



GREEN ENGINEERING SOLUTIONS



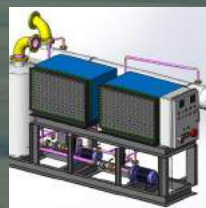
**GAS
FLARE
SYSTEMS**



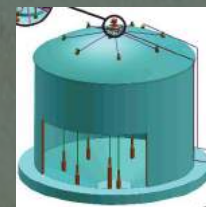
**THERMAL
OXIDISERS &
INCINERATORS**



**GAS
SCRUBBING
SYSTEMS**



**BIOGAS BOOSTING
CONDITIONING &
UPGRADING**



**GAS MIXING
& SAFETY
SYSTEMS**



**GAS
LINE
ACCESSORIES**

A FLARE SYSTEM FOR EVERY NEED



ENCLOSED FLARES

- Suitable for Biogas, Natural Gas & combustible gases
- Smokeless, low noise & radiation free operation
- Meets stringent emission regulations
- Customised API 521 & 537 solutions
- Suitable for Waste Water Treatment Plants, Landfills, Oil fields, Coal Bed methane etc.

OPEN FLARES

- Available as Utility flare or Assisted flare (gas/steam)
- For WWTPs, Landfills, Coal Bed Methane etc.
- Available in Derrick, Guy-Wired or Self Supported Structures
- Aspirated burner design allows for high efficiency
- Continuous or intermittent pilot function

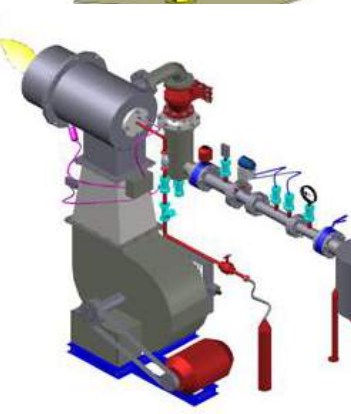


COMPACT FLARE

- Low budget & flow application
- Modular, pre-piped & pre-wired design
- Perfect for application such as small ETPs/STPs

BURNERS

- Boiler & Process heater application
- Customised NFPA certified solutions
- Compatible with Biogas, Natural gas etc.

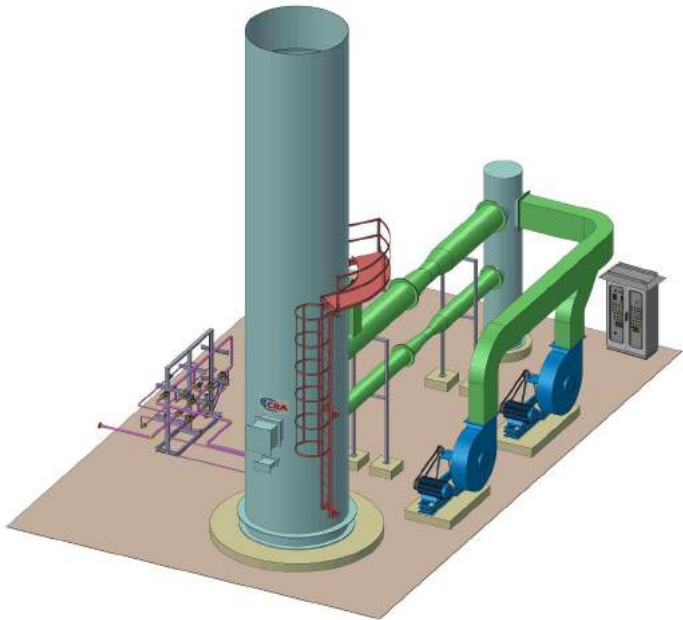


PILOTS & IGNITORS

- Intermittent or continuous pilots
- Burner & other flare applications.
- Self aspirating or forced air supply options with retraction capabilities
- Flame Front Generator or Electrical Ignition Systems
- Automatic & Manual FFG options
- High Voltage Direct Ignition or High Energy Direct Ignition



THERMAL OXIDISERS & INCINERATORS



THERMAL OXIDIZER

- Over 99% VOC destruction efficiency & elimination of odour concerns
- Hidden flame, low noise, fumes & radiation to help meet strict regulations
- Regenerative & Recuperative options available
- CHM compliant modular PLC/SCADA enabled systems
- Designed to meet international certifications such as FM Global, CSA, ATEX & TSSA

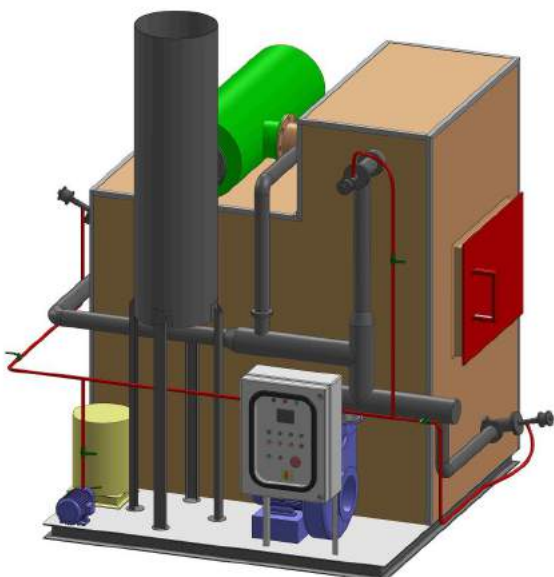
VAPOUR COMBUSTION UNIT

- Application includes liquid tank storage operations such as ships
- Designed to meet Quad O & other regulations
- Over 99% VOC destruction efficiency
- Hidden flame, low noise & fumes to meet environmental regulations
- Flashback resistant burners & auto ignition electrodes



ANIMAL & PET CREMATOR

- Load capacity ranging from 10 kg to 2000 kg
- For animals such as sheep, pigs, fish, horses, cattle & pets
- Optional heat recovery & brick or cast refractory
- Suitable for butcheries, veterinary labs, animal waste collection etc.
- Single or dual stage loading



A DIVERSE RANGE OF BIOGAS SCRUBBERS

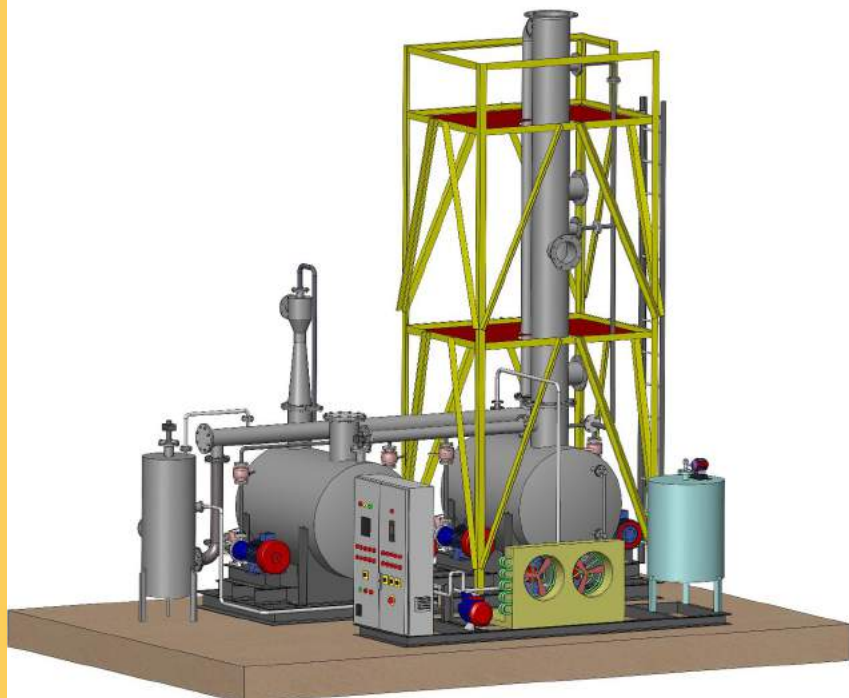


BIOLOGICAL SCRUBBER

- Manufactured under German collaboration
- Technologically advanced systems designed to alleviate blockage problems
- SulphPur® type scrubber offers low energy & water consumption
- Elementary sulphur (S) produced
- Classic model offers low maintenance & over 98% H₂S reduction
- Application in biogas plants, sewage treatment plants, paper mills etc.

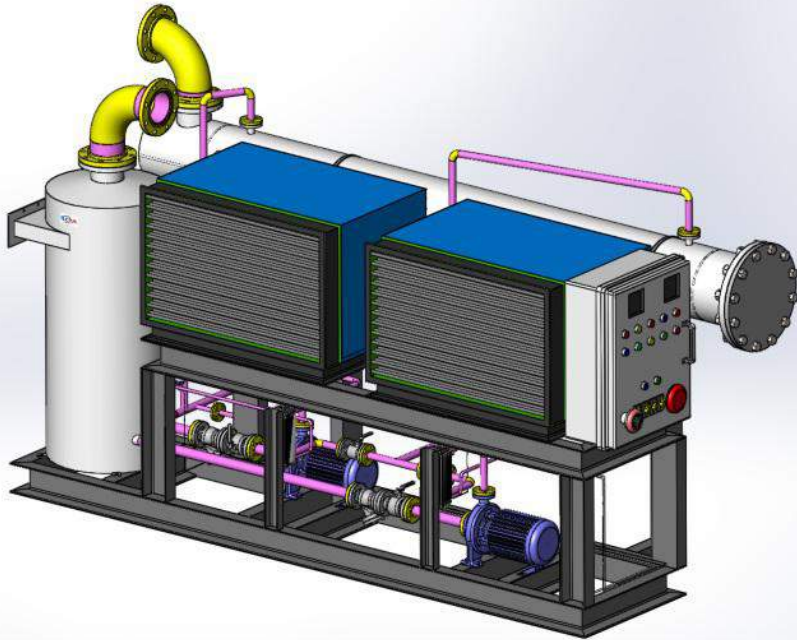
CHEMICAL SCRUBBER

- Caustic NaOH treatment offers unparalleled efficiency & performance
- Zero down time ensures maximum output
- Tolerant to fluctuating gas flows
- Fully customised & totally integrated system



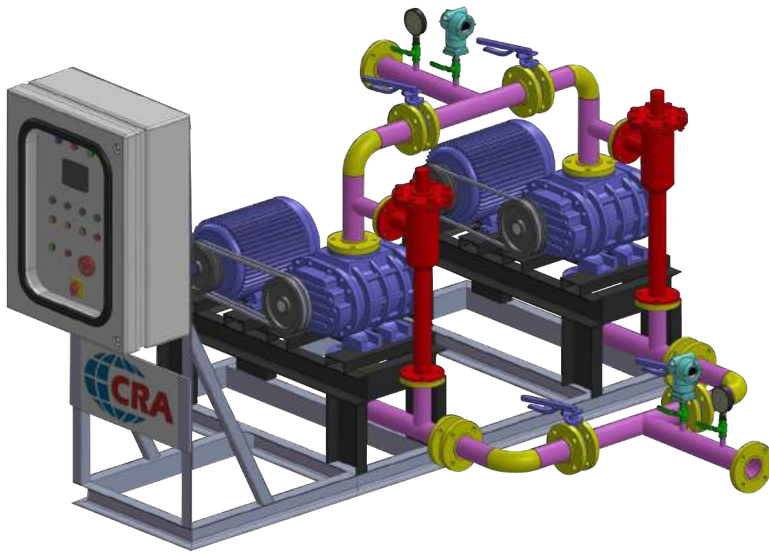
CONDITION, BOOST & UPGRADE YOUR BIOGAS

GAS DEHUMIDIFIER



- Dehumidifies process gas to ensure good quality gas
- Designed to pre-treat combustible gases prior to injecting into a critical process
- Automated control units to adjust the out gas temperature
- Capacity up to 10000 m³/hr
- Flashback resistant burners & auto ignition electrodes

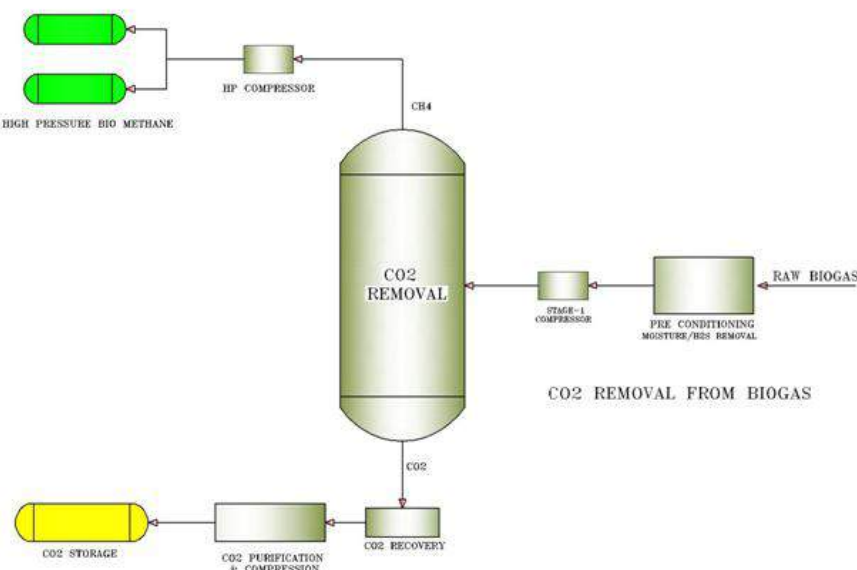
GAS BOOSTING SYSTEM



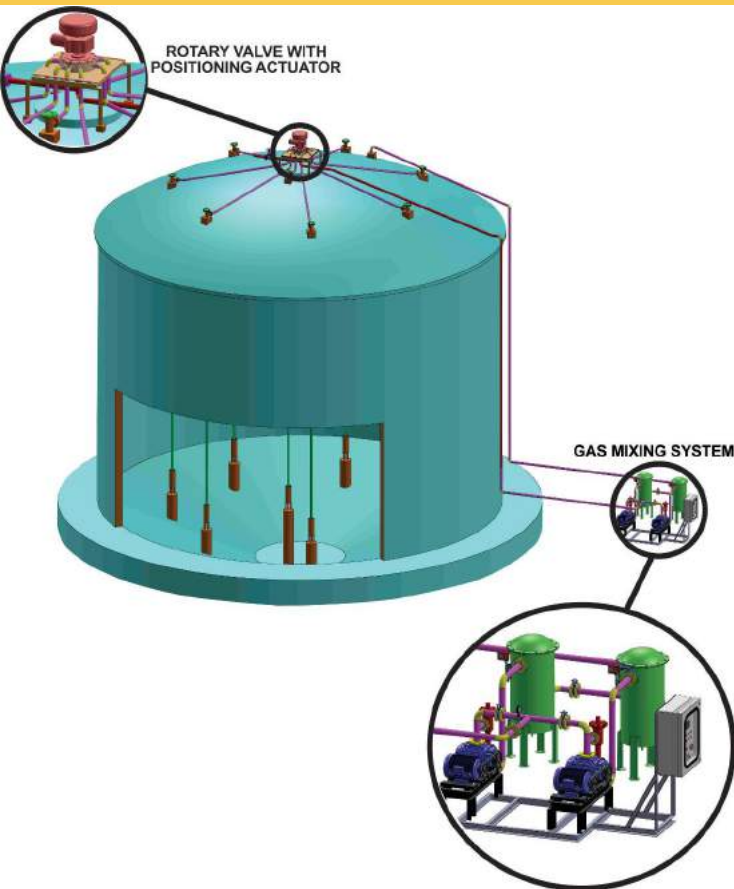
- Fully automated system with provision of all necessary instrumentation
- Sophisticated synchronisation between demand & supply of the gas
- Pressures ranging from 0-3.5 bar
- Compact, pre-wired, skid mounted packaged system
- Modelling & Engineering done as per client requirements

BIOGAS UPGRADEATION

- Offers high returns from Biogas converting into Bio-Methane or Bio-CNG
- Fully automated control with continuous monitoring of gas quality
- Low payback period with high purity Methane (up to 99%)
- Gas utilisation includes vehicle fuel, grid gas, combined heat and power plants etc.



GAS MIXING & SAFETY SYSTEMS

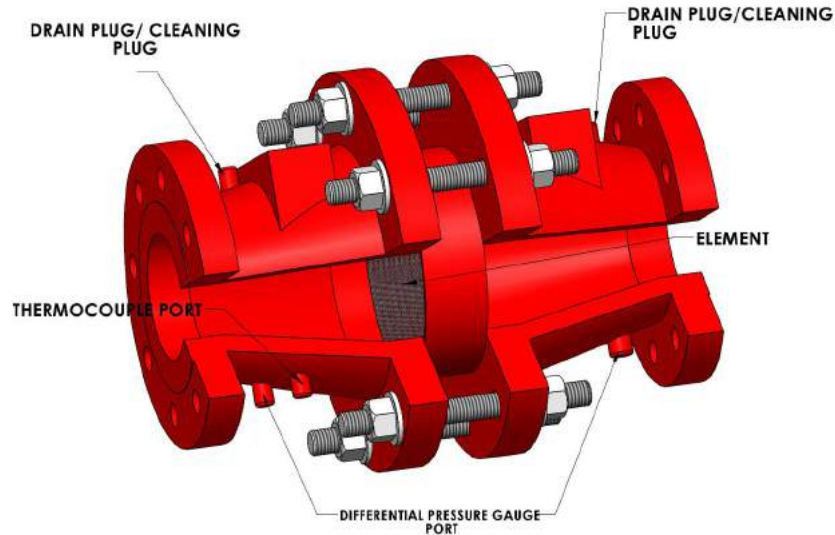


ANAEROBIC DIGESTER GAS MIXING SYSTEM

- Both confined & unconfined type systems offered
- Offers high mixing efficiency of entire tank
- Suitable for use in sealed digester tanks
- No downtime

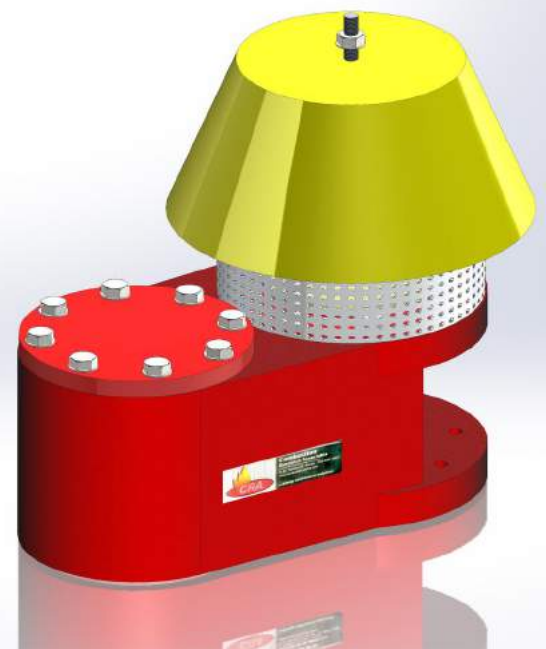
PVRV & BREATHER VALVES

- Designed with focus on tank protection
- Pressure only, vacuum only & combined pressure & vacuum valves
- Designed as per API 2000 6th edition
- Available in dead weight and spring loaded mechanisms



FLAME ARRESTOR SYSTEM

- Prevent any flashbacks in tanks & pipelines
- Designed under BS 7244 & EN 2874
- Suitable for gas groups 1, 2A & 2B
- Sizes range from 25 NB to 300 NB
- Approved by leading consultants & government bodies
- Various installations world-over



GAS LINE ACCESSORIES



KNOCKOUT DRUM

WATER SEAL

PURGE REDUCTION SEAL

METERING SKIDS

FLOWMETERS



ABOUT US

Founded in 1993, Combustion Research Associates (ISO 9001:2008 & ISO 14001:2004) is a multi-faceted engineering company that is managed by highly experienced scientists and engineers. We focus on providing clean, green and innovative solutions to a wide array of industries including Oil & Gas, Petrochemicals, Defence, Biomass, Waste Water Treatment, etc. Our solutions span regions world over including Asia, The Middle East, Africa & the Americas.

Our extensive product range ranges from Flares & Scrubbers to complete gas based solutions including gas handling, safety, conditioning & utilization systems for fuel sources such as Natural Gas, Syn Gas, Producer Gas, Biogas, LFG & other hydrocarbon based gases.

For the renewable energy sector, we provide comprehensive and tailor made solutions for biogas based systems including Flares, Scrubbers (Dry, Wet & Biological), Upgrading Systems (Biogas to Bio-CNG) etc. We also offer Clean Development Mechanism (CDM) rated projects helping our clients qualify for CDM compliance.

With rigorous in-house testing and quality control as per international standards, we ensure the reliable and safe operation of our products

REACH OUT TO US

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