OSIS Quality & Reliability

Gas Chromatography

Contents

1. GC-7860 Network-based series Gas Chromatography

GC-7860 Plus/B, GC-7860 E/SE, GC-7860 A/SA and GC-7860 Micro are available.

Feature：

GC-7860 series network-based gas chromatography is a new digital full control gas chromatography. The instrument has fully absorbed the advanced technology of foreign similar products and adopted the leading manufacturing technology to ensure the reliability and trouble-free operation time of the instrument. It can not only maximize the normal operation time, reduce the number of maintenance, and in the structure of more concise and reasonable, simple to learn, easy to operate.

GC-7860 gas chromatography gas circuit control has two modes of manual and electronic gas circuit EPC/EFC control, advanced electronic gas circuit control (EPC/EFC) system, can provide industry users with industry-leading excellent quality and reliable results. The instrument has a unique network remote transmission and control function, so that the instrument in unattended, decentralized detection, centralized control into a reality; Data analysis results can be connected to DCS to complete the statistics, analysis and monitoring of chromatographic component content and improve the automation of the production process.

GC-7860 series gas chromatography is widely used in petrochemical, fine chemical, biological medicine, environmental protection, food hygiene, high purity gas, electricity, wine making, scientific research and education and other fields.

All inlet and detector gas paths for the GC-7860 gas chromatography can be controlled by an electronic gas circuit (EPC/EFC) to provide better retention time and peak area accuracy. Instrument users can set various parameters such as gas flow rate, shunt ratio, external events, automatic sampler, temperature and detector through the reverse control software, and save all parameters of the analysis method. The digital circuit keeps Settings consistent between operators on each run. As a result, users can achieve better retention time reproducibility and more consistent and reliable results.

GC-7860 series network-based gas chromatography can be configured with 6-bit, 15-bit, and 150-bit liquid automatic samplers, and each parameter can be controlled by the reverse control software, which will bring better repeatability and improve work efficiency, while eliminating errors caused by manual samplers.

Solutions:

1. Gas analysis of pressure transformer oil (GB/T 17623-1998, DL/T 722-2000, DL/T 703-1999)
2. Air quality (TVOC, benzene, total hydrocarbon and non-methane total hydrocarbon) analysis (GB/T 50325-2001,

GB/T 18883-2002, gb16927-1996); Workshop exhaust gas, flue gas analysis, and VOC, benzene and non-methane total hydrocarbon in flue gas 24 hours uninterrupted online analysis;

3. Natural gas, refinery gas, pyrolysis gas, artificial gas and other industrial gas gas analysis (simple single valve type, wide spectrum process double valve four-column economy type, wide spectrum process three valve four column practical type, wide spectrum process five valve six column high end type, three valve four column TCD type, four valve five column double TCD type, etc. In accordance with GB/T 13610-2003, UOP539, ASTM1945, ASTM D 1946 and GPA2261; Can be customized according to the user's specific samples);

4. Safety gas analysis in underground coal mine gas chromatography (available for 24 hours continuous cycle sampling analysis of 32 points);

5. Water quality analysis (accord with GB/T 5750-2006);

6. Gas, methane analysis (H2, O2, N2, CH4, CO, CO2 six components, unique single valve sequence conversion);

7. Sulfur compounds in natural gas (unique single-valve sequence reversal method for detection of H2S, CSO, SO2 and total sulfur);

8. High purity gas analysis, electronic industrial gas analysis (minimum detectable concentration up to 10ppb);

9. Benzene and toluene in gasoline (accord with ASTM D3606; SH/T 0713-2002);

10. Analysis of oxygen-containing compounds in gasoline (accord with ASTM D4815 and SH/T 0633-1998);

11. Analysis of benzene, toluene and aromatics in gasoline (in accordance with ASTM d5580-1995, SH/ t0693-2000);

12. SOA analysis of hydrocarbon group composition in gasoline (content detection of saturated hydrocarbon, olefin, aromatic hydrocarbon and benzene, using a special olefin adsorption trap; In line with SH/T 0741-2004), PONA analysis of single hydrocarbon in gasoline and CPNA analysis of the composition of carbon family;

13. Simulated distillation gas chromatography (accord with SH/T 0558, ASTM D5307, D3710, D6352, D2887);

14. Blood ethanol analysis (in line with the ministry of public security standard GA/ t105-1995);

15. Cigarette sticks VOC (in line with YC/T 207-2006), drug residue analysis, ethylene oxide in medical devices (in line with GB/T 16886.7-2001), solvent residue detection in packaging materials;

16. Gas chromatography for room temperature gases (CO2, CH4 and N2O, 0.1ppm-100%);

17. Catalytic evaluation, Fischer-Tropsch synthesis, high pressure and high temperature on-line analytical system (system chromatography based on requirements);

18. Process gas chromatography (industrial chromatography), sample pretreatment, analysis cabin construction, multiple flow path sample selection. (up to 32 sample options are supported), etc

2. GC-7860 Plus/B series Gas Chromatography

GC-7860 Plus

GC-7860 B

Features:

1. 5.7-inch dot-matrix LCD large liquid display, support Chinese and English switch.
2. Gas circuit manually and full electronic gas circuit (EPC/EFC) control is optional, networking communication (Ethernet interface IEEE802.3), computer online full control operation.
3. Electronic gas circuit (EPC/EFC) control mode

EPC electronic gas circuit control precision is 0.01mL/min or 0.01Kpa, which ensures better retention time reproducibility and more consistent and reliable results

EPC working mode: constant current, constant voltage, shunt mode

Program pressure control: 4 stage

EPC working gases: N2, H2, Air, He, Ar

EPC control range: pressure 0~ 0.6kpa flow 0~100sccm or 0~500sccm

EPC control accuracy: pressure 0.01Kpa; Flow rate of 0.01 sccm

4. Support high-speed heating, the maximum rate of 80 ℃ / min; Suitable for rapid analysis
5. Could be up to 450 ℃, suitable for high boiling point the analysis of the sample
6. Support double oven and double rear door opening mode
7. Oven temperature increment 1 ℃, the accuracy of + / - 0.01 ℃, is close to high-grade imported similar products
8. External events: 6-way. auxiliary control 2-way.
9. Diversified injection system; Packed column injection, capillary S/SL injection, valve injection, automatic liquid injection, automatic headspace injection, splitting injection, thermal desorption injection, purge and capture injection are optional

10. Special customized valve system can help users complete complex multidimensional chromatographic analysis tasks. Plus series is a multi-purpose gas chromatography specially designed for multidimensional application analysis and online analysis.

11. Rich detector types, up to three detectors can be installed: TCD, HTCD, uTCD, FID, FPD, ECD, NPD, ZD, PDHID, PID, AID

12. The program supports multiple flow path sample selection MPV system, with automatic identification valve number, automatic cascade judgment, automatic reset, valve position selection, valve position analysis memory function, up to 32 support sample flow path selection

13. Unique network remote transmission and control functions, unattended analysis, decentralized monitoring, centralized control.

14. The data can be connected to DCS system to complete the statistics, analysis and monitoring of chromatographic component content and improve the automation level of production process control

15. Temperature control index：

A) Temperature control circuit number: 8

B) Oven temperature index

Oven temperature range: room temperature of 4 ℃ ~ 450 ℃ (increment 1 ℃)

Oven temperature control precision, better than ±0.01 ℃

Oven temperature programming Rising order: 16 order

Rising rate setting: 0.1 ~ 39 ℃ / min (ordinary type); 0.1~80℃/min (high-speed type)

Constant temperature time of each order: 0~999min (increment: 0.1min)

Programmed cooling: 260 ℃ to 50 ℃ only need 6 minutes

C) Sample injector, detector, thermal conductivity pool, methane reformer temperature index:

Range of temperature: Room temperature of 4 ℃ ~ 450 ℃ (increment 1 ℃)

The accuracy of temperature control: better than±0.01 ℃

1. GC-7860 E/SE Electronic pressure flow monitoring gas chromatography

GC-7860 E/SE gas chromatography is a new generation of gas chromatograph with high stability and reliability, which is suitable for routine testing. It is equipped with advanced electronic pressure and flow measurement monitoring EPFM module, by adjusting gas circuit knob, can get gas parameters easily in the host screen and workstation, including the pressure and flow of carrier gas, hydrogen, air etc, and the injection port diversion ratio, column flow, etc. No flow meter measurement and manual calculation required, easy to operate.

GC-7860 E gas chromatography is widely used in petrochemical, fine chemical, biological medicine, environmental protection, food hygiene, high purity gas, electricity, wine making, scientific research and education and other fields of analysis, is the best choice for daily detection.

The machine can be installed at most three injection ports and three detectors; Easy to install automatic liquid sampler and special custom valve system to achieve high throughput analysis.

GC-7860 series networked gas chromatography can be equipped with 6-bit, 15-bit and 150-bit liquid automatic sampler, and each parameter can be controlled by counter-control software, which will bring better repeatability and improve work efficiency, while eliminating errors caused by manual injection.

Features & Technical Parameters：

1. 5.7-inch dot-matrix LCD large liquid display, support Chinese and English switch.

2. Gas circuit manually control electronic pressure flow monitoring, networking communication (Ethernet interface IEEE802.3), computer online full control operation.

3.SE series models adopt 1/16in imported stainless steel pipelines and stainless steel joints; The sample inlet and the vaporization chamber of the detector are specially treated to minimize the dead volume of the sample and the adsorption of the tube wall on the sample. With electronic flow monitoring, economic and practical, intuitive and convenient operation.

4. All detectors and injection ports can be equipped with electronic pressure flow monitoring, electronic pressure flow monitoring parameters (E/SE series)

5. Manual gas circuit control pressure and flow display: electronic pressure and flow measurement display, and can display pressure and flow in the anti-control software.

6. Full electronic pressure and flow measurement system: maximum number of measurement channels is 16.

7. Pressure Sensor:

Degree of accuracy: Full range ＜±2%;

Repeatability＜±0.05Kpa;

Temperature Coefficient＜±0.01Kpa/℃

Measuring Range 0~0.3Kpa or 0~0.6Kpa;

8. Flow Sensor:

Degree of accuracy: Full range ＜±2%;

Repeatability＜±0.05Kpa (Full Range);

Measuring Range: 0~500sccm;

4.GC-7860 GC7860 A/SA Gas Chromatography

GC-7860 A/SA gas chromatography use electronic gas circuit EPC/EFC control mode, advanced electronic gas circuit control (EPC/EFC) system, can provide industry users with industry-leading excellent quality and reliable results. The instrument has a unique network remote transmission and control function, so that the instrument in unattended, decentralized detection, centralized control into a reality; Data analysis results can be connected to DCS to complete the statistics, analysis and monitoring of chromatographic component content and improve the automation of the production process.

GC-7860 series gas chromatography is widely used in petrochemical, fine chemical, biological medicine, environmental protection, food hygiene, high purity gas, electricity, wine making, scientific research and education and other fields.

GC-7860 series network-based gas chromatography can be configured with 6-bit, 15-bit, and 150-bit liquid automatic samplers, and each parameter can be controlled by the reverse control software, which will bring better repeatability and improve work efficiency, while eliminating errors caused by manual samplers.

Features:

1. 5.7-inch dot-matrix LCD large liquid display, support Chinese and English switch.

2. Full electronic gas circuit (EPC/EFC) control mode, networking communication (Ethernet interface IEEE802.3), computer online full control operation.

3. SA series (component no. GS46), 1/16in imported stainless steel pipeline and stainless steel connector; The sample inlet and the vaporization chamber of the detector are specially treated to minimize the dead volume of the sample and the adsorption of the tube wall on the sample. With electronic gas circuit EPC/EFC, easy to operate.

4. Electronic gas circuit (EPC/EFC) control mode (A/SA)

a. EPC electronic gas circuit control precision is 0.01mL/min or 0.01Kpa, which ensures better retention time reproducibility and more consistent and reliable results

b. EPC working mode: constant current, constant voltage, shunt mode

Program pressure control: 4 stage

c. EPC working gases: N2, H2, Air, He, Ar

d. EPC control range: pressure 0~ 0.6kpa flow 0~100sccm or 0~500sccm

e. EPC control accuracy: pressure 0.01Kpa; Flow rate of 0.01 sccm

5. Other parameters are the same as GC-7860 Plus

5. GC-7860 Micro Gas Chromatography series

Portable Gas Chromatography

On-board Gas Chromatography

GC-7860 Micro gas chromatography can provide mini portable gas chromatography and mini on-board gas chromatography for your choose. According to the type of gas circuit control, divided into pressure and flow rate monitoring (E) and electronic gas circuit EPC/EFC control mode (A).

Application:

Portable gas chromatography can be widely used in:

1. On-site detection of toxic and harmful gases released by building decoration materials and furniture;
2. Indoor air detection in office buildings and bedrooms;
3. On-site detection of pesticide residues in food, agricultural and sideline products and green vegetables;
4. Monitored the discharge of waste water and gas from petroleum, chemical, electric power, pharmaceutical and cosmetics production departments;
5. Air quality monitoring network, water quality monitoring network and other fixed-point continuous testing;
6. Comprehensive test of automobile exhaust;
7. Gas detection in underground coal mine;
8. Drugs, criminal investigation, on-site detection of drugs, on-site analysis of inflammables, explosives and their residues;
9. Military: real-time analysis and test of battlefield chemical substances;
10. Real-time analysis of public safety guarantee and on-site diagnosis of diseases;

Features & Technical Parameters:

1. Small size and light weight; Can be customized according to user needs;
2. Fast analysis speed, can analyze dozens of substances from gas to high boiling point in tens of seconds, after installing argon ionization detector or helium ionization detector PDHID can detect high purity gas, minimum detection concentration of 50PPb, 5ppb or more.
3. Network communication (Ethernet interface IEEE802.3), computer online full control operation.

4. Air circuit control: manual air circuit control and full electronic air circuit EPC control are optional.

5. All-electronic pressure, flow measurement and display mode: maximum 16 channels (ME/MBE)

a. Pressure Sensor:

Degree of accuracy: Full range ＜±2%;

Repeatability＜±0.05Kpa;

b. Temperature Coefficient＜±0.01Kpa/℃

c. Measuring Range 0~0.3Kpa or 0~0.6Kpa;

d. Flow Sensor:

Degree of accuracy: Full range ＜±2%;

Repeatability＜±0.05Kpa (Full Range);

Measuring Range: 0~500sccm;

6.Electronic gas circuit (EPC/EFC) control mode (MA/MBA)

a. EPC electronic gas circuit control precision is 0.01mL/min or 0.01Kpa, which ensures better retention time reproducibility and more consistent and reliable results

b. EPC working mode: constant current, constant voltage, shunt mode

Program pressure control: 4 stage

c. EPC working gases: N2, H2, Air, He, Ar

d. EPC control range: pressure 0~ 0.6kpa flow 0~100sccm or 0~500sccm

e. EPC control accuracy: pressure 0.01Kpa; Flow rate of 0.01 sccm

7.Sampling Method: Capillary column shunt/non-shunt injection, filling column injection, valve injection

8.Rich detector types, up to two detectors can be installed： TCD, uTCD, FID, ECD, NPD

9. Can do online analysis, unique network remote transmission and control functions, can be unattended analysis, decentralized detection, centralized control

10. The data can be connected to DCS system to complete the statistics, analysis and monitoring of chromatographic component content and improve the automation level of production process control.

11. Temperature control index：

a. Number of temperature control channels: 6 channels

b. Oven temperature index

Oven temperature range: room temperature of 4 ℃ ~ 450 ℃ (increment 1 ℃)

Oven temperature control precision, better than ±0.01 ℃ (200 ℃ actual measurement)

Oven temperature programming Rising order: 16 order

Rising rate setting: 0.1 ~ 39 ℃ / min (ordinary type); 0.1~80℃/min (high-speed type)

Constant temperature time of each order: 0~999min (increment: 0.1min)

Programmed cooling: 260 ℃ to 50 ℃ only need 6 minutes

c. Sample injector, detector, thermal conductivity pool temperature index

Range of temperature: Room temperature of 4 ℃ ~ 450 ℃ (increment 1 ℃)

The accuracy of temperature control: better than±0.01 ℃(200 ℃ actual measurement)

6. Detector

Detector Parameters for GC-7860 Plus/B, GC-7860 E/SE, GC-7860 A/SA

1. FID

◎The collecting pole adopts the original cylindrical structure and quartz nozzle

◎Limit of detection： ≦3×10^{-12}g/s

◎Baseline Noise: 5×10^{-14}A

◎Baseline Drift: ≦1×10^{-13}A/30min

◎Linear: ≧10^7

◎Autoignition

2. TCD

◎Adopt semi-diffused structure

◎Constant current control mode is adopted for power supply

◎Sensitivity: S≧3000mv.ml/mg

HTCD High sensitivity thermal conductivity detector S≧10000mv.ml/mg; Digital amplification 1, 2, 4, 8 times optional

◎Baseline Noise: ≦10μv

◎Baseline Drift: ≦30μv/30min

◎Linear: ≧10^5

◎Carrier gas velocity stability: ≦1%

◎Capillary column connecting parts are optional

3.ECD

◎Limit of detection： ≦1×10^{-14}g/s

◎Linear range: 10^4

◎Source: Ni^{63}

4.FPD

◎Limit of detection: $5\times^{-12}$g/s(S) (S in methyl parathion)

5×10^{-13}g/s (P) (P in methyl parathion)

◎Linear range: 10^5(P) 10^3(S)

◎Maximum service temperature: 350℃

◎Detection Method: Air-hydrogen flame spectrometry

◎Optical detector: Top photomultiplier

◎Multiplier voltage: Max--700V

5.NPD

◎Limit of detection: (N)≦5×10^{-12}g/s

(P)≦5×10^{-12}g/s

Detector Parameters for GC-7860 Micro Gas series

1. FID Detector

Sensitivity: 6×10^{-12}g/s

Linear Range: 10^7

Program autoignition

2. TCD Thermal conductivity detector

Sensitivity: S≧3000mv.ml/mg (N-hexadecane/iso-octane)

Baseline Noise: ≦10μv

Baseline Drift: ≦30μv/30min

Linear: ≧10^5

3. ECD Electron capture detector

Limit of detection： ≦1×10^{-14}g/s

Linear range: 10^4

Source: Ni^{63}

4. FPD Flame photometric detector

Limit of detection:

$5\times^{-12}$g/s(S) (S in methyl parathion)

5×10^{-13}g/s (P) (P in methyl parathion)

5. NPD Nitrogen and phosphorus detector

Limit of detection: (N)≦6×10^{-12}g/s

(P)≦6×10^{-12}g/s

7.Headspace sampler

Application：

1. Petrochemical industry: high polymer monomer coating, volatile organic compounds, etc

2. Environmental science: volatile halogenated hydrocarbons in drinking water and organic toxic volatiles in industrial sewage;

3. Sanitation and epidemic prevention: analysis of EO in medical supplies;

4. Food industry: quality control of liquor, vinegar and soy sauce, analysis of acetaldehyde residues in beverage bottles, solvent residues in food packaging materials and 6# solvent residues in leaching oil;

5. Flavor and fragrance analysis of beer and tea;

6. Quality inspection of drugs: organic residual solvent in drugs;

7. Forensic chemistry: determination of alcohol, ketone and aldehyde in blood and urine, blood alcohol analysis;

8. Tobacco industry: determination of volatile organic compounds (VOC) in cigarette strips and packaging paper;

9. Others: volatile organic compounds in soil;

Automatic headspace sampler AHS-910

Features：

1. The heating zone of the headspace sample bottle is designed in a circular shape, which minimizes the temperature gradient between different hole positions and improves the stability of the analysis results.
2. The sample inlet valve, quantitative pipe ring and sample transmission pipeline can control the temperature to avoid condensation during the transmission of samples
3. The sampling kelton and filling valve with the function of cleaning, prevent cross infection.
4. Pressure balanced headspace injection (optional with quantitative tube ring injection), automatic pressure, automatic injection, automatic cleaning.

Technical Parameters:

1. Temperature index of heating zone, valve, transmission line and quantitative tube of the top empty bottle
2. The range of temperature: room temperature to 200 ℃ (increment 1 ℃)
3. The temperature control precision, better than plus or minus 0.1 ℃
4. Headspace: 9/11
5. Headspace bottle specification: standard 20ml (10ml, 50ml and other specifications can be customized);
6. Quantitative tube volume: 1ml
7. Backblow cleaning flow: 0~20ml/min (continuously adjustable);
8. Injection pressure range: 0~ 0.4mpa (continuously adjustable);
9. Pressure time: 0-99min, step length: 0.01min;
10. Filling time of quantitative tube: 0-99min, step length: 0.01min;
11. Injection time: 0-99min, step length: 0.01min;
12. Repeatability: RSD 1.5%

Fully automatic headspace sampler AHS-4206

The newly developed automatic headspace sampler AHS-4206 can be used in drug solvent residue, food soft packaging, VOC analysis and detection, blood alcohol and ethanol detection, tap water analysis and other industries. Shock heating station: 6.

AHS-4206 is a stable and reliable sample pretreatment instrument, which can be applied to different sample substrates to reduce or not require sample pretreatment, thus reducing the maintenance cost of injection orifice and chromatographic column. Fully automatic analysis, simple operation, high sample capacity and processing capacity, stable, and reliable design.

Features:

1. Provide diversified support for volatile components from daily quality control to new product research and development.

A. The most suitable way to meet the high reliability of modern analysis is to use A stable and durable precision instrument;

B. HS-4206 automatic headspace injector has excellent performance, it can meet the new challenges in daily analysis, and provide reliable, reliable analysis results.

2.AHS-4206 automatic headspace injector has strong sample processing capacity

A. 10ml and 20ml headspace bottles can be used to meet A large number of analysis requirements;

B. Starting and ending bottle positions can be set freely to meet special needs on site;

C. The shaker function of the sample bottle accelerates the balance time to improve the efficiency, sensitivity and reproducibility;

D. The 6-position sample heating position can be overlapped to save analysis time and realize maximum speed;

E. Automatic detection of missed sample bottles to reduce the confusion of sequence analysis.

3. Reliable results and reproducibility

A. The valve and quantitative ring technology is A technology with high reliability and high reproducibility in current use. Samples of fixed volume and known volume are precisely controlled to ensure good reproducibility and avoid the risk of wrong results and sample condensation.

B. The sample flow path was all treated with thermal insulation and chemical inertness, which greatly reduced the analysis residue and kept the sample intact.

4.AHS-4206 has 2 control modes

A. It can be controlled directly through the touch screen or by special software on the computer;

B. Powerful and simple operation interface greatly improves work efficiency;

C. It can be operated separately on the touch screen of the instrument and the computer;

D. Simple and intuitive setting of methods and sequences;

E. Methods and sequences can be easily edited and saved and applied to instruments;

F. Real-time display of injection status and visual presentation of temperature conditions;

Technical Parameters:

Temperature control: at room temperature to 220 ℃ (incrementally 1 ℃ as a set)

Temperature control precision: plus or minus 0.1 ℃

Top empty bottle station: 42

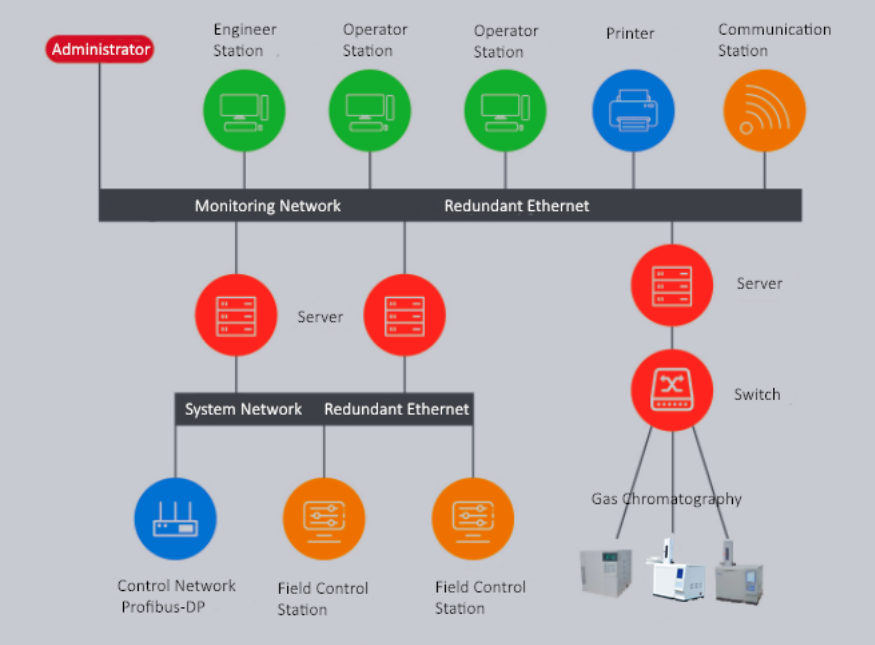
Shock heating station: 6

Headspace bottle specification: standard 10ml, 20ml (other specifications can be customized)

Repeatability: RSD 1.5% (ethanol: water)

Pressure range of injection: 0-0.4mpa (continuously adjustable)

8. 7860NetChrom network-based anti-control workstation N903



Features:

1. Communication:

A. Networked communication, IEEE802.3 Ethernet interface;

B. The workstation also supports RS232 communication interface;

2. The organic combination of chromatographic data processing and instrument reverse control operation makes the operation convenient and the interface friendly;

3. The workstation software can set and control the temperature of the heating area, the name of the heating area, user-defined enabling switch, gas flow and pressure, program boost control, program temperature rise and external events, automatic sampler, multi-flow sample selection control, detector and other parameters;

4. The workstation supports multi-channel data processing of multiple chromatograph devices. The maximum design supports connection of 5000 chromatograph devices.

5. The workstation software has integrated time program setting, base-line locking, negative peak identification and negative peak reversal and other practical functions;

6. Data analysis results can be converted into WORD format for printing, output and copy;

7. Automatically generate the folder named after the chromatograph, automatically generate the time for users to manage multiple chromatograph at the same time;

8. The NetChrom network anti-control workstation CAN transmit the analysis results to the place needed by users remotely through various transmission methods (Internet, CAN bus, MODBUS bus, GPRS communication, 3G communication, wireless private network, etc.).

9. Data analysis can be easily uploaded to DCS system and output 4mA~20mA, which is convenient for industrialized online closed-loop control;Connect with Agilent, Waters and other chromatographic workstations;

10. Multi-thread technology is adopted to realize signal collection, data processing and user management working together at the same time;

11. The unique software architecture realizes the rich configuration of multiple monitoring seats in a system, and a single chromatograph supports the simultaneous access of three IP addresses;
12. Equipped with the analysis results to extend the communication interface and support the user's secondary development and function extension;
13. The unique spectrum peak can only be identified, which minimizes the processing parameters of the spectrum that need to be set by the user, and basically realizes the automatic processing of peak determination, baseline correction and overlapping peak segmentation;
14. The sample data can be read into the CDF file conforming to A/A standard, which can be connected with Agilent, Waters and other chromatographic workstations;
15. The unique high-fidelity digital filtering algorithm is adopted, which has strong anti-noise interference ability and can detect weak and small peaks at the same level as the baseline noise;
16. Data processing includes: normalization method, calibration normalization method, single-point calibration method (single-point internal standard method, single-point external standard method), multi-point calibration method (multi-point internal standard method, multi-point external standard method);
17. Provide GMP version, power dedicated, non-methane total hydrocarbon, TVOC, gasoline analysis, PONA and other dedicated software;
18. The GMP certification workstation has the functions of authority management, log management and result traceability, etc.;
19. The NetChrom online workstation can also be equipped with a "component content monitoring system" to complete the statistics, analysis and monitoring of chromatographic component content, which can be used in the production of chemical products (such as reaction, fractional flow, rectification, etc.). Carry out data statistics of each component of the sample, content change trend, threshold detection, threshold alarm, so that the component content change trend is clear at a glance.The data on the same day or on duty are automatically archived without manual analysis of the atlas, manual sorting of the atlas, and manual judgment of the results, which improves the automation level of the factory.

Technical Parameters:

Input voltage range: -2.5v ~ 2.5v
Integral sensitivity: 0.05 V·s
Minimum resolution: 1 V
Dynamic range: 10-7
Alignment: 0.005%
Repeatability: 0.005%
Sampling cycle: 10, 20, 30, 40, 50 times/second adjustable

9. Multi-function automatic Oscillator ZD-30

ZD-30 multi-functional automatic oscillating instrument, in line with GB/ t17625-1998 "determination of dissolved gas component content in insulating oil by meteorological chromatography" oscillating degassing method; According to the oscillation heating method of dl429.4-91 "water-soluble acid quantitative determination method", this instrument is controlled by microcomputer program and used for constant temperature and regular heating, oscillation and degassing of various liquids in the laboratory.

Features:

1.240*128 dot-matrix LCD liquid display, no identification key operation;
2. Microcomputer control, PID self-tuning temperature control mode, accurate temperature control;
3. Mechanical transmission fatigue, anti-vibration, maintenance-free, low noise;
4. An external thermometer jack is provided to facilitate the operator to calibrate the temperature;
5. Small size, light weight, elegant appearance;
6. Can put 8 100ml syringes or 4 250ml triangular bottles at the same time;
7. All-Chinese/all-English interface display can be realized

Technical Parameters:

Temperature Range	Room Temp.~120℃
Control Precision	Room Temp.~50℃±0.2℃
	50℃~100℃±0.3℃
	100℃~120℃±0.5℃
Oscillation Frequency	275±3 times/min
Oscillation Amplitude	35mm
Chromatographic oscillation degasification	Oscillate for 20 minutes, hold for 10 minutes, keep the temperature at 50℃
Water-soluble acids oscillate	Oscillate for 5 minutes at a constant temperature of 75℃
	Let stand time ±5 secs
	Set the temperature at room temperature ~120℃
Other physical oscillations	Set any oscillation within 0~99 minutes
	Let stand time ±5 secs
	Set the temperature at room temperature ~120℃
Noise	＜35 decibels
Power supply voltage	AC220V±10% 50HZ±10%
Applicable ambient temperature	5℃~50℃
Applicable ambient humidity	≤85%RH
Overall dimensions	500*350*385mm
Weight	≈35KG

10. Gas generator

EP series gas generator is suitable for all kinds of gas chromatography. It can produce high purity nitrogen, high purity hydrogen and pure air separately or at the same time.

EPH-300/500 high purity hydrogen generator

	Hydrogen Purity	99.999%
	Out Flow	0~300ml/min; 0~500ml/min
	Out Pressure	0.4Mpa
	Power	150W 180W
	Dimension	440*210*360mm
	Net Weight	12KG 13KG

Feature:

Small size, plate type electrolytic cell, stainless steel anti-return device, automatic adjustment of output flow, LED flow display, using high quality low sulfur rubber seal, effectively improve the quality of gas. Liquid level display window is illuminated by LED light, which is more convenient for maintenance.

EPN-300/500 High purity nitrogen generator

	Nitrogen gas purity	O2≤3ppm Dew point≤-70℃
	Out Flow	0~300ml/min; 0~500ml/min
	Out Pressure	0.4Mpa
	Power	150W 180W
	Dimension	440*210*360mm
	Net Weight	14KG

Feature:

Plate type electrolytic cell, stainless steel anti-return device, automatic adjustment of output flow, LED flow display, using high quality low sulfur rubber seal, effectively improve the quality of gas. The purity of nitrogen output is guaranteed by the preextraction purification device.

EPA-2000/5000 Air generator with low noise air pump

Out Flow	0~2000ml/min; 0~5000ml/min
Out Pressure	0.4Mpa
Power	125W 150W
Dimension	440*210*360mm
Working Noise	≤40dB
Net Weight	19KG

The famous brand compressor is equipped with normal pressure starting device, stainless steel gas storage tank, two levels of stable pressure automatic drainage, long service life, more safe.

EPA-380A/580A Air generator with imported oil-free compressor

Out Flow	0~3000ml/min 0~5000ml/min
Net Weight	27KG
Dimension	260*360*665mm
Out Pressure	0.4Mpa
Power	560W 600W
Working Noise	≤40dB

EPHA-300/500 (EPHA-300B/500B oil-free) Hydrogen air generator

Hydrogen Purity	99.999%
Hydrogen Out Flow	0~300ml/min 0~500ml/min
Hydrogen Out Pressure	0.4Mpa
Air Out Flow	0~2000ml/min; 0~5000ml/min
Air Out Pressure	0.4Mpa
Power	350W
Dimension	500*340*420mm
Working Noise	≤40dB
Net Weight	35KG

Hydrogen and air integrated structure, small size and easy operation, safe, stable and reliable.

EPX-300/500 (EPX-300B/500B oil-free) Nitrogen-hydrogen air generator

Nitrogen gas purity	O2≤3ppm Dew Point ≤-70℃
Nitrogen Out Flow	0~300ml/min 0~500ml/min
Hydrogen Purity	99.999%
Hydrogen Out Flow	0~300ml/min 0~500ml/min
Out Pressure (N2/H2)	0.4Mpa (N2/H2)
Air Out Flow	0~2000ml/min; 0~5000ml/min
Air Out Pressure	0.4Mpa
Power	400W 450W
Dimension	500*420*420mm
Working Noise	≤40dB
Net Weight	42KG 45KG

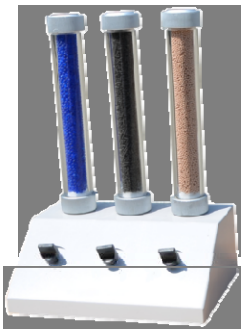
Nitrogen hydrogen air generator integrated structure, small size, reasonable structure, easy to use； Plate type electrolytic cell, stainless steel anti-return device, automatic adjustment of output flow, using high quality low sulfur rubber seal, effectively improve the quality of gas.

EPNA-300/500 (EPNA-300B/500B oil-free) Nitrogen air generator

Nitrogen Purity	O2≤3ppm Dew Point ≤-70℃
Nitrogen Out Flow	0~300ml/min 0~500ml/min
Nitrogen Pressure	0.4Mpa
Air Out Flow	0~2000ml/min; 0~5000ml/min
Air Out Pressure	0.4Mpa
Power	360W
Dimension	500*340*420mm
Working Noise	≤40dB
Net Weight	35KG

Nitrogen air generator integrated structure, small size, easy to use.

Gas Purifier



EPJH-133 purifier has three independent gas circuit and a switch valve to carry out targeted purification of harmful impurities in the gas. For instance, remove water and fill with molecular sieve or discolored silica gel; Removal of hydrocarbons (CH2), can be filled with activated carbon; Remove CO2, can be filled with caustic asbestos, etc. According to different requirements, three can also be used in tandem, to achieve the requirements of three deep purification.

EPJH-131 purifier has the function of three tubes and one channel switch, which is suitable for the separate use on the carrier gas circuit to purify the moisture and hydrocarbons in the carrier gas; Or add deoxidization, the function of removing CO2.

Features:

1. Equipped with on-off valve to purify the gas, a small tri-gas purifier specially designed to improve gas purity.
2. It has the advantages of simple installation, high purification performance, beautiful shape and not easy to leak.