Enviro Technology Services plc
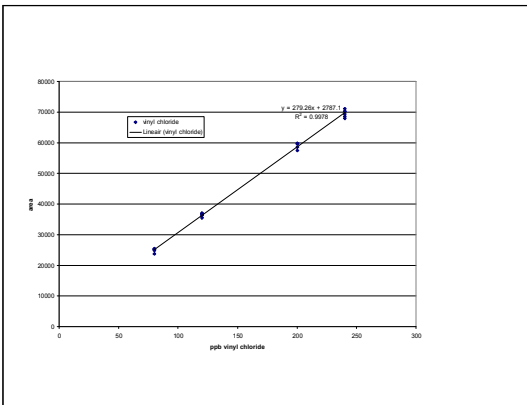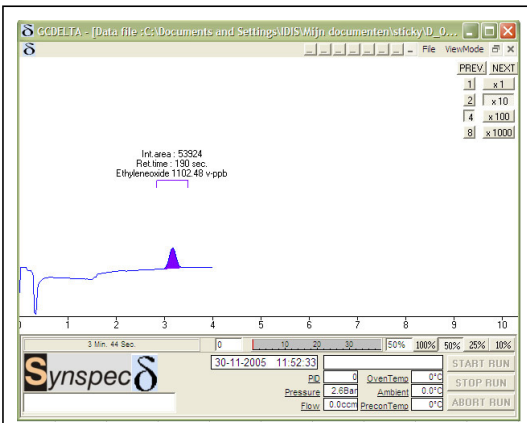
Air Pollution Solutions

Synspec DELTA 300

TOXIC HYDROCARBON ANALYZER

THE DELTA IS THE NEW SINGLE COMPONENT ANALYZER LINE OF SYN-SPEC FOR THE MEASUREMENT OF TOXIC HYDROCARBONS. IN THE DELTA WE HAVE COMBINED THE KNOWLEDGE OF 10 YEARS OF MAKING GAS CHROMATOGRAPHS FOR AMBIENT AIR MONITORING. SYN-SPEC DESIGNED THIS NEW MONITOR FOR ENVIRONMENTAL AND SAFETY MONITORING IN INDUSTRIAL AREAS

For many years Synspec has been developing monitors for hydrocarbons measurement for industrial safety.

Envfironmental and industrial safety authorities require increasingly very strict monitoring of the carcinogenic and highly toxic hydrocarbons: this means that low ppm to ppb measurements for indoor industrial applications down to low ppb for outdoor use are obligatory.

We offer for this a multipoint sampler, automatic measurements, simple software, automatic TWA calculations, flexible data-communication

EXAMPLES OF MODIFICATIONS:

- Benzene, Epichlorhydrine
- Ethylene oxide, Propylene oxide
- Acrylonitrile, 1.3-Butadiene, Styrene
- Vinyl chloride, Dichloroethane
- THT (tetra hydro thiophene) in natural gas

And many other toxic hydrocarbons on demand

MEASURING PRINCIPLE: The analyzer is a compact GC. It contains all the essential elements: sampling unit, backflush valve, separation column in special small oven unit and detector. The detector is an FID or a PID, depending on the application.
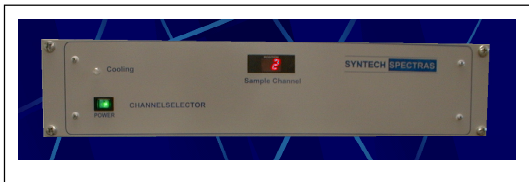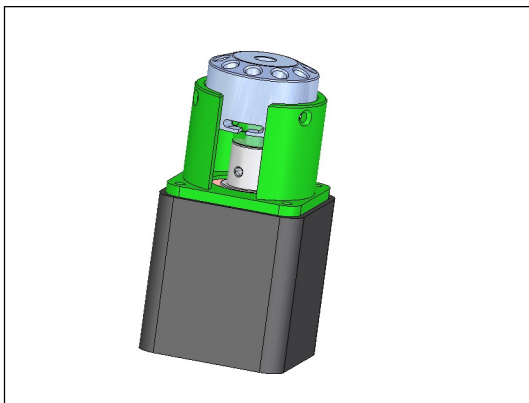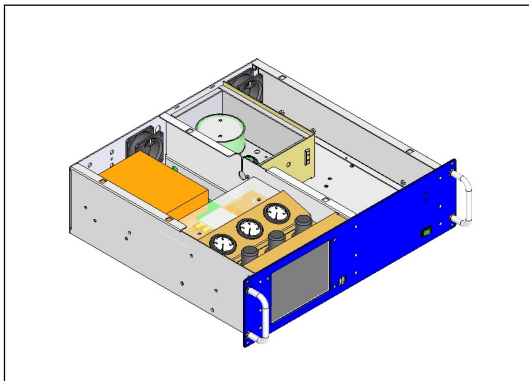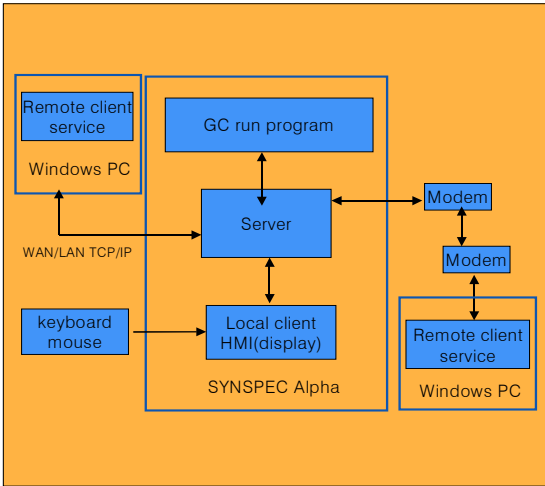
The gas sample is pumped in a **LOOP**. The sample is then injected over the valve into a column and the single hydrocarbons pass on to the detector. The loop size is adapted to the concentration range specified by the customer.

All higher boiling hydrocarbons will be **BACKFLUSHED.**-This means that the system will auto clean and that a short cycle time is possible. The system is adapted to the specific hydrocarbon that must be monitored with regards to the essential parameters column, flow, temperature and backflush setting.

The instrument works with a **TRUE GAS CHROMATOGRAPHIC SEPARATION**: we use this to avoid problems with misidentification.

SYNSPEC DELTA 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

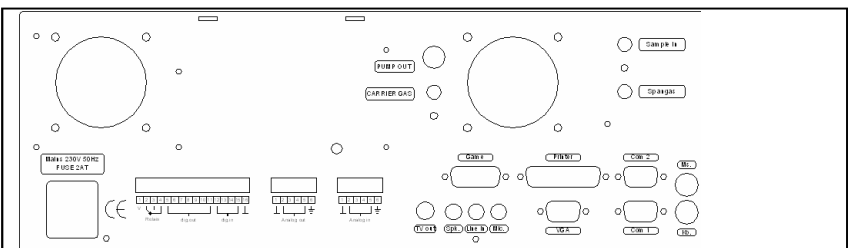| GAS CHROMATOGRAPH	
DELTA MODEL 300	Detector: PID. Levels: 0.1 ppm to 0.01 ppm for hydrocarbons sensitive to PID, or FID detector, Levels: 0.5 ppm to 0.1 ppm for hydrocarbons sensitive to FID cycle time 1 to 10 min
CONSUMPTION OF GAS	PID / FID: nitrogen, quality 5.0, 2.0 bar, 5 ml/min FID: instrument air: dry and clean, 2.5 bar, 250 ml/min FID: hydrogen, quality 5.0, 2,5 bar at 20 ml/min
RANGE	0 - 1000 ppm for FID, 0- 100 ppm for PID
REPRODUCIBILITY	1% of FS
HARDWARE AND COMMUNICATION OPTIONS	
INCLUDED HARDWARE	Computer Pentium class, harddisk >20 Gb, 6 " full colour LCD display, I/O 2 x RS232, 4 x USB, Ethernet, PS2 keyboard/mouse, touchscreen
INCLUDED SOFTWARE	Windows98, GC software, TWA calculation modules, alarm setting modules
COMMUNICATION	direct control via keyboard or mouse, or via remote host (RS232/Ethernet/ modem), or via TCP/IP data exchange protocols available on demand
GC SPECIFICATION	Loop 0.075 to 2 ml, 10 port valve Synspec, analytical column 2 -13 m backflush column 0.5 to 2 m
CALIBRATION	internal calibration switch for calibration with 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 RANGE	5 TO 40 oC
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 stream selector possible: stream selector type Vici dead end or flow through, 6 to 16 stream, pump 5l/min (internal) or on demand external. Combination with RS232 alarm outputs 4-20 mA up to 15 stream.