



**HORIBA**  
Scientific

SA-9600 SERIES  
BET MULTIPOINT  
SURFACE AREA  
ANALYZERS

SA-9600

**SA-9600 Series Specifications:**

	SA-9601	SA-9601MP	SA-9603	SA-9603MP
Single point surface area	Yes	Yes	Yes	Yes
Multi-point surface area	No	Yes	No	Yes
Analysis stations	1	1	3	3
Preparation stations	2	2	3	3
Range	0.10 to > 2000 square meters per gram			
Analysis time	Typically 6 minutes per sample	Typically 6 minutes per point	Typically 6 minutes per analysis (three simultaneous samples)	Typically 6 minutes per point (three simultaneous samples)
Repeatability	<1% relative standard deviation (RSD)			
Power Requirements	100, 120, 220 or 240 volts AC, 50/60 Hz Maximum peak power 200 Watts,			
Weight	34.5 pounds (14.5 kg.)	38 pounds (17.7 kg.)	38.5 pounds (15.9 kg.)	42 pounds (18.14 kg.)
Dimensions	20" H x 14" D x 14" D (50.8cm H x 35.6cm W x 35.6cm D)			



**Prager**  
Elektronik

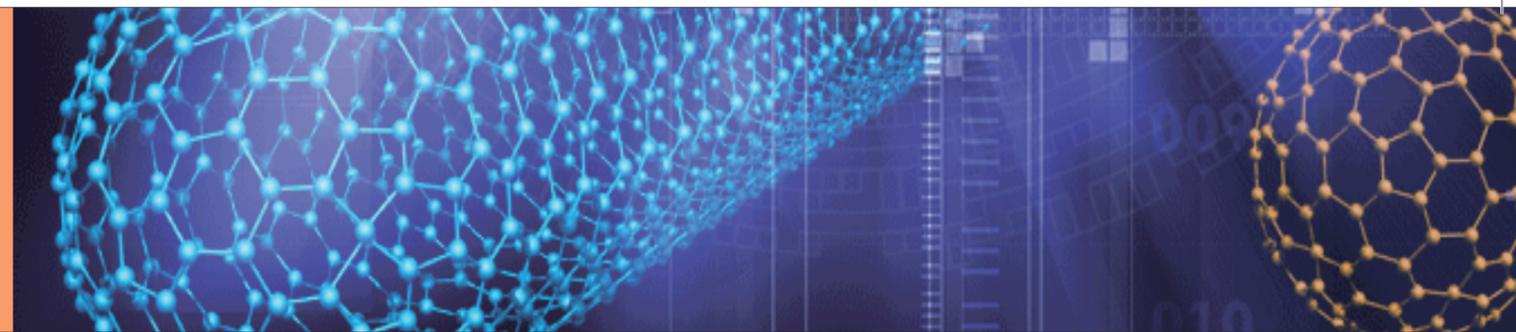
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*SPEED, SIMPLICITY, PRECISION AND ECONOMY  
FOR YOUR SURFACE AREA APPLICATIONS*

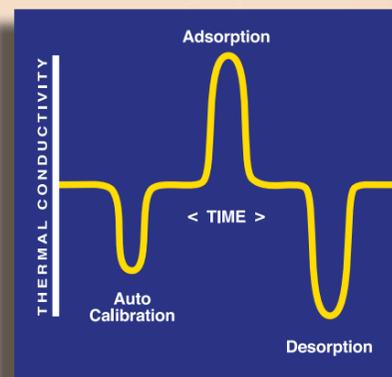


HORIBA's breakthrough SA-9600 Series brings exceptional convenience and confidence to surface area analysis. Now you can perform single-point and multi-point surface area measurements with push-button ease. In single-point mode, up to ten sample analyses can be performed per hour.

HORIBA's use of the flowing-gas method allows routine total surface area measurements to be made as quickly as every six minutes, depending on magnitude of surface area. The three-station SA-9603 analyzer measures three samples simultaneously. The multi-point performance is comparable to the slower and more expensive static volumetric systems.

**Applications**

The SA-9600 provides quick, user friendly specific surface area analysis for a wide variety of powders ranging from catalysts to active pharmaceutical ingredients (API's). Low surface area API's and excipients are particularly well suited for analysis by the SA-9600, which provides a quicker measurement time at a lower cost than competitive options.



To ensure repeatable, accurate measurements the HORIBA analyzer calibrates the detector and zeros the baseline before every analysis. Because it is fully automated, the SA-9600 series eliminates variables that are sometimes introduced by operator involvement, such as the measurement of nitrogen or movement of the dewer flasks. Considering its many advantages, the SA-9600 series analyzers are very modestly priced, delivering the lowest per-analysis cost available.

**Push and Go!**

Just touch a button and the SA-9600 analyzers automatically perform every measurement step. Detector baselines are zeroed, then a high precision valve injects 1cc of nitrogen (N<sub>2</sub>) into the flow system to calibrate the analyzer. Next a liquid nitrogen bath is raised around the sample cells. From a stream of mixed gas flowing through the sample cell, N<sub>2</sub> is adsorbed on the powder's surface. Then the bath is lowered, and the amount of desorbed N<sub>2</sub> is measured and proportioned to the calibration signal to determine the sample's surface area. Finally, the surface area is divided by the sample's weight to provide the specific surface area in m<sup>2</sup>/g. For multi-point analysis, this sequence is repeated for each of the gas mixture points. For single-point surface area analysis, the flowing gas is 30% nitrogen (user selectable).

speed  
precision

simplicity

**Runs as a stand alone...**

The SA-9603, the three-station analyzer is a complete solution with an on-board computer, full alphanumeric keyboard, vacuum fluorescent display and integrated three-sample de-gas preparation station. Additional de-gas capacity is available via a dedicated SA-9660 three-sample prep station. The analyzer stores up to 100 analyses in memory and provides a parallel output to furnish ASCII files to printers or send serial output to LIMS.

**...And Connects to a Remote PC.**

Complete with newly designed software, the SA-9600 series analyzers can be operated remotely from any PC with Windows. HORIBA also offers a complete 21 CFR Part 11 compliant package, including an audit trail, user management and electronic signatures.



The SA-9600 analyzers come with sample preparation stations (2 or 3 depending on the model). If additional preparation capacity is desired, the model SA-9660 prep station, which has three preparation stations, can be purchased separately.

