NOTE
Please put the Manufacturers Index
on the back of the section 3 tab page
across from page 3-1

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MANUFACTURERS INDEX, SECTION 3

ProMax®

RESIDENTIAL GAS WATER HEATERS

ATMOSPHERIC VENT

A.O. Smith®

INTELLIGENT CONTROL LOGIC*

- The internal microprocessor provides enhanced operating parameters and tighter differentials for precise sensing and faster heating response to optimize performance.
- Uses a thermopile to generate the power needed to operate the electronic gas control without requiring an external power source.
- The electronic gas control incorporates an LED status indicator that monitors system operation and service diagnostics.
- *Not available on 60,000 BTU input models (GCRX-50).

GREEN CHOICE® GAS BURNER

- Patented eco-friendly burner design reduces NOx emissions by up to 33% and complies with Low-NOx emission requirements of less than 40 ng/J.

DYNACLEAN™ DIFFUSER DIP TUBE

- Reduces lime and sediment buildup and maximizes hot water output. Made from long-lasting PEX cross-linked polymer.

COREGARD™ 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.

PUSH-BUTTON PIEZO IGNITOR

- Makes lighting the pilot fast and easy with one-hand push-button spark ignition.

HEAT TRAP NIPPLES

- Factory-installed for faster installation.

BLUE DIAMOND® GLASS COATING

- Provides superior corrosion resistance compared to industry standard glass lining.

ENHANCED-FLOW BRASS DRAIN VALVE

- Our residential water heaters have a solid brass, tamper resistant, enhanced-flow, ball type, drain valve.
- Uses a standard female hose fitting that allows for fast and easy draining during maintenance.
- Designed for easy operation, this valve includes an integral screwdriver slot that features a 1/4 turn (open/close) radius, which not only permits full straight-through water flow but also a quick and positive shut off.

CODE COMPLIANCE

- Meets UBC, CEC and HUD National Codes.
- Meets the thermal efficiency and standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IENSA 90.1.
- Complies with the Federal Energy Conservation Standards effective April 16, 2015, in accordance with the Energy Policy and Conservation Act, (EPCA), as amended.

HIGH ENERGY FACTORS

- Eco-Friendly non-CFC foam insulation, external heat traps and specially designed combustion chamber combine to produce a high Energy Factor for maximum savings on operating costs.

CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

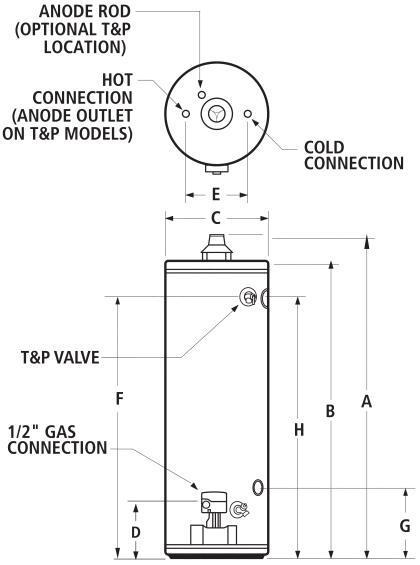
MAXIMUM HYDROSTATIC WORKING PRESSURE 150 PSI

DESIGN-CERTIFIED BY CSA INTERNATIONAL

- Certified at 300 PSI test pressure and 150 PSI working pressure. Listed according to ANSI Z21.10.1-CSA 4.1 standards governing storage tank-type gas water heaters.

6-YEAR LIMITED TANK AND PARTS WARRANTY

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



Maximum Hydrostatic Working Pressure: 150 PSI

FLAMMABLE VAPOR IGNITION RESISTANT (FVIR) WATER HEATERS

A. O. Smith FVIR design meets the American National Standards Institute standards (ANSIZ21.10.1-CSA 4.1) that deal with the accidental or unintended ignition of flammable vapors, such as those emitted by gasoline.

Features a sealed combustion chamber with intake air filter and a flame arrestor built into the water heater base. In addition, a thermal cutoff (TCO) device, is designed to shut off gas flow to the burner and pilot if poor combustion is detected.

MODEL NUMBER	GALLON CAPACITY	FIRST HOUR RATING GALLONS	ENERGY FACTOR	BTU INPUT NATURAL GAS	BTU INPUT PROPANE GAS	RECOVERY 90ºF RISE GALLONS PER HR.	DIMENSIONS IN INCHES								DRAFT HOOD OUTLET	APPROX. SHIPPING WEIGHT (LBS)
							A	B	C	D	E	F	*G	*H		
TALL MODELS																
GCR-30	30	67	0.63	35,500	32,000	37	61-1/2	58	18	12-1/4	8	51-3/4	N/A	N/A	3 or 4	132
GCR-40	40	70	0.62	40,000	36,000	42	61-3/4	58-1/4	20	12-1/4	8	52	14-1/4	51-3/4	3 or 4	138
GCG-50	50	88	0.60	40,000	37,000	41	60-3/4	57-1/4	21	12-1/4	8	50-1/2	14-1/4	50-1/2	3 or 4	148
SHORT MODELS																
GCRL-30	30	62	0.63	35,500	32,000	37	50	46-1/2	20	12	8	40	N/A	N/A	3 or 4	118
GCRL-40	40	68	0.62	40,000	36,000	41	51-1/2	48	22	12	8	41-1/4	N/A	N/A	3 or 4	135
GCRL-50	50	93	0.60	40,000	40,000	43	53-3/4	49-3/4	24	12	8	41-3/8	N/A	N/A	3 or 4	177

Recovery capacities based on actual performance tests.
Water connection is 3/4" on all models
All models approved for installation from sea level to 10,100 ft. elevation.
Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

Low Lead Content

Green Choice™ The Eco-Friendly Gas-Fired Burner

For the most up to date information visit www.wlengler.com

A.O. Smith
Innovation has a name.

ProMax® PLUS HIGH RECOVERY

MODELS GCRT(X), FCG

FEATURES

HIGHEST RECOVERIES AND FIRST HOUR RATINGS
Capacity/input combinations up to 100 gallons/78,000 BTU produce recoveries up to 82 gallons per hour, with deliverable hot water up to 152 gallons.

6-YEAR LIMITED TANK AND PARTS WARRANTY
For complete information, consult written warranty or A.O. Smith Water Products Company.

A.O. SMITH DYNACLEAN™ DIFFUSER DIP TUBE
Helps reduce lime and sediment buildup, maximizes hot water output. Made from long-lasting PEX cross-link polymer.

GREEN CHOICE™ GAS BURNER
Patented "eco-friendly" design reduces NOx emissions by up to 33%, complies with Southern California and Texas requirements.

COREGARD™ ANODE ROD
An A.O. Smith exclusive. Aluminum anode has stainless steel core, protects tank against corrosion longer than ordinary mild steel anodes.

PUSH-BUTTON PIEZO IGNITER
Makes lighting pilot fast and easy with one-hand push-button spark ignition. Standard on C3 Technology™ models.

DURABLE TAMPER-RESISTANT BRASS DRAIN VALVE

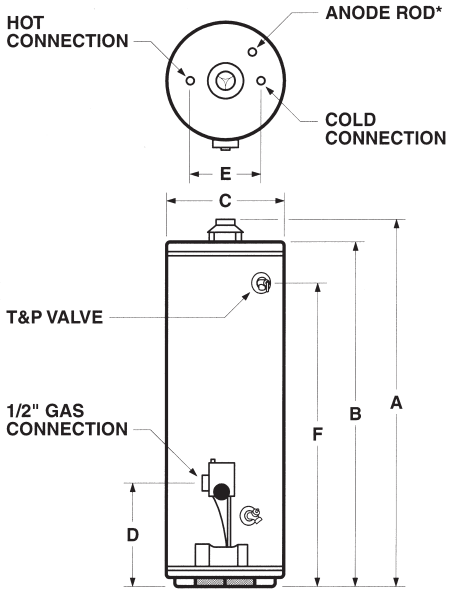
THICK CFC-FREE FOAM INSULATION

A.O. SMITH PERMAGLAS® GLASS COATING
Protects steel tank from rust.

FACTORY-INSTALLED TEMPERATURE AND PRESSURE (T&P) RELIEF VALVE
Top-mounted T&P valve available as option on 40, 50 and 65-gallon models.

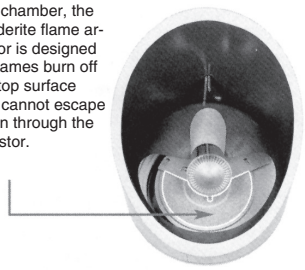
CODE COMPLIANCE: UBC, CEC, SBCC, CABO, HUD, BOCA NATIONAL CODES, ASHRAE/IES 90.1-1999 AND 1990 NAECA

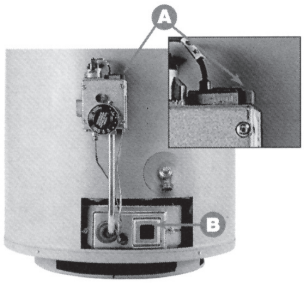
DESIGN-CERTIFIED BY CSA INTERNATIONAL
According to ANS Z21.10.1* standards governing storage-type water heaters.



*Location for optional top-mounted T&P Valve if ordered from factory.

If flammable vapors accidentally enter the combustion chamber, the Corderite flame arrestor is designed so flames burn off the top surface and cannot escape down through the arrestor.





A. Easy-to-light piezo igniter
B. View port for easy burner inspection

Flammable Vapor Ignition Resistant C3 Technology™ Water Heaters

MODEL NUMBER	FIRST HOUR RATING GALLONS	ENERGY FACTOR	GAL CAP.	BTU INPUT PER HOUR NATURAL	RECOVERY 90° RISE GALLONS PER HR.	R VALUE	DIMENSIONS IN INCHES						DRAFT HOOD OUTLET	APPROX. SHIPPING WEIGHT (LBS)
							A	B	C	D	E	F		
GCRT50	92	.60	50	50,000	54	18	60-3/4	57-1/4	22	12-1/4	8	50-1/2	4	165
GCRX50	98	.60	50	60,000	65	18	65-1/2	61	22	13-1/2	8	54-1/4	4	190
FCG75*	N/A	N/A	74	75,100	81	16	61	58-1/2	26-1/2	15-3/16	16	50-1/4	4	275
FCG100*	N/A	N/A	98	75,100	81	10	68-1/2	65	27-3/4	15-3/16	16	57-3/8	4	350

Recovery capacity based on actual performance tests.
Water Connections-1" on 75-gallon, 1-1/4" on 100-gallon models, 3/4" on all other models.
* Not equipped with C3 Technology. 75 gallon model has 80% efficiency, 100 gallon model has 80% efficiency.

A.O. Smith®
Innovation has a name.

ProMax®

RESIDENTIAL GAS WATER HEATERS
GPVL/GPVT/GPVX Series 200

PROMAX® POWER VENT

The ProMax Power Vent water heaters have been engineered to maximize efficiency and deliver a greater energy factor (EF).

FEATURES

ENERGY STAR® QUALIFIED
- All models meet the September 2010 ENERGY STAR® EF requirement and may also qualify for local utility and rebate programs
- Dynaclean™ II dip tube optimizes inlet water pressure to minimize cold water regions within the tank. The self-cleaning action also reduces sediment accumulation on the bottom of the tank.
- Hot-surface ignitor is more robust and reliable than standing pilot, and reduces energy consumption
- Built-in heat traps on the water inlet and outlet reduce the amount of heat lost through piping
- 2-inch, thick, "Environmentally-Friendly" foam insulation reduces the amount of heat loss and contributes to overall energy efficiency

BLUE DIAMOND® GLASS COATING
- An A. O. Smith exclusive provides superior corrosion resistance compared to the industry-standard glass lining

VERSATILE POWER VENT DESIGN
- All models feature an ***exclusive*** 3-position rotatable blower outlet which adds flexibility
- Combined horizontal and vertical vent runs up to 180 equivalent feet with 4" diameter venting (ABS, PVC, CPVC and polypropylene)
- All models are equipped with a protected sensor that detects the presence of flammable vapors and automatically disables the burner to prevent ignition
- Air intake snorkel elevates the inlet location of combustion air to prevent flammable vapors from entering the sealed combustion chamber
- Reduced NOx emissions comply with air quality management district regulations

USER-FRIENDLY
- State-of-the-art electronic gas control provides more precise temperature control
- LED control light displays operation status and diagnostics information
- Factory-installed T&P and a durable, tamper-resistant brass drain valve are positioned for service accessibility

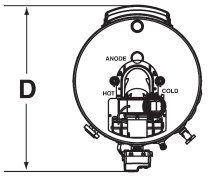
AVAILABLE IN NATURAL GAS AND PROPANE

6-YEAR LIMITED TANK AND PARTS WARRANTY

DIMENSIONS

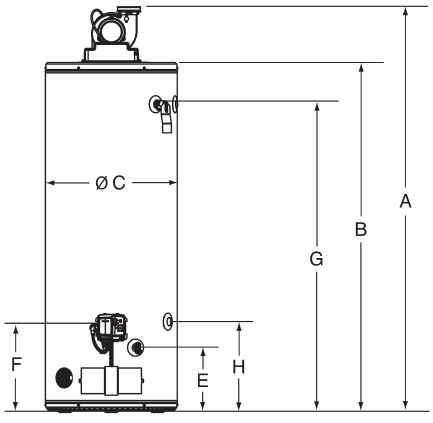
MODEL NUMBER	SERIES	HEIGHT TO TOP OF BLOWER A	HEIGHT TO TOP OF TANK B	DIAMETER C	OVERALL DEPTH D	HEIGHT TO DRAIN E	HEIGHT TO GAS INLET F	HEIGHT TO T&P G	HEIGHT TO UPPER SIDE CONNECT G	HEIGHT TO LOWER SIDE CONNECT H	SHIPPING WEIGHT (LBS)
GPVL 40	200	59	49-5/8	22	29-1/8	11	13-1/4	42-1/2	N/A	N/A	174
GPVT 40	200	68-1/2	59-1/4	20	27-1/8	11	13-1/4	53-1/8	53-1/8	15-1/4	176
GPVL 50	200	60-1/8	50-3/4	24	31-1/8	11	13-1/4	43-3/4	N/A	N/A	198
GPVT 50	200	68-1/8	58-3/4	22	29-1/8	11	13-1/4	51-3/4	51-3/4	15-1/4	192
GPVX 50L	200	61-1/8	52	24	31-1/8	11	13-1/4	44-1/2	44-1/2	15-1/4	212
GPVX 75L	200	70-5/8	61-1/4	26	33-1/8	11	13-1/4	53	53	15-1/4	277

All dimensions in inches.
Side connections standard on GPVX models.
For side connect models, add 'L' to model number, e.g. GPVT 40L.



SPECIFICATIONS

MODEL NUMBER	GALLON CAPACITY	INPUT BTU/H	ENERGY FACTOR	FIRST HOUR RATING USG	RECOVERY 90°F RISE GPH
GPVL 40	40	40,000	0.70	73	44.7
GPVT 40	40	50,000	0.70	90	55.9
GPVL 50	50	40,000	0.70	90	44.7
GPVT 50	50	50,000	0.70	96	55.9
GPVX 50L	50	62,000	0.70	110	69.3
GPVX 75L	75	72,000	0.68	155	80.4



VENT LENGTH

MODEL NUMBER	MAXIMUM VENT LENGTH EQ. FT.		
	Ø2"	Ø3"	Ø4"
GPVL 40	50'	125'	180'
GPVT 40	50'	125'	180'
GPVL 50	50'	125'	180'
GPVT 50	50'	125'	180'
GPVX 50L	N/A	50'	125'
GPVX 75L	N/A	50'	125'

A.O. Smith
Innovation has a name.

VERTEX™

90% EFFICIENCY POWER VENT WATER HEATER MODEL GPHE-50

FEATURES

HELICAL INTERNAL HEAT EXCHANGER

- Positioned in the center of the tank, surrounded by water to virtually eliminate radiant heatloss from the chamber
- Achieves 90% thermal efficiency which saves money on operating costs compared to a standard 78% efficient gas water heater

POWER VENTS USING PVC PIPE

- Combined vertical and horizontal vent runs terminating through an outside wall, using Schedule 40 PVC
- 2" pipe, vents up to 25 equivalent feet
- 3" pipe, vents up to 65 equivalent feet
- 4" pipe, vents up to 128 equivalent feet

MODULAR BLOWER

- Equipped with 120 volt, 60 Hz electrical system (rating 5 amps or less), 6-foot cord with standard 3-prong connector
- 2" PVC pipe, elbows and condensate drain supplied to connect heat exchanger outlet to blower
- PVC Vent Attenuation Assembly (VAA) supplied

SIDE-MOUNTED HOT AND COLD RECIRCULATING TAPS

- Allows Vertex to be installed as part of combination space heating/water heating applications or any system requiring a recirculating hot water loop, including radiant floor heating INTELLI-VENT™**

GAS CONTROL

- Equipped with nearly indestructible silicon nitride hot surface ignitor
- Advanced electronics for more precise control of water temperature and easy to understand system diagnostics

COMMERCIAL GRADE GLASS LINING

- A. O. Smith PermaGlas® Ultra Coat™ process provides superior protection against corrosion
- Protects all interior tank surfaces including inside and outside of helical heat exchanger

TWO HEAVY-DUTY ANODE RODS

- Provide maximum protection against corrosionGREEN CHOICE® GAS BURNER
- Patented "Eco-Friendly" design reduces NOx emissions by up to 33%

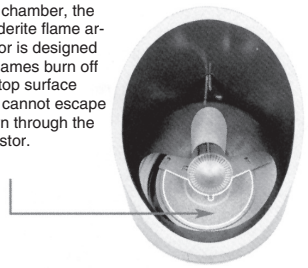
CERTIFIED AND ASME RATED T&P RELIEF VALVE

MAXIMUM HYDROSTATIC WORKING PRESSURE: 150 PSI

®Residential Gas Water Heaters

- Spiral heat exchanger reduces scale and sediment from forming on water-side surface, which can reduce energy efficiency over time

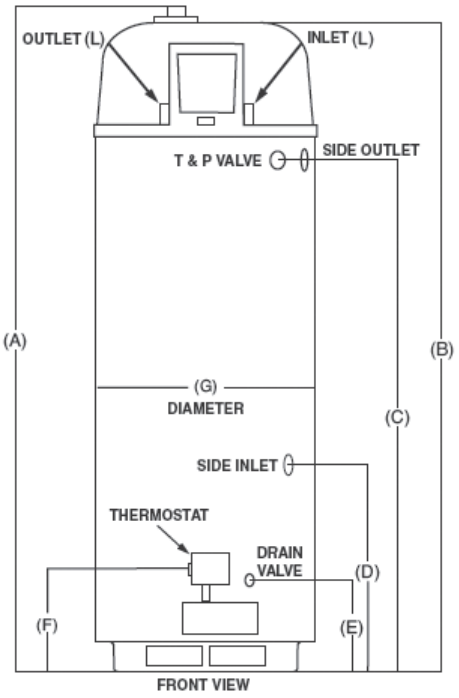
If flammable vapors accidentally enter the combustion chamber, the Corderite flame arrestor is designed so flames burn off the top surface and cannot escape down through the arrestor.



Green Choice® The Eco-Friendly Gas-Fired Burner

CORDERITE COMBUSTION CONTAINMENT C3 TECHNOLOGY

GAS-FIRED UL® LISTED



MODEL NUMBER	BTU INPUT	MAXIMUM VENT DISTANCE (Total Equivalent Feet)		
		2" Pipe	3" Pipe	4" Pipe
GPHE-50	76,000	25'	65'	128'

Model	Gal. Cap.	Vent Pipe Dia.	NATURAL GAS Input	NATURAL GAS GPH 90 ° Rise	PROPANE GAS Input	PROPANE GAS GPH 90 ° Rise	A Hgt.	B Hgt. to Top of Jacket	C Side Outlet	D Side In-Let	E Hgt. Drain Valve	F Gas Inlet/ Diameter	G	Approx. Ship. Wt.
GPHE-50	50	3"	76,000	92	76,000	92	71	68-5/8	52	21	9-1/8	12	22	210

For the most up to date information visit www.wlengler.com

A.O. Smith
Innovation has a name.

ProMax® SPECIALTY
ELECTRIC WATER HEATERS

PROMAX® SPECIALTY ELECTRIC FEATURES

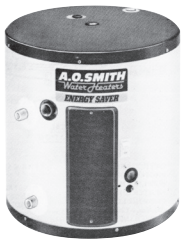
COMPACT ELECTRIC WATER HEATERS
Compact design, side-mounted plumbing and electrical connections (optional top-mounted connections). Designed for installation under a counter, in a crawl space or in other tight spaces. Tank capacities range from 6 through 20-gallons and offer single heating element and durable tamper-resistance brass drain valve.

POINT-OF-USE ELECTRIC WATER HEATER
Designed for low-demand, point-of-use applications, such as office lavatories or buildings with remote restrooms. Models have 2-1/2 gallon tank capacity and are equipped with a single heating element. Includes a standard 110/120V cord set with 3-prong plug and wall-mounting brackets for easy installation.

CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

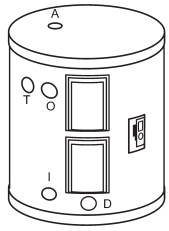
CODE COMPLIANCE
Meets or exceeds the Federal energy efficiency standards effective January 20, 2004, according to the National Appliance Energy Conservation Act (NAECA) of 1992. Also meets or exceeds the standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IESNA 90.1.

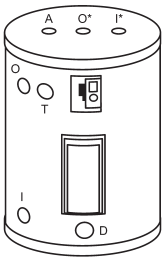
6-YEAR LIMITED TANK AND PARTS WARRANTY
For complete information, consult written warranty or A. O. Smith Water Products Company.

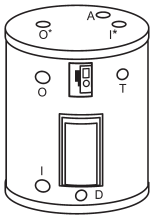


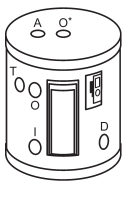
Compact Models

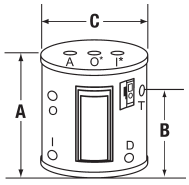
Point-Of-Use

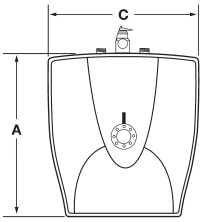


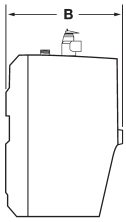












COMPACT MODELS

MODEL NUMBER	FIRST HOUR RATING GALLONS	ENERGY FACTOR	GALLON CAPACITY	ELEMENT WATTAGE		RECOVERY 90°F RISE	R VALUE	DIMENSIONS IN INCHES			APPROX. SHIPPING WEIGHT (LBS.)
				STANDARD 120V	MAXIMUM 240V			A	B	C	
EJC-6	N/A	N/A	6	1650	3000	8	8	15-1/4	10-3/4†	14-1/4	31
EJC-10	N/A	N/A	10	1650	6000	8	8	18-1/4	12-1/4†	16	45
EJCS-20	N/A	N/A	19	2500	6000	11	8	24-3/4	18-5/8†	18	65
EJCT-20	N/A	N/A	19.9	2500	6000	11	8	31-5/8	25-3/4†	16	62

LOWBOY SIDE-CONNECT MODELS

MODEL NUMBER	FIRST HOUR RATING GALLONS	ENERGY FACTOR	GALLON CAPACITY	ELEMENT WATTAGE		RECOVERY 90°F RISE	R VALUE	DIMENSIONS IN INCHES			APPROX. SHIPPING WEIGHT (LBS.)
				STANDARD 240V	MAXIMUM 240V			A	B	C	
ENJ-30	39	.95	28	4500	6000	21	16	30	21-3/4	22	101
ENJ-40	44	.95	38	4500	6000	21	12	33-1/2	24	26	118

POINT-OF-USE MODEL

MODEL NUMBER	FIRST HOUR RATING GALLONS	ENERGY FACTOR	GALLON CAPACITY	ELEMENT WATTAGE	RECOVERY 90°F RISE	R VALUE	DIMENSIONS IN INCHES			APPROX. SHIPPING WEIGHT (LBS.)
							A	B	C	
EJC-2	N/A	N/A	2.5	1500@120V	7	8	13-3/4	11	13-3/4	18

ProMax®

RESIDENTIAL ELECTRIC WATER HEATERS

MODELS ENT, ENS, ENL

ENHANCED HEATING ELEMENTS

- Dual 4500 watt elements for fast recovery and reliable operation.
- Incoloy stainless steel lower element lasts longer than a standard copper element.

DYNACLEAN™ DIFFUSER DIP TUBE

- Helps reduce lime and sediment buildup and maximizes hot water output. Made from long-lasting PEX cross-linked polymer.

HIGH ENERGY FACTORS

- Eco-friendly non-CFC foam insulation, heat traps and other features combine to yield a higher Energy Factor that maximizes savings on operating costs.

COREGARD™ 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® GLASS COATING

- Provides superior corrosion resistance compared to industry standard glass lining.

ENHANCED-FLOW BRASS DRAIN VALVE

- Our residential water heaters have a solid brass, tamper resistant, enhancedflow, ball type, drain valve.
- Uses a standard female hose fitting that allows for fast and easy draining during maintenance.
- Designed for easy operation, this valve includes an integral screwdriver slot that features a ¼ turn (open/close) radius, which not only permits full straightthrough water flow but also a quick and positive shut off.

CODE COMPLIANCE

- Meets UBC, CEC and HUD National Codes.
- Meets the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1.
- Complies with the Federal Energy Conservation Standards effective April 16, 2015, in accordance with the Energy Policy and Conservation Act (EPCA), as amended.

APPROVED FOR MANUFACTURED HOUSING

- All residential electric water heaters are compliant with HUD Standards for mobile homes/manufactured housing.

CERTIFIED TO UL 174 FOR HOUSEHOLD ELECTRIC WATER HEATERS

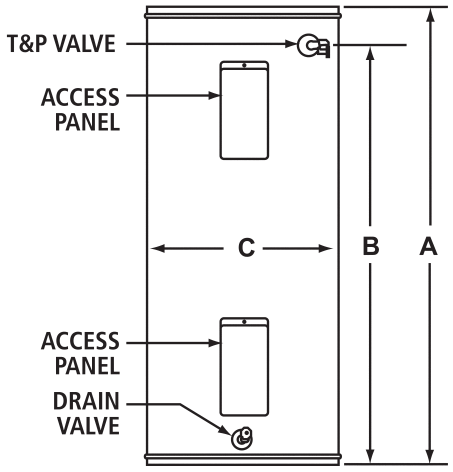
CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

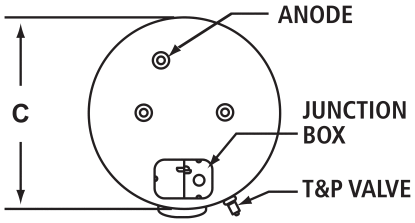
DESIGN-LISTED BY UNDERWRITERS LABORATORIES

- Certified at 300 PSI test pressure and 150 PSI working pressure.
- Listed according to UL 174 standards governing storage tank-type electric water heaters.

6-YEAR LIMITED TANK AND PARTS WARRANTY

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





Low Lead Content

MODEL NUMBER	GALLON CAPACITY	FIRST HOUR RATING GALLON	ENERGY FACTOR	RECOVERY @ 90ºF RISE GALLON PER HOUR	ELEMENT WATTAGE 240 V		DIMENSIONS IN INCHES			APPROX. SHIPPING WEIGHT (LBS)
					STANDARD	MAXIMUM	A	B	C	
TALL MODELS										
ENT-30	30	47	0.95	21	4500	6000	46-1/2	39-1/2	19	95
ENT-40	40	51	0.95	21	4500	6000	60-1/4	53-1/4	20	118
ENT-50	50	71	0.95	21	4500	6000	60-1/2	51-1/4	22	134
SHORT MODELS										
ENS-30	30	49	0.95	21	4500	6000	39-3/4	30-1/2	22	94
ENS-40	40	55	0.95	21	4500	6000	50	40-3/4	22	109
ENS-50	50	62	0.95	21	4500	6000	49-3/4	40-3/8	24	161
LOWBOY TOP CONNECT MODELS										
ENL-20	19.5	N/A	N/A	21	4500	6000	30	21-1/4	20	65
ENL-30	28	43	0.95	21	4500	6000	31-1/4	21-1/4	24	115
ENL-40+	38	44	0.95	21	4500	6000	33-1/2	24	26	118

3/4" water connections on 8" center.
+ Top T&P option not available on this model.
Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

For the most up to date information visit www.wlengler.com

COMMERCIAL
ELECTRIC WATER HEATERS

LIGHT-SERVICE COMMERCIAL ELECTRIC WATER HEATERS

Designed for light duty commercial applications with intermittent hot water loads.

GLASSLINED TANK
Tank interior is coated with glass specially designed by A. O. Smith for water heater use.

HEATING ELEMENTS
Two 4.5 KW zinc plated copper sheathed elements are standard.

STANDARD VOLTAGES
The standard voltage is 240V single phase.

TOP MOUNTED RECESSED JUNCTION BOX

CONTROLS
Thermostat is adjustable through a range of 120º to 181ºF with a manual reset high temperature cutoff. The heater is wired for non-simultaneous single phase operation.

COREGARD™ ANODE ROD
Our anode rods have a stainless steel core that extends the life of the anode rod allowing superior tank protection for longer than standard anode rods.

ENHANCED-FLOW BRASS DRAIN VALVE
Solid brass, tamper resistant, enhanced-flow, ball type, drain valve.

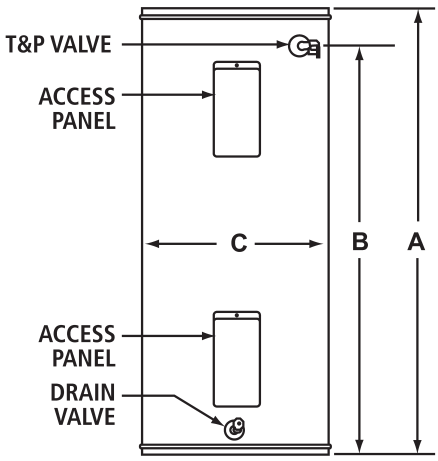
MAXIMUM WORKING PRESSURE 150 PSI

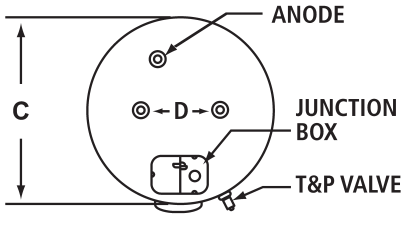
FACTORY INSTALLED CSA CERTIFIED AND ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE

CERTIFIED TO UL 1453 FOR COMMERCIAL ELECTRIC WATER HEATERS

COMPLIANCE
Meets the standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IES 90.1.

WARRANTY
- 3-Year limited tank/1-Year limited parts.
- For complete information consult the written warranty or hotwater.com.





PRODUCT SPECIFICATIONS

Model Number	Gallon Capacity	Standard Element Wattage 240 VAC	Dimensions in Inches				Approx. Shipping Weight (lbs)
			A	B	C Diameter	D	
LTE 66D	66	4500	60-1/4	53	22	8	146
LTE 80D	80	4500	60-1/2	52-1/4	24	8	175
LTE 120D	119	4500	61-1/2	54-1/2	28	8	268

Not available with top mounted T&P valve option. Inlet and outlet connections: 3/4”

A.O. Smith®
Innovation has a name.

CONSERVATIONIST®

TANK-TYPE WATER HEATERS

BT-65, 80 & 100

FEATURES

All models comply with ASHRAE/IES 90.1b-1992.

GLASS-LINED TANK — Assures years of rust-free clean hot water.

FULLY AUTOMATIC CONTROLS WITH SAFETY SHUTOFF — Accurate, dependable control system requires no electric connections. Fixed automatic gas shutoff device for added safety. Not recommended for 180°F sanitizing. Use Models BTC-80 & BTC-100 for 180°F sanitizing.

HEAVY GAUGE STEEL JACKET — Finished with baked enamel over bonderized undercoat.

FOAM INSULATION — Saves fuel, helps reduce standby heat loss.

CERTIFICATION — Units are design certified by the American Gas Association (Canadian Gas Association for units built in Canada). Meets rigid requirements of the National Sanitation Foundation when equipped with leg kit. Certified for installation on combustible flooring.

EASY TO INSTALL — Completely factory assembled. Only gas, water and vent connections need be made. All connections are located in front and top of heaters for ease of installation and service.

DRAFT DIVERTER — Low profile diverter furnished as standard equipment.

MAXIMUM WORKING PRESSURE — 150 psi.

MAXIMUM GAS INLET PRESSURE — 14" W.C.

HANDHOLE CLEANOUT — On 75 and 100 gallon models. Allows easy tank cleaning.

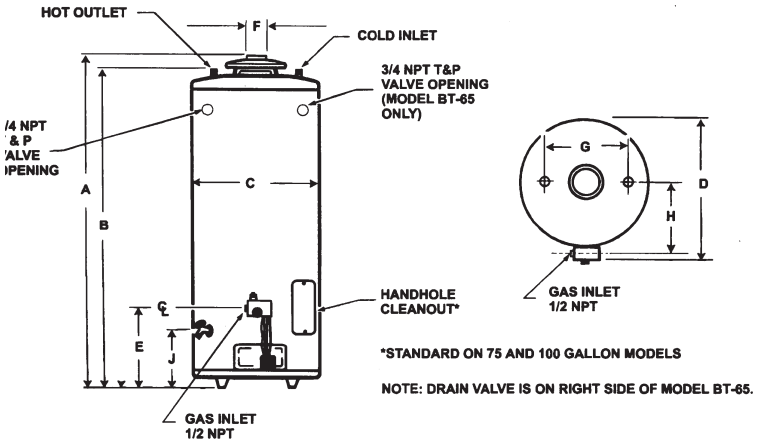
OTHER FEATURES

• Built-in gas filter and integral dirt leg (propane only) • Anodic protection • Equipped with gas pressure regulator • Integral automatic gas shutoff system prevents excessive water temperature • Factory installed A.G.A./ASME rated temperature and pressure relief valve.

LIMITED WARRANTY OUTLINE

If the tank should leak any time during the first three years, under the terms of the warranty, A. O. Smith will furnish a replacement heater; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY.** For complete information, consult the written warranty or A. O. Smith Water Products Company.

Warranty does not apply to product installed outside of the United States of America or its territorial possessions and Canada.



ALL DIMENSIONS IN INCHES

Model	A	B	C	D	E	F	G	H	J	Inlet Outlet	Approx. Ship. Wt. (Lbs.)
BT65	64-3/4	59-7/8	20-1/4	23-3/8	15-5/8	4	8	11-1/2	11-3/4	3/4	165
BT80	61-1/2	58-1/2	25-1/2	28-1/2	15-3/16	4	16	14	11-15/16	1	291
BT100	68-3/4	66-1/2	26-1/2	29-3/4	15-3/16	4	16	14-1/2	11-15/16	1-1/4	366

FOR UNITS BUILT IN USA

RECOVERY CAPACITIES

Model	Approx. Gal. Cap	Type of Gas	Input Rating BTU/Hr.	Temperature Rise - Degrees F - Gallons Per Hour											
				30	40	50	60	70	80	90	100	110	120	130	140
BT65	65	Nat. & Prop.	50,000	162	131	97	81	69	61	54	48	44	40	37	35
BT80	74.5	Nat. & Prop.	75,000	227	170	136	114	97	85	76	68	62	57	52	49
BT100	100	Nat. & Prop.	75,000	227	170	136	114	97	85	76	68	62	57	52	49

NOTE: To compensate for the effects of high altitude areas above 2000 feet, recovery capacity should be reduced approximately 4% for every 1000 feet above sea level.

Capacity ratings are at 75% thermal efficiency (except as noted).

A.O. Smith
Innovation has a name.

CYCLONE XHE™

94% EXTRA HIGH EFFICIENCY TANK-TYPE WATER HEATERS

BTH-120, BTH-150, BTH-199 & BTH-250

FEATURES

94% THERMAL EFFICIENCY — Fully condensing design is 16% more efficient than the ASHRAE requirement of 78%.

FLEXIBLE VENTING — 3" or 4" PVC, ABS or CPVC pipe is recom-mended. The CYCLONE XHE TM vents vertically, horizontally and is also approved for direct vent sealed combustion applications.50 equivalent feet maximum using 3" vent, 120 equivalent feet using 4" vent.

ADVANCED ELECTRONIC CONTROLS — A microprocessor controls the ignition and thermo-stat allowing precise setting of water temperatures from 110°F to 180°F. A digital display panel shows the operating mode, all user settings and any failure modes for ease of service.

PRESET POWER BURNER — Developed for the CYCLONE XHE TM ,a turbulent jet flame shoots down the submerged combustion chamber in a spiral action. This turbulence causes a thorough mixing of the gas and air for optimum combustion and high heat transfer efficiencies.

SUBMERGED COMBUSTION CHAMBER — Submerging the combustion chamber in the cen-ter of the water storage tank minimizes radiant heat loss and improves efficiency.

ZERO INCH CLEARANCE — The CYCLONE XHE™ jacket is cool and is approved for zero inches to combustibles for unsurpassed installation flexibility.

SPIRAL WOUND FLUE TUBE — The continuous spiral flue tube keeps the hot combustion gases moving at a high velocity. The combination of high turbulence and velocity causes an enormous rate of heat transfer into the water.

SCALE FREE — This flue design prevents scale and sediment from forming on the flue tube and reducing efficiency over time.

GLASS LINED TANK — Proprietary ceramic coating developed by A.O. Smith's ceramic engi-neers specifically for this heater is applied after the complete tank has been assembled to give a seamless barrier against corrosion by hot water. The maximum working pressure is 160 psi.

HANDHOLE CLEANOUT — Allows easy inspection and cleaning of the tank.

FOAM INSULATION — Thick foam insulation protected by a heavy gauge steel jacket contrib-utes to low standby losses.

EASY INSTALLATION — All components are factory assembled and 100% tested prior to shipment. Only gas, water, electrical and venting connections need to be made. No major field adjustments are required for proper operation. Includes T&P valve and drain valve.

LIMITED WARRANTY OUTLINE

If the tank assembly which includes the combustion chamber and flue should leak any time during the first three years, under the terms of the warranty, A.O. Smith will furnish a replacement tank assembly. Instal-lation, labor, handling and local de-livery are extra. **THIS OUTLINE IS NOT A WARRANTY.** For complete information, consult the written war-ranty or A.O. Smith Water Products Company.

Warranty does not apply to product installed outside of the United States of America or its territorial posses-sions and Canada.

SCQAMD Approved, Rule 1146.2 Low NOx

ASME (OPTIONAL)

RECOVERY CAPACITIES

Model	BTU Input	Approx. Gallon Capacity	Ship. Wt.	Temperature Rise - Degrees F - Gallons per Hour											
				30	40	50	60	70	80	90	100	110	120	130	140
BTH-120	125,000	60	350	475	356	285	237	203	178	158	142	129	119	110	102
BTH-150	150,000	100	438	570	427	342	285	244	214	190	171	155	142	131	122
BTH-199	199,000	100	438	756	567	453	378	324	283	252	227	206	189	174	162
BTH-250	240,000	100	438	912	684	547	456	391	342	304	273	249	228	210	195
BTH-300	300,000	130	940	1164	873	699	582	499	436	388	349	318	291	269	250
BTH-400	400,000	130	940	1552	1164	931	776	665	582	517	465	423	388	359	332
BTH-500	500,000	130	940	1919	1439	1151	959	822	720	640	576	523	480	443	411

*BTH-250 NOT AVAILABLE IN LP GAS.

Combustible clearances 0".
Approved for combustible floors.

MAXIMUM EQUIVALENT VENT LENGTH:

BTH-120 – 250	using 3" pipe: 50 ft.
BTH-120 – 250	using 4" pipe: 120 ft.
BTH-300 – 500	using 3" pipe: not applicable
BTH-300 – 500	using 4" pipe: 70 ft.

GAS VALVE PIPING

BTH-120	1/2" NPT
BTH-150	3/4" NPT
BTH-199	1/2" NPT
BTH-250	1/2" NPT
BTH-300	1 1/4" NPT
BTH-400	1 1/4" NPT
BTH-500	1 1/2" NPT

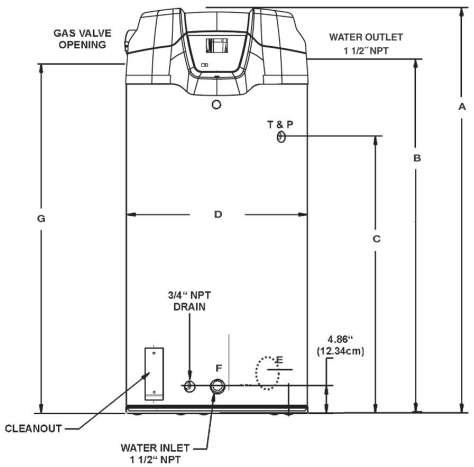
INSTALLATION CLEARANCES

Sides	0"
Front	4"
Rear	0"
Top	2"

CLEARANCES

Sides	0"
Front	0"
Rear	0"
Top	1.5"
To Combustibles*	0"

• Approved for combustible floors



DIMENSIONS AND SHIPPING WEIGHTS

MODEL	DIMENSIONS							SHIP WEIGHT STD LBS/KG	SHIP WEIGHT ASME LBS/KG
	A INCHES/CM	B INCHES/CM	C INCHES/CM	D INCHES/CM	E INCHES/CM	F INCHES/CM	G INCHES/CM		
BTH-120	55.5/141	44.5/113	35/88.9	27.75/70.5	7.5/19.1	6.3/16	47/119.4	460Lbs/208.7Kg	490Lbs/222.2Kg
BTH-150	75.5/191.8	64.5/163.8	55.5/141	27.75/70.5	7.5/19.1	6.3/16	68/172.7	555Lbs/251.7Kg	595Lbs/269.9Kg
BTH-199, 250	75.5/191.8	64.5/163.8	55.5/141	27.75/70.5	7.5/19.1	6.3/16	72/182.9	555Lbs/251.7Kg	595Lbs/269.9Kg
BTH-300, 400, 500	75.5/191.8	64.5/163.8	50.77/129	33.12/84.1	8/20.3	4.86/12.3	67.25/170.8	N/A	940Lbs/426.4Kg

A.O. Smith
Innovation has a name.

Master - Fit

BOOSTER MODELS
COMMERCIAL WATER HEATERS
BTR-151, BTR-201

The Master-Fit® BTR-151 and BTR-201 are designed for installation in "booster" applications, to supply commercial dishwashers with very high temperature water…usually 180ºF. A booster water heater is normally used in conjunction with a standard water heater water delivering hot water at a lower temperature to meet the non-dishwashing needs of a restaurant or other foodservice application.

THE ELIMINATOR™
SELF-CLEANING SYSTEM

- Designed to significantly reduce or eliminate buildup of lime, sand and other sediment inside the tank
- Reduced sediment buildup helps Master-Fit water heaters maintain their rated energy-efficiency and reduce water heating costs
- Self-cleaning system also helps prolong tank life

BUILT-IN INDUCED DRAFT BLOWER

- Produces power-induced draft of makeup air prior to burner ignition
- Provides more efficient control of heat through the flue collector
- Ideal for installations where negative air pressure is a potential problem
- No draft hood or barometric damper required

RATED AS CATEGORY 1 APPLIANCE

- Can be commonly vented with other Category 1 appliances, using standard metal type "B" vent

PERMAGLAS® ULTRA COAT
GLASS LINING

- A.O. Smith exclusive process provides superior protection against corrosion
- A.O. Smith CoreGard anode rods with stainless steel core provide additional corrosion protection

THREE WATER CONNECTION OPTIONS

- Hot and cold water connections can be made through top, front or rear of water heater
- The Eliminator self-cleaning device operates when cold water is connected through front

INTERMITTENT ELECTRONIC IGNITION

- Eliminates standing pilot
- Includes power ON/OFF switch
- Provides flame failure response in less than one second

FACTORY-INSTALLED TEMPERATURE & PRESSURE RELIEF VALVE

MAXIMUM HYDROSTATIC WORKING
PRESSURE 160 PSI

80% THERMAL EFFICIENCY CODES AND STANDARDS

- Design-certified by CSA International, according to to ANSZ21.10.3 standards governing storage-type water heaters
- Optional ASME construction available

WARRANTY

- Three-year limited warranty against tank leaks
- For complete warranty information, consult written warranty shipped with water heater, or contact A.O. Smith Water Products Company

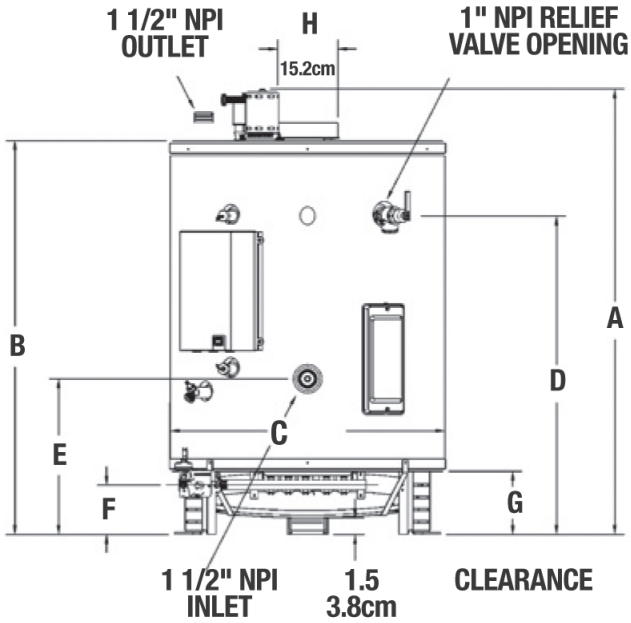
A.O. Smith
Innovation has a name.

Master - Fit

BOOSTER MODELS
COMMERCIAL WATER HEATERS
BTR-151, BTR-201

CAPACITY, INPUT AND OUTPUT

MODEL NUMBER	GALS. CAP.	BTU INPUT PER HOUR	FIRST HOUR RATING 100°F RISE	RECOVERY – GALLONS PER HOUR AT °F TEMPERATURE RISE		
				40°	100°	140°
BTR-151	32	150,000	167	364	145	104



DIMENSIONS AND WEIGHT

MODEL NUMBER	DIMENSIONS IN INCHES								GAS CONN.	WATER CONN.	APPROX. SHIPPING WEIGHT (LBS.)
	A	B	C	D	E	F	G	H			
BTR-151	45	40	27-3/4	32-1/4	15-3/4	5	6-1/2”	6”	3/4”	1-1/2”	400

SUGGESTED SPECIFICATION

Gas booster water heater(s) shall be A.O. Smith Master-Fit, Model Number _____ , with a 32-gallon storage capacity, an input rate of _____ BTU/HR, _____ gas, and a recovery rate of _____ gallons per hour at a _____ degree Fahrenheit temperature rise, and a maximum hydrostatic working pressure of 160 psi.

Unit(s) shall have a fan-assisted combustion system, providing a power-induced draft of makeup air prior to burner ignition.

Unit(s) shall be equipped with intermittent electronic ignition with power on/off switch, which shall provide flame failure response in less than one second. The burner for the unit(s) shall be easily removable. Unit(s) shall be equipped with a factory-installed temperature and pressure relief valve, and a 2-3/4” x 3-3/4” tank inspection port.

The water heater tank shall be glasslined and protected against premature failure in the following ways:

1. Against electrolytic corrosion by multiple, factory-installed anode rods
2. Against failure due to overheating caused by the buildup of scale, film and other sediment by a self-cleaning device, positioned inside the tank so that it directs the flow of inlet water in such a way that microscopic particles of precipitated solids shall be kept in suspension and exhausted from the water heater on that or successive hot water draws.

Unit(s) shall meet or exceed ASHRAE/IESNA 90.1-1999, and be design certified by CSA International, according to ANSZ21.10.3 standards governing storage-type water heaters.

A.O. Smith®
Innovation has a name.

MasterFit®

COMMERCIAL GAS TANK-TYPE WATER HEATERS BTR 120-500(A)

FEATURES

80+ % thermal efficiency affords lower operating costs on most models.

WATER CONNECTIONS — For ease of installation, BTR's feature on most models water connections on the top, front, and rear.

GLASS LINED TANK — Permaglas® Ultracoat is the proprietary ceramic coating developed by A.O. Smith's ceramic engineers specifically for this heater. It is applied after the complete tank has been assembled to give a seamless barrier against corrosion by hot water. The maximum working pressure is 160 psi.

FULLY AUTOMATIC CONTROLS WITH SAFETY SHUTOFF — Accurate, dependable control system. Manual reset gas shutoff device for added safety. Maximum inlet gas pressure is 14" W.C. Minimum gas pressure is 4.5" W.C. natural gas, 11" W.C. propane.

FOAM INSULATION — Saves fuel, helps reduce standby heat loss.

JACKET — Heavy gauge steel finished with a baked enamel finish over a bonderized undercoat.

EASY CLEANING — Handhole cleanout allows easy cleaning.

FULLY TESTED FOR SAFETY AND PERFORMANCE — Design certified by the Underwriters Laboratory for 180ºF hot water service. Meets rigid requirements of the National Sanitation Foundation when equipped with optional leg kit. Certified for use on combustible flooring.

INTERMITTENT IGNITION DEVICE — Eliminates standing pilot. Provides flame failure response in less than one second. Power ON/OFF switch.

EASY TO INSTALL — Completely factory-assembled. Only gas, water, vent and electric connections need be made. Provided with drain valve.

FACTORY INSTALLED AND TESTED DRAFT DIVERTER — Low profile "snap action" diverter with automatic motorized flue damper to minimize standby losses.

ANODES — CoreGuardTM long-life, stainless steel core anode rods.

PLUG KITS — Pipe nipples and caps are included to plug unused water connections.

OTHER FEATURES

- Equipped with gas pressure regulator and pilot filter
- Integral automatic gas shutoff system prevents excessive water temperature
- A.G A. rated temperature and pressure relief valve factory-installed
- Maximum working pressure is 160 psi standard
- Cathodic protection
- Adjustable thermostat witha 120-180ºF range.

OPTIONS

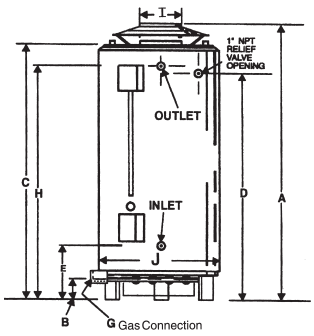
- Power vent kits for side wall venting.
- Manifold kits for multiple heater installations.
- Meets NSF Standard 5 with optional leg kit.

LIMITED WARRANTY OUTLINE

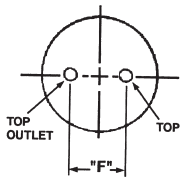
If the tank should leak any time during the first three years, under the terms of the limited warranty, A. 0. Smith will furnish a replacement heater; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY**. For complete information, consult the written warranty or A. 0. Smith Water Products Company.

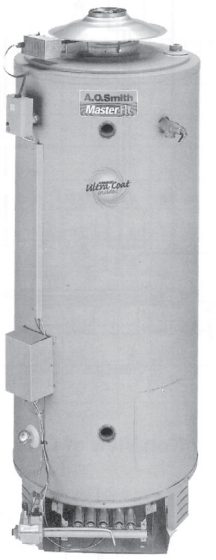
Warranty does not apply to product installed outside of the United States of Amenca or its territorial possessions andCanada.

ROUGH-IN DIMENSIONS
SIDE VIEW OF BTR
Models 120-500



Top View of BTR





c UL us LW ASME on selected models.

Dimension Tables for BTR
Models 120-500

Model	Approx Tank Cap. (Gals.)	Type of Gas	Input Rating Btu/Hr	A	B	C	D	E	F	G	H	I	J	Approx. Ship Wt. Std	Approx. Ship Wt. ASM
BTR120	71	nat/prop	120,000	69-3/4	4-1/4	59-1/2	50-7/8	19-5/8	19	1/2	51-7/8	5	27-3/4	400	---
BTR154	81	nat/prop	154,000	73	4-1/4	66-1/2	57-7/8	19-5/8	19	1/2	59	6	27-3/4	470	---
BTR180	81	nat/prop	180,000	67-1/2	4-1/2	62	53-5/8	20-1/2	21	1/2	54-5/8	6	27-3/4	470	---
BTR197	100	nat/prop	199,000	75	4-1/2	70	61-5/8	20-1/2	21	1/2	62-5/8	6	27-3/4	603	---
BTR198	100	nat/prop	199,000	75	4-1/2	70	61-5/8	20-1/2	21	1/2	61-1/2	6	27-3/4	603	---
BTR199	81	nat/prop	190,000	67-1/2	4-1/2	62	53-5/8	20-1/2	21	1/2	53-1/2	6	27-3/4	470	---
BTR200(A)	100	nat/prop	199,000	72	4-1/2	65	55-7/8	19-3/4	23	1/2	54-7/8	6	30-1/4	630	724
BTR250(A)	100	nat/prop	250,000	72	4-1/2	65	55-7/8	19-3/4	23	1/2	56-3/8	8	30-1/4	630	724
BTR251(A)	65	nat/prop	251,000	75	4-1/2	65-3/4	57-1/4	20	NA	1/2	58-3/4	8	27-3/4	750	862
BTR275(A)*	100	nat/prop	275,000	72	4-1/2	65	55-7/8	19-3/4	23	1/2	56-3/8	8	30-1/4	630	724
BTR305(A)	65	nat/prop	305,000	75	4-1/2	65-3/4	57-1/4	20	NA	3/4	58-3/4	8	27-3/4	750	862
BTR365(A)	85	nat/prop	365,000	79-1/2	4-1/2	70-1/4	62-1/2	22-1/2	21	3/4	63	8	27-3/4	725	833
BTR400(A)	100	nat/prop	399,000	75-1/2	4-1/2	67-1/2	58-1/4	26-3/4	23	3/4	59	8	30-1/4	760	874
BTR500(A)	85	nat/prop	500,000	82-1/4	4-1/2	73-1/2	65-1/4	25-1/2	21	1	65-3/4	8	27-3/4	745	856

Gas Pressure Requirements		
	Natural Gas	PropaneGas
Max. Supply Pressure	13.8" w.c.	13.8" w.c.
Min. Supply Pressure	4.5" w.c.	11" w.c.
Manifold Pressure	3.5" w.c.	10" w.c.

Electrical Specifications		
	Volts	Amps
BTR	120VAC	.7
BTR with Power Venter	120VAC	3.0 FLA

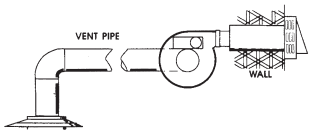
A.O. Smith®
Innovation has a name.

MasterFit®

COMMERCIAL GAS TANK-TYPE WATER HEATERS BTR 120-500(A)

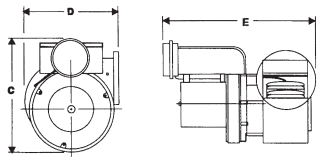
POWER VENTS FOR BTR

FEATURES



DESIGNED FOR FLEXIBILITY — Easy to install sidewall power vent system. Use these kits where gas is the preferred choice, but conventional venting is costly. Allows conversion from electric to gas or upgrading to units with higher inputs without having to do costly venting system upgrades. Easy to install and wire. Approved for use on all A.O. Smith water heaters listed below. Allows th~ use of smaller diameter vent pipe than allowed with conventional venting.

POWERFUL 115 VOLT POWER VENTER — Allows venting up to 100 equivalent feet away. Each model sized for a perfect match with A.O. Smith water heaters. Power Venters have one or more of the following depending on the heater's requirements. Built in 24/11 Svolt relay to interface with control systems. Combination 24 volt relay and adjustable post-purge timer control in lieu of relay on some models. Installed diaphragm draft proving switch. Vibration isolation mount works with common plumber's strap and helps keep operation quiet. All controls factory mounted and wired for simple installation.

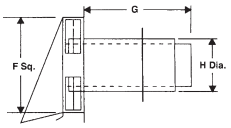


ALUMINUM VENT HOOD — Mounts on outside of wall. Features telescoping vent pipe connection sleeve, rust free construction, outside wall condensate shield, 1 airspace provides clearance forcombustibles, special heat shield protects building exterior. Mounting hardware included.

COLOR CODED WIRING HARNESS — Eliminates need for electrician (check codes). Simple 24 volt connections and a 25' lowvoltage cable. Includes grounded 115 volt power cord with plug on models up through 250,000 btu.

ADAPTER FITTINGS — Provided along with mounting hardware and instructions for a quick and simple installation. Approved vent pipe reducers supplied where applicable.

APPROVED FOR TYPE-B VENT — Non pressurized vent from heater to power venter allows the use of economical Type-B vent pipe.



BTR Water Models	Part Number	Motor Watts	Motor Amps	Max. Length of Vent	Vent Dia. Size	C Vent Assembly Height	D Vent Assembly Depth	E Vent Assembly Width	F Vent Termination Square	G	H Dia.	Rough In
120	6543	95	1.26	100 ft.*	4"	7-7/8"	7"	10-1/4"	9"	9-1/2"	6-5/8"	7-1/8"
154-251	6544	95	1.26	100 ft.*	4"	7-7/8"	7"	10-1/4"	9"	9-1/2"	6-5/8"	7-1/8"
275-500	6545	224	2.0	100 ft.*	6"	9-1/4"	8-1/2"	11-1/2"	10-1/8"	9-1/2"	8-1/2"	9"

*Vent pipe/vent hood connection based on Class B vent pipe sizes. Calculated using total pipe length, plus 5 ft. for every 90" elbow and 2-1/2 ft. or every 45" elbow.

RECOVERY CAPACITIES FOR BTR

Model	Input Rating Btu/Hr.	Gal.	Temperature Rise - Degrees F - Gallons Per Hour											
			30	40	50	60	70	80	90	100	110	120	130	140
BTR120	120,000	71	388	291	233	194	166	145	129	116	106	97	90	83
BTR154	154,000	81	498	373	299	249	213	187	166	149	136	124	115	107
BTR180	180,000	81	532	436	349	291	249	218	194	175	159	145	134	124
BTR197	199,000	100	643	482	386	322	276	241	214	193	175	161	148	132
BTR198	199,000	100	643	482	386	322	276	241	214	193	175	161	148	138
BTR199	190,000	81	614	461	368	307	263	230	205	184	167	154	142	132
BTR200(A)	199,000	100	643	482	386	322	276	241	214	193	175	161	148	132
BTR250(A)	250,000	100	808	606	485	404	346	303	269	242	220	202	186	173
BTR251(A)	251,000	65	811	608	487	406	348	304	270	243	221	203	187	174
BTR275(A)	275,000	100	889	667	533	444	381	333	296	267	242	222	205	190
BTR305(A)	305,000	65	986	739	592	493	423	370	329	296	269	246	228	211
BTR365(A)	365,000	85	1180	885	708	590	506	442	393	354	322	295	272	253
BTR400(A)	399,000	100	1293	970	776	646	554	485	431	388	353	323	298	277
BTR500(A)	500,000	85	1616	1212	970	808	693	606	539	485	441	404	373	346

Model	Clearance to Combustibles		Clearance to Non-Combustibles	
	Sides & Rear	Top Cover	Sides & Rear	Top Cover
BTR120	1"	12"	0"	12"
BTR154	1"	12"	0"	12"
BTR180	1"	12"	0"	12"
BTR197	1"	12"	0"	12"
BTR198	1"	12"	0"	12"
BTR199	1"	12"	0"	12"
BTR200(A)	1"	12"	0"	12"
BTR250(A)	2"	12"	0"	12"
BTR251(A)	2"	12"	0"	12"
BTR275(A)	2"	12"	0"	12"
BTR305(A)	2"	12"	0"	12"
BTR365(A)	3"	12"	0"	12"
BTR400(A)	3"	12"	0"	12"
BTR500(A)	6"	12"	3"	12"

Water Connections in Inches						
	Inlet			Outlet		
Models	Top	Front	Back	Top	Front	Back
BTR120	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
BTR154	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
BTR180	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
BTR197	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
BTR198	1-1/2	1-1/2	2	1-1/2	1-1/2	2
BTR199	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
BTR200(A)	1-1/2	2	2	1-1/2	2	2
BTR250(A)	1-1/2	2	2	1-1/2	2	2
BTR251(A)	NA	1-1/2	1-1/2	NA	1-1/2	1-1/2
BTR275(A)	1-1/2	2	2	1-1/2	2	2
BTR305(A)	NA	1-1/2	1-1/2	NA	1-1/2	1-1/2
BTR365(A)	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
BTR400(A)	1-1/2	2	2	1-1/2	2	2
BTR500(A)	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2

A.O. Smith
Innovation has a name.

CONSERVATIONIST®

COPPER HEAT EXCHANGER COMMERCIAL WATER HEATERS

*HW-120M, *HW-160M, *HW-200M, *HW-225M

Meets or exceeds the requirements of ASHRAE-90.1-1989 & New York, California Codes for energy efficiencies as a water heater.

LIMITED WARRANTY OUTLINE

If the coil, heat exchanger or burner should fail within 5 years, under the terms of the warranty, then A.O. Smith will furnish a replacement part; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY**. For complete information, consult the written warranty or A O Smith Water Products Company.

FOR UNITS BUILT IN USA

FOR UNITS BUILT IN CANADA

FEATURES

ALL NON-FERROUS WATERWAYS — Rustproof because water comes in contact with nothing but copper, brass or bronze. Copper transfers heat eight times faster than ferrous metals yet offers remarkable structural strength without excessive weight. Free from the effects of therma! shock.

EFFICIENT COPPER COIL COMBUSTION CHAMBER — Continuous coils of tightly wound copper tubing form a unique combustion chamber. Water circulating thru the coils, around the flame, captures radiant heat which may otherwise be lost. Eliminates any need for insulation.

OPTIMUM ENERGY TRANSFER FROM COPPER HEAT EXCHANGER — Integral extended surface copper tube having helical fins on the outside. Since the fins are extruded from the tube, surface contact is optimized resulting in maximum heat transfer and efficiency. Burkay design provides a liberal heat transfer area directly above the source of heat.

NEW HIGH-EFFICIENCY STAINLESS-STEEL BURNER — Developed especially for A. O. Smith water heaters using the very latest burner principles.

FORCED WATER CIRCULATION IMPROVES SYSTEM EFFICIENCY — Water moving at 2 to 4 feet per second helps to prevent lime build-up and also scrubs extra heat from the copper coil combustion chamber.

120V AC CONTROLS — Positive switch action. Max. inlet gas supply pressure 14" W.C. Heaters must be activated by external temperature control.

THERMAL BALANCER (HW-200M, HW-225M) — Patented thermal balancer functions as a pump shutoff delay switch. It allows the pump and heater to activate simultaneously but delays pump shut off for 120 ± 30 seconds after heater shuts down. This allows the high temperature water to clear the heater thus utilizing all heat that had been generated plus reducing the scale forming tendencies of motionless hot water (Not to be used on booster recovery systems.)

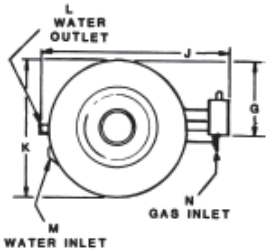
MAIN BURNER REGULATION — Factory adjusted for gas required.

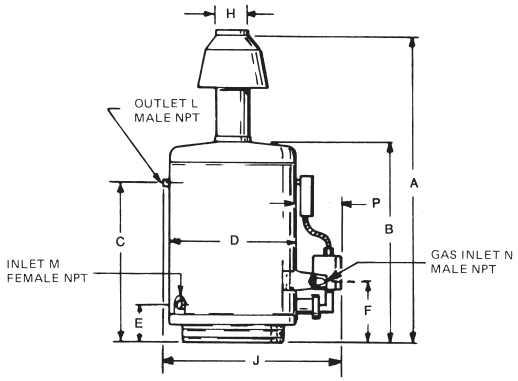
JACKET — Prefinished with a bonderized coating followed by a bakedon enamel finish.

CERTIFICATION — All models are design certified by the American Gas Association (Canadian Gas Association for units built in Canada) and are certified for installation on combustible flooring. All bear the ASME code symbol and are approved by the National Sanitation Foundation.

WORKING PRESSURE — 160 psi.

INTERMITTENT IGNITION — Available as an option (120/24 volt).





ALL DIMENSIONS IN INCHES

Models	A	B	C	D	E	F	G	H	J	K	L	M	N
HW120M	49-3/8	30-3/8	23-5/8	20-3/4	5-1/2	10	11-13/16	6	26-11/16	20-3/4	1-1/4	1	1/2
HW160M	50-1/8	30-3/8	23-5/8	20-3/4	5-1/2	10	11-13/16	7	26-11/16	20-3/4	1-1/4	1	1/2
HW200M	53-1/4	33-1/8	27-1/8	20-3/4	5-1/2	10	11-13/16	7	26-11/16	20-3/4	1-1/4	1	1/2
HW225M	60	33-1/8	27-1/8	20-3/4	5-1/2	10	11-13/16	7	26-11/16	20-3/4	1-1/4	1	3/4

RECOVERY CAPACITIES

Model	Input Rating BTU/Hr. Nat. & Propane Gas	Temperature Rise - Degrees F - Gallons Per Hour										
		40	50	60	70	80	90	100	110	120	130	140
HW120M	120,000	300	240	200	171	150	133	120	109	100	92	86
HW160M	160,000	385	308	257	220	193	171	154	140	128	118	110
HW200M	199,000	487	389	324	278	243	216	195	177	162	150	139
HW225M	225,000 Nat. Gas Only	543	434	362	310	271	241	217	197	181	167	155

Recovery rating of models shown in chart above are obtained by actual efficiency test data, by a recognized Certification Agency.

A.O. Smith®
Innovation has a name.

CONSERVATIONIST®

COMMERCIAL BOILERS
HW-300 THRU HW-670
Domestic Hot Water Supply Boiler

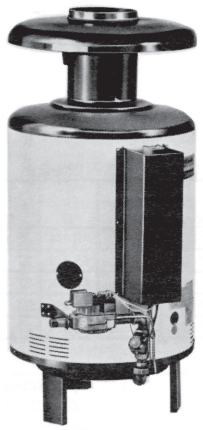
Meets or exceeds the requirements of ASHRAE 90.1b-1992, New York and California Energy Codes.

HW – INDOOR INSTALLATION ONLY

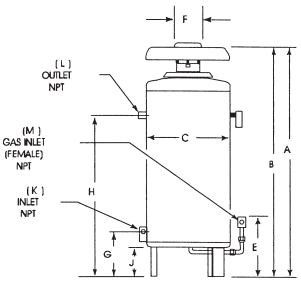
Not approved for instantaneous applications.

USA CANADA

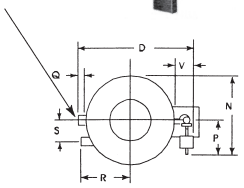
HW MODELS CERTIFICATION & APPROVAL

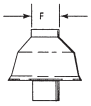


NOTE: MANIFOLD HAS EXTRA OPENINGS FOR THERMOMETER (3/4" AND RELIEF VALVE [1"] (HW-520 AND -670 ONLY)



HW - INDOOR MODELS





HW - 300 ONLY

HW - 670 ONLY

FEATURES

ALL NON-FERROUS WATERWAYS — All castings are made of Bronze or Brass. All water tubes are made from copper. Brazed joints or flare union construction make the heater immune to the effects of thermal shock and thermal cycling. A great boiler for domestic hot water supply systems.

EFFICIENT COPPER COIL COMBUSTION CHAMBER — The combustion chamber is a heat exchanger formed from a two passage coil of tightly wound continuous copper tube. Water circulating through this coil surrounds the main burner and captures the radiant heat. A wrap of insulation on the outside of the coil retains the heat captured by the circulating water.

COPPER HEAT EXCHANGER — Directly above the coil and the main burner is a compact, horizontal, copper fin tube heat exchanger. The flue gases must pass through this efficient heat exchanger before leaving the boiler. This unique Burkay coil and heat exchanger design provide maximum heat transfer and proven field durability.

BURKAY BURNER MAXIMIZES EFFICIENCY — The patented Burkay burner uses primary air injection at up to 72 individual orifices plus secondary entrainment of air. Approved for installation on combustible floors as shipped from factory.

GAS VALVES — Slow opening redundant gas valves ensure smooth light-off without flame roll-out or pilot outage.

THERMAL BALANCER — Patented pump delay system that allows boiler and pump to run simultaneously but delays pump shut off at end of heating cycle to remove usable heat from the heat exchanger and reduce the scale forming tendencies of motionless hot water.

AUTOMATIC SAFETY CONTROLS AND ELECTRONIC IGNITION — Proven pilot ignition system provides flame failure response in under one (1) second. Redundant high limit controls and gas valves assure safe shutoff in the event of overheating or flame failure. Requires 120V 60Hz, maximum inlet gas pressure of 14" WC and activation of heater by external temperature control.

OPTIONAL POWERED VENT HOOD — for sidewall venting.

WORKING PRESSURE — ASME approved, hydrostatically tested and certified for 160 psi.

*Except model HW-399 is 81%.

LIMITED WARRANTY OUTLINE

If the heat exchanger modules should fail within 5 years, under the terms of the warranty; A. O. Smith will furnish a replacement part; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY.** For complete information, consult the written warranty or A. O. Smith Water Products Company.

Note: When used as a hot water boiler, heat exchanger carries a 10 year warranty.

DIMENSIONS

Models	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	V	Approx Ship. Wt. Lbs.
HW-300	65	43-1/4	25-1/4	29-5/8	16-1/2	8	12	36	9	1-1/4	1-1/4	3/4	26-5/8	14	1	10-1/8	5-318	5	240
HW-420	57-1/8	45-1/8	27	31-1/2	16-3/4	10	12	38-3/4	9	1-1/2	1-1/2	1	27-1/2	14	1	11-1/4	5-1/2	5	291
HW-520	68-5/16	56-1/4	27	36-1/2	18	10	12	46-1/2	9	2	2	1-1/4	24-1/2	11	3-1/2	12	5-3/4	7	361
HW-670	67	56-1/4	27	38-1/4	17-3/4	12	12	46-1/2	9	2	2	1-1/4	26-3/4	13-1/4	3-1/2	12	5-3/4	7	361

SPECIFICATIONS AND RECOVERY CAPACITIES

Model	Input Rating A.G.A. BTUH Natural and Propane Gases		Temperature Rise - Degrees F												
			20	30	40	50	60	70	80	90	100	110	120	130	140
HW-300	300,000	GPH	1491	993.9	745	596	497	426	373	331	298	271	248	229	213
		GPM	24.8	16.6	12.4	9.9	8.3	7.1	6.2	5.5	4.9	4.5	4.1	3.8	3.5
HW-420	420,000	GPH	2087	1391	1044	935	696	596	521.9	464	417	379	348	321	298
		GPM	34.7	23.2	17.4	13.9	11.6	9.9	8.7	7.7	6.9	6.3	5.8	5.3	4.9
HW-520	520,000	GPH	2584	1723	1292	1034	861	738	646	574	516	470	430	396	369
		GPM	43	28.7	21.5	17.2	14.4	12.3	10.8	9.6	8.6	7.8	7.1	6.6	6.1
HW-670	660,000 Nat.	GPH	3280	2186	1640	1312	1093	937	820	729	656	596	547	504	468
		GPM	54.6	36.4	27.3	21.9	18.2	15.6	13.6	12.1	10.9	9.9	9.1	8.4	7.8
	670,000 LP	GPH	3249	2166	1624	1299	1083	928	812	722	650	591	541	500	464
		GPM	54.1	36.1	27.1	21.7	18.1	15.5	13.5	12.0	10.8	9.8	9.0	8.3	7.7

A.O. Smith
Innovation has a name.

Dura-Power

COMMERCIAL ELECTRIC WATER HEATERS
DRE-52, 80, 120

FEATURES

GLASS-LINED TANK — Three sizes: 50, 80 and 119 gallon capacity. Tank interior is coated with glass specially developed by A.O. Smith Ceramic Research for water heater use. Tanks rated 150 psi working pressure (ASME 150 psi). Foam insulation reduces costly heat loss and is vermin proof.

ELEMENTS — Incoloy sheathing for longer life. Low watt density: means lower surface temperature to minimize scale buildup and more surface to heat water. Element sizes from 3 to 6 Kw. Use 3, 6, or 9 elements standard; total of 9 to 54 Kw input (see chart on back).

FUSING — Protects all elements, thermostats, and internal wiring circuits against excess current flow. Meets National Electric Code requirements that non-ASME tanks must have internal fusing when current draw exceeds 48 amps.

STANDARD VOLTAGES — 208, 240 and 480V single-phase and three phase delta. Convertible from three-phase to single-phase (in field) and vice versa. 277V single-phase also available.

TERMINAL BLOCK — Factory installed. Just bring the service to the heater and connect to block.

CONTROLS — One temperature control (adjustable through a range of 120º to 180ºF) and manual reset high temperature cutoff per element. Thermostat step control may be achieved by varying settings on individual temperature controls. Located behind hinged control compartment door for quick, easy access.

OTHER STANDARD FEATURES

- Simplified circuitry, color coded for ease of service
- Two anode rods for maximum corrosion protection
- Cabinet has bonderized undercoat with baked enamel finish
- Bottom inlet and top outlet openings
- Drain valve
- A.G.A./A.S.M.E. Temperature and Pressure relief valve
- Single panel control box

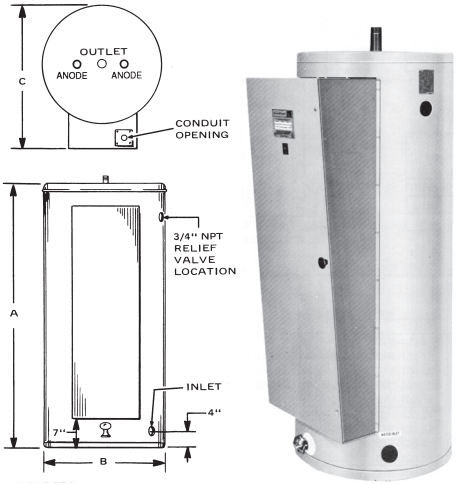
OPTIONAL

- U.L. listed conversion kits to correct some voltage and Kw requirements in the field before and after installation.
- Manifold kits with gate valves - available for multiple installation.
- ASME 150 psi tank construction
- International voltages — 380, 415 and 480 volts, three-phase available with Y connected elements.
- Field conversion kits for voltage and Kw.

RECOVERY RATE IN GALLONS PER HOUR*
Temperature Rise ºF

STANDARD KW INPUT	BTU/ HOUR	30º	40º	50º	60º	70º	80º	90º	100º	110º	120º	130º	140º
9	30,717	123	92	74	62	53	46	41	37	34	31	28	26
12	40,956	164	123	98	82	70	61	55	49	45	41	38	35
13.5	46,025	184	138	111	92	79	69	62	55	50	46	43	40
15	51,195	205	154	123	102	88	77	68	61	56	51	47	44
18	61,434	246	184	148	123	105	92	82	74	67	62	57	53
24	81,912	328	246	197	164	140	123	109	98	90	82	76	70
27	92,151	369	276	221	185	158	138	123	111	101	92	85	79
30	102,390	410	307	246	205	176	154	137	123	112	102	95	88
36	122,868	492	369	295	246	211	184	164	148	134	123	113	105
40.5	138,226	554	418	332	277	237	208	185	166	151	138	128	119
45	153,585	615	461	369	307	263	230	205	184	168	154	142	132
54	184,302	738	554	443	369	316	277	246	221	201	185	170	158

Figured at 1 KW (3413 Btu) = 4.1 Gallons at 100ºF temperature rise.
To determine recovery rate per minute, divide recovery rate per hour by 60.
NSF ratings may be obtained by multiplying the above GPH figures by 0.98.



Model Number	Tank Capacity in Gallons	Dimensions in Inches A	B	C	Inlet/ Outlet	Approx. Ship. Wt. (Lbs.) Standard	ASME
DRE-52	50	55-1/4	21-3/4	27-1/4	1-1/4	245	296
DRE-80	80	59-1/2	25-1/4	31-1/4	1-1/4	264	309
DRE-120	119	62-1/4	29-1/2	35-3/4	1-1/4	375	401

LIMITED WARRANTY OUTLINE

If the tank should leak any time during the first three years, under the terms of the warranty, A.O. Smith will furnish a replacement heater; installation, labor, handling and local delivery extra.

THIS OUTLINE IS NOT A WARRANTY.

For complete information, consult the written warranty or A.O. Smith Water Products Company.

KW Input	Model Numbers Tank Capacity In Gallons 50	80	119	No. of Elements and Thermostats	Element Wattage	Full Load Current In Amperes Single Phase 208V	240V	277V	480V	Three Phase 208V	240V	480V
9	DRE-52-9	DRE-80-9	DRE-120-9	3	3000	43.3	37.5	32.5	18.8	25.0	21.7	10.8
12	DRE-52-12	DRE-80-12	DRE-120-12	3	4000	57.7	50.0	43.3	25.0	33.3	28.9	14.4
15	DRE-52-15	DRE-80-15	DRE-120-15	3	5000	72.1	62.5	54.2	31.3	41.6	36.1	18.0
13.5	DRE-52-13.5	DRE-80-13.5	DRE-120-13.5	3	4500	64.9	56.3	48.7	28.1	37.5	32.5	16.2
18	DRE-52-18	DRE-80-18	DRE-120-18	3+	6000	86.5	75.0	65.0	37.5	50.0	43.3	21.7
24	DRE-52-24	DRE-80-24	DRE-120-24	6	4000	115.4	100.0	86.6	50.0	66.6	57.7	28.9
27	DRE-52-27	DRE-80-27	DRE-120-27	6	4500	129.8	112.5	97.5	56.3	74.9	65.0	32.5
30	DRE-52-30	DRE-80-30	DRE-120-30	6	5000	144.2	125.0	108.3	62.5	83.3	72.2	36.1
36	DRE-52-36	DRE-80-36	DRE-120-36	6+	6000	173.1	150.0	130.0	75.0	99.9	86.6	43.3
40.5	N/A	DRE-80-40.5	DRE-120-40.5	9	4500	194.7	168.8	146.2	84.4	112.4	97.4	48.7
45	N/A	DRE-80-45	DRE-120-45	9	5000	216.3	187.5	162.5	93.8	124.9	108.3	54.1
54	N/A	DRE-80-54	DRE-120-54	9	6000	N/A	225.0	194.9	112.5	149.9	129.9	65.0

UL®

ASME

NSF

+ 208 volt models may contain three (3) additonal elements and thermostats.

A.O. Smith
Innovation has a name.

Dura-Power

COMMERCIAL ELECTRIC WATER HEATERS
DVE-52, 80, 120

FEATURES

GLASS-LINED TANK — Three sizes; 52, 80 and 119 gallon capacity. Tank interior is coated with glass specially developed by A.O. Smith Ceramic Research for water heater use. Tanks rated at 150 psi working pressure; tested at 300 psi. Foam insulation reduces costly heat loss. ASME (optional) maximum working pressure is 160 psi.

ELEMENTS — Heavy duty elements have Incoloy sheaths and ceramic terminal block for rugged commercial service. Medium watt density means lower surface temperature to minimize scale buildup and more surface to heat water. Element sizes from 2 to 6 KW. Use 3, 6 or 9 elements; maximum input 54 KW. The design assures proper placement of elements in the tank to avoid bridging the sheaths with lime or scale deposits.

POWER CIRCUIT FUSING — Protects elements and contactors from short circuits, overloading or line surges. Meets National Electric Code requirements (fusing required when current draw exceeds 48 amps).

STANDARD VOLTAGES — 208, 240 and 480V single-phase and three phase delta. Convertible from three-phase to single-phase (in field) and vice versa (except 208/54 KW). 277V singlephase also available.

TERMINAL BLOCK — Factory installed. Just bring the service to the heater and connect to block.

MAGNETIC CONTACTORS — Heavy duty; UL rated 100,000 cycles.

Meets or exceeds the requirements of ASH RAE 90.1 b-i 992 Standard for energy efficiencies.

CONTROLS — 120V control circuit is powered by fused transformer, eliminating need for 120V service connection. Immersion temperature control adjustable through a range of 60ºF to 180ºF. Manual reset high temperature cutoff.

• Simplified circuitry, color coded for ease of service • Hinged control compartment door for quick, easy access • Two anode rods for maximum corrosion protection • Cabinet has bonderized undercoat with baked enamel finish • Top outlet, side inlet and relief valve openings • Nipple and brass drain valve • A.G.A./ ASME temperature and pressure relief valve.

OPTIONAL

MANIFOLD KITS WITH STOP VALVES — Available for multiple installations.

THERMOSTATIC SEQUENCING CONTROL — Energizes three elements at a time to prevent line surges when thermostat calls for heat. Available on units 24 KW and larger. See page C 029.0 for service wiring and fuse selection.

OPTIONAL INTERNATIONAL VOLTAGES — 380, 415, 480, 575 and 600 volts three-phase available with Y connected elements.

RECOVERY CAPACITY IN GALLONS AT TEMPERATURE RISE OF

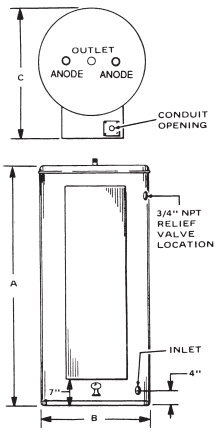
STANDARD KW INPUT	BTU/ HOUR	30º	40º	50º	60º	70º	80º	90º	100º	110º	120º	130º	140º
6	20,478	82	62	49	41	35	31	27	25	22	21	19	18
9	30,717	123	92	74	62	53	46	41	37	34	31	28	26
12	40,956	164	123	98	82	70	61	55	49	45	41	38	35
13.5	46,075	184	138	111	92	79	69	62	55	50	46	43	40
15	51,195	205	154	123	102	88	77	68	61	56	51	47	44
18	61,434	246	184	148	123	105	92	82	74	67	62	57	53
24	81,912	328	246	197	164	140	123	109	98	90	82	76	70
27	92,151	369	276	221	185	158	138	123	111	101	92	85	79
30	102,390	410	307	246	205	176	154	137	123	112	102	95	88
36	122,868	492	369	295	246	211	184	164	148	134	123	113	105
40.5	138,226	554	418	332	277	237	208	185	166	151	138	128	119
45	153,585	615	461	369	307	263	230	205	184	168	154	142	132
54	184,302	738	554	443	359	316	277	246	221	201	185	170	158

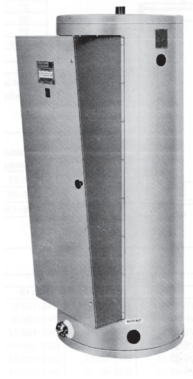
Figured at 1 KW (3413 BTU) = 4.1 Gallons at 100ºF temperature rise.
NSF ratings may be obtained by multiplying the above figures by 0.98.

LIMITED WARRANTY OUTLINE

If the tank should leak any time during the first three years, under the terms of the warranty, A.O. Smith will furnish a replacement heater; installation,labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY.**

For complete information, consult the written warranty or A. 0. Smith Water Products Company





Model Number	Tank Capacity in Gallons	Dimensions in Inches A	B	C	Inlet/ Outlet	Approx. Ship. Wt. (Lbs.) Standard	ASME
DVE-52	50	55-1/4	21-3/4	27-1/4	1-1/4	265	316
DVE-80	80	59-1/2	25-1/4	31-1/4	1-1/4	280	325
DVE-120	119	62-1/4	29-1/2	35-3/4	1-1/4	390	416

KW Input	Model Numbers Tank Capacity In Gallons 50	80	119	Number Of Elements	Element Wattage	Full Load Current In Amperes Single Phase 208V	240V	277V	480V	Three Phase 208V	240V	480V
6	DVE-52-6	DVE-80-6	DVE-120-6	3	2,000	28.8	25.0	21.7	12.5	16.7	14.4	7.2
9	DVE-52-9	DVE-80-9	DVE-120-9	3	3,000	43.3	37.5	32.5	18.8	25.0	21.7	10.8
12	DVE-52-12	DVE-80-12	DVE-120-12	3	4,000	57.7	50.0	43.3	25.0	33.3	28.9	14.4
13.5	DVE-52-13.5	DVE-80-13.5	DVE-120-13.5	3	4,500	64.9	56.3	48.7	28.1	37.5	32.5	16.2
15	DVE-52-15	DVE-80-15	DVE-120-15	3	5,000	72.1	62.5	54.2	31.3	41.6	36.1	18.0
18	DVE-52-18	DVE-80-18	DVE-120-18	3*	6,000	86.5	75.0	65.0	37.5	50.0	43.3	21.7
24	DVE-52-24	DVE-80-24	DVE-120-24	6	4,000	115.4	100.0	86.6	50.0	66.6	57.7	28.9
27	DVE-52-27	DVE-80-27	DVE-120-27	6	4,500	129.8	112.5	97.5	56.3	74.9	65.0	32.5
30	DVE-52-30	DVE-80-30	DVE-120-30	6	5,000	144.2	125.0	108.3	62.5	83.3	72.2	36.1
36	DVE-52-36	DVE-80-36	DVE-120-36	6*	6,000	173.1	150.0	130.0	75.0	99.9	86.6	43.3
40.5	DVE-52-40.5	DVE-80-40.5	DVE-120-40.5	9	4,500	194.7	168.8	146.2	84.4	112.4	97.4	48.7
45	DVE-52-45	DVE-80-45	DVE-120-45	9	5,000	216.3	187.5	162.5	93.8	124.9	108.3	54.1
54	DVE-52-54	DVE-80-54	DVE-120-54	9	6,000	N/A	225.0	194.9	112.5	149.9	129.9	65.0

Lime Tamer

ASME
(OPTIONAL)

NSF

* 208 volt models may contain three (3) additonal elements.

Stainless Steel Indirect Fired Water Heaters

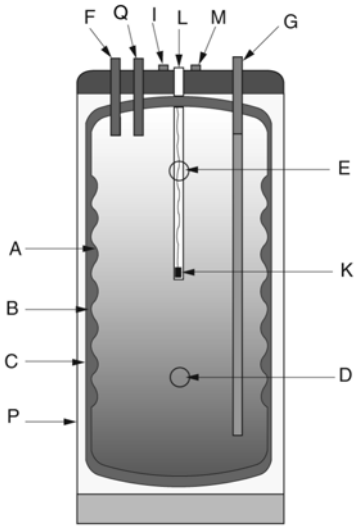
FEATURES

- Exclusive “Tank-in-Tank” Technology
- Abundant Domestic Hot Water at the Lowest Possible Cost
- A Limited Lifetime Warranty
- 2" of Polyurethane Foam Insulation
- 8 Sizes to Choose From
- Self Cleaning/Self Descaling Heat Exchanger
- Lowest Pressure Drop in the Industry

PERFORMANCE

Model No.	Boiler Output Btu/hr	1st Hour Recovery (gal.)	Continuous Flow (gal.)	Peak/Flow Gal/10 min.
Smart 20	79,000	120	105	35
Smart 30	87,000	140	115	40
Smart 40	112,000	180	150	50
Smart 50	140,000	220	185	65
Smart 60	270,000	410	360	100
Smart 80	300,000	460	400	125
Smart 100	337,000	525	450	150
Smart 120	420,000	650	560	190

Conditions:
- 200º boiler water supply
- 90º temperature rise



A. Inner stainless steel tank
B. Outer steel tank
C. 2” Polyurethane insulation
D. Boiler water connection
E. Boiler water connection
F. Hot water outlet
G. Cold water inlet
H. Enameled steel jacket
I. Thermostat control
J. Temperature gauge
K. Thermostat remote sensing bulb
L. Air vent
M. Electrical wiring plug
N. Thermometer remote sensing bulb
P Plastic jacket
Q. Auxiliary connection

SUPERIOR DESIGN “TANK-IN-TANK” TECHNOLOGY

Superior Heat Exchange Surface Area

The domestic storage tank is constructed of stainless steel and is surrounded by boiler water in the outer tank, resulting in a full “wrap around” heat exchanger.

It’s superior heat exchange surface (typically 1.5 to 2.5 times larger than a traditional coil) makes for a large volume of hot water in a short period of time. Thanks to this fast recovery, the storage capacity can be reduced, resulting in a reduced thermal loss.

Stainless Steel Tank Construction

The inner domestic storage tank is constructed of durable, corrosion resistant stainless steel.

Optimal Insulation

The Phase III®, Smart Series are insulated with 2” of either sprayed-on or injected polyurethane foam, resulting in a stand by heat loss of less than 1º/Hr.

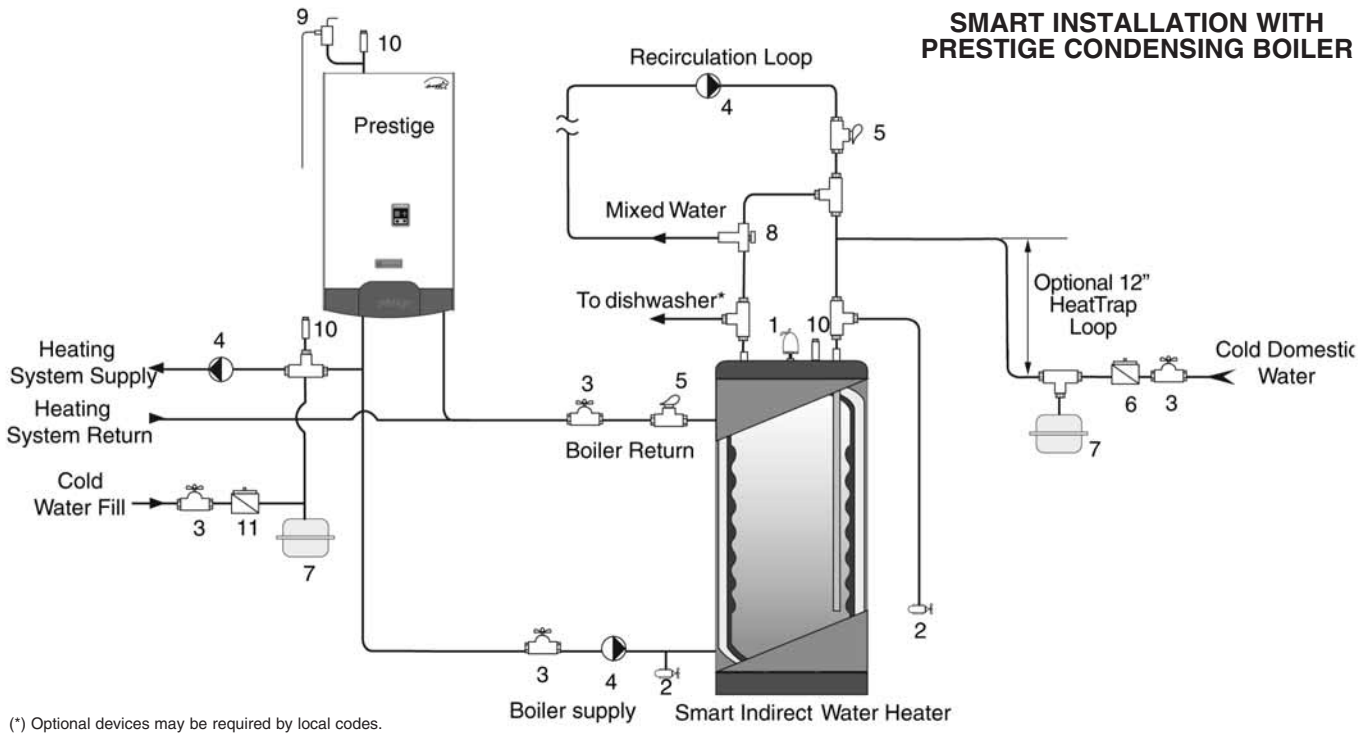
Self Cleaning / Self-descaling

The inner, domestic tank is suspended within the outer tank so it is free to expand and contract as the pressure varies during hot water draws. Moreover, its corrugations amplify the movement and prevents the lime build up on the heat exchanger; thus maintaining its performance during the Phase III®’s life span.

Anti-Bacteria Growth / Maintenance Free

The “Tank-in-Tank” design allows us to store domestic water at higher temperatures preventing bacteria growth. Additionally constructed of high quality stainless steel, Phase III® does not require a protective anode.

Stainless Steel Indirect Fired Water Heaters



(*) Optional devices may be required by local codes.

1. Temperature & Pressure Relief Valve
2. Drain
3. Shut -off Valves
4. Circulator
5. Flow Check Valve
6. Backflow preventer or pressure reducing valve(*)
7. Expansion Tank
8. Mixing Valve
9. Pressure Relief Valve
10. Air Vent
11. Automatic Fill Valve

PRODUCT SPECIFICATIONS

Model No.	Dimension	Height	Boiler/Supply Return	Domestic Inlet/Outlet	3rd Domestic Connection*	Domestic Capacity (gal.)	Heating Water Capacity (gal.)	Heat Surface (sq. ft.)	Empty Weight (lbs)
Smart 20	22" dia.	32"	1"	3/4"	3/4"	22	5	11	100
Smart 30	22" dia.	38"	1"	3/4"	3/4"	28	5	13	115
Smart 40	22" dia.	46"	1"	3/4"	3/4"	36	6	16	135
Smart 50	22" dia.	57"	1-1/4"	3/4"	3/4"	46	8	20	165
Smart 60	22" dia.	66"	1-1/4"	3/4"	3/4"	56	8	24	190
Smart 80	26" dia.	61"	1-1/2"	1-1/2"	1-1/2"	70	14	28	271
Smart 100	26" dia.	78"	1-1/2"	1-1/2"	1-1/2"	95	25	36	362
Smart 120	32" dia.	72"	2"	1-1/2"	1-1/2"	119	43	42	479

(*) This fitting can be used as a return connection if circulated domestic water is required or can be used as a connection for the T&P Relief Valve.

Innovation has a name.

COMMERCIAL HOT WATER STORAGE TANKS TJV-120M, TJV120A

FEATURES

Exceeds ASHRAE 90.1b-1992.

A.O. Smith storage tanks are ideal for use with gas-fired copper heat exchanger equipment for storage of any potable water at temperatures up to 180ºF.

GLASS-LINED TANK — Alkaline borosilicate composition permanently fused to steel by firing at a temperature of 1600ºF, providing years of corrosion protection and dependable use.

HEAVY GAUGE STEEL JACKET — With baked enamel finish.

THREADED OPENINGS — All tanks furnished with threaded openings for thermometer, relief valve, 2" recirculation lines, tankstat, and drain valve.

TJV-120M and TJV-120A

• Fits through 30" door • Magnesium anode • for anticorrosion protection

TJV-120M • 119 gallons • exceeds ASHRAE requirements • 150 psi working pressure.

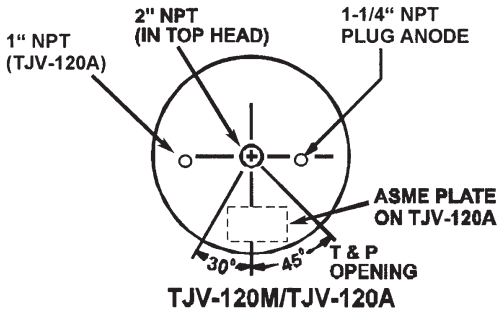
OPTIONS

Perfectly balanced manifold kits (120 gallon models) allow installation where 240 to 480 gallons of stored water is required.

LIMITED WARRANTY OUTLINE

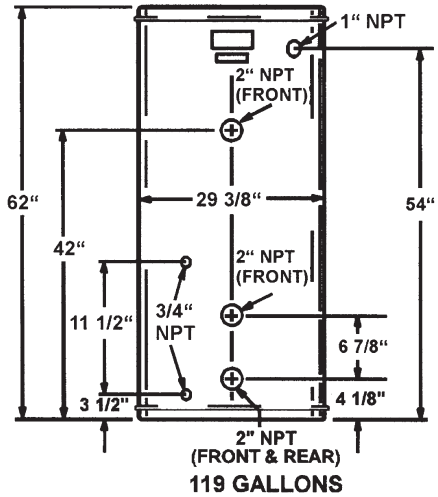
If the tank should leak any time during the first 5 years, under the terms of the warranty, A.O. Smith will repair or replace the tank; installation, labor, handling and local delivery extra. **THIS OUTLINE IS NOT A WARRANTY.** For complete information, consult the written warranty or A.O. Smith Water Products Company.

120 GALLON MODEL



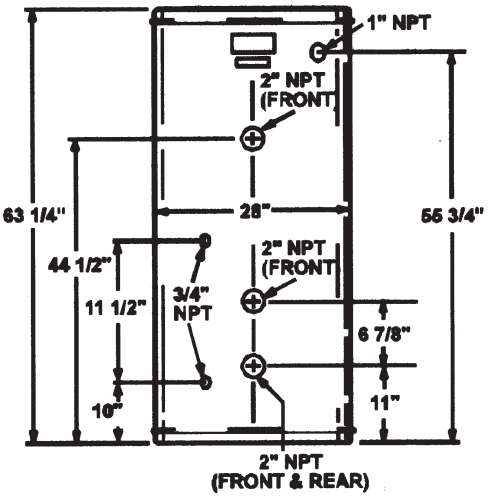
TJV-120M/TJV-120A

TJV-120M
(SHIPPING WT. 320 LBS.)



119 GALLONS

TJV-120A
(SHIPPING WT. 400 LBS.)



ASME 119 GALLONS

Innovation has a name.

LARGE VOLUME HOT WATER STORAGE TANKS

LIMITED WARRANTY OUTLINE

If the tank should leak any time during the first 5 years, under the terms of the warranty, A.O. Smith will repair or replace the tank; installation, labor, handling and local delivery are extra. **THIS OUTLINE IS NOT A WARRANTY**. For complete information, consult the written warranty or A.O. Smith Water Products Company.

Warranty does not apply to product installed outside of the United States of America or its territorial possessions and Canada.

FEATURES

A.O. Smith storage tanks are ideal for use with gas4i red copper heat exchanger equipment and other A. 0. Smith hot water systems for storage of any potable water at temperatures as high as 180 degrees or lower.

GLASS-LINED — All internal surfaces exposed to water are glass-lined per ASME HLW procedures, using an NSF approved glass-lining compound.

SIZES FROM 80 TO 1,000 GALLONS — All tanks in table on reverse side are normally carried in stock. ASME construction available on all except 80 and 120 gallon size.

HORIZONTAL OR VERTICAL MOUNTING — Except TL-500 which is horizontal.

MAGNESIUM ANODES — For extra protection.

Stock tanks T-140A and larger have threaded leg sockets on one head for vertical installations. (Except TL-500).

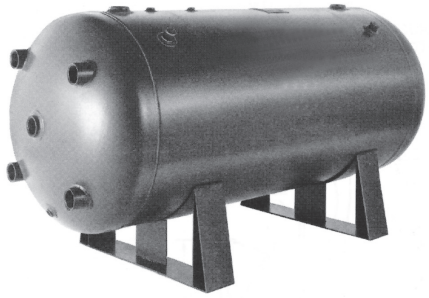
WORKING PRESSURES

Tanks tested at test pressures assigned in accordance with working pressures shown in table on reverse side.

OPTIONS

- ASME and National Board Certification sheets
- Tank saddles - two per horizontal tank required.

NOTE: Custom line tanks available to meet military specifications, various working pressures, lifting lugs, handholes, manholes, special opening sizes or locations. Refer to sheet A 411.0.



(ON ASME CONSTRUCTED TANKS)

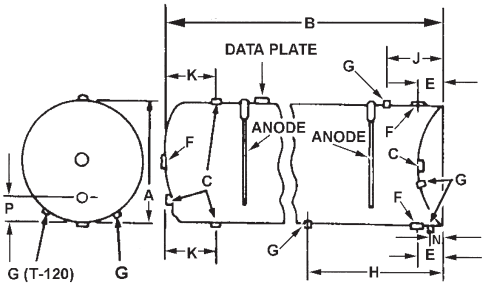


FIGURE 1 – T-80, T-120
NOTE: T-120 shown.

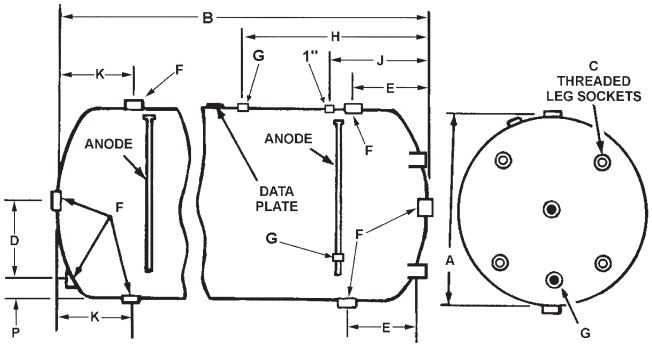


FIGURE 2 – T-140 thru T-1000A
TL-500 - Horizontal mounting only. No leg sockets.

All Dimensions in Inches (mm)

Model	Overall Dimensions Inches	Working Pressure	Approx. Ship Wt.	Refer to Figure	A	B	C	D	E	F	G	H	J	K	N	P
T-80 STD.	23" x 62"	150	230	1	23-1/4	62-1/4	--	46-1/2	16	--	3/4	--	7	3-5/8	3/4	--
T-120 STD	24" x 64"	150	287	1	24-1/4	64-3/8	2-1/2	--	--	--	3/4	34-1/2	15-1/2	10-1/2	3-1/2	4-1/8
T-140 ASME	24" x 76-1/4"	125	400	2	24	75	2-1/2	8	10-1/2	2	3/4	26	17	10-1/2	--	4
T-200 ASME	30" x 72"	125	460	2	30	70-3/4	2-1/2	11	13	2-1/2	3/4	28-1/2	19-1/2	13	---	4
T-250 ASME	30" x 84"	125	505	2	30	84	2-1/2	10	13	2-1/2	3/4	28-1/2	19-1/2	13	---	4
T-350 ASME	36" x 88"	125	670	2	36	86	2-1/2	13-3/8	14-1/2	2-1/2	3/4	30	21	14-1/2	---	4-5/8
T-400 ASME	36" x 97"	125	775	2	36	96	2-1/2	13-3/8	14-1/2	2-1/2	3/4	30	21	14-1/2	---	4-5/8
TL-500 ASME	36" x 122"	125	950	2	36	120-3/8	---	11	16-1/4	3	3/4	31-3/4	22-3/4	16-1/4	---	7
T-500 ASME	48" x 74"	125	950	2	48	72-3/4	3	18	19-3/4	3	3/4	32-3/4	26-3/4	19-3/4	---	6
T-750 ASME	48" x 106"	125	1290	2	48	105	3	18	19-3/4	3	3/4	32-3/4	26-3/4	19-3/4	---	6
T-1000 ASME	48" x 138"	125	1655	2	48	136	3	18	19-3/4	3	3/4	32-3/4	26-3/4	19-3/4	---	6

COMMERCIAL GAS CIRCULATING WATER HEATERS

BURKAY® GENESIS

85% EFFICIENT, ULTRA-LOW NOx HOT WATER HEATER

A. O. Smith Genesis® Water Heaters offer everything you could ask for in a non-condensing water heater. They provide a near condensing 85% thermal efficiency, outstanding venting flexibility, space-saving stackable design and a clean burning fan assisted combustion system with low NOx emissions that meet the most stringent California standards.

ELECTRONIC CONTROL WITH PRECISE TEMPERATURE MANAGEMENT

- Controls every electrical water heater function, including pump operation and main burner ignition, delivers precise temperature management, with ±1º accuracy.
- Display panel shows current operating status and fault readings
- Display also shows temperature setpoints, outlet temperature, current inlet/outlet differential (DT) and tank temperature.
- Included remote temperature sensor when mounted in the storage tank allows the tank temperature to be set and monitored at the water heater.

STAGE GAS FIRING SYSTEM

- Prevents short cycling and ensures smooth operation, saves fuel and extends product life.
- Delivers maximum output when demand is high, reduced firing rates during off peak times.

ULTRA-LOW NOx OPERATION

- Meets SCAQMD Rule 1146.2 air quality standards.

COPPER FINNED-TUBE HEAT EXCHANGER

- Gasketless glasslined headers and copperfinned tubes with extruded integral fins deliver exceptional heat transfer.
- Copper is lightweight for easier handling and immune to thermal shock.

SPACE-SAVING DESIGN

- Optional stack rack allows one unit to be stacked on top of another, doubling output within the footprint of a single unit.
- If floor space is limited, the Genesis water heater can be installed outdoors with an optional outdoor Vent Cap.

MEETS ASHRAE/IESNA 90.1-2004 MULTIPLE VENTING OPTIONS

- All Genesis models can vent vertically in Category I with double wall "B" vent or horizontally in Category IV with AL29-4C stainless steel vent material.

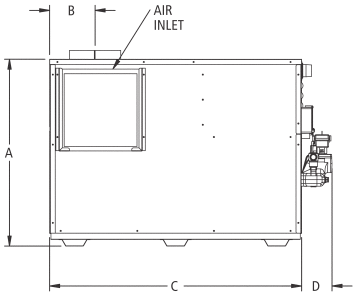
FACTORY START-UP INCLUDED

- Required for activating warranty and assuring maximum operating performance. Contact your local sales representative or Authorized Start-Up Agent to arrange a FREE Certified Start-Up.

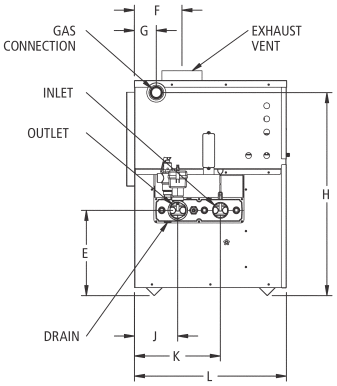
5-YEAR LIMITED HEAT EXCHANGER WARRANTY

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

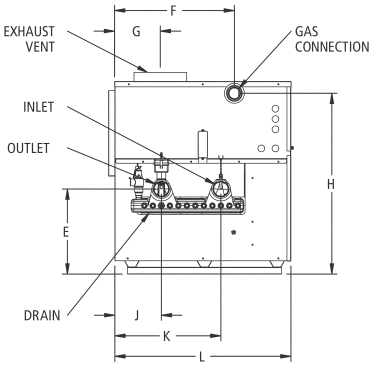
GWH-400 THRU GWH-2100



SIDE VIEW



GWH-400 THRU GWH-750



GWH-1000 THRU GWH-2100

Low Lead Content

HLW

MODEL NUMBER	INPUT MBH	GPH @ 40ºF RISE	GPH @ 100ºF RISE	GPH @ 140ºF RISE	DIMENSIONS IN INCHES											APPROX. SHIPPING WEIGHT (LBS)
					A	B	C	D	E	F	G	H	J	K	L	
GWH-400N	399	1,028	412	294	31-1/2	7	37-5/8	8-7/8	12-1/2	7	3-1/4	29-3/4	6-3/8	12-5/8	22-1/4	454
GWH-500N	500	1,288	515	368	31-1/2	7	45-3/8	8-7/8	12-1/2	7	3-1/4	29-3/4	6-3/8	12-5/8	22-1/4	467
GWH-650N	650	1,674	670	478	31-1/2	8-1/2	56-3/4	8-7/8	12-1/2	8-1/2	3-1/4	29-3/4	6-3/8	12-5/8	22-1/4	551
GWH-750N	750	1,932	773	552	31-1/2	8-1/2	64	8-7/8	12-1/2	8-1/2	3-1/4	29-3/4	6-3/8	12-5/8	22-1/4	611
GWH-1000N	990	2,550	1,020	729	36	8-3/4	48-1/2	5-7/8	15-7/8	22-1/2	8-1/2	33-3/4	8-3/4	19-7/8	33	843
GWH-1250N	1,260	3,245	1,298	927	36	9-3/4	58-3/4	5-7/8	15-7/8	22-1/2	9-3/4	33-3/4	8-3/4	19-7/8	33	939
GWH-1450N	1,440	3,709	1,484	1,060	36	10-1/2	68-7/8	5-7/8	15-7/8	22-1/2	10-1/4	33-3/4	8-3/4	19-7/8	33	1,035
GWH-1800N	1,800	4,636	1,855	1,325	36	11	82-3/8	5-7/8	15-7/8	22-1/2	10-7/8	33-3/4	8-3/4	19-7/8	33	1,168
GWH-2100N	2,070	5,332	2,133	1,523	36	11	92-5/8	5-7/8	15-7/8	22-1/2	10-7/8	33-3/4	8-3/4	19-7/8	33	1,285

Pump and flanges are shipped loose for field installation.
Gas connect pipe size is 1¼" for models GWH-400 to GWH-750 and is 2" for models GWH-1000 to GWH-2100.
Water connections for models GWH-400 to GWH-750 are 2" NPT on 6-1/2" centers.
Water connections for models GWH-1000 to GWH-2100 are 2-1/2" NPT on 11-1/4" centers.
Performance data is based on manufacturer test results.
Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

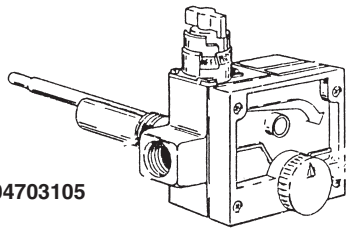
For the most up to date information visit www.wlengler.com

A.O. Smith
Innovation has a name.

CONTROLS & PARTS

Master-Fit water heater PARTS GAS

WHITE-RODGERS CONTROL



PART NO. 9004703105

A. O. Smith* American-Standard* Master-Fit*	J.C. Penney Kmart Sears* State*	Honey-well	J.C. Penney/Kmart Grainger/ White-Rodgers*		Rheem/Rudd Nasco/ Robertshaw
ALL RESIDENTIAL	3773	V5124C	3703	3773U	
WATFR HEATERS	3773U	V5126C	3708	37C73U	Use
MANUFACTURED	37C73U	VSI3OC	3733	3755	No. 23910-1
AFTER 6/1/62	37C75U	V5130R	3753	3775U	Master-Fit
	---	V5130W	3763	37C75U	Control
	---	V5131C	3763U	3777	
	---	---	3767	3777U	
	---	---	3773	3779	

RESIDENTIAL

NATURAL GAS

3-1/2" main pressure regulator setting.

3" to 4" pilot pressure.

Energy cutoff at 1950F water temperature.

Temperature range: warm 120ºF) to hot (160ºF).

PART NO. 9004703105 WITH 1-1/4" SHANK

PART NO. 9004353105 WITH 2-1/2" SHANK

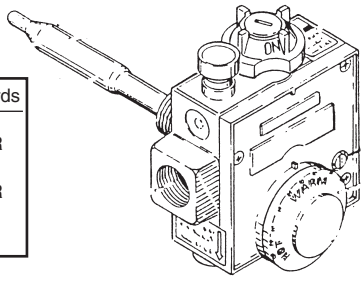
*Where required, use Part No. 39079 to add 1-1/2" to control shank length.

RESIDENTIAL – TO 170ºF MAX.

Robertshaw UNITROL® 110 CONTROL

Replaces These Controls

*Robertshaw/*Nasco/*Rheem/*Wards		
110	110RTS	200
110R	110RTSP	200R
110S	R110RT	400
110T	R110RTP	400R
110RT	R110RTS	
110RTP	R110RTSP	



PART NO. 9005891105

LIGHT COMMERCIAL

NATURAL GAS

96.000 Btuh maximum capacity.

4" main pressure regular setting.

3" to 4" pilot pressure.

Energy cutoff at 195ºF water temperature.

Temperature range: Warm 120ºF to Hot 180ºF.

PART NO. 9005891105

A.O. Smith
Innovation has a name.

BC/HW COMMERCIAL WATER HEATER PARTS

Master-Fit water heater PARTS GAS

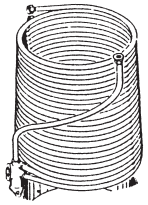
BC 120-670 COMMON WATER HEATER PARTS

MODEL	SERIES	COIL	HEAT EXCHANGER	COIL LIMIT SWITCH	CONTROL LIMIT	THERMO COUPLE	GAS VALVE
BC120	830,831,840,841 832,833,842,843	---	100110246	100110201	097933-015	K16FA36	--- 100109891
BC160	830,831,840,841 832,833,842,843	100110248	100110243	100110201	097933-015	K16FA36	--- 100109891
BC200	830,831,840,841 832,833,842,843	100110249	100110243	100110201	097933-015	K16FA36	100109891
BC225	830,831,840,841 832,833,842,843	100110249	100110243	100110201	097933-015	K16FA36	100109891
BC300	740, 741 740A, 741A 740B/P, 741B/P 760, 761S	---	100110235	100110201	097933-015	K16FA36	---
BC399	740, 741 740A, 741A 740B/P, 741B/P 760, 761S	---	---	100110201	097933-015	K16FA36	---
BC 420	740, 741 740A, 741A 740B/P, 741B/P 760, 761S	---	---	100110201	097933-015	K16FA36	---
BC 670	740, 741 740A, 741A 740B/P, 741B/P 760, 761S	---	100110261	100110201	097933-015	K16FA36	---

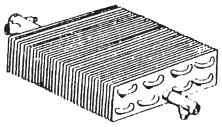
HW 80-670 COMMON WATER HEATER PARTS

MODEL	SERIES	COIL	HEAT EXCHANGER	MODULE	CONTROL LIMIT	THERMO-COUPLE	GAS VALVE*
HW80	840-843 880-883	97282 97282-1	96582	78191	93661-4	78802 32536-7	6390 78190-4
HW120	840-843 880-883	97283 97283-1	96582	78191	93661-4	78802 32536-7	6390 78190-4
HW160	840-843 880-883	97284 97284-1	96558	78191	93661-4	78802 32536-7	6390 78190-4
HW200	840-843 880-883	97285 97285-1	96558	78191	93661-4	78802 32536-7	6390 78190-4
HW225	840-843 880-883	97285 97285-1	96558	78191	93661-4	78802 32536-7	6390 78190-4
HW300	872, 873 892, 893	97485	93997 190922	78191-2 191182	93661-4	PILOT 78192-2	6390
HW399/ HW420	872, 873 892, 893 838, 839	97486	94774 190913 98927	78191-2 78191-2	93661-1 97474-1	78192-2 78192-2	CALL
HW670	892, 893 896, 897	99267	190889	191182	97474-1 93661-1		CALL

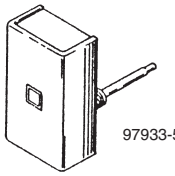
***SMR S-12 use 6390.**
SMR S-13 use 78190-4.



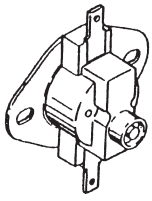
COPPER COMBUSTION COILS



HEAT EXCHANGERS

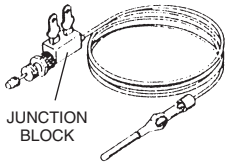


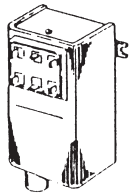
Thermostatic
TEMPERATURE CONTROLS
For Coil and Tank Type heaters



Surface mounted high limit
TEMPERATURE CONTROLS
For Coil and Tank Type heaters

THERMOCOUPLES





MODULES

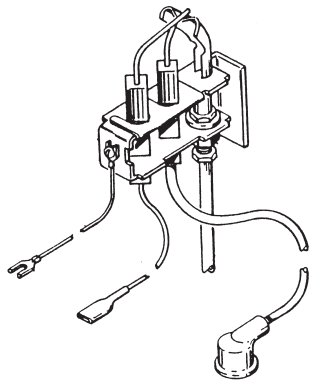
COMMERCIAL TANK-TYPE WATER HEATER PARTS LIST

BTC-120, 154, 179, 240, 305, 365 SERIES 880 THRU 883
STANDARD AND ASME MODELS (A)

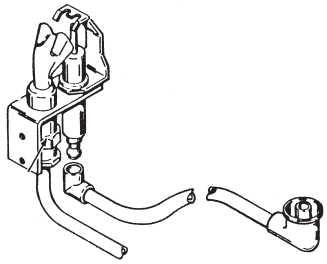
Master-Fit water heater PARTS ELECTRIC

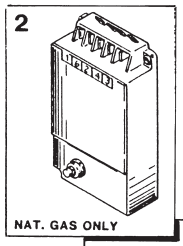
1 PILOT BURNER ASSEMBLIES

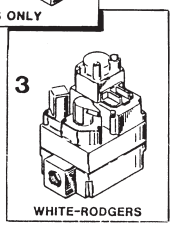
880 and 881 Series

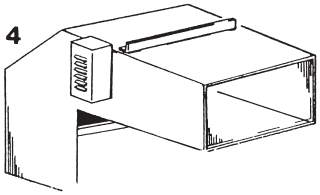


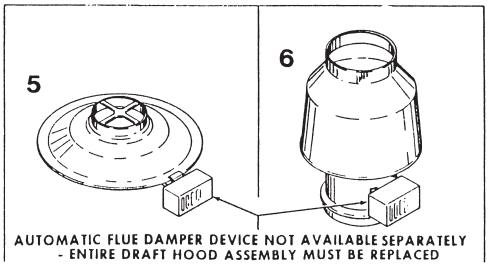
882 and 883 Series

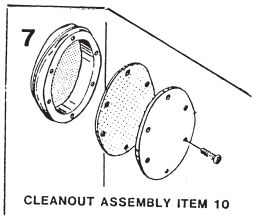












DESCRIPTION	BTC 120	BTC 154	BTC 179	BTC 197/240A	BTC 305A	BTC 365(A)
MAIN BURNER*	9005889205(2)*	9005889205(2)*	9005889205(3)*	9005889205(4)*	9005889205(6)*	9005889205(8)*
1) PILOT BURNER:						
#880 SERIES	9004988115	9004988115	9004988115	9004988115	9004988115	9004988115
#882 SERIES	9004998215	9004998215	9004998215	9004998215	9004998215	9004998215
2) SPARK MODULE						
#880 SERIES	9004470205	9004470205	9004470205	9004470205	9004470205	9004470205
#882 SERIES	AS 78191-2	AS 78191-2	AS 78191-2	AS 78191-2	AS 78191-2	AS 78191-2
4) GAS VALVE	AS 77937-2	AS 77937-2	AS 77937-2	AS 77937-2	AS 77937-2	AS 77937-4
5, 6) DRAFT HOOD: HORIZONTAL BTC 197 ONLY BTC 240A ONLY VERT. LO-PROFILE VERTICAL	CALL	CALL	CALL	CALL	CALL	CALL
7) CLEANOUT ASSY						
PRESS PLATE	9005797205	9005797205	9005797205	9005797205	9005797205	9005797205
GASKET	9004099215	9004099215	9004099215	9004099215	9004099215	9004099215
SCREWS	9004100215	9004100215	9004100215	9004100215	9004100215	9004100215

* ( ) INDICATES NUMBER OF BURNERS

TEMPERATURE & PRESSURE RELIEF VALVES

Hi Capacity Commercial T&P Valves

The Apollo 18C-500 Series bronze automatic temperature and pressure relief valves are used for protection of high capacity commercial hot water heaters and storage tanks.

MODEL #	INLET	OUTLET	ELEMENT LENGHT	AGA/CGA TEMP. STEAM RATING	ASME PRESS. STEAM RATING
18C-511-5-125	3/4" M	3/4" F	5"	205,000	1,619,000
18C-511-5-150	3/4" M	3/4" F	5"	205,000	1,912,000
18C-521-5-125	1"M	1"F	5"	500,000	1,825,000
18C-521-5-150	1"M	1"F	5"	500,000	2,155,000
18C-522-5-125	1"M	1"F	5"	750,000	3,070,000
18C-522-5-150	1"M	1"F	5"	750,000	3,625,000
18C-542-4-125	1-1/2"F	1-1/2"F	4"	1,200,000	5,125,000
18C-542-4-150	1-1/2"F	1-1/2"F	4"	1,200,000	6,050,000

18C-500 Series

A.S.M.E. WATER PRESSURE RELIEF VALVE

Bronze body relief valves for pressure protection only of all types of hot water heating boiler equipment.

MODEL #	INLET	OUTLET	HEIGHT	STEAM DISCHARGE CAPACITIES 30 LBS	50 LBS	125 LBS	150 LBS
10-604-10	3/4"	3/4"	5-1/4"	----------	1,209,000	----------	----------
10-604-125	3/4"	3/4"	5-1/4"	----------	----------	2,639,000	----------
10-605-34	3/4"	1"	6-3/4"	----------	----------	----------	5,044,000
10-607-25	1-1/2"	1-1/2"	10-3/4"	----------	----------	10,054,000	----------
10-614-07	3/4"	3/4"	5-1/4"	970,000	----------	----------	----------
10-614-10	3/4"	1"	5-1/4"	----------	1,418,000	----------	----------
10-615-05	1"	1-1/4"	6-3/4"	1,570,000	----------	----------	----------
10-615-10	1"	1-1/4"	6-3/4"	----------	2,295,000	----------	----------
10-616-05	1-1/4"	1-1/2"	8-1/3"	2,716,000	----------	----------	----------
10-616-10	1-1/4"	1-1/2"	8-1/3"	----------	3,969,000	----------	----------
10-617-05	1-1/2"	2"	10-3/4"	3,696,000	----------	----------	----------
10-617-10	1-1/2"	2"	10-3/4"	----------	5,400,000	----------	----------
10-618-05	2"	2-1/2"	14"	8,900,000	----------	----------	----------

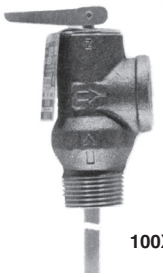
10 Series

NO.100 XL

A thermostat with a thermo-bonded non-metallic protective coating and a protective dialectric barrier to protect thermostat from accumulations of mineral deposits.

MODEL	INLET	OUTLET	HEIGHT	AGA/CGA TEMP. STEAM RATING
WV 100XL*	3/4"	3/4"	3-1/2"	100,000

***Available in 125 or 150 psi.**

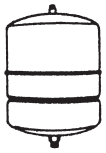


100XL Series

THERM-X-TROL®

THERMAL EXPANSION ABSORBER. FOR POTABLE WATER HEATERS ONLY.

MODEL # / CAP.*
AM ST-5
AM ST-12
AM ST30V



* STANDARD AIR CHARGE 40 PSI.

Maximum Temperature Setting 140°F			
Water Heater Size (gals.)	Static Supply Pressure (psig)		
	40	60	80
40	ST-5	ST-5	ST-5
50	ST-5	ST-5	ST-5
60	ST-8	ST-8	ST-8
80	ST-8	ST-8	ST-12
120	ST-12	ST-12	ST-25V