593 FOREST AVE Business Name:	CVI IOTE NUCL	101 10 111	Owner Address:	1101	Phone:	1
Business Name:	GIUSTI NICE		PO BOX 2005 Contractor Address:		O T Thomas	_
	The Steinert C		64 Rt. 35 No. W	CHYUFP	OR ThankID	0.2
Lessee/Buyer's Name	Phone:		Permit Type: HVAC		20107250	Zone:
Past Use:	Proposed Use:		Permit Fee:	Cost of Work:	CEO District:	
Commercial	3 unit resident in basement	ial/ new Biasi boiler	\$165.00	Denied Use C	BECTION: Group: U	Type. H
Proposed Project Description:			IV.	0 165 _	- 1	
new Biasi boiler in basement			Signature PEDESTRIAN ACT Action: Appro	Signal Si		Denied
			Signature		Date:	
Permit Taken By:	Date Applied For:		Zoning	Approval		
Idobson	10/28/2005	Special Zone or Revi				1
	Applicant(s) from meeting applicable State and Federal Rules.  Building permits do not include plumbing, septic or electrical work.		ews Zoni	ng Appeal	Historic Pres	
			Miscell	ancous	Does Not Rea	dire Review
			☐ Condition	tation	☐ Requires Rev	7
		Site Plan  Maj Minor MM	Approv	ed	Denied	Conditions

ADDRESS

DATE

PHONE

such permit.

SIGNATURE OF APPLICANT

•		ilding or Use Permit		Permit No:	Date Applied For:	CBL:
389 Congress Stree	et, 04101 Tel:	(207) 874-8703, Fax: (2	207) 874-8716	05-1589	10/25/2005	125 0008001
Location of Construction	eation of Construction: Owner Name: O					Phone:
593 FOREST AVE		GIUSTI NICHOLAS II	II	PO BOX 2005		
Business Name:		Contractor Name:		Contractor Address:		Phone
		The Steinert Co., Inc.		64 Rt. 35 No. Wir	ndham	(207) 892-5683
Lessee/Buyer's Name		Phone:	1	Permit Type:		
				HVAC		
Proposed Use:			Propose	d Project Description	:	
3 unit residential/ ne	w Biasi boiler i	n basement	new B	iasi boiler in baser	nent	
Dept: Zoning Note:	Status:	Not Applicable	Reviewer:	Tammy Munson	Approval I	Oate: 11/16/2005 Ok to Issue: ☑
Dept: Building Note:	Status:	Approved with Conditions	Reviewer:	Tammy Munson	Approval l	Date: 11/16/2005 Ok to Issue: ☑
1) Installation shall	comply with 2	003 International Mechanic	cal Code and Sta	ate of Maine Oil ar	nd Solid Fuel Board	Laws and Rules
Dept: Fire	Status:	Approved	Reviewer:	Jay Kelley	Approval l	Date: 10/28/2005 Ok to Issue:



# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



25 0 008

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:

Name and address of owner of appliance Nick Guis	Use of Building 3 unit Apt Date 10/25/05
Installer's name and address The Steinert Co. Windham me 04062	Inc. P.O. BOX 1912
Location of appliance:  Basement	Type of Chimney:  Masonry Lined Factory built
Type of Fuel:  Gas Solid  Appliance Name:  U.L. Approved Yes No  Will appliance be installed in accordance with the manufacture's installation instructions? Yes No  IF NO Explain:	Direct Vent Type  Type of Fuel Tank Gas  NOLLOSIGN SWITHOUT SIGN 1430  Size of Tank  275
The Type of License of Installer:  Master Plumber #	Number of Tanks
Approved  Fire:  Ele.:  Bldg.:  Signature of Installer	Approved with Conditions  See attached letter or requirement  Inspector's Signature  Date Approved
	ink - Applicant's Gold - Assessor's Copy

## The BIASI B-10 Boiler System



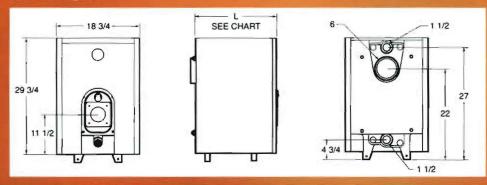
- Energy Star compliant
  - Compact size
- Limited lifetime warranty





### BIASI...The Style of Warmth

The B-10 boiler system has been heating residential buildings throughout the world for years. It has proven its fuel efficiency and durability in countries where fuel can cost up to four times as much as in the U.S. The same fuel saving technology is now available here in North America. With the three-pass boiler design and low water content, heat is quickly supplied for your heating zones and hot water needs. Combined with an outdoor reset control, you can achieve a fuel savings of up to 40% over conventional single pass boilers. You will also have peace of mind since the B-10 boiler package complies with ASME and UL standards and is IBR rated. The B-10 boiler system is the cost-competitive heat and hot water system of choice.



		The	BIASI B-1	O Reside	ntial Seri	es		
Boiler Model #	Heating Capacity		out Burner acity MBH	Net Output (MBH)	AFUE Efficiency (%)	Water Content (Gals.)	Length (L) (Inches)	Weight (Lbs.)
B-3	67	0.55	80	58	86.6	3.7	15.5	247
B-4	110	0.90	115	96	85.8	4.7	19.5	307
B-5	124	1.00	140	108	87.2	5.7	23.5	367
B-6	153	1.25	175	133	86.7	6.7	27.5	427
B-7	185	1.50	215	161	86.8	7.7	31.5	486
B-8	211	1.80	257	183	86.8	8.7	35.5	546
B-9	257	2.10	298	223	86.5	9.7	39.5	606

Maximum water working pressure: 58 PSI (1) The burner input is based on oil with a heat value of 140,000 BTU/Gal., (2) The net output ratings shown are based on piping and pick-up allowance of 1.15. (3) The efficiency ratings are based on a combustion condition of 12.5% CO2. Warranty: The BIASI B-10 botter has a limited lifetime warranty A copy is provided with each boiler or is available from your dealer. Built in accordance with the requirements of ASME boiler and pressure vessel code.



A 3-pass boiler design is the most efficient way to get the maximum amount of heat from the fuel, since it contains three times as much interior surface area (compared to a single-pass boiler) to extract heat from.

### **Technical Advantages**

- Gas or oil burner compatible
  - Easy access swing door
- No flue required; can be direct vented outdoors
- Low water content boiler heats up faster with less fuel
  - Efficient 3-pass heat exchanger boiler design
  - GG20 cast-iron construction for superior heat retention and durability
    - ASME, UL, and IBR listed
    - 58 psi cast-iron construction





### **Product Specifications**

Model No.	Dimension	Height	Boller/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 14"	1"	1"	56	8	24	220
TR-80	24" x 24"	62"	2"	11/2"	11/2"	76	15	28	368
TR-100	26" x 27"	72"	2"	1 1/2"	1 ½°	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"	11/2"	1 1/2"	70	14	28	315
Smart 100	26" dia.	78°	11/2"	11/2"	11/2*	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 Blu/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



### Conditions:

**TR Series** 

- 200° boiler water supply

**SMART Series** 

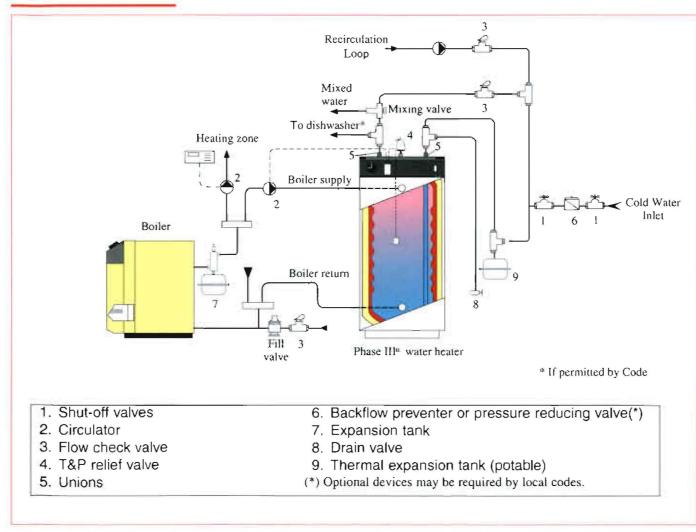
- 90° temperature rise

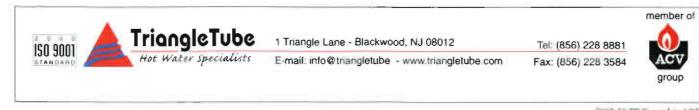
### **Standard Features**

- 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





2002-58 TR/Smart Lit. 6/02

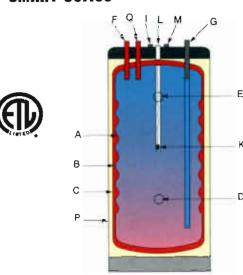


### **Construction Specifications**

### TR Series

# D A B C H

### **SMART Series**



Phase III<sup>®</sup> 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
- B. Outer steel tank
- C. Polyurethane insulation
- D. Boiler water connection
- E. Boiler water connection
- F. Hot water outlet
- G. Cold water inlet
- H. Enameled steel jacket

- 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

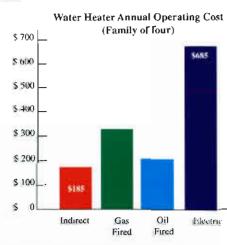
### Quality, Performance and Reliability

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.

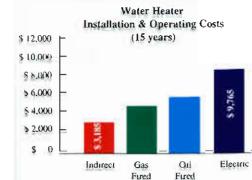


- \*Based on the following energy cost:
  - Gas: \$ 0.87/Therm
  - Oil: \$ 0.96/Gallon
  - Electricity: \$ 0.11/kw/Hour

### 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.



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

### 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<sup>®</sup> Indirect water heater exceeds 20 years! That is two or three times the average life of a conventional gas, oil or electric water heater.

# Water Heater Average Life 25 Years 20 Years 15 Years 10 Years 5 Years 0 Years Indirect Gas Oil Electric

\*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, contructed of high quality stainless steel, Phase III® does not require a protective anode.

### Energy Efficiency

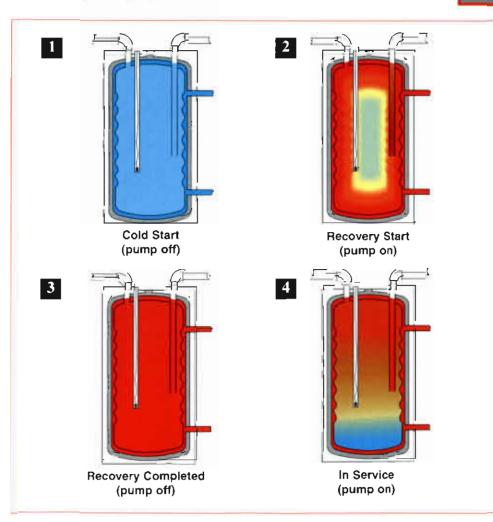
The Phase III® Stainless Steel Indirect Fired Water Heater is heated by the hot water from your boiler. As your home is being heated, your domestic hot water is being heated at the same time, thereby, consuming less fuel and conserving energy. Combine this with a recovery rate that is up to three time 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 IIP 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.



### CITY OF PORTLAND, MAINE

**Department of Building Inspections** 

Oct 24 2005
Received from the description to the contract
Location of Work 592 Facts Alle
Coat of Construction C
Cost of Construction \$
Permit Fee \$
Building (IL) Plumbing (I5) Electrical (I2) Site Plan (U2)
Other
CBL: 195 0 008
Check #: 19159 Total Collected \$ 65.00

### 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