



## Exhaust Gas Conditioning (EGC) System

Pyrolizer, Wet Scrubber, and Neutralization Systems

Many processes require the use of hazardous gases which can be flammable, toxic, corrosive, or pyrophoric. Industry standards and government regulations mandate the proper treatment of process effluent gases prior to release.

CVD's EGC systems provide automated handling of hazardous gases. We have taken extensive measures to provide fail-safe designs and combine them with forward thinking features in an effort to offer a versatile product for waste gas treatment.

The EGC systems thermally decompose and oxidize gases in a furnace, then pass the gases through a water spray packed tower to wet scrub, remove particles, and cool the exhaust gases prior to exiting the system. An optional pH monitoring system can neutralize the scrubbing solution.

### Integrated System



Models EGC410, EGC610, EGC810, EGC1010, and EGC1510, are integrated with our CVD system control logic.

### Standalone System



EGC410S, EGC610S, EGC810S, EGC1010S, and EGC1510S, are standalone models with a PLC control system and touchscreen display.

### Touchscreen Display

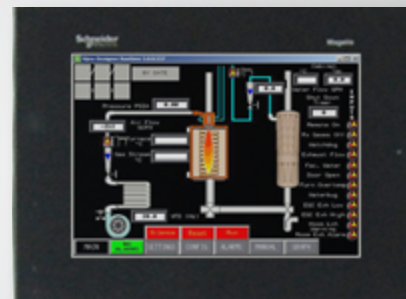
Terminal Type: Touchscreen Display

Display Type: Backlit Color TFT LCD

Display Size: 10.4 inch

Display Resolution: 640 x 480 pixels VGA

Touch Sensitive Zone: 1024 x 1024



## EGC System Features

- Furnace operating temperature up to 900 °C
- Digital temperature setpoint and readout
- Vertically mounted, Inconel® reaction tube with water cooled top flange
- Air flowmeter for oxidation
- Air pump
- Water spray packed tower
- Automatic PLC system control with touchscreen display (standalone models)

## Treatable Chemistries

- Ammonia (NH<sub>3</sub>)
- Arsine (AsH<sub>3</sub>)
- Boron Tribromide (BBr<sub>3</sub>)
- Boron Trichloride (BCl<sub>3</sub>)
- Carbon Monoxide (CO)
- Chlorine (Cl<sub>2</sub>)
- Diborane (B<sub>2</sub>H<sub>6</sub>)
- Fluorine (F<sub>2</sub>)
- Germane (GeH<sub>4</sub>)
- Hydrocarbons:
  - Methane (CH<sub>4</sub>)
  - Ethylene (C<sub>2</sub>H<sub>4</sub>)
  - Acetylene (C<sub>2</sub>H<sub>2</sub>)
- Hydrogen (H<sub>2</sub>)
- Hydrogen Bromide (HBr)
- Hydrogen Sulfide (H<sub>2</sub>S)
- Hydrogen Chloride (HCl)
- Hydrogen Flouride (HF)
- Hydrogen Selenide (H<sub>2</sub>Se)
- Metalorganics:
  - Diethyl Zinc
  - Trimethyl Aluminum
- Phosphine (PH<sub>3</sub>)
- Phosphorous Oxychloride (POCl<sub>3</sub>)
- Silane (SiH<sub>4</sub>)
- Silicon Tetrachloride (SiCl<sub>4</sub>)
- Trichlorosilane (SiHCl<sub>3</sub>)
- Many others

## Cabinet Dimensions (inches)

MODEL	HEIGHT	DEPTH	WIDTH
EGC 410(S)	74"	27"	28"
EGC 610(S)	74"	27"	28"
EGC 810(S)	74"	36"	36"
EGC 1010(S)	74"	36"	36"
EGC 1510(S)	80"	48"	48"

## EGC System Options

- Water recirculation system
- Drain pump
- Closed loop pH neutralization

## Interlocks

- Water flow switch with indicator
- Air flow switch with indicator
- Over temperature protection
- pH lower and upper warning and alarm (optional)
- Inputs and outputs available to interface with process tools, gas cabinets, and facility alarm systems



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