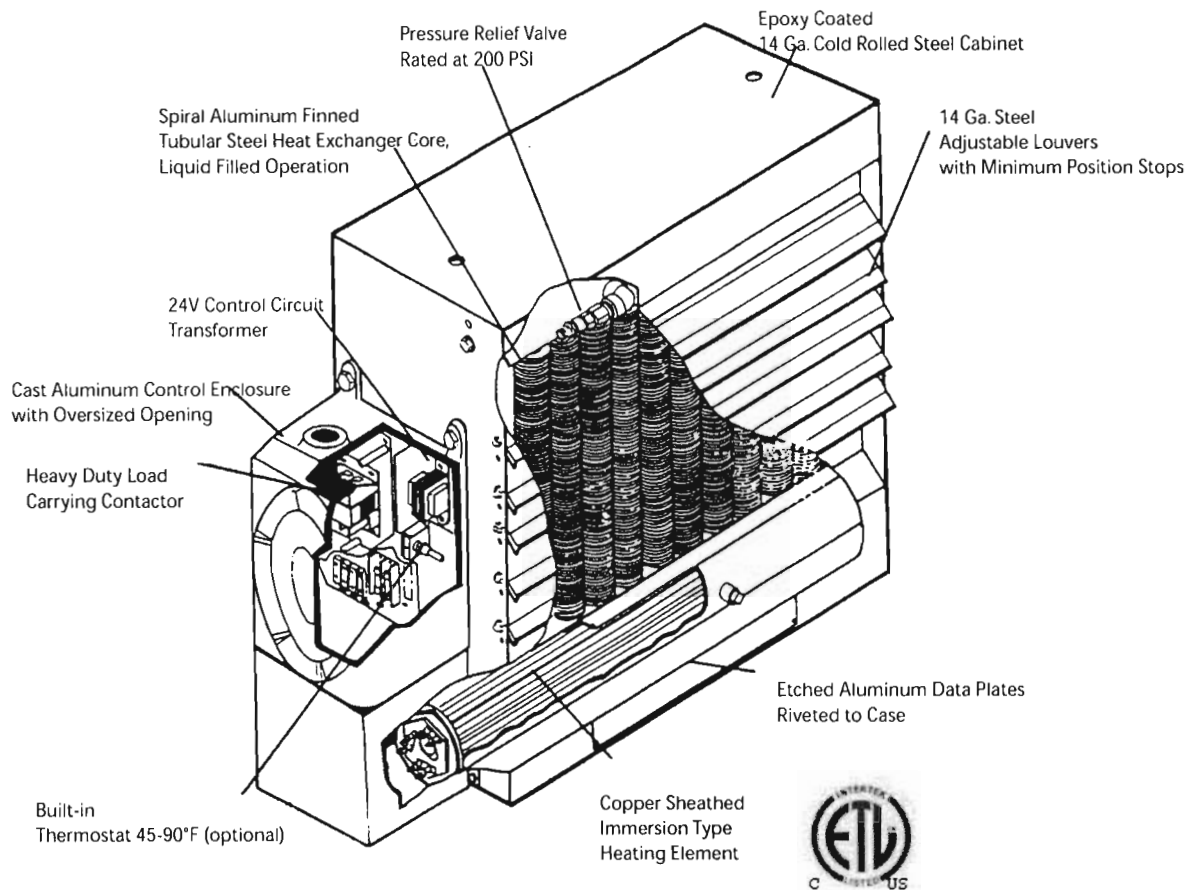


An aerial photograph of a wetland area. The landscape is a mosaic of green, textured vegetation and light blue, irregularly shaped water bodies. The water bodies are scattered throughout the green areas, creating a fragmented pattern. The overall scene is a natural, undisturbed wetland environment.

**Brasch Hazardous Location Unit Heaters**

# BRASCH HAZARDOUS LOCATION Heaters

## Electric Heater



- Liquid to air heat exchanger with low watt density heating elements in ethylene glycol solution that provides freeze protection to -45°C.
- Ball bearing permanently lubricated explosion proof motor. Chrome plated guard meets OSHA requirements.
- Heavy-duty control contactor with 24 Volt control circuit provided on all models.

### CAUTION

Before installing and operating heaters confirm location, classification and properties of flammable vapors, liquids, gases, dusts and fibers which may be present. Each room, section or area should be considered individually.

For further information consult National Electric Code and National Fire Prevention Association (ANSI) standards. All models conform to OSHA requirements when mounted at any height.

For Class I, Group C & D, Divisions 1 & 2 and Class II, Groups E, F and G, Divisions 1 & 2

# BHUH Features

Designed for rugged industrial applications in hazardous locations where the possibility of explosion or fire exists due to the presence of certain flammable gases, vapors, powdered metals or dusts.

- Permanently sealed, liquid to air, finned tube heat exchanger core.
- Ethylene Glycol to water mixture used a heat transfer fluid in the heater core, providing -45°C, (-49°F) freeze damage protection.
- High-performance electric motor driven fan blows air across finned tubes to effect uniform heat transfer and area heat distribution.
- Automatic Reset capillary type high limit provides high temperature regulation and is rated for 100,000 cycles of service.
- Stainless steel and aluminum pressure relief valve for over-pressure condition.
- 14 Ga. steel cabinet epoxy paint finish contains heater core, motor and fan assembly.
- Narrow gap safety fan guard shields all moving parts.
- Adjustable louvers allow directional control of air.
- Copper conductor wires enclosed in rigid metal conduits carry all electrical power.

(Box lugs furnished for field connections within an approved enclosure)

Abbreviated descriptions of UL classes, groups and divisions. Before selecting any heater for a particular application, refer to Article 500 as well as other standards referenced in the National Electric Code.

**Class I:** Equipment does not have surface operating temperature in excess of the ignition temperature of the specific gas or vapor.

**Class II:** Equipment does not have surface temperature greater than the ignition temperature of the specified dust.

**Group C:** Atmospheres containing flammable liquid-produced vapor mixed with air that may burn or explode.

**Group D:** Atmospheres such as but not limited to acetone, alcohol, gasoline, lacquer solvent vapors, natural gas, propane or other gases or vapors of equivalent hazard.

**Group E:** Atmospheres containing combustible metal dust regardless of resistivity, or other combustible dust of similar hazard characteristics having resistivity of less than 10° OHM-Centimeter.

**Group F:** Atmospheres containing carbon black, charcoal, coal or coke dust.

**Group G:** Atmospheres containing combustible dust having resistivity of 10° OHM-Centimeter or greater.

**Division I:** A location in which ignitable concentrations of flammable material exist under normal operating conditions.

**Division II:** Locations in which flammable materials will normally be confined within closed containers and escape only in the case of accidental rupture, breakdown or during maintenance operations. Any equipment approved for Division I is automatically also approved for Division II.

## Built-in Hydraulic Thermostat optional on all BHUH models

- Stainless steel bulb and capillary
- 125 VA pilot duty
- Used on 24 volt, 120 volt or 208-240 volt line voltage control
- 60° to 90° temp range
- Adjustable from front of unit with screwdriver.

## Hazardous Location Nema 7 Div. 1 Rated Wall- Mounted Thermostat

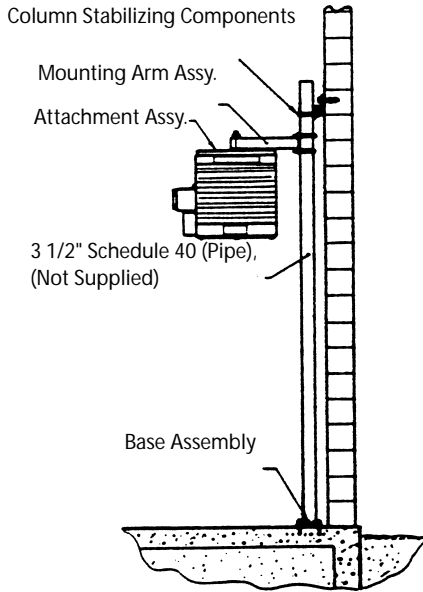
- Single Pole & Double Pole
- 22 Amps 125-277 Vac
- 3/4 HP 125 Vac
- 1 1/2 HP 250-277 Vac
- 5 3/4" H x 5 5/8" W x 4 1/2" D
- Can be used for heating or cooling applications

## Installation Conditions

1. Refer to owner's manual.
2. The BHUH Series electric unit heaters have been listed by ETL Semko. Use only in atmospheres having an ignition temperature higher than 165°C (T3B) for Class I operation and 165°C (T3B) for Class II.
3. Altitude restrictions - see specification table.
4. Heater must be installed in permanently mounted upright position and connected to fixed power supply.
5. Do not operate in atmospheres corrosive to steel and aluminum.

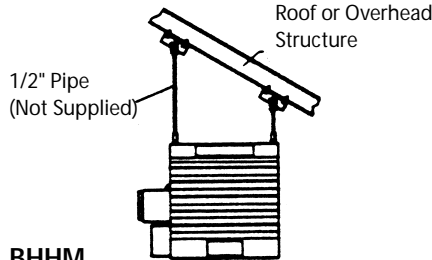


## Mounting Bracket Kits



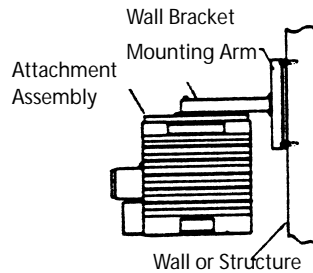
### BHPM Pipe Mounting Kit

Particularly useful in buildings with insufficient strength to use other type of mounts. Requires 3 1/2" pipe (4" O.D. - not supplied).



### BHHM Hanging Mounting Kit

Simple and economical if adequate overhead structure exists. Requires 1/2" pipe, cut and threaded (no supplied).



### BHWM Wall Mounting Kit

Ideal for use in buildings that have substantial walls. Arm only can also be bolted directly to structural steel.

### PIPE KITS

BHPM 75	3 to 7.5KW Models
BHPM 10	10KW Models
BHPM 25	15 to 25KW Models

### HANGING KITS

BHHM	All Models
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### WALL MOUNTING KITS

BHWM 75	3 to 7.5KW Models
BHWM 10	10KW Models
BHWM 25	15 to 25KW Models

## Sample Specifications

Contactors shall supply and install Brasch type BHUH explosion-proof suspended fan-forced unit heaters of the capacity and voltage listed on the plans. Heaters shall be ETL listed for Class I, Group C & D, Divisions 1 & 2 and Class II, Groups E, F and G, Divisions 1 & 2, UL temperature code shall be T3B (165°C) for Class 1, and T3B (165°C) for Class II, indicating maximum operating surface temperatures.

Heat exchangers shall be heavy walled, liquid filled, with three, low watt density, immersion type copper sheathed elements hermetically sealed into the core along with the high limit thermal cut-out. Heat transfer fluid shall be ethylene-glycol solution, protected to -45°C (-49°F).

Motors shall be PSC, explosion-proof, permanently lubricated, ball bearing type, 1725 rpm.

Contactors shall be built-in and pre-wired into an explosion-proof enclosure. Contactors shall be heavy duty and break all ungrounded conductors and be rated for 100,000 cycles at full load. Control transformers shall be built-in and pre-wired. Control circuits shall be 24 volt.

Cabinet shall be 14 gauge cold rolled steel, epoxy coated plated fan guard shall have less than 1/4 inch spacing to conform with OSHA requirements. All fasteners shall be zinc plated. Heater conduits shall be cadmium plated seamless steel or aluminum.

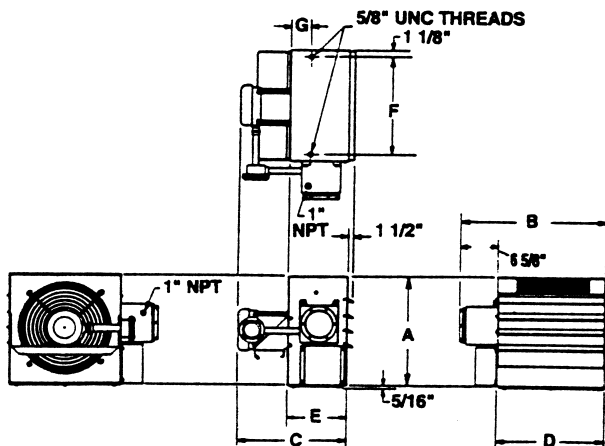
## Mounting Kits

Brasch offers three mounting kits available for the Series: the BHPM Pipe Mounting Kit; the BHHM Hanging Mounting Kit; and the BHWM Wall Mounting Kit. Each of these is illustrated and described in this brochure. To order, specify the type of kit with the heater model desired. Consult our Sales Department for details.

## Physical Dimensions

Inches

Model	A	B	3Ø <sup>C</sup>	1Ø	D	E	F	G
BHUH-A	17 3/4	22 3/8	19 3/4	20 5/8	16 1/4	10 1/2	14	3
BHUH-B	20 3/4	26 3/8	20 3/4	21 5/8	20 1/4	11 1/2	18	4
BHUH-C	24 3/4	30 3/8	22 1/2	—	24 1/4	12 1/2	22	4 1/2



## Performance Data

Size	Model	Volts	Phase	KW	Heater Amps	Line Amps	BTU/HR	Air Temp Rise Deg F	Min Cir Ampacity	Max Fuse Amps	Min. Wire AWG?*
BHUH 7.5	BHUH 3-2081	208	1	3.0	14.4	16.3	10250	16.6	20.4	25	10
	BHUH 3-2083	208	3	3.0	8.3	9.8	10250	16.6	12.3	15	14
	BHUH 3-2401	240	1	3.0	12.5	14.8	10250	16.6	18.5	20	12
	BHUH 3-2403	240	3	3.0	7.2	8.6	10250	16.6	10.8	15	14
	BHUH 3-4803	480	3	3.0	3.6	4.3	10250	16.6	5.4	15	14
	BHUH 3-6003	600	3	3.0	2.9	3.5	10250	16.6	4.4	15	14
	BHUH 5-2081	208	1	5.0	24.0	26.0	17100	27.6	32.4	35	8
	BHUH 5-2083	208	3	5.0	13.9	15.4	17100	27.6	19.2	20	12
	BHUH 5-2401	240	1	5.0	20.8	23.1	17100	27.6	28.9	30	10
	BHUH 5-2403	240	3	5.0	12.0	13.4	17100	27.6	16.8	20	12
	BHUH 5-4803	480	3	5.0	6.0	6.7	17100	27.6	8.4	15	14
	BHUH 5-6003	600	3	5.0	4.8	5.4	17100	27.6	6.8	15	14
	BHUH 7.5-2081	208	1	7.5	36.1	38.0	25600	41.4	47.5	50	8
	BHUH 7.5-2083	208	3	7.5	20.8	22.3	25600	41.4	27.9	30	10
	BHUH 7.5-2401	240	1	7.5	31.3	33.6	25600	41.4	42.0	45	8
	BHUH 7.5-2403	240	3	7.5	18.0	19.4	25600	41.4	24.3	25	10
	BHUH 7.5-4803	480	3	7.5	9.0	9.7	25600	41.4	12.2	15	14
	BHUH 7.5-6003	600	3	7.5	7.2	7.8	25600	41.4	9.8	15	14
BHUH 10	BHUH 10-2083	208	3	10.0	27.8	29.3	34150	21.7	36.6	40	8
	BHUH 10-2401	240	1	10.0	41.7	44.0	34150	21.7	55.0	60	6
	BHUH 10-2403	240	3	10.0	24.1	25.5	34150	21.7	31.8	35	8
	BHUH 10-4803	480	3	10.0	12.0	12.7	24150	21.7	15.9	20	12
	BHUH 10-6003	600	3	10.0	9.6	10.2	34150	21.7	12.8	15	14
BHUH 25	BHUH 15-2083	208	3	15.0	41.6	43.5	51200	19.2	54.4	60	6
	BHUH 15-2403	240	3	15.0	36.1	38.1	51200	19.2	47.6	50	8
	BHUH 15-4803	480	3	15.0	18.0	19.0	51200	19.2	23.8	25	10
	BHUH 15-6003	300	3	15.0	14.4	15.2	51200	19.2	19.0	20	12
	BHUH 20-4803	480	3	20.0	24.1	25.1	68300	26.2	31.3	35	8
	BHUH 20-6003	600	3	20.0	19.2	20.0	68300	26.2	25.1	30	10
	BHUH 25-4803	480	3	25.0	30.1	31.1	85400	32.8	38.8	40	8
	BHUH 25-6003	600	3	25.0	24.1	24.9	85400	32.8	31.1	35	8

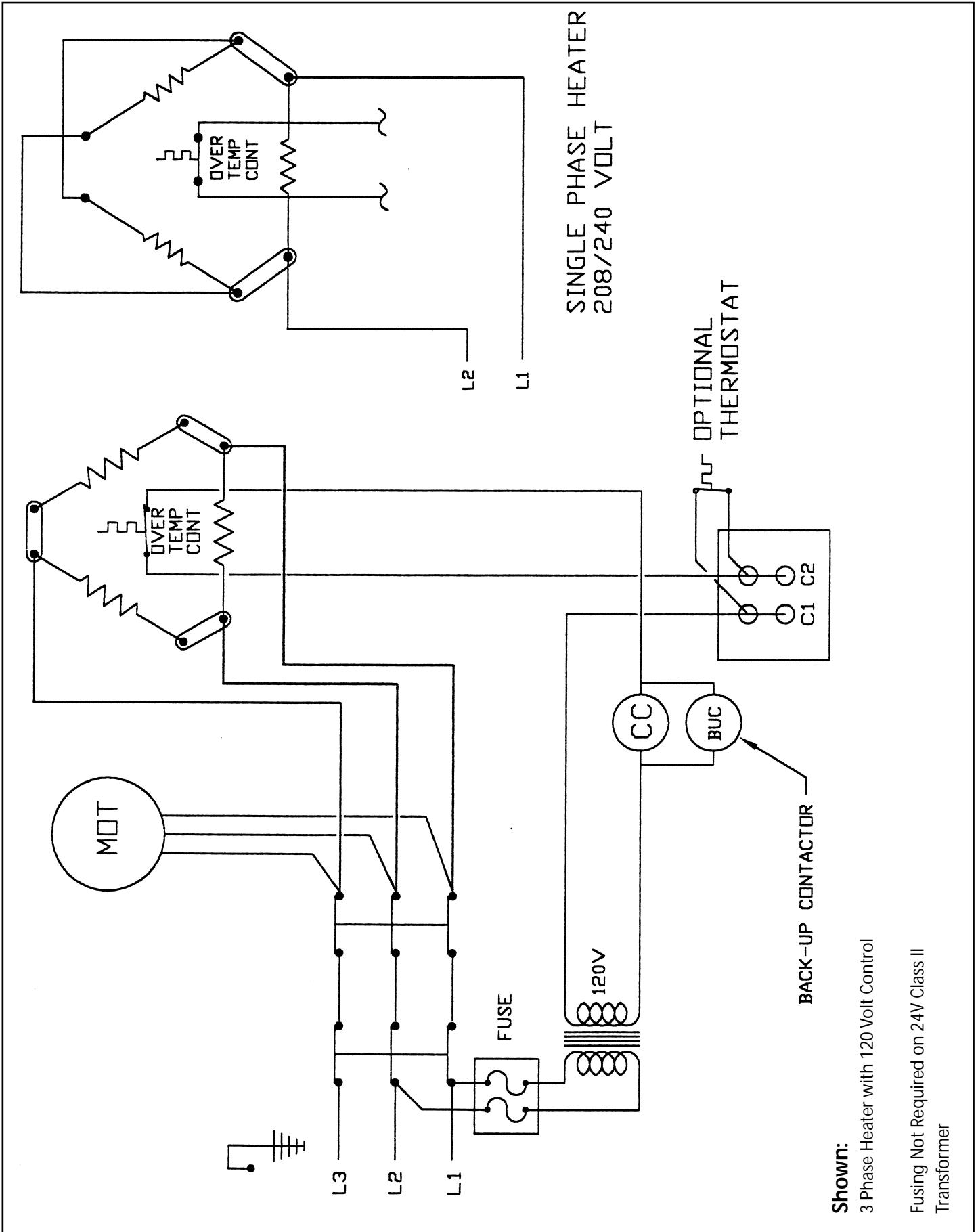
\*Supply conductors must be suitable for 90°C

### Controls

- Standard unit includes 24 volt transformer and contactors
- 120 volt option — delete 24 suffix on model # — add 120 to model #
- 600 volt models available with 24 volt controls only

### Thermostats

- Add suffix "T" to model # for built-in thermostat
- Remote thermostat — see wall thermostat specifications on page 3



**Shown:**

3 Phase Heater with 120 Volt Control

Fusing Not Required on 24V Class II Transformer

## Limited Warranty

All Brasch Manufacturing Company, Inc. products covered in this bulletin are warranted against defects in workmanship and materials for one year from date of purchase. This warranty does not apply to damage from accident, misuse or alteration; nor where the connected voltage is more than 5% above product nameplate voltage; nor to equipment improperly installed or wired or maintained in violation of installation instructions. This warranty is valid only in the fifty states of the United States. No other written or oral warranty applies. No employee, agent, dealer or other person is authorized to extend warranty on behalf of Brasch Manufacturing Company.

The customer shall be responsible for all costs incurred in the removal or reinstallation and shipping of the product for repairs. Inoperative units should be returned to Brasch, attention of Service Manager for repair or replacement at our option. Product will be returned freight prepaid. Repair or replacement is the exclusive remedy available from Brasch who is not liable for damages of any kind, including incidental and consequential damage.



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