

# Installation Guidelines



**Triton**

This important information must be maintained to validate any warranty claims. Your NY Thermal Boiler must be serviced and cleaned seasonally to ensure years of safe, reliable comfort.

Boiler  Serial  Installation   
 Model  Number  Address

Description	Cleaning						
	Installation	1	2	3	4	5	6
Date							
Technician							
Company							

Carbon Dioxide							
Oxygen							
Smoke							
Stack Temp.							
Room Temp.							
Net Temp. Rise							
Combustion Eff.							

Nozzle Make							
Angle							
Spray							

# Welcome to NY Thermal. . .

**Our customers know: when you choose NY Thermal, you choose the pinnacle in top quality furnaces and boilers! Our commitment to technicians means that, in addition to the best research, development and training programs available.**

**If you have any installation or service questions, please do not hesitate to contact our North America-wide technical service hotline: 506-657-6000.**

## **Delivery**

Be extremely careful to examine your components for damage, prior to delivery for the installation. Any claims of lost or damaged items must be reported to the transport company immediately.

## **Installation**

The boiler must be installed by a trained heating technician, in accordance with this manual and all local codes and regulations including CSA Standard B 139 and UL 726 installation code, and C22.1 electrical code. We, as the appliance manufacturer, hold no responsibility for the installation and maintenance of the boiler, except for the guidance supplied in this manual, which we hope will answer any questions.

## Air Supply

Allowances for combustion air must be supplied to the burner directly, due to the fact that the heating appliance consumes large volumes of air. In most instances one square inch of free unrestricted outside air for every 1000 BTU's input is sufficient, however compensations must be made depending on the tightness of the house; usually a 15% larger area is required. Do not place the heating appliance in, or adjacent to, a room where an exhaust fan is operating.

## Chimney

*(Note: not used on Through-The-Wall Venting Units)*

Sufficient draft by natural or mechanical means is necessary for ensuring optimal and consistent operation. The appliance should have a stack draft sufficient enough to support stable operation (See Draft Settings).

## Important

**Due to the high combustion efficiencies and low stack gas temperatures, great care must be taken to ensure that the chimney isn't subjected to gas condensation. The gas temperature where the flue pipe enters the chimney must be a minimum of 200°F.**

## Draft Regulator

A draft regulator must be used and set to regulate the draft of the boiler. Make sure that the damper is free to operate without sticking, for this will affect the boiler's combustion system. It is important that the draft be adequate because poor draft conditions will cause poor operation and a possibly hazardous condition.

## 1.0 Specifications

# Draft Settings

The TRITON is designed to operate with a  $-.04''$  WC. draft in the flue breeching, therefore make sure that there is enough natural or mechanical draft to ensure proper operation. Due to the design of the TRITON it may operate at a positive over fire pressure up to  $+.03$  at a  $-.02$  draft.

## Riello Burners with TRITON Boilers

Model	Input gph (US)	Delevan Nozzle 60B	Pump (psig)	Output MBH	CSA Efficiency	Recommended Burner Settings		
						Model	Air	Turbulator
VS80	0.65	0.60	115	78	87%	F3	4.0	0
VS90	0.75	0.60	155	90	86%	F3	6.0	0
VS100	0.85	0.75	130	101	85%	F3	6.0	0.5
VS120	1.00	0.75	180	118	85%	F5	3.5	1.0
VS130	1.10	1.00	120	129	84%	F5	4.0	1.5
VS150	1.25	1.00	155	145	83%	F5	6.0	2.0
VS160	1.35	1.10	150	157	83%	F5	6.5	3.0
VS180	1.50	1.35	125	174	83%	F5	7.5	4.0
VS210	1.75	1.35	170	202	83%	F10	.0	1.0

# Beckett Burners with TRITON Boilers

Model	Input	Delevan Nozzle 60°B	Output	Pump Pressure	AFG Model	Beckett Head	Burner Shutter-band
VS 80	.65	0.5 5	79	140	50 M B L1	Low fire baffle	7-0
VS 90	.75	0.6 5	91	133	50 M B L1	-	6-0
VS 100	.85	0.7 5	105	128	50 M B L1	-	10-1
VS 120	1.00	0.85	119	138	50 M D V1	0	7-0
VS 130	1.10	0.85	131	167	50 M D V1	0	8-0
VS 150	1.25	1.10	148	130	50 M D V1	0	10-3
VS 160	1.35	1.25	158	117	50 M D V1	1	10-4
VS 180	1.5	1.25	175	144	50 M D V1	2	10-3
VS 210	1.75	1.50	203	136	50 M D V1	3	10-4

## 2.0 Clearances

The clearances of the TRITON Series are as follows:

Top	24" (61 cm)	Right side	5" (12.4 cm)
Flue pipe	9" (22.8 cm)	Rear	5" (12.4 cm)
Coil side	24" (61 cm)	Floor	NON-COMBUSTIBLE

# Recommended Settings - TRITON Series

With Domestic Coil

Hi = 210°F, Lo 175°F, DIFF = 20°F

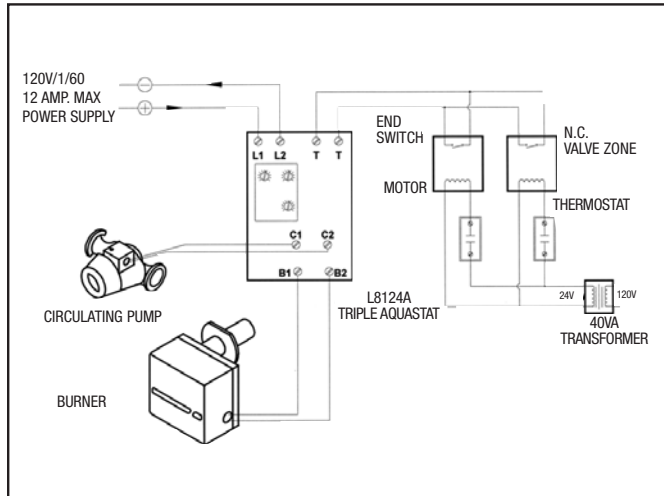
With Indirect Water Heater

Hi = 210°F, Lo 165°F, DIFF = 20°F

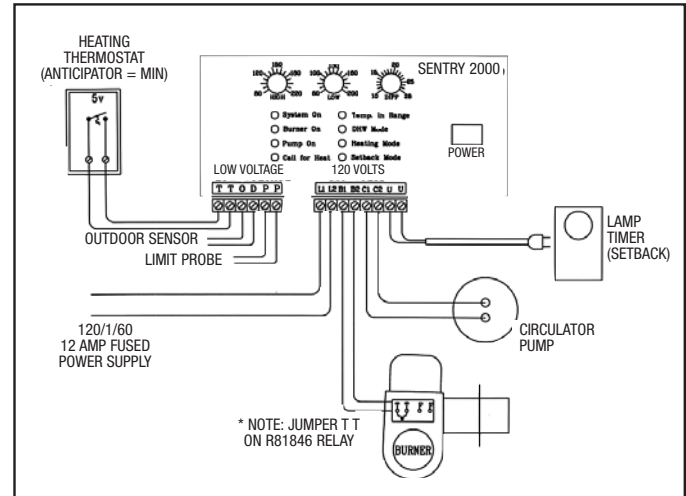
For Space Heating ONLY

Hi = 210°F, Lo 120°F, DIFF = 10°F

## Triple Aquastat Wiring



## Sentry 2000 Wiring



# Piping

The closed piping system must be in accordance with the piping illustration. All piping joints must be secure and water tight, or the boiler warranty is void.

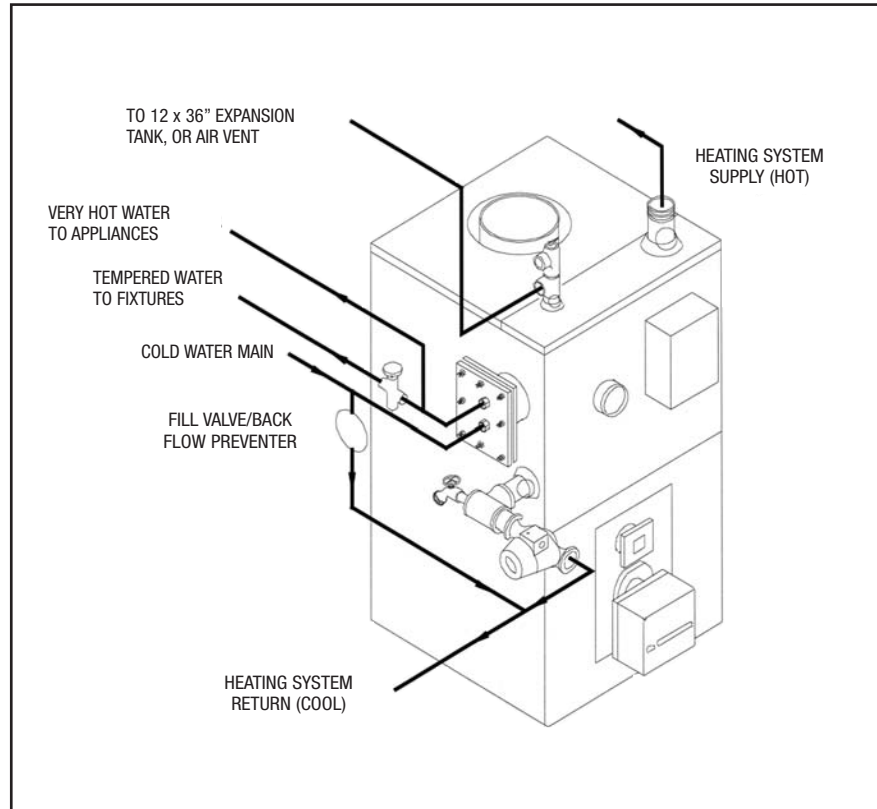
# Boiler venting

Hot water boilers are designed to operate with airless water in the system. The NY Thermal boilers are designed with a built-in air trap, to purge air at the 3/4" relief valve nipple. Venting of air must take place here, or the boiler warranty is void.

# Gauge

Your boiler is supplied with a temperature and pressure gauge, which is installed in the front of the boiler. (Sentry Boilers are on the coil plate).

## Specifications - TRITON Series



# Burner Installation

The NY Thermal boiler is designed to work with burners described in this manual. The use of other nozzles, and/or burners, may cause unsafe operation and will void any and all responsibility by NY Thermal for the safety and reliability of the system.

## Burner Settings

*(A Reliable, certified smoke pump is required to correctly set up this equipment.)*

The burner must be installed so the end of the blast tube is recessed inside the boiler burner tube by 1/4". For convenience, we have provided recommended air settings (see page 2) which can be used as a starting point for the burner set-up. These settings are guidelines and will require alteration due to installation and equipment variations. To accurately set the combustion system, first establish a stable firing condition with a #1 smoke spot, then slightly increase the air settings until a #0 smoke is obtained. Establish a minimum of three 5 minute burner cycles and repeat the smoke test - a #0 smoke should be detected. *Caution - All tests must be done with the burner covers or air intakes in place to simulate normal operation.*

## Important

**Due to the high combustion efficiencies and low stack gas temperatures, great care must be taken in ensuring that the chimney isn't subjected to gas condensation. The gas temperature where the Flue Pipe enters the chimney must be a minimum of 200°F.**

## Boiler Cleaning

At least once per year, the NY Thermal boiler is to be cleaned and serviced by a licensed burner technician, preferably in the fall months. (If the boiler is not used for extended periods of time, it must also be cleaned before being taken out of service.)

# Warranty

## What is Covered

We the manufacturer warrant to the original owner, that any parts or components of each new boiler will be supplied free of defects in material or workmanship. This warranty replaces any other warranty implied or expressed. All the durations, terms and conditions mentioned hereafter are for manufacturer defects due to material or workmanship only, and do not include misuse or normal wear of the equipment. Equipment returned for warranty consideration will be evaluated upon the condition of the part when examined by us or an authorized service representative. Due care must be taken during handling.

## Basic Coverage A

We will repair or replace any component supplied, but not manufactured by NY Thermal Corporation, that is found to be defective for a period of one (1) year, from date of installation, if found to be in concurrence with the original manufacturer's warranty.

## Basic Coverage B

We will repair or replace the pressure vessel or any component manufactured by NY Thermal Corporation, found to be defective for a period of five (5) years, from the date of installation, if found to be in concurrence with the recommended installation and terms and conditions of this warranty.

## Extended Coverage C

We feel so confident of the quality of the product, we will offer an extended warranty plan for the pressure vessel, if found to be defective for a period of twenty (20) years for the date of installation, if found to be in concurrence with the recommended installation and terms and conditions of this warranty.

This extended plan will credit the costs of repair or replacement of the unit from six (6) to ten (10) years, and on a pro-rated schedule ranging from 100% in year eleven (11) to a fraction of the selling price effective at that time, in year twenty (20). To receive this warranty, the boiler and installation must be registered with NY Thermal. The registration card must be filled out and returned to NY Thermal Corporation within one (1) year of purchase of the unit.

## Terms and Conditions

These terms and conditions void any of the preceding warranty statements:

1. Damage due to installation not in accordance with this manual and local codes and regulations.
2. Any repairs or replacements made without authorization or notification to the manufacturer.
3. This warranty does not cover the labour and shipping costs associated with installing a repaired or replaced boiler.
4. Installations determined to have any leaks in the entire heating system causing make up water to enter the system, eg. solder leaks, coil gasket leaks, frequent system drainage.
5. Decision of warranty repairs or replacements to boiler will be at the discretion of the manufacturer or authorized service representative.
6. This warranty is to the original owner only.

# What to do in the case of a Warranty Service Problem:

1. Contact your installing contractor or burner service company.
2. If your contractor or service representative requires further help, they will contact us directly.
3. If for any reason you cannot contact your contractor or service representative, contact us at 506-657-6000 to the attention of the service department.
4. Please realize that we as the boiler manufacturer will replace or credit the parts under warranty. Credits are at our cost, so do not purchase replacement parts from suppliers with hopes of receiving 100% credit. Thus it is recommended to receive all of your warranty parts from your authorized service representative or us directly, at no charge (if under the warranty coverage).
5. We are very concerned about the service which you receive, so if you have a complaint concerning the authorized service representative, we would very much appreciate your evaluation.

## For Service Contact:

Name \_\_\_\_\_

## Warranty Registration Form

Name \_\_\_\_\_

Address \_\_\_\_\_

City/Prov. \_\_\_\_\_

Boiler Model \_\_\_\_\_

Serial Number \_\_\_\_\_

Installer's Name \_\_\_\_\_

Date of Installation \_\_\_\_\_

**Return to:** NY Thermal Corporation  
31 Industrial Drive,  
Sussex, NB, E4E 2R7

Complete this form, photocopy  
and return to NY Thermal



30 Stonegate Drive  
Saint John, New Brunswick,  
E2H 0A4 Canada  
Tel: 506-657-6000  
Toll-free: 800-688-2575  
Fax: 506-432-1135  
Web: [www.nythermal.com](http://www.nythermal.com)

As we continue to improve our products, we reserve the right to change specifications without notice.

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