GAS CONDITIONER / DEHUMIDIFIER

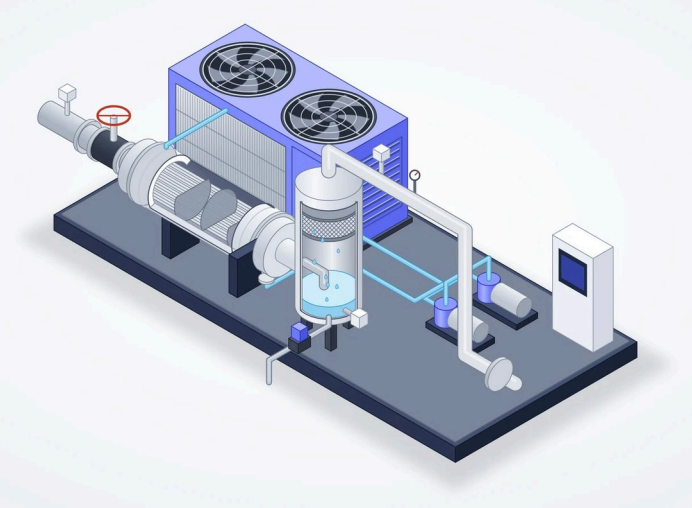
Engineering a Safer World

CHILLED GAS CONDITIONING FOR BIOGAS, LFG & COMBUSTIBLE PROCESS GAS

Biogas, landfill gas and producer gas leave the digester saturated with water vapour and above the temperature a gas engine will accept. Carried forward, that moisture condenses in the fuel train, corrodes the engine and derates output.

The CRA Gas Conditioning Skid pre-treats the gas before it enters a critical process or a gas turbine generator. It performs two duties — it strips liquid droplets from the stream and trims gas temperature to the injection requirement. Gas passes through the tubes of a shell-and-tube exchanger against chilled water in the shell; condensate drops out, collects in a sump and is drained automatically for unattended operation.

Filter elements are selected to the gas composition, and all vessels, piping, chiller and controls are skid mounted for transport and single-point installation. Horizontal and vertical models are supplied to suit the available plot, in capacities to 10,000 m^3/hr.



CRA ADVANTAGE

+ Modular Skid, Smaller Footprint	+ Optimal Design & Performance + Accomodate Special Requirements
+ High Efficiency Moisture Recovery	+ On-Time Delivery + Responsive & Organized Team
+ Customised MOC — SS 316, SS 304, CS	+ Stringent Quality Management + Fast Turnaround
+ Capacities to 10,000 m^3/hr	+ Cost Effective Maintenance Packages + Long-Term CRA Support

APPLICATIONS

Supplied for gas cleaning and fuel-conditioning duty across biogas and waste gas plants

+ Gas Scrubber Systems
+ Biogas Upgrading Plants
+ Biogas to Power Generation
+ Gas Temperature Adjustment to Design
+ Moisture Removal from Any Combustible Gas
+ Gas Booster & Engine Fuel Trains

CRA
7, Sector 140A
Noida, UP, 201304

Learn more at www.cra.energy

contact@cra.energy
0120 415 6787 · +91 85060 09433

QUALITY ASSURANCE MANAGEMENT ISO 9001

©2022 Combustion Research Associates

WORKING & SELECTION

CRA
Engineering a Safer World

CHILLED WATER SEPARATION, SKID MOUNTED AND PANEL CONTROLLED

WORKING

+ Gas enters the chilled water heat exchanger, where moisture is removed on contact with the chilled water

+ Refrigerant then passes to the condensing unit and the additional heat of the gas is rejected to cooling water or air

+ In the chiller the liquid refrigerant is successively expanded; boiling at low pressure, it draws latent heat from the surrounding water and chills it

+ The exchanger is shell & tube — gas through the tubes, chilled water through the shell

+ A storage tank on the skid holds and circulates the chilled water

+ Operation and chiller selection are handled from the control panel provided on every system

FOOT PRINTS

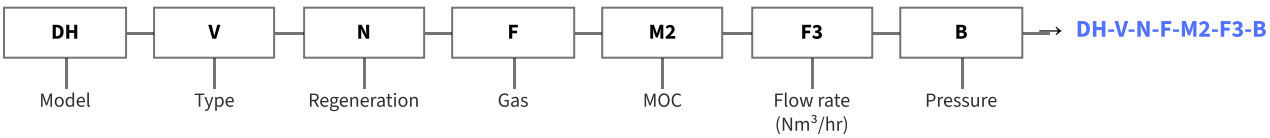
Width	1.0 m to 2.5 m
Length	1.2 m to 3.8 m
Height, vertical model	2.0 m to 5.0 m
Capacity	up to 10,000 m^3/hr

Horizontal and vertical models, regenerative and non-regenerative, with optional standby chiller and gas booster.

SELECTION & ORDERING

Model	Type	Regeneration	Gas	MOC	Flow, Nm^3/hr	Pressure, bar
DH	Horizontal — H	Regenerative — R	LFG — L	SS 316 — M1	Up to 50 — F1	< 0.1 — A
	Vertical — V	Non-Regenerative — N	Fuel — F	SS 304 — M2	Up to 150 — F2	Up to 3.5 — B
			Biogas — B	CS — M5	Up to 300 — F3	Up to 10 — C
			Other — W		Up to 500 — F4	Up to 30 — D
					Up to 1000 — F5	
					Up to 2000 — F6	
					Others — FX	

Example for Model Selection



CRA
7, Sector 140A
Noida, UP, 201304

Learn more at www.cra.energy

contact@cra.energy
0120 415 6787 · +91 85060 09433

ISO 9001 QUALITY ASSURANCE MANAGEMENT

©2022 Combustion Research Associates