

PORTABLE GAS CHROMATOGRAPH

GCS-02F



APPLICATION

The portable gas chromatograph is designed to provide fast quantitative and qualitative analysis of a wide variety of organic substances in gaseous and liquid samples both for laboratory and field use.

The built-in microprocessor controls the chromatograph's operating conditions. Data collection, storage, processing and displaying are carried out by built-in PC with related software.

ADVANTAGES

- High sensitivity and selectivity.
- Short analysis time (tens seconds) for heavy complex organic compounds.
- For most applications the ambient air may be used as gas-carrier.
- Remote sampling option.

MAIN SPECIFICATIONS

Either of two types of detectors are available to be mounted:

- Photo-Ionization Detector (PID) or
- Electron Capture Detector (ECD)

Detector type	Gas-carrier	Typical substances	Detection limit to particular compounds
PID	Ambient air	Wide range of hydrocarbons (including aromatic) and their derivatives, in particular drugs.	Standard - better than 10 pg benzene cocaine 0,5 ng amphetamine 0,5 ng THC 1,5 ng heroin 1,5 ng
ECD	Argon or nitrogen	Electron-acceptor substances (nitro-, halogen-, phosphorous-containing compounds), in particular explosives, pesticides.	Standard - better than 1 pg lindane RDX 16 pg TNT 3,0 pg PETN 5,0 pg

Straight multicapillary columns of different types are available (with SE-30, SE-54, Carbowax 20M, OV-61 and other stationary liquid phases).

Column efficiency	from 1000 to 3000 theoretical plates (depending on the detector type and analyzed substance)
Thermostats temperature range	from 50 to 250°C
Warm-up period	30 minutes at column temperature of 200°C
Continuous operation:	
GCS-02P:	40 hours with a fully charged (150 atm) built-in gas cylinder (ECD)
GCS-02PN:	not limited
Power supply	100-240V, 50/60Hz AC or from accumulator (12 V DC car power supply is acceptable)
Power consumption	
warm-up	less than 200 W
operation	less than 100 W
Ambient operating conditions	
temperature	+5 +40°C
relative humidity	80% (at ambient temperature +25°C)
Full set in case dimensions	465x345x185 mm
Chromatograph weight	14,5 kg
Full set in case weight	24,0 kg

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