



V-Sorb 2800TP surface area and pore size distribution analyser

- * Be designed for micropore and super micropore materials determination;
- * Equips with one mechanical vacuum pump and one turbo pump;
- * 1000 torr, 1 torr and 0.1torr three types pressure sensors;
- * Ideal measuring system for government labs and universities;
- * The TOP analyzer in physisorption field.

V-Sorb 2800TP surface area and pore size distribution analyser introduction

V-Sorb 2800TP surface area and pore size distribution analyser is manufactured by Gold APP Instruments engineers for specific surface area, pore volume and pore size related data testing, especially for super micropore testing. It has a turbo molecular vacuum pump and 0.1 torr pressure sensor, also equips 316L stainless steel manifold pipelines, can make to reach a very low pressure with high accuracy.



316L VCR manifolds

V-Sorb 2800TP surface area and pore size distribution analyser applications

1. Super micro powder, nanomaterials, particle and fiber etc. samples specific surface area, pore size distribution, pore volume etc. analysis.
2. Government institutes and universities for researching work

V-Sorb 2800TP surface area and pore size distribution analyser parameters

1. Test Principle: static volumetric adsorption
2. Test Data: adsorption/ desorption isotherms, single and multipoint BET (Brunauer-Emmett-Teller), Langmuir surface area, external surface area, BJH (Barrett-Joyner-Halenda) total pore volume and pore size distribution, T-plot micropore, MP micropore, Horvath-Kawazoe (HK) micropore, Saito-Foley (SF) micropore, Dubinin-Radushkevich (DR) micropore, Dubinin-Astakhov (DA) micropore, carbon black (STSA) etc.
3. Vacuum System: V-Sorb unique stainless steel micro welding vacuum manifolds system, metal-to-metal (VCR) fittings, reduce dead space in maximum degree and also keep long duration high vacuum; the VCR metal fittings' vacuum leak rate can reach 1×10^{-10} (Pa m³/s), absolutely without usage of any O-ring sealing which will release gas to affect vacuum purity when under high vacuum condition
4. Measuring Ranges: 0.01 m²/g (nitrogen)/ 0.0005m²/g (krypton) to no known upper limit (specific surface area); 0.35 to 500nm (pore size)
5. Accuracy: repeatability errors within 1%
6. Data Acquisition: high-precision and high integration data acquisition and archiving system, minimal error, strong anti-interference ability
7. Sample Ports: 2 analyzing and 2 degassing work simultaneously and independently
8. Control System: programmable solenoid valve system with high integration and strong anti-interference ability, enhance instrument's stability and life
9. Pressure Measurement: branded pressure transducer greatly improve the measuring accuracy at low P/Po point, 1000Torr, 1Torr and 0.1Torr three pressure transducers are equipped
10. Transducer Accuracy: pressure transducer accuracy can reach 0.1% of real reading
11. Vacuum Pump: built-in mechanical vacuum pump and turbo pump be controlled by software
12. Dewar: branded 4 liter stainless steel Dewar can provide at least 72 hours of unattended measurement without refilling the LN2
13. Ultimate Vacuum: bipolar pump: 4×10^{-2} Pa (3×10^{-4} Torr), molecular pump: 5×10^{-8} mbar





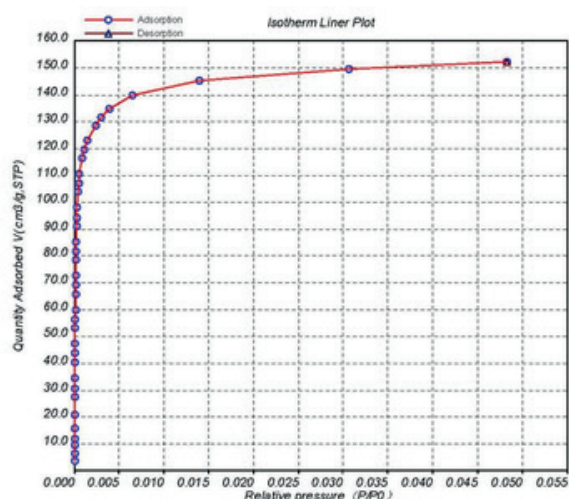
4L stainless steel Dewar

V-Sorb 2800TP surface area and pore size distribution analyser technical features

1. Stainless steel micro welding vacuum manifolds system can reduce the leak rate apparently and improve ultimate vacuum.
2. Micro welding vacuum system can decrease manifolds dead volume, increases measuring sensitivity and improve accuracy.
3. Equip turbo vacuum pump, ultimate vacuum value can reach 5×10^{-8} -0.998 mbar, maintenance free, convenient to use.
4. Branded high vacuum pneumatic valve sealing performance is up to 5×10^{-12} (Pa m³/s).
5. Fully metal-to-metal VCR connecting eliminate O-ring gas release problem when under high vacuum circumstance, efficiently improve ultimate vacuum and analysis reliability.
6. Modularity design can configure as customer requests, easy for future upgrading and maintenance.
7. Programmable pneumatic valve system with high integration and strong anti-interference ability.
8. Multi calculating formulas for data reduction provides all-round sample analysis options; powerful data archiving and searching system helps a lot for data management.

Analysis Information

Mass: 0.33280 (g)	
Method: Pore size	
Room Temp.: 25°C	Pretreatment: 350 °C vacuum heating for 4h
Analysis Time:	



Analysis Information

Mass: 0.33280 (g)	Pretreatment: 350 °C vacuum heating for 4h
Method: Multi-Point BET	
Room Temp.: 25°C	Multi-BET: 634.125950(m²/g)
Analysis Time:	



BET Tabular Report

P/P₀	Quantity Adsorbed(ml/g)	(P/P₀)/(V*(1-P/P₀))	Single point BET
0.048291	152.036882	0.000334	629.712049
0.030691	149.390959	0.000212	630.195420
0.013915	144.782611	0.000097	621.326155
0.006428	139.434426	0.000046	602.917794
Slope	Intercept	Vm(ml)	C Value
0.006862	0.000002	145.693148	3426.679771
R	Multi-BET Area	Langmuir Area	
0.999993	634.125950(m²/g)	670.918843(m²/g)	

