PGC30

ONLINE PROCESS GAS CHROMATOGRAPH

Flameproof Industrial Analyzer for Hazardous Areas

01
FLAMEPROOF DESIGN

Ex d IIC T6 Gb, ATEX certified for Zone 1 & 2. Robust 316 stainless steel enclosure for demanding hazardous environments.

02
MULTI-DETECTOR PLATFORM

FID, TCD, micro-TCD, FPD, PDHID, PID, ECD, EPD. Supports up to 2 FID detectors simultaneously for complex analysis.

03
7×24 INDUSTRIAL UPTIME

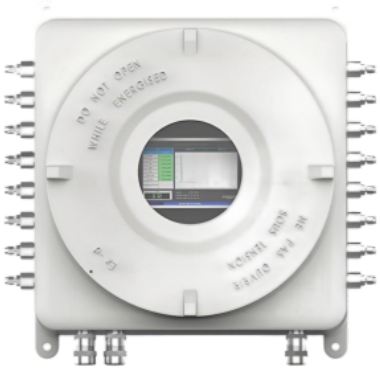
Linux-based UniLite OS with over 1 year of continuous data storage. Wizard-based auto-calibration for unattended operation.

04
FULLY MODULAR

3 Valco switching valves with 15-channel EPC. TCP/IP expansion enables multi-instrument parallel analysis.

KEY ADVANTAGES

- Ex d IIC T6 Gb flameproof enclosure
- ATEX certified Zone 1 & 2 hazardous areas
- 8 detectors: FID, TCD, micro-TCD, FPD, PDHID, PID, ECD, EPD
- Up to 2 simultaneous FID detectors
- 15-channel full EPC gas path control
- 16+ sample switching with cyclic sampling
- Built-in industrial PC with 5.7" display
- Explosion-proof keyboard for safe operation
- 330°C maximum valve box temperature
- 1200 psi high-pressure liquid injection
- 500°C/min on-column rapid heating
- Internal temp & pressure compensation
- TCP/IP internal, MODBUS external
- 1+ year 7×24 continuous data storage



EXPLOSION-PROOF ENCLOSURE
Ex d IIC T6 Gb rated, ATEX Zone 1 & 2. 316 stainless steel housing, 500x500x350 mm.

HIGH-TEMPERATURE VALVE BOX
330°C maximum with patented penetration insulation joints.

MODULAR DETECTOR SYSTEM
Hot-swappable detectors via 4-pin connector. FID, TCD, FPD, PDHID, PID, ECD, EPD.

INDUSTRIAL COMPUTER
Built-in IPC, 5.7" display, UniLite Linux OS. 1+ year data storage.

EPC GAS PATH CONTROL
15-channel full electronic pressure control with temp & pressure compensation.

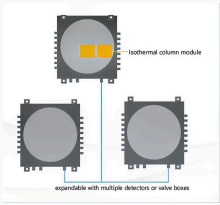
CORE TECHNOLOGIES

GAS/LIQUID INJECTION

- Switching & diaphragm valves
- Up to 4 switching + 6 diaphragm
- 330°C max, 1200 psi liquid

SEPARATION ENGINE

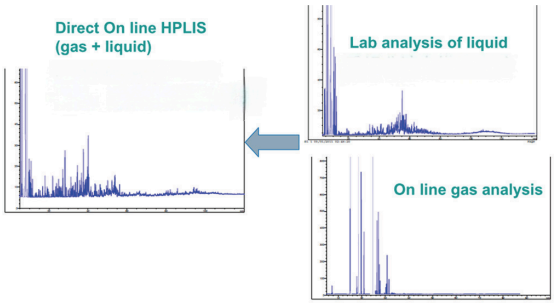
- Two isothermal ovens, 330°C
- >500°C/min rapid heating
- Deanswitch microfluidic control



NETWORK EXPANSION

- TCP/IP internal, MODBUS external
- Multi-instrument parallel control
- 15-channel full EPC gas path

PERFORMANCE PROOF



Proven Analysis Performance

Reliable chromatographic separation across petrochemical, environmental, and process gas applications. Simultaneous C1-C40 detection with excellent peak resolution and repeatability over continuous 24/7 industrial operation.

APPLICATION AREAS

PETROCHEMICAL	COAL CHEMICAL	NATURAL GAS	HYDROGEN ENERGY	SPECIALTY GAS	ENVIRONMENTAL
Process gas monitoring in refineries	Syngas composition for gasification	Heating value & component analysis	High-purity hydrogen verification	Ultra-high purity at ppb/ppt levels	Emission monitoring & compliance

MAIN SYSTEM

Enclosure	Explosion-proof, Ex d IIC T6 Gb
Dimensions (H x W x D)	500 x 500 x 350 mm
Weight	50 kg
Hazardous Area Rating	ATEX Zone 1 & 2
Column Oven	Isothermal up to 330°C
Valve Box Temperature	0-225°C (330°C optional)
Column Types	Packed and capillary
Max Columns per Oven	2-4 packed or 2 capillary
Max Column Ovens	2 built-in isothermal

POWER & COMMUNICATION

Power Input	100-240 VAC, 50-60 Hz
Max Power	300 W
Communication	RS485, Ethernet TCP/IP
Protocol	MODBUS (standard)

SAMPLE HANDLING & DETECTION

Max Switching Valves	4 Valco rotary valves
Max Diaphragm Valves	6
EPC Channels	15-channel full gas path
Sample Switching	16+ channels, cyclic sampling
High-Pressure Liquid	Up to 1200 psi
Detectors	FID, TCD, micro-TCD, FPD, PDHID, PID, ECD, EPD

PERFORMANCE HIGHLIGHTS

330°C
Maximum valve box temperature

>500°C/min
On-column heating rate

1200 psi
High-pressure liquid injection

<1 ppm
MEMS micro TCD detection limit

<10 ppb
PDHID / PID sensitivity

CONTROL, SOFTWARE & DATA

Operating System	Industrial Linux (UniLite)
Data Processing	Built-in automatic modules
Calibration	Wizard-based auto-calibration
PC Software	UniStation for offline analysis
Data Storage	1+ year of 7x24 operation data
Analog Output	4-20 mA (optional), up to 32 ch
I/O Output	Status, alarm, error, maintenance
Insulation	Aerospace-grade thermal cotton

** Specifications are subject to change without notice. Rev 20.E1*