

# ALPHA 400

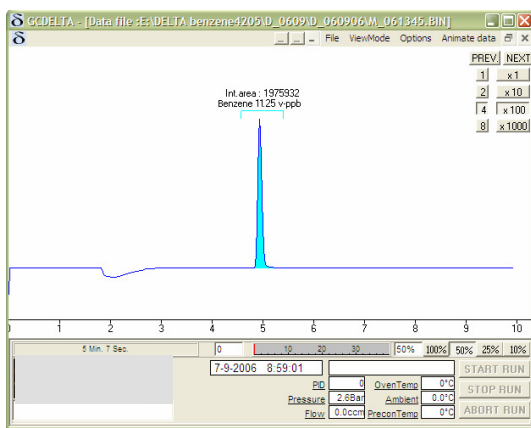
## BENZENE ANALYSER



THE ALPHA 400 BENZENE ANALYSER IS BUILT FOR THE MEASUREMENT OF BENZENE IN AMBIENT AIR.

IN THE EUROPEAN REGULATIONS MEASUREMENT OF BENZENE IN AMBIENT AIR IS NOW OBLIGATORY. THE CONCENTRATION OF BENZENE VARIES FROM UNDER 1 TO ABOVE 50 MICROGRAMS PER M<sup>3</sup>.

THE NEW ALPHA BENZENE IS A VERY SIMPLE BUT PRECISE BENZENE ONLY ANALYSER.

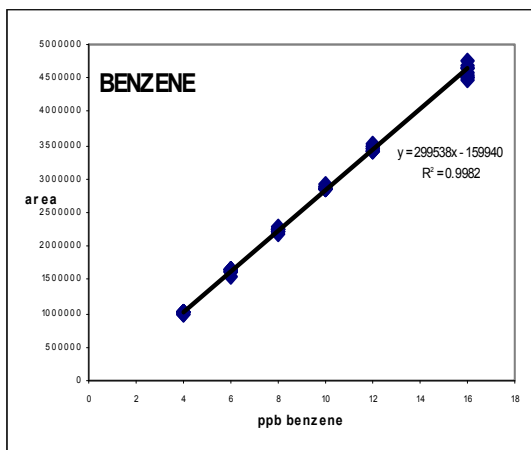


For many years ET has been developing monitors for hydrocarbons measurements for environmental monitoring. The Alpha and Delta are together the new single component analyser line of ET for measurement of toxic hydrocarbons.

ET designed these new monitors for environmental and safety monitoring in industrial areas. It is a compact analyser, with a height of 3HU, which fits in a 19" rack. This analyser is made with simple software and works via the principle of a GC model.

Environmental 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.

This analyser is suitable for small containers like tunnel cabins or kerbside stations. Its an easy way to keep up with the levels of selected components. For multi component measurements ET produces the GC955 series for BTEX or Ozone precursor measurements.



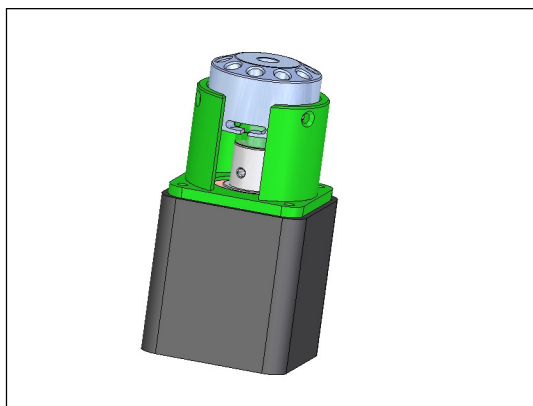
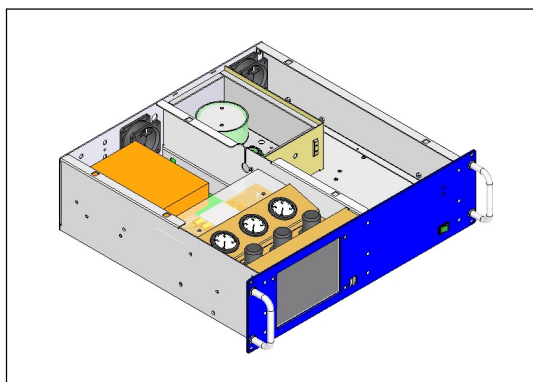
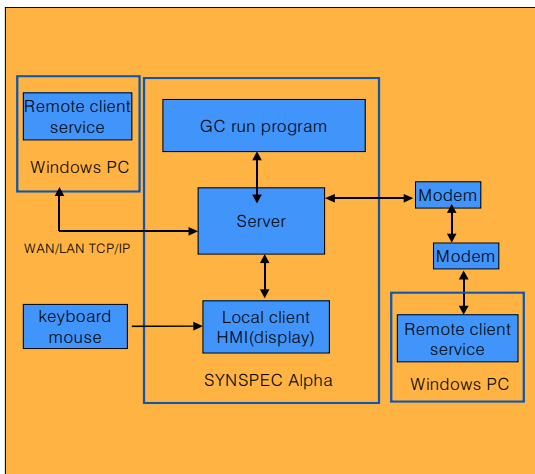
**MEASURING PRINCIPLE:** Alpha is a compact GC containing all the essential elements: preconcentration sampling unit, backflush valve, separation column in special small oven unit and detector. The detector is a PID.

The gas sample is concentrated in a **TRAP**. The sample is then desorbed and injected over the valve into a column and benzene passes on to the detector. The system is optimized for ambient benzene concentrations.

All higher boiling hydrocarbons will be **BACKFLUSHED**. This gives two advantages to the system: auto cleaning every cycle and that a very short cycle ( for benzene standard 10 minutes). 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 **OVEN** is isothermal.

## ALPHA SOFTWARE

ALPHA'S SOFTWARE HAS GOT TWO LEVELS OF USER'S INTERFACES: USER'S LEVEL FOR AN OPERATOR AND A HIGHER LEVEL FOR A TECHNICIAN ALLOWING TO ADJUST, CALIBRATE AND MAINTAIN THE GC. BOTH INTERFACES COMMUNICATE WITH A SERVER. GC DATA CAN BE ACCESSED LOCALLY OR REMOTELY BY DEDICATED SOFTWARE FOR CLIENT AND FOR TECHNICIANS 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

<b>DELTA MODEL 600</b>	Detector: PID Levels: 0,15ppb to 0,03 ppm for benzene
<b>BENZENE CONSUMPTION OF GAS RANGE</b>	Cycle: 10 min
<b>REPEATABILITY</b>	PID : Nitrogen, quality 5.0, 3.0 bar 20 ml/min
	0 – 100 ppb for PID
	1% of FS

### HARDWARE AND COMMUNICATION OPTIONS

<b>INCLUDED HARDWARE</b>	Computer Pentium class, hard disk >20Gb, 6" full colour LCD
<b>INCLUDED SOFTWARE</b>	Windows Xpe Embedded, GC Software
<b>COMMUNICATION</b>	Direct control via touchscreen, keyboard or mouse.
<b>GC SPECIFICATIONS</b>	Columncage with special application column 10 port valve Synspec Preconcentration trap detector PID
<b>CALIBRATION</b>	Internal calibration switch for calibration zero and span gas, gas stream required 25 mL at ambient pressure

### PHYSICAL DATA

<b>DIMENSIONS</b>	19" rack, 3 standard Height Units, depth 37,2 cm net
<b>POWER DEMAND</b>	220 V AC, 200 VA (110 V AC available)
<b>TEMPERATURE</b>	5 TO 40 °C
<b>HUMIDITY</b>	20 TO 95%
<b>WEIGHT</b>	12 KGS

### GENERAL

<b>APPROVALS</b>	CE approval for EMC conformity: EN 61010-1, EN 61000-6-2 and EN 60111-6-3
<b>EXTRA FUNCTION</b>	Combination with streamselector possible: Stream selector type VICI dead end or flow through, 6 to 16 stream, pump 5 L/min (internal) or on demand external. Combination with RS232 alarm out puts 4-20mA up to 15 stream.

