

# Toaster™

**Serious Thermal Products Ltd.**




The TOASTER™ Infrared Ground Thawing Equipment by Serious Thermal Products Ltd., is a propane-fired, electrically operated infra-red ground thawing device specifically designed to remove frost from frozen ground to allow for installation, repair, and replacement of buried utilities and excavation of small areas or trenching. **The device is field inspected, tested and approved (labelled with field evaluation labels) for Canada and the United States.** The use of infra - red technology provides the advantages of:

- **No open flame:** place units next to buildings and utility pedestals
- **Easy set-up:** no heavy equipment required and site preparation reduced
- **Less affected conditions:** such as wind, snow, and ice than traditional thawing methods.
- **Flexible:** can be placed in any number of positions, side by side, end to end and Tee configurations.
- **Efficient:** thaw rates equal to coal and faster than existing open flame units and less affected by wind, snow and ice.
- **Environment friendly:** doesn't emit foul odours or smoke.
- **Reliable:** all components rated to -40° (C,F).

## GENERAL HAZARD WARNING

FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSIONS, BURN ASPHIXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK. ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE THIS HEATER. IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABEL, ETC. CONTACT THE MANUFACTURER.

 **WARNING:** FIRE, BURN, INHALATION, AND EXPLOSION HAZARD, KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIEALS, PAPER, OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THE INSTRUCTIONS. NEVER USE THE HEATER IN SPACE WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES OR UNKNOWN CHEMICALS.

 **WARNING:** NOT FOR HOME OR RECREATIONAL VEHICLE USE.  **FOR OUTDOOR USE ONLY.**

## Technical Specifications

A Serious TOASTER unit comes with a regulator with 25' hose. You provide your own power and propane.

- Dimensions: 123.5" (l) x 20.75" (h) x 26.75" (w)  
3.2 m (l) x 0.52 m (h) x 0.68 m (w)
- Weight: 345 lbs (118 kg)
- Fuel: Propane Gas
  - The TOASTER can be used with a 500 gallon tank for larger work sites and for smaller sites a 100 lb tank for 1 heater or a 420 lb tank for 2 heaters (*see propane tank sizing chart*).
- Fuel input: 88,000 Btu/hour
- Gas supply Pressure: Max:14" WC; Min: 11" WC
- Input Power: 120V, 1A. 60 Hz
- Min ambient temperature – 40° C.
- Manifold pressure: 6.3" WC
- Consumption: Avg. 4 Pound/Hour
- Stainless Steel Reflector
- Solid State Electronics
- Lifting Bracket
- Power cord must be type SEW, SEOW, SW or SOW rated minimum 15 A

## Propane Tank Sizing

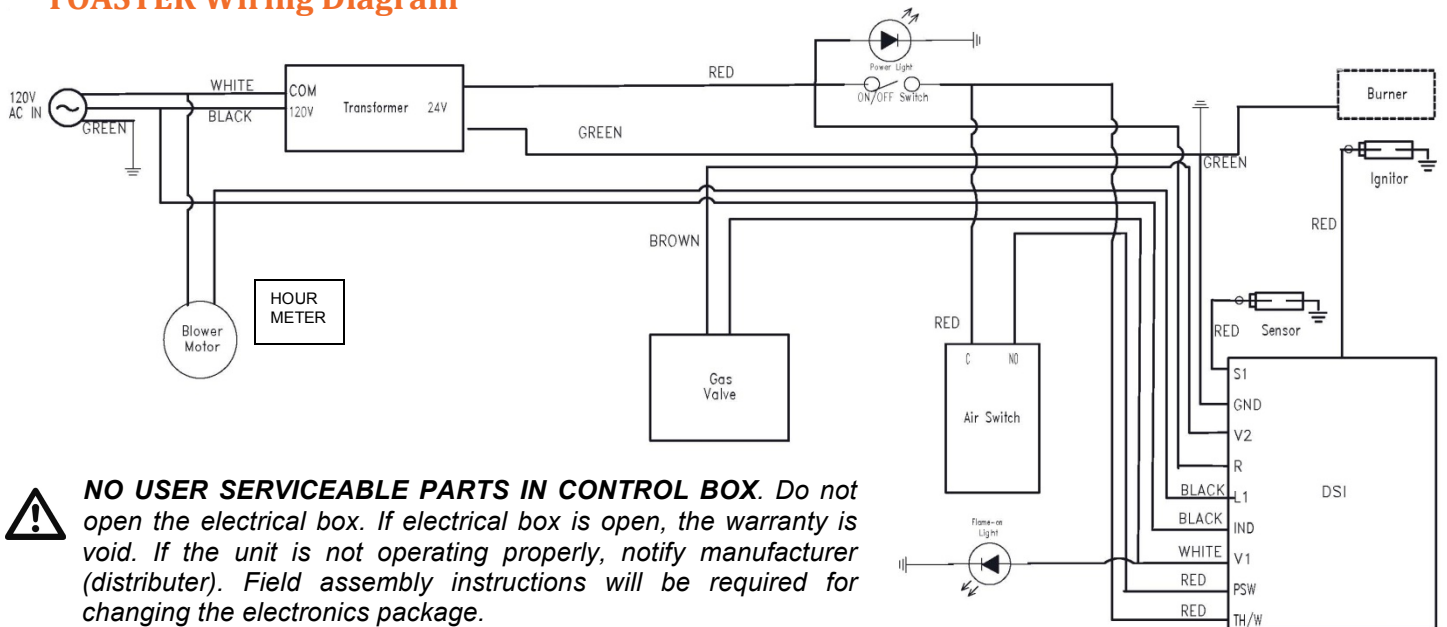
It is important to use the correct size of propane tank for your job. Weather has a dramatic influence on the ability of propane tanks to vaporise propane. The Serious Toaster will run on smaller tanks but will not reach maximum efficiency. Use the charts below to ensure your success in thawing ground with the Serious Toaster.

**USE ONLY THE HOSE AND REGULATOR PROVIDED BY SERIOUS THERMAL PRODUCTS LTD.**

- If not using supplied regulator (Gas Flo GR-800) tank regulator must provide protected pressure of 11" W.C to the heater (downstream of the gas hose).
- All tanks should have tank heaters to obtain these results

100 Pound Tank		420 Pound Tank				500 Gallon Tank		
Temperature		# of Toasters	Temperature		# of Toasters	Temperature		# of Toasters
C	F		C	F		C	F	
-40	-40	1	-40	-40	2	-40	-40	5
-28	-18.4	2	-28	-18.4	4	-28	-18.4	8
-16	3.2	3	-14	6.8	6	-14	6.8	12
0	32	4	0	32	8	0	32	16

## TOASTER Wiring Diagram



**NO USER SERVICEABLE PARTS IN CONTROL BOX.** Do not open the electrical box. If electrical box is open, the warranty is void. If the unit is not operating properly, notify manufacturer (distributor). Field assembly instructions will be required for changing the electronics package.

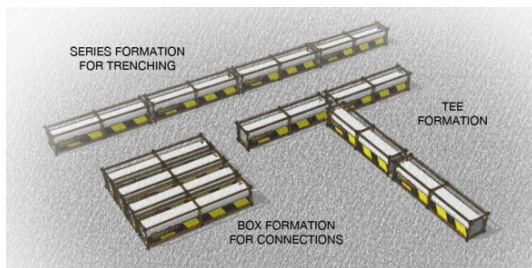
## TOASTER Clearances

Position heater properly before use:

- Maintain the following clearances of 6" from the top, 12" from sides to combustible materials, gasoline, and other flammable vapours and liquids.
- The hose assembly shall be protected from traffic, building materials and contact with hot surfaces both during use and while in storage.
- The heater must not be placed at an angle greater than: 25 degrees.
- The TOASTER is intended as a temporary heater to defrost frozen ground. **DO NOT USE AS A SPACE HEATING DEVICE – DO NOT PLACE OVER COMBUSTIBLE MATERIALS**
- Keep debris and snow clear of all vents and openings.
- Do not block the control panel during operation so you can easily turn on and off the unit.

## Serious TOASTER Placement

- **CAUTION:** Locate the heater at least 3 m (10 ft) from any propane gas container. No radiant heater shall be directed toward any propane gas heater within 6 m (20 ft).
- **CAUTION:** Always monitor the TOASTER when heating concrete surfaces. Too much heat on a concrete surface could cause it to crack or explode.



Multiple TOASTER units have flexible configuration such as a series, tee, or square.

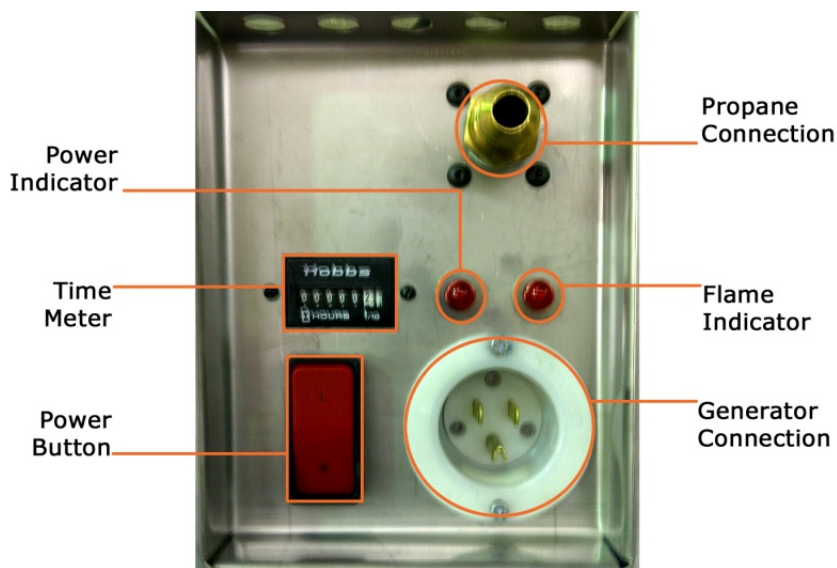


The TOASTER heats the ground in a pyramid pattern that widens out below the unit as heat penetrates the ground deeper.

## Unit Operation

### TURN ON THE TOASTER

1. The TOASTER must be placed to direct heat at the surface to be thawed. If the TOASTER is installed on slope, make sure that it cannot slide out of position.
2. *Visually inspect the hose assembly before each use. Replace the hose if it is worn, abraded, or cut.*
3. Hook up line to propane tank to the propane connection on TOASTER.
4. Open the propane tank valve.
5. Connect TOASTER to 120V power source with the approved cord.
6. Turn on TOASTER with the power button. The red LED light will light up indicating power—the second LED indicates ignition.



**⚠️ WARNING! Electrical Grounding Instructions:** This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle.

### TURN OFF THE TOASTER

1. Turn off the TOASTER™ with the power button.
2. Close the propane tank valve and disconnect propane hose from TOASTER™.  
*Always close the valve on the propane tank to turn off the gas flow when the unit is not in use.*
3. Unplug the power cord from TOASTER™.

**NOTE:** Always disconnect the propane supply cylinder and generator, and store securely when the heater is not in use. Storage and installation of the propane supply cylinder must be in accordance with the Standard for the **Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58** and the latest edition of the **Natural Gas and Propane Installation Code, CSA B149.1**.

### CLEAN THE TOASTER

The Serious TOASTER™ is built with stainless steel to resist corrosion and increase efficiency. The cleaner the inner reflective surfaces are, the more efficient the heater. Clean these surfaces with any household cleaner designed for stainless steel.

**⚠️ Never clean the heater when hot.**

## Troubleshooting

If your TOASTER doesn't work check the following:

- Electrical and propane connections.
  - Propane tank valve is open.
  - Electrical supply is steady and 120V (Standard Household current)
1. Turn ON/OFF switch to OFF position, then turn to ON position.
  2. If still no combustion, contact Serious Thermal Products Ltd. **NO USER SERVICEABLE PARTS IN CONTROL BOX.**

If instructed by Serious Thermal Products Ltd. Remove control box by removing the 4 – Phillips head screws that connect it to frame, install replacement control box and replace screws. See Picture 1&2



Picture 1



Picture 2



### WARNINGS



If you smell gas anytime during operation, turn off the TOASTER and shut the propane tank valve **immediately**. If you suspect a propane leak use a bubble test or a propane gas detectors to test for a leak.

The TOASTER can be lifted by two or more people. Always lift with proper ergonomic lifting techniques or use a fork lift to move and position the TOASTER.

Heat exchangers are hot while in operation. Do not touch the heat exchangers on the underside of the TOASTER when the unit is on.

Manufactured by Serious Thermal Products Ltd.  
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Retain these instructions for future reference. Contact the manufacturer for any replacement parts or repairs.  
ANSI Z83.7b . CGA 2.14b-2009 Constr. Htr Construction Heater for use with Propane.