

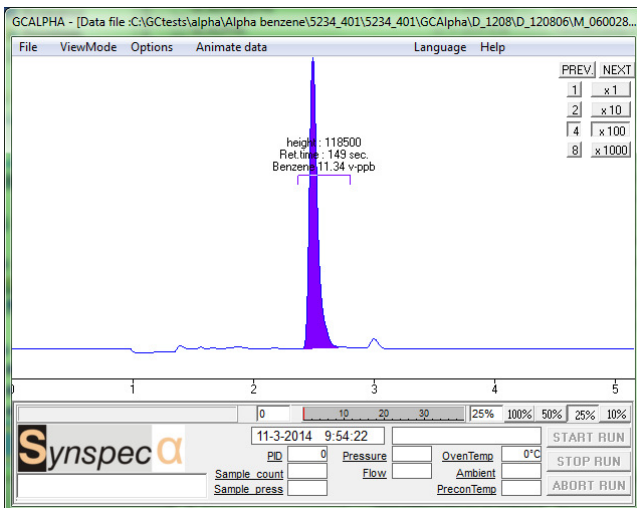
# α

## SYNSPEC ALPHA BENZENE ANALYSER



### A BENZENE ONLY ANALYSER FOR THE MONITORING IN AMBIENT AIR TO CONFORM TO REGULATIONS

The Synspec alpha 401 benzene analyser is built for the measurement of benzene in ambient air. The measurement of benzene in ambient air is now obligatory according to European regulations. The concentration of benzene varies from under 1 to above 50 micrograms per m<sup>3</sup>.

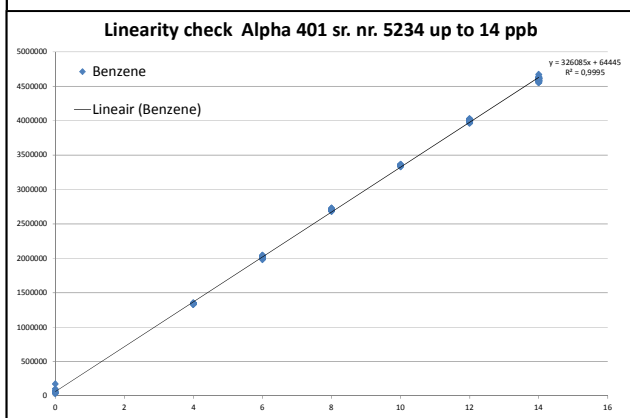


### OBLIGATION TO MONITOR BENZENE

For many years Synspec has been developing monitors for hydrocarbons measurements for environmental monitoring. The Alpha and Delta are the small analyzer line of Synspec for measurement of toxic hydrocarbons. It is a compact analyzer, with a height of 3HU, which fits in a 19" rack. This analyzers are made with simple software and work via the principle of a standard Synspec GC. The ALPHA is for standardized applications, the DELTA for industrial toxics.

Environmental and industrial safety authorities require increasingly very strict monitoring of the carcinogenic and highly toxic hydrocarbons: down to low ppb to ppt concentrations for outdoor use are obligatory.

This analyzer is suitable for small containers like tunnel cabins or kerb side stations. It's an easy way to keep up with the levels of the selected component. For multi component measurement Synspec produces the Syntech Spectras GC955 series, like 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.

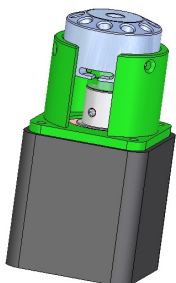
The gas sample is concentrated in a **TRAP**. The sample is then desorbed and injected over the valve into a column and benzene passes on to the detector. The system is optimized for ambient benzene concentrations.

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.

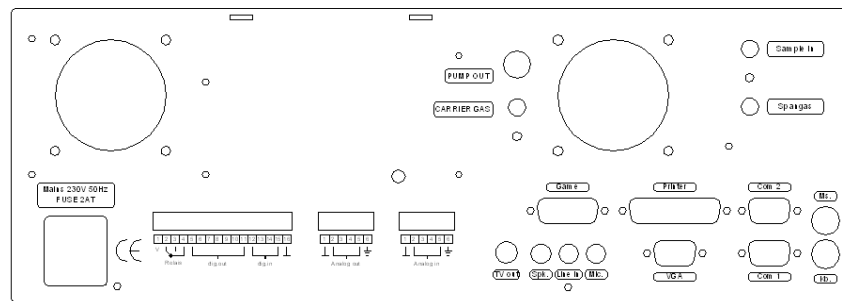
The Alpha software has 2 levels, one level is available for the end user, the other for the technician. In this way the set-up of the software will not be changed. The software package of the Synspec Alpha analyser has the same functionality as the Syntech Spectras GC955. For the end user many features are not visible, making the analyser easier to run.

The system comes to the customer function tested, calibrated and with a 2 year warranty. Please contact Synspec or your distributor for the maintenance and for the consumables packages.

401 SYNOSPEC ALPHA SERIES 401 BENZENE ANALYSER	
SPECIFICATIONS	Detector: PID Levels: 0,15ppb to 0,03 ppm for benzene, Cycle time: 10 min
GAS CONSUMPTION	PID : Nitrogen, quality 5.0, 3.0 bar 20 ml/min
RANGE	0 – 100 ppb for PID
REPEATIBILITY	1% of FS
HARDWARE AND COMMUNICATION OPTIONS	
INCLUDED HARDWARE	Computer Pentium class, hard disk >20Gb, 6" full colour LCD
INCLUDED SOFTWARE	Windows Xpe Embedded, GC Software
COMMUNICATION	Direct control via touchscreen, keyboard or mouse. External data communication via RS232, analog and digital outputs, via TCP-IP.
GC SPECIFICATIONS	Column cage with special application column, 10 port valve Synspec Preconcentration trap, detector PID
CALIBRATION	Internal calibration switch for calibration zero and span gas, gas stream required 25 mL at ambient pressure
PHYSICAL DATA	
DIMENSIONS	19" rack, (W 48,3 cm ) 3 standard Height Units, (high 13,9 cm ) depth 37,2 cm Weight 12 kg
POWER DEMAND	220 V AC, 200 VA (110 V AC available)
CONDITIONS	5 TO 40 °C, 20 TO 95% Rh
GENERAL	
APPROVALS	CE approval for EMC conformity: EN 61000-6-2, EN 61000-6-3, EN 61010, EN 61326
EXTRA FUNCTION	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.



The proprietary 10 port valve



The rear panel with many connection options

SYNSPEC BV  
DE DEIMTEN 1  
9747AV GRONINGEN  
NEDERLAND  
WWW.SYNSPEC.NL  
INFO@SYNSPEC.NL

