

RESOURCES

A summary of new products and services
for materials research...

Test And Measurement Instruments Guide:

The 96-page 1994 purchasing guide from Herman H. Sticht Company provides specifications on hand and stationary tachometers, frequency meters, running time meters, insulation testers, stroboscopes, controllers, static eliminators, and more. Also presents information on multimeters and test instruments by leading manufacturers worldwide.

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Hotplate and Stirrer Catalog:

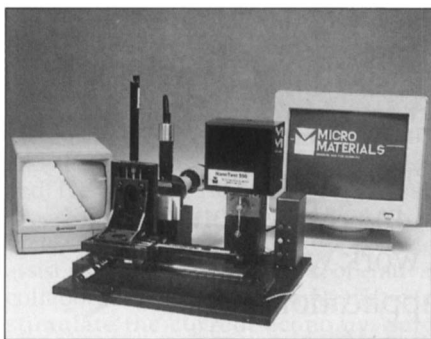
PMC Industries' six-page catalog details the 500 Series of analog hotplates, stirrers, and hotplate stirrers. Included are corrosion-resistant, heavy-duty, and multi-task multi-zone heating/stirring units. Pictures, charts, descriptions, and specifications are included for each unit.

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Halogen Point Source for Fiber Optic Illumination:

Suitable for microscopes, borescopes, and endoscopes, Chiu Technical's MSI-150 modular illuminator features a quick-change lamp module that can be serviced while the illuminator operates with a spare or loaner module. A concentric knob set controls the solid-state dimmer and mechanical diaphragm, and a lateral sliding filter holder accepts any two filters.

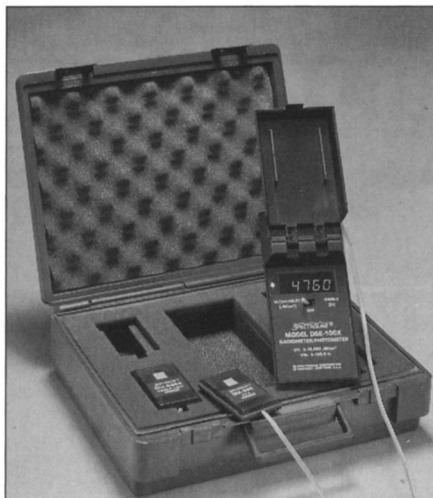
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Diamond Stylus Indenter:

Micro Photonics' NanoTest 550 offers three modes for characterizing mechanical properties of submicron thin films and provides a depth resolution of 0.1 nm or more. The indenter mode measures load vs. displacement during indentation and relaxation to produce surface hardness and elastic modulus data. The scratch tester mode produces data about adhesion, friction, and scratch and wear resistance. The third mode produces a surface topography profile.

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Digital Radiometer/Photometer:

Spectronics' redesigned Spectroline® DSE-100X features improved linearity and better signal-to-noise ratio, as well as auto-zeroing and a built-in battery-level indicator. Interchangeable sensors measure visible light with resolution to 0.1 fc, and black light with resolution to 10 $\mu\text{W}/\text{cm}^2$. Accuracy is better than 5% NIST-traceable over the full measurement range.

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Low-Profile Micropositioners:

Charles Supper Company's Solo-Slide micropositioners are suitable for precise position adjustability in a single plane, regardless of orientation. Models are available with either a 1/4-in. or 3/4-in. single-axis travel. The aluminum devices, constructed with permanently lubricated stainless-steel drive screws, have drilled and tapped mounting holes or can be epoxied.

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3-D Surface Measurement System:

WYKO's RST Plus measures surface texture for materials such as plastics, films, glass, ceramics, paper, metal, etched silicon, and more. The system provides surface height measurements up to 500 μm with subnanometer resolution and displays results as 3-D color images. Software operates on a PC Pentium computer under Windows, and several applications can be run simultaneously, incorporating graphics, database results, and analysis summaries in one document. System also features variable field of view and an objective turret with five different objectives.

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Cryopumps for Semiconductor Needs:

Marathon™ cryopumps, manufactured jointly by APD Cryogenics and Daikin Industries of Japan, are designed for the semiconductor market and worldwide user compatibility. Their 25-liter hydrogen capacity reduces regenerations and improves production time, and a pneumatic expander with two moving parts enables on-site maintenance without breaking vacuum. The large refrigeration capacity also facilitates crossover at high pressures, and the units may be installed on existing systems without additional engineering.

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High Vacuum Lab System:

Balzers' PLS 500 can be used for such PVD processes as E-beam evaporation, ion beam sputtering, plasma-enhanced CVD, plasma etching and separation, cold plasma treatment, and more. A 520-l/s turbopump provides the vacuum chamber with hydrocarbon-free high vacuum and short pumpdown cycles. A 1,600-l/s turbopump is also available, and an optional butterfly valve for the intake line allows the working range to be varied from 10^2 to 10^7 torr.

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Portable Vacuum Calibrator:

The PVS-60 from MKS Instruments is designed for calibrating capacitance manometers, pressure transducers and transmitters, TC gauges, and mechanical/dial gauges over the range of 10^6 to atmosphere. An optional NIST-traceable hot-filament nude ion gauge allows calibrating ionization gauges to 5×10^8 mm Hg. The cart system features all-metal sealed construction with up to three transfer standards, and instruments may be calibrated *in situ*.

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Dynamic Mechanical Thermal Spectrometer:

Gabo Qualimeter's Eplexor™ 25 N enables analysis of the viscoelasticity of polymers, glasses, and biological substances. Sample holders for tension, compression, shear, and three- and four-point bending allow material investigations for most applications. Dynamic E-modulus, shear modulus, and damping may be studied in the force range of 0.0025 to 25 N, over a temperature range of -150 to 500°C at frequencies of 0.0001 to 100 Hz. Upgrades for measurements up to 1 kHz and simultaneous determination of thermal extension are available.

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