

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 300 PSIG (higher on request).

CODES

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

FUELS

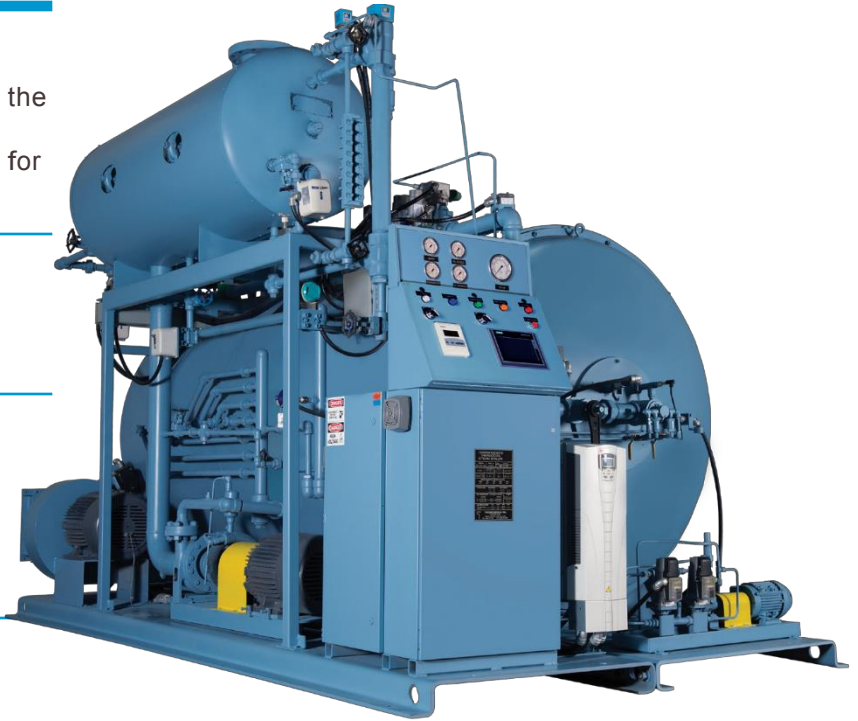
- Natural Gas and Number 2 Oil.
- Propane.

COMPACT SIZE

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

ENVIRONMENTAL

- 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 systems with individual temperature readouts and set points.

STANDARD EQUIPMENT FEATURES

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

SPECIFICATIONS 400 BHP



THERMOCOIL PACKAGED RE-CIRCULATING STEAM GENERATORS

DESIGN DETAILS

General Information

BOILER TYPE	Watertube
RATED CAPACITY	400 HP
EQUIVALENT EVAPORATION	13,800 lbs/hr from and at 212°F
THERMAL OUTPUT	13,391,000 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)	15-240 (103-1655)
350 (2413)	241-335 (1661-2310)
Contact factory for up to 500 psig	

CONTROLS

Siemens LMV5X linkageless burner control, Siemens PLC and touch screen, excess steam pressure, redundant low water cutoff, flame failure protection, coil temperature limits, high water valve and high water cut-off.

BURNER

MANUFACTURER	Thermogenics Inc.
FUELS	Number 2 Oil, Natural Gas, Propane or Combination
TYPE (OIL)	Air Atomized
TYPE (GAS)	Multiple Orifice Nozzle
GAS PRESSURE REQUIRED	5 psig (or 10 psig optional)
IGNITION TYPE	Electric Spark Gas Pilot
OIL - OIL AND GAS	Interrupted Gas Pilot

POWER REQUIREMENTS

MAIN POWER	230/460/575 VAC, 3 Ph, 60 Hz or 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 93" x 107"
Approx. Shipping Weight	17,800 lbs

PERFORMANCE DATA

Fuel Consumption at Rated Output

OIL	118 gph
GAS	16,331 scfh
THERMAL EFFICIENCY	82%
WITH ECONOMIZER	15,571 scfh
THERMAL EFFICIENCY WITH ECONOMIZER	86%
TURNDOWN RATIO	10 to 1

CUSTOMER CONNECTIONS

STACK OUTLET:	24" O.D.
STEAM OUTLET:	
15 psig	10" ASME B16.5 Class 300
100 psig	6" ASME B16.5 Class 300
150, 250 psig	4" ASME B16.5 Class 300
300, 500 psig	4" ASME B16.5 Class 300
MAIN GAS SUPPLY	2" NPT
PILOT GAS SUPPLY	1/2" NPT (Internal)
OIL SUPPLY	1" NPT
OIL RETURN	3/4" NPT
ATOMIZING AIR SUPPLY	1/2" NPT
FEEDWATER INLET	1 1/4" NPT
MANUAL BLOWDOWN OUTLET:	
15 PSIG	1" NPT

SAFETY VALVE OUTLET

15 psig	3" NPT
150, 250 psig	2 1/2" NPT
300 psig	2 1/2" NPT

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

Additionally, the advantages of our Steam Generators are:

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