



KEY	DESCRIPTION	
A	Flue Outlet	4" [101.6] Diameter (AL29-4C SS)
B	Factory Installed Pilot Gas Li	1/4" [6/4] O.D. Tube
C	Water Supply to System	2" NPT
D	Inlet Air	4" [101.6] Diameter
E	Drain, Startup Condensate	5/8" [15.9] O.D. Tube SS
F	Appliance Drain	1" NPT
G	Gas Supply	1" NPT
H	Water Return from System	2" NPT
I	Optional Gas Train Vent	3/4" NPT (D.B.&B & D.B.&B w/ POC Only)

**NOTES:**

1. SEE O&M FOR REQUIRED INSTALLATION CLEARANCES.
2. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
3. DIMENSIONS ENCLOSED IN [ ] ARE IN MM.

### RATINGS AND CAPACITIES

Input (MBH):	<b>500,000</b>	BTU/HR
Output (MBH):	<b>431,000</b>	BTU/HR
Boiler Horsepower:	<b>12.9</b>	BTU/HR
Thermal Efficiency:	<b>86.2%</b>	BHP
Heating Surface:	<b>123</b>	Sq.Ft.
Water Content:	<b>6.1</b>	Gallons
Fuel:	<b>Natural Gas or LP Gas</b>	
Firing Rate:	<b>Reliable Modulation</b>	
Burner Turndown:	<b>3:1</b>	
Low NOx Emissions:	<b>&lt;10 ppm</b>	
Inlet Gas Pressure (NG):	<b>See Chart at right</b>	
Inlet Gas Pressure (LP):	<b>See Chart at right</b>	

\* This data supercedes data found on Table 3 of I&O Manual, per PRODUCT UPDATE issued June 6, 2024.

Shipping Weight, Approximate: **772** lbs

ASME Section IV (Max 160 PSIG / 250°F)

Setpoint range is 145-230°F

Adjustable, manual reset high limit setting of ≤ 240°F.

ASME H stamp MAWT is 250°F for the vessel. (For max setpoint, see Setpoint range.)

UL Certified to ANSI Z21.13 / CSA 4.9

UL Certified to UL 795 / CSA 3.1



### DIMENSIONS / CONNECTIONS

Height:	<b>71 1/4"</b>	(Note 1)
Width:	<b>28 3/8"</b>	(Note 2)
Length:	<b>30 3/8"</b>	(Note 3)
Supply Connection:	<b>2" NPT</b>	
Return Connection:	<b>2" NPT</b>	
Vent / Air Intake Connections:	<b>4" Vent</b>	<b>4" Intake</b>
Condensate / Appliance Drain Connection:	<b>5/8" Condensate Tube</b>	<b>1" NPT Drain</b>
Gas Connection:	<b>1"</b>	

### NOTES:

1. Height dimension is from floor to top of jacket.

2. Length is from jacket front to jacket rear.

3. Dimensions shown are for reference only

### FLOWS AND PRESSURE DROPS

Delta T	Flow (GPM)	ΔP (Ft. Hd)
20°FΔT	<b>43 (Max)</b>	<b>2.93</b>
40°FΔT	<b>22 (Min)</b>	<b>0.74</b>

### Electrical Supply Options

<input type="checkbox"/>	120v/60hz/1ph (Standard)	4.5 amps
<input type="checkbox"/>	208v/60hz/1ph	3.5 amps
<input type="checkbox"/>	230v/60hz/1ph	3.4 amps
<input type="checkbox"/>	208v/60hz/3ph	3.0 amps
<input type="checkbox"/>	230v/60hz/3ph	2.9 amps
<input type="checkbox"/>	460v/60hz/3ph	1.5 amps

### Blower Motor (hp)

1/2

### Relief Valve Options

<input type="checkbox"/>	30 psi	<input type="checkbox"/>	50 psi	<input type="checkbox"/>	60 psi
<input type="checkbox"/>	75 psk	<input type="checkbox"/>	100 psi	<input type="checkbox"/>	125 psi
<input type="checkbox"/>	150 psi				

### Inlet Gas Pressure

SIZE	Nat. Gas Min. ("w.c.)	LP Min. ("w.c.)	Max
<b>500</b>	5.0" w.c.	8.0" w.c.	14.0" w.c.
<b>750</b>	7.0" w.c.*		
<b>1000</b>	7.0" w.c.*		
<b>1500</b>	7.0" w.c.*		
<b>2000</b>	9.0" w.c.*	9.0" w.c.	
<b>2000s</b>	7.0" w.c.	8.0	
<b>2500</b>	6.0" w.c.		
<b>3000</b>	6.0" w.c.		

\* NOTE: Optional natural gas train with 4" w.c. minimum inlet gas pressure ONLY AVAILABLE on sizes 750, 1000, 1500 & 2000.

## STANDARD EQUIPMENT

### PRESSURE VESSEL DESIGN

Copper Fin-tube construction  
Carbon steel or cast iron header design  
Gasketless heat exchanger  
ASME Section IV certified "H" stamp  
MAWP 160 PSI & max design temp 250°F  
5-year heat exchanger warranty  
20-year thermal shock warranty

### COMBUSTION DESIGN

Maintenance-free ceramic burner  
Ultr-low NOx emissions (<10ppm)  
Whisper quiet operation (<50 dBA)  
Easy to service, 99% efficient industrial air filter  
Industrial cast aluminum blower assembly  
VFD Driven Blower  
Reliable electric spark-to-pilot ignition  
10-year burner warranty  
Honeywell UV-Scanner

### VENTING

Sealed or room air combustion  
Direct vent (sidewall or vertical) (Cat IV)  
Conventional venting (Cat II)  
*NOTE: This is NOT a Cat 1 Vent appliance.*

### BOILER EQUIPMENT

Siemens RWF55 operating control  
High limit w/ manual reset safety temperature control  
Water flow switch  
Low water cut-off with manual reset safety controller  
Outlet temperature sensor  
Combustion air switch  
Pressure and temperature gauge  
Safety relief valve (Optional pressure 30 - 150 PSI; See details above.)  
Single point electrical supply: (Available in: 1 and 3 phase options. See details above.)

### BURNER EQUIPMENT

UL/FM/CSD-1 gas train  
Reliable Turndown  
Natural or LP gas  
Pilot gas valve / Pilot gas regulator  
Siemens SKP-75 gas valve  
Low and high gas pressure switches with manual reset

### SIEMENS RWF55 OPERATING CONTROL FEATURES

Adjustable set point  
Remote set point (0-10v or 4-20 mA)  
Outdoor air temperature reset  
Remote system temperature monitoring

## OPTIONAL EQUIPMENT

Low gas pressure venturi, 4" wc (AVAILABLE ONLY on Models 750-2000)  
(FACTORY INSTALLED OPTION ONLY)

- Line Reactor Adds voltage / spike protection for the blower's VFD. (*Highly recommended for areas with dirty voltage.*)
- Honeywell 7800 Series display with ModBus Module
- Line Reactor Adds voltage / spike protection for the blower's VFD. (*Highly recommended for areas with dirty voltage.*)
- Outdoor Air Sensor
- Condensate neutralizer:
  - 850 MBH  1,200 MBH
  - 2,000 MBH  5,000 MBH
- Pump Kit (Boiler Circulation Pump, Pump Flange Kit Sized based on a 20°F Delta T)
- Annual Maintenance Kit
- System Temperature Sensor
- ModBus RS485 communication for Siemens RWF55 and Honeywell Flame Safeguard Control (Boiler to BMS System)
- Universal comms. gateway (BACnet MS/TP, BACnet/IP, N2, Modbus TCP)
- Local / remote switch
- Alarm bell with silencing switch
- Relays:  General Alarm  Boiler Status
- Conductor Sequencing Panel: Req. for multiple EVA applications without BMS. Contact your RSM with Questions.)

The Conductor Sequencing Panel manages multiple condensing & non-condensing, small & large heat output, new and/or existing boilers (full modulation), and steam or hot water applications. It helps improve system efficiency by selecting and modulating the right boiler to match operating conditions. The Conductor offers a single point boiler plant Energy Management System (EMS) interface including Modbus TCP/IP, Modbus RTU RS485, BACnet/IP and BACnet MSTP standard. If Lonworks needed, add for the separate Lonworks gateway.

### Extended Warranty Options Available:

	<u>3-Year</u>	<u>5-Year</u>	<u>10 Year</u>
<u>Parts Only</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Parts and Labor</u>	N/A	<input type="checkbox"/>	<input type="checkbox"/>