

Commercial Gas Water Heaters

Most water heater sales are replacements. Specifying a replacement commercial gas water heater usually means getting information about the existing water heater. It's a good idea to get a picture of the data plate because most of the information needed can be determined from the existing water heater's data plate. **Note:** Some areas require Low NOx or Ultra Low NOx water heaters.

BTU Input		Capacity		Fuel Type			
 <p>AUTOMATIC CIRCULATING TANK OR AUTOMATIC STORAGE WATER HEATER</p>  <p>ANSI Z21.10.1-CSA 4.1-2013</p>							
MODEL NUMBER		CAPACITY		GAS TYPE		ITEM ID	
BTR 120		118		NATURAL		9200551001	
INPUT BTU/HR		RECOVERY GAL/HR		SERIAL NUMBER		ALTITUDE FT.	
120000		116.36		0000A000000		0-10100	
GAS PRESSURES IN. W.C.			MAX WORKING PRESSURE P.S.I.		ELECTRICAL RATINGS		
MANIFOLD	MAX INLET	MIN INLET			VOLTS	HZ	AMPS
4.00	14.00	5.00	150		120	60	5
BUILD DATE							1/6/2015
MADE IN THE USA							
A.O. SMITH WATER PRODUCTS CO.						MCBEE, SC. USA	
							
Model Number BTR 120				Serial Number 0000A000000			

BTU Input/Fuel Type

199,000 Btus is a common size, but commercial water heaters can range from 120,000 Btus to 500,000 Btus or more. Most commercial water heaters use natural gas but a few use LP. The correct fuel type should also be specified.

Gallon Capacity

The gallon capacity of commercial water heaters is wide ranging, but a common size is 119 gallons.

Venting Type and Size

Standard commercial water heaters use galvanized steel "Type B" double-wall vent pipe. High efficiency water heaters use PVC or other types of plastic vent pipe (or in some cases, stainless steel). In addition to the type of vent material, the size (diameter and in some cases, the length) of the vent pipe should be determined from the existing installation. Usually, when water heaters are upgraded, the existing metal vent pipe is abandoned and inexpensive PVC (or other types of plastic) vent pipe is installed.



Metal "Type B" vent pipe (double wall) used with standard water heaters.



Plastic vent pipe for high efficiency (power vented) water heaters.

Standard Commercial Gas Water Heaters
Standard gas water heaters are about 80% efficient and use metal "B-Vent" pipe for venting. Standard gas water heaters often require more maintenance and have fewer features than high efficiency versions.



High Efficiency Commercial Gas Water Heaters

This Cyclone® high efficiency gas water heater is up to 98% efficient which means it can save thousands in operating costs over its life compared to standard water heaters. It has an LCD display with built-in diagnostics. Cyclone® high efficiency gas water heaters can be connected to building automation systems (BACnet™, Modbus®) or wifi (iCOMM™) for remote monitoring and operation. You can use the link below to access the calculator to figure the annual savings of a Cyclone® high efficiency water heater vs. a standard efficiency model:

<http://www.hotwater.com/water-heaters/commercial/water-heaters/gas/cyclone/cyclone-mxi/>



Accessories

Before installing a replacement water heater, the water pressure should be checked and controlled with a Pressure Reducing Valve (80 psi is the maximum allowed by code). Commercial water heaters also require a Thermal Expansion Tank. The expansion tank must be sized according to the capacity and temperature of the water heater and must be pressurized with air to match the water pressure before installing the expansion tank. Expansion tanks have a sizing chart to help you determine the correct size.

We also recommend installing an automatic water shut off valve and a combination carbon monoxide/fuel gas detector. To reduce the risk of scalding, a thermostatic mixing valve should be installed if they are not already fitted at each point of use.

