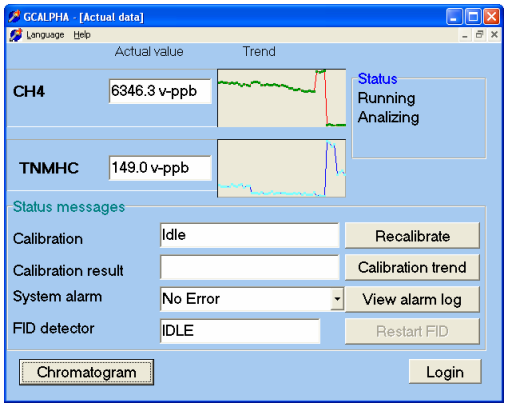
Synspec ALPHA 115

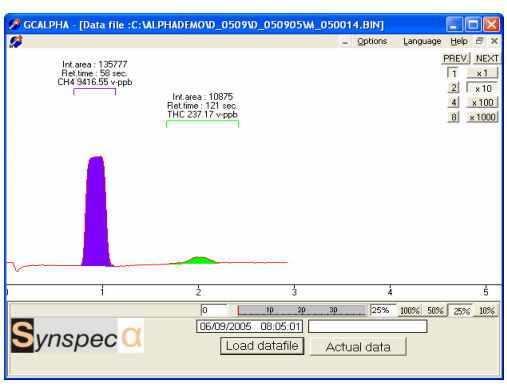
METHANE / TOTAL NONMETHANE ANALYZER

THE ALPHA IS THE NEW ANALYZER LINE OF SYNSPEC.

IN THE ALPHA WE HAVE COMBINED THE KNOWLEDGE OF 10 YEARS OF MAKING GAS CHROMATOGRAPHS FOR AMBIENT AIR MONITORING.

SYNSPEC DESIGNED A SIMPLE NEW MONITOR FOR MEASURING HYDROCARBONS IN AIR FOR ENVIRONMENT AND INDUSTRY





The Synspec ALPHA M/TNMHC analyser 115 is built for the analysis of methane and the sum of all other hydrocarbons in air (TNMHC).

Total non-Methane Hydrocarbons (TNMHC) have already been measured for a long time in many countries. Synspec designed three analyzers for this: the Alpha 114 for background monitoring, the Alpha 115 for standard ambient monitoring and the Alpha 116 for emission monitoring.

In view of the growing interest in ozone precursors the sum of hydrocarbons is also important. In many areas in the world monitoring of hydrocarbons is just beginning. There are many different compounds in the TNMHC value and the relation between them is unknown and different in diverse areas. Especially in areas where many oxygenated hydrocarbons are found the value of TNMHC measurement is useful. To have a general overview of all hydrocarbons from C2 to C10 the Synspec Alpha 115 is the instrument of choice.

Methane originates from the following sources: natural gas, modern farming methods and bacterial soil activity. Methane generation is depending on temperature, humidity and compost activity. At waste deposits the emission of methane often has to be monitored.

MEASURING PRINCIPLE: The analyzer is a real gas chromatograph. It contains a compact oven with a column that separates methane from total non-methane hydrocarbons . The detector is an FID.

The gas sample passes through a **COLUMN WITH A SPECAIL LAYERED PACKING**. The **methane** (CH_4) passes through and is first injected into the detector.

A second after this, the column is **BACKFLUSHED** and all other hydrocarbons pass to the detector. This results in two peaks generated by the FID: a methane and a TNMHC-peak.

The system is very easy to use: it has an automatic start-up for the whole system and this means that setting to work is very simple. The FID detector starts very easily, provided the gases used are of good quality.

The measuring is a **TRUE GAS CHROMATOGRAPHIC SEPARATION**: we use this to avoid problems with catalytic functioning. As often occurs with systems without the GC column.

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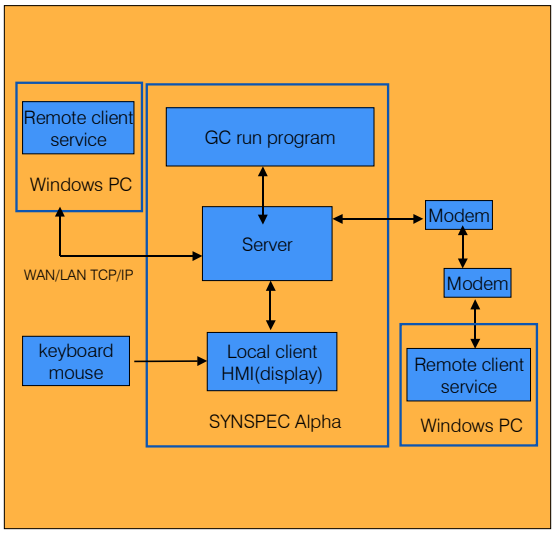
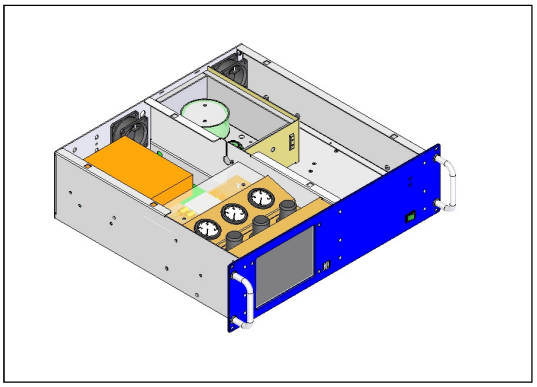
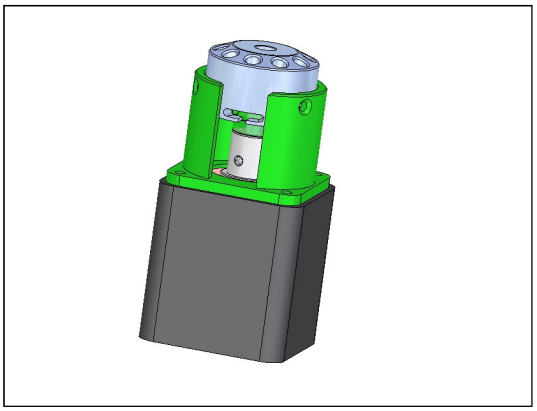


SYNSPEC ALPHA SOFTWARE

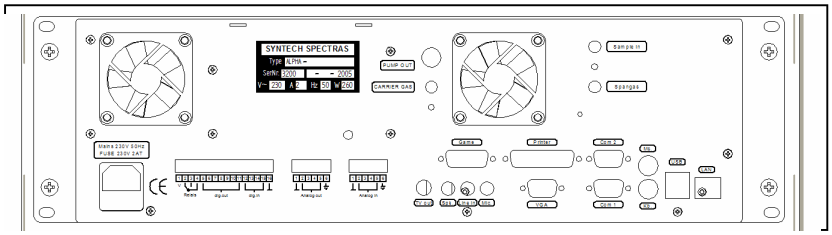
THE SOFTWARE OF THE SYNSPEC ALPHA SERIES WORKS ACCORDING TO A NEW PRINCIPLE. AUTOSTART OF THE GC RUN PROGRAM ENSURES CORRECT FUNCTIONING. THIS SOFTWARE COMMUNICATES TO A SERVER PROGRAM.

THIS SERVER CAN BE ACCESSED LOCALLY OR ON DISTANCE BY DEDICATED SOFTWARE FOR CLIENT AND FOR TECHNICANS FOR ALL NECESSARY FUNCTIONS: DATA TRANSFER INCLUDING ALARMS, CALIBRATION START, PROGRAM ADJUSTMENT, COMMUNICATIONS WITH EXTERNAL EQUIPMENT LIKE STREAM SELECTORS. THE ACCESS CAN BE LOCAL, BY MODEM OR VIA INTERNET.





GAS CHROMATOGRAPH	
ALPHA MODEL 115 METHANE/TNMHC	Detector: FID Levels: 0.1 ppm for methane, 100 ppb for TNMHC FID detector, Cycle time 3 minutes
CONSUMPTION OF GAS	FID : Zero air, dry and clean, 2.5 bar, 250 ml/min, Hydrogen, quality 5.0, 3.5 bar 20 ml/min
RANGE	0.1 – 10 ppm for Methane, selectable to 100 ppm 0,05 – 20 ppm for TNMHC
REPEATIBILITY DRIFT LINEARITY	<1% of FS <0,3% IN 7 DAYS <1% of FS
HARDWARE AND COMMUNICATION OPTIONS	
INCLUDED HARD-WARE	Computer Pentium class, harddisk >40Gb, 6” full colour LCD
INCLUDED SOFT-WARE	Windows Xpe Embedded, GC Software
COMMUNICATION	Direct control via external screen, keyboard and mouse.
GC SPECIFICA-TION	Column cage with special application column 10 port valve Synspec 2 ml loop detector FID
CALIBRATION	Internal calibration switch for calibration zero and span gas, gas stream required 25 ml at ambient pressure
PHYSICAL DATA	
DIMENSIONS	19” rack, 3 standard Height Units, depth 37,2 cm net
POWER DEMAND	220 V AC, 200 VA (110 V AC available)
TEMPERATURE	5 TO 40 °C
HUMIDITY	20 TO 95%
WEIGHT	12 KGS
GENERAL	
APPROVALS	CE approval for EMC conformity: EN 61010-1, EN 61000-6-2 and EN 60111-6-3
EXTRA FUNCTION	Combination with streamselector possible



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