

# City of Portland, Maine - Building or Use Permit Application

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

<b>Location of Construction:</b> 168 Danforth St		<b>Owner Name:</b> Levandowski Michael T &		<b>Owner Address:</b> 62 Main St		<div style="border: 2px solid black; padding: 5px; text-align: center;"> <b>PERMIT ISSUED</b>          JUN - 6 2005  <b>CITY OF PORTLAND</b> </div>	
<b>Business Name:</b>		<b>Contractor Name:</b> Rudi The Plumber		<b>Contractor Address:</b> 1231 Forest Ave. Portland		<b>Phone:</b> 207-7978311	
<b>Lessee/Buyer's Name</b>		<b>Phone:</b>		<b>Permit Type:</b> HVAC			<b>Zone:</b> R-6
<b>Past Use:</b> 3 unit apartment building		<b>Proposed Use:</b> 3 unit apartment building with replacement heating unit		<b>Permit Fee:</b> \$129.00		<b>Cost of Work:</b> \$12,000.00	<b>CEO District:</b> 2
<b>Proposed Project Description:</b> replace: Three (3) residential dwelling units install new gas heating unit in 3 unit apartment building				<b>FIRE DEPT:</b> <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied Signature: <i>J.R. P. 6/24/05</i>		<b>INSPECTION:</b> Use Group R2 Type: HVAC ME State Gas Rules Signature: <i>AMB 7/7/05</i>	
				<b>PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)</b> Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Signature: _____ Date: _____			
<b>Permit Taken By:</b> jharris		<b>Date Applied For:</b> 06/22/2005		<b>Zoning Approval</b>			

Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland	<input type="checkbox"/> Variance	<input type="checkbox"/> Not in District or Landmark
<input type="checkbox"/> Wetland	<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Does Not Require Review
<input type="checkbox"/> Flood Zone	<input type="checkbox"/> Conditional Use	<input type="checkbox"/> Requires Review
<input type="checkbox"/> Subdivision	<input type="checkbox"/> Interpretation	<input type="checkbox"/> Approved
<input type="checkbox"/> Site Plan	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Conditions
Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> <i>OK</i> Date: <i>6/23/05</i>	<input type="checkbox"/> Denied	<input type="checkbox"/> Denied <i>Any exterior work requires separate review and approval</i>

## 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**

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

<b>Permit No:</b>	<b>Date Applied For:</b>	<b>CBL:</b>
05-0823	06/22/2005	044 D031001

<b>Location of Construction:</b> 168 Danforth St	<b>Owner Name:</b> Levandowski Michael T &	<b>Owner Address:</b> 62 Main St	<b>Phone:</b>
<b>Business Name:</b>	<b>Contractor Name:</b> Rudi The Plumber	<b>Contractor Address:</b> 1231 Forest Ave. Portland	<b>Phone</b> (207) 797-8311
<b>Lessee/Buyer's Name</b>	<b>Phone:</b>	<b>Permit Type:</b> HVAC	

<b>Proposed Use:</b> 3 unit apartment building with replacement heating unit	<b>Proposed Project Description:</b> install new gas heating unit in 3 unit apartment building
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**Dept:** Zoning      **Status:** Approved      **Reviewer:** Marge Schmuckal      **Approval Date:** 06/23/2005  
**Note:** legal 3 unit      **Ok to Issue:** ☒

**Dept:** Building      **Status:** Approved      **Reviewer:** Jeanine Bourke      **Approval Date:** 07/07/2005  
**Note:**      **Ok to Issue:** ☒

1) The installation must comply with the State of Maine Gas Regulations.

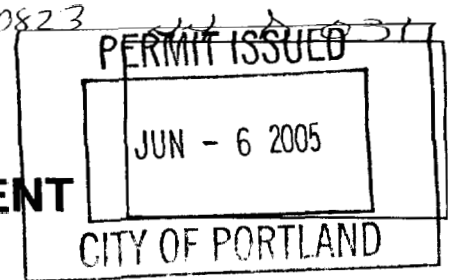
**Dept:** Fire      **Status:** Approved      **Reviewer:** Jay Kelley      **Approval Date:** 06/24/2005  
**Note:**      **Ok to Issue:** ☒

1) install to manufactures specifications



FILL IN AND SIGN WITH INK

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



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 164 Danforth Use of Building Apt Date 6/22/05Name and address of owner of appliance Mike LewandowskiInstaller's name and address Rolf CaspariusTelephone 797-8311**Location of appliance:**

- ☒ Basement ☐ Floor  
☐ Attic ☐ Roof

**Type of Fuel:**

- ☒ Gas ☐ Oil ☐ Solid

Appliance Name: Buderus (3) Replacement + FRHU.L. Approved ☒ Yes ☐ NoWill appliance be installed in accordance with the manufacture's installation instructions? ☒ Yes ☐ No

IF NO Explain: \_\_\_\_\_

**The Type of License of Installer:**

- ☒ Master Plumber # 06695  
☐ Solid Fuel # \_\_\_\_\_  
☐ Oil # \_\_\_\_\_  
☒ Gas # PNT 1311  
☐ Other \_\_\_\_\_

**Type of Chimney:**

- ☐ Masonry Lined  
Factory built \_\_\_\_\_

- ☐ Metal  
Factory Built U.L. Listing # \_\_\_\_\_

- ☒ Direct Vent  
Type Manufacturer Buderus unit UL# \_\_\_\_\_

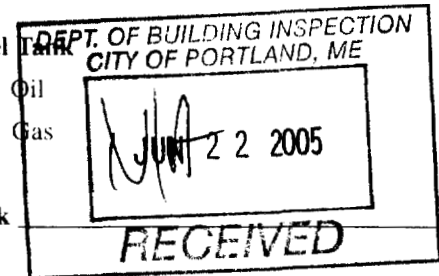
**Type of Fuel Tank**

- ☐ Oil  
☐ Gas

Size of Tank \_\_\_\_\_

Number of Tanks \_\_\_\_\_

Distance from Tank to Center of Flame \_\_\_\_\_ feet.

Cost of Work: \$ 12,000Permit Fee: \$ 129.00**Approved**

Fire: \_\_\_\_\_

Ele.: \_\_\_\_\_

Bldg.: \_\_\_\_\_

Signature of Installer

White - Inspection

Yellow - File

Pink - Applicant's

Gold - Assessor's Copy

**Approved with Conditions**

- ☐ See attached letter or requirement

Inspector's Signature

Date Approved

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)
TR-20	19" x 19"	38"	1"	3/4"	3/4"	20	8	12	110
TR-30	19" x 19"	49"	1"	3/4"	3/4"	30	9	15	165
TR-36	19" x 19"	60"	1"	3/4"	3/4"	36	12	18	180
TR-45	23" x 23"	57"	1 1/4"	1"	1"	46	8	20	194
TR-60	23" x 23"	67"	1 1/4"	1"	1"	56	8	24	220
TR-80	24" x 24"	62"	2"	1 1/2"	1 1/2"	76	15	28	368
TR-100	26" x 27"	72"	2"	1 1/2"	1 1/2"	95	25	34	390
TR-120	30" x 30"	72"	2"	1 1/2"	1 1/2"	119	30	42	450

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	315
Smart 100	26" dia.	78"	1 1/2"	1 1/2"	1 1/2"	95	17	34	340

(\*) 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.

Performance

Model No.	Boiler Output Btu/hr	1st Hour Recovery (gal.)	Continuous Flow (gal.)	Peak/Flow Gal/10 min.
TR-20	80,000	125	110	35
TR-30	87,000	140	115	45
TR-36	118,000	190	160	55
TR-45	137,000	220	185	70
TR-60	270,000	410	360	110
TR-80	337,000	510	450	135
TR-100	375,000	575	500	160
TR-120	420,000	650	560	190

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



TR Series



SMART Series

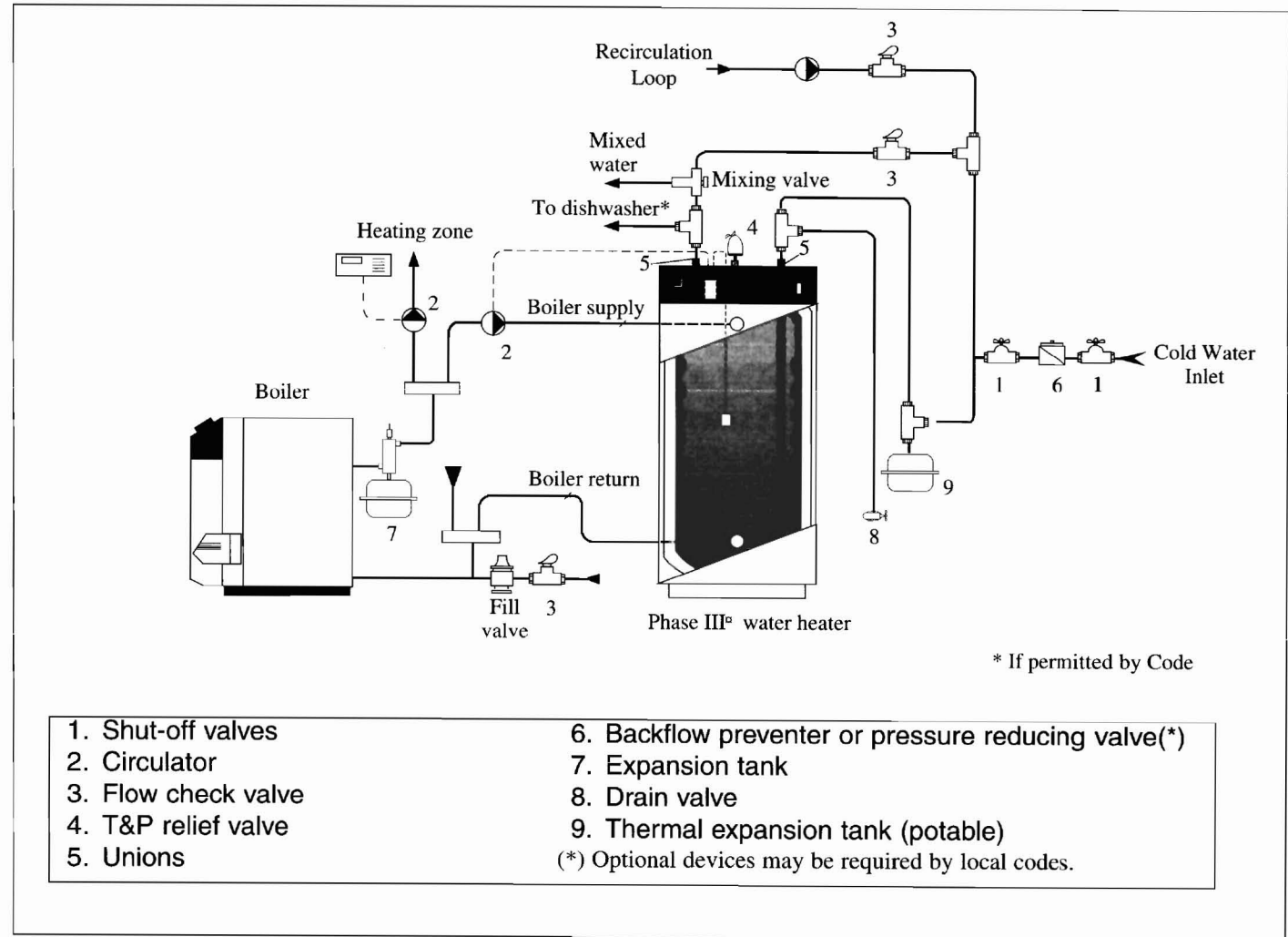
Conditions:

- 200° boiler water supply
- 90° temperature rise

Standard Features

- Durable, corrugated stainless steel inner tank
- Steel outer tank completely insulated with 2" of HCFC free water blown polyurethane foam
- Baked enamel steel jacket for TR models and sturdy plastic exterior jacket for the Smart
- Factory supplied automatic air vent
- Complete control system includes:
  - Adjustable thermostat
  - Temperature gauge (TR series)
- Limited LIFETIME warranty residential
- 15 year limited warranty commercial

Phase III® Installation



1 Triangle Lane - Blackwood, NJ 08012  
E-mail: info@triangletube - www.triangletube.com

Tel: (856) 228 8881  
Fax: (856) 228 3584



# Phase III®

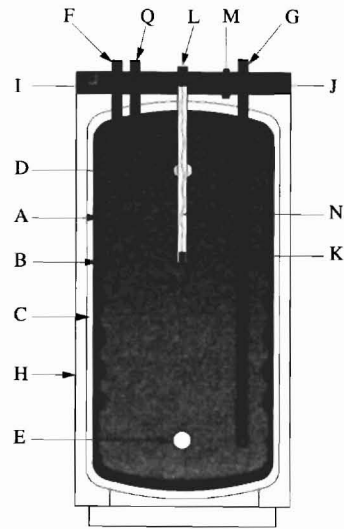
## Corrugated Steel Jacketed Water Heaters

The SMART CHOICE

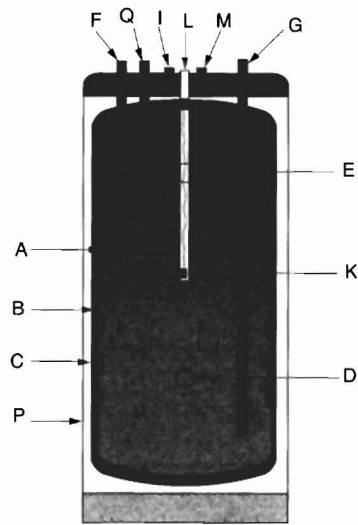
in domestic hot water

## Construction Specifications

### TR Series



### SMART Series



Phase III® is tested in accordance with the standard (ANSI/UL-174, 1989) (CAN/CSA-C22.2 NO. 110-M90) and is certified by ETL.

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

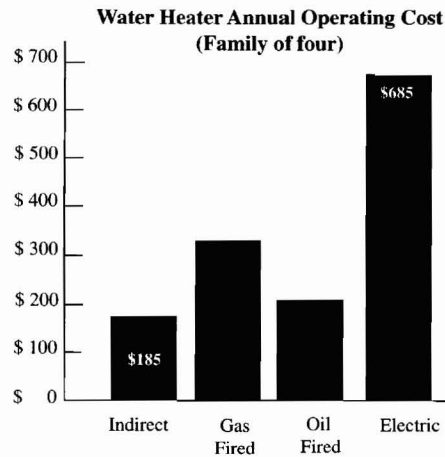
## Quality, Performance and Reliability

The Phase III® Indirect Fired Water Heater provides the convenience and comfort of hot water whenever you want it at the lowest possible cost.

### High Efficiency , Low Annual Operating Cost

Phase III® indirect fired water heaters, when combined with any boiler, offer domestic hot water supply rates and operating cost efficiencies that are second to none.

A Phase III® Indirect fired water heater can save up to 50% or more off your current water heating bills. Plus, since Phase III® doesn't require a flue and has no burner, your maintenance costs drop dramatically compared to conventional water heaters.



\*Based on the following energy cost:  
- Gas: \$ 0.87/Therm  
- Oil: \$ 0.96/Gallon  
- Electricity: \$ 0.11/kw/Hour

## A Wise Economic Decision

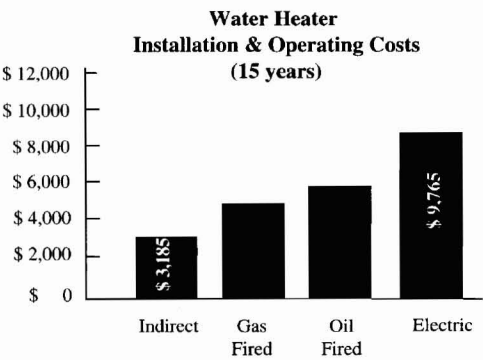
Even with a slightly higher initial purchase price, the total cost of owning a Phase III® Indirect Fired Water Heater is significantly lower than a conventional water heater over a fifteen year period.

Also, the Phase III® exclusive self cleaning, self descaling design prevents the build up of minerals and lime that can reduce performance.

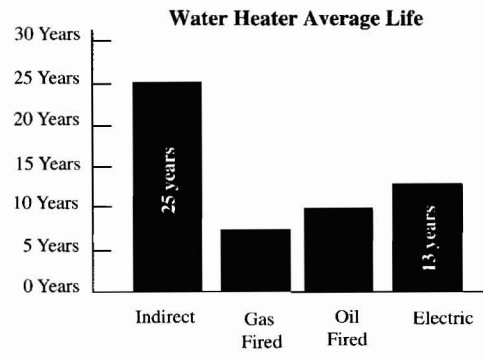
## Long Term Dependability and Quality that Lasts

Unlike conventional water heaters, the lower temperature differential between the Phase III® heat exchanger and the domestic hot water dramatically reduces wear and tear on the system.

The average life span of a Phase III® Indirect water heater exceeds 20 years! That is two or three times the average life of a conventional gas, oil or electric water heater.



\*Based on household of four persons and average heater life/cost.



\*Based on normal residential usage. Life of all units will be reduced where water quality is poor.

## 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.

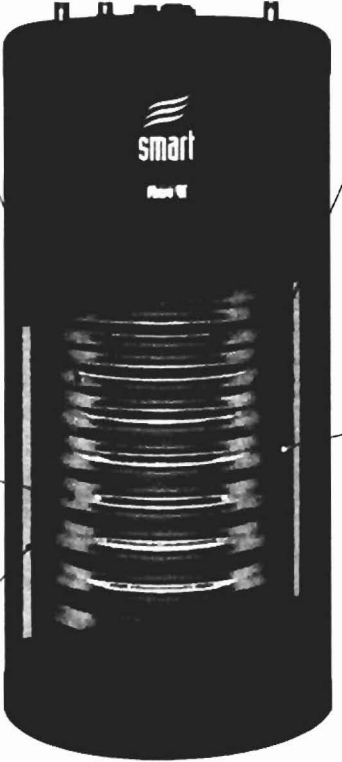
It's superior heat exchange surface (typically 1.5 to 2.5 times larger than a traditional coil) makes for a large volume of hot water in a short period of time. Thanks to this fast recovery, the storage capacity can be reduced, resulting in a reduced thermal loss.

### Stainless Steel Tank Construction

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

### Optimal Insulation

The Phase III®, TR Series and Smart Series, are insulated with 2" of either sprayed-on or injected polyurethane, foam, resulting in a stand by heat loss of less than 1%/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

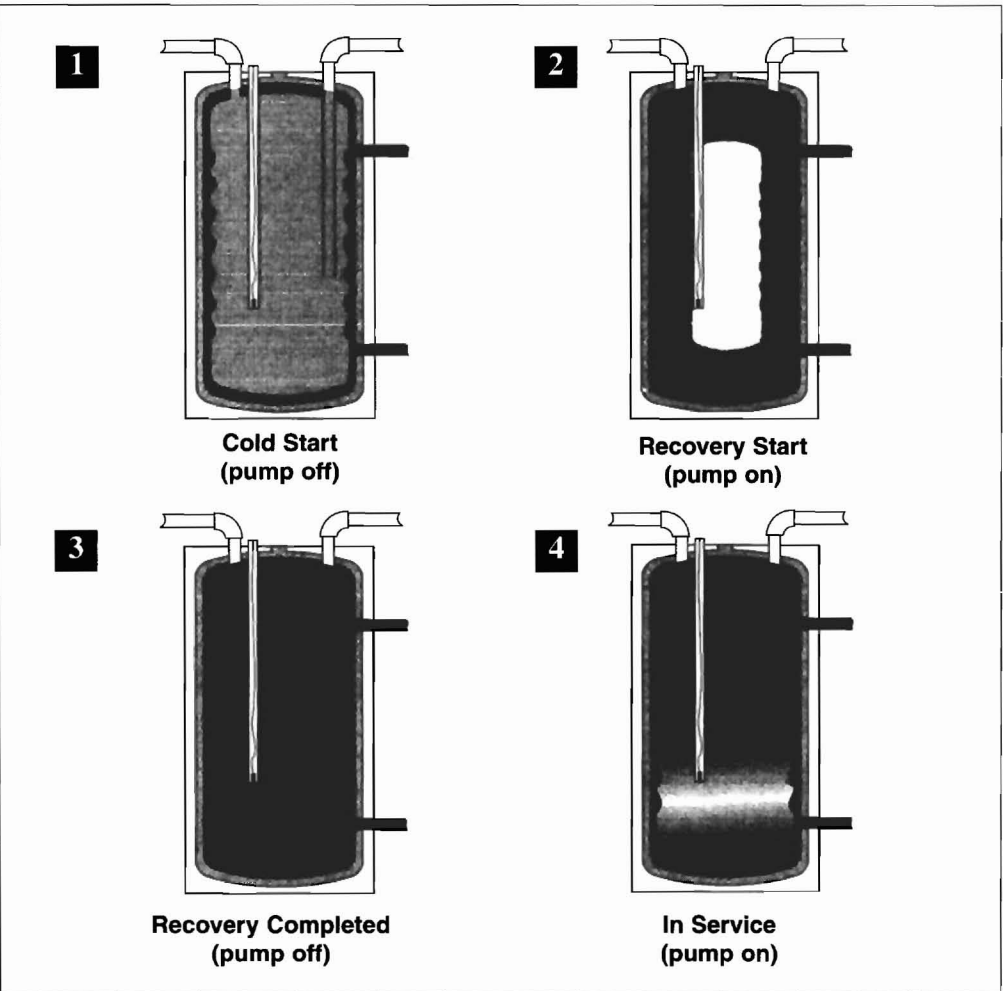
The "Tank-in-Tank" design allows us to store domestic water at higher temperatures preventing bacteria growth. Additionally, constructed of high quality stainless steel, Phase III® does not require a protective anode.

## Energy Efficiency

The Phase III® Stainless Steel Indirect Fired Water Heater is heated by the hot water from your boiler. As your home is being heated, your domestic hot water is being heated at the same time, thereby, consuming less fuel and conserving energy. Combine this with a recovery rate that is up to three time faster than conventional gas or electric water heaters, and The Phase III® Water Heater heats more hot water with less fuel for the energy conscious consumer.

## How Phase III® Works

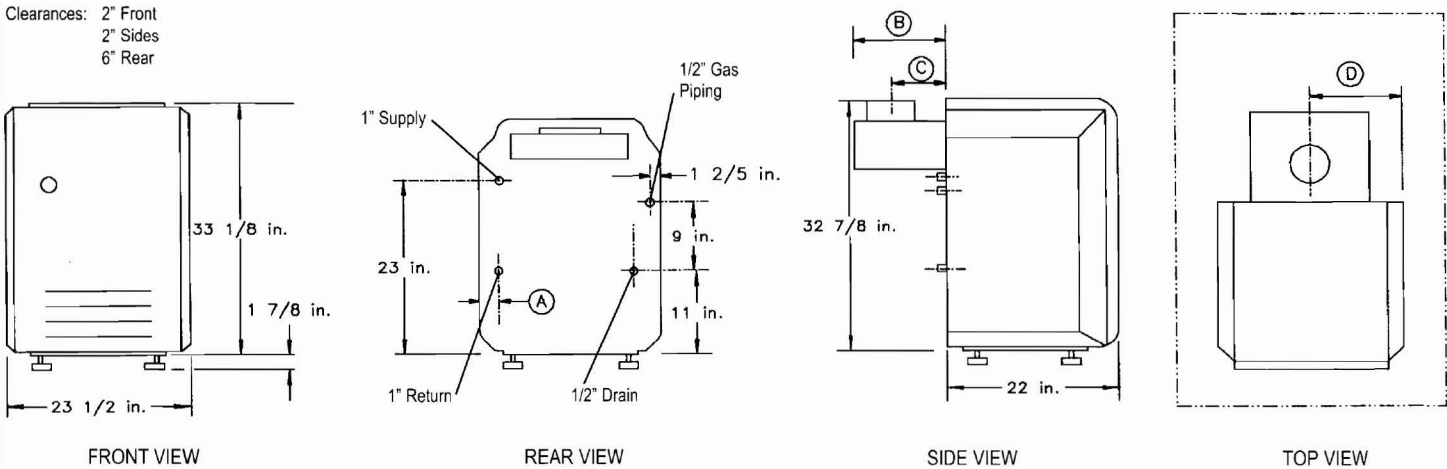
### Phase III® operating cycle



When the Phase III® thermostat in the inner tank calls for heat, the boiler and circulator start. Boiler water is circulated around the outer tank and heats the domestic water in the inner tank. After transferring its heat, boiler water is returned to the boiler to be re-heated. When the thermostat in the inner tank reaches its pre-set mark, the boiler and circulator shut off.



Dimensions and Technical Data for G124X Series Boilers



G124X Series		Intermittent Ignition G124X II/DI Models			Standing Pilot G124X SP/DP Models		
		G124X/18	G124X/25	G124X/32	G124X/18	G124X/25	G124X/32
Input	Btu/hr	74,000	103,000	132,500	74,000	103,000	132,500
Output	Btu/hr	61,400	85,500	110,000	61,400	85,500	110,000
AFUE	II Models	84.3%	84.2%	84.6%	81.5%	81.5%	81.5%
AFUE	DI Models	85%	85%	85%	81.5%	81.5%	81.5%
Vent Size	Inch	5	5	6	5	5	6
Dry Weight	Lbs	224	280	332	224	280	332
Water Content	Gal	2.5	3.0	3.5	2.5	3.0	3.5
Number of Burners		2	3	4	2	3	4
Pres. Drop @ 20°F ΔT (In WC)		18.8	22.9	32.2	18.8	22.9	32.2
Dimension A	Inch	8 3/4	5 1/8	1 5/8	8 3/4	5 1/8	1 5/8
Dimension B	Inch	7 1/4	8 1/8	9	7 1/2	8 1/8	9
Dimension C	Inch	4 1/2	5 1/8	5 1/8	4 3/4	5 1/8	5 1/8
Dimension D	Inch	15	13 1/2	11 1/2	15 1/2	13 1/2	11 1/2

Venting Requirements:

- Atmospheric Venting Models:** Slope vent pipe up to chimney at least 1/4" per foot.  
Minimum 6" clearance between venting and combustibles.  
Maintain vent size; install per National Fuel Gas Code.
- Draft Induced Models:** Use 3" AL 29-4C for venting material.  
Draft inducer, fan connector and termination provided.  
Maximum total pipe run: 25 feet total equivalent length.  
90° elbow equal to 3 feet.  
Slope pipe upward from boiler at 1/4" per foot, last run down at 1/4" per foot.  
Use high temperature silicone (G.E. 106 or equivalent) for sealing of vent components.

**Buderus**  
HYDRONIC SYSTEMS

50 Wentworth Ave • Londonderry, NH 03053  
Phone: (603) 421-2760 • Fax: (603) 421-2719  
Website: [www.buderus.net](http://www.buderus.net)

Residential  
● Cast Iron Hot Water  
Gas Boilers: G124X

Atmospheric or Draft Induced  
Intermittent Ignition or Standing Pilot  
Natural Gas or Propane

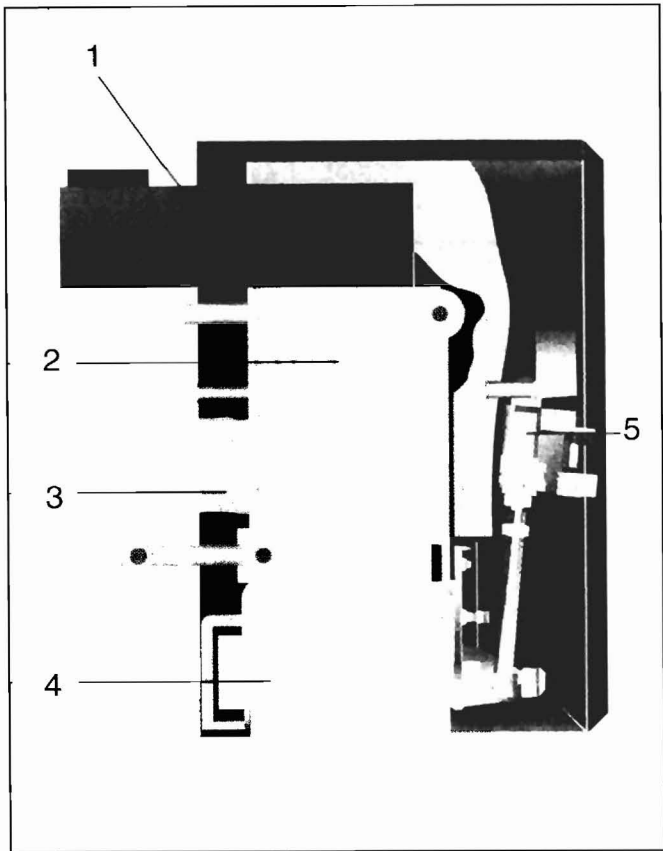


G124X Series

# The G124X Series gas boiler set new standards for quality, service, versatility and efficiency.

## Versatility:

- Two Ignition Options: Intermittent ignition and Standing pilot
- Two Venting Options: Atmospheric venting with vent damper or sidewall venting with draft inducer.



1. Draft hood with integral diverter for dilution of flue gases.
2. Boiler sections: flexible cast iron with contoured fins.
3. Deluxe blue enameled insulated boiler jacket.
4. Stainless steel premix burners with high reliability.
5. Gas valve with intermittent ignition or standing pilot.

## Stainless Steel Premixed Burners:

- Low emissions with Premixed Burner Technology.
- Factory tested for natural gas operation.
- All models easily converted to propane.
- Complete burner tray is easily removed.
- Durable, quiet and efficient, designed for long life.

## Standard Features

- Manufactured by Buderus, world's leader in cast iron boiler design and production.
- Flexible GL-180M cast iron, designed to resist thermal shock for long life.
- High silicone cast iron surface for excellent corrosion resistance.
- High precision castings with threaded steel nipples.
- Staggered, contoured fins for optimum heat transfer and efficient operation.
- Deluxe, heavy gauge blue enameled jacket.
- Full 3" thermal insulation for minimal standby losses.
- U.S.A. factory assembled, wired and tested.
- All U.S. manufactured Honeywell controls.
- Combination slow opening gas control valve.
- Combination circulator relay high limit control.



C.S.A. Certified for  
Natural and  
Propane Gas



Tested for 58 lbs.  
ASME Working  
Pressure



C.S.A. Certified for  
Natural and  
Propane Gas



## Service Features:

- Quick disconnect coupling for easy burner removal.
- U.S.A. factory assembled, wired and tested boiler.
- Approved for installation on combustible flooring.
- Approved for closet installation with 2" clearances.
- All rear tappings for clean, finished appearance.
- Adjustable, rubber leveling feet for ease of installation.
- Standard Honeywell control components.
- Built-in draft diverter for dilution of flue gases.
- 1" supply and return tappings, 1/2" NPT gas connection.

## Possible System Upgrades

### Indirect fired DHW storage tanks

- Horizontal L-tanks for small foot print.
- Vertical models with improved recovery rates.
- Easy access port for cleaning of tank interior.
- "Duoclean" interior tank protective coating assures corrosion resistance for long life and ease of cleaning.
- Well insulated tank loses less than 1/4°F per hour.
- Large diameter coiled heat exchanger for excellent recovery rates.
- Heat exchanger size increases with tank volume.
- Extra thick Magnesium anode rod for active corrosion protection.
- Optional electric anode.

### Buderus Logamatic control system

- Low temperature boiler operation for superior comfort and improved fuel efficiency.
- Complete space heating control based on outside temperature with room temperature compensation.
- Priority heating of domestic hot water.
- Adjustable night setback for additional efficiency.
- Adjustable factory heating programs allow customized operation.
- Built-in self diagnostics for ease of service.



G124X Series Boiler



Logamatic Control



# CITY OF PORTLAND, MAINE

## Department of Building Inspections

20

Received from

Location of Work

Cost of Construction \$

Permit Fee \$

Building (IL) \_\_\_\_\_ Plumbing (IS) \_\_\_\_\_ Electrical (I2) \_\_\_\_\_ Site Plan (U2) \_\_\_\_\_

Other

CBL:

Check #: 24351

Total Collected \$ 129.

## THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less \$10.00 or 10% whichever is greater.

WHITE - Applicant's Copy

YELLOW - Office Copy

PINK - Permit Copy