

Series 8H/8HE

CAST IRON GAS FIRED
COMMERCIAL WATER BOILER



**252 TO 505
MBH INPUT**

80–82%
THERMAL
EFFICIENCY

30 OR 50 PSI

CAST IRON
SECTIONAL
DESIGN

ATMOSPHERIC
VENT

MODULAR/
MULTIPLE BOILER
CONFIGURATIONS
AVAILABLE



BURNHAM[®]
Commercial Boilers

Series 8H/8HE EFFICIENT CAST IRON COMMERCIAL WATER BOILER

High Performance & Long Term Reliability

Burnham Commercial's commitment to quality and dependability continues with the Series 8H/8HE. The features and efficiency of the 8H/8HE boiler make it ideal for single and multiple boiler applications. Offering space heating, or a combination of heating and domestic hot water, the Series 8H/8HE has a compact design which easily adapts to existing piping arrangements, boiler room requirements, and system heating needs.

American-Made Cast Iron Construction

Burnham Commercial's unique cast iron formula has an extremely high silicon content, making it stronger and more flexible. It offers better thermal shock resistance and greater heat transfer capabilities than other cast iron products.



• MANUFACTURED WITH QUALITY

Casting Solutions operates a state-of-the-art foundry, in Zanesville, Ohio, ensuring quality and availability of boiler sections.



• CAST IRON NIPPLE DIFFERENCE

The gaskets that other manufacturers use to connect boiler sections can break down if they come in contact with oils, boiler flue gases, corrosion inhibitors, pump lubricants, and antifreeze. Burnham Commercial is committed to safety, reliability and durability. That's why the Series 8H/8HE uses cast iron nipples instead of gaskets. The Series 8H/8HE's cast iron nipples remain unaffected by those elements, ensuring long life and eliminating costly repairs. Cast iron nipples expand and contract with the sections they connect, ensuring the overall integrity of the section assembly.



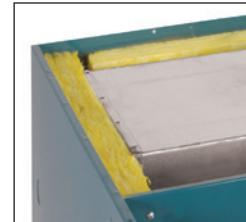
• HEAT EXCHANGER DESIGN

The cast iron heat exchanger on the Series 8H/8HE features a pinned heating surface. These multi-faceted pins allow the heat generated from the combustion process to be transferred to the cast iron from a number of angles, which contributes to the boiler's overall efficiency. A vertical flue design extracts heat while maintaining low draft losses.



• DELUXE INSULATED JACKET

The jacket on the Series 8H/8HE is lined with three inches of insulation. This serves to reduce jacket and standby heat losses, further conserving energy. The jacket itself is powder coated, insuring a scratch resistant, long lasting finish.

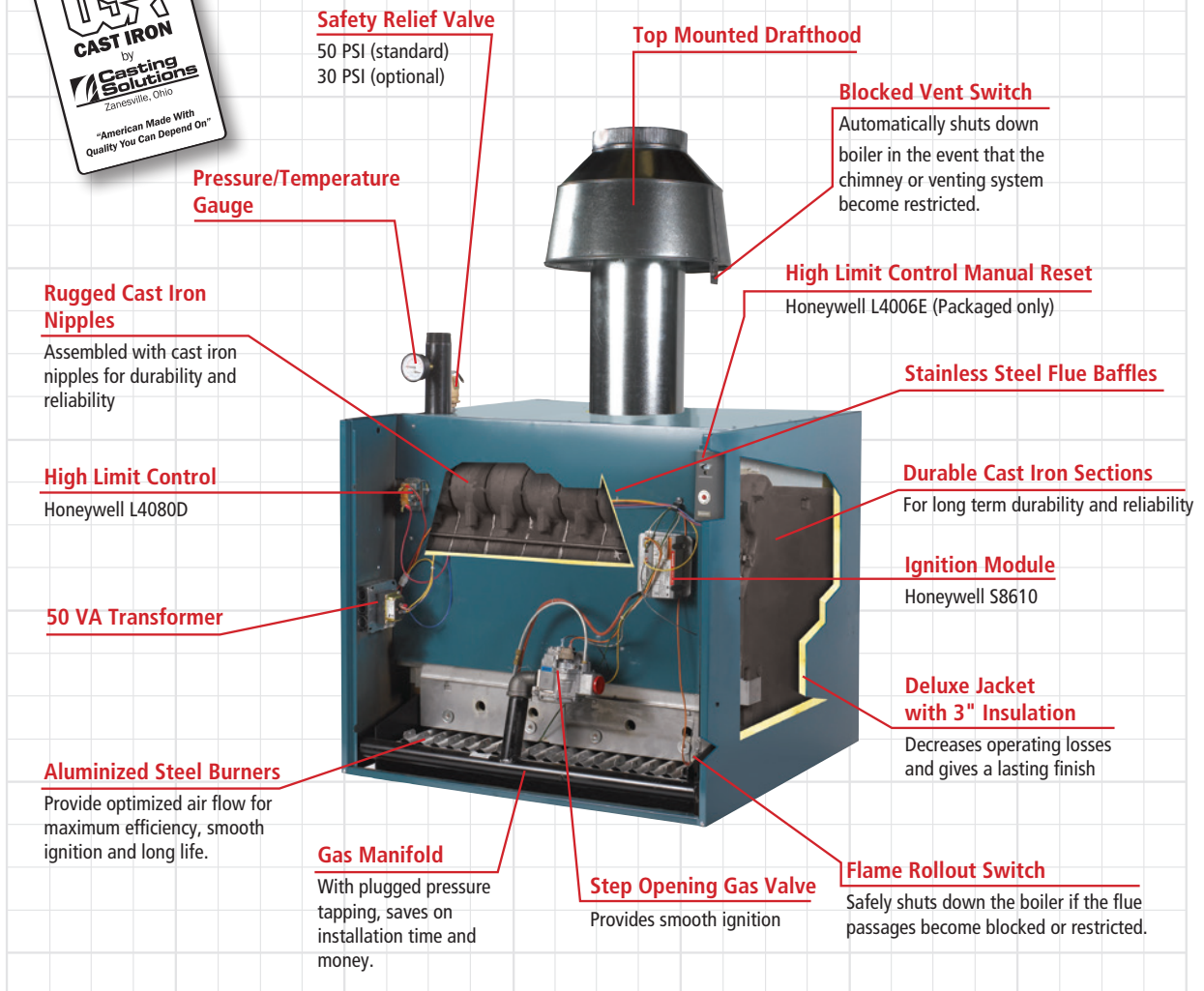


Two Packaging Options

Knockdown 8H/8HE units are easy to handle and maneuver at the job site. Knockdown units are supplied in a crate which includes an assembled block with separate cartons containing jackets and components (shown). Packaged and wired units are ready to install out of the crate. A reinforced shipping container protects against damage.



Series 8H/8HE STANDARD EQUIPMENT



Modular Optional Equipment



Water Manifolds

Factory fabricated manifolds are available as a convenience to the installer. The manifolds are lightweight and forgiving of minor piping misalignments common to multiple boiler installations. Available as two-module or three-module manifolds. For installations of four or more modules in a row, the manifolds can be joined together as required. Applicable to primary-secondary or parallel piping arrangements.



Flex Couplings



Easy to install flex couplings are available to facilitate piping connections. They accommodate misalignments between pipes and permit up to a total of 8° angular misalignment at each connection while maintaining a leakproof seal. Flex couplings reduce installation time and reduce labor costs.

Staging Controls

Go to www.burnhamcommercial.com to view the selection of staging controls we offer from Tekmar Control Systems.

Dimensions and Specifications

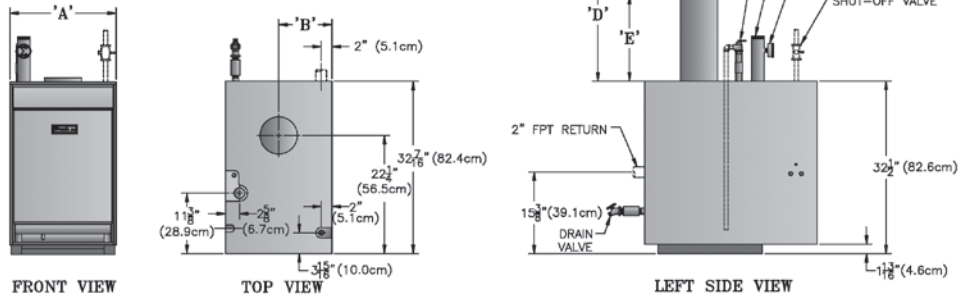
DIMENSIONS (INCHES)

Boiler Model	'A'	'B'	'C'	'D'	'E'
805H	20	10	7	24-13/16	16-1/8
806H	23-3/4	11-7/8	8	27-13/16	18
807HE	27-1/2	13-3/4	8	27-13/16	18
808HE	31-1/4	15-5/8	9	30-13/16	20
809HE	35	17-1/2	10	33-1/2	22
810HE	38-3/4	19-3/8	10	33-1/2	22

All dimensions are in inches



All Burnham Commercial products are currently in compliance with the Energy Policy and Conservation Act and are registered with the Department of Energy (DOE) in accordance with Federal Register 10 CFR Parts 429, 430, & 431.



Series 8H/8HE Ratings* Natural and LP Gas

Boiler Model (1)	Input (MBH)	Gross Output (MBH)	I=B=R Net Rating Water (MBH) (2)	Thermal Efficiency(4)	MINIMUM NATURAL GAS PRESSURE (INCHES)		Recommended Chimney Size (Round)	Water Content (Gallons)	APPROX. SHIPPING WEIGHT (LBS.)	
					24V	EI			Packaged	Knock-down
805H	252	208	181	82.7	N/A	4.5	7" dia. x 15ft.	11.9	600	680
806H	315	253	220	80.2	4.5	4.5	8" dia. x 15ft.	13.9	690	770
807HE	340	275	239	81.0	5.0	4.5	8" dia. x 15ft.	15.9	770	870
808HE	410	328	285	80.1	N/A	4.5	8" dia. x 15ft.	17.9	880	950
809HE	460	370	322	80.4	N/A	5.0	10" dia. x 15ft.	19.9	970	1040
810HE	505	406	353	80.5	N/A	5.0	10" dia. x 15ft.	21.9	1060	1140

*Ratings shown are for installations at sea level and elevations up to 2,000 feet. For elevations above 2,000 feet, ratings should be reduced at the rate of four percent (4%) for each 1,000 feet above sea level.

- When ordering, use prefix P for packaged and K for knocked-down. Use suffix NSP for natural gas, standing pilot; NEI for natural gas, electronic ignition; PSP for LP gas, standing pilot; PEI for LP gas, electronic ignition.
- Net I=B=R ratings shown are based on normal I=B=R piping and pickup allowance of 1.15. Consult the Burnham Commercial website for installations having unusual piping and pickup requirements such as intermittent system of operation, extensive piping systems, etc.
- 15 foot height is measured from top of drafthood to top of chimney.
- 805H Efficiency is AFUE.

Maximum allowable working pressure: 50 PSI Water only; 50 PSI Safety Relief Valve - Standard; 30 PSI Safety Relief Valve - Optional

Standard Equipment

Cast Iron Section Assembly	Aluminized Steel Burners	Blocked Vent Switch (BVS) - All Sizes	751P-MT-120 Probe LWCO - 808HE-810HE Only
Deluxe Jacket with 3 inch Insulation	1" Gas Connection	Flame Roll-Out Switch (FRS) - All Sizes	Electronic Ignition on 805H & 808HE - 810HE for Natural or LP Gas
100% Shut-Off Gas Controls	2" Supply and Return Connections	L4080D High Limit Control	24V Standing Pilot on 806H & 807HE for Natural or LP Gas
Boiler Drain Valve	50 PSI Safety Relief Valve	High Limit Control with Manual Reset -	Pressure Temperature Gauge
50VA Transformer and Junction Box	Stainless Steel Flue Baffles	L4006E (in addition to L4080) - Packaged Boilers Only	

Packaged units are shipped packaged and wired in a reinforced cardboard container, for added protection. Drafthood, trim carton, low water cut-off and damper; when supplied, are shipped in separate cartons. Knocked-down units are shipped in a stackable container with sections assembled and mounted on the base with manifold and burners installed. Controls, trim, drafthood, and jacket are shipped together in the same container as the boiler.

Optional Equipment

Intermittent circulation—24V-R8285D relay in lieu of AT150D1001 (80160155)	Electronic Control Sets to Meet CSD-1
30 psi relief valve in lieu of standard 50 psi relief valve (specify on order)	Deduct 751P-MT-120 low water cut-off (on 808HE thru 810HE)
Vent damper (Optional on 806H + 807HE - 810HE, not available with "EP" or "OP" control sets)—(Standard on 805H)	Combustible floor shield (Required for installation on combustible flooring)

NOTE: NOT FOR DIRECT INSTALLATION ON COMBUSTIBLE FLOORING. A HEAT SHIELD IS REQUIRED AND AVAILABLE FOR COMBUSTIBLE FLOOR INSTALLATION AND CONCRETE INSTALLATION WHICH IS OVER A MATERIAL THAT IS SUBJECT TO MELTING (PVC, PEX RADIANT TUBING ETC.). NOT FOR INSTALLATIONS ON CARPET, EVEN WITH A COMBUSTIBLE FLOOR SHIELD.

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Form No. PL81401161000-1/16-2M Printed in the U.S.A.

