

## Vacuum Trap Filters

**MV** Products, a division of Mass-Vac, Inc., provides a line of custom filter elements that can be designed to trap



specific gases and particulates. The traps can also be combined with MV's line of vacuum inlet and exhaust traps to meet demanding process requirements. The company fabricates its custom filter elements using specific materials to absorb gases such as arsine, boron trifluoride, boron trichloride, and hydrochloric acid. For example, stainless steel and copper gauze traps gases and vapors; activated alumina neutralizes acids and absorbs oils; and Sodasorb removes acetic acids.

### MV Products

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## Ultrafast Fiber Laser

IMRA has extended its ultrafast fiber-laser technology to the 1- $\mu\text{m}$  wavelength range with its new Wattle system. The ytterbium-fiber amplified laser system has a range of 1.03 to 1.05  $\mu\text{m}$  and provides pulses of 100 fs at 150 to 450 nW or 3 ps at

0.4 W, at a 1,040-nm wavelength and a 50-MHz repetition rate. An optional 520-nm output is available. The turnkey, air-cooled Wattle has an ultracompact design of only 28  $\times$  25  $\times$  12 cm, and it comes ready for stand-alone use or original-equipment-manufacturer integration. Applications include semiconductor diagnostics, multiphoton microscopy, laser-based fluorescence and bioanalytical studies, and high-speed instrumentation; the system also can serve as a seeder for high-power amplifiers.

### IMRA America, Inc.

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## Vacuum Pumping System

Alcatel has introduced its new Drytel 1025 oil-free vacuum pumping system. The company's Drytel series uses two dry pumping stages working in series. The pumps are intended for industrial applications that require a dry, clean vacuum, including chemicals, electronics and semiconductors, analytical instrumentation, food processing, and pharmaceutical manu-

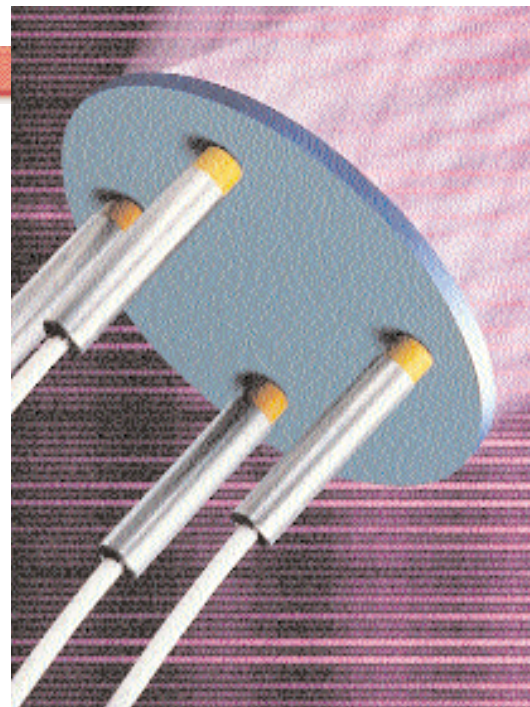


facturing. The Drytel 1025 provides a compact, one-switch design and operates between 1 atm and  $10^{-5}$  Torr. Its maximum pumping speed of 16 ft<sup>3</sup>/min makes this model particularly useful in small chambers, cryostats, and load-locks.

### Alcatel Vacuum Technology, Inc.

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## Differential Measuring System

Kaman Instrumentation's DIT-5200 differential measuring system provides high-precision inductive technology for use in such applications as pointing and tracking, fast steering mirrors, laser-beam communications, military tracking systems, image stabilization and jitter compensation, and laboratory experimentation. Its balanced-bridge technology provides nanoradian resolution, high-gain analog dc output, and a low noise level. The DIT-5200 is extremely stable and adaptable to environmental conditions. It is available in single- and dual-channel configurations with a compact electronics package.

### Kaman Instrumentation Operations

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## Split-Flow Turbopumps

Pfeiffer Vacuum's advanced Split-Flow Turbopumps for analytical original-equipment manufacturers feature up to three ports that can be configured to fit customers' differential pumping requirements, including liquid chromatography-mass spectrometry (LC-MS) and gas chromatography-mass spectrometry. The box-style, multiport design improves the analytical instrument's sensitivity by delivering high pumping speed, locating the port where it is needed, and defining the compression

ratio between each port. Unlike conventional LC-MS systems, the Split-Flow Turbopump needs only one rotary-vane backing pump, which reduces complexity and saves space and expense. The compactness of the vacuum system permits the design of benchtop analytical systems.

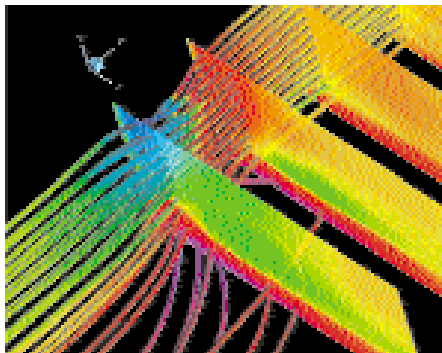
**Pfeiffer Vacuum, Inc.**  
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## Laser Inspection Systems

Veeco has brought two new automated component-inspection systems to market, both aimed at improving process control and increasing yields.

The Optium Laser Diode Inspection System and Optium Thin Film Filter Inspection System combine Veeco's defect-detection technology with advanced automatic handling. The systems' high-speed evaluations enable manufacturers to implement in-line production inspection to improve defect trapping. The laser-diode system measures at the wafer, three-side bar, and individual diode levels, and provides the sensitivity, repeatability, and throughput to support large-scale manufacturing of source and pump diodes. It automatically locates and identifies coating, cleave, and crystal-growth defects. The filter-inspection system provides high-speed examination of thin-film filters and will reveal any chips, cracks, scratches, coating defects, or contamination.

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## New Software

### 3-D Visualization

Amtec has released version 9.0 of Tecplot, its technical plotting software package. The new version includes OpenGL for use with the fast graphics available on today's personal computers and UNIX workstations. Tecplot 9.0 renders three-dimensional data up to 100 times faster than version 8.0, and OpenGL enables users to interactively visualize, analyze, and "fly through" large two- and three-dimensional data sets. The new true-color and translucency of the software yield impressive plots, animations, and presentations. The package provides scientists and engineers who are working with large data sets created with numerical simulation and from analysis and testing a one-stop program for data visualization and high-quality on-screen graphics. Tecplot Version 9.0 is available for Windows 95, 98, NT, and 200, and Linux and UNIX.

**Amtec Engineering, Inc.**  
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## New Literature

### Vacuum Gauge Brochure

MKS's vacuum products group recently published its "HPS Pirani Gauge Brochure." The publication provides readers with information about applications for the devices, which are used to measure vacuum pressure from 1 atm to medium vacuum, as well as a technical overview, specifications,

dimensions, and pricing. Products include the Series 945 light-emitting diode digital controller, which measures from  $10^{-4}$  to 100 Torr, and the Series 917 analog controller, which measures from  $10^{-3}$  Torr to 1 atm. Series 315 and 345 Pirani sensor tubes are also listed for use with Series 945, 917, 937, and 953 gauge controllers, which have a measurement range of  $10^{-4}$  Torr to 1 atm. The tubes can be installed in any orientation and are interchangeable without the need for calibration.

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## Vacuum Components

EVAC, a supplier of stainless steel and aluminum vacuum components, offers a free catalog describing its large inventory.

EVAC's product line includes Pyrex and quartz components, stainless steel bellows and hoses, Teflon bellows, and a variety of chain clamps, flanges, fittings, and seals for use in vacuum technology, semiconductor processing, high-energy physics, chemistry, and cryogenics. The company typically can ship standard parts within one to three weeks.

**EVAC International Inc.**  
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