

## **HTYSP-H Oil Dissolved Gas Analyzer**



### **I. Introduction**

HTYSP-H adopts the isolated and analysis techniques of multicomponent mixture. It mainly makes use of the differences in the samples of the component boiling point, polarity and the adsorption coefficient in the chromatographic column, to make the components isolated in the chromatographic column, and qualitative and quantitative analyze the isolated components.

HTYSP-H oil chromatographic analyzer in accordance with the power system, "insulating oil dissolved gas component content mensuration (chromatography)" requirement, uses micro-computer control, full keyboard, large screen LCD display, with high precision, stable and reliable performance, high sensitivity, good repeatability etc.

The instrument uses two columns in parallel shunt system. Equipped with TCD and double FID and methane reformer, one sample injection can achieve full analysis of seven components of the oil dissolved gas (H<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, CO, CO<sub>2</sub>), if necessary can do full analysis of nine components (H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, CO, CO<sub>2</sub>)

### **II.Features**

- 1.Using advanced technology 10 / 100M adaptive Ethernet communication interface, and built-in IP protocol stack, can easily through the enterprise intranet and Internet for remote data transmission; Convenient for laboratory construction, simplify the laboratory configuration, convenient for management of data analysis
2. The Internal of instrument designed three separated connection process, can connect to the local processing site (laboratory), unit director (such as quality inspection chief, production factory director, etc.), and higher authorities (e.g., environmental protection bureau, bureau of technical supervision, etc.). Can easy to real-time monitor the operation of the instrument and the analysis of data results
- 3.Optional NetChrom™ workstation can simultaneously support multiple chromatographic analyzer work, data processing and control, simplifies document management, and reduce the user's investment and operating costs
- 4.System with Chinese and English operating system, the user can switch according to their needs
- 5.Temperature control area can be freely named by the user, convenient for use.
- 6.The instrument uses the multi-processor parallel work mode, stable and reliable; can meet the complex sample analysis, can optional high-performance detectors, such as FID, TCD, ECD, FPD and NPD, can be installed four detectors at the same time.
- 7.Adopts the modular structure, design and clear, easy to replace and upgrade, to protect the effectiveness of investments

8.The new microcomputer temperature control system, high precision temperature control, superior reliability and anti-jamming performance; with six fully independent temperature control system can be realized 16 stages temperature programming, so the device is qualified for a wider range of sample analysis; with oven automatic back opening door system, the low temperature control accuracy is improved, up / cool down faster

9.Can optional advanced electronic flow controller (EFC), electronic pressure controller (EPC), to realize the digital control, can greatly improve the reproducibility of qualitative and quantitative results

10.with timing self-starting program, it can easily complete on-line analysis of gas samples (equipped with on-line automatic sample parts required)

11.Full computer control keyboard operating system, simple operation, and design a detector with automatic identification technology. With fault diagnosis, and power-off data protection function, automatic memory setting parameters

12.Built-in low noise, high-resolution 24 AD circuit, and with the function of baseline storage and baseline deduction

13.Chromatographic signals acquisition and data processing, suitable for WinXP, Win2000, Windows7 operating systems. In line with the A / A (USA Analysis Society) standard CDF file is read into the sampling data, it can be integrated with Agilent, Waters and other chromatography workstation

14.The chromatographic system with completely independent intellectual property rights, with the MODBUS/TCP standard interface, easy for docking DCS

15.The device can be docked with many of automatic samplers; such as Shimadzu AOC-20i, Italy HTA company's HT series high-performance liquid, gas auto-sampler, etc

### III. Parameters

Main parameters

Display	192×64 LCD
Temperature control area	6 loops
Temperature control range	Room temperature: +5°C~400°C, increment: 1°C, accuracy: ±0.1°C
Programmed temperature order	16
Program rise rate	0.1~40°C/min
Gas path control	Mechanical valve control mode, electronic pressure flow control mode
external	4 loops
Sample injector type	Filling column, capillary tube, six way valve gas inlet, automatic headspace sampling, etc.
Number of detectors	5: FID, TCD, ECD, FPD, NPD (optional)
Start sampling	Manual, auto
Communication	IEEE802.3

#### Detector parameters

FID	
Range	$\leq 3 \times 10^{-12}$ g/s (n-hexadecane/ isooctane)
Baseline noise	$\leq 5 \times 10^{-14}$ A
Baseline drift	$\leq 1 \times 10^{-13}$ A/30min
Linear range	$\geq 10^7$
TCD	
Sensitivity	$S \geq 10000$ mV.ml/mg(benzene, toluene) (Amplification 1, 2, 4, 8 times optional)
Number of detectors	5: FID, TCD, ECD, FPD, NPD (optional)
Baseline noise	$\leq 20$ $\mu$ V
Baseline drift	$\leq 30$ $\mu$ V/30min
Linear range	$\geq 10^5$
ECD	
Range	$\leq 1 \times 10^{-14}$ g/ml(lindane / isooctane)
Baseline noise	$\leq 0.03$ mV
Baseline drift	$\leq 0.2$ mV/30min
Linear range	$\geq 10^4$
Radioactive Source	$^{63}\text{Ni}$
Detection limit	(S) $\leq 2 \times 10^{-11}$ g/s (P) $\leq 1 \times 10^{-12}$ g/s (parathion-methyl / Absolute alcohol)
Baseline noise	$\leq 3 \times 10^{-13}$ A
Baseline drift	$\leq 2 \times 10^{-12}$ A/30min
Linear range	sulfur $\geq 10^3$ , phosphorus $\geq 10^4$

#### IV. Accessories





Ignitor

Wrench / Screwdriver

Sample Injector



Serial Cable