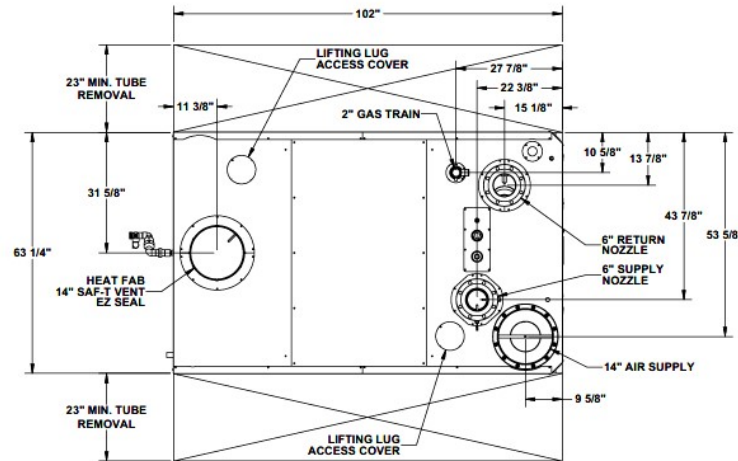
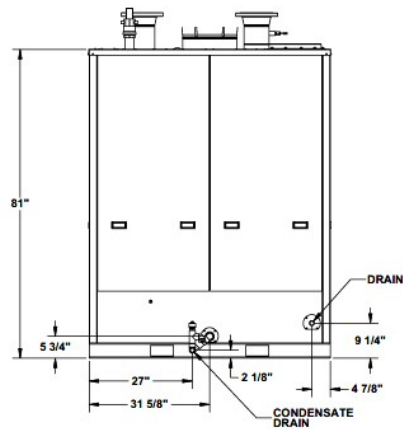
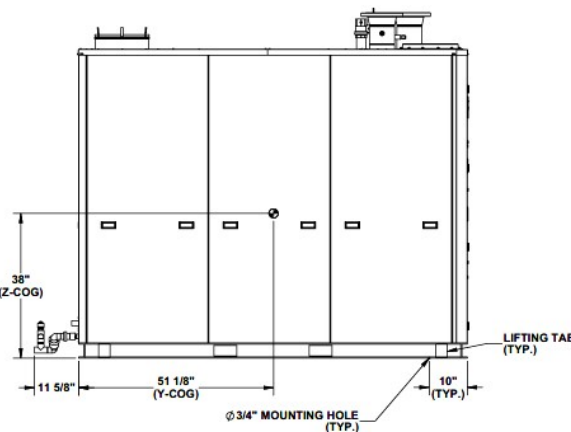




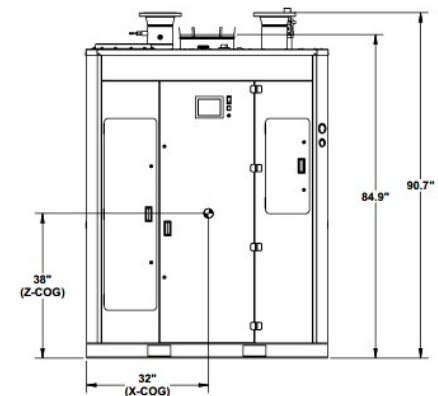
TOP VIEW



REAR VIEW



LEFT SIDE VIEW



FRONT VIEW



Boiler SUBMITTAL DATA SHEET



RATINGS AND CAPACITIES

Input - Low fire:	1,125,000	BTU/HR
Input - High Fire:	4,500,000	BTU/HR
Output - High Fire:	4,230,000	BTU/HR
Boiler Horsepower:	126	BHP
Thermal Efficiency %:	95	
Combustion Efficiency %:	94	
Water Vol. (gal):	81	Gallons
Fuel:	Natural Gas ONLY	
Firing Rate:	Full Modulation	
Burner Turndown:	4:1	
Low NOx Emissions:	Capable, Consult Factory	
Inlet Gas Pressure (NG):	7" (Min.) / 14" (Max.)	
Minimum Flow Rate:*	132 gpm	0.8 Δ P (ft) 65° Δ T High Fire
Maximum Flow Rate (20°F Δ T):*	428 gpm	25.17 Δ P (ft) 20° Δ T High Fire
Note: Not for sizing constant volume pump. 3500-6000 models will force modulation at delta of 69°F, recycle at 75°F, and lock out at 80°F.		
Approx. Shipping Weight (lb):	5,400	lbs.

ASME Section IV (Max 160 PSIG / 210°F)

Setpoint range is 60-185°F

Adjustable, manual reset high limit setting of ≤ 200°F.

ASME H stamp MAWT is 210°F for the vessel. (For max setpoint, see Setpoint range.)

ETL Certified to ANSI Z21.13 / CSA 4.9

ETL Certified to UL 795 / CSA 3.1



DIMENSIONS / CONNECTIONS

Height:	81"	(Note 1)
Width:	102"	(Note 2)
Length:	102"	(Note 3)
Water Outlet Pipe:	6" Flange	
Water Inlet Pipe:	6" Flange	
Vent Connection:	14"	
Air Intake Connection:	14"	
Condensate Drain (PVC):	1"	
Drain Line Connection:	1"	
Gas Inlet Connection (FPT):	2"	

FLOWS AND PRESSURE DROPS*

Delta T	Flow (GPM)	Head Loss (ft)
*65°F Δ T (Min. Flow)	132	0.8
60°F Δ T	143	0.9
50°F Δ T	171	2.9
45°F Δ T	190	4.2
40°F Δ T	214	6.3
35°F Δ T	244	8.2
30°F Δ T	285	11.2
25°F Δ T	342	16.1
*20°F Δ T (Max. Flow)	428	25.2

Electrical Requirements: (Appliance Only)

Model	Voltage	FLA	CCA	MHP	MA
1000	120/1/60	6.6 FLA	2.6 CCA	0.46 MHP	4 MA
1500	120/1/60	13.1 FLA	2.6 CCA	1.1 MHP	10.5 MA
	208-240/1/60	6.9 FLA	2.6 CCA	1.1 MHP	4.3 MA
2000-3000	120/1/60	15.6 FLA	2.6 CCA	1.5 MHP	13 MA
	208-240/1/60	8.3 FLA	2.6 CCA	1.5 MHP	5.7 MA
	208-240/3/60	9.5 FLA	2.6 CCA	3 MHP	6.9 MA
	480/3/60	5.25 FLA	1.25 CCA	3.2 MHP	4 MA
3500-4000	208-240/3/60	10.5 FLA	2.6 CCA	3 MHP	6.9 MA
	480/3/60	5.25 FLA	1.25 CCA	3.2 MHP	4 MA
4500-6000	208-240/3/60	26.6 FLA	2.6 CCA	10.7 MHP	24 MA
	480/3/60	14.25 FLA	1.25 CCA	10.7 MHP	13 MA

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
4. Refer to manual for gas supply piping charts



Boiler SUBMITTAL DATA SHEET



STANDARD EQUIPMENT

PRESSURE VESSEL DESIGN

Stainless Steel Mesh Pre-Mix Burner

ASME Stainless Steel Heat Exchanger

MAWP 160 PSIG & Max Temp 210°F

Setpoint range is 60-185°F

Adjustable, manual reset high limit setting of ≤ 200°F.

ASME H stamp MAWT is 210°F for the vessel. (For max setpoint, see Setpoint range.)

Ten Year Pressure Vessel Warranty; Lifetime Thermal Shock Warranty

COMBUSTION DESIGN

ASME Stainless Steel Heat Exchanger Modulating Gas Valve

Stainless Steel Mesh Pre-Mix Burner Supervised Pilot / UV Scanner

Variable Speed Combustion Blower 7" (Min.) / 14" (Max.)

Full Modulation, 4:1 Turndown Blocked Vent Switch

Natural gas only

Blower Motor (Voltage Options Below)

High/Low gas pressure switches, manual reset

Direct Spark Ignition System with UV Scanner

VENTING

Category IV Individual Venting

Category II Common Venting with Engineered Vent System

Polypropylene & Stainless Steel Acceptable *Material

Ducted or Room Combustion Air Intake

BOILER EQUIPMENT

Siemens LMV3 Burner Management & Parallel

Positioning Fuel to Air System w/ (9)

Programmable Points

High Limit Temp Control, Manual Reset

Low water cutoff, manual reset

Supply & Return Water Temperature Sensors

ASME Relief Valve: (Available: 30, 50, 60, 75, 100, 125, or 150 PSIG)

Water Flow Switch

Condensate Trap

Blocked Condensate Switch

Pressure & Temperature Gauge

Flue Gas Temperature Sensor

ELECTRICAL DESIGN

Model 1000:

120/1/60

Model 1500:

120/1/60

208-240/1/60

Models 2000-3000:

120/1/60

208-240/1/60

208-240/3/60

480/3/60

Models 3500-4000:

208-240/3/60

480/3/60

Models 4500-6000

208-240/3/60

480/3/60

*Flue system material shall be capable of continuous operation at 230°F or higher, have the same corrosion resistance to flue gas condensation as AL29-4C and shall be certified to UL 1738 – venting system for gas-burning appliances cat II, III and IV.



Boiler SUBMITTAL DATA SHEET



OPTIONAL EQUIPMENT

- ☐ Hydronic Kit (Boiler Circulation Pump selected for 30° Δ T with Primary / Secondary Piping, Pump Flange Kit and Condensate Neutralizer)
- ☐ External High Limit Temperature Control, Adjustable Manual Reset, 200°F
- ☐ Condensate Neutralizer
- ☐ Supply Header Temperature Sensor [10K NTC]: ☐ Direct Immersion ☐ Well Immersion (with Well)
- ☐ Outdoor Air Temperature Sensor (Wired) [10K NTC]
- ☐ Alarm Buzzer with Silencing Switch
- ☐ Motorized Isolation Valves for Variable Primary Piping (Quick reacting, drive open / drive closed)
- ☐ Universal Communications Gateway (BACnet, Metasys, Modbus or Lonworks)
- ☐ Tube Replacement Tools
- ☐ Knockdown Configuration: KD-1 - Ships with jacket, flue collector/heat exchanger and base in separate cartons. (Sizes 1500-6000)
- ☐ Knockdown Configuration: KD-2 - Ships with jacket, flue collector, tubes, burner, stack, lower tube rail, and base in separate cartons. (Sizes 1500-6000)

EXTENDED WARRANTY

- ☐ 3-Year Parts ☐ 5-Year Parts ☐ 10-Year Parts ☐ 5-Year Parts/Labor ☐ 10-Year Parts/Labor



Boiler SUBMITTAL DATA SHEET



CONCERT CONTROL FEATURES



Dashboard - Color Touchscreen Display, 4"

Intuitive Icon Navigation
"Quick" Setup Menus
*Real Time BTU/H Display

Three (3) Pump Control

Boiler Pump With On/Off or Variable Speed Control
Domestic Hot Water (DHW) Pump
System Pump
Alternative Control to Combustion
Air Damper or Standby Loss Damper
Pump Overrun for Heat Dissipation
Pump Exercise
Pump Rotor Seizing Protection

Peer-to-Peer Boiler Communications

Multiple Size Boiler Sequencing Up to 8 Units
*Two (2) Boiler Start/Stop Trigger
Lead Boiler Automatic Rotation

Energy Management System (EMS) Interface

*Firing Rate and Water Temperature Based
Algorithms for Multiple Boilers; loss of EMS
signal defaults to local boiler settings
4-20mAdc & 0-10 Vdc Input/Output
ModBus Input/Output (BACnet or LonWorks Optional Gateway)
Simultaneous Interface with Peer-to-Peer

USB Data Port Transfer

Upload Settings Between Boilers
Download Parameters for Troubleshooting
Import Data into .CRV Formatted Files for Performance Analysis



Energy Efficiency Enhancer

Anti-Cycling Technology
Adjustable boiler base load common rate
Outdoor Air Temperature Reset Curve
Warm Weather Shutdown
Boost Temperature & Time
Ramp Delay
OverTemperature Safeguarding

Self-Guiding Diagnostics

Self-Guiding Diagnostics
Identifies Fault
Describes Possible Problems
Provides Corrective Actions

Unmatched Archives

Historical Trends Collects Up to 4 months Data
Event History Up to 3000 Alarms, Lockouts and Cycle & Run Times
Alarm Limit String Faults, Holds, Lockouts and Others
Cycle & Run Time Boilers & Pumps
Resettable (Lockouts/Alarms/Cycles & Run Time)

Domestic Hot Water Priority

DHW Tank Piped With Priority in the Boiler Loop
DHW Tank Piped as a Zone in the System With the Pumps Controlled by the Concert Control
DHW Modulation Limiting
Status Screens
Sensor Monitoring and Control

Other Features

Factory Default Settings
Three Level Password Security
Frost Protection
Contractor Contacts (Up to 3)
Low Water Flow Control & Identification
Proportional Integral Derivative (PID) Parameter for Central HEAT, DHS, Sequencer and Fan

* Unique to Concert