



**County  
Administrator**

Robert W. Wilson  
701-241-5770  
wilsonro@casscountynd.gov

RECEIVED  
CASS COUNTY COMMISSION

OCT 16 2019

**M E M O**

TO: Cass County Board of Commissioners  
FROM: Robert Wilson  
DATE: October 16, 2019  
SUBJECT: Purchase Order – Jail Water Heater Replacement

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One of the water heaters at the Cass County Jail has a leak and needs to be replaced. A quote has been submitted by Brekke Sales Company, Inc. in the amount of \$29,890.00 with a 25-year warranty.

This is an unbudgeted item since the leak was just discovered. The Finance Director said the cost will be paid from the Jail Maintenance line item. A budget adjustment may be needed at the end of the year if costs exceed the budgeted amount for this line item.

Please let me know if you have any questions.

Respectfully Submitted,

Robert W. Wilson  
County Administrator

**SUGGESTED MOTION:**

**Authorize Chair to sign the purchase order with Brekke Sales Company, Inc. in the amount of \$29,890.00 for the purchase of a replacement water heater at the Cass County Jail.**

PO Box 2806  
211 Ninth Street South  
Fargo, North Dakota 58108

www.casscountynd.gov

## Worden, Heather

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**From:** Gartner, Gene  
**Sent:** Tuesday, October 15, 2019 4:27 PM  
**To:** Wilson, Robert  
**Cc:** Montplaisir, Michael; {Cass}-Bldg & Grounds  
**Subject:** FW: PVI Quote for Water Heater Replacement  
**Attachments:** 20191015154004957.pdf; Quote\_35514PM440.pdf; tank.jpg

Robert,

We will need to make an emergency addendum to get this on the Commission agenda for approval so we can issue a purchase order and get it ordered. I have included a picture of the leak in the old tank. Thank you very much. New tank as noted is a 25year warranty.

Gene Gartner  
Maintenance Supervisor  
Cass County Government  
211 9th street south  
Fargo,ND 58103  
Ph.701-241-5708  
Cell.701-541-0713  
gartnerg@casscountynd.gov

-----Original Message-----

From: Allyn Waitkus <allynw@brekkesales.com>  
Sent: Tuesday, October 15, 2019 3:57 PM  
To: Gartner, Gene <GartnerG@casscountynd.gov>  
Cc: Grant Brekke <grantb@brekkesales.com>  
Subject: PVI Quote for Water Heater Replacement

CAUTION: EXTERNAL EMAIL

Good afternoon Gene,

Please see attached for the PVI water heater information and our quote.

Thank you,

Allyn Waitkus  
Brekke Sales Company  
952-936-9551 (F) 952-936-9668





# Quotation

## Cass County Jail

**Quote No:** 2129-1  
**Quote Date:** 10/15/2019  
**Print Date:** 10/15/2019  
**Page:** 1 of 1  
**Bid Due:** 10/15/2019  
**Exp Date:** 12/14/2019

5909 Baker Road Suite 580  
 Minnetonka MN 55345  
**Phone:** 952-936-9551  
**Fax:** 952-936-9668  
**Web:** brekkesales.com  
**Email:** ALLYNW@BREKKESALES.COM

Quote Information	Customer Information	Comments
<b>Quote No:</b> 2129-1 <b>Job:</b> Cass County Jail <b>Footnotes:</b> * <b>Bid Due:</b> 10/15/2019 <b>Exp Date:</b> 12/14/2019	Bidding Contractor	

Line	Item Description	NET Each
1	<b>PVI INDUSTRIES 1250L250A-TP</b> TURBOPOWER® GAS PACKAGED WATER HEATER, 250 GAL AquaPLEX STORAGE TANK (UNLINED DUPLEX ALLOY), 1,000,000 BTU/H INPUT, 1000 GPH RECOVERY @ 100 DEG F TEMPERATURE RISE (40-140 DEG F) - SEE SPECIFICATION SHEETS FOR ALL OTHER INFORMATION. PRICE INCLUDES STANDARD FREIGHT Includes option A which is for the AGA Relief Valve, first year service policy & one trip for factory authorized start-up.	29,890.00
	<div style="border: 1px solid red; padding: 5px; width: fit-content; margin: 0 auto;"> <p>#8060 101-1504-411.47-01 PO</p> </div>	

**Footnotes**  
 \*Items on this quote are based on current information provided to our company. Pricing and quote is valid for 90 days from bid date.



# PURCHASE ORDER

PAGE: 1  
 P.O. NO.: 141357  
 DATE: 10/16/19

N.D. Sales Tax Exempt No. E-3009

BREKKE SALES CORPORTATION  
 5909 BAKER ROAD SUITE 580  
 MINNETONKA, MN 55345

SHIP TO: CASS COUNTY GOVERNMENT  
 COUNTY AUDITOR  
 211 9TH ST S  
 FARGO, ND 58103

VENDOR NO.		8060							
DELIVER BY		SHIP VIA		F.O.B.		TERMS			
10/16/19						NET			
CONFIRM BY			CONFIRM TO			REQUISITIONED BY			
GENE GARTNER			PAPENFUSS, WYATT			WYATT PAPENFUSS			
FREIGHT		CONTRACT NO.		ACCOUNT NO.		PROJECT		REQ. NO.	REQ. DATE
				101-1504-411.47-01				BREKKE	10/16/19
LINE NO.	QUANTITY	UOM	ITEM NO. AND DESCRIPTION			UNIT COST	EXTENDED COST		
1	1.00	EA	PVI INDUSTRIES 1250L250A-WATER HEATER			29890.0000	29890.00		
						SUB-TOTAL		29890.00	
								29890.00	

AUTHORIZED BY \_\_\_\_\_ COUNTY OFFICIAL



**TURBOPOWER® GAS • PACKAGED WATER HEATER**  
**AquaPLEX® STORAGE TANK (UNLINED DUPLEX ALLOY)**

**TANK SERIES 250 GALLONS**

Model Number ①	Recovery gph ②		Input Btu/h	* Min. Inlet Flow Gas Pressure "W.C.	Dimensions (Inches)				Blower Motor		Shipping Weight lbs EST.
	40°- 120°F	40°- 140°F			A	B	C	J ∅	HP	Volt/Ph/Amps	
250 L 250A-TPL	250	200	199,000	4.5	21	4	3/4	10-1/4	1/6	115/1∅/3	1330
375 L 250A-TPL	375	300	300,000	4.5	21	4	3/4	10-1/4	1/6	115/1∅/3	1340
500 L 250A-TPL	500	400	399,000	4.5	21	5	3/4	10-1/4	1/6	115/1∅/3	1350
750 L 250A-TP	750	600	600,000	6.0	29-1/2	6	1	16	1/3	115/1∅/8	1430
1000 L 250A-TP	1000	800	800,000	6.0	29-1/2	8	1-1/4	16	1/3	115/1∅/8	1470
1250 L 250A-TP	1250	1000	1,000,000	6.0	46-1/2	8	2	16	1/2	115/1∅/10	1700
1500 L 250A-TP	1500	1200	1,200,000	6.5	46-1/2	8	2	16	1/2	115/1∅/10	1710

① Recoveries based on 83% thermal efficiency. ASHRAE 90.1 compliant for efficiency and standby loss.

② "J" dimension is for the burner housing only. Gas train may exceed this dimension.

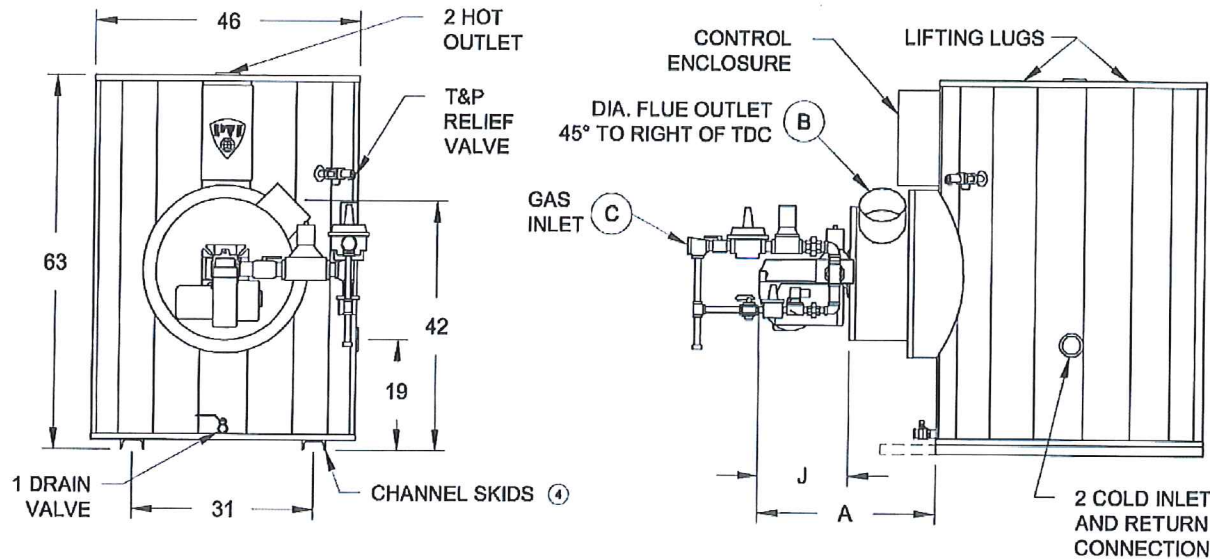
③ Models with "TPL" suffix are less than 55 ppm NOx. SCAQMD models 2TPL (200MBH), 3TPL (300MBH) and 4TPL (400MBH).

④ 4" x 46" Channel skids for inputs < 1000 MBtu/h.

4" x 54-1/2" Channel skids for inputs ≥ 1000 MBtu/h.

\* The information presented is for Natural gas 0.6 S.G.— For operation with propane (LP gas), consult factory. Dimensions are in inches unless otherwise specified.

For standard and optional equipment, see form PV 8050.



**\* GAS PRESSURE REQUIREMENTS**

SEE TABLE FOR MINIMUM PRESSURE BY MODEL NUMBER.  
 MAXIMUM STATIC INLET PRESSURE:  
 10.5" W.C. for 199,000 - 399,000 AND 14" W.C. for > 399,000.

**VENTING REQUIREMENTS**

-.02" TO -.06" W.C. (NEGATIVE PRESSURE)  
 TYPE B VENTING  
 ENTIRE VENT SYSTEM SHOULD NEVER BE SIZED BASED UPON THE  
 VENT CONNECTION DIAMETER EXCLUSIVELY.  
 FOR PROPER SIZING, CONSULT  
 THE NATIONAL FUEL GAS CODE UNDER "FAN-ASSISTED."

**STANDARD ELECTRICAL REQUIREMENTS**

CONTROL VOLTAGE: 120V, 1∅, 60 HZ., 2 AMPS.  
 MOTOR VOLTAGE:  
 208V, 230V, AND 460V MOTORS ARE AVAILABLE BUT WILL REQUIRE A  
 SEPARATE 120V/2 amps CONTROL CIRCUIT OR AN OPTIONAL CONTROL  
 CIRCUIT TRANSFORMER.

PVI RESERVES THE RIGHT TO CHANGE THE DESIGN  
 AND SPECIFICATION WITHOUT NOTICE.

# TURBOPOWER® GAS - PACKAGED WATER HEATER with AquaPLEX® STORAGE TANK (DUPLEX STAINLESS STEEL)



## STANDARD FEATURES and EQUIPMENT

### PERFORMANCE

- 83% thermal efficiency

### PRESSURE VESSEL

- AquaPLEX® tank (duplex stainless steel)
- ASME stamped and National Board Registered for 150 psi Maximum Allowable Working Pressure
- Temperature and pressure relief valve (ASME rated)
- Non-ferrous, removable tank fittings
- Fiberglass insulation
- Coated steel jacket panels
- Bottom drain valve
- Tie down anchor points on tank
- Lifting lugs
- Water pressure gauge on drain piping

### HEAT EXCHANGER

- Submerged, removable, two-pass heat exchanger with AquaPLEX® combustion chamber and solid-copper fire tubes. ASME stamped for 150 psi

### BURNER, OPERATING CONTROLS AND SAFETIES

- Power combustion burner
- Spark ignition
- Electronic flame safeguard with pre-purge
- Programmable electronic operating control with digital temperature readouts
- High temperature limit (auto reset)
- Terminals for remote on-off

### WARRANTY AND SERVICE POLICY

- 25-year tank warranty (PV901) ①
  - 10-year heat exchanger warranty (PV584) ①
  - 1-year burner and parts warranty (PV536) ①
  - 1-year cost-free service policy (PV551) ①
- Conditions exist outside of the continental United States

### CODES AND STANDARDS

- Intertek/ETL listed
  - UL 795 / CSA CAN1-3.1
  - NSF 372 lead free
- ASHRAE 90.1 compliant

### MISCELLANEOUS

- Barometric damper
- Factory authorized startup

① See complete warranties and service policies for full details.

PVI reserves the right to change the design and specification without notice.

## FACTORY OPTIONS PACKAGES

### 1 ACCESSORIES PACKAGE

- Electronic low-water cutoff (auto reset)
- High temperature limit (manual reset)
- Relay and proving terminal for remote equipment

### 3 ALARM and COMMUNICATIONS PACKAGE

- Alarm on any failure functionality with switched contacts for remote notification
- 95dB local audible alarm with silencing switch
- 485 serial cable to connect electronic operator to BAS (Modbus RTU)

### 4 CSD-1 COMPLIANT CONTROLS PACKAGE

*Includes the "Accessories" Package*

- Test and manual-reset function for low-water cutoff
- Non-recycle, single-try ignition

## FACTORY INSTALLED INDIVIDUAL OPTIONS

**A** CSA-rated temperature and pressure relief valve(s)

**C** MASS code compliance

**J** Direct combustion air intake adapter for burner

**N** Celsius functionality for operating control

## FIELD INSTALLED OPTIONS

Protocol gateways (consult factory)

\_\_\_ Bacnet IP \_\_\_ Bacnet MSTP

## OPTIONAL SERVICE POLICY

Long-life service policy (PV559) ①

Conditions exist outside of the continental United States

## CUSTOM CONFIGURATION

Consult representative for all additional custom options

## PART NUMBER ORDERING SEQUENCE

BASE MODEL# + "PACKAGES" + "OPTIONS"

Example: 1000 L 400ATP-13AC



## 25-YEAR AquaPLEX® TANK LIMITED WARRANTY

Covers TURBOPOWER® series, DURAWATT®, QuickDraw®, EZ Plate® Storage, Cobrex® Storage and SUPERTANK® Storage Tanks

This warranty applies only to installations in the U.S. and Canada. For other locations, please contact PVI.

### WHAT THIS LIMITED WARRANTY COVERS

When used for heating or storing potable water for domestic water heating purposes, this limited warranty covers defects in materials or workmanship of the tank that result in any of the following:

- Production of Rusty or Discolored Water
- Leaking
- Chloride Stress Corrosion Cracking

Separate warranties are provided for the removable heating sections (heat exchangers) and they are not covered by this warranty. Refer to those warranties for details.

The external economizer used on TURBOPOWER 96 water heaters is warranted for defects in materials and workmanship for one year and is not covered by the terms of this warranty.

### TANK REPAIR LIMITED WARRANTY

For 15 years from the start of this limited warranty, if the tank has a warranty-covered defect, PVI will repair the defect and bring the tank back to working condition. If, in the judgment of PVI, tank repair is not practical, this tank repair limited warranty will not be in force and the tank replacement limited warranty will be in force.

### TANK REPLACEMENT LIMITED WARRANTY

For 15 years from the start of this limited warranty, if, in the judgment of PVI, a warranty-covered defect of the tank is not repairable, PVI will replace the tank with the then current equivalent model. The first 15 years will be at no cost to the owner for the tank. No labor or freight will be authorized or paid by PVI.

From the beginning of the 16th year to the end of the 25th year from the start of this limited warranty, PVI will offer to sell the owner a new tank of the then current equivalent model.

The cost to the owner will be equal to the number of months in service from the date of start of this limited warranty, divided by the total number of months of this limited warranty, times the then current list price. At no point will the cost to the owner exceed 75% of the current list price. No labor or freight will be authorized or paid by PVI.

### START OF LIMITED WARRANTY

FOR PRODUCTS WHERE FACTORY-AUTHORIZED START-UP IS REQUIRED: This limited warranty will begin at the time of start-up or six months from the date of shipment, whichever occurs first.

FOR PRODUCTS WHERE FACTORY-AUTHORIZED START-UP IS NOT REQUIRED: This limited warranty will begin at the receipt of shipment.

### GENERAL CONDITIONS

Under no circumstances will PVI pay for, or be responsible for, overtime pay (nights, weekends, or holidays) for the owner's convenience or desires. Labor cost covered by this warranty is limited to installations with normal access to the equipment. All additional cost resulting from uncommonly restrictive ingress or egress requiring intricate rigging and/or unusual building or machinery alterations will be the owner's responsibility.

Installation and operation must comply with all applicable federal, state, and local regulations, and must be in accordance with applicable instructions and limitations contained in the PVI installation and maintenance manual for the product. Normal maintenance and repair shall be performed by the owner. This limited warranty does not cover abuse or misuse of the product. This limited warranty is void if modifications are made to the product without the knowledge and consent of PVI. This limited warranty does not cover tanks or heaters used for non-domestic (process) applications or for non-potable or high-purity water. Separate warranties are provided for these applications. Potable water is defined as complying with the U.S. EPA primary drinking water regulations and secondary drinking water standards.

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND GUARANTEES, WHETHER EXPRESSED OR IMPLIED, INCLUDING STATUTORY WARRANTIES, SUCH AS WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** The sole and exclusive remedy is repair or replacement of defective products pursuant to the terms of this limited warranty. **IN NO EVENT SHALL PVI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, OR CONTINGENT LIABILITIES OF ANY KIND, RESULTING FROM THE MANUFACTURE, SALE, INSTALLATION, OR USE OF THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ON THE LENGTH OF AN IMPLIED WARRANTY. THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.** In no event shall Seller's liability on any claim for damages arising out of or connected with the sales contract or the manufacture, sale, delivery, or use of the goods exceed the purchase price of the goods.

All legal actions for breach of this limited warranty, or the terms and conditions of the contract for sale of the product, must be commenced on or before the expiration of one year from the date of such breach. Otherwise, such action shall be considered barred by a period of limitations established by agreement. This limited warranty covers the first installation only. PVI shall be entitled to inspect the product prior to repair or replacement.

Warranty claims should be presented through prompt telephone notification to PVI at toll-free 1-800-433-5654.





**ORIGINAL EQUIPMENT  
WARRANTY**

**TEN-YEAR LIMITED WARRANTY**

**AquaPLEX® HEAT EXCHANGER FOR THE TURBOPOWER® PRODUCT FAMILY**

**DEFINITION OF HEAT EXCHANGER**

For the purpose of this warranty, the heat exchanger is defined as the duplex stainless steel combustion chamber and tube sheets and the copper fire tubes. The burner and its components, the flue collector, the refractory plug, and the flue baffles are not covered by this heat exchanger warranty.

**WHAT THIS WARRANTY COVERS**

The heat exchanger is warranted against defects in materials and workmanship, corrosion, production of rusty water and leakage.

**HEAT EXCHANGER REPAIR LIMITED WARRANTY**

At no cost to the owner, for FIVE years from the start of this limited warranty, PVI will, if the heat exchanger has a warranty covered defect, repair the heat exchanger.

If, in the judgment of PVI, the heat exchanger cannot practically be repaired, this heat exchanger repair limited warranty will not be in force and the heat exchanger replacement limited warranty will be in force.

**HEAT EXCHANGER  
REPLACEMENT LIMITED WARRANTY**

For FIVE years from the start of this limited warranty, if the heat exchanger has a warranty covered defect and in the judgment of PVI the heat exchanger is not repairable PVI will replace the heat exchanger with the then current equivalent model. The first FIVE years will be at no cost to the owner for the exchanger, labor or freight.

From the beginning of the SIXTH year to the end of the TENTH year from the start of this limited warranty, PVI will offer to sell the owner a new heat exchanger of the then current equivalent model. The cost to the owner will be according to the following schedule. No labor or freight will be authorized or paid by PVI.

Year	Discount from then prevailing list price
6	50%
7	45%
8	40%
9	35%
10	30%

**START OF LIMITED WARRANTY**

This limited warranty will begin at the time of factory-authorized start-up or six months from the ship date, whichever occurs first.

**GENERAL CONDITIONS**

Under no circumstances will PVI pay for, or be responsible for, overtime pay (nights, weekends, or holidays) for the owner's convenience or desires. Labor cost covered by this warranty is limited to installations with normal access to the equipment. **ALL ADDITIONAL COST RESULTING FROM UNCOMMONLY RESTRICTIVE INGRESS OR EGRESS, REQUIRING INTRICATE RIGGING AND/OR UNUSUAL BUILDING OR MACHINERY ALTERATIONS, WILL BE THE OWNER'S RESPONSIBILITY.**

Installation and operation must comply with all applicable federal, state, and local regulations, and must be in accordance with applicable instructions and limitations contained in the PVI installation and maintenance manual for the product. Normal maintenance and repair shall be performed by the owner. This limited warranty does not cover abuse or misuse of the product, failure due to an accumulation of scale or precipitant, or heating other than potable water as defined by EPA drinking water regulations.

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND GUARANTEES, WHETHER EXPRESSED OR IMPLIED, INCLUDING STATUTORY WARRANTIES, SUCH AS WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** The sole and exclusive remedy is repair or replacement of defective products pursuant to the terms of this limited warranty. **IN NO EVENT SHALL PVI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, OR CONTINGENT LIABILITIES OF ANY KIND, RESULTING FROM THE MANUFACTURE, SALE, INSTALLATION, OR USE OF THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ON THE LENGTH OF AN IMPLIED WARRANTY. THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.** In no event shall Seller's liability on any claim for damages arising out of or connected with the sales contract or the manufacture, sale, delivery, or use of the goods exceed the purchase price of the goods.

All legal actions for breach of this limited warranty, or the terms and conditions of the contract for sale of the product, must be commenced on or before the expiration of one year from the date of such breach. Otherwise, such action shall be considered barred by a period of limitations established by agreement. This limited warranty covers the first installation only. PVI shall be entitled to inspect the product prior to repair or replacement.

Warranty claims should be presented through prompt telephone notification to PVI at toll-free 800-433- 5654.



**ONE-YEAR LIMITED WARRANTY  
BURNER**

**PURPOSE**

PVI is a customer-oriented company and our desire is customer satisfaction. PVI's purpose is to provide the user with protection against failure, which could occur during the time period detailed within this limited warranty.

**BURNER**

At no cost to the owner for one year from the start of this limited warranty, if the burner should have a manufacturing defect, PVI will, at its option and judgment, replace or repair the burner and return the unit to operating condition.

**PARTS**

At no cost to the owner for one year from the start of this limited warranty, if any part supplied by PVI should have a manufacturing defect, PVI will replace the defective part and return the unit to operating condition. This limited warranty does not cover ordinary service calls.

**START OF LIMITED WARRANTY**

**FOR PRODUCTS WHERE FACTORY-AUTHORIZED START-UP IS REQUIRED:**

This limited warranty will begin at the time of start-up or six months from the date of shipment, whichever occurs first.

**FOR PRODUCTS WHERE FACTORY-AUTHORIZED START-UP IS NOT REQUIRED:**

This limited warranty will begin 90 days from date of shipment.

Warranty claims should be presented through prompt telephone notification to PVI at toll-free 1-800-433-5654.

**GENERAL CONDITIONS**

Under no circumstances will PVI pay for, or be responsible for, overtime pay (nights, weekends, or holidays) for the owner's convenience or desires. Labor cost covered by this warranty is limited to installations with normal access to the equipment. **ALL ADDITIONAL COST RESULTING FROM UNCOMMONLY RESTRICTIVE INGRESS OR EGRESS, REQUIRING INTRICATE RIGGING AND/OR UNUSUAL BUILDING OR MACHINERY ALTERATIONS, WILL BE THE OWNER'S RESPONSIBILITY.**

Installation and operation must comply with all applicable federal, state, and local regulations, and must be in accordance with applicable instructions and limitations contained in the PVI installation and maintenance manual for the product. Normal maintenance and repair shall be performed by the owner. This limited warranty does not cover abuse or misuse of the product.

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND GUARANTEES, WHETHER EXPRESSED OR IMPLIED, INCLUDING STATUTORY WARRANTIES, SUCH AS WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** The sole and exclusive remedy is repair or replacement of defective products pursuant to the terms of this limited warranty. **IN NO EVENT SHALL PVI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, OR CONTINGENT LIABILITIES OF ANY KIND, RESULTING FROM THE MANUFACTURE, SALE, INSTALLATION, OR USE OF THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ON THE LENGTH OF AN IMPLIED WARRANTY. THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.** In no event shall Seller's liability on any claim for damages arising out of or connected with the sales contract or the manufacture, sale, delivery, or use of the goods exceed the purchase price of the goods.

All legal actions for breach of this limited warranty, or the terms and conditions of the contract for sale of the product, must be commenced on or before the expiration of one year from the date of such breach. Otherwise, such action shall be considered barred by a period of limitations established by agreement. This limited warranty covers the first installation only. PVI shall be entitled to inspect the product prior to repair or replacement.



**FIRST-YEAR LIMITED SERVICE POLICY**  
**Applicable to United States and Canadian installations only**

PVI is a customer-oriented company and our desire is customer satisfaction. PVI's purpose is to provide the user with protection against failure that could occur during the time period detailed within this service policy.

For one year from the start of this service policy, PVI will, if the tank or a component part fails due to a defect in material or workmanship, replace or repair the defective component and return the product to operating condition.

**Conditions and Exceptions (all installations):**

1. All general conditions, as stipulated on PVI's limited warranties, will apply to this one-year cost-free service policy.
2. The installation must be accessible for service, must comply with all applicable federal, state, and local regulations, and must be in accordance with PVI's installation and maintenance manual.
3. Normal maintenance and repair will be the responsibility of the owner.
4. This policy is valid during the first installation only.

**Conditions and Exceptions (Alaska, Hawaii and Canadian installations):**

1. Labor cost covered by this service policy is limited to installations with normal access to the equipment, and travel distance not to exceed 150 miles from the nearest factory authorized service agency.

The First Year Limited Service Policy is effective as of the date of start-up by a PVI authorized contractor, or six months from the date of shipment, whichever occurs first. In the event there is no such start-up required, this service policy period shall begin 60 days from the date of shipment.

Warranty claims should be presented through prompt telephone notification to PVI at toll-free 1-800-433-5654. PVI shall be entitled to inspect the product prior to repair or replacement.



## REQUEST FOR START-UP SERVICE

Factory Authorized Start-Up is required and is included in the purchase price for this product. Your PVI representative will coordinate startup by a local factory-authorized service agency.

You must complete this form and submit it to your local PVI representative or contact Customer Service at 1-800-433-5654.

### TWO-WEEK ADVANCE NOTICE REQUESTED.

Start-Up requested to occur on: \_\_\_\_\_

Job Name: \_\_\_\_\_

Job Street Address: \_\_\_\_\_

Job Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Model Number(s): \_\_\_\_\_

Serial Number(s): \_\_\_\_\_

### Installers' Pre-Start Checklist

1. Multiple heater installation:  Yes  No;
2. Balanced piping:  Yes  No; Common manifold pipe size: \_\_\_\_\_
3. EMS connected to which heater terminals: \_\_\_\_\_ Wire ga. \_\_\_\_\_ Distance to EMS panel: \_\_\_\_\_ ft.
4. Describe EMS type and function:  lead/lag  burner staging  outdoor reset  setback  
\_\_\_\_\_  
\_\_\_\_\_
5. Power venting equipment installed in flue?:  Yes  No
  - Connects to which unit terminals: \_\_\_\_\_ Wire ga.: \_\_\_\_\_ Distance from heater: \_\_\_\_\_ ft.
6. Direct-ducted combustion air?  Yes  No Duct diameter: \_\_\_\_\_ inches;
  - Duct length: \_\_\_\_\_ feet Duct Material: \_\_\_\_\_
  - Does duct have elbows?  Yes  No; Qty / Type: \_\_\_\_\_
7. Mechanically operated combustion air louvers  or Fixed openings  Qty/Size: \_\_\_\_\_
  - Are mechanical louvers interlocked with unit?  Yes  No
  - Louver wiring connects to which unit terminals: \_\_\_\_\_ Wire ga.: \_\_\_\_\_ @ length: \_\_\_\_\_

## Installers' Pre-Start Checklist (cont.)

**PRIOR TO THE ARRIVAL OF YOUR STARTUP TECHNICIAN, WE WILL ENSURE THAT THE INSTALLATION IS COMPLETE, INCLUDING ALL ITEMS APPLICABLE TO OUR EQUIPMENT AS CHECKED BELOW:**

- Potable water system with isolation valves, tank filled and vented.
- Electrical system is intact and wired for operation
- Fuel system (Gas or Oil pressure/supply checked to be within equipment specification)
- Flue gas vent and barometric damper installed
- Mechanical vent electrically interlocked to burner controls, tested and adjusted
- Make-up air for combustion
- Steam or Hot Water supply
- Condensate or hot water return
- All other auxiliary equipment necessary for operation installed and ready for operation
- Relief valves and tank drain plumbed to suitable floor drain

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**WE UNDERSTAND THAT THE START-UP SERVICE IS PART OF THE SALES CONTRACT, PROVIDED AT NO EXTRA CHARGE, AND IS REQUIRED TO REGISTER THE WARRANTY ON THE PRODUCT WITH THE FOLLOWING EXCEPTIONS:**

1. If Start-Up is scheduled and upon arrival of your factory-authorized startup technician it is determined that the equipment is not ready for start-up due to incomplete or improper installation, an hourly service charge for the delay will be paid to the PVI Representative prior to the restart of this equipment.
2. The Start-Up service is necessary for the warranty of this equipment to become effective. The warranty will not start until a rescheduled startup is completed and approved by PVI.

Requested by: \_\_\_\_\_ Date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

# START-UP FORM FOR GAS (NON-CONDENSING) WATER HEATERS

MAXIM – MAXIM Low NOx - TURBOPOWER® - TURBOPOWER® Low NOx MODELS



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  
3209 Galvez Ave.  
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*\* This Equipment Start-up Form can also be completed and submitted electronically via our web site at [www.pvi.com](http://www.pvi.com). You will find it under the Service and Support menu, e-Forms section.*

<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 there a building recirculation loop piped to the water heater?	

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 GAS (NON-CONDENSING) WATER HEATERS (cont.)**  
 MAXIM - MAXIM Low NOx - TURBOPOWER® - TURBOPOWER® Low NOx MODELS

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:		Ø:		Hz:	
Measured Voltage (unit off)	V:		Ø:		Hz:	
Measured Voltage (unit on)	V:		Ø:		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 / Check)
Vertical Direct Vent	(two pipe vertical termination)			<input type="checkbox"/>
Horizontal Direct Vent	(two pipe sidewall termination)			<input type="checkbox"/>
Vertical Vent with Sidewall Air	(single pipe vertical termination with single pipe combustion air supply)			<input type="checkbox"/>
Vertical Vent with Room Air	(single pipe vertical termination)			<input type="checkbox"/>
Horizontal Vent with Room Air	(single pipe sidewall termination)			<input type="checkbox"/>
Air Inlet Duct Dia. (in.):		Air Inlet Duct Material:		Total Eqv. Length (ft.):
Is there a powered combustion air device, damper or louver system?				
The powered combustion air device is connected to which heater terminals?				
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?				
The powered draft device is connected to which heater terminals?				
Is the flue vent combined with other units?				
Common vent size and length:		Number of combined units:		

BURNER COMBUSTION & ADJUSTMENT (For fixed rate burners, use High Fire column)			
Burner Model No.:	Burner Serial No.:	Low Fire	High Fire
Operating Temperature Set Point (°F):			
Pilot Gas Pressure (in. WC):			
Manifold Gas Pressure (in. WC):			
Carbon Dioxide CO <sub>2</sub> (8% - 9% NAT / 9.5-10.5 LP):			
Oxygen O <sub>2</sub> (5% - 7% NAT / 2% - 4% LP):			
Carbon Monoxide CO (should not exceed 200 PPM):			
Nitrogen Oxide NO <sub>x</sub> (%):			
Vent Pressure (Range of negative .02 in. WC to negative .06 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.:			

