

POWER+ GENERATOR

MODEL: 6500B+

ElectraTherm

BY BITZER GROUP

PRODUCT OVERVIEW

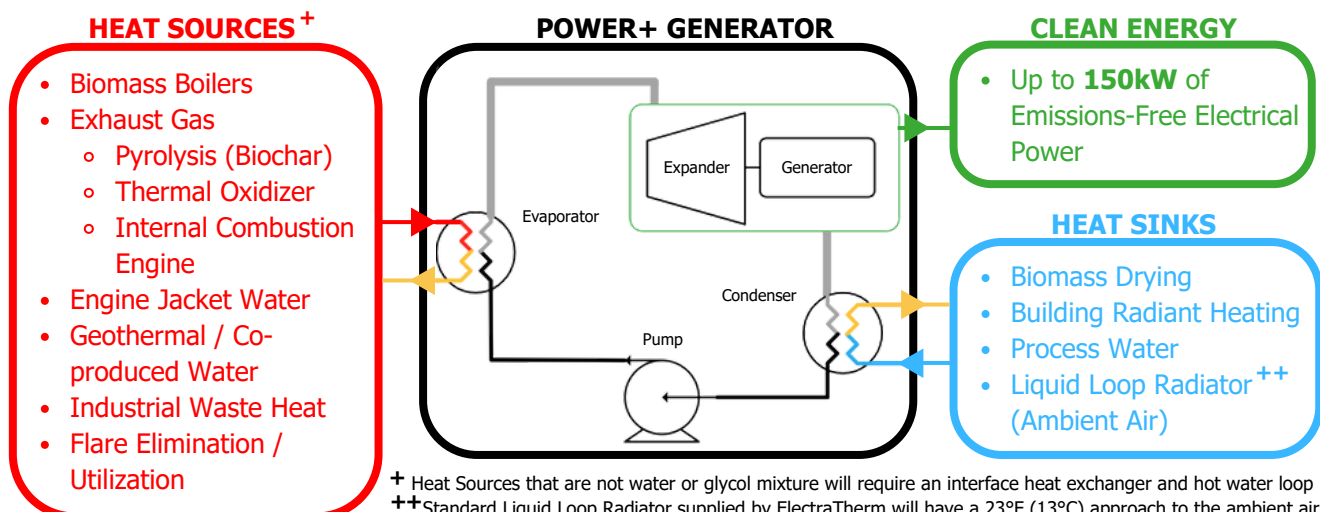
ElectraTherm's Power+ Generator uses the Organic Rankine Cycle (ORC) to convert low-grade waste heat into emissions-free electric power. The Power+ Generator employs the BITZER twin-screw semi hermetic expander which allows for superior turn-down and the ability load follow changing amounts of thermal energy. This technology allows end users to generate onsite power, improve site efficiency, offset cooling loads, and integrates into combined heat and power (CHP) systems.



HOT WATER CONDITIONS	ORC	COLD WATER CONDITIONS
Temperature Range: 158-302°F (70-150°C)	Max Power Output: 150kW @ 60Hz // 125kW @ 50Hz	Temperature Delta from Hot Inlet: 80°F (45°C)**
Flow Rate: 95-364 GPM (6-23 L/s)	Utility Connection: 3 Phase // 380-500v // 50, 60Hz	Flow Rate: 253-412 GPM (9-26 L/s)
Thermal Input: 2.7 - 7.5 MMBTU/hr* (800-2200 kW)	Working Fluid: R1233zd(E); 470 lbs (213 kg)	Thermal Output: 2.4 - 7 MMBTU/hr (700-2050 kW)
Higher Temps or non water/glycol fluids possible with interface heat exchanger	Weight: 10,250 lbs, Dimensions: 6.6' x 10.8' x 8.2' (W*L*H) (2.0m x 3.3m x 2.5m)	Ambient Temperature Range: 32-104°F (0 – 40°C)

*Thermal input requirements increase with elevated ambient temperatures/ heat sink conditions

**Temperature delta between inlet hot and cold water





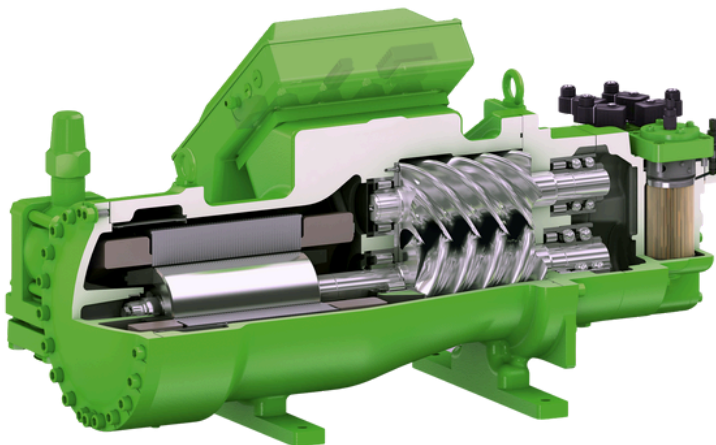
- // 1 MW biomass boiler
- // 72kW average gross output
- // Rejected heat used for drying and building heat.

DESIGN ATTRIBUTES

- // Built to ASME and CE Standards
- // Semi-Hermetic Twin Screw Expander
- // Grid-tied Induction Generator
- // Proprietary PLC and HMI controls
- // Sound Pressure (@ 1 Meter) 87 dBa
- // Power Factor: output dependent >0.9 lagging
- // Outdoor Rated
- // Design Life: 20 years
- // Low GWP Working Fluid

PRODUCT HIGHLIGHTS

- // Zero Emissions
- // Zero Carbon Power
- // Easy to install
- // Remote monitoring via VPN
- // Low Maintenance
- // Minimal Footprint
- // Qualifies for Incentives
- // Grid Protection Relay Input



The ElectraTherm ORC design incorporates a BITZER semi-hermetic twin screw expander. Both the expander and generator are integrated within the same housing, eliminating the need for a shaft seal and enhancing reliability. Additionally, the expander is designed for dual-phase flow, allowing for a robust range of operating conditions.

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