# JUM OVF-3000

## FID VOC THC Analyzer

The model OVF-3000 uses a Vent-Down Hydrogen Flame Ionization Detector (FID). This lightweight, portable FID detector will allow you to continuously measure the total concentration of hydrocarbons in a gas sample.

## A compact and lightweight analyzer

Whether it is ambient air, exhaust gases from a combustion process such as stack gas emissions in industry, internal combustion engines or any other industrial application, the OVF-3000 is the most compact solution for carrying out your continuous measurements.

- ✔ **Comply with NF EN 12619 norm**
- ✔ **Certified QAL1-EN 14181 and EN ISO 14956 (EU)**
- ✔ **EPA Method 25A & Method 503 (USA)**

THC VOC

**Flame Ionization Detector (FID)**

## KEY POINTS

- Fast response in 0.2 seconds
- Ergonomic, portable and lightweight
- Long life FID ignition system
- Easy-to-change sample filter
- Condensation free FID exhaust
- Fuel storage system (35H autonomy)
- Gas purifying agent in the form of metal hydride (guarantee for maximum safety and zero explosion risk)
- Integrated burner air generator
- Sampling pump and air pressure pumps
- Automatic flame out alarm and fuel shut off with power off available in option
- 6 digit direct ppm display
- Measure up to 3 measuring ranges without range change
- Low fuel consumption
- Excellent accessibility for easy maintenance

## APPLICATIONS

### Continuous emission monitoring

- Chimney hydrocarbon gases
- RDE test: vehicle hydrocarbon gas
- Crude hydrocarbon gases from vehicles

### Continuous ambient air monitoring

- Oil contamination in air
- Traces of hydrocarbons detection
- Indoor air quality
- LEL solvent-laden air monitor

### Other ...

- Catalytic converter test
- Engine combustion efficiency monitoring
- Regeneration control of carbon uptake
- Industries

# DESCRIPTION

The JUM OVF-3000 is a FID analyzer with a unique ergonomic design that provides portability and reliability for your VOC measurements. The detector (FID) including all parts that come into contact with the sample are housed at 180°C in a heated oven.

Compared to virtually all other lightweight portable FID analyzers available, the JUM OVF-3000 uses a 180°C heated chamber that discreetly houses all measurements and samples of components such as the sample filter, sample pump, sample pressure control and detector. Only this technique prevents the large molecular weight loss of hydrocarbons to ensure reliable long-term results, fast response, fast return to zero and highly reliable performance in the analysis of trace amounts of low-level total carbon concentrations of contaminants in stack emissions, process gases, air and other gases.

The disposable heated sample filter is easily accessible on the front panel. No special tools are required for quick, safe and easy sample filter change. All wet component samples are integrated into the heated chamber. The JUM OVF-3000 uses a high-tech low-pressure solid metal fuel to purify the storage system which is held inside the hinged cover. The user can safely, legally and easily refill the fuel cartridge itself at low pressure from any hydrogen cylinder. Very low fuel gas consumption. The combustion air supply for the FID sensor is already integrated. No external burner air generator or external high pressure cylinder for synthetic burner air is required. Reliable low-pressure charging at 10 bar (0.1 MPa) from any cylinder.

| TECHNICAL SPECIFICATIONS | |
|---|---|
| METHOD | Heated Flame Ionization Detector (HFID) |
| SENSITIVITY | Max. 1 ppm CH4 full scale (100 ppb lowest detectable) |
| RESPONSE TIME | @ sample inlet <0.2 seconds |
| t90 TIME | @ sample inlet <1.2 seconds |
| t90 TIME (Including 4x6mm sample line) | Including heated sample line (7.5m) and sample filter sample line probe: less than 8 seconds |
| ZERO DRIFT | <2% full scale / 24h |
| SPAN DRIFT | <2% full scale / 24h |
| LINEARITY | Up to 10.000 ppm full scale within <2.5% FSD |
| OXYGEN SYNERGISM | <2% full scale / 24h |
| MEASURING RANGES (ppm) | Front panel turn switch: 0-10,100, 1.000, 10.000, 100.000, others on request. |
| SIGNAL OUTPUTS | 0-10 VDC, 4-20 mA and RS-232 data output |
| DISPLAY | 6- digit direct reading ppm units capability to measure two (2), max. three (3) overlapping measuring ranges |
| TOTAL SAMPLE FLOW THROUGH | 2.5 to 2.8 l/min capacity @ operating temp. |
| HEATED SAMPLE FILTER | Disposable 2 micron change filter in front panel |
| ZERO AND SPAN GAS | Via sample inlet by using an overflow "T" fitting or by using optional calibration box ECB 3000 |
| ZERO AND SPAN ADJUST | Manual duo dials on front panel |
| BURNER AIR CONSUMPTION | Built in burner air supply. No external cylinder air needed. Flow approximately 130 ml/min |
| OVEN TEMPERATURE | 180°C (374°F) |
| POWER REQUIREMENTS | 230VAC/50Hz, 850W (120 VAC/60Hz optional) |
| AMBIENT TEMP. | 5-43°C (41-110°F) |
| DIMENSIONS | (W x D x H) 445 mm x 220 mm x 350 mm |
| WEIGHT | approx. 14 kg |

| AVAILABLE OPTIONS | |
|---|---|
| ECB 3000 | Calibration adapter box to be mounted on heated line inlet or analyzer sample inlet. Correct flow adjusted for a 1 bar calibration gas pressure |
| RCI4 3OOO | 4-20 mA analog output, galvanic isolated |
| RCI0 3000 | 0-20 mA analog output, galvanic isolated, instead of standard 4-20 A |
| TPR 3000 | External temperature controller for heated sample line, e.g. JUM TJ 100 using "J" type thermocouple |
| HPG 3000 | Trending pressure gauge mounted in the fuel outlet of the pressure regulator |

## For more information


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