

# Introducing the all-new, ultra-compact, high-efficiency TRINITY

When you choose the **TRINITY** Boiler, you choose the ultimate in top-quality, high-efficiency boilers. Count on years of trouble-free, safe and comfortable heat, from North America's hot water heating leader: NTI.

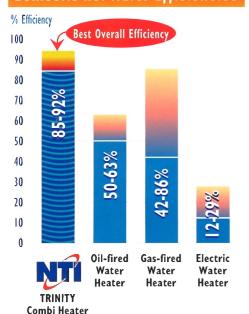
**Great Savings...** The superb efficiencies and state-of-the-art combustion systems of the **TRINITY** means little heat is wasted, less natural gas or propane is used, and homeowners save money.

**Lots of Hot Water...** The **TRINITY'S** high-capacity heat exchanger coil provides ample hot water for every household need, at very low cost.

**Years of Dependability...** NTI customers know... our boilers are built to last a lifetime! With an advanced ignition system, and a top-quality heat exchanger, the Trinity represents the highest standard in top-quality boilers.

The TRINITY makes regular service fast and efficient...
All mechanical components and sophisticated controls are conveniently located and accessible by simply unsnapping access panels.

### Domestic Hot Water Efficiencies



## The all-new NTI combustion system

NTI's new state-of-the-art combustion system allows the TRINITY to modulate the burner to the exact size required to meet the conditions of the system. The TRINITY incorporates an electronic state-of-the-art combustion system to reduce the amount of gas that is injected into the burner, to ensure proper combustion throughout the full range of modulation. This system also compensates for extended venting; therefore, adjustments are not required between short and long vent runs. The TRINITY is a totally sealed combustion system: all combustion air is drawn from outside, used for combustion and then expelled. This eliminates any need for fresh air intake into the room, thereby decreasing heating costs.

#### Exclusive NTI heat exchanger

NTI has developed a sophisticated heat exchanger that provides virtually endless hot water, at unheard-of efficiencies. The condenser does not use aluminum but is constructed totally from stainless steel, which is a proven material for condensing appliances.

The TRINITY utilizes its modulation combustion system to electronically increase or decrease the flame size, depending upon the required flow and water temperature. As the water is instantaneously heated and regulated, a storage tank is not required, and energy is not lost due to typical tank standby losses. The TRINITY can deliver up to 5.5 US gallons of water per minute at a constant temperature of 110°F. The TRINITY system automatically gives priority to the domestic hot water system to ensure that all your family's hot water needs are met.



## Gas Boiler

## All-New Sentry 2100

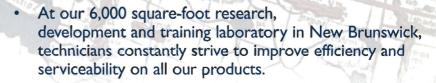
NTI has confirmed its status as the leader in advanced features with the all-new digital Sentry 2100 controller. This digitally programmed controller provides the most accuracy and energy efficiency available.

NTI has committed years to designing the Sentry 2100 controller to provide ultimate reliability. The Sentry is flexible and capable of withstanding numerous installation irregularities. The digital programming system provides the installer with several operational options. The Sentry 2100 controller continuously monitors the outdoor air temperature, and automatically reduces the heating set point. It also modulates the combustion system to ensure long, even cycles utilizing the least possible amount of fuel.



## The NTI Commitment to Service

- Established in 1966 in Sussex, NB, today's NTI remains a privately owned family business with the same original mandate to manufacture top-quality central heating equipment.
- We design our products with easy installation and servicing in mind. The TRINITY is pre-assembled and wired, with easy access to key components. NTI has bilingual sales and technical service.



 NTI's comprehensive two-day training program, developed and run by a full-time Training Manager, provides three levels of certification and is available to service technicians at our plant or anywhere in North America.

#### SENTRY'S ADDITIONAL FEATURES ARE:

- Control is fully enclosed in impact-resistant enclosure
- Multifunctional LED display system
- Digital set point for unmatched accuracy
- Provides all safety and operational functions
- Operates burner, heating pump, and auxiliary indirect pump or valve
- Provided with outdoor sensor for automatic boiler temperature reset
- Pump exerciser routine activates pump for five seconds every 72 hours to prevent seizing
- Internal diagnostic system continuously monitors for errors
- Designed to withstand power dips and spikes

## TOPTEN LIST

The Advantages of the

## TRINITY

- Available in both Natural Gas and Propane versions with a modulation system that eliminates additional models.
- State-of-the-art sealed modulation combustion system with hot surface ignition.
- 3. Innovative condensing heat exchanger provides ultimate efficiencies.
- 4. All connections are conveniently located for ease of installation.
- Wall mount configuration saves valuable floor space.
- Vents easily with conventional ABS or CPVC plastic piping.
- 7. Condenser does not use aluminum but is constructed totally from stainless steel, which is a proven material for condensing appliances.
- 8. The distinctive casing design reduces costly standby losses, while virtually eliminating combustion noises.
- 9. High-capacity heat exchanger coil provides ample domestic hot water.
- 10. The Trinity is certified, designed and rated to strict CSA, AGA and CSAus codes.



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#### **GENERAL SPECIFICATIONS**

Size (D x W x L)	15" × 20.5" × 23"	
Weight	80 lbs.	
Max. Pressure	30 PSI	
Gas Type	Natural, Propane	
Max.Vent	105' equivalent	
Gas Line Size	I/2" NPT	
Max. Supply Water	200°F	
Min. Return Water	30°F	
Oxygen Tube Barrier	Required	
Certification	CSA, AGA, CSAus	

#### **HEATING SPECIFICATIONS**

	T150	T200
BTU Input x1000	50 - 145	75 - 200
BTU Output x1000	47.5 - 137.7	70.5 - 188
S.S. Efficiency	95%	94%
AFUE	91.9%	90.8%
Pressure Drop	6 feet	9 feet
Supply - Return	3/4" NPT	

#### **DOMESTIC HOT WATER**

(Combi Version)

	T150	T200
Supply - Return	3/4" NPT Outlet 1/2" Inlet	
DWH Pressure Drop	I PSI	
Heating Pressure Drop	7 feet	10 feet
Temperature Regulation	Electric Modulation	
D.H.W. Outputs at	4.0 @ 110°F	5.5 @ 110°F
45° inlet water	3.5 @ 120°F	4.8 @ 120°F
(GPM @ Water °F)	3.1 @ 130°F	4.5 @ 130°F



FRONT

Gas Line

Air In



TOP

**Exhaust** 





DISTRIBUTED BY:

gama

## **Trinity**

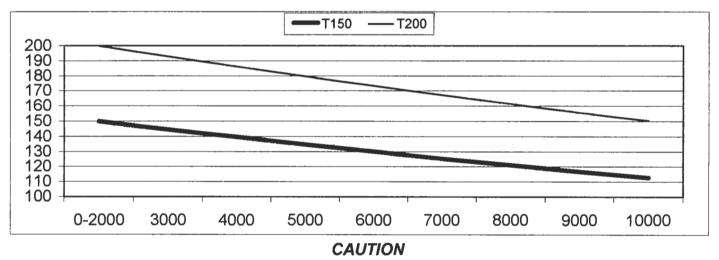
#### 1.0 SPECIFICATIONS

Description	T150	T200
Description	1150	1 200

Input (BTUx1000)	Natural =145 / 50	Natural = 200 / 75
Input Capacity - Max. / Min.	Propane= 140 / <i>50</i>	Propane= 190 / <i>75</i>
Output (BTUx1000)	Nat=137 / 47.5	Natural= 188 / 70.5
Output Capacity - Max. / Min.	Propane = 133 / 47.5	Propane = 178.6 / 70.5
Steady State Efficiency	95%	94%
AFUE Efficiency	91.9%	90.8%
Venting material	ABS, CPVC, PVC, AL294C stainless	
Max. Vent lengths 2"	25 Equivalent Feet	-
Max. Vent lengths 3"	105 Equivalent Feet	
Weight	90 lbs.	
Dimensions L-W-D	23.75 – 20.5 – 15	
Clearance to Combustibles	0"	

#### 1.1 High Altitude Operation

The Trinity boiler is designed to operate to capacity in installations with 2000 feet of elevation or less. As elevations higher than 2000 feet have less dense air, the unit is not capable of providing its specified capacity. The affect of elevation will derate the input by approximately 3.6% per 1000 foot of elevation, (see following Chart).



At elevations greater than 2000 feet, the combustion of the Trinity must be checked with a calibrated combustion tester to ensure safe and reliable operation. Consult section 5.20 for instructions on adjusting the input to provide proper operation.

It is the <u>Installers responsibility</u> to check the combustion, and to adjust the combustion to section 5.02