# Submittal Sheet

**OptiTherm® Water Heater**

**600,000 to 900,000 BTU/hr**

**Job Name Location Arch./Engr. Wholesaler Mech. Contractor Model No. Gas Type BTU/hr Input Recovery Rate in GPH °F Rise**

**Notes ASME Construction**

**OptiTHERM® for Optimal Thermal Efficiency:**

* 600/700/800/900,000 BTU Inputs
* 130 gallon tank
* Extremely efficient
	+ *99% at Low Fire/98% at High Fire*
* New Touch Screen Controls for ease of operation
* Fits through a 36-inch door
* Front intake/exhaust for zero rear clearance
* BACnet/BMS/BOCK Net Remote Access
* Manual reset high limit (field testable)/High-Low Gas Pressure Switches/Optional Low Water Cutoff
* Automatic cathodic corrosion protection system
	+ *No sacrificial anode rods*
* PVC/CPVC/ABS venting - 240' maximum power vent length
* Glass-fused-to-steel water tank and heat exchanger
* SCAQMD certified Ultra-Low NOx
* Natural gas or propane fuel
* Stealth Quiet™ operation
* Built-in pallet jack openings and lifting lugs

**Turboflue® High Performance Heat Exchanger:**

* Patented helical-fin multi-stage design
* Superior heat conduction and fuel efficiency

**Made in the USA**

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## OT600N/OT700N/OT800N/OT900N

#### Storage, Inputs, Recovery & Efficiency

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Storage GAL (L)** | **Max. Rated Input BTU/HR (KW)** | **Min. Rated Input BTU/HR (KW)** | **Recovery @ 100°F Rise GAL/HR (L/HR)** | **1st Hr. Del. @ 100°F Rise GAL (L)** | **Thermal Efficiency @ Max Input (%)** | **Thermal Efficiency @ Min Input (%)** |
| OT600N-A | 130 (492) | 600,000 (175) | 140,000 (41) | 706 (2,675) | 797 (3,017) | 98 | 99 |
| OT700N-A | 130 (492) | 700,000 (205) | 140,000 (41) | 824 (3,121) | 915 (3,464) | 98 | 99 |
| OT800N-A | 130 (492) | 800,000 (235) | 140,000 (41) | 941 (3,567) | 1,032 (3,907) | 98 | 99 |
| OT900N-A | 130 (492) | 900,000 (264) | 140,000 (41) | 1,059 (4,013) | 1,150 (4,353) | 98 | 99 |

*NOTE: OT 600/700/800/900 only ASME and high altitude models available.*

*Change the suffix from “N” to “LP” to designate liquid propane. “A” denotes ASME construction.*

#### Dimensions and Connections

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Dimensions in Inches (cm)** | **Cold NPT** | **Hot NPT** | **Recirc. Return NPT** | **Gas NPT** | **Air Intake PVC** | **Exhaust Vent PVC** | **Shipping Weight LBS (kg)** |
| **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** |
| OT600N-A |  |  |  |  |  |  |  |  |  |  | 2" | 2" | 1" | 2" | 6" | 6" |  |
| OT700N-A | 78 | 34 | 68 | 15 | 13 | 67 | 78 | 42 | 80 | 83 | 1,700 |
| OT800N-A | (199) | (86) | (173) | (38) | (33) | (170) | (198) | (106) | (203) | (211) | (773) |
| OT900N-A |  |  |  |  |  |  |  |  |  |  |  |

**T&P valve and brass drain valve factory installed. Standard Voltage (all):** 120V, 60 Hz, 1P

**Maximum Working Pressure:** 150 psi (1034 kPa) These models meet or exceed current ASHRAE standards.

NSF/ANSI 5

**Warning:** Installation should be in accordance with all national and/or local codes. In the absence of local codes, refer to NFPA 54 or CSA B149.1.

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**Caution:** The recommended maximum hot water temperature setting for normal residential use is 120°F. Bock recommends a tempering valve or anti-scald valve be installed and used according to the manufacturer’s directions to prevent scalding.

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## Venting (Materials)

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##### *The following materials are approved for use as the vent and combustion air intake piping:*

* PVC (DWV, ASTM-D2665 or CSA B181.2) • PVS (Schedule 40, ASTM-D1785 or CSA B137.3)
* PVC (SDR Series, ASTM-D2241 or CSA B137.3) • CPVC (Scedule 40, ASTM-F441 or CSA B137.3)
* CPVC (SDR Series, ASTM-F442) • ABS (Schedule 40, DWV, ASTM-D2661 or CSA B181.1)
* AL29-4C Stainless Steel • PVC IPEX 1738 (UL 1738, ASTM D2665)

**NOTE: Use of cellular core PVC (ASTM F891), cellular core CPVC, or Radel (polyphenyl-sulfone) in non-metallic venting systems is prohibited.**

**Covering non-metallic vent pipe and fittings with thermal insulation is prohibited.**

**In Canada, check local codes to ensure that SDR series is approved for use, SDR is not approved for all installations in Canada.**

##### *The following materials are approved for use for the fittings in the vent and combustion air intake systems:*

* PVS (Schedule 40 DWV, ASTM D2665) • CPVC (Scedule 40, ASTM F438)
* ABS (Schedule 40, DWV, ASTM D2661) • AL29-4C Stainless Steel
* PVC IPEX 1738 (UL 1738, ASTM D2665)

## Venting (SystemLengths)

**Minimum and Maximum Vent Lengths - 6" Pipe**

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **Pipe Arrangement** | **Minimum Equivalent Pipe Length (per pipe run)** | **Maximum Equivalent Pipe Length (per pipe run)** |
| **Air Intake (ft)** | **Vent (ft)** | **Air Intake (ft)** | **Vent (ft)** |
| OT600N/OT700N/ OT800N/OT900N | Power Direct Vent (2 Pipe) | 20 | 20 | 100 | 100 |
| Power Vent (1 Pipe) | 0 | 20 | 0 | 200 |

## Venting (Equivalent Length)

The equivalent straight pipe length of a 90°, 1/4 standard bend elbow and 45°, 1/8 standard bend elbow is 5 feet and 2.5 feet, respectively. **DO NOT** use short bend elbows.

## Gas Pressures (OT600-900)

### *For natural gas:*

MINIMUM GAS SUPPLY PRESSURE (at gas control) = 4" W.C. (dynamic) MAXIMUM GAS SUPPLY PRESSURE (at gas control) = 14" W.C. (static or dynamic)

### *For LP gas:*

MINIMUM GAS SUPPLY PRESSURE (at gas control) = 8" W.C. (dynamic) MAXIMUM GAS SUPPLY PRESSURE (at gas control) = 14" W.C. (static or dynamic)

**Note:** Dynamic pressure is measured while gas is flowing and static pressure is measured while gas is not flowing.

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## UL Classified

UL classified in accordance with NSF/ANSI 372 - *Drinking Water System Components (Lead content)* to comply with ≤0.25% lead as required by the Reduction of Lead in Drinking Water Act.

UL classified in accordance with NSF/ANSI 5 – *Water Heaters, Hot Water Supply Boilers, and Heat Recovery Equipment.*

## Clearances (OT600-900)

Minimum clearances from combustible construction: 0" Sides, 0" Back, 0" Top, 6" Front. 0" from vent connector. Approved for alcove installation and combustible flooring.

Minimum access clearances for servicing: 12" Left Side, 8" Right Side, 0" Back, 24" Top, 24" Front.

Minimum Clearance From Combustibles

Required Minimum Access Clearances

[www.bockwaterheaters.com](http://www.bockwaterheaters.com/)

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