



SEQUENCING 2-CHANNEL, HEATED TOTAL HYDROCARBON ANALYZER MODEL VE 572



With all identical components from the VE7, the Model 572 fully complies with EN 12619, EN 13526 (EU), EPA Method 25A and Method 503 (USA) and 2. BImSchV, 13. BImSchV and 17. BImSchV (DE) and

The J.U.M. Engineering HFID Model VE572 is a time proven reliable and rugged Dual Channel Sequencing heated total hydrocarbon analyzer for low drift, high accuracy, sensitivity and stability.

The VE572 uses a hydrogen flame ionization detector (FID) in a heated oven to prevent the loss of high molecular weight hydrocarbons and to provide reliable performance in the analysis of high concentrations down to trace levels of THC-contaminants in high purity gases, air and other gases.

All sample wetted components are integrated into the heated chamber. The two permanent heated sample filters are designed to be fully regenerated by back purging with compressed air or nitrogen. With only a few seconds needed for back purging, this technique allows uninterrupted measurements during cleaning of the sample filter while not in the sample mode. During back purging the sample filter, the sample line is also cleaned. The use of a stack probe filter is not necessary.

The combustion air supply for the detector is built in. No expensive zero gas generator or external cylinder for synthetic air is needed.

Automated sample sequencing and back purging of the sample filter can be done with one of our optional timing controllers.

Features

- All components in contact with sample are fully heated and controlled at 190°C
- Built-In sample pressure and sample pumps
- Built-in combustion air supply, no extra burner air bottle needed
- Maintenance free sample filter backpurge system allows both filters to be cleaned without dismantling (automatic purge optional)
- Permanent heated 2 µm stainless steel mesh filter
- "Overflow" calibration system for pressure less zero/span calibration
- Automatic flame out control with alarm. An automatic fuel shut off valve is optional
- Fast response less than 1 second
- Low fuel consumption and very selective
- Microprocessor PID-type temperature controller
- Cold spot free coupling of the heated sample lines inside the heated oven optional
- Remote control for sample, zero/span and backpurge is standard
- Automatic or remote range change optional

Applications

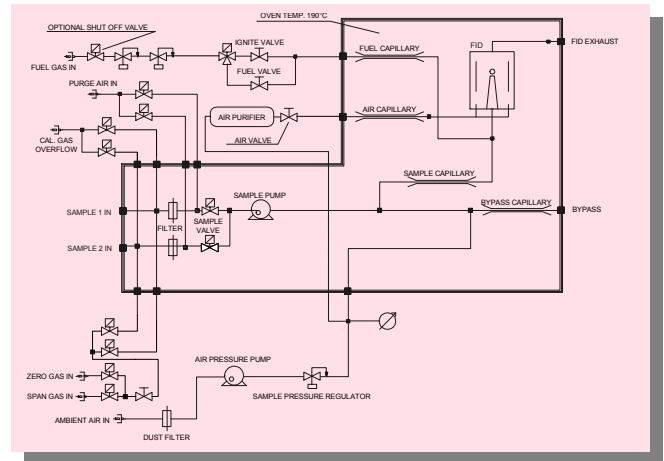
- EPA Method 25A compliance monitoring of source hydrocarbons (inlet and outlet)
- Stack gas hydrocarbon emissions monitoring before and after an abatement system
- Solvent recovery monitor for carbon bed break through
- Thermal combustor compliance monitoring and testing
- Catalytic converter compliance monitoring and testing
- Carbon adsorption regeneration control
- Measuring engine combustion efficiency
- Raw exhaust vehicle emissions analysis
- Hydrocarbon contamination monitoring in air and other gases
- Carbon adsorption regeneration control
- Detection of trace hydrocarbons in purity gases used in the semi conductor industry

Principle of Operation

The Flame Ionization Detection (FID) method is used to determine the presence of total hydrocarbon concentrations in a gaseous sample. Burning hydrocarbon-free hydrogen in hydrocarbon-free air produces a negligible number of ions.

Once a sample containing hydrocarbons is introduced into this flame a very complex ionization process is started. This process creates a large number of ions. A high polarizing voltage is applied between the two electrodes around the burner nozzle and produces an electrostatic field. Now negative ions migrate to the collector electrode and positive ions migrate to the high voltage electrode. The so generated ionization current between the two electrodes is directly proportional to the hydrocarbon concentration in the sample that is burned by the flame. This signal is measured and amplified by our electrometer-unit.

A sample pressure regulator provides a controlled back pressure at the sample capillary which gives admittance of a constant sample flow rate to the burner. This technique without the conventional back pressure regulator is used by J.U.M. Engineering for over 30 years to provide the highest possible sample flow rate stability and lowest maintenance. Our compactly designed flow control module for controlling the fuel and air flow rates via needle valves use high precision pressure regulators. The needle valves are factory adjusted and sealed to ensure the optimization of the burner.



Technical Data	
Method of analysis . . .	Flame Ionization Detector
Sensitivity	Max. 1 ppm CH ₄ full scale
Response time	0.2 seconds
T ₉₀ time	1.2 seconds
T ₉₀ time with heated line (7.5m) and filter	less than 8 seconds
Zero drift	<1.0% full scale / 24h
Span drift	<1.0% full scale / 24h
Linearity	Up to 10.000ppm within 1% FSD
Oxygen synergism . . .	< 1.2% FSD
Measuring ranges (ppm)	0-10, 100, 1.000, 10.000, 100.000, others on request
Analog outputs	0-10 VDC and 4-20 mA
Display	3 1/2 digit
Sample pump	approx. 2.5 l/min capacity @ operating temp.
Zero and span adjust . .	Manual on front panel
Fuel consumption 100% H ₂	approx. 20 ml/min @ 1.5 bar (22 psig)
Fuel consumption 40%H ₂ /60%He	approx. 90 ml/min @ 1.5 bar (22 psig)
Burner air consumption	built in burner air supply
Oven temperature . . .	190°C (374°F)
Temperature control . .	µ-processor PID controller
Power requirements . .	either 230VAC/50Hz, 850 W or 115VAC/60Hz, 850 W
Ambient temperature . .	5-43°C (41-110°F)
Dimensions (W x D x H)	19" (483 mm) x 460 mm x 221 mm
Weight	approx. 28 kg (62 lbs)
J.U.M. reserves the right, at any time and without notice, to change specifications presented in this data sheet and assumes no responsibility for the application or use of the devices described herein.	

Available Options	
AMU 572	Automatic controlled range change
APO 572	External automatic programmable backpurge system for the sample filter
AZM 572	Automatic flame ignition and re-ignition
DCC 572	Dual concentration alarm w. individual adjustable thresholds and alarm outputs
ENGA 572	6-digit engineering units display 0-100.000 ppm with RS232 data output.
FOAS 572	Automatic fuel shut off valve for flame out control
HBPR 572	Fully heated sample back pressure regulator
PDA 572	Sample pressure monitor with alarm
RCA 572	0-20mA analog output instead of 4-20mA
RCC 572	Remote controlled range change
RCI0 572	0-20 mA analog output, galvanically isolated instead of std. 4-20 mA
RCI4 572	4-20 mA analog output, galvanically isolated instead of std. 4-20 mA
TPR 572	External temperature controller for J.U.M. heated sample lines Model TJ 100
MBP 572	Integrated bypass pump for very long sample lines, also compensates sample pressure fluctuations
Availability of options may change without announcement!	



J.U.M.® Engineering G.m.b.H.
 Manufacturing, R&D, Distribution & Service
 Gauss-Str. 5
 D-85757 Karlsfeld, Germany
 Tel.: 49-(0)8131-50416, Fax: 49-(0)8131-98894
 E-mail: info@jum.com, Internet: http://www.jum.com

Represented By