

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 09-0778	Issue Date:	CBL: 061 C001001
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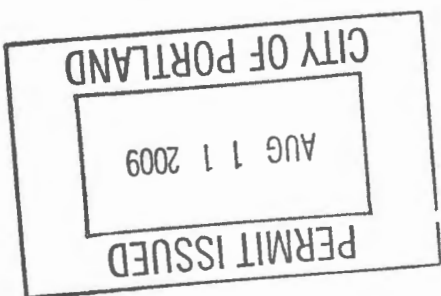
Location of Construction: 17 THOMAS ST	Owner Name: D'AMICO SAMUEL J & JUDITH	Owner Address: 17 THOMAS ST	Phone: 888-310-1924
Business Name:	Contractor Name: Irving Energy Distribution and Mark	Contractor Address: 385 Main Street, So. Portland	Phone: 8883101924
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R-2

Past Use: Single Family Home	Proposed Use: Single Family Home - Install Smith 8-s-5T Steam Boiler	Permit Fee: \$130.00	Cost of Work: \$10,886.00	CEO District: 2
		FIRE DEPT: <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied <i>N/A</i>	INSPECTION: Use Group: <i>V</i> Type: <i>HVAC</i> <i>IMC 2003</i>	

Proposed Project Description: Install Smith 8-s-5T Steam Boiler	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
Signature:	Date:	

Permit Taken By: lmd	Date Applied For: 07/27/2009	Zoning Approval
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p><i>OK w/conditions</i> Date: 7/27/09 <i>AKM</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>	<p>Historic Preservation</p> <p><i>yes</i></p> <p><input type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p><i>any exterior work requires a separate review & approval thru hist. pr.</i></p> <p>Date:</p>
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SCANNED

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

City of Portland, Maine - Building or Use Permit

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Proposed Use: Single Family Home - Install Smith 8-s-5T Steam Boiler	Proposed Project Description: Install Smith 8-s-5T Steam Boiler
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Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Ann Machado **Approval Date:** 07/27/2009

Note: **Ok to Issue:**

- 1) ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.
- 2) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Tammy Munson **Approval Date:** 08/10/2009

Note: **Ok to Issue:**

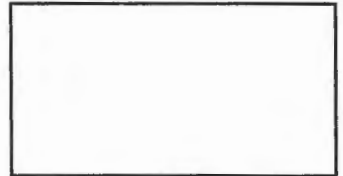
- 1) Installation shall comply with 2003 International Mechanical Code and State of Maine Oil and Solid Fuel Board Laws and Rules



FILL IN AND SIGN WITH INK

09.078

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



061-C-001001

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL _____ Use of Building RESIDENTIAL Date 7-20-09
 Name and address of owner of appliance SAMUEL D'AMICO
17 THOMAS ST. PORTLAND, ME.
 Installer's name and address IRVING ENERGY DISTRIBUTION AND MARKETING
305 MAIN ST. SOUTH PORTLAND, ME. Telephone 1-888-310-1924
04106

Location of appliance:

- Basement
- Floor
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name:

SMITH B-S-ST STEAM BOILER

U.L. Approved Yes No

Will appliance be installed in accordance with the manufacture's installation instructions? Yes No

IF NO Explain: _____

The Type of License of Installer:

- Master Plumber # _____
- Solid Fuel # _____
- Oil # MIKE HANSEN # MS 30002725
STEVEN ERNEST # MS 2000476
- Gas # _____
- Other _____

ED GALE - SALES - MASTER # MS 30004052

Type of Chimney:

- Masonry Lined
Factory built BRICK CHIMNEY
WITH
STAINLESS STEEL LINER
- Metal
Factory Built U.L. Listing # _____
- Direct Vent
Type _____ UL# _____

Type of Fuel Tank

- Oil
- Gas

Size of Tank 275

Number of Tanks 1

Distance from Tank to Center of Flame 15 feet.

Cost of Work: \$ 10,006.⁰⁰

Permit Fee: \$ 130

Approved

Fire: _____
 Ele.: _____
 Bldg.: _____

Signature of Installer Ed Gale

Approved with Conditions

- See attached letter or requirement

Inspector's Signature _____

Date Approved _____

White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy

* Please mail to Irving Energy Distrib.

8 SERIES

BOILER-BURNER UNIT

STEAM OR HOT WATER

INSTALLATION AND OPERATING INSTRUCTIONS

DESIGNED AND TESTED ACCORDING TO THE A.S.M.E. BOILER AND PRESSURE VESSEL CODE, SECTION IV FOR MAXIMUM ALLOWABLE WORKING PRESSURE. STEAM 15 LBS. - WATER 40 LBS.



Boiler Model Number	DOE Heating Capacity MBH	I=B=R Burner Capacity Oil Input		I=B=R Net Ratings			Natural Draft Chimney	Relief Valve Capacity Lbs/Hr
		GPH	MBH	Steam		Water MBH		
				SQ. FT.	MBH			
8"-3L	91	.75	105	283	68	79	8" X 8" X 18'	122
8"-3H	102	.85	119	318	76	89		
8"-4L	133	1.10	154	414	99	116	8" X 8" X 17'	176
8"-4H	150	1.25	175	466	112	130		
8"-5L	169	1.40	196	525	126	147	8" X 8" X 16'	230
8"-5H	203	1.70	238	632	152	177		
8"-6L	211	1.75	245	654	157	184	8" X 8" X 15'	283
8"-6H	249	2.10	294	776	186	217		

* Insert "S" for Steam or "W" for Water. The ratings are based on a allowance of 1.333 for steam or 1.15 for water. The manufacturer should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as, intermittent system operation, extensive piping systems, etc.

CAUTION - DO NOT USE AUTOMOTIVE ANTI-FREEZE IN BOILER WATERWAYS. IF NECESSARY TO USE ANTI-FREEZE, BE SURE TO EMPLOY A PREPARATION DESIGNED FOR HYDRONIC HEATING SYSTEMS AND OF ETHYLENE OR PROPYLENE GLYCOL BASE WITHOUT CORROSION INHIBITORS FOR PROTECTION OF ALUMINUM.

THESE INSTRUCTIONS TO BE KEPT WITH THE BOILER FOR REFERENCE PURPOSES.

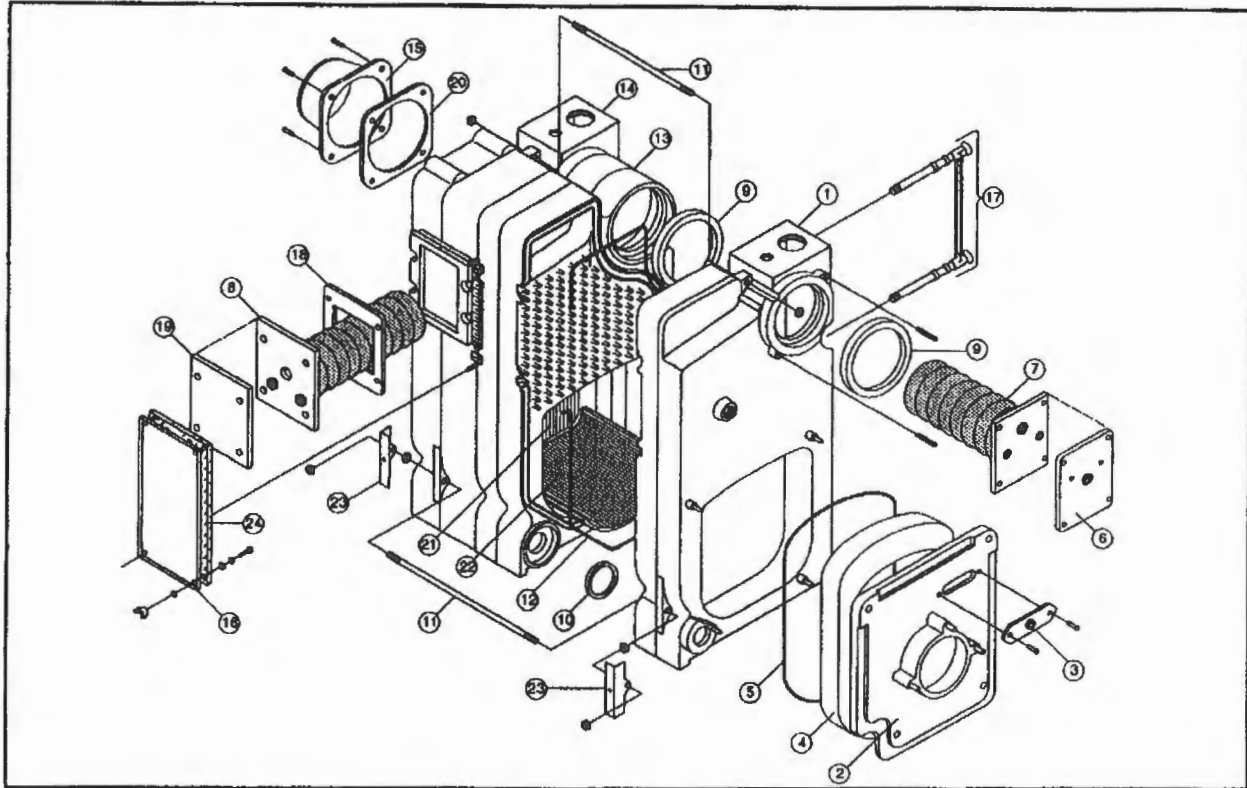
Smith

CAST IRON BOILERS

Westcast, Inc. • 260 North Elm Street • Westfield, MA 01085 • (413) 562-9631 FAX: (413) 562-3799

8 SERIES BOILER INSTALLATION AND OPERATING INSTRUCTIONS

FIG. NO. 1 (BOILER ASSEMBLY)



PARTS LIST

ITEM NO.	COMPUTER NO.	DESCRIPTION	ITEM NO.	COMPUTER NO.	DESCRIPTION
1	3542	FRONT SECTION	12	60024	ROPE INSULATION (6' EACH SECTION)
2	3547	BURNER MOUNTING PLATE	13	3543	INTERMEDIATE SECTION
3	3383	OBSERVATION COVER	14	3544	BACK SECTION (WATER)
4	89358	BURNER INSULATING BLOCK	14	3580	BACK SECTION (STEAM)
5	60023	ROPE INSULATION (37")	15	3545	SMOKE HOOD (7')
6	3326	UPPER PORT COVER PLATE (WATER)	16		CLEANOUT COVER PLATE ASSY.
6	3579	UPPER PORT COVER PLATE (STEAM)	17	60289	GAUGE GLASS SET (STEAM)
7	50638	TANKLESS HEATER (WATER 3 & 4)	18	60336	STEAM HEATER GASKET
7	50639	TANKLESS HEATER (WATER 5 & 6)	19	3615	BACK SCTN. HEATER COVER PLATE (STM)
8	50635	TANKLESS HEATER (STEAM)	20	60334	SMOKEHOOD GASKET
9	60386	UPPER PORT HYDRONIC SEAL	21	69406	TARGET WALL
10	61814	LOWER PORT HYDRONIC SEAL	22		COMBUSTION CHAMBER INSULATION BLANKET
11		DRAW ROD (STATE SECTION SIZE)			

NOTE: RELIEF VALVE OR SAFETY VALVE NOT SHOWN (STATE BOILER MODEL NO.)

1. GENERAL

The 8 Series boiler-burner unit is a wet-base, vertical flue, low pressure, sectional, cast iron steam or hot water heating boiler. It is rated for natural draft firing with 0.02 ins. water column over-fire draft. Boilers are available as either factory assembled in blocks from three to six sections in length with burner and controls supplied for field assembly or as a completely packaged boiler.

The ports between sections are provided with a special hydronic seal which is resistant to petroleum products. The flue gas seal between sections is accomplished by the use of fiberglass rope rated at 1000° F.

Both packaged units and assembled blocks of sections are hydrostatically tested for the maximum working pressures. The assembled blocks also include the special hydronic seals, the glass fiber rope joint seal, a precast fiber target wall, the insulated burner mounting plate and cleanout covers.

An insulated metal jacket is furnished to both enhance the units looks and to minimize any heat loss. A full access cleanout cover for cleaning vertical flue passages is on the left hand side of the boiler and is accessible by removing the left hand cleanout access jacket panel.

IMPORTANT - Sufficient clearance must be given to insure access to cleanout covers for cleaning purposes.

2. CODES, RULES AND REGULATIONS

The installation of the boiler, the burner, wiring, controls and fuel piping must be done in accordance with the requirements of the local authorities having jurisdiction. In the absence of local requirements, the following codes apply:

ANSI/NFPA31 - "INSTALLATION OF OIL BURNING EQUIPMENT"

ANSI/NFPA70 - "NATIONAL ELECTRICAL CODE"

In Canada the following codes apply:

CSA STD. B139 - Latest Edition. "Installation Code For Oil Burning Equipment."

CSA STD. C22.2 No. 0 - Latest Edition. "General Requirements - Canadian Electrical Code Part II."

3. BOILER LOCATION

Boiler should be located on a smooth level concrete floor or pad close to the chimney to minimize breeching length. Allow access for boiler cleaning and burner maintenance.

CAUTION - Boiler shall be installed on non-combustible floor only.

4. CHIMNEY AND BREECHING

The boiler must be vented to the outdoors by means of a tile lined masonry chimney of the size listed on the front page or by another approved method.

The flue pipe should be run to the chimney by the most direct route, with the minimum number of elbows and with a slight upward pitch. The pipe should terminate flush with the inside face of the chimney and should be sealed in place with insulating cement.

For energy conservation, the boiler should be vented directly to the chimney without using a barometric draft control. The burner operation does not require draft control for stability with varying draft values.

5. COMBUSTION AND VENTILATION

Normal residential construction usually allows sufficient air infiltration for combustion. If construction is tight, consideration should be given for air louvers to the outside. Local codes or NFPA 31, "INSTALLATION OF OIL BURNING EQUIPMENT", should be referred to for proper sizing and design and air supply. In Canada refer to CSA STD. B139 - latest edition.

CAUTION - An oil-fired unit shall be connected to a flue having sufficient draft at all times to assure safe and proper operation of the unit.

6. PACKAGED BOILERS

Packaged boilers are shipped on a wood skid with tie down bands and a wooden crate enclosing the boiler and burner.

Remove the protective crate and skid. Set the boiler in its final location and shim under the feet to make it level and secure. Adjust the jacket for proper alignment and support. Refer to Carlin or Beckett Series 8 Burner Installation Manual for appropriate wiring diagrams.

7. BLOCKS OF SECTIONS

Blocks of sections are arranged for use either as steam or water boilers. All back sections have a flanged opening in the left side, below the water line. A tankless heater may be installed in this location.

NOTE: A cover plate is supplied as part of either the steam trim or water trim cartons.

Unlike the packaged units, blocks of sections require that the smokehood, controls, burner, steam or water trim, circulators (water boilers), and jackets must be installed in the field.

The smokehood is sized for a 7 inch diameter flue pipe placed over the cast iron collar and secured to the collar with a sheet metal screw. Place the furnished smokehood gasket in place between the smokehood and the back section, and assemble with hardware furnished.

8. PACKAGED BOILERS AND BLOCKS OF SECTIONS

Careful inspection should be made of all assemblies to detect possible damage during shipment. Factory assembled blocks of sections and package boilers are hydrostatically tested at the factory to insure pressure tightness. Before piping connections are made to the boiler, hydrostatically retest boiler sections to detect leaks that may have developed from rough handling during shipment.

IMPORTANT - Do not exceed 1 1/2 times boiler working pressure during hydrostatic testing.

9. BURNER INSTALLATION

Instructions regarding both assembly and operation of the burner is covered in a separate catalog.

CAUTION - Do not start the burner unless all cleanout covers are secure in place.

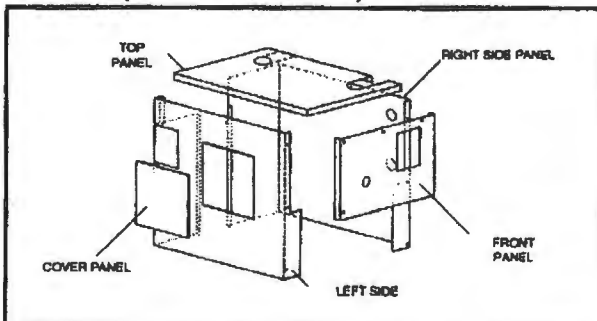
10. CLEANOUT COVER PLATES

It is important to maintain the integrity of the gas seal by careful installation of the cleanout cover plate. Be sure there is no opening to allow gases to escape.

11. JACKET ASSEMBLY

Remove all knockouts that are going to interfere with your specific installation arrangement. Install the front panel over the two upper burning mounting plate studs prior to the installation of the burner mounting plate. Fold the right side panel at both the front and rear perforated seams 90° back against the insulation. Slide the front fold under the front panel and secure with philip head screw. Lift side panel up slightly to align the slots in jacket with the bracket holes. Secure with the screws supplied.

FIG. NO. 2 (JACKET ASSEMBLY)



8 SERIES BOILER. INSTALLATION AND OPERATING INSTRUCTIONS

Repeat same procedure for the left side panel.
Screw the two folds together at the back of the boiler.
Attach the top panel over the edges of all panels and secure.
The cleanout cover door attaches to the left side panel by sliding the lower left corner into the slot provided and up over the fold at the top of the opening in the side panel. Slide the cover back toward the rear of the boiler until it makes contact with the back of the slot.

12. BOILER TRIM STEAM

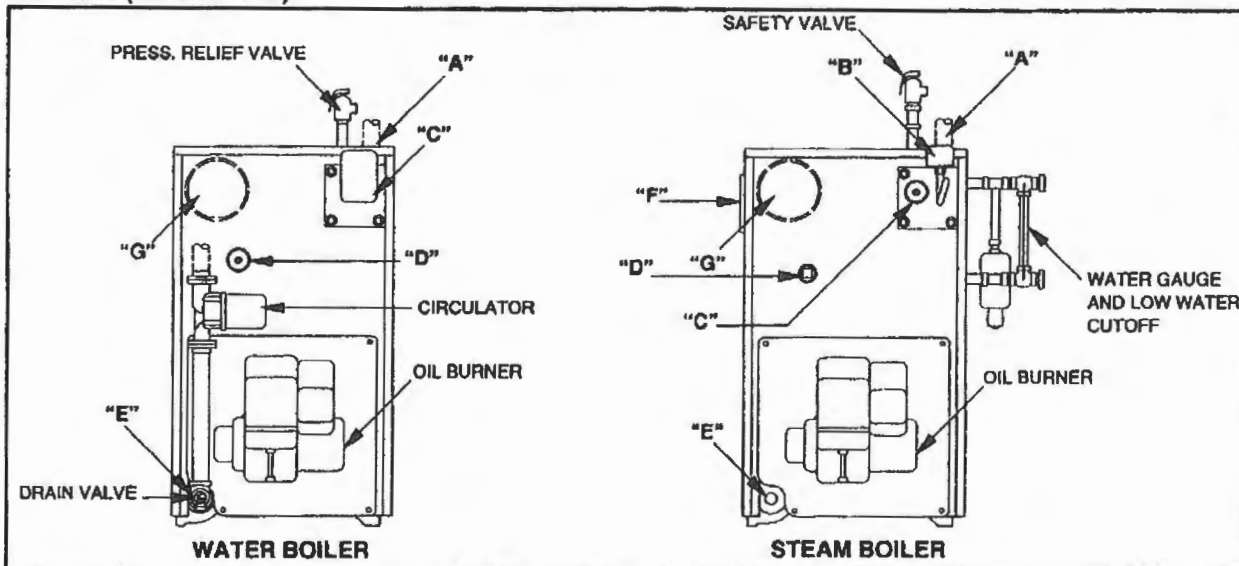
The steam trim furnished with the boiler consists of a 2 1/2" round steam pressure gauge, McDonnell Miller #67 Quick Hook-Up Low Water Cutoff, water gauge glass set with gauge cocks, side outlet steam safety valve, and high pressure limit control with siphon. Refer to FIG. NO. 3 for correct control and trim locations. Pipe fittings required to install trim and controls as shown are furnished.

WATER

The water trim furnished with the boiler consists of a 2 1/2" round temperature altitude gauge and a 30 psi pressure relief valve. A circulator relay is furnished for installation in the upper port cover plate or the tankless heater cover plate as indicated in FIG. No. 3. The installer must furnish and install air removal devices, expansion tank, automatic air vents, make-up water pressure reducing valve, isolating valves and other pipe fittings and equipment necessary for proper operating system.

CAUTION - Direct discharge away from all personnel to avoid accidental burning. If necessary, pipe discharge toward floor using pipe the same diameter as valve discharge. See FIG. No. 9.

FIG. NO. 3 (BOILER TRIM)



LOCATION	SIZE	WATER	STEAM
"A"	2"	Supply	Supply
"B"	1/4"	High Pressure Limit
"C"	3/4"	Hydronic Relay
	1/4"	Press. Gauge
"D"	3/4"	Therallimeter	Plugged
"E"	1 1/4"	Return (Front) With Drain	Return (Back) With Drain
"F"	Flange	Tankless Heater (Locate temp. control in domestic coil mtg. plate.)
"G"	7"	Flue Vent Conn. (Back)	Flue Vent Conn. (Back)

13. SAFETY VALVE INSTALLATION

Install safety or relief valve in top 3/4" tapping of back section.

14. OPERATING AND LIMIT CONTROLS

Many jurisdictions require dual limit controls. The boiler installer must arrange to comply with local requirements by furnishing and installing any extra controls. The suggested locations for such controls are indicated on FIG. NO. 3.

The water boiler without tankless water heater is furnished

with a Honeywell L8148A hydronic relay, which, provides high limit and circulator switching upon signal from a 24 volt operating control. The water boiler with tankless is furnished with a Honeywell L8124A hydronic relay, which provides high limit, low limit and reverse action circulator control under signal from a 24 volt operating control.

The steam boiler is furnished with a high limit pressure control and low water cutoff. If tankless hot water is furnished, a low limit temperature control must be ordered.

Recommended wiring diagrams for these boilers are illustrated in the separate burner instruction catalog.

15. SMOKEHOOD INSTALLATION

The smokehood is sized for a 7 inch diameter flue pipe placed over the cast iron collar and secured to the collar with a sheet metal screw. Secure the smokehood and gasket in place with the 4 brass round head screws.

16. PIPING CONNECTIONS

The recommended boiler piping connections are shown in FIG. No. 4. Where special conditions exist, other arrangements may be employed.

IMPORTANT - Steam piping should be pitched to insure both steam and condensate flow back toward drip leg.

17. CIRCULATORS

The Taco 007 and 0010 circulators are suitable for use on a closed heating system with 30 psi maximum operating pressure. If the circulator furnished with the boiler does not have the required capacity to serve the connected load, provide an extra zone circulator (FIG. NO. 5) or change the circulator to the proper size. Capacity curves for the circulators are provided in these instructions to permit the sizes to be checked with the system requirements. See FIG. NO. 6 & 7.

NOTE: The Taco 0010 circulator is rated for 125 psi maximum operating pressure.

18. DOMESTIC HOT WATER HEATERS

Tankless domestic hot water heaters are available for either water boiler or steam boiler application. Refer to Page 2 for correct installation of tankless heaters. TABLE 1 and 2 list water capacities for both styles of heaters. See FIG. NO. 8 for suggested tankless water heater piping arrangement.

FIG. NO. 4 (PIPING CONNECTIONS)

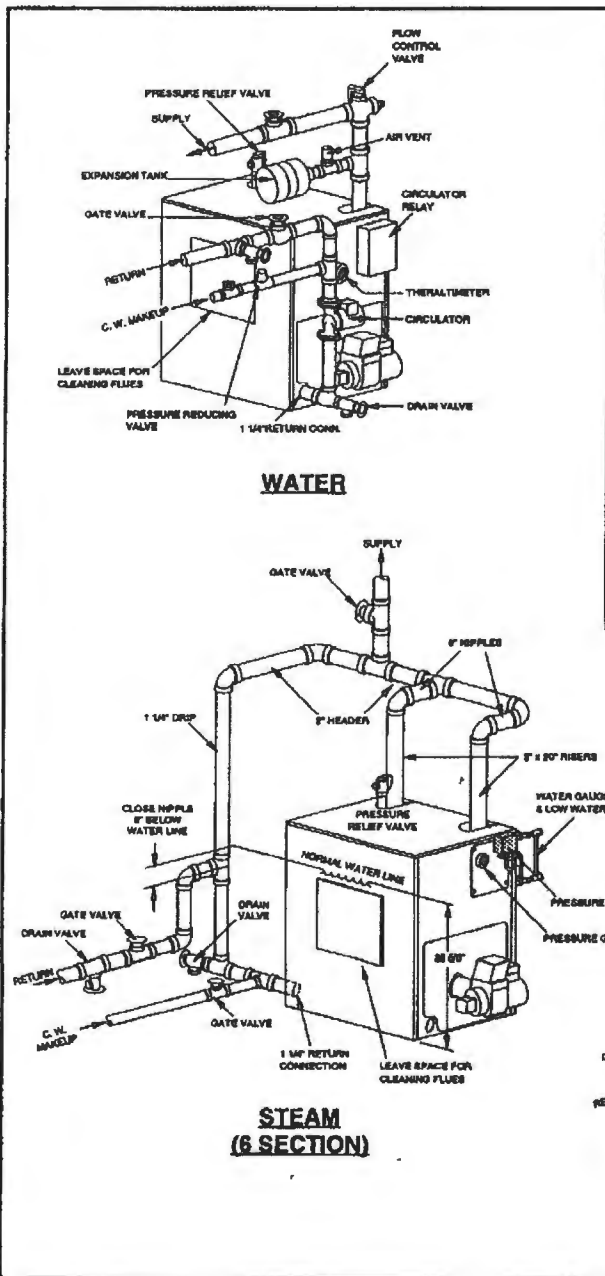
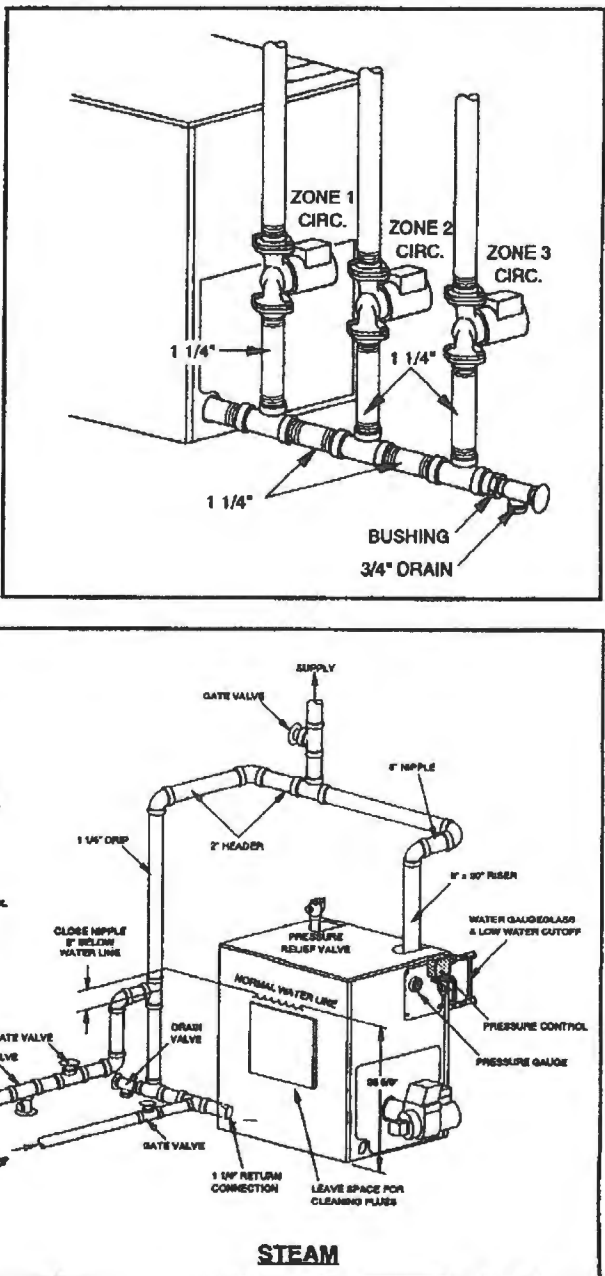


FIG. NO. 5 (ZONE CIRCULATORS)



8 SERIES BOILER INSTALLATION AND OPERATING INSTRUCTIONS

FIG. NO. 6 (HEAD-FEET OF WATER)

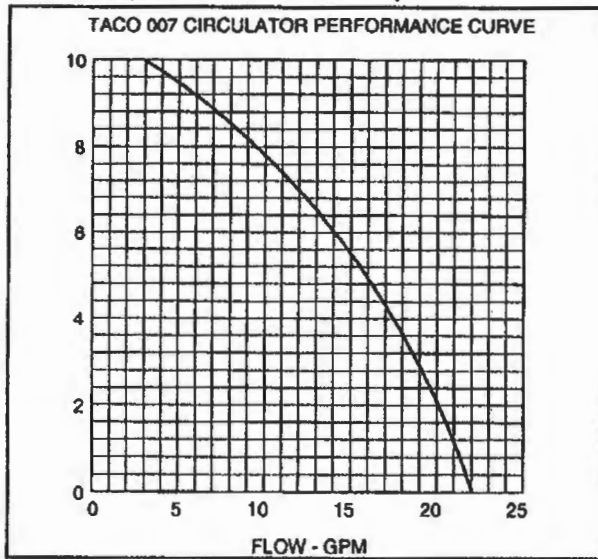


FIG. NO. 7 (HEAD-FEET OF WATER)

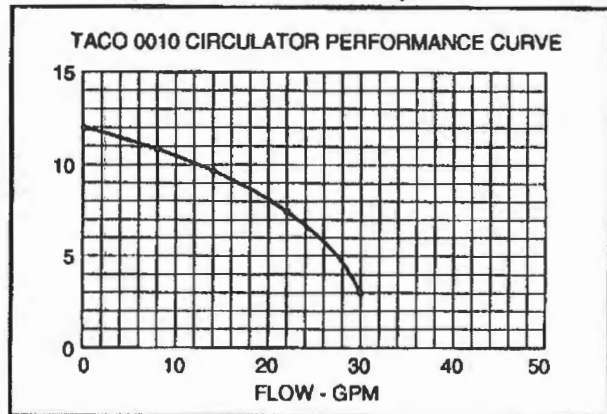


FIG. NO. 8 (TANKLESS HEATER)

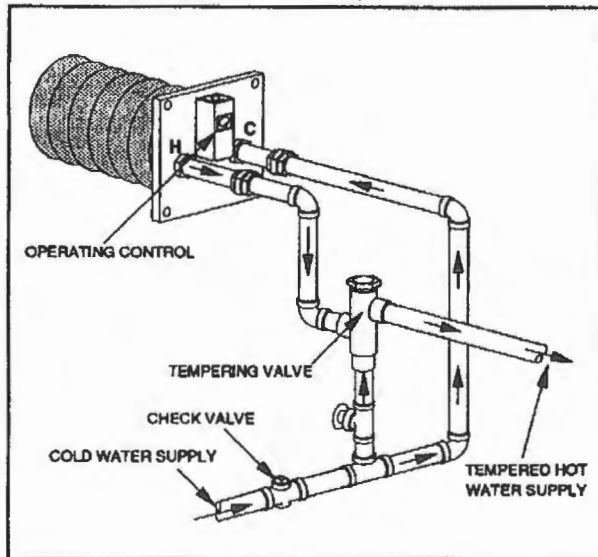


FIG. NO. 9 (SAFETY/RELIEF VALVE INSTALLATION)

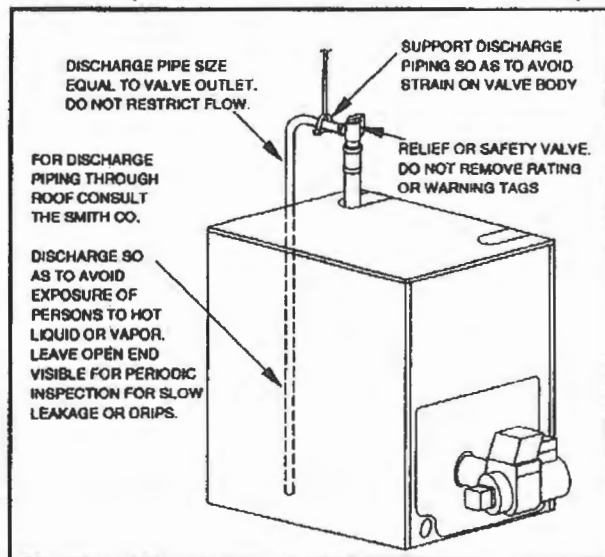


TABLE 1

DOMESTIC HOT WATER SUPPLY STEAM BOILER			
No. of Sections	Firing Rate	Intermittent Draw (GPM)	Continuous Draw (GPM)
3	Low	2.50	1.75
	High	2.50	2.00
4	Low	3.30	2.50
	High	3.50	2.90
5	Low	3.50	3.30
	High	3.50	3.50
6	Low	3.50	3.50
	High	3.50	3.50

TABLE 2

DOMESTIC HOT WATER SUPPLY WATER BOILER			
No. of Sections	Firing Rate	Intermittent Draw (GPM)	Continuous Draw (GPM)
3	Low	2.50	1.75
	High	2.50	2.00
4	Low	3.30	2.50
	High	3.30	2.90
5	Low	3.80	3.30
	High	4.50	3.90
6	Low	4.60	4.00
	High	5.00	4.90

40° to 140° temp. rise at 180° F. boiler water.

19. FILLING THE SYSTEM WATER

Fill the system slowly, venting and checking for leaks. Do not operate the circulator until the system is full.

When the relief valve is set to operate at 30 psi, the initial fill pressure should be sufficient to fill the system to the high point and develop a pressure at that point so as to prevent the water in the system from boiling at the maximum operating temperature. Under normal conditions, a static height of 18 1/2 feet will require an initial fill pressure of 12 psi.

STEAM

Stable water level is a necessity for steam boilers. It is very important to have boiler water free from oil, grease, foaming materials etc. Therefore, flush the boiler thoroughly through a bottom drain by introducing clean water into the upper ports of all sections of the boiler. After the boiler piping connections are completed and the boiler can be fired, the boiler water should be heated up and surface impurities flushed off through a high connection and then drained through a bottom opening. The burner should not be operated with low water level in the boiler and makeup water should not be introduced into a hot boiler.

If possible, the heating boiler should be operated for a time with all condensate returning from the system being wasted to a drain. This will remove impurities from the piping system which, if not removed early, will eventually enter the boiler and cause problems. In some instances, more than one cleaning will be required to obtain stable water line.

20. BOILER MAINTENANCE

IMPORTANT - These suggestions cover the boiler maintenance work which will result in the most efficient operation, the longest useful life of the boiler and the highest return on any investment necessary to carry out the maintenance work.

STEAM

1. WATER LEVEL: Check regularly to be sure the boiler water level stays at the marked water line during operation under steam pressure. **DO NOT ADD WATER TO A HOT BOILER.** If water level is not visible in the gauge glass, allow the boiler to cool before adding makeup water. Locate the cause of low water and correct before starting operation.

2. LOW WATER CUTOFF: Check the burner cutoff switch to be certain the switch opens on water level drop below cutoff level.

3. PRESSURE CONTROLS: Check regularly to be certain the pressure limit controls are functioning.

4. SAFETY VALVES: Conduct regular visual inspection of safety valve to detect signs of corrosive deposits, rust buildup or signs of weeping. If there are signs of deposits around the disc and the seat of the valve, replace the valve with a new valve of proper capacity and pressure setting.

5. GAUGE GLASS: When rust, suspended solids, etc. appear in the gauge glass, blowdown may be necessary. Blowdown should be limited only as necessary to remove sediment from the boiler waterways. Foaming, fluctuating water line, steam hammer are signs pointing to the need for blowdown.

6. CLEAN HEATING SURFACES: Each side cleanout cover must be removed for access to flue during cleaning. The burner mounting plate allows full access to the combustion chamber when removed. Cleanout covers for the individual flue passages are located on the left hand side of the boiler and are uncovered by removing the left hand side access jacket panel. Use a wire brush to clean the surfaces and vacuum the soot and scale out of the base of the boiler.

NOTE: The best cleaning method is brushing, starting at the top and working down. Be sure to treat all fireside surfaces.

WATER

1. WATER PRESSURE: The boiler water pressure must be sufficient to maintain a full system and to prevent boiling of the system water. An initial fill pressure of 12 psi provides for 18 1/2 feet of system height. Each additional 2.3 feet of height requires an additional one pound pressure. Be sure no air is trapped in the boiler, system piping or heating units to impede circulation of the heated boiler water.

2. LOW WATER CUTOFF: Check the cutoff switch to be certain the switch opens on water level drop below cutoff point.

3. TEMPERATURE CONTROLS: Check regularly to be sure the controls are functioning to prevent excessive high boiler water temperature.

4. RELIEF VALVES: Conduct regular visual inspection of relief valves to detect signs of corrosive deposits, rust buildup or signs of weeping. If there are signs of deposits around the disc and seat of the valve, replace the valve with a new valve of proper capacity and pressure setting.

5. CLEAN HEATING SURFACES: Each side cleanout cover must be removed for access to flue during cleaning. The burner mounting plate allows full access to the combustion chamber when removed. Cleanout covers for the individual flue passages are located on the left hand side of the boiler and are uncovered by removing the left hand side access jacket panel. Use a wire brush to clean the surfaces and vacuum the soot and scale out of the base of the boiler.

NOTE: The best cleaning method is brushing starting at the top and working down. Be sure to treat all fireside surfaces.

CHIMNEY AND SMOKE PIPE

Be sure that the chimney and smoke pipe do not become obstructed by birds nests, squirrels, soot, chimney liner deterioration, or other happenings. Keep chimney cleanout doors closed and seal tight around the frames. Be sure the smoke pipe is inserted only at the nearest chimney liner surface and seal around the pipe with insulating cement.

COMBUSTIBLES

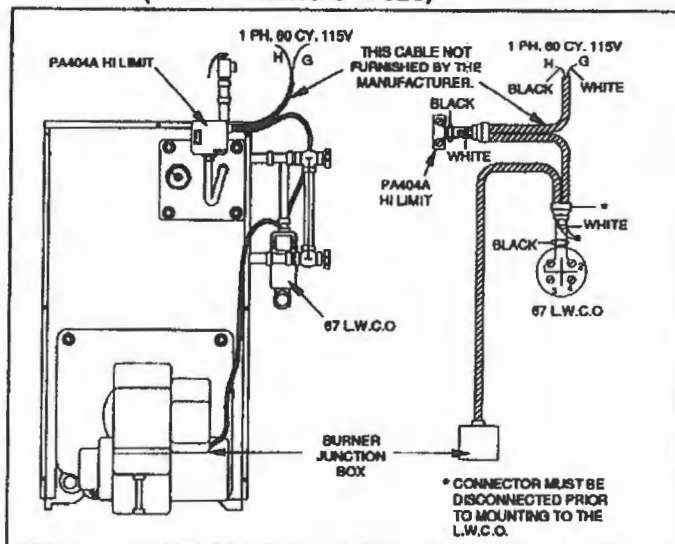
Be sure that no combustible materials are stored close to the boiler or smoke pipe. Fires can cause personal injury and property damage.

21. STEAM BOILER CABLE INSTALLATION

Refer to Figure No. 10 when installing wiring cable on series 8 Steam Boilers.

8 SERIES BOILER INSTALLATION AND OPERATING INSTRUCTIONS

FIG. NO. 10 (STEAM WIRING CABLES)



WARNING

Any appliance that burns natural gas, propane gas, fuel oil, wood or coal is capable of producing carbon monoxide (CO).

Carbon Monoxide (CO) is a gas which is odorless, colorless and tasteless but is very toxic.

If your Smith boiler is not working properly, or is not vented properly, dangerous levels of CO may accumulate. CO is lighter than air and thus may travel throughout the building. **BRIEF EXPOSURE TO HIGH CONCENTRATIONS OF CO, OR PROLONGED EXPOSURE TO LESSER AMOUNTS OF CO MAY RESULT IN CARBON MONOXIDE POISONING.**

EXPOSURE CAN BE FATAL AND EXPOSURE TO HIGH CONCENTRATIONS MAY RESULT IN THE SUDDEN ONSET OF SYMPTOMS INCLUDING UNCONSCIOUSNESS.

Symptoms of CO poisoning include the following:

dizziness	vision problems	shortness of breath
headaches	loss of muscle control	unclear thinking
nausea	weakness	unconsciousness

The symptoms of CO poisoning are often confused with those of influenza, and the highest incidence of poisoning occurs at the onset of cold weather or during flu season. A victim may not experience any symptoms, only one symptom, or a few symptoms. Suspect the presence of carbon monoxide if symptoms tend to disappear when you leave your home.

The following signs may indicate the presence of carbon monoxide:

- Hot gases from appliance, venting system, pipes or chimney, escaping into the living space.
- Flames coming out around the appliance.
- Yellow colored flames in the appliance.
- Stale or smelly air.
- The presence of soot or carbon in or around the appliance.
- Very high unexplained humidity inside the building.

If any of the symptoms of CO poisoning occur, or if any of the signs of carbon monoxide are present, **VACATE THE PREMISES IMMEDIATELY AND CONTACT A QUALIFIED HEATING SERVICE COMPANY OR THE GAS COMPANY OR THE FIRE DEPARTMENT.**

To reduce the risk of CO poisoning, have your heating system "tuned up" by a licensed heating contractor or the gas company -- preferably before each heating season. Also have the service company check your chimney or vent pipes for blockage.

Your home should also be adequately ventilated, particularly if you have insulated your home.

ONLY QUALIFIED, LICENSED SERVICE CONTRACTORS SHOULD PERFORM WORK ON YOUR SMITH BOILER.

WARNING

Install, operate and maintain unit in accordance with manufacturer's instructions to avoid exposure to fuel substances or substances from incomplete combustion which can cause death or serious illness. The State of California has determined that these substances may cause cancer, birth defects, or other reproductive harm. Also, install and service this product to avoid exposure to airborne particles of glasswool fibers and/or ceramic fibers known to the State of California to cause cancer through inhalation.



CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

7/22/2003

Received from Irving Energy Distribution

Location of Work 17 Thomas St.

Cost of Construction \$ 10,886 Building Fee: _____

Permit Fee \$ 130 Site Fee: _____

Certificate of Occupancy Fee: _____

Total: _____

Building (IL) _____ Plumbing (I5) _____ Electrical (I2) _____ Site Plan (U2) _____

Other HVAC

CBL: _____

Check #: CASH Total Collected \$ 130

**No work is to be started until permit issued.
Please keep original receipt for your records.**

Taken by: T. Munson

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy