PRODUCT SUBMITTAL

IFIRE Volume Water Heater

Job: _____

Date: _____ Job: _____ Location: _____

Equipment Tags: _____ Engineer: _____ Contractor: _____

Model: _____ Notes: _____

Prepared by: _____ Indoor ☐ Outdoor ☐ Gas Type: Natural Gas ☐ Propane ☐

Stainless steel water-tube construction, versatile and adaptive controls. Designed for ease of maintenance.

- Up to 96.5% thermal efficiency at full rate
- 100% factory fire-tested
- VERSA IC® modulating controller with 4.3"(109mm) color touchscreen display
- 7:1 turndown
- Fault history with full diagnostics
- Status display lighting in logo on front panel
- Cascade up to 8 heaters - no external sequencer required
- Cascade in parallel or sequential modulation modes
- Modbus RTU BMS port with BACnet gateway option
- Maximum outlet water temperature: 180°F (82°C)
- Maximum setpoint: 160°F (71°C)

  [Factory override capability to increase maximum setpoint to 190°F (88°C)]
- Zero side clearance to combustibles
- Indoor/outdoor construction - standard
- PVC, CPVC, polypropylene or stainless steel venting certified
- Vent protection with vent temperature sensor
- Limited 20-year thermal shock warranty
- Limited 10-year heat exchanger warranty
- Meets SCAQMD R1146.2 requirements (NOx less than 20 ppm)
- Proudly assembled in the USA

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Features and Options

Heat Exchanger

- All stainless steel construction with brass connections
- Gasketless heat exchanger design
- ASME H stamped; 160 PSIG MAWP
- National Board listed
- ASME pressure relief valve 125 PSIG (shipped loose)
  - ☐ Optional field supply _____PSIG
- T&P gauge (shipped loose)

Power

- 120V, 60Hz, 1Ø power supply (standard)

Control

- VERSA IC® with 4.3" color touchscreen display
- 3-Try Ignition module (standard)
- 0-10 VDC input for BMS
- Cascade up to 8 heaters
- Cascade in parallel or sequential modulation modes
- Remote flame sensor
- Fixed high limit, manual reset, 200°F (93°C)
- Adjustable high limit manual reset, 200°F (93°C)
- Alarm dry contact connection
- On/off power switch
- Flow switch (factory mounted)
- Low water cut-off, remote probe
- Blocked vent pressure switch
- Vent Protection with vent temperature sensor
- Boiler, DHW & System Pump contacts
- Water temperature sensors: 1x mounted at inlet,1mounted at outlet, 1 x 10kΩ (shipped loose)
- Data logging
- Modbus RTU BMS port
  - ☐ 014691 BMS Gateway, Modbus RTU to Modbus TCP, N2 Metasys, BACnet IP, or BACnet MS/TP (loose)
  - ☐ 014692 BMS Gateway, Modbus RTU, LON Works (loose)

Burner

- Direct spark ignition (DSI)
- Low NOx: less than 20 ppm

Gas Train

- Fuel
  - ☐ Natural gas
  - ☐ Propane (minimum grade HD-5) Requires field conversion kit
- Dual-seat combination valve
- Electronic modulating firing mode
- Low gas pressure switch, manual reset
- High gas pressure switch, manual reset

Construction

- Indoor/outdoor construction
- Enclosed front controls
- PolyTuf powder coat finish
- Rear connections (water, gas, vent, electrical, combustion air, condensate and drain)
- Design certified ANSI Z21.13/CSA 4.9
- Built-in combustion air filter
- Built-in condensate trap and switch

Cat IV Venting

(PVC-CPVC-Polypropylene-Stainless Steel)

- Ready to vent with PVC/CPVC
- Adapter required for polypropylene & stainless steel
  - ☐ 013286F PVC to SS flue adapter exhaust 4"
  - ☐ 017969F PVC to SS flue adapter exhaust 6"
- Vent termination (options)
  - ☐ 017801 Outdoor flue exhaust termination kit (stainless steel) 4"
  - ☐ 017802 Outdoor flue exhaust termination kit (stainless steel) 6"
  - ☐ 011712 Vent termination cap (Cat IV horizontal) 4"
  - ☐ 016720 Vent termination cap (Cat IV horizontal) 6"
- Extractor fan cascade vent as needed
  - ☐ By others
  - ☐ Not required
- Other Options
  - ☐ Truseal™ Air Intake (loose)
  - ☐ Stainless steel vent adapter
  - ☐ 017805 Polypropylene vent adapter (Centrotherm InnoFlue®) 4"
  - ☐ 017806 Polypropylene vent adapter (Centrotherm InnoFlue®) 6"
  - ☐ 017754 Outdoor vent 4"
  - ☐ 017755 Outdoor vent 6"

Other Options

- ☐ 011932 Sensor well
- ☐ 011934 Outdoor air sensor
- ☐ Indirect tank aquastat control
- ☐ Condensate treatment kit (field supplied)

Additional Options or Accessories

☐ _____

Regulatory Agency Requirements

☐ _____

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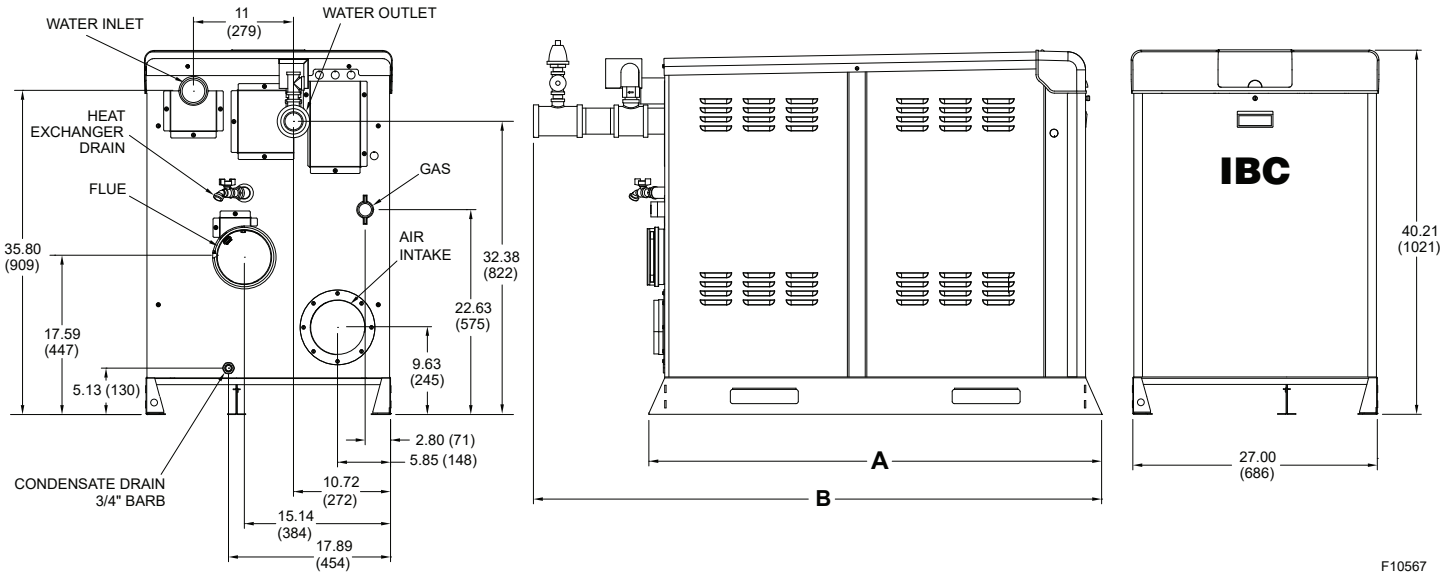

IFIRE	MBTUH (kW) Input	MBTUH (kW) Output	Turn Down	AHRI Thermal Efficiency	Dimensions - inches (mm) A	B	Water Inlet/Outlet NPT	Flue Ø*	Air Intake Ø	Gas Connection NPT in. (mm)	Operating Weight lbs (kg)
☐ 300	300 (88)	289 (85)	7:1	96.5%	36.83 (935)	45.34 (1151)	2 (50)	4 (100)	4 (100)	1 (25)	411 (186
☐ 400	399 (117)	383 (112)		96.0%	36.83 (935)	45.34 (1151)	2 (50)	4 (100)	4 (100)	1 (25)	411 (186)
☐ 500	500 (147)	480 (141)			36.83 (935)	45.34 (1151)	2 (50)	4 (100)	4 (100)	1 (25)	416 (189)
☐ 650	650 (191)	624 (183)			45.25 (1149)	54.66 (1388)	2 (50)	6 (150)	6 (150)	1-1/4 (32)	501 (227)
☐ 800	800 (235)	768 (225)			45.25 (1149)	54.66 (1388)	2 (50)	6 (150)	6 (150)	1-1/4 (32)	547 (248)
☐ 1000	1000 (294)	960 (281)			50 (1270)	62.75 (1593)	2.5 (65)	6 (150)	6 (150)	1-1/4 (32)	627 (284)

* PVC/CPVC Standard

IFIRE	Boiler Current Draw ☐ 120VAC
☐ 300	<7.5 A
☐ 400	<7.5 A
☐ 500	<5.0 A
☐ 650	<5.0 A
☐ 800	<7.5 A
☐ 1000	<7.5 A

Clearances - in. (mm)	Floor	Rear	Right	Left	Top	Front	Vent
Combustible Minimum	0	24 (610)	0	0	0	Open	1 (25)
Minimum Service	0	24 (610)	0	0	0	30 (762)	1 (25)

* Current draw is for heater only.
Supply breaker must have delayed trip.
** Single phase only

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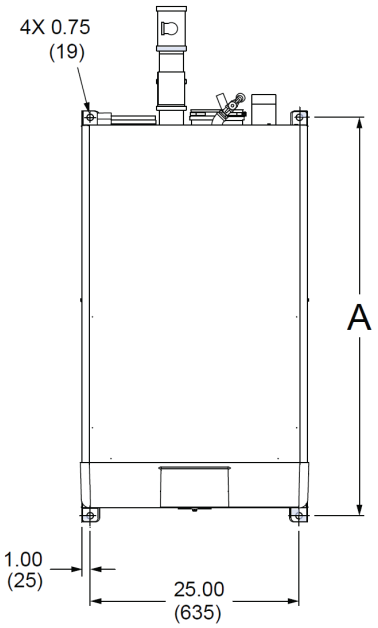
Flow and Pressure Loss Information

IFIRE	MBTUH (kW/h)		20 °F ΔT		30 °F ΔT		Min Flow			Max Flow		
	Input	Output	GPM (L/min)	ΔP ft.wc.(kPa)	GPM (L/min)	ΔP ft.wc.(kPa)	GPM (L/min)	ΔP ft.wc.(kPa)	ΔT-°F (°C)	GPM (L/min)	ΔP ft.wc.(kPa)	ΔT-°F (°C)
☐ **300**	300 (88)	289 (85)	29 (110)	6 (18)	19 (72)	3 (9)	15 (56)	2 (6)	39 (22)	38 (144)	10 (30)	15 (8)
☐ **400**	399 (117)	383 (112)	38 (144)	11 (33)	26 (97)	5 (15)	20 (74)	3 (9)	39 (22)	50 (189)	17 (51)	15 (8)
☐ **500**	500 (147)	480 (141)	48 (182)	12 (36)	32 (121)	6 (18)	25 (93)	4 (12)	39 (22)	62 (235)	20 (60)	15 (8)
☐ **650**	650 (191)	624 (183)	62 (235)	11 (33)	42 (158)	5 (15)	32 (121)	3 (9)	39 (22)	80 (303)	17 (51)	16 (9)
☐ **800**	800 (235)	768 (225)	77 (291)	12 (36)	51 (194)	6 (18)	39 (149)	4 (12)	39 (22)	90 (341)	16 (48)	17 (9)
☐ **1000**	1000 (294)	960 (281)	96 (363	14 (42)	64 (242)	6 (18)	49 (186)	4 (12)	39 (22)	90 (341)	12 (36)	21 (12)

Maximum flow based on 15°F ΔT (8 °C) or 8 ft/s (2.4 m/s) velocity, whichever is less.
SHL = System Head Loss of water heater plus 100 equivalent feet (30 m) of pipe.
When water hardness is higher than 15 GPG, a softener MUST be used.

Footprint and Base Anchor Bolt Pattern



Dimensions are shown in inches (mm)

IFIRE	Dimensions in. (mm) A
☐ **300-500**	35.33 (897)
☐ **650-800**	43.75 (1,111)
☐ **1000**	48.50 (1,231)