



# VENUS PRO

## Cow Gas Emissions Monitor

**The Venus Pro is a customisable solution for accurate, multi-gas analysis.**

This **livestock variant** has been specifically designed to meet the challenges faced in measuring **methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>)** in the **digestive gas of cows**. This technique is used for **genetic and nutritional research** to aid breeders and to **reduce greenhouse gases and protect the environment**.

Samples collected from animals have a high degree of humidity which some sensors simply cannot cope with. We use the latest in **Gas Filter Correlation (GFC) technology** which is **not cross sensitive to humidity**, ensuring accurate readings in real time.



**The Venus Pro has NO LIMITS.**

- Specially selected sensors to ensure **no cross sensitivity to humidity** or background gases typically found in a barn environment such as **ammonia, hydrogen sulphide and nitrous oxide**
- Long life sensors
- Low maintenance system
- **VERA** compliant
- **Simultaneous and continuous** gas measurements
- Compatible with **Structured Query Language (SQL)**
- **Internet of Things** enabled
- **Local data storage** on SD card
- Users have the flexibility to operate and check the **system remotely** via a **cell phone** or **desktop**
- **Multi-gas path sequencing** can be added as an optional extra (Max 8 channels)

**Features**

- Hi-Res, full colour, touch-screen display
- Wall mount enclosure
- GFC methane sensor
- GFC carbon dioxide sensor
- 2 relays
- Permeation dryer
- Automatic calibration function
- CO<sub>2</sub> scrubber (Soda Lime)
- Automatic water trap and particulate filter
- Data-logging
- GSM module
- Sample and purge pumps
- Temperature and pressure compensation



## Sensor Module Solutions

Feature	Methane	Carbon Dioxide
Technology Type	GFC	GFC
Sensor Range	0-2000ppm	0-12000ppm
Operating Temperature	5-40°C 41-104°F	5-40°C 41-104°F
Ambient Humidity	Up to 95% RH at 20°C / 68°F	Up to 95% RH at 20°C / 68°F
Warm-Up Time	30 minutes	30 minutes
Resolution	1ppm	10ppm
Repeatability	± 0.2% of Scale	± 0.2% of Scale
Drift	,2.5% of Scale over 3 months	,2.5% of Scale over 3 months
Response Time	< 20 seconds	< 20 seconds

### Why Nebula?

...because we specialise in gas sensing and analysis in all environments and supply and support the best of the best.

### Want another gas?

Just give us a call or email us with a list of your requirements



## Technical Specification

Criteria	Specification
Operating Temperature Range	5°C to 40°C 41°F to 104°F
Operating Pressure Range	0-2psi (0-130mbar)
System Warm-Up Time	30 minutes to operational 24 hours to full specification
Power Requirements	90-240VAC 50/60Hz
Outputs	2 Relays, GSM, 0-1V Isolated
IP Rating	Enclosure IP65 Display IP66
Data-logging	Up to 2 years
Compliance	VERA, CE EMC and LVD



## FACT

Every time a cow 'burps' it releases methane into the atmosphere. Each cow produces 300 litres of CH<sub>4</sub> a week which accounts for 15% of global greenhouse emissions.

### NEBULA Gas Instrumentation

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