



Methane/Non Methane Determination NMHC Cutter 900

J.U.M.'s External Non Methane Hydrocarbon Cutter allows the added capability to measure alternately only METHANE or THC with just one heated total hydrocarbon analyzer (HFID).

Sample can be from ambient air, indoor air or from stack or other industrial emission sources.



The model 900 Complies with EN ISO 25140:2010 (EU) ISO 25140:2010 and VDI 3481 (DE).

The catalyst efficiency from Methane to Propane and higher is >99%. The catalyst efficiency from Methane to Ethane is 90 to 95%, The maximum inlet concentration of Propane equivalent total hydrocarbons is 1000 ppm.

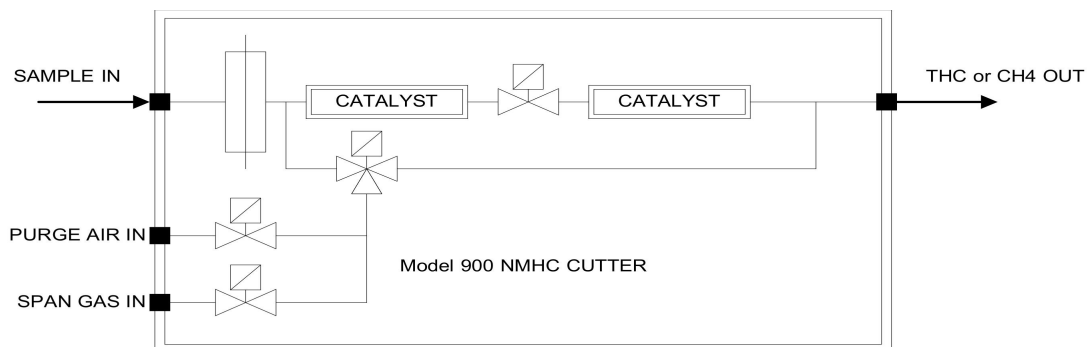
General Description

Quite often studies in out door air pollution, indoor air pollution as well as in stack emissions monitoring require measurements of total hydrocarbons, because results of ambient hydrocarbon emissions must be correlated with ozone and NO_x. These correlation's are of a great need in the determination of the geographical spread of smog, acid rain, and other similar atmospheric conditions.

Methane is a naturally occurring non reactive hydrocarbon which is found in the atmosphere of the earth. Because of this reason, the analysis of reactive or non reactive hydrocarbons is very important. Our Model 900 External Non-Methane Hydrocarbon Cutter allows the added capability to measure alternately methane only and total hydrocarbons with any heated total hydrocarbon analyzer (HFID).

The Model 900 External NMHC Cutter is the low cost alternative when compared to "all in one" heated non methane hydrocarbon analyzers. The cutter, which is a temperature controlled catalytic device is housed in a 19 inch rack mount case and is to be added in series to the sample inlet of a total hydrocarbon analyzer. The external cutter allows only methane to reach the FID analyzer. A stainless steel assembly (pat. pend.) which contains a proprietary catalyst is housed inside of the heated oven in the rack mount case. The heated oven is maintained at a stable temperature by means of digital temperature control. The Model 900 includes all necessary plumbing, a permanently installed heated sample filter to be cleaned by back purging with compressed air or nitrogen and all solenoid valves. The switching valves allow the catalytic converter to be switched into and out of the sample stream to provide either a continuous total hydrocarbon or methane only sample.

The connected heated FID analyzer will consequently measure either total hydrocarbons (THC) or methane only CH₄. Non methane hydrocarbons are calculated by using the the difference between total hydrocarbons and methane. All connectors are on the rear panel. All controls are activated by front panel switches. Remote control capabilities are optional.



Features

- *Made in Germany*
- All components in contact with sample stainless steel fully heated and accurately controlled at reaction temperature
- Standard, permanent installed 2 μ sample filter to be cleaned by back purge with hydrocarbon free compressed air or nitrogen
- Calibration valves for span calibration. Standard manual switch and remote operation, e.g. PLC or PC
- Fast response

Applications

- Stack gas hydrocarbon emissions monitoring @ moderate sampling conditions
- European and USA-EPA Method compliance monitoring
- Ambient air monitoring of NMHC concentrations
- Indoor air monitoring of NMHC concentrations

Technical Specifications

Method	Alternating sampling via catalytic NMHC reactor, resp. bypassing the reactor
Warm up time	180 Minutes
Catalyst efficiency @ Ethane	> 90%
Catalyst efficiency @ Propane	> 99%
Max. C_nH_m inlet concentration	< 900 ppm Propane equivalent
Sample flow through	Approx. 2,5 liter/min
Sample Filter Back Purge	Standard 2 μ m stainless steel mesh low pressure drop. Back purge pressure max. 4 bar
Ambient temperature	5 °C - 43 °C (41 °F - 110 °F)
Voltage	230 VAC/50Hz, or 115 VAC/60 Hz
Dimensions	Width: 483mm (19"). Depth 460 mm. Height 132 mm
Weight	18 kg

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