The Guardian GS4 & GS8 scrubbers are the industry standard for reliable, thermal oxidation and combustion of process gases. The GS4 & GS8 systems are designed to thermally oxidize spent process gases using active flame oxidation. The effluent gases pass through a wall of flame in the main chamber, ensuring ignition of flammable and pyrophoric process gas by-products.

In these burn-boxes, an active flame front is produced by injecting a small quantity of hydrogen or methane fuel ignited by redundant, fail-safe igniters. Air enters the chamber creating a swirling action for efficient air and process gas mixing in addition to post combustion cooling. The combustion chamber and gases are air-cooled, eliminating the need for water cooling. The cooled reaction gases exit the burn-box and flow to the house exhaust system.

Over 1,500 installations worldwide have proven the thermal systems as safe and effective at treating flammable gases from process effluents and gas cabinet vent lines. Multiple safety interlocks provide a high level of safety during operation. Instantaneous shutoff of fuel and igniters eliminates a potential ignition source from upstream gas flows. With no moving parts, maintenance intervals are extended with MTBF measured in years.

The GS4 & GS8 technology is a proven effective solution for thermal oxidation.

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

Advantages
- Simultaneous treatment of multiple chambers & tubes
- Low cost of ownership
- Immediate cool down
- Natural gas fueled
- Low maintenance
- MTBF measured in years
## Specifications GS4

### Performance
- **Inert Gas Capacity**: 220slm for H2 and CH4 (CH4 requires flame stability kit to achieve this capacity)*
- **Exhaust Air Flow**: 250 - 550scfm (118 - 260 lps)
- **Power Consumption**: 200 watts
- **Fuel Consumption**: 15 - 37.5 slm Hydrogen, or 12 - 16.5 slm Nat Gas/LPG
- **Clean Dry Air**: 3.5 slm (7.5 scfh)
- **Nitrogen**: 100 slm (212 scfh) only required with optional flash back arrester

### Facilities
- **Inlet connection options**: KF40, KF50, ½” VCR
- **Nitrogen**: 80 - 100 psig
- **Clean Dry Air**: 80 psig (552 kPa) 3/8” compression fitting
- **Electrical**: 115VAC, 50/60 Hz, 10A
- **Process Exhaust**: 4 in I.D. (102mm), 4.5 in O.D. (114mm)
- **Fuel Supply**
  - Hydrogen: 35psi (241 kPa), ¾” VCR
  - Natural Gas: 7.5 in w.c. ½” compression
- **Dimensions**: 42H x 19W x 36D inches (1,067 x 483 x 914 mm)
- **Weight**: 200lbs (91Kg)

## Specifications GS8

### Performance
- **Inert Gas Capacity**: 600slm for H2 and CH4 (CH4 requires flame stability kit to achieve this capacity)*
- **Exhaust Air Flow**: 800-2000scfm (378 - 944 lps)
- **Power Consumption**: 200 watts
- **Fuel Consumption**: 15 - 37.5 slm Hydrogen, or 12 - 16.5 slm Nat Gas/LPG
- **Clean Dry Air**: 3.5 slm (7.5 scfh)
- **Nitrogen**: 100 slm (212 scfh) only required with optional flash back arrester

### Facilities
- **Inlet connection options**: KF40, KF50, ½” VCR
- **Nitrogen**: 80 - 100 psig
- **Clean Dry Air**: 80 psig (552 kPa) 3/8” compression fitting
- **Electrical**: 115VAC, 50/60 Hz, 10A
- **Process Exhaust**: 8 in I.D. (203mm), 8.62 in O.D. (219mm)
- **Fuel Supply**
  - Hydrogen: 35psi (241 kPa), ¾” VCR
  - Natural Gas: 7.5 in w.c. ½” compression
- **Dimensions**: 58H x 21W x 76D inches (1,480 x 533 x 1,930 mm)
- **Weight**: 600lbs (273Kg)

*The inert capacity of CH4 fuel without the flame stability kit is: GS4 110slm and GS8 180slm