

# START-UP FORM FOR BRIGADE™ WATER HEATERS

A Start-up Form must be completed for each unit installed on site. All completed Start-Up Forms must be returned to the PVI Customer Care Department **within 21 days from the date of Start-Up to activate warranty.** Start-up must be performed by qualified personnel.

## PVI CUSTOMER CARE DEPARTMENT

PVI Industries LLC 425 W. Everman Pkwy. Suite 101 Fort Worth, TX 76134	Phone: 1-800-433-5654 Email: <a href="mailto:PVI-CustomerCare@wattswater.com">PVI-CustomerCare@wattswater.com</a> Web: <a href="http://www.pvi.com">www.pvi.com</a>
<i>* This Equipment Start-up Form can also be completed and submitted electronically via our web site at <a href="http://www.pvi.com">www.pvi.com</a>. You will find it under the Service and Support menu, e-Forms section.</i>	

<b>Date:</b>		<b>Report Type:</b>	Original Start-Up <input type="checkbox"/>	Service Call <input type="checkbox"/>			
<b>Model Number:</b>		<b>Serial Number:</b>					
<b>Installation Job Name:</b>							
<b>Installation Address:</b>							
<b>Installation Type:</b>	New <input type="checkbox"/>	Repl. <input type="checkbox"/>	School <input type="checkbox"/>	Lodging <input type="checkbox"/>	Hospital <input type="checkbox"/>	Restaurant <input type="checkbox"/>	Other <input type="checkbox"/>

## PRE START-UP CHECKLIST

Inspect the unit for the following points as applicable and refer to the product Installation & Maintenance Manual prior to Start-Up. Note any deficiencies in the space provided at the end of the report.

GENERAL	(Y / N / NA)
Is the electrical disconnect set to the "Off" position?	
Is the unit damaged or are there any missing parts?	
Is there adequate clearance for proper operation & maintenance?	
Has the ductwork been properly connected and complete?	
Have all shipped loose parts been installed? (sensors, hoods, filters)	
Are all piping complete, connections tight, leak free and damage free?	

WATER SYSTEM	(Y / N / NA)
T&P relief valve(s) piped to a suitable floor drain?	
Expansion relief in the cold water supply?	
Water softener on the cold water supply?	
Mixing valve on the hot water supply?	
Is the condensate trap installed and positioned properly?	
Is there a building recirculation loop piped to the water heater?	
Is the building return connected to the dedicated mid-tank fitting at the rear of the tank as required?	

BUILDING MANAGEMENT/AUTOMATION	(Y / N / NA)
Gateway installed?	
EMS Discrete Interface (Enable, Disable, Remote On-off)?	
EMS Communication Interface (Modbus, BACnet, etc.)?	
EMS connected to which field access terminals:	Field Wire Gauge:
EMS Brand (JCI, Siemens, etc.):	

**START-UP FORM FOR BRIGADE™ WATER HEATERS (cont.)**

ELECTRICAL & CONTROL REQUIREMENTS							(Y / N / NA)
Does the main power supply comply with the unit's nameplate specifications?							
Is the unit properly wired to an electrical disconnect or breaker?							
Are terminal screws and wires connected and are tight?							
Is voltage from Terminal L2 (Neutral) to the Ground Lug on the tank zero (0)?							
Nameplate Voltage	V:		∅:		Hz:		
Measured Voltage (unit off)	V:		∅:		Hz:		
Measured Voltage (unit on)	V:		∅:		Hz:		

GAS SUPPLY				(Y / N / NA)
Type of Gas (NAT / LP):		Gas Line Size and Material:		
Is there an intermediate lockup type gas regulator on the inlet gas supply?				
Is this gas regulator externally vented?				
Distance from gas regulator to heater (ft.)				
Static Inlet Gas Pressure (in. WC: )		High Gas Pressure Switch Setting (in. WC):		
Flow Inlet Gas Pressure (in. WC):		Low Gas Pressure Switch Setting (in. WC) :		

COMBUSTION AND VENTILATION AIR				(Y / N / NA)
Vertical Direct Vent	(two pipe vertical termination)			
Horizontal Direct Vent	(two pipe sidewall termination)			
Vertical Vent with Sidewall Air	(single pipe vertical termination with single pipe combustion air supply)			
Vertical Vent with Room Air	(single pipe vertical termination)			
Horizontal Vent with Room Air	(single pipe sidewall termination)			
Concentric Vent Vertical	(single pipe vertical termination)			
Concentric Vent Horizontal	(single pipe sidewall termination)			
Air Inlet Duct Dia. (in.):		Air Inlet Duct Material:		Total Eqv. Length (ft.):
Is there a powered combustion air device, damper, or louver system?				
Which heater terminals is the powered combustion air device connected to?				
Is direct-duct combustion air combined with other units?				
Common duct size and length:		Number of combined units:		
Flue Vent Dia. (in.):		Flue Vent Material:		Total Eqv. Length (ft.):
Is there a powered draft device in the flue system?				
Which heater terminals is the powered draft device connected to?				
Is the flue vent combined with other units?				
Common vent size and length:		Number of combined units:		

BURNER COMBUSTION & ADJUSTMENT				LOW FIRE	HIGH FIRE
Operating Temperature Set Point (°F):		Starting Modulation Rate (%):			
Modulation Rate (%):					
Carbon Dioxide CO2 (8.0 - 9.5 % NAT / 9.0 - 10.5 LP):					
Oxygen O2 (4.0% to 6.5% NAT / 2% - 4.5% LP):					
Carbon Monoxide CO (should not exceed 200 PPM):					
Nitrogen Oxide NOx (%):					
Vent Pressure – Individual Venting (Maximum 0.3 in. WC):					
Vent Pressure – Common Venting (must be assisted venting, maximum negative 0.25 in. WC):					
Net Vent Temperature (°F) - Gross vent temp minus ambient air temp.:					

