



HIGH EFFICIENCY COMMERCIAL GAS HCG SERIES



The HCG Series High Efficiency Commercial Gas Water Heaters embody all that's great about the American brand. They're designed for outstanding reliability, maximum installation flexibility and, above all, excellent thermal efficiency. In comparison to standard water heaters with only 80% efficiency, they deliver up to 250,000 BTU input with 95% efficiency. With their small footprint and top-mounted controls, HCG Series units are a natural cost-saving choice for restaurants and other mid-sized applications.

FULLY SUBMERGED, SPIRAL-SHAPED CONDENSING HEAT EXCHANGER

- Spiral shape coil design maximizes heat transfer, resulting in high efficiency
- Spiral design prevents scale and sediment from forming on surface of heat exchanger

ALL CONTROLS, INCLUDING GAS VALVE AND COMBUSTION AIR BLOWER, LOCATED ON TOP

- Provides easy access during installation and service
- Protects against high water damage
- Control cover requires less than 2" of ceiling clearance

ADVANCED ELECTRONIC CONTROLS

- Microprocessor controls ignition and thermostat, with adjustment of water temperature from 100°F to 180°F
- LCD display shows all operating settings and failure modes in plain English for ease of service

DOWN-FIRED LOW-NOx POWERED-BURNER DESIGN

- Top-mounted down-fired burner ensures optimum combustion efficiency

SPACE-SAVING DESIGN, WITH ZERO CLEARANCE TO COMBUSTIBLES

- Approved for installation on combustible flooring

POWERED ANODES (STANDARD ON ALL MODELS)

- Provide superior long-lasting tank protection
- Able to protect tank in varying water conditions

STANDARD POWER-VENT OR POWER DIRECT-VENT FLEXIBILITY

- Vertical or sidewall power venting
- Vertical or sidewall sealed-combustion power direct-venting draws all combustion makeup air from outside the building
- Vents using inexpensive PVC, ABS or CPVC pipe
- Air intake and vent runs can be up to 120 equivalent feet depending on model and vent diameter

FACTORY-INSTALLED TEMPERATURE & PRESSURE RELIEF VALVE

MAXIMUM HYDROSTATIC WORKING PRESSURE: 160 PSI

ASME TANK CONSTRUCTION

OPTIONAL ASME TANK

For more information on HCG Series High Efficiency Gas Water Heaters, contact:

American Water Heaters
500 Tennessee Waltz Parkway
Ashland City, TN 37015
1-800-937-1037
www.americanwaterheater.com

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OTHER HCG SERIES FEATURES:

COMMERCIAL GRADE GLASS-LINED TANK AND HEAT EXCHANGER FOR LONG-TERM PROTECTION AGAINST CORROSION

- Heat exchanger glassed internally and externally to protect against corrosive flue gases and condensate

MEETS ASHRAE/IES 90.1 REQUIREMENTS

- Also meets SCAQMD low-NOx Rule 1146.2
- Design-certified by CSA International, according to ANSZ21.10 storage-type water heater standards
- Design-certified by Underwriters Laboratories Sanitation to NSF Standard 5 for 180°F (62°C) water

HANDHOLE CLEANOUT

- For easy inspection and cleaning

THREE-YEAR LIMITED TANK WARRANTY

- For complete warranty information, consult written warranty shipped with water heater or contact American Water Heaters



ASME
(OPTIONAL)



RECOVERY CAPACITY

MODEL	TYPE OF GAS	INPUT		Thermal Efficiency	U.S. Gallons/Hr and Litres/Hr at TEMPERATURE RISE INDICATED													
		BTUH	KW		Approx. Capacity	F°	30 F°	40 F°	50 F°	60 F°	70 F°	80 F°	90 F°	100 F°	110 F°	120 F°	130 F°	140 F°
						C°	17 C°	22 C°	28 C°	33 C°	39 C°	44 C°	50 C°	56 C°	61 C°	67 C°	72 C°	78 C°
HCG-60T120-3N	NATURAL/ PROPANE	120,000	35	95%	60 U.S. Gals.	GPH	461	345	276	230	197	173	154	138	126	115	106	99
					227 Litres	LPH	1744	1308	1046	872	747	654	581	523	476	436	402	374
HCG-100T150-3N	NATURAL/ PROPANE	150,000	44	95%	100 U.S. Gals.	GPH	576	432	345	288	247	216	192	173	157	144	133	123
					379 Litres	LPH	2179	1635	1308	1090	934	817	726	654	594	545	503	467
HCG-100T199-3N	NATURAL/ PROPANE	199,900	58	95%	100 U.S. Gals.	GPH	767	575	460	384	329	288	256	230	209	192	177	164
					379 Litres	LPH	2904	2178	1743	1452	1245	1089	968	871	792	726	670	622
HCG-100T250-3N	NATURAL/ PROPANE	250,000	73	95%	100 U.S. Gals.	GPH	960	720	576	480	411	360	320	288	262	240	221	206
					379 Litres	LPH	3632	2724	2179	1816	1557	1362	1211	1044	991	908	838	778

Recovery capacities are based on heater performance at 95% and 96% thermal efficiency.

Add "A" in front of model number when ordering ASME. For example, AHCG-100T199-3N. Change N to P when ordering propane (LP).

Maximum gas supply pressure for 120 - 250: 10.5" w.c. natural gas 14" w.c. propane.

Manifold pressure: 4" w.c. natural gas 10" w.c. propane. Electrical requirements: 120 VAC, Blower 2.2 Amps FL, Igniter 4.0 Amps.

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DIMENSIONS AND SHIPPING WEIGHTS

MODEL	DIMENSIONS							SHIP WEIGHT STD	SHIP WEIGHT ASME
	A	B	C	D	E	F	G		
	INCHES/CM	INCHES/CM	INCHES/CM	INCHES/CM	INCHES/CM	INCHES/CM	INCHES/CM	LBS/KG	LBS/KG
HCG-60T120-3N	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
HCG-100T150-3N	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
HCG-100T199-3N	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
HCG-100T250-3N	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

Water Connections: 1-1/2"

INSTALLATION CLEARANCES

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

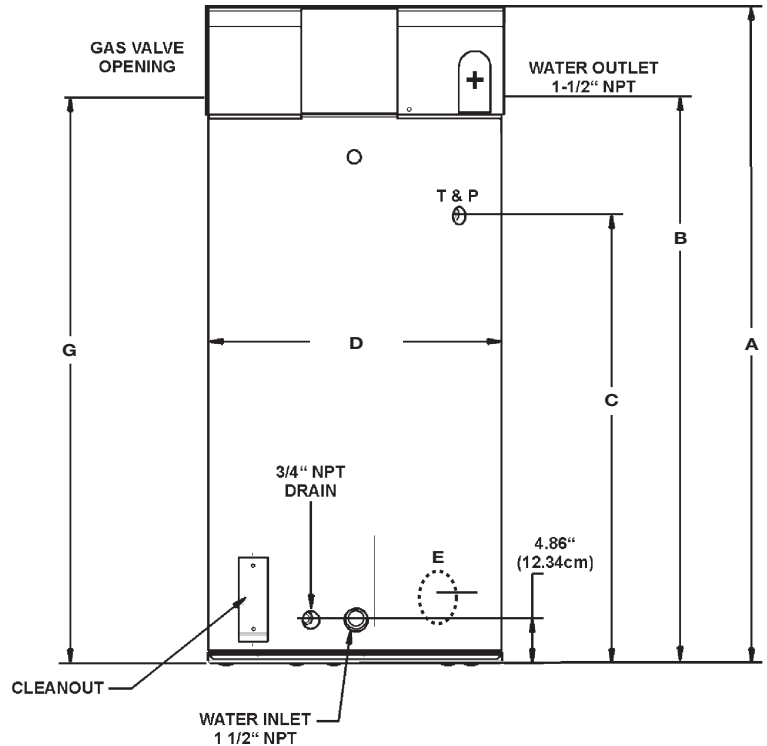
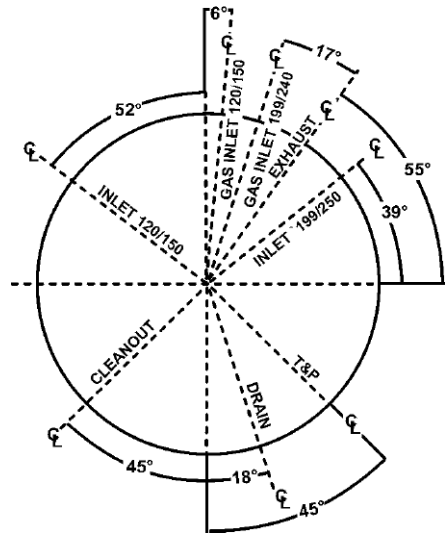
* Approved for combustible floors

GAS VALVE PIPING

HCG-60T120-3N	1/2" NPT
HCG-100T150-3N	3/4" NPT
HCG-100T199-3N	1/2" NPT
HCG-100T250-3N	1/2" NPT

MAXIMUM EQUIVALENT VENT LENGTH:

HCG-60T120-3N	using 3" pipe: 50 ft.
HCG-100T150-3N	using 3" pipe: 50 ft.
HCG-100T199-3N	using 4" pipe: 120 ft.
HCG-100T250-3N	using 4" pipe: 120 ft.



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INSTALLATION CONSIDERATIONS

1. Noise – Vent terminal should be located away from bedroom windows or other areas where blower noise will be objectionable. Avoid venting into corners or confined areas, which will amplify sound. Anchoring intake or vent pipe walls or ceilings can cause noise to be transmitted to living areas, and isolation mounts should be used where anchoring is required.
2. Air Intake – In cold climates, air intake should be located at least three feet from the vent termination of the water heater and any other appliance vents that discharge moisture-laden air (such as clothes dryers). This will help prevent freeze-over of the intake screen required to prevent foreign objects from entering the intake pipe. Air intake should be located above the maximum snowline.
3. Vent Termination – Exhaust gases of this water heater are less than 140°F. In cold climates, water vapor in flue gases will condense into a cloud of vapor where the vent exits the building. This vapor can gradually discolor exterior building surfaces. Vent termination should be located where this vapor cloud and potential discoloration are not a concern. Locating vent termination 6" or more from the wall helps vapor from being trapped along a building's face. To avoid this problem, the vent can be terminated on the roof. Always locate vent termination above the maximum snowline, and do not locate vent termination above a walkway.
4. Blockage Sensors – The water heater is equipped with sensors to shut it down if blockage of vent or air intake occurs. The heater's diagnostic panel will alert service technicians to this problem.
5. Condensate Drain – This is a fully condensing water heater and should be located near a drain to permit proper disposal of condensate.
6. Optional Concentric Vent Kit - Helps to minimize unsightly wall/roof penetrations.

SUGGESTED SPECIFICATION

Gas water heater(s) shall be American HCG Series Model _____, with a storage capacity of ____ gallons, an input rating of _____ BTU/hr., a recovery rating of ____ GPH at 100°F temperature rise, and thermal efficiency of ____%. Heater(s) shall meet ASHRAE/IES 90.1 requirements for thermal efficiency and standby loss, and meet SCAQMD R1146.2 low-NOx requirements. In addition, heater(s) shall: 1) Have a power burner that requires no special calibrations on start-up. 2) Have seamless glass-lined tank construction in which the glass coating is applied to the water side surfaces of the tank after the tank has been assembled and welded. 3) Have a condensing flue coil that is coated on the flue gas side with acid-resistant glass lining designed for use in condensing heaters. 4) Have a control system that includes an integrated solid-state temperature and ignition control device with integral diagnostics, LCD fault display capability and a digital display of temperature settings. 5) Be equipped with an ASME rated temperature and pressure relief valve. 6) Be approved for 0" clearance to combustibles. 7) Heater shall be supplied with maintenance-free powered anode.

For Standard Venting: Water heater(s) shall be suitable for venting using (3" or 4") diameter PVC pipe for a maximum total equivalent distance of (50' or 120').

For Sealed Combustion Direct-Venting: The heater(s) shall be suitable for sealed combustion direct-venting using (3" or 4") diameter PVC pipe for separate air intake and vent runs, with a maximum total equivalent distance of (50' or 120') for each run.

For complete information on limited warranties, consult written warranty or contact the American Warranty and Service Support team at 1-800-456-9805.

American Water Heaters reserves the right to make product changes or improvements without prior notice.



For more information on HCG Series High Efficiency Gas Water Heaters, contact:

American Water Heaters
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Ashland City, TN 37015
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