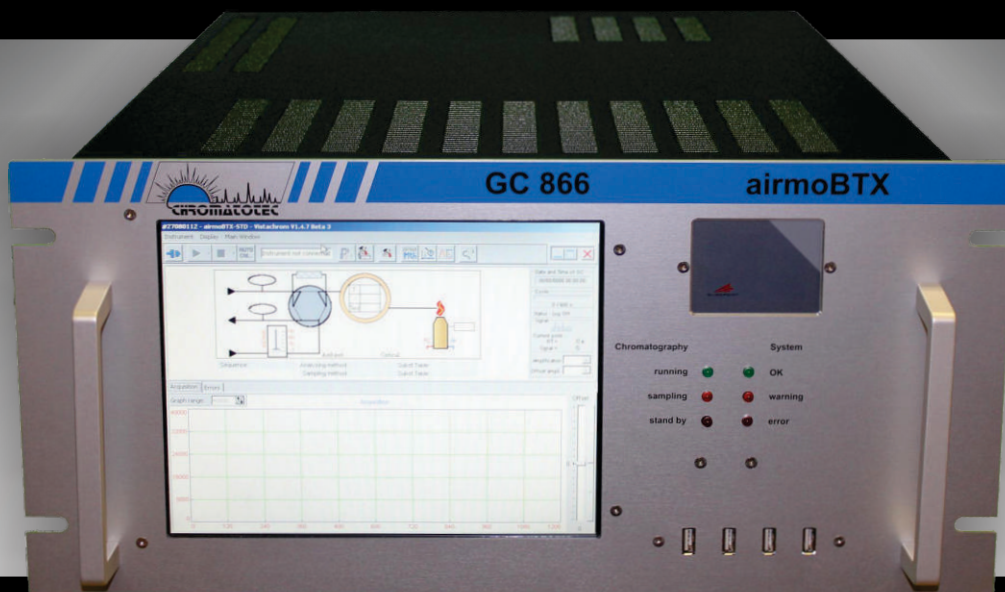# CAS
CONSOLIDATED ANALYTICAL SYSTEMS

Gas Chromatographs

Measurement Solutions

Our gas chromatographs (GCs) have been developed specifically to address the challenges of online, continuous monitoring. The instruments are fully automated, rugged, industrial analyzers that provide an ideal solution for companies and operators seeking to increase data capture and maximize efficiency. These integrated solutions provide unsurpassed separation of chemical compounds and exceptional stability of results, combined with the ease of an automatic platform. The GCs perform in the most stringent applications with the lowest cost of ownership on the market. The detectors allow no interference from competing compounds. Our partners globally have validated the GCs as the most accurate and reliable analyzers in the industry for measurement of gases in ambient, environmental, process, natural gas, and industrial monitoring.

The instruments offered by CAS are robust, automatic gas chromatographs dedicated to the analysis and monitoring. Miniaturization, sensitivity, mobility, and flexibility are their main features. The comprehensive range of Chromatotec GCs provides automated, continuous, online analysis of over 100 organic compounds using measurement detection methods including PID, FID, dual FPD, electrochemical cells, and TCD. Complete systems incorporating GC, internal calibration, stream selectors, air conditioning, H_2/N_2/air generators, industrial computer, and data acquisition software are delivered offering turnkey solutions for online, continuous monitoring needs. Results are validated automatically by an internal permeation standard to ensure repeatability and accuracy.

All GCs offer an advanced color display, intuitive user interface, flexible I/O, and built-in data acquisition. All instrument set up, control, and access to stored data and diagnostic information are available through the front panel, or via RS232, Ethernet, or USB com ports either locally or by remote connection using the included VISTACHROM® software. High and low threshold alarms for monitoring are user adjustable. Proprietary VISTACHROM® software enables remote monitoring and injection control as well as full traceability with onboard archiving of results.

- **Ranges: ppt, ppb, ppm, %**
- **Serial com ports**
- **Four front panel USB ports for peripheral devices**
- **Comprehensive internal data logging with 40GB storage**
- **Hard drive storage of date and time stamped chromatograms**
- **Full traceability through archiving of results and QC**
- **Ethernet connectivity for remote access and monitoring**
- **Adjustable threshold alarms**
- **Online, continuous sampling**
- **Low maintenance**
- **Automatic validation of results by Internal Permeation Tube**
- **Large, vivid, and durable color graphics display with user-friendly interface**

TISCH International

www.cas-en.com

Applications

Ambient Air/Environmental:
- Natural Gas (NG)
- Refineries
- Ambient air control (PAMS and TO-14)
- Atmospheric pollution
- Traffic emissions
- Petrochemical fence line
- BTEX
- Urban areas
- Non-urban areas
- Indoor/outdoor air

Emission monitoring:
- CEM - Continuous Emission Monitoring
- Incinerators
- Stack
- H_2S
- Solvents and paints
- Petrochemical
- VOC treatment (Filtration...)
- Process

Industrial:
- Process quality control
- Industrial hygiene (VOC/UHC monitoring)
- Waste water treatment plant (headspace/ppt)
- Industrial health and safety
- Clean air room
- Pharmaceutical plant
- Heavy chemicals
- Micro-electronics manufacturing

Natural gas:
- Odorization processes
- Deodorization processes
- Gas quality analysis:
  - mercaptans, H_2S, Sulfides
- H_2S level monitoring
- Verification of H_2S removal processes
- Butane/Propane: ppb level control
- Catalyzer protection
- Propellant gases
- Automatic alarm generation

Other applications:
- Purge and Trap (Method 502-2 or 524)
- Toxicity: Benzene, 1,3-butadiene
- Total Hydrocarbons
- Filter integrity monitoring
- Drinking water

Detector Types

DFPD: Dual Flame Photometric Detector
Electrochemical: gas-liquid reaction
FID: Flame Ionization Detector
FPD: Flame Photometric Detector
PID: Photoionization Detector
TCD: Thermal Conductivity Detector

Options

Calibration Options:
- Automatic validation and calibration
- Internal Permeation Tube system (CALIBRATION system)
- Multiple stream analysis with Multiplexer (2 to 6 streams)
- User definable alarm thresholds

Mounting Options:
- Rack mount brackets with chassis slides
- Rack mount brackets with stationary shelf
- Enclosed instrument rack with HVAC

Other Options:
- 24V power for transportable analysis
- Explosion proof Exp box - Ex Specification Class 1 Div 2, Groups B,C,& D
- Maintenance kit
- UPS (Uninterrupted Power Supply)
- Climate-control
- Hydrogen and Zero Air Generators

Communication Specifications

Included I/O:
- MODBUS/JBUS or MGS1 (RTU or ASCII)
- RS232
- RS485
- Ethernet
- 4 USB com ports

Optional I/O:
- 4-20mA output
- 0-10V output

Contact Information

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TISCH International