SUBMITTAL DATA SHEET

JOB NAME: _____ DATE: _____

LOCATION: _____

ENGINEER: _____

WHOLESALER: _____

CONTRACTOR: _____

SUBMITTED TO: _____

MODEL DESIGNATION: _____ FUEL: _____

CHECK ONE: _____ REFERENCE (NOT FOR PRODUCTION)

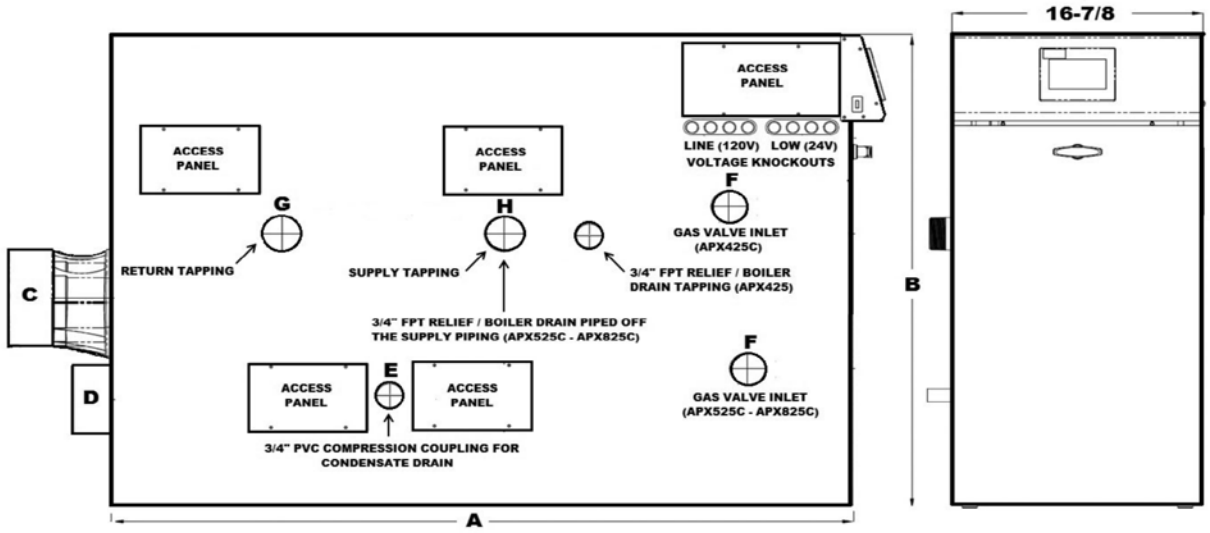
_____ APPROVED (IMMEDIATE PRODUCTION)

_____ APPROVED WITH CHANGES NOTED (IMMEDIATE PRODUCTION)

RATINGS & TECHNICAL DATA

MODELS	INPUT MIN (MBH)	INPUT MAX (MBH)	GROSS OUPUT (MBH)	THERMAL EFFICIENCY (%)	HEATING SURFACE (SQ/FT)	WATER CONTENT (GAL.)	FUEL NAT. GAS MIN / MAX	FUEL PROPANE MIN / MAX	SHIPPING WEIGHT (LBS)
APX425C	80	399	375	94.1%	41.8	3.4	4"/14"wc	8"/14"wc	316
APX525C	100	500	485	97.0%	58.1	4.3	4"/14"wc	8"/14"wc	368
APX625C	125	625	594	95.0%	76.2	5.4	4"/14"wc	8"/14"wc	458
APX725C	145	725	689	95.0%	76.2	5.4	4"/14"wc	8"/14"wc	458
APX825C	160	800	760	95.0%	87	6.2	4"/14"wc	8"/14"wc	500

DIMENSIONS



MODELS	"A" LENGTH (Inches)	"B" HEIGHT (Inches)	"C" VENT SIZE (Inches)	"C" VENT EQUIV. LENGTH (Ft.)	"D" AIR INTAKE SIZE (Inches)	"D" AIR INTAKE EQUIV. LENGTH (Ft.)	"F" GAS (Inches	"G / H" SUPPLY / RETURN (Inches)
APX425C	31-3/16	43-1/2	4	Up to 100	4	Up to 100	3/4 FPT	1-1/2 FPT
APX525C	46-1/2	35-1/16	4	Up to 100	4	Up to 100	3/4 FPT	2 MPT
APX625C	49-1/2	35-1/16	6	Up to 200	4	Up to 100	1 FPT	2 MPT
APX725C	49-1/2	35-1/16	6	Up to 200	4	Up to 100	1 FPT	2 MPT
APX825C	53-5/16	35-1/16	6	Up to 200	4	Up to 100	1 FPT	2 MPT

SUBMITTAL DATA SHEET

STANDARD EQUIPMENT

PRESSURE VESSEL DESIGN

*ASME Stainless Steel Heat Exchanger
ASME Section IV Certified, "H" Stamp
MAWP 160 PSIG & Max Temp 210°F
Ten Year Limited Heat Exchanger Warranty

COMBUSTION DESIGN

Stainless Steel Mesh Pre-Mix Burner
Low NOx Emissions (<20 ppm)
Full Modulation, 5:1 Turndown
Natural or LP Gas
4" wc to 14" wc inlet gas pressure
Direct Spark Ignition System
Zero governor gas valve
Variable Speed Combustion Blower
Air Proving Switch

VENTING

* 3-In-1 Vent Connector
- CPVC, Polypropylene or Stainless Steel
- Combustion Analyzer Test Port

PVC Vent Kit:
- 30" CPVC Pipe, Schedule 40
- 90° elbow, Schedule 80
- (2 qty) vent terminals w/ rodent screens

Vent - Horizontal or Vertical (Cat. IV)
- Up to 100 Equiv/Ft (APX425C & 525C) or 200 Equiv/ft (APX625C - 825C)

Air Intake - Sealed or Room Air (Cat. IV)
- Up to 100 Equiv/Ft

** Unique to Thermal Solutions*

BOILER EQUIPMENT

* Concert Boiler Control (24 Vac)
High Limit w/Auto Reset Temperature Control
High Limit w/Manual Reset Safety Temperature Control
Water Flow Switch
Supply & Return Water Temperature Sensors
Flue Gas Temperature Sensor
Outdoor Air Temperature Sensor
Air Vent Valve
Boiler Drain Valve
Condensate trap
Stacking boiler brackets
Pressure & Temperature Gauge
ASME Safety Relief Valve
- 50 psig, APX425C & 525C
- 60 psig, APX625C - 825C

ELECTRICAL DESIGN

120VAC/60HZ/1PH - High Voltage Printed Circuit Board (PCB)
- Amp Draw (APX425C < 7 / APX525 < 6 / APX625C - 825C < 8)
- Three sets of Pump Contacts (Boiler, DHW, System)
- PCB Fused Connections

24VAC/5VDC - Low Voltage Printed Circuit Board (PCB)
- 24VAC Contacts for Enable/Disable Sensor, DHW Demand, Low Water Cutoff, Proving Switch or Auto or Manual Reset External Limit, Lockout Alarm, EnviraCom Thermastat & Flow Switch
- 5VDC Contacts for Remote Header Sensor, DHW Tank Sensor, Outdoor Air Sensor, Peer-To-Peer Communication, EMS Interface & Remote 4-20mA
- RJ45 Jacks (Qty 2) Peer-To-Peer or ModBus Optional Connections
- PCB Fused Connections

OPTIONAL EQUIPMENT

_____ Hydronic Kit (Boiler Circulation Pump, Pump Flange Kit, ASME CSD-1 Kit (Except Model APX425C), Low Water Cutoff with Manual Reset and Condensate Neutralizer)

_____ ASME CSD-1 Kit (includes High & Low Gas Pressure Switches, Manual Reset)

_____ External High Limit Temperature Control, Manual Reset

_____ Low Water Cut-Off, Manual Reset

_____ Condensate Neutralizer

_____ 80 psig Relief Valve

_____ 100 psig Relief Valve

_____ Header Sensor, Direct Immersion

_____ Header Sensor, Well Immersion (with Well)

_____ Wireless Outdoor Air Temperature Kit

_____ EMS Signal Converter Kit (Converts Energy or Building Management System 0-10v signal to 4-20mA)

_____ Universal Communications Gateway (BACnet, Metasys, Modbus or Lonworks)

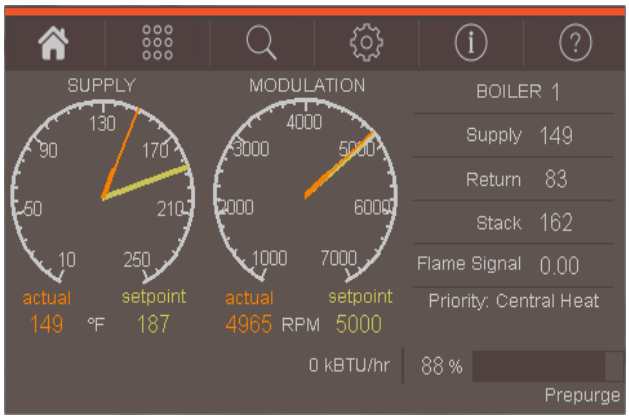
_____ IPEX Low Profile Sidewall Termination Kit (3" vent/air intake on 425C & 525C | 4" vent/air intake on 625C to 825C)

_____ Eco Propel Variable Speed Pump Kit

_____ Eco Propel Variable Speed Pump Kit with EMS Signal Converter

SUBMITTAL DATA SHEET

CONCERT BOILER CONTROL FEATURES



Dashboard - Color Touchscreen Display, 4.3"
- Intuitive Icon Navigation
- "Quick" Setup Menus
- *Real Time BTU/H Display

Two (2) Temperature Demand Inputs
- Outdoor Air Reset Curve for Each Input
- Time of Day Setback Capability
  (Enviracom Thermastat must be installed)

Three (3) Pump Control
- Boiler Pump With On/Off or Variable Speed Control
- Domestic Hot Water (DHW) Pump
- System Pump
- Alternative Control to Isolation Valve, Combustion Air Damper or Standby Loss Damper
- Pump Overun 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 Input/Output (0-10Vdc Optional Converter)
- 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
- Multipler boiler base load common rate
- Outdoor Air Temperature Reset Curve
- Warm Weather Shutdown
- Boost Temperature & Time
- Ramp Delay
- Over-Temperature Safeguarding

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

*Time/Date Stamp on Alarms and Lockouts

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 Safety Control & Indication
- Proportion Integral Derivative (PID) Parameters for Central Heat, DWH, Sequencer and Fan
- Built-in Brown-Out Protection

* Unique to Thermal Solutions