NHW-15 HOT WATER MACHINE

OPERATING MANUAL/INSTALLATION

120/240 V 1650/660 W US
120/240 V 1350/5500 W CAN
CONVERTIBLE

2 GALLON
DRIP TRAY INCLUDED
ADVANCED TEMPERATURE CONTROL
TVT TECHNOLOGY

NEWCO
ENTERPRISES
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SPECIFICATIONS
MODEL NW15 HOT WATER MACHINE

120/240 VOLTS     3 GALLONS PER HOUR (120V)  6 GALLONS PER HOUR (240V) 1 PH
OPERATING TEMP RANGE: 170 DEG F - 208 DEG F

* UNIT CAN BE CONVERTED FROM 120 V 1PH TO 240V 1PH
(240V POWER CORD NOT SUPPLIED)
SEE 240 V SCHEMATIC
MACHINE SETUP

PLUMBER’S INSTALLATION INSTRUCTIONS

**CAUTION:** Power to machine must be OFF before proceeding with plumbing installation.

1) Flush water line before installing machine. Machine should be connected to COLD WATER LINE for best operation.

2) Water pressure should be at least 20 psi. For less than a 25 ft run, use 1/4” copper tubing and connect to 1/2” or larger water line. For longer runs, use 3/8” copper tubing & connect to 1/2” or larger water line and provide an adapter fitting for connection to the machine.

3) If installed with saddle valve, the valve should have a minimum of 1/8” port hole for up to 25 ft run, and 5/16” port hole for over 25 ft runs.

4) Connect incoming water line to the flow control device on the back of the machine. A 1/4” flare fitting is provided. Manufacturer recommends connecting to copper tubing.

**ELECTRICAL HOOKUP**

**WARNING:** - Read and follow installation instructions before plugging or wiring in machine to electrical circuit. Warranty will be void if machine is connected to any voltage other than that specified on the name plate.

The machine has a power cord attached for 120 volts. Machine should be connected to the appropriate receptacle type. A wiring diagram at the rear of this manual illustrates the complete machine wiring.

**INSTALLATION INSTRUCTIONS**

**WARNING:** - Read and follow installation instructions before plugging or wiring in machine to electrical circuit.

1) **Make sure machine is level.** Connect machine to water line as described in “PLUMBER’S INSTALLATION INSTRUCTIONS”. Connect to suitable power supply as described in “ELECTRICAL HOOKUP”. Tank will begin to fill when connected to power supply. The display will indicate ‘fill’ when filling is in process. Time required to fill the tank is about 4-1/2 minutes.

2) Water level in the tank is controlled by a level probe which senses when water contact is made. A maximum run time of six minutes is programmed into the machine for the initial fill cycle to prevent flooding should an error occur.

3) Once the water level has reached the proper water level the tank heater will begin to heat the water to the preset temperature. This prevents premature failure of the element by heating it dry. This probe will also call for power to be shut off to the element should the probe not detect water for 3 minutes. Heating time will be approximately 20 minutes. The heating circuit has a maximum continuous run time of 45 minutes. Should the machine call for heat for a time period in excess of 45 minutes the machine will shut down the heating circuit and display an Er5 message. See the “ERROR MESSAGES” section for instructions on how to clear the error and possible causes. The heating icon (thermometer) on the faceplate will indicate heating status. As the preset temperature is approached the icon will begin pulsing as the power to the element is cycled on and off.
**NHW-15 OPERATING INSTRUCTIONS**

**FACTORY DEFAULT TEMPERATURE SETTING IS 200 DEGREES F**

TO ADJUST TEMPERATURE SETTING:

1. DEPRESS AND HOLD CENTER BUTTON FOR 5 SECONDS UNTIL ‘prog’ APPEARS
2. TOGGLE TEMPERATURE SETTING UP OR DOWN WITH ARROWS
3. DEPRESS CENTER BUTTON, ‘end’ WILL APPEAR
4. DEPRESS LEFT OR RIGHT BUTTON TO EXIT PROGRAM MODE TEMPERATURE SETTING WILL BE STORED

TO MONITOR UPPER AND LOWER WATER TEMPERATURE LEVELS:

1. DEPRESS LEFT ARROW TO MONITOR UPPER TANK TEMPERATURE
2. DEPRESS RIGHT ARROW TO MONITOR LOWER TANK TEMPERATURE

TO CHANGE FROM FAHRENHEIT TO CENTIGRADE TEMP DISPLAY:

1. UNPLUG POWER CORD
2. DEPRESS AND HOLD CENTER BUTTON, WHILE HOLDING BUTTON PLUG POWER CORD BACK IN
3. WHEN ‘prog’ APPEARS TOGGLE F TO C WITH LEFT OR RIGHT BUTTONS
4. DEPRESS CENTER BUTTON TWICE UNTIL ‘end’ APPEARS
5. DEPRESS LEFT OR RIGHT BUTTON TO STORE SETTING AND EXIT PROGRAM MODE

NOTE: A THERMOMETER ICON IS DISPLAYED WHEN THE HEATER IS ENERGIZED
A ‘HAPPY FACE’ ICON IS DISPLAYED WHEN TEMPERATURE SETPOINT IS REACHED
<table>
<thead>
<tr>
<th>FIGURE #</th>
<th>QTY.</th>
<th>PART #</th>
<th>DESCRIPTION</th>
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Service Notes

1) Should water overflow the tank into the float switch, the water fill valve (solenoid) circuit is interrupted. This is a safety feature to prevent as spill from occurring should the water level-probe system malfunction (ER6). To empty the overflow cup, unplug the power cord and loosen screw on the sheet metal cup holder bracket. (see illustration on page 9) and empty cup.

2) The heater element is protected by a hi-limit manual reset thermostat (ER5).

Error Modes - To reset an error condition simply power the machine off and back on. If the error continues, check the condition of all sensors, hardware & wiring.

ER1 – Top thermistor shorted
ER2 – Top thermistor open
ER3 – Bottom thermistor shorted
ER4 – Bottom thermistor open
ER5 – Heater has run for more than 45 minutes continuously
ER6 – Fill time has run for more than 6 minutes
HOT WATER MACHINE 120/240V - MODEL NO. NH-15

LIQUID LEVEL BOARD

DISPLAY BOARD NEWCO ELECTRONICS-25208

TANK LEVEL PROBE

FLOAT SWITCH

FILL SOLENOID VALVE

SOLID STATE DRIVER (TRIAC)

TO CONVERT FROM 120 V TO 240 V OPERATION, MOVE OR/WH WIRE FROM N TO L2 AND CHANGE POWER CORD DASHED LINE FOR 240 V ONLY

TERMINAL BLOCK

120 V HOOKUP

240 V HOOKUP

POWER CORD

CHASSIS GND

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