GC-FID

Portable-Process-Gaschromatograph
Type: meta GC-FID / 4HU

CONSTRUCTION

19" housing as rack or table version with 4 hight units (4HU)

Detector:
FID - Flame Ionization Detector

Column:
packed or capillary

Oven:
Isothermal temperature control With 40, 60 or 120°C

Carrier gas: N_2 or He
Fuel gas: H_2
Combustion air: Air (free of hydrocarbons)

SAMPLE INPUT

Sample taking:
- automatic
- manual (optional)

Signal processing:
- PC / Laptop with evaluation software

Signal output:
- 0...1V
- RS 232 (optional)

MEASURING PARAMETER

Highly volatile, aliphatic, aromatic and halogenated hydrocarbons

Examples:
methane
ethane
propane
butane
trichloroethylene
tetrachloroethylene
benzene
toluene
xylene

Detection limit:
0,1mg / m³

Technical specifications

Power supply:	230VAC / 50Hz
Power consumption:	1,0 kW
Humidity:	0 - 90% rel. humidity, none condensing
Operating temperature:	0 - 40°C
Protection class:	IP 20 / DIN 40050
Environmental condition:	dust-free

Description of the GC-FID

The gas chromatograph GC - FID enables manual and automatic samplings and analysis. The application areas are the online analysis of emission / immission / soil air / exhaust air / process and waste water. Control functions are possible through the connection of other devices, for example an measuring multiplexer.

Detector - FID - (Flame Ionization Detector)

The FID has an extremely large linearity for flammable hydrocarbons.

FID:	Flame Ionization Detector
Carrier gas :	N_2 or He
Flame gases :	Air and H_2

FID - functions

The FID burned the substance to be analyzed. This creates a flow of current within the flame. The strength of that is equivalent to the introduced amount of substance.

Injector

- Split / Splitles Samplings
- manual sampling by means of septum in the injector block (optional)
- automatic sampling by means of time controlled Sample Loop

Oven

Column:	Steel or quartz capillary - it depends on your application
Standard:	Steel capillary, type meta OV 101
Temperature:	isothermal with 40, 60 or 120°C (Option: temperature programm)

Implementation of Analysis

The system cyclically starts the measurement. From sampling up to the evaluation, all steps are performed automatically. A single measurement can be performed, also a re-analysis.
The system has a minimal cycle time of 3min (benzene) for single channel. The normal cycle time is 10...15min (it depends from your measurement task), that means 96...144 measurements per day are possible.

Process control and data-storage
The evaluation software stores all measurements and external signals (optional) on hard-disk of attached computer.
Reports from these data can be created daily, weekly or monthly (MS-EXCEL) with min. / max. limits.