

THERMOCOIL COIL TUBE STEAM BOILER

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SAFETY

- Forced circulation, low water volume eliminates the potential of a steam side catastrophic failure.
- Thermogenics coil tube generators can be used for unattended operation in specific jurisdictions.

CAPACITY

- Low and high pressure steam applications from 75 to 600 BHP.

FUEL EFFICIENCY

- Up to 86% efficiency with economizers.
- Double walled boiler shell preheats combustion air and cools outer casing, thereby minimizing radiation losses.

PRESSURE SPECIFICATIONS

- Standard 15 psig to 350 psig (higher on request).

CODE

- ASME, NATIONAL BOARD or as specified. Complies with local code requirements as applicable.
- ASME BPVC SECTION I, CSA B51.

FUELS

- Natural Gas
- Number 2 Oil
- Propane
- Combination of any of the above

COMPACT SIZE

- Compact size and low weight for reduced installation and engineering cost.

ENVIRONMENTAL COMPLIANCE

- Compliance with current noise and NOx emissions regulations.



DESIGN AND OPERATIONAL

- Full output in minutes from cold start.
- Redesigned low NOx burner with increased efficiency.
- Air cooled circulating pump, eliminates wasted cooling water.
- PLC based panel complete with flame safeguard with linkageless control.
- Fully compatible with PLC based lead / lag control.
- Coil temperature system with individual temperature readouts and set points.

STANDARD EQUIPMENT FEATURES

- Fully modulating burner with upto 10:1 turndown on Natural Gas, Number 2 Oil and Propane.
- Automatic bottom and surface blowdown standard.
- Steam separation drum provides 99% plus dry saturated steam.
- NEMA 4 enclosures.

400 BHP THERMOCOIL COIL TUBE STEAM BOILER



THERMOCOIL PACKAGED RE-CIRCULATING STEAM GENERATORS

DESIGN DETAILS

General Information

BOILER TYPE	Watertube
RATED CAPACITY	400 BHP
EQUIVALENT EVAPORATION	13,800 lbs/hr from and at 212°F
THERMAL OUTPUT	13,389,000 Btu/hr
HEATING SURFACE	743 ft ²
CONSTRUCTION CODES	ASME, BPVC Sec I, CSA B51
BOILER SHELL	Combustion Air Cooled

PRESSURE psig (kPag)

DESIGN:	OPERATING:
250 (1725)	5-220 (35-1520)
350 (2413)	221-320 (1525-2210)
Contact factory for up to 500 psig (3450 kPag)	

CONTROLS

- Siemens LMV5X linkageless burner control
- Siemens PLC and touch screen including the following:
 - Excess Steam Pressure
 - Flame Failure Protection
 - Coil Temperature Limits
 - Additional Low Water Boiler Protection
 - High Water Valve and High Water Cut-Off

BURNER

MANUFACTURER	Thermogenics Inc.
FUELS	Natural Gas, Number 2 Oil, Propane or Combination
BURNER TYPE: OIL	Air atomization
BURNER TYPE: GAS	Multiple Zone Orifice Nozzle
GAS PRESSURE REQUIRED	5 psig (or 10 psig optional)
IGNITION TYPE	Electric Spark Interrupted
IGNITION FUEL	Natural Gas, Propane

POWER REQUIREMENTS

MAIN POWER	• 208/240/460/575 VAC, 3 ph, 60 Hz • 380 VAC, 3 ph, 50 Hz
CONTROL POWER	120 VAC, 1 ph, 60 Hz
HP REQUIRED BY:	
CIRCULATING PUMP	15 HP
FD FAN	15 HP

OVERALL DIMENSIONS

LENGTH X WIDTH X HEIGHT	148" x 95" x 107"
APPROX. SHIPPING WEIGHT	17,800 lbs

PERFORMANCE DATA

Fuel Consumption at Rated Output*

OIL	117 US gph
OIL RECIRCULATION RATE	180 US gph
NATURAL GAS	16,328 SCFH
PROPANE	6,490 SCFH
TURNDOWN	10:1

* Up to 86% with Economizer

CUSTOMER CONNECTIONS

STACK OUTLET:	24" O.D.
STEAM OUTLET:	
15 psig	10" RF ASME B16.5 Class 150
100 psig	6" RF ASME B16.5 Class 300
150, 250 psig	4" RF ASME B16.5 Class 300
350, 500 psig	4" RF ASME B16.5 Class 300
MAIN GAS SUPPLY	2" NPT
PILOT GAS SUPPLY	½" NPT (INTERNAL)
OIL SUPPLY	1" NPT
OIL RETURN	¾" NPT
ATOMIZING AIR SUPPLY	½" NPT
FEEDWATER INLET	1 ¼" NPT
BLOWDOWN OUTLETS:	
Surface	½" NPT
Bottom	1" NPT
Manual	1" NPT

SAFETY VALVE OUTLET

15 psig	3" NPT
150, 250 psig	2 ½" NPT
350 psig	2 ½" NPT

Built to meet strict ASME standards, Thermogenics Steam Generators are skid-mounted and completely packaged; all burners, and required safety and operating devices, are supplied and installed at the factory.

Additionally, the advantages of our Steam Generators are:

- Fast Start-up
- High Pressure
- Compact Size & Low Weight
- Safe Operation
- Modulating Output