



Pressure Regulators

Scott has introduced its Model 237 series of pressure regulators for use with compressed, acid-forming gases such as hydrogen chloride and boron trifluoride. The new regulators have a single-stage, tied-diaphragm design and are made of aluminum silicon bronze for corrosion resistance. They also feature stainless steel pressure gauges and a stainless steel diaphragm, which helps protect gas purity. The Model 237 series provides delivery pressure ranges of 3 to 75 psig (0.2–5.2 bar) or 10 to 150 psig (0.7–10.3 bar). The regulators' maximum inlet-pressure ratings are 3,000 psig (207 bar), 800 psig (55 bar), or 300 psig (21 bar).

Scott Specialty Gases

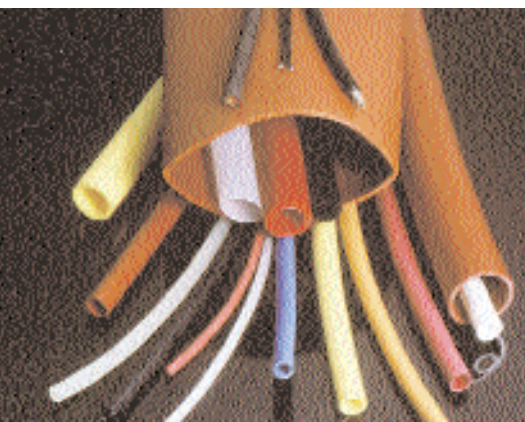
6141 Easton Road

Plumsteadville, PA 18949

Circle No. 180 on Reader Service Card

High-Performance Tubing

E-BEAM Services provides industry with resilient, high-performance tubing that it cross-links using electron-beam technology to transform cost-efficient tubing products into value-added specialty items. The enhanced tubing has a wide range of industrial applications in which heat, mechanical stress, chemical interaction, and abrasion create material problems. The company's high-energy processing cross-links polymer



molecules to create a permanent, three-dimensional molecular structure with high tensile strength, durability, and resistance to creep, fatigue, and abrasion. Electron-beam processing does not affect the finished size, shape, or form of the tubing or tubing assemblies, and it leaves no residue, odor, or aftertaste. Indeed, processing

actually sterilizes the tubing.

E-BEAM Services, Inc.

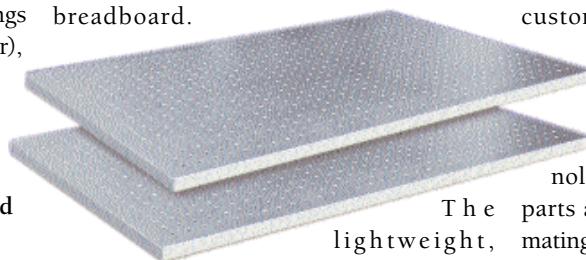
118 Melrich Road

Cranbury, NJ 08512

Circle No. 181 on Reader Service Card

Mounting Plates

Kinetic Systems' new Series 7000 aluminum mounting plates provide a flat, stable surface for affixing sensitive equipment used in applications that need damping but do not require a high-performance, vibration-damped workstation or breadboard.



The lightweight, nonmagnetic plates have a black anodized finish, are 0.5 in. thick, and come in five standard sizes up to 24 × 48 in. They have a flatness of ±0.03 in. over a 24 × 24-in. area and weigh 0.5 lb/in.². Their size, thickness, and shape can be customized. Series 7000 plates are used in areas such as original-equipment-manufacturer applications, prototyping instrument bases, and optical assembly, and in medical research, aerospace R&D, and semiconductor manufacturing.

Kinetic Systems, Inc.

20 Arboretum Road

Boston, MA 02131

Circle No. 182 on Reader Service Card

Custom Connectors

Konnex custom-engineers connectors for power and signal applications that integrate design, molding, machining, stamp-



ing, and other technologies to resolve space, mating, and assembly problems, especially for high-density interconnects. Konnex can combine brackets, terminal blocks, male–female contact assemblies, machined metal-base housing, shunts, protective covers, and other components in its customized connectors to meet specific power- and signal-carrying capacities and environmental requirements. The company uses several materials and manufacturing technologies to develop products with few parts and that facilitate fast and fail-safe mating and simplify assembly.

Konnex, Inc.

4 Kane Industrial Drive

Hudson, MA 01749

Circle No. 183 on Reader Service Card

Sapphire Domes

Meller Optics provides custom-engineered sapphire domes that protect electronic detectors and sensors operated in harsh environments and that extend the angle at which the devices can be viewed up to 160°. The sapphire domes have a surface hardness second only to diamond, which helps protect detectors and sensors from moving particles such as sand and flowing liquids. They transmit light from the ultraviolet to the infrared, with transmission up to 85% uncoated and up to 99% with anti-reflection coatings on both sides. Meller makes sapphire domes with an outer diameter of up to 4 in. and a surface hardness



rating of Moh 9, less than 25 mm variation in wall thickness, and less than 1 fringe/in. surface accuracy measured at 633 nm. The sapphire domes are available in prototype through production quantities.

Meller Optics, Inc.
120 Corliss Street, P.O. Box 6001
Providence, RI 02940
Circle No. 184 on Reader Service Card

Teflon Tubing

Newman markets extruded Teflon tubing for use as conduits in many laboratory, medical, machine-vision, and robotics applications. Because the tubing is unaffected by moisture and most chemicals, including acids, it ensures effective protection for wires, cables, tubing, and hoses used in harsh environments. Newman extruded Teflon tubing is suitable for packing and finishing a wide range of instruments and equipment. It is available in corrugated and convoluted styles from 0.25 to 2 in. interior diameter with various wall thicknesses, and as plain tubing from 0.1 to 1.25 in. All the company's tubing is Underwriters Laboratories listed, nonflammable, and functions from -450° to $+450^{\circ}$ F.

M. M. Newman Corp.
24 Tioga Way, P.O. Box 615
Marblehead, MA 01945
Circle No. 185 on Reader Service Card

Curing System

Xenon has introduced its new RC-1002 CoolCure Twin-XL pulsed ultraviolet-visible light curing system for use with products ranging from micrometer-size to 20 in. long. The RC-1002 consists of a power supply, pulse-forming network, and switch control module that drives twin xenon lamps, which can be mounted remotely. The company says its new unit provides greater flexibility than continuous-wave mercury-lamp curing systems at a comparable price. Each of the two xenon lamps delivers $1,000 \text{ W/cm}^2$ peak power and 100 W/cm^2 average (per pulse) power and has a

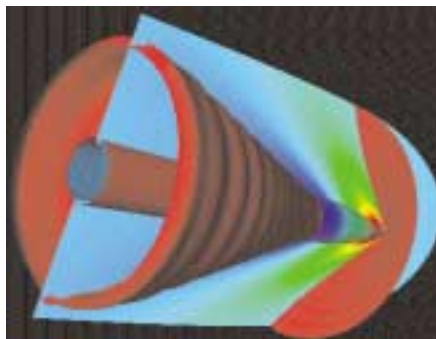
5.5-in.-diameter light footprint. The RC-1002 operates with chemistries that absorb light at 200 to 600 nm and can easily be integrated into original-equipment-manufacturer and end-user systems.

Xenon Corp.
20 Commerce Way
Woburn, MA 01801
Circle No. 186 on Reader Service Card

New Software

Tecplot Add-On

Amtec Engineering has released a new add-on to its Tecplot data-visualization software that has extensive capabilities for post-processing computational fluid dynamic (CFD) data. The CFD Analyzer 3.0 enables the detection, extraction, and display of key CFD features such as vortex cores, shock surfaces, and separation bubbles—flow features



often difficult to detect in large, complex three-dimensional data but essential for understanding flow field physics. The MIT Fluid Feature eXtraction library powers the CFD Analyzer's extraction capability and calculates shock surfaces, vortex cores, and separation-attachment lines.

Amtec Engineering, Inc.
13920 SE Eastgate Way, Suite 220
Bellevue, WA 98005
Circle No. 187 on Reader Service Card

New Literature

Fluoroplastic Tubing

TexLoc's new brochure features a full line of precision fluoroplastic tubing in a wide range of convoluted and corrugated

products, materials, and sizes. Tubing is available with various cuffed and flanged ends in sizes from 0.25 to 4.0 in. interior diameter that meet commercial and military specifications. Tubes can be manufactured from several fluoroplastic materials, including poly(tetrafluoroethylene), perfluoroalkoxy, and poly(perfluoromethylvinylether). The eight-page brochure also describes the major characteristics of each type of material and provides an overview of operations such as cutting, etching, and scoring.

TexLoc, Ltd.
4700 Lone Star Boulevard
Fort Worth, TX 76106
Circle No. 188 on Reader Service Card

Platinum Labware

Alfa Aesar, a Johnson Matthey company, has published a new catalog, "Platinum Labware," which includes descriptions, specifications, and illustrations of its precious-metal crucibles, molds, dishes, non-wetting apparatus, utensils, and electrodes. The 56-page publication also lists Alfa Aesar's line of Spectorflux alkali metal borate fusion fluxes for use in analyzing a wide range of refractory materials with direct optical or X-ray emission spectrometers, atomic absorption spectrometers, spectrophotometers, polarographs, ion-selective electrodes, inductively coupled plasma, or classical analytical techniques.

Alfa Aesar
30 Bond Street
Ward Hill, MA 01835-8099
Circle No. 189 on Reader Service Card

The New Products section is based on information supplied by the manufacturers. *The Industrial Physicist* can assume no responsibility for its accuracy. To facilitate inquiries, a Reader Service Card is attached between pages 30 and 31.

