## Commercial Gas Water Heater

## CYCLONE ${ }^{\circledR}$ Xi

## MODELS BTX AND BTXL 100

## 96\% THERMAL EFFICIENT POWER DIRECT VENT MODELS.

The Cyclone ${ }^{\circledR} \mathrm{Xi}$ is a light-duty, power direct vent, fully condensing commercial gas water heater with an internal helical heat exchanger. This helical heat exchanger helps Cyclone ${ }^{\circledR}$ Xi achieve $96 \%$ thermal efficiency and deliver outstanding hot water output.

## ADVANCED ELECTRONIC CONTROL

- Large LCD display.
- Temperature control up to $181^{\circ} \mathrm{F}$.
- Advanced diagnostics.
- iCOMM $^{T m}$ Compatible and can be monitored from remote locations. Call 1.888.WATER02 for more information.


## ENERGY STAR ${ }^{\circledR}$ 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

- Combined vertical and horizontal runs terminating through the roof or an outside wall. Vents using PVC, CPVC or polypropylene piping. Canadian installations require ULC S636 approved pipe for venting.
- $2^{\prime \prime}$ pipe, vents up to 45 equivalent feet.
- $3^{\prime \prime}$ pipe, vents up to 125 equivalent feet.


## CONDENSING DESIGN

- $96 \%$ efficient condensing design.
- Equipped with condensate drain tee.


## SIDE-MOUNTED HOT AND COLD

 RECIRCULATING TAPS- Allows Cyclone ${ }^{\circledR}$ Xi to be installed as part of combination space heating/water heating applications.


## COREGARD ${ }^{\text {™ }}$ ANODE ROD

- Our anode rods have a stainless steel core that extends the life of the anode rod allowing superior tank protection far longer than standard anode rods.


## BLUE DIAMOND ${ }^{\circledR}$ GLASS COATING

- Provides superior corrosion resistance compared to industry-standard glasslining.


## TOP FIRED ULTRA-LOW NOx GAS BURNER

- Enhanced Ultra-low NOx burner complies with SCAQMD Rule 1146.2 and other Air Quality Management Districts with similar requirements for NOx emissions of less than $14 \mathrm{ng} / \mathrm{s}$ or 20 ppm .


## AVAILABLE IN NATURAL GAS OR PROPANE

## MAXIMUM HYDROSTATIC WORKING

 PRESSURE: 150 PSI
## STANDARDS AND CERTIFICATIONS

- Design-certified by CSA International according to ANSI Z21.10.3 - CSA 4.3 Standards.
- These models meet the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition ASHRAE/IES 90.1.
- CSA certified and ASME rated T\&P relief valve.
- Approved for Canada.


## 3-YEAR LIMITED TANK AND 1 YEAR LIMITED PARTS WARRANTY

- For complete warranty information, consult written warranty or go to hotwater.com.



# AOSmith. <br> Commercial Gas Water Heater 



## ROUGH-IN DIMENSIONS

| Model Number | Approximate Capacity |  | Units | A | B | C | D | E | F | G | H | I |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | U.S. Gals. | Liters |  |  |  |  |  |  |  |  |  |  |
| BTX-100 | 50 | 189 | Inches | 66.75 | 49.25 | 22 | 15.75 | 3 | 8 | 8 | 62 | 65 |
|  |  |  | cm | 169.5 | 125.09 | 55.88 | 40 | 7.62 | 20.32 | 20.32 | 157.48 | 165.1 |

Specify when ordering propane (LP) gas.
Standard model certified from sea level to 10,100 ft. elevation.
Optional Concentric Vent Kit (9006328005) and Condensate Neutralization Kit (9007959005).
Top Inlet and Outlet: $3 / 4^{\prime \prime}$ NPT
Side Inlet and Outlet: 3/4" NPT
Gas Inlet: 1/2" NPT
Condensate drain outlet: $1 / 2^{\prime \prime}$ NPT
Electrical Characteristics: $120 \mathrm{~V} 60 \mathrm{~Hz}<5 \mathrm{amps}$
The manifold pressure is factory set and is not adjustable. A negative pressure will be seen with just the blower running without the Gas Control Valve open.
All models - Maximum Supply Pressure: 14 inches W.C. (3.48kPa)
Minimum Supply Pressure for Natural Gas: 3.50 " ( .87 kPa )
Minimum Supply Pressure for Propane Gas: $8.00^{\prime \prime}(1.99 \mathrm{kPa})$
Minimum pressure must be maintained under both load and no load (dynamic and static) conditions.

# AOSmith. <br> <br> Commercial Gas <br> <br> Commercial Gas Water Heater 

 Water Heater}

DIMENSIONS FOR BTXL-100


## ROUGH-IN DIMENSIONS

| Model Number | Approxim | Capacity | Units | A | B | C | D | E | F | G | H | I |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | U.S. Gals. | Liters |  |  |  |  |  |  |  |  |  |  |
| BTXL-100 | 75 | 284 | Inches | 65.25 | 45.64 | 27.75 | 16 | 3.71 | 8 | 7.93 | 57.36 | 58.98 |
|  |  |  | cm | 165.7 | 115.9 | 70.5 | 40.6 | 9.4 | 20.32 | 20.1 | 145.7 | 149.8 |

Specify when ordering propane (LP) gas.
Standard model certified from sea level to $10,100 \mathrm{ft}$. elevation.
Optional Concentric Vent Kit (9006328005) and Condensate Neutralization Kit (9007959005).
Top Inlet and Outlet: 1" NPT
Side Inlet and Outlet: 1 " NPT
Gas Inlet: 1/2" NPT
Condensate drain outlet: $1 / 2^{\prime \prime}$ NPT
Electrical Characteristics: $120 \mathrm{~V} 60 \mathrm{~Hz}<5 \mathrm{amps}$
The manifold pressure is factory set and is not adjustable. A negative pressure will be seen with just the blower running without the Gas Control Valve open.
All models - Maximum Supply Pressure: 14 inches W.C. ( 3.48 kPa )
Minimum Supply Pressure for Natural Gas: $3.50{ }^{\prime \prime}(.87 \mathrm{kPa})$
Minimum Supply Pressure for Propane Gas: 8.00 " (1.99kPa)
Minimum pressure must be maintained under both load and no load (dynamic and static) conditions.

## AOSmith. <br> Commercial Gas Water Heater

RECOVERY CAPACITIES - BTX AND BTXL

| Input |  | Recovery Capacities |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rating (Btu/hr) | Rating (Kw) | Temp Rise | F | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 |
|  |  |  | C | 17 | 22 | 28 | 33 | 39 | 44 | 50 | 56 | 61 | 67 | 72 | 78 |
|  |  | GPH |  | 387 | 291 | 233 | 194 | 166 | 145 | 129 | 115 | 106 | 97 | 90 | 83 |
| 100,000 | 29.3 | LPH |  | 1465 | 1102 | 882 | 734 | 628 | 549 | 488 | 439 | 401 | 367 | 341 | 314 |

MAXIMUM VENTING DISTANCE - BTX AND BTXL

| Number of $\mathbf{9 0}^{\circ}$ <br> Elbows | $\mathbf{2 " M}^{\mathbf{\prime}}$ Maximum Pipe-ft. (m) | $\mathbf{3 "}^{\mathbf{\prime}}$ Maximum Pipe-ft. (m) |
| :---: | :---: | :---: |
| $\mathbf{1}$ | $40(12.19)$ | $120(36.57)$ |
| $\mathbf{2}$ | $35(10.66)$ | $115(35.05)$ |
| $\mathbf{3}$ | $30(9.14)$ | $110(33.52)$ |
| $\mathbf{4}$ | $25(7.62)$ | $105(32)$ |
| $\mathbf{5}$ | $20(6.09)$ | $100(30.48)$ |
| $\mathbf{6}$ | $15(4.57)$ | $95(28.95)$ |

Note: See the Instruction Manual for the most current and detailed venting information.

## SUGGESTED SPECIFICATION

(Natural or Propane) gas water heater(s) shall be A. O. Smith Cyclone Xi model with $96 \%$ thermal efficiency with storage capacity $\qquad$ ; an input rating of 100,000 BTUs per hour, a recovery rating of 116 gallons per hour at $100^{\circ} \mathrm{F}$ rise and a maximum hydrostatic working pressure of 150 psi. Water heater(s) shall be of power direct vent design, using 2 " or $3^{\prime \prime}$ PVC, CPVC, or polypropylene pipe for horizontal and/or vertical vent runs. Water heater(s) shall have: 1: Steel tank construction with seamless glass lining and a spiral-shaped heat exchanger placed entirely inside the tank, which shall be glasslined on the flue gas side to protect against acidic condensate. 2: Advanced electronic control w/ LCD display and actual diagnostic. 3: A 3-year limited warranty against tank leaks. Water heater(s) shall meet the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1 and be design-certified by UL (Underwriters Laboratories) according to ANSI Z21.10.3-CSA 4.3 standards governing storage tank water heaters. Water heater should incorporate the $\mathrm{iCOMM}{ }^{\text {TM }}$ system connection for remote monitoring, leak detection and fault alert.

