75 <sup>1</sup> / <sub>2</sub>	33 <sup>1</sup> / <sub>8</sub>

\* Power-vent only—see spec sheet for details.



## Commercial Gas Water Heaters

### INNOVATIVE SOLUTIONS FOR ALL

The expanded Cyclone<sup>®</sup> line gives you a high-efficiency commercial water heater choice for almost any commercial application.

For complete specifications on Cyclone HE and Cyclone Xi, consult Specification Sheets at [www.hotwater.com](http://www.hotwater.com).



A. O. Smith Water Products Company

500 Tennessee Waltz Parkway Ashland City, TN 37015

[www.hotwater.com](http://www.hotwater.com)