



PRODUCT SUBMITTAL

IFIRE-B Condensing Commercial Boiler

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" color touchscreen display
- 7:1 turndown
- Fault history with full diagnostics
- Status display lighting in logo on front panel
- Cascade in parallel or sequential modulation modes
- Three pump control (DHW, system and boiler)
- Modbus RTU BMS port
- Maximum outlet water temperature: 200°F (93°C)
- Maximum system temperature: 192°F (89°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 60 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 10kΩ (5 total, of which 3 shipped loose)
Outdoor air sensor (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

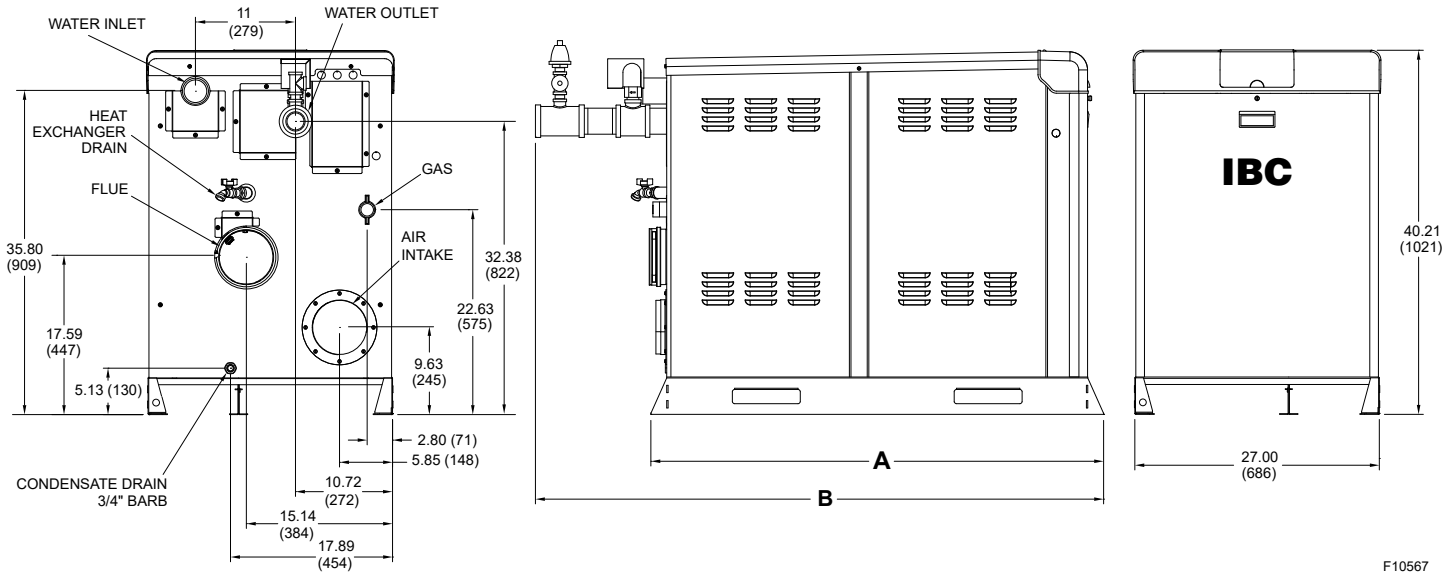
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F10567

IFIRE-B	MBTUH (kW)		Turn Down	AHRI Thermal Efficiency	Dimensions - inches (mm)					Operating Weight lbs (kg)	
	Input	Output			A	B	Water Inlet/Outlet NPT	Flue Ø*	Air Intake Ø		Gas Connection NPT in. (mm)
<input type="checkbox"/> 300B	300 (88)	289 (85)	7:1	96.5%	36.83 (935)	45.34 (1,151)	2 (50)	4 (100)	4 (100)	1 (25)	411 (186)
<input type="checkbox"/> 400B	399 (117)	383 (112)			36.83 (935)	45.34 (1,151)	2 (50)	4 (100)	4 (100)	1 (25)	411 (186)
<input type="checkbox"/> 500B	500 (147)	480 (141)			36.83 (935)	45.34 (1,151)	2 (50)	4 (100)	4 (100)	1 (25)	416 (189)
<input type="checkbox"/> 650B	650 (191)	624 (183)		96.0%	45.25 (1149)	54.66 (1,388)	2 (50)	6 (150)	6 (150)	1-1/4 (32)	501 (227)
<input type="checkbox"/> 800B	800 (235)	768 (225)			45.25 (1149)	54.66 (1,388)	2 (50)	6 (150)	6 (150)	1-1/4 (32)	547 (248)
<input type="checkbox"/> 1000B	1000 (294)	960 (281)			50 (1270)	62.75 (1,593)	2.5 (65)	6 (150)	6 (150)	1-1/4 (32)	627 (284)

* PVC/CPVC Standard

IFIRE	Boiler Current Draw 120VAC
<input type="checkbox"/> 300	<7.5 A
<input type="checkbox"/> 400	<7.5 A
<input type="checkbox"/> 500	<5.0 A
<input type="checkbox"/> 650	<5.0 A
<input type="checkbox"/> 800	<7.5 A
<input type="checkbox"/> 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

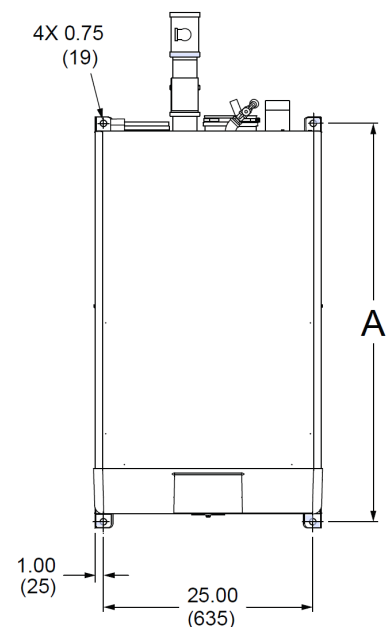
IFIRE	MBTUH (kW/h)		20 °F ΔT		30 °F ΔT		Min Flow			Max Flow		
	Input	Output	GPM (L/min)	ΔP ft.wc.(kPa)	GPM (L/min)	ΔP ft.wc.(kPa)	GPM (L/min)	ΔP ft.wc.(kPa)	ΔT-°F (°C)	GPM (L/min)	ΔP ft.wc.(kPa)	ΔT-°F (°C)
<input type="checkbox"/> 300	300 (88)	289 (85)	29 (110)	6 (18)	19 (72)	3 (9)	15 (56)	2 (6)	39 (22)	38 (144)	10 (30)	15 (8)
<input type="checkbox"/> 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)
<input type="checkbox"/> 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)
<input type="checkbox"/> 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)
<input type="checkbox"/> 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)
<input type="checkbox"/> 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.

IFIRE	Dimensions in. (mm) A
<input type="checkbox"/> 300-500	35.33 (897)
<input type="checkbox"/> 650-800	43.75 (1,111)
<input type="checkbox"/> 1000	48.50 (1,231)

IFIRE	Recommended IFIRE-B Boiler Pumps (Field Supplied)					
	TACO MDL	Grundfos	HP	Amps @120VAC	GPM/FT HD	ΔT °F (°C)
<input type="checkbox"/> 300B	0012	UPS 26-150 F	1/8	1.3	30@8.5'	19 (11)
<input type="checkbox"/> 400B	0012	UPS 26-150 F	1/8	1.3	30@8.5'	26 (14)
<input type="checkbox"/> 500B	0012	UPS 26-150 F	1/8	1.3	32@7.8'	30 (17)
<input type="checkbox"/> 650B	1611	UPS 50-60 F	1/4	5.7	55@14'	23 (13)
<input type="checkbox"/> 800B	1611	UPS 50-60 F	1/4	5.7	57@13'	27 (15)
<input type="checkbox"/> 1000B	1611	UPS 50-60 F	1/4	5.7	65@9.8'	30 (16)

Footprint and Base Anchor Bolt Pattern



Dimensions are shown in inches (mm)