SUBMITTAL DATA SHEET

JOB NAME: _____ DATE: _____

LOCATION: _____

ENGINEER: _____

WHOLESALER: _____

CONTRACTOR: _____

SUBMITTED TO: _____

MODEL DESIGNATION: _____ FUEL: _____

CHECK ONE: _____ REFERENCE (NOT FOR PRODUCTION)

_____ APPROVED (IMMEDIATE PRODUCTION)

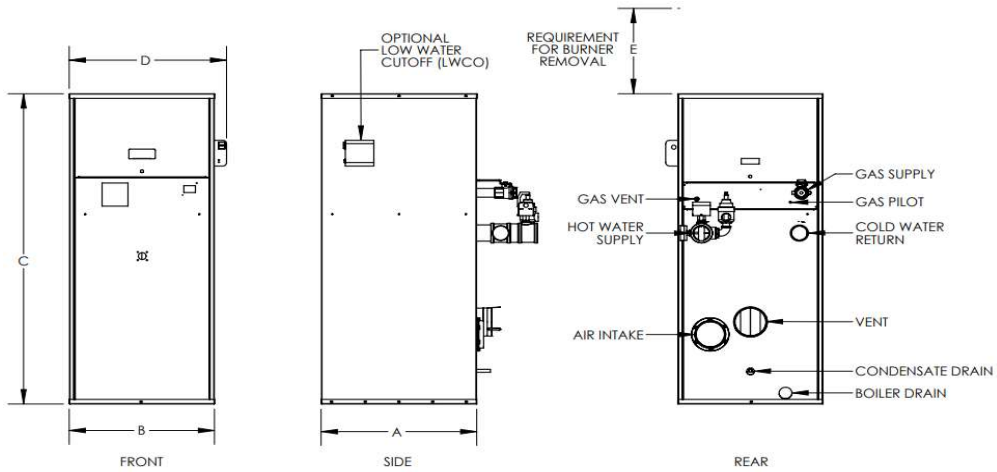
_____ APPROVED WITH CHANGES NOTED (IMMEDIATE PRODUCTION)

RATINGS AND TECHNICAL DATA

EVOLUTION EVSW Models	INPUT	GROSS OUPUT	THERMAL EFFICIENCY	HEATING SURFACE	WATER CONTENT	*FUEL NAT. GAS / LP Gas	SHIPPING WEIGHT
	(MBH)	(MBH)	(%)	(SQ/FT)	(GAL.)	MIN / MAX	(LBS)
EVSW-750	750	615	82.0%	131	15.9	7"-14" wc	1772
EVSW-1000	1000	820	82.0%	175	16.4	7"-14" wc	1260
EVSW-1500	1500	1230	82.0%	264	17.4	7"-14" wc	1402
EVSW-2000	2000	1640	82.0%	352	18.5	7"-14" wc	1536

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

DIMENSIONS



volution EVSW Mode	"A" LENGTH	"B" WIDTH	"C" HEIGHT	"D" WIDTH	"E" BURNER REMOVAL	VENT / AIR INTAKE VENT	VENT / AIR INTAKE AIR INTAKE	GAS	SUPPLY OUTLET	RETURN INLET
	(Inches)	(Inches)	(Inches)	(w/ LWCO)	(Inches)	(Inches)	(Inches)	(Inches)	NPT Male	NPT
EVSW-500	30 3/8	28 3/8	71 1/4	31	16	4	4	1	2	2
EVSW-750	30 3/8	28 3/8	60 15/16	31	16	4	6	1	3	3
EVSW-1000	30 3/8	28 3/8	67 3/8	31	16	6	6	1 1/2	3	3
EVSW-1500	30 3/8	28 3/8	79 7/16	31	19	6	8	1 1/2	3	3
EVSW-2000	30 3/8	28 3/8	91 7/8	31	31	6	8	1 1/2	3	3
EVSW-2000S*	40 1/8	38 1/8	70 1/2	40 3/4	13	6	8	1 1/2	4	4
EVSW-2500*	40 1/8	38 1/8	77 1/2	40 3/4	20	8	8	2	4	4
EVSW-3000*	40 1/8	38 1/8	84 1/2	40 3/4	16.5	8	8	2	4	4

** Features Double Row of Copper Fin Tubes!*

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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 ceremic burner
Ultr-low NOx emissions (<10ppm)
Whisper quet operation (<50 dBA)
Industustrial-grade combustion air filter, 99% efficient
Industrial cast aluminum blower assembly
Variable frequency drive
Electric spark-to-pilot ignition system
10-year burner warranty
Robust UV-Scanner

VENTING

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

BOILER EQUIPMENT

Thermal Solutions Boiler Control (TSBC) [24 Vac]
High limit w/ manual reset safety temperature control
Water flow swtich
Low water cut-off with manual reset safety controller
Inlet & Outlet temperature sensor
Combustion air switch
Pressure and temperature gauge
Safety relief valve (optional pressures 30-150 PSI)
Single point electrical supply (Available in 1 or 3 phase; See below for details).

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

TSBC Control Key Features

Advanced Boiler Modulation
Building Management System Interface
Outdoor air temperature reset
Remote system temperature monitoring

OPTIONAL EQUIPMENT

_____ Low gas pressure venturi, allows operation down to 4" wc (Available on Models 750-2000 Only)

_____ Double block & bleed (DB&B) Gas Train - (1) motorized & (1) solenoid valve & N.O. vent valve

_____ IRI with Proof of Closure Gas Train - (2) motorized valves w/ POC & N.O. vent valve

_____ Honeywell 7800 Series display with ModBus Module

_____ Line Reactor Adds voltage / spike protection for the blower's VFD. (*Highly recommended* .)

_____ Electrical Power Supply:

☐ 120/60/1 *(Sizes 500-2000 ONLY)* ☐ 208/60/1 ☐ 230/60/1
☐ 208/60/3 ☐ 230/60/3 ☐ 460/60/3

_____ Safety Relief Valve Options:

☐ 30 PSI ☐ 50 PSI ☐ 60 PSI ☐ 75 PSI
☐ 100 PSI ☐ 125 PSI ☐ 150 PSI

_____ Outdoor Air Sensor

_____ Condensate neutralizer:

☐ 850 MBH ☐ 1,200 MBH ☐ 2,000 MBH ☐ 5,000 MBH

_____ Hydronic Kit (Boiler Circulation Pump, Pump Flange Kit and Condensate Neutralizer) Sized based on a 20°F △T

_____ Annual Maintenance Kit

_____ Supply system temperature sensor

_____ ModBus communication for Siemens RWF55 and Honeywell Flame Safeguard Control (Boiler to BMS System)

_____ Universal communications gateway (BacNet MS/TP, BacNet/IP, LonWorks)

_____ Local / remote switch

_____ Alarm bell with silencing switch

_____ Relays: ☐ General Alarm ☐ Boiler Status

_____ Conductor Sequencing Panel: (Required for multiple EVA boiler applications without BMS); Contact Regional Manager with Questions.)

The Conductor manages multiple condensing & non-condensing, small & large heat output, new and/or existing boilers (full modulation or on-off), 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:

☐ 3 Year Parts ☐ 5 Year Parts ☐ 10-Year Parts
☐ 5-Yr. Prts/Lbr ☐ 10 Yr. Prts/Lbr

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TCBC CONTROL FEATURES

Flexible, Field Selectable Control

- Remote Setpoint Control
- Factory defaults simplify field programming
- Eleven settings to help control oversizing

Temperature Demand Inputs

- Time of Day Setback Capability
  (Enviracom Thermostat must be installed)

Boiler Monitoring and Diagnostic Displays

- Boiler inlet and outlet sensors
- (OPTIONAL) System header sensor
- (OPTIONAL) Outdoor air sensor
- Modulation rate setpoint & modulating percent
- Mixing valve demand percent
- Boiler sequencing messages, alarms, hold & lockout messages
- Event history - Up 10 alarm messages & data

Modulation Rate

- Various boiler modulation control options
- Choice of six different control modes
- Adjustable PID for local or remode control

Advanced Availability

- If an optional header sensor fails, TSBC automatically changes to a control mode to allow continued boiler operation

Outdoor Air Reset

- Fine tune the water temp based on outdoor air temp for maximized comfort and fuel savings. *Requires optional outdoor air temp sensor.*
- Frost protection enabled with optional outdoor air sensor

Pump 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 Network

- Lead-lag sequencing for up to eight (8) boilers.
- Selectable Lead boiler rotation, 8-720 hours
- RJ45 plug in connections between units *(Requires splitter)*
- Rotation off feature for complex installations

Warm Weather Shutdown (WWSD)

- Boilers used primarily for building heat automatically shutdown when outdoor air temperature is warm.
- Saves energy by preventing boiler, pump and / or system pump from starting
- Requires the optional outdoor air sensor

Other Features

- Domestic Hot Water Priority (DHWP)
- Combustion Air damper Outputs
- Factory configured RS485 Modbus interface for EMS or SCADA available
- Rotation enable and disable
- Low fire only w/external contact closure
- Setpoint adjustable up to 230F for boilers and 200F for water heaters
- Defineable min setpoint to reduce chance of condensing
- 3 pump control capable, Boiler, DHW, System