



# Guardian GS8

## THE INDUSTRY STANDARD FOR THERMAL OXIDATION

The Guardian® series provides reliable thermal oxidation of process gases, using active flame oxidation to safely combust flammable and pyrophoric by-products. A flame wall in the main chamber, ignited by redundant fail-safe ignitors and fueled with minimal natural gas or methane, ensures complete ignition. Perpendicular dilution air enhances mixing through a swirling effect, and the air-cooled design eliminates the need for water. Treated gases are then directed to the facility's exhaust system.

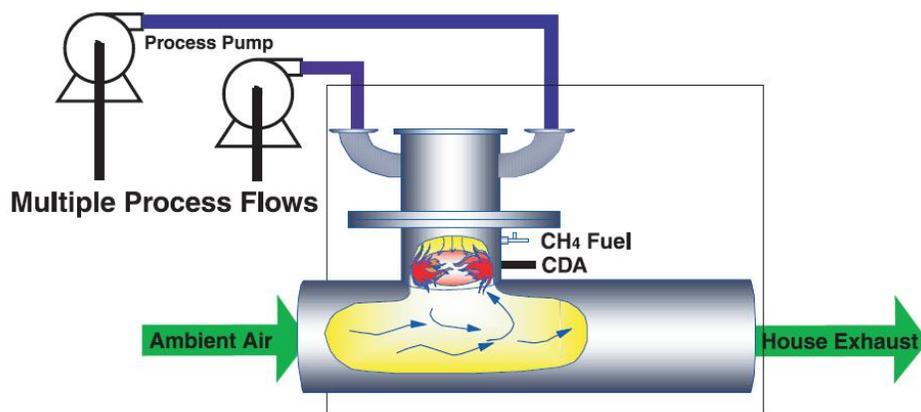
With over 1,500 installations worldwide, Guardian systems are proven safe, low-maintenance, and effective for treating effluent and gas cabinet vent lines. Built with no moving parts and multiple safety interlocks, the system offers extended maintenance intervals and a long MTBF. Its mature, robust design makes it ideal for “burn-box” applications in demanding industrial environments.

### APPLICATION

- Polysilicon
- CVD
- Pyrophoric/ flammable gas combustion
- Gas cabinet vent purge

### ADVANTAGES

- Simultaneous treatment for multiple
- process chambers and/or furnace tubes
- Low cost of ownership
- No electrically heated elements
- for instantaneous shutdown
- Flame flashback prevention system
- for safe, reliable operation
- Natural gas fueled
- Low maintenance requirement



# Product Dimensions

## OPERATING PARAMETERS

Total Process Gas Capacity	400 slm (14.1 scfm)
Total Inert Gas Capacity	100 slm (3.5 scfm)
Exhaust Air Flow	22 - 57 m3/min (800 - 2,000 scfm)
<b>Fuel Consumption</b>	
Methane, CH4	15 - 25 slm (0.5-0.9 scfm)
LPG Gas (option)	15 - 25 slm (0.5-0.9 scfm)
Hydrogen, H2 (option)	25 slm (0.9 scfm)
Power Consumption	500 watts
Clean Dry Air (CDA)	3-5 slm (6.4-10.6 scfh)
Nitrogen (N2) (Only used with optional Flashback Arrestor)	100 slm (3.5 scfm)

## FACILITIES REQUIREMENTS

### Connections

Process Inlet	KF40 / KF50, 1/2"VCR
Process Exhaust	8 in I.D. (203 mm) 8.62 in O.D. (219 mm)

### Fuel Supply

Methane (CH4)	3.0 in w.c. (7.5 mbar) 1/2" compression fitting
LPG Gas (option)	3.0 in w.c. (7.5 mbar) 1/2" compression fitting
Hydrogen (H2) (option)	30 psig (2.1 bar) 1/4" VCR

### Compressed Gas

Nitrogen (N2)	80-100 psig (5.5-6.7 bar) 1/4" compression fitting
Clean Dry Air (CDA)	80 psig (5.5 bar) 1/4" compression fitting
Electrical Supply	120/220 VAC, 50/60 Hz, 2.1A, 1 Phase
Overall Dimensions	59" H x 21" W x 31" D (1,487 x 533 x 787) mm
Clearance	Front: 36 in (914 mm) Top: 16 in (419 mm)
Weight	600 lbs (272 kg)

## COMMUNICATION AND INTERLOCKS

- 15-pin, D-sub female pin connector

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