LEVA ENERGY
Leveraged Power.

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The Power Burner

Most Cost-Effective Cogeneration System

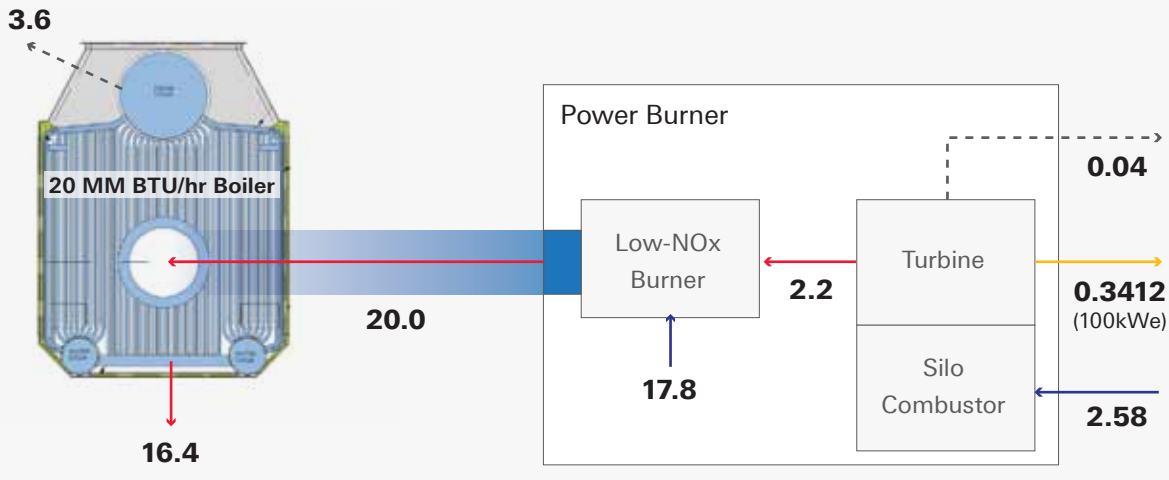
Leva Energy offers power-generating burners ("Power Burner") that turn industrial and commercial boilers into generators of more efficient, reliable and cleaner heat and power at the lowest possible cost.

The Power Burner simply replaces your aging burner with an efficient and reliable power-generating burner that reduces your energy bills, provides energy tax credits and rebates, and meets today's strictest NOx emission regulations.

The Power Burner generates 100 kWe and the heat to satisfy any boiler with heat-input capacities greater than 5 million Btu/hr. Its approach to cogeneration is entirely different than past systems. By first fulfilling the thermal demand of the boiler, the Power Burner can generate electricity with 90% efficiency.

How it works

The Power Burner is an integration of a highly reliable gas turbine with a low-emissions burner. The system uses all of the turbine's hot exhaust while managing variability in burner thermal load. This technological breakthrough enables flexible operating conditions (i.e. turndown), yet generates maximum electrical power output. The following diagram shows the energy flow in MMBtu/hr for a 20 MMBtu/hr boiler.



$$\frac{.3412}{(2.58-2.2)} = 90\%$$

90% Power Conversion Efficiency

Legend:

- Gas
- Heat
- Power
- Loss

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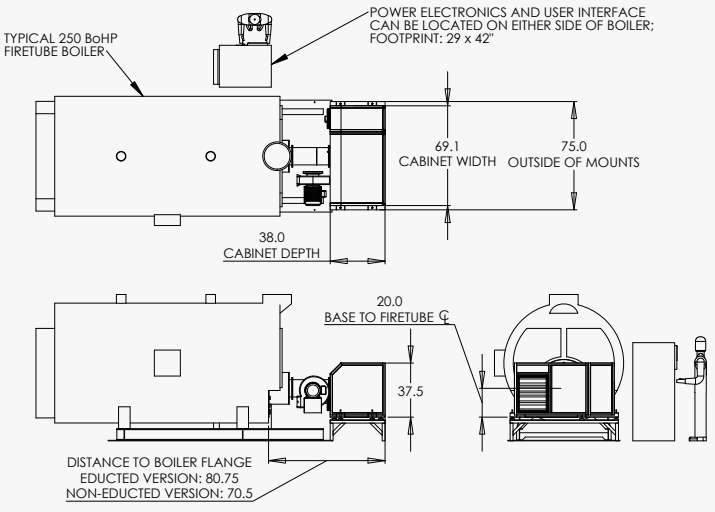
Benefits & Specifications

- **Amazing Efficiency:** Achieves maximum electrical power efficiency possible for gas-fired distributed generation (3812 Btu/kWh Heat Rate) and improves thermal efficiency (3-5%).
- **Quick Payback:** Provides less than a two-year payback in most markets.
- **ROI for NOx Compliance:** Surpasses market's strictest regulations (< 9 PPM) for existing boilers while giving owners an attractive ROI on their investments in NOx reduction.
- **High Turndown:** Follows thermal load with up to a 10:1 turndown ratio while maintaining maximum power output (100 kWh)
- **Lowers CO_2:** Reduces CO_2 by 63% compared to today's state-of-the-art gas-fired central power plants, and by 85% compared to conventional coal-fired power plants.
- **Off-Grid Capability:** Improves power availability, avoids boiler outages and reduces boiler's dependency on the grid.
- **Flexible Controls:** Operates in multiple modes ensuring that a boiler's thermal process is never disrupted.

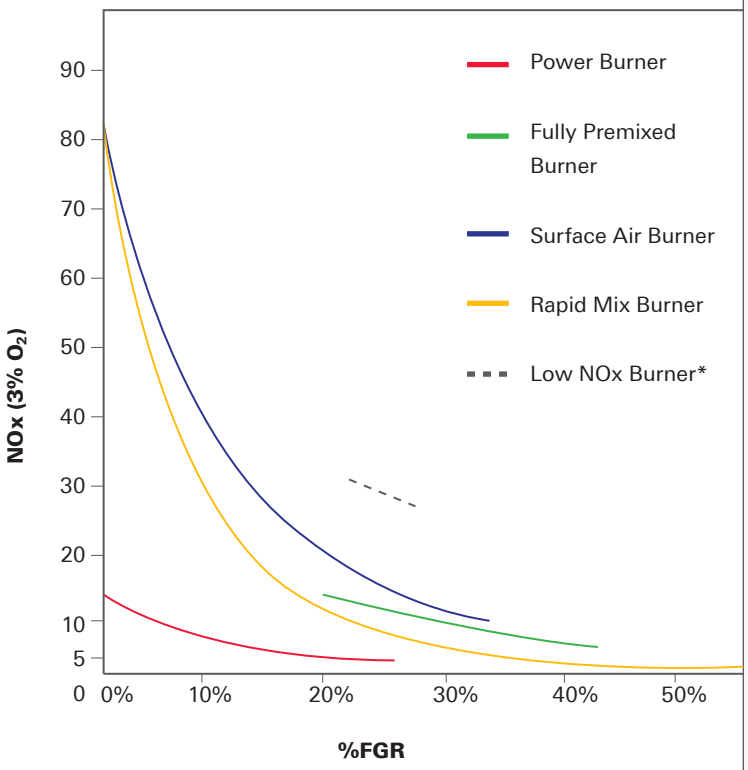
Dimensions



Emissions Performance

Boiler NOx Performance

Power Burner achieves less than 9 PPM boiler NOx at 3% O_2 with very little Flue Gas Recirculation (FGR) outperforming conventional burners.



*Conventional 30 PPM Burner with Flue Gas Recirculation (FGR)

CARB 2007 Performance

Power Burner surpasses CARB 2007 limits on NOx, Carbon Monoxide (CO) and Hydrocarbons (HC).

	NOx	CO	HC
CARB 2007 Limits	4.33	10.16	3.55
Power Burner	3.91	1.30	0.24

All cases corrected to 15% O_2 in the exhaust