GC4310 / TYPE I

Portable total hydrocarbon, methane and non-methane total hydrocarbon analyser (Type I, chromatography)

Overview

The GC4310 Type I uses GC-FID to monitor non-methane total hydrocarbons and benzene-series compounds in stationary-source waste gas, and non-methane total hydrocarbons in ambient air. A built-in humidity module supports regulatory monitoring, on-site comparisons and company self-monitoring.

Features

- Lightweight portable design with a detachable 8-inch rugged industrial tablet; total weight of the main unit and all components within 16 kg.
- Miniature refillable nitrogen and hydrogen cylinders, with an internal battery; battery or mains power can be selected.
- FID automatic ignition, flame monitoring and hydrogen shut-off when the flame goes out.
- After a full charge, the source states over 4 hours with the heated line on and over 8 hours without heating; full nitrogen and hydrogen cylinders support over 8 hours.
- Automatic flow control for carrier, fuel and combustion-support gases; a sample loop controls sample gas.
- Chinese-language interface with one-touch measurement; stores readings, alarms, curves and reports; administrator and operator permissions, 4G and Wi-Fi communications.
- Built-in printer and humidity module; PID temperature control accuracy ±0.1 °C; key components are imported.



Technical specifications

Detection principle	Chromatography, FID detector
Parameters	Non-methane total hydrocarbons, benzene, toluene and xylene; multifunction probe optional
Heated line	Heating temperature ≥120 °C and more than 20 °C above flue-gas temperature
Integration	Chromatography module, FID detector, carrier gas cylinder and hydrogen cylinder inside main unit
Power and runtime	Battery or mains; normal operation battery runtime ≥7 h
Cylinder runtime	Nitrogen and hydrogen cylinders ≥8 h
Data and printing	Print individual and average readings; chromatograms and equipment conditions exportable as PDF, Word or Excel; historical chromatograms can be reanalysed
Detection limit	≤0.1 mg/m³
Sampling flow	≥0.5 L/min
Range	0.1-20000 mg/m³
Repeatability	≤1%
Linearity error	Non-methane total hydrocarbons ≤±0.5% F.S.; benzene series ≤1% F.S.
Analysis cycle	≤2 min (non-methane total hydrocarbons); ≤5 min (non-methane total hydrocarbons and benzene series)

Referenced standards

- HJ 1012-2018 - Technical requirements and test methods for portable monitors of total hydrocarbons, methane and non-methane hydrocarbons in ambient air and waste gas
- HJ 1332-2023 - Stationary source emissions: determination of total hydrocarbons, methane and non-methane hydrocarbons by portable gas chromatography-FID
- HJ 38-2017 - Stationary source emissions: determination of total hydrocarbons, methane and non-methane hydrocarbons
- JJG 700-2016 - Verification regulation for gas chromatographs
- DB11 1488-2018 - Emission standard of air pollutants for the catering industry

Configuration

Standard

- A complete standard configuration list is not provided in the source.

Source notes and verification

- The catalogue claims type approval for measuring instruments and an environmental certification; certificates and current validity have not been independently verified.
- The source separately states normal battery runtime ≥7 h, over 4 h with line heating and over 8 h without heating; test conditions require confirmation.
- Standards, specifications and complete configuration have not been independently verified.
- English translation has not been reviewed by a native technical translator.