



Waterborne Paint Drying System With Heat: Basic System

System Description

The California Pulse electric heater system is a combination of a waterborne paint drying system and an electric heater. The system has four user selectable modes: Pre-Heat, Flash-Off, Spray and Bake.

1. The system heats the booth during Pre-Heat to warm up a cold vehicle.
2. Spray Mode is a non heated mode that uses shop air at shop temperature.
3. The heated Flash-Off mode is used to dry waterborne finishes.
4. The finish coat is baked on during Bake Mode.

The blower takes air from the spray booth cabin. The heating element is installed in front of the blower. The system heats the air from the blower and delivers it into the cabin through the nozzles mounted in the gable area of the booth.

The system operates based on the fact that paint can be sprayed at relatively low air temperatures. Even during cold days, the shop air temperature is high enough for spraying especially if the vehicle can be pre heated. The electric heater system can easily heat up the spray booth to reach the desired flash-off temperature of waterborne finishes. The system is also effective in creating a high enough temperature for baking the finish coat on.

Patent Pending Ventilation Technology

Our patent pending ventilation technology makes it possible to use a very small amount of energy to produce outstanding temperature rise values. The standard 30kW system provides a 45F-50F temperature rise in about 20-25 minutes.

Cost of Operation

The standard heater is a 30Kw unit. If the cost of 1Kwh electricity is \$0.12 then the cost of heater operation for a cycle is only about \$1.80-\$2.10. This is significantly less than the cost of a refinishing cycle in a booth that uses a gas fired heater.

System Components

- intake filter
- ducting package
- 2hp blower
- control panel
- 30kW electric heater
- exhaust VFD (supplied by installer)

System Specifications

Control panel: 0.5A @ 110V

Blower motor (2HP): 6.3A @ 208V

Heating element: 85A @ 208V (30Kw)

Temperature rise: 30F in 10 min

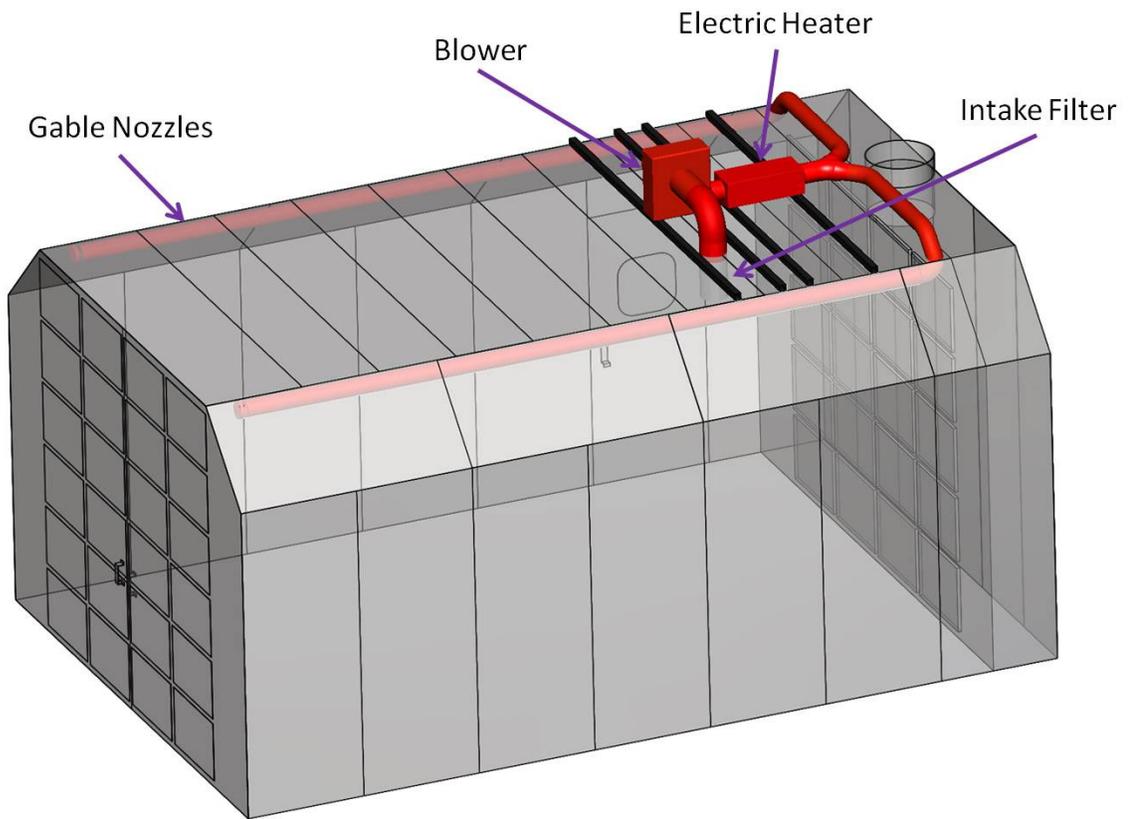
50F in 20 min

The system is available in all voltages. It is available in three phase and single phase configurations.

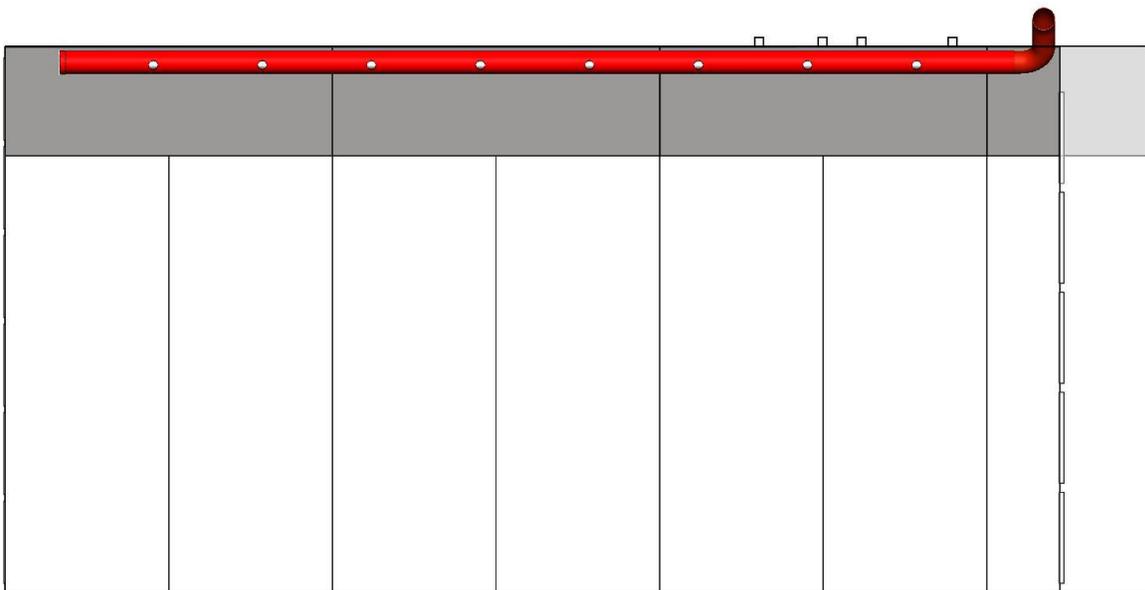
The standard system is either 208V 3phase or 230V 3 phase. Other voltages and single phase configurations are available as options.

Custom built systems are available for ANY spray booth size. Please contact us with your specifications for a quote.

Heated Drying System Layout



Gable Nozzles



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