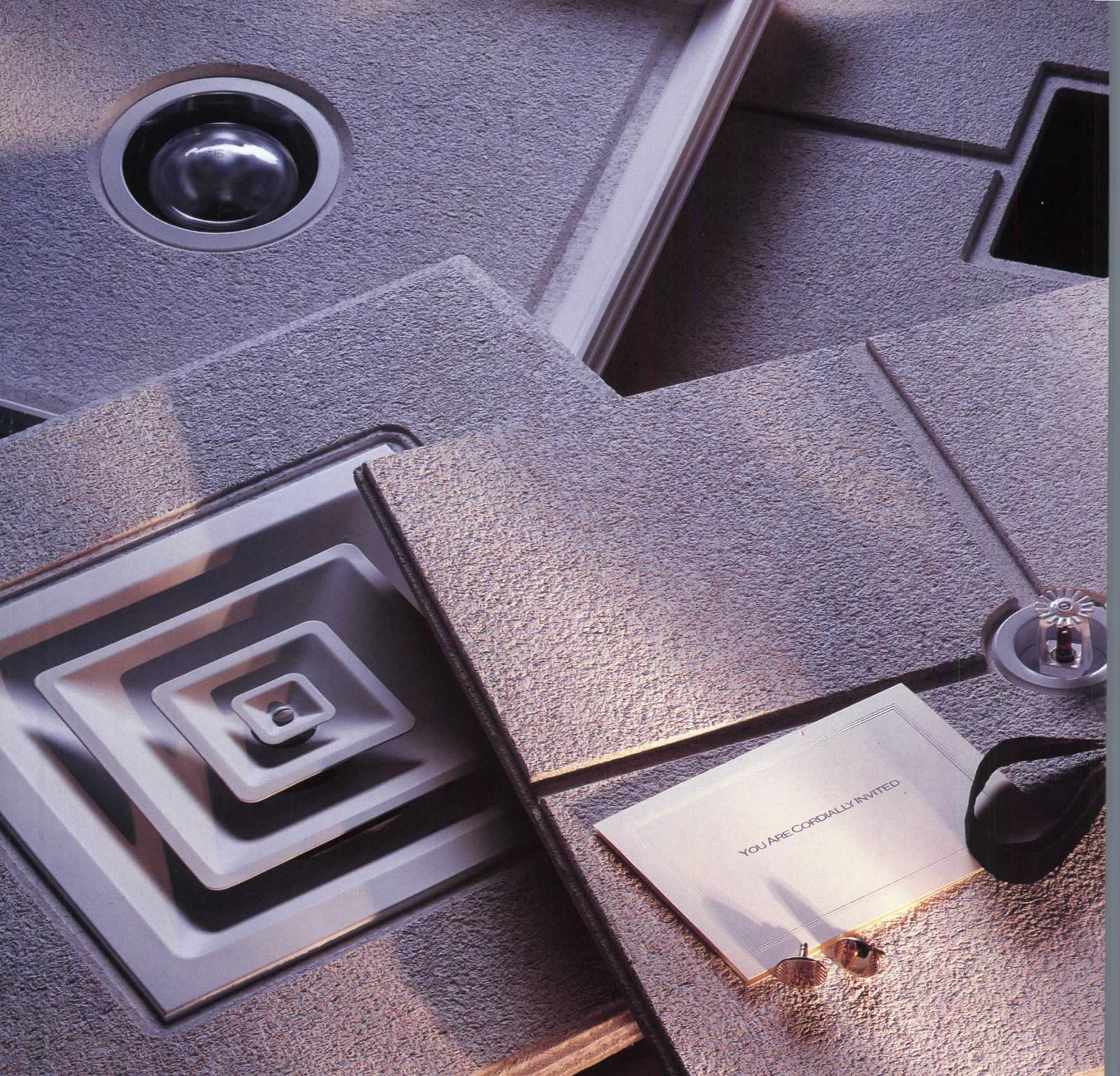


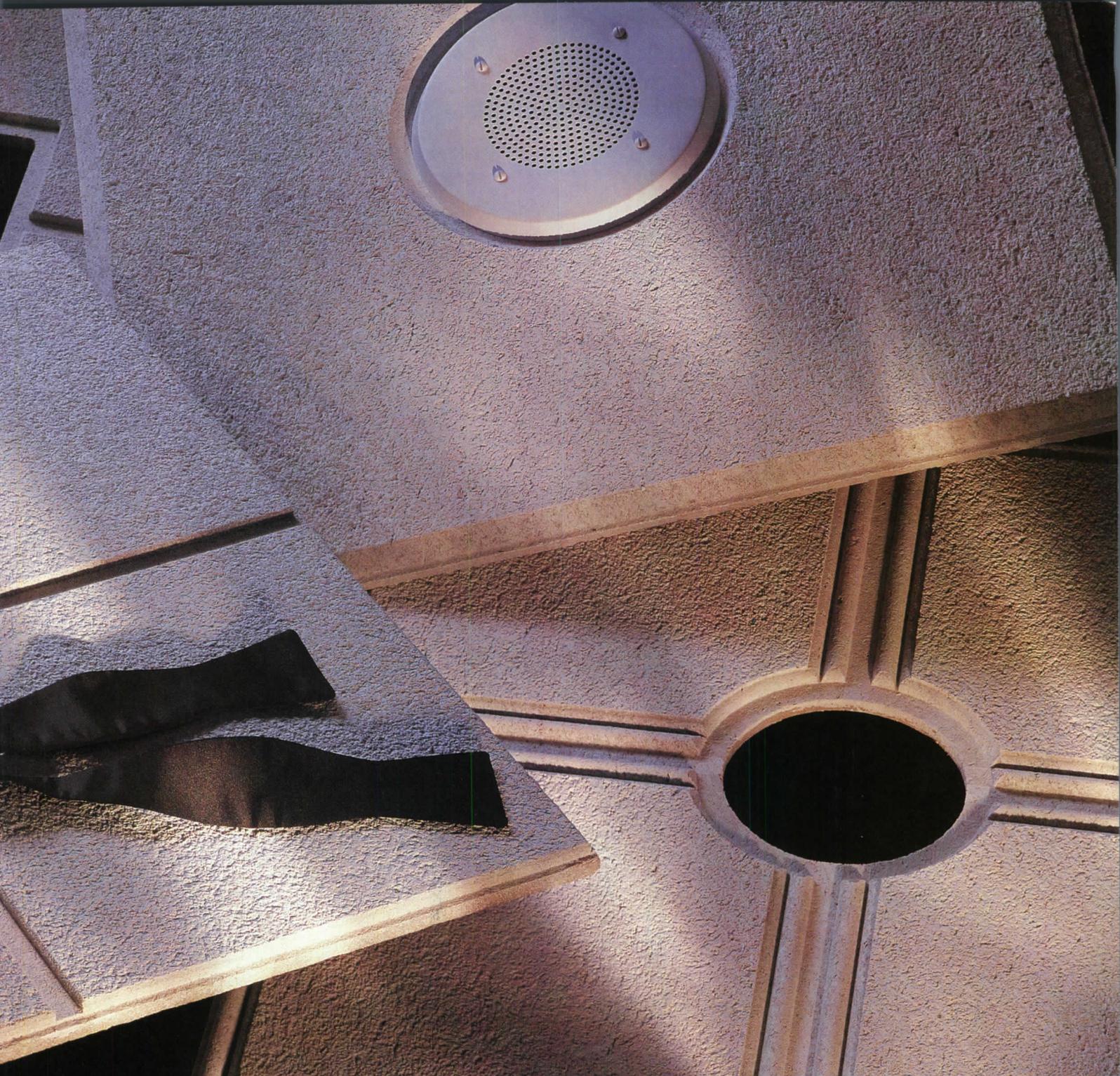
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### Guggenheim design debate

On the recent alteration of the Solomon R. Guggenheim Museum [RECORD, October 1992, page 100], the addition of the rectangular tower irretrievably compromises the formal integrity and historical value of the sole public building in New York to have been constructed to the design of America's greatest architect.

The open helical volume of the museum is the culminating expression of Wright's determination to "beat the box"—the effort to liberate American architecture that he first achieved with the Larkin Company building. The presence of the hermetic slab that now interrupts and constrains this volume constitutes a rejection of Frank Lloyd Wright's testament.

*Edward Frank, Architect  
New York City*

I believe Charles Gwathmey and Robert Siegel engaged this fearful endeavor with great courage and exceptional ability, and they should therefore receive praise as well as the inevitable criticism. As one who spends too much time writing about the brilliant and unequalled works of Wright, I nevertheless believe that there are too many who would see all his works not as museums, houses, churches, or office buildings but as untouchable monuments to genius, made devoid of life if necessary to preserve their pristine perfection. It is imperative that all Wright's buildings continue to contain and give form to human life and actions—it is for this and nothing else that Wright created them.

After closing the Guggenheim Museum for over a year,

Gwathmey Siegel Associates handed it back to us remade and revitalized, having released many of Wright's spaces from the confines of numerous abysmal "renovations" made over the years, the cumulative effect of which was to compromise almost every space within the original structure, closing off many to public occupation.

Gwathmey Siegel deserves great praise for both restoring the spaces to the public realm and improving certain aspects of the museum functions with remarkable restraint and tact. Allowing us once again to stand at the very top of the main spiral space, enabling us to enter the ramp as Wright intended, is reason enough for my admiration and thanks.

Gwathmey Siegel's careful investigations of Wright's own design proposals were not done to replicate the forms exactly, but to comprehend and extend the intentions—Wright designed his buildings to be frameworks for the lives that took place within them, and Gwathmey Siegel have helped restore life to the lost spaces of the Guggenheim. In a time where criticism is plentiful and memorable places are scarce, I want to applaud Gwathmey Siegel for an exceptionally respectful yet vigorous design. Wright deserved no less.

*Robert McCarter, Architect  
Chairman, Department of  
Architecture  
University of Florida,  
Gainesville*

### Correction

The study for a new gateway to Old San Juan [RECORD, October 1992, page 28] was produced jointly by Hector Arce Arquitecto and Koetter, Kim and Associates, Inc.

### Through January 3, 1993

"Building in a New Spain: Contemporary Spanish Architecture," an exhibition of photographs, drawings, and models by Spain's leading architects, in Gallery 227 at The Art Institute of Chicago. For information, call 312/443-3600.

### Through January 29

An exhibition of waterfront, park and subway projects for New York City will be displayed at the National Institute for Architectural Education, 6th floor, 30 W. 22nd St., New York City. Contact: Mary Neibauer, 212/924-7000.

### December 15 to April 12

"Coop Himmelb(l)au." Exhibition at Centre Georges Pompidou, Paris. Models, drawings, sketches, photographs. Focal point of exhibit is the Object, a structure intended to exemplify firm's ideas on Open Architecture. Contact: Eric Otto in Los Angeles 310/838-8264.

### January 29-30

A national conference on housing, sponsored by Perspecta: the Yale Architectural Journal and the Yale School of Architecture. Submissions sought for a curated exhibit on housing to be displayed at the conference. For information, contact: 203/432-2291.

### Through January 31

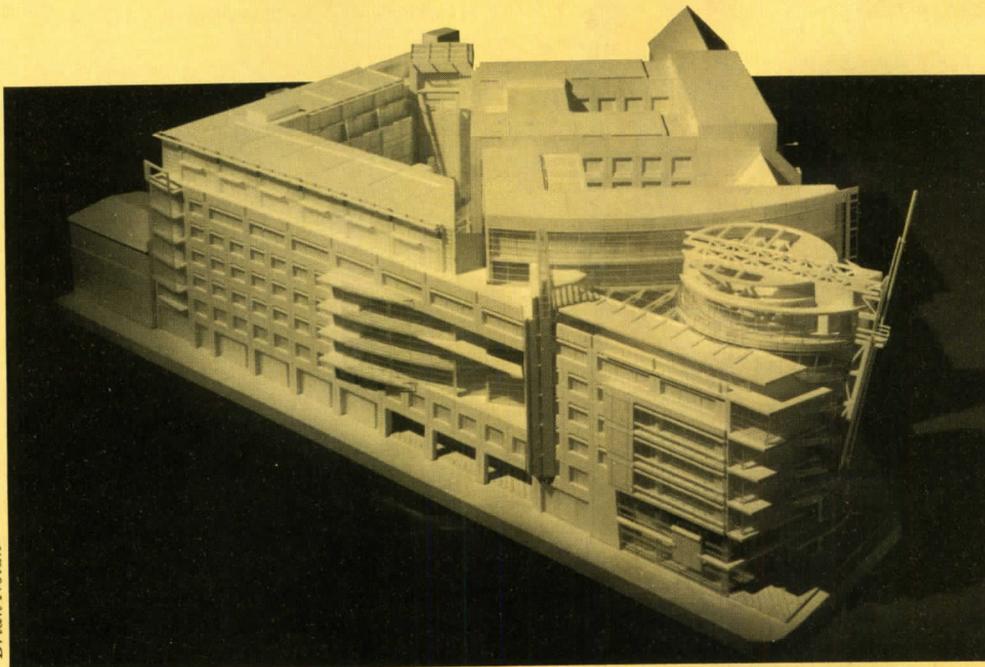
"Visions/Revisions," 2nd DC/AIA biennial exhibition, is now held at the National Building Museum, 401 F Street, N. W., Washington, D. C. Contact: Donna Anderson, 202/272-3606.

### February 16-19

The National Roofing Contractors Association hosts its 106th annual convention and exhibit in Henry B. Gonzalez Convention Center, San Antonio, Tex. Contact: Alison LaValley, 708/299-9070.

**Berlin**

**Checkpoint Charlie Project Embraces Berlin Wall**

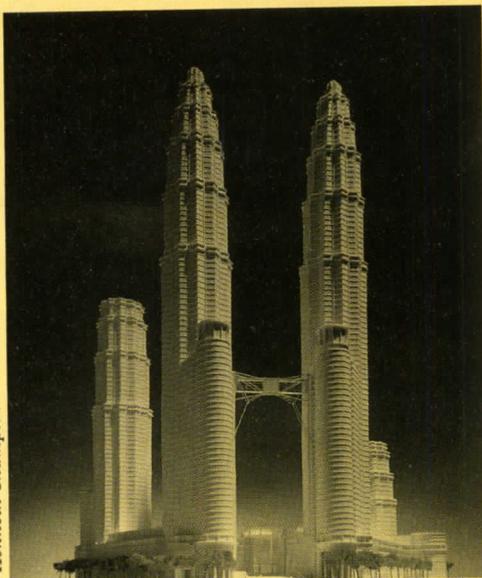


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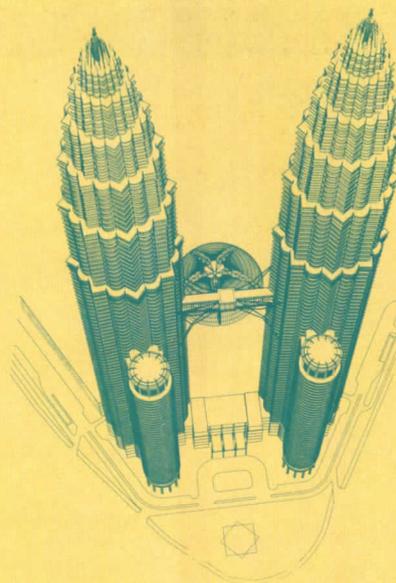
Skidmore, Owings & Merrill has won a design competition for a 500,000-sq-ft mixed-use development on one of five sites comprising the American Business Center at Checkpoint Charlie. The seven-story project combines a modern design idiom with a traditional-scale streetwall enclosure and inner courtyards. Sited where the Berlin Wall would have intersected the fortified boundary of 17th-century Berlin, it incorporates portions of the 1961-89 Wall, suspended to demonstrate symbolically that barriers can indeed be lifted. "Our intent is to create an urban space acknowledging the area's physical and political history," says SOM's design partner David Childs. Project elements focus the complex toward the former Checkpoint Charlie, possibly the most famous border crossing during the decades when the Wall divided Berlin. ■

**Kuala Lumpur**

**Prime Minister Collaborates on Regional Skyscraper Design**

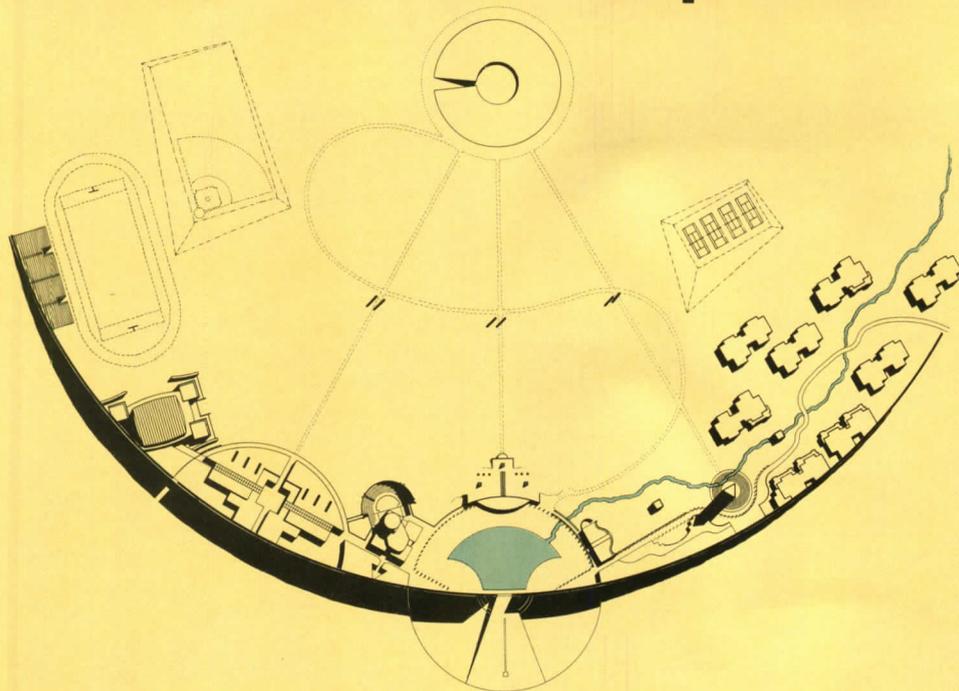


© Kenneth Champlin



Cesar Pelli & Associates has won a design competition for phase one of the Kuala Lumpur City Centre (KLCC), a four-tower project that includes 5.4 million sq ft of offices, 1.8 million sq ft of retail, a 750-room convention hotel and twin 85-story towers for the headquarters of Petronas, the national petroleum company of Malaysia. Post-competition, Malaysian Prime Minister Mahatir, an avid amateur architectural historian, worked with Pelli's team to create a first in the country: a regionally resonant skyscraper. Islamic forms and geometries influenced the rotated-square floor plates that mold its overall minaret silhouette with setbacks and recall the area's Hindu roots. Studios of San Francisco will design the interiors. KLCC's first phase is expected to open in 1996. ■

## Landscape Molds Native Prep School

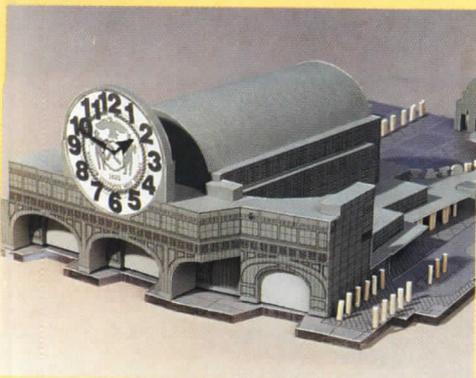


Richard Yates Architects has won a state-wide competition to design the Native American Preparatory School, whose aim is to avoid imposing an "American" stereotype on Native students while preparing them for competitive colleges and universities. A half-mile arc of rammed earth, the most common spiritual reference among North America's more than 500 diverse Native societies, serves as windbreak and solar collector and organizes the campus in the landscape. Jury members, advised by Conron and Woods, Architects, were University of New Mexico

dean of architecture George Anselevicius, artist John Nieto, architects William Cowles and Peter Dominick, Stanford University director of Native American studies James Larimore, Fountain Valley School headmaster Eric Waples, and Kogee Thomas, co-director of school and college relations at the University of California, Irvine. Arizona State University professor of architecture Jeffrey Cook chaired. Of the Native American jurists, Larimore is Comanche, Nieto is of Hispanic and Native ancestry, and Thomas is Creek/Seminole. ■

## New York City

### Terminal Clock Is New Beacon For the Battery



One of America's most famous rides—the Staten Island Ferry—will have a \$112-million new terminal if funding can be found to replace the existing facility, severely damaged by fire. The winning scheme, by Venturi, Scott Brown Associates and Anderson/Schwartz Architects, beat five other teams in a limited competition. A 120-ft-high clock, scaled to the lower-Manhattan skyline, greets arriving passengers, who pass through a barrel-vaulted hall to an arcaded plaza. A smaller clock marks a subway entrance. ■

## Briefs

- The index to 1992 RECORD articles will appear in the January 1993 issue.
- Simon Martin-Vegue Winkelstein Moris has won its third DuPont Antron grand prize for the Apple Computer Data Center, designed with MBT Architects. It continues indoors the colors of the surrounding Napa, California hills and vineyards. Category winners were Farrington Design Group for healthcare, Bottom Duvivier for small offices, Tom Gass for store planning (his second United Chair-showroom award), and Frost Tsuji Architects for hospitality.
- Jack Travis, author of *African American Architects in Current Practice*, has developed a wall calendar based on the book. The calendar is \$5, with a minimum order of three. To order, call 212/594-1122.

### Competitions

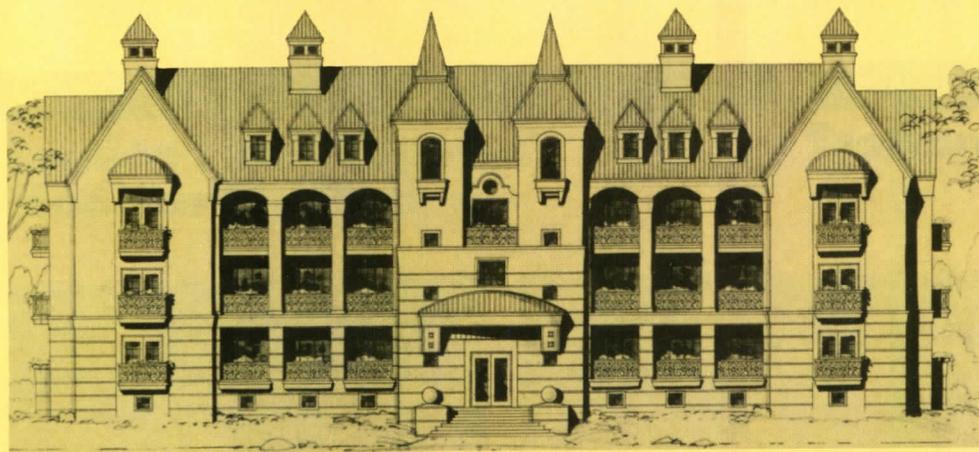
- Stringent emission regulations that will begin to take effect in some states in 1998 have prodded the auto industry to gear up to mass-produce electric vehicles, and the U. S. Department of Energy is offering \$100,000 in prizes to architect/economist/civil engineer/environmentalist/builder/planner teams for city-specific fueling-station designs. Sponsors include General Motors/Hughes Power Control Systems and Edison Electric Institute. Deadline is April 13, 1993. Contact Electric Vehicle, 432 North Saginaw St., Flint MI 48502.
- The Samuel H. Kress Publication Fellowship deadline is January 31, 1993; the Vincent Scully, Jr. Grant is February 1. Contact Architectural History Foundation, 350 Madison Ave., New York, N.Y. 10017, (212)/682-5969.
- Postmark entries for the Andrea Palladio Award by January 31, 1993. Contact: Caoduro, Spa, Via Chiuppese 15, Cavazzale (Vicenza), Italy. Fax: 39/44/459-6761.

### Planning

- AIA launches Housing Assistance Team, a citizen-participation repopulation project for historic downtown Helena, Arkansas. Its a delta town of 7,000 that Mark Twain said "occupies one of the prettiest situations on the Mississippi." The finance/development/design/construction team includes M. David Lee of Stull and Lee; AIA's Charles Zucker, Christopher Rose, of Chris Schmitt & Associates; Francisco Behr of Behr Browsers; landscape designer/planner Karen Bess, and five architecture students. ■

Latvia

## Design Tackles Diplomatic Quandary



A curious development opportunity has emerged from the break-up of the Soviet galaxy: the housing of embassy and consular staffs from countries that are establishing diplomatic relations in Eastern Europe for the first time in more than 50 years. A joint venture of the Latvian government and the Finnish developer Polar-Bek has selected Houston's Kaufman Meeks to design family housing for Riga's roughly 25 new embassies. Firm president Don Meeks says the long-term goal is to be ready to deliver new homes for Latvians as soon as

their economy can handle it. In the meantime, foreign governments are willing to pay for conveniently located modern accommodations in cities that otherwise might be considered hardship posts. Each of the four four-story buildings will contain 18 units with an average of 1,500 sq ft, two baths and two or more bedrooms. Exteriors complement existing Latvian architecture, which is on the dark and medieval side, but the interiors "will be quite westernized and as open and bright as possible." Groundbreaking is scheduled for the first part of 1993. ■

China

## Lufthansa Opens Hotel and Business Complex in Beijing



The new Hotel Kempinski Beijing Lufthansa Center was designed by the German firm of Novotny and Mäehner to include a 540-room hotel with a full business center and 12 restaurants and bars, including an on-site boutique brewery (center); 12,000 sq ft of of-

fices; 161 furnished apartments for long-term business visits (left); exhibition and retail space; and the largest department store in the city (right). All interiors in the \$351-million complex are by Dale Keller and Associates of Hong Kong. ■

Washington, D. C.

## Upbeat Mood Marks Minority Architects

In contrast to 1991, a decidedly upbeat mood marked this year's annual conference of the National Organization of Minority Architects as it convened this fall in Washington, D. C., at Howard University in conjunction with the newly created 1st Congress of African American Architects. The Congress agreed to develop, by next February, a manifesto defining the issues of survival and development of black professionals. Delegates also debated the rising preoccupation of black architects with African cultures and their influence on American design, and, during program breaks and at social gatherings, talked about the aftermath of the riots in South-Central Los Angeles, an event referred to increasingly in African American circles as the Rebellion. NOMA's Los Angeles chapter has had a strong role in the restoration effort, including the fall reopening of Paradise Market.

The Congress's proposed manifesto, underwritten in part by a Graham Foundation grant, will come out under three headings—*accessing* (how to encourage access of minority youngsters to architecture as a profession); *sustaining* (reinforcing the study and practice of architecture by black Americans); and *developing* (dealing with the advancement of black architects and institutions and evolving a pattern language for African American esthetics).

A highlight was Kent State University professor David Hughes' illustrated lecture on the roots of an Afrocentric architecture in America. Tracing Egyptian, Zimbabwean, and other antecedents in terms of site planning, materials, form and scale, and the impact of customs and craft skills, Hughes conceded that an "Afrocentric architecture may not conform to standards of beauty . . . of other cultures" but warned Afrocentrists not to "seek or accept values of other cultures as measures of the worth of their creativity." Richmond architect Robert L. Easter was elected NOMA president, succeeding Atlanta architect (and RECORD editorial advisory panel member) William J. Stanley III. Host to the 650 participants was Howard Dean Harry G. Robinson III, who earlier this year agreed to make Howard the home of an African American architectural archive. S. A. K.

## This Month

## Vaulting the Barriers to Green Architecture

**Technology transfer**, Martin Pawley writes, is "what happens when the methods or processes developed in one industry are applied to another." Were it not for this cross-fertilization, a great number of the scores of new products shown in this issue would not be available to us. In these pages we offer four perspectives on a process that, for all its proven advantages, is tricky and fraught with risk.

Arguably, the most important mission for architects in the next decade is to support more environmentally sustainable means of development, including speeding to market "greener" products and techniques. The barriers to this, write Amory Lovins and William Browning in *Vaulting the Barriers to Green Architecture* (right), are more institutional than technological. It's often difficult to show owners and lenders that paybacks for sustainable design are real.

A different technology-transfer perspective comes from Gerald Moorhead. In *Computerizing Concrete*, he reports on the efforts of a Finnish company to shortcut the design-to-fabrication process—in this case the roboticized production of precast-concrete forms directly from "drawings" supplied through the architect's CAD program (opposite). To the extent such techniques become common in construction, they will ease fabrication of complex configurations in a variety of materials.

Over the years, we've heard many experts decry the fragmented, managerially primitive state of building construction in the U. S., especially its tiny investment in research and development. By contrast, Japan's largest design and construction firms see R&D investment as essential to their long-term international competitiveness. Anthony Webster asks, in *Japan's Zenecons: Builder-Driven Innovation*, whether these intense efforts will leave American firms behind (page 18).

Finally, Martin Pawley writes in *The Case for Uncreative Architecture* that practicing architecture as technology transfer offers a more compelling, useful future than the "myth of individual creativity." (page 20). ■

*By Amory Lovins and William Browning*  
Though it's widely recognized that planning and architecture need to become more environmentally responsible, and we've seen a dramatic increase in the efficiency of lighting and glazing and improvements in other products, the *integrated* use of a variety of strategies—where truly vast improvements are to be found—has proven harder to realize. These barriers are more institutional than technological. The lack of real design optimization in hvac, for example, has wasted about 80 to 90 percent of the nation's investment in these systems, costing America up to \$1-trillion in unnecessary space-conditioning equipment and associated power supplies over recent decades. A patient, integrative design process, involving users as well as the design team, diverges sharply from rushed normal practice, with architects throwing drawings over the wall to the mechanical engineer with the injunction, "Cool this." Sloppy design and fear of liability lead to rounded-up sizing. Capital and operating costs rise; comfort falls.

### Tactics that make real differences

Architects should already take advantage of orientation, form, shading, color, and landscaping. Coordinating thermal mass and venting with fenestration that distributes daylight (while achieving the best spectral and thermal performance) not only improves envelope performance, it cuts cooling loads further by displacing electric lighting. Good lighting systems require only 0.7 connected watts per sq ft; with control savings and daylighting, only 0.1W per sq ft.

If you carefully specify office equipment so that miscellaneous loads are about 0.2W per sq ft; size hvac using real, scaled-down loads, not rules-of-thumb; substitute passive and alternative systems for refrigerative cooling; optimize controls; and improve any remaining refrigeration systems to below 0.7kW per ton, you will have designed a building that is more comfortable, yet needs about one-tenth the hvac energy of a current large office building and (through reduced

*Amory Lovins is research director and William Browning heads green development at the Rocky Mountain Institute in Snowmass, Colorado.*

mechanicals) will cost several percent less to build. Integrated design requires extra effort, but traditional fee structures penalize efficient design. Since clients usually evaluate fees based, directly or indirectly, on project cost, there is little incentive for the designer to optimize the design if it reduces construction cost while taking more hours. While most U. S. utilities offer rebates for efficient equipment [RECORD, February 1992, pages 34-35], a few are starting to offer rebates *directly to designers* based on how much energy or life-cycle costs can be reduced. This can reverse the perverse fee disincentive. Ontario Hydro's rebate, for instance, is to be shared among the developer, architect, and consulting engineers, and equals three years' energy savings, or several dollars per sq ft—about enough to double total design fees. Lacking utility-design rebates, design firms can tender two-part fee proposals: one part for the normal "plain vanilla" design, plus an incentive provision that rewards cutting energy or life-cycle costs.

### How to get everyone on board

Each of the two dozen categories of actors in the design and development process has different incentives, outlook, and language. Developers speak dollars per square foot; financiers, risk and return; asset managers, net operating income; electrical engineers, watts per sq ft, and so forth unto Babel. Only collaborative design teamwork can bridge the gulf of language and perception. More owners, operators, and investors would question business-as-usual if they knew that energy savings (easily over a dollar per sq ft per year) are often at least 10 times competitive rent differences. And since annual office salaries are typically several hundred times the one-time mechanical-design fee, even a tiny improvement in productivity accruing from well-designed buildings produces huge financial benefits.

Aldo Leopold said that to be an ecologist is to live "in a world of wounds," conscious of the environmental damage around us. The task of design in the 21st century will be to heal those wounds. And that process of healing can return to professionals—long deprived of their traditional integrative function—the gift of truly being architects again. ■

# Computerizing Concrete

Though use of computers in design and construction is pervasive, there is as yet little linkage by computers of the design-fabrication-build processes. The precast-concrete industry in Finland may be changing all that. Partek Concrete, Ltd., of Helsinki, one of the largest precast manufacturers in the European market, patented its "Dimensio" system in 1990 with the goals of improving design-information flow and reducing the cost of formwork, the most expensive component of precast.

Precast-concrete construction is most economical when forms are simple (reducing cost of fabrication) and when the same shape is repeated as often as possible. Forms for complex shapes—traditionally carpenter-built—often involve the expensive skills of the furniture or boat builder. All too many clients opt to severely simplify the panel design rather than bear such a cost. (These formwork limitations apply to cast-in-place concrete as well.) Partek has confronted this problem by making forms from a recyclable wax and plastic compound and by using robots to make the forms from instructions derived from the architect's CAD drawings. Thus, complex configurations are easily made, and do not require extensive repetition to be economical.

## Electronic design to fabrication

The Dimensio system uses CAD/CAM software based on McDonnell Douglas's Unigraphics II. The airline and auto industries have used automated design and production methods for some time and desktop CAD/CAM software (such as that sold in America by Roland Digital) is used to build manufacturing prototype models for products from toothbrushes to machine pin holders. Partek is applying such concepts to construction components.

The architect prepares the design on a variety of CAD programs (AutoCAD, Intergraph, GDS, Medusa, among others) or by digitizing hand drawings. Even three-dimensional objects or models can be digitized as a data file. These files are electronically transmitted to Partek, which uses the designer's data directly, thus saving redraw time, reducing errors, and simplifying revisions. The company feeds in structural-engineering re-

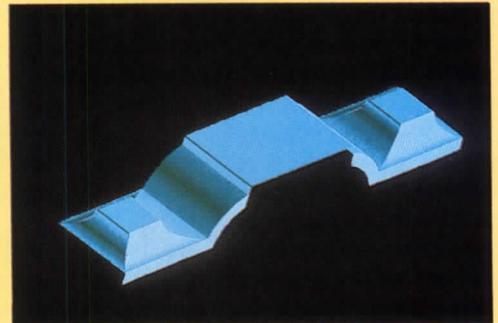
quirements, material specifications, and estimating formulas. Dimensio prepares three-dimensional models of the panel form, which can be detailed on screen and visually reviewed for acceptability. The computer model is also used to plot the workpath for the Italian-made robot that carves Partek's forms. The precast elements may then be shop-cast and trucked to the site for erection. For some projects, Partek makes a positive mold and casts a lightweight rubber mat over it, which becomes the actual concrete form. These forms may be used for either precast or site-cast elements. These rubber forms are extremely durable, readily reusable, and maintain a fine surface finish.

## A wider data-integration horizon

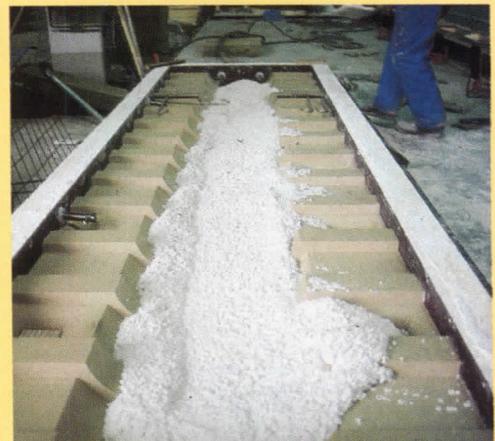
In addition to improving the economy of formwork, the Dimensio system should open new design possibilities. More complex design can be created through computer visualization and modeling, and the system allows the architect, contractor, and fabricator to work more closely together.

Partek first used Dimensio in 1990 to replicate damaged plaster ornament on a Helsinki warehouse that was being converted into a dockside hotel. A plaster mold was made from existing fragments and was then digitized into the computer. In the first large-scale use of the system, Partek in 1991 designed and produced facade elements for the Muurame Cultural Center (Reijo Perko and Sima Rautamaki architects—right). The company has also cast other types of components, such as decorative bridge railings.

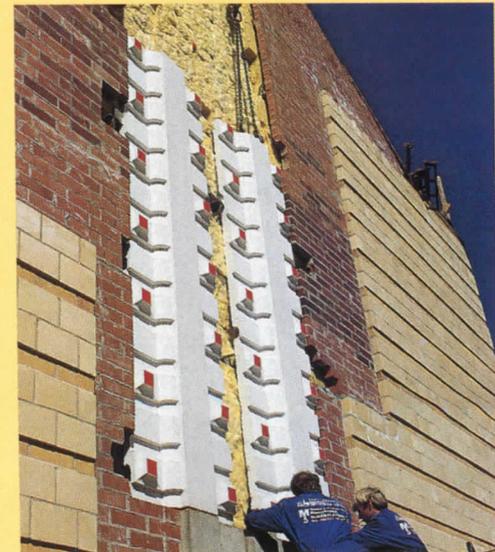
Data prepared by Dimensio will be compatible with RATAS, a government-sponsored set of protocols and standards intended to assure the compatibility of data for all kinds of computer-integrated construction. This "open system" will ease data exchange from manufacturers and designers through contractors, building owners and users. The RATAS system consists of general databases, a data-transfer system, and building-product data, and should be available industry-wide by now. Officials anticipate that other companies will update their own computer-aided information systems and programs to work within the RATAS framework. *Gerald Moorehead*



1



2



3

*(1): 3-D computer model of precast formwork segment. It can be designed for easiest fabrication. Digitized information from its electronic file drives robot routers, which cut forms from recyclable material. (2): Form being filled at precast plant. (3): Installation of completed panel.*

Courtesy Partek Concrete

# Japan's Zenecons: Builder-Driven Innovation

By Anthony C. Webster

The combination of large, stable companies, a long-term outlook, and an unstinting commitment to research and development has allowed Japanese companies to dominate categories ranging from cameras to cars. Is construction next? The answer is, maybe. Though Japan's population is about one-half that of the U. S., it's \$350-billion construction industry is similar in size to America's. If Japanese construction came to international dominance, its six giant general contractors, or Zenecons (Shimizu, Obayashi, Taisei, Kajima, Takenaka, and Kumagai-Gumi corporations) would play a prominent role. This "Big Six" controls roughly 10 percent of Japan's design and construction market for building and civil work. Besides designing, engineering, and constructing buildings, the largest firms also provide some combination of planning, maintenance, and financial services for big projects.

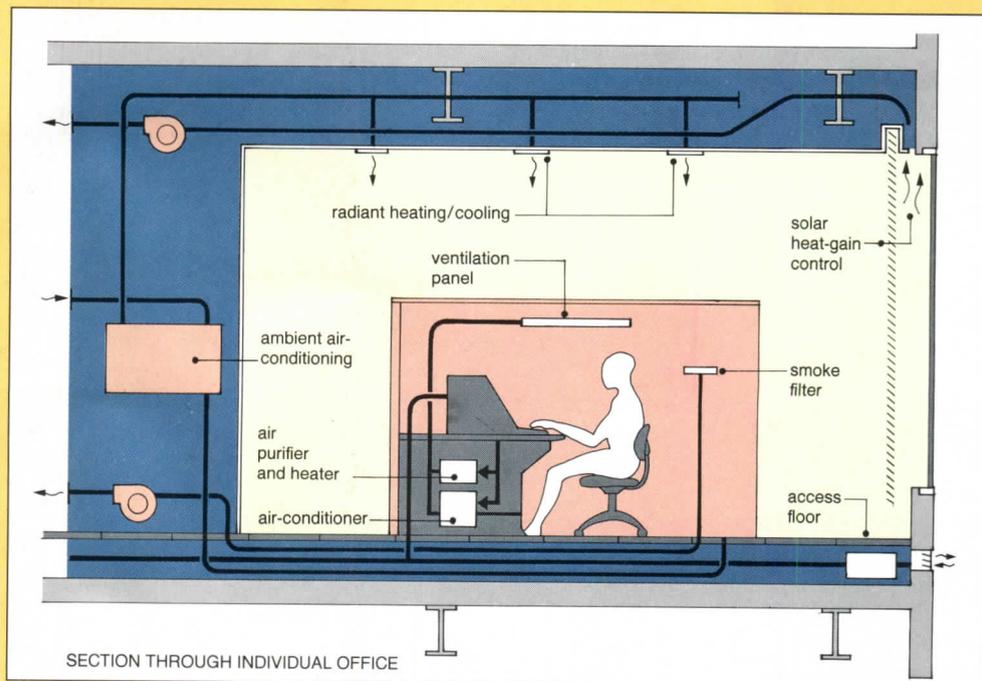
What is most striking about the Zenecons is their large, well-staffed and well-funded research and development divisions. Unlike their American counterparts, these firms expect R&D to contribute to current profitability and see it as an essential part of a long-term growth strategy. The R&D funding of the Big Six firms averages almost one percent of sales, about 10 times the amount invested by similar American firms.

## Where Japanese R&D is out in front

The following are areas of intense research attention in Japan:

- *Seismic-resistance technologies*, including active mass dampers and variable-force tendons. The omnipresent earthquake threat accounts for the Japanese sensitivity to tall-building vibrations. Research has focused on mechanical damping devices since they may be installed more cheaply than conventional structural stiffening. Active mass-damper technology has been advanced by Takenaka Corporation in a 13-story building in Tokyo. The damping system will resist both wind and earthquake motions through movement

Anthony C. Webster is Director of Building Technologies at Columbia University's architecture school and a consulting associate at Weidinger Associates, engineers.



*Kajima's research and development arm has proposed workspaces that include individual control of temperature, air quality, and ventilation.*

of a mass block at the top of the building. Computerized velocity sensors at the top, middle, and base of the building instruct hydraulic jacks to move the block to counter detected building movement. (Takenaka's mechanical engineers proposed making the mass block of crystallized-liquid-ice tanks. These make ice at night—when utility rates are low—and melt it during the day to cool the building.) Kajima has proposed new passive-seismic control for the Edo-Tokyo Museum. A double-floor system works much like a Citroën's air-sprung suspension.

- *Intelligent-building controls* at Takenaka's Intes building in Tokyo electronically operate venetian blinds to reduce solar-heat gain.

- *Carbon-fiber-reinforced-concrete panels* have been used by Kajima and others to reduce the weight of facade elements.

- *Fire-resistive steel* is closer to reality thanks to Nippon Steel. The yield point does not significantly change in its experimental 50 Ksi steel at temperatures up to 900F. Japan's steel industry is also standardizing a line of rolled-steel shapes with constant flange depths. This speeds detailing by avoiding structural and mechanical conflicts.

- *Construction robots* are starting to see use in Japan, including automated concrete finishers, steel welding machines, and facade-inspection systems.

The most striking research being pursued by the Zenecons—having no parallel in the U. S.—is in automated building construction. Obayashi's proposed system, one of the most advanced in the industry, envisions an automated all-weather "factory" sitting on jacks atop the building's main columns. It would set in place and attach structural, envelope, and environmental-control assemblies for each floor, then jack itself up to the next level.

## Stitching together disparate disciplines

The vertically integrated organization of the Zenecons helps them improve a project's design. For a 550-seat music hall, the R&D staff of Takenaka used a proprietary acoustic-modeling computer program it developed, called AUDIA, to compare the design's performance with the previously stored performance of famous symphony halls, including the Grosser Musikvereinsaal in Vienna and Boston

*Japan's huge research-oriented design and construction companies may leapfrog American construction technology.*

Symphony Hall. The client was called in to listen to the computer-simulated performance of the hall in an anechoic chamber, and to approve its acoustic properties. As a final test of the AUDIA program's accuracy and capabilities, Takenaka plans to record the sound in the completed hall, and compare it with the computer-simulated design.

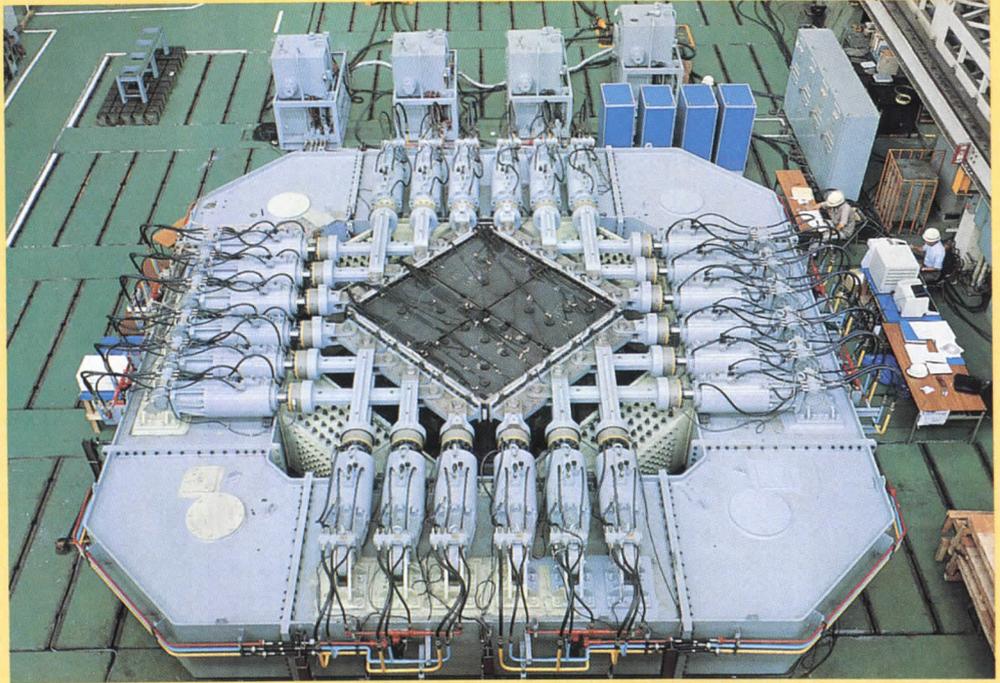
In addition to studying new building systems or "hardware," the Zenecons' R&D divisions are developing ways of improving a building's amenities, or "software." Japanese often link such improvements to greater worker happiness as well as productivity. Researchers are focusing on, among other things, relationships between environment and human comfort, clean-room technology, personal microclimate workspace controls (drawing opposite), olfactory systems, and personal information-management and communications systems.

**How critical is Japan's competitive edge?**

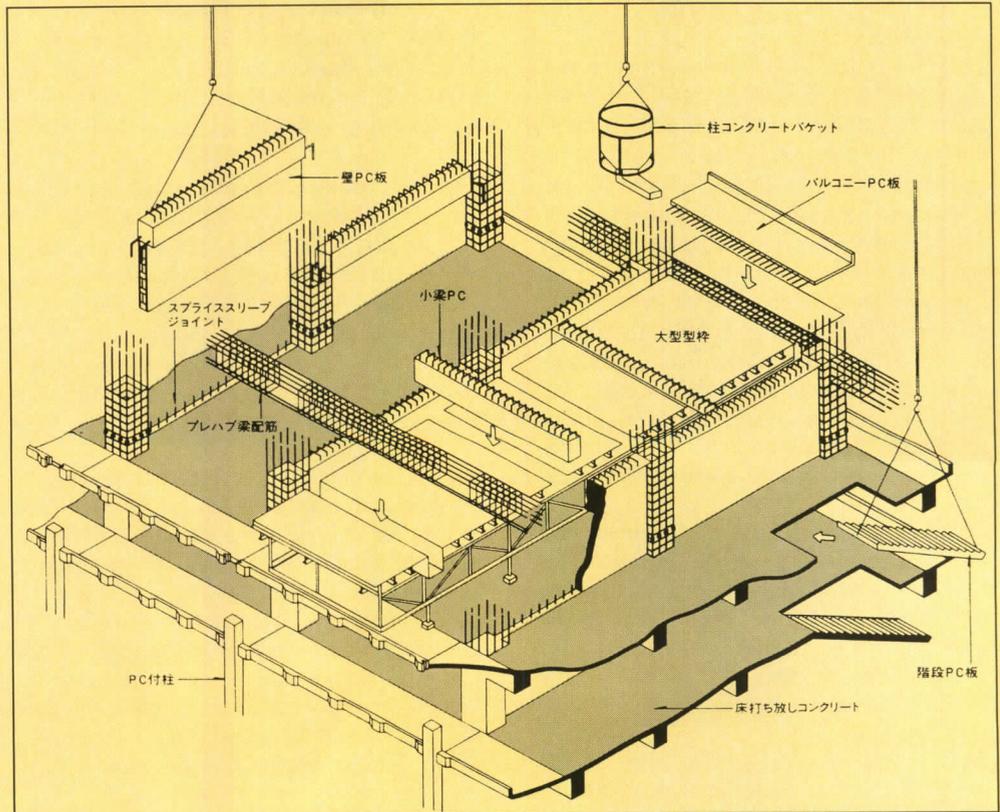
By having all their technical staff under one roof, the Zenecons build with an efficiency that does not come easily in the U. S. But this efficiency comes at a price. The bias toward technical competence has produced few architecturally exceptional works. The Zenecons' size also makes them unwieldy and unable to respond easily to rapidly changing market conditions.

Innovative products *are* being created in the laboratories of American manufacturing firms. Much of the basic research on the effect of vibrations on human-comfort levels has also been done in the U. S., and using computerized design drawings to generate instructions for computer-controlled machining of components, as Starnet Structures does, has yet to develop in Japan.

Overall, however, the picture in America is one of limited innovation. Our building industry is highly specialized, yet fragmented; it is flexible, yet unable to envision systems and methods that integrate the efforts of several professional disciplines and construction trades. There remains a risk that forward-looking Japanese companies will leapfrog American industry, both technologically and economically. ■



*Above: Kajima has built its own panel-testing facility. It is preassembling concrete beams and panels (below) to reduce onsite labor.*



# The Case For Uncreative Architecture

By Martin Pawley

A modern building may be no more than a piece of industrial design, "like an enormous typewriter," as Robert Venturi once put it, but its unique combination of industrial components is still considered to be intellectual property. Why this should be is not clear. Architects know that getting a building built is not like writing a book. It is more like winning an election after undergoing a process of immense and unfathomable complexity involving many personalities, products, consultancies, bureaucracies, budgets, protest groups, and so on. Only one member of this huge cast—the architect—is trying to create something original. In such circumstances creative architecture is a myth.

In my book *Theory and Design in the Second Machine Age* (Oxford, England: Basil Blackwell, 1990), I argued that the profession of architecture should move from meretricious claims of creativity based on art history and "meaning"—a realm where, as the Prince of Wales has demonstrated, expertise is already completely consumerized—to the more challenging field of technology transfer.

Technology transfer is what happens when the methods or processes developed in one industry are applied to a completely different one. Its history is immense and uncharted, often bizarre. The dome of the fifth-century church of San Vitale in Ravenna was made from earthenware pots, complete with carrying handles, a technology-transfer tour de force executed in pursuit of lightness. In the Middle Ages, wooden-ship construction inspired timber-roof techniques. In the 19th century, the first I-section iron beams, made to support the decks of ships, migrated ashore to become structural beams and railroad tracks.

Technology transfer has all the unpredictable wonderment of genetic mutation. Ignored by historians, its importance in construction has been direct and seminal. Forty years after a small reinforced-concrete boat was exhibited in Paris, reinforced-concrete building became common. Like shipbuilding,

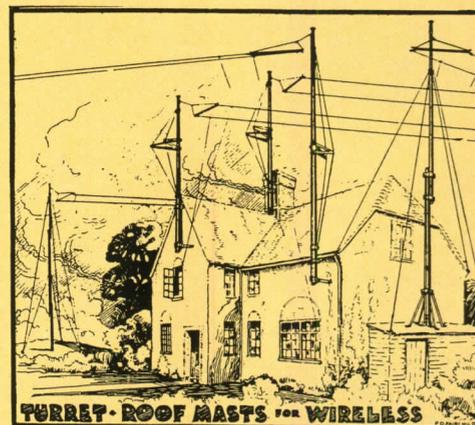
*Martin Pawley is an author and architectural critic in London.*

the auto industry has been a great source of building technology. Its cold-rolled-steel chassis beams led to the family of tubes, angles, channels, and space-frame members that are used in construction today. At the behest of pioneer technology-transfer architect Eero Saarinen, an auto-industry supplier adapted neoprene gasket windshield glazing for curtain-wall systems. Complex alloy castings and raised access-floor systems for buildings have been developed from those used in commercial aircraft. Similarly, an array of composites and adhesives created for aerospace has filtered into construction products.

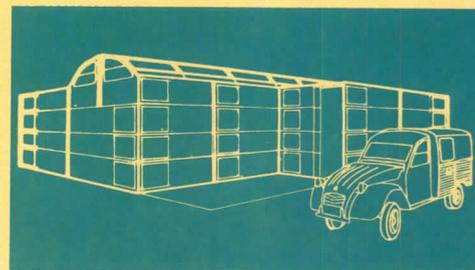
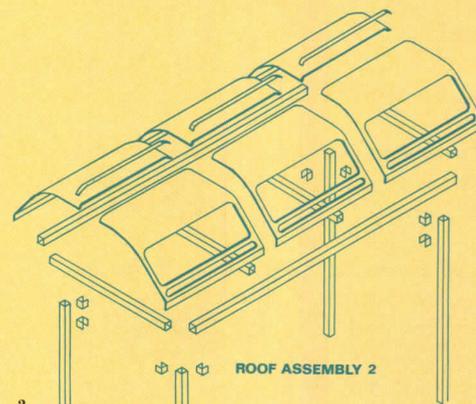
Sir Norman Foster is well known for his ingenious early use of components and materials that have their origin in industries far removed from construction: solvent-welded PVC roofing derived from swimming-pool liners, gaskets of neoprene developed originally for cable-jacketing, structural glazing and glass fritting from the auto industry, superplastic aluminum and metalized fabrics from aerospace. Even Foster's presentation-drawing techniques are culled from aviation magazines. Nevertheless, Foster rejects the notion that this interesting but uncreative process can supplant the fine-art tradition upon which the architectural profession depends.

Though leading European architects such as Sir Richard Rogers, Jean Nouvel, Terry Farrell, Benthem Crouwel, Nicholas Grimshaw, Weber Brand, and Richard Horden also acknowledge the presence of technology transfer in their designs and cite it as evidence of modernity in their buildings, they, too, shrink from espousing it as a worthy theory of architecture in itself.

Exploiting the products of research and development in other fields, without actually paying for it, is parasitism well-suited to the needs of an impoverished and fragmented design profession. Technology transfer is a process far better attuned to the needs of a globally organized construction industry than fine-art architecture can ever be, opening building construction to the whole gene pool of scientific and industrial activity everywhere. It is an activity literally waiting for a profession to take it over. ■

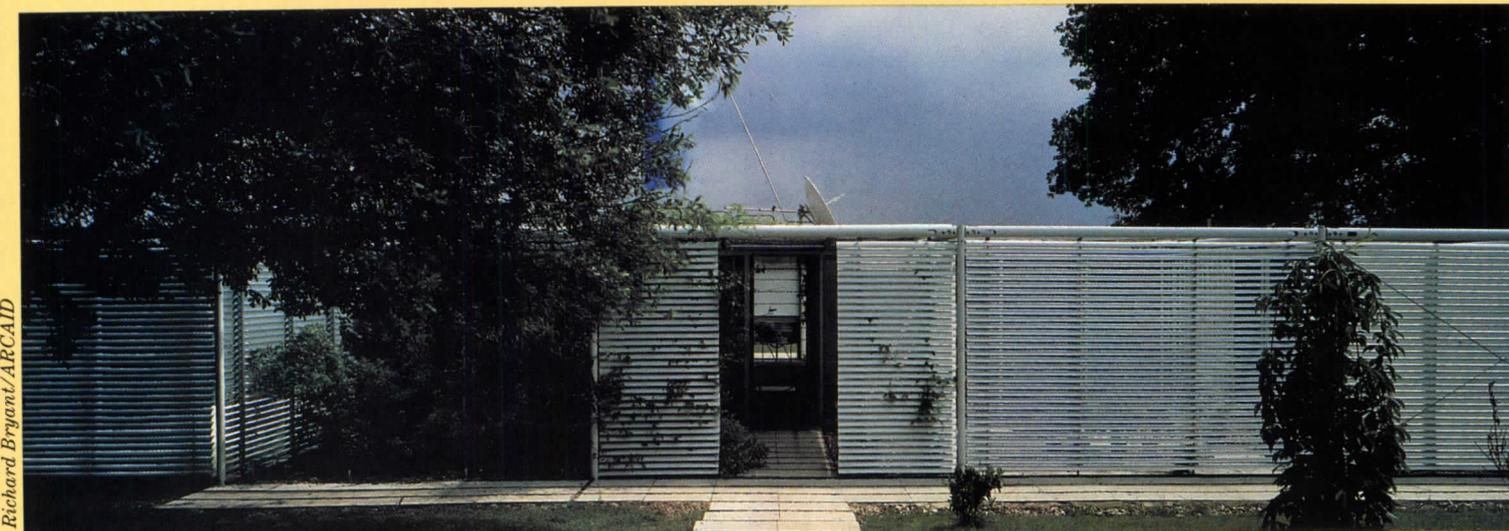


(1) A 1923 advertisement stresses that the long-wave radio ("wireless") antennae shown are "designed by naval experts."



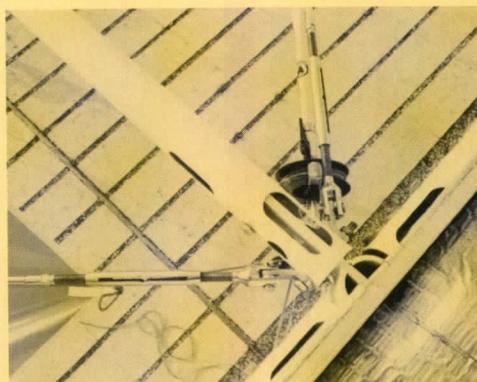
In 1973, the author proposed converting pressed-metal body parts from the Citroën 2cv into an emergency housing system for Chile. Van body parts form siding and a roof. The windshield and cab (2) provide clerestory lighting and ventilation. The prototype (3) was designed by Jeff Skorneck. (Similarly, a Dutch architect's 1975 office building used welded oil drums, camper-van roof panels, and glass bottles.)

*Author and critic Martin Pawley claims that architecture's future lies in technology transfer rather than "meretricious claims of creativity."*



© Richard Bryant/ARCAID

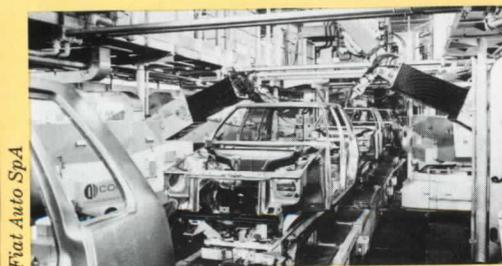
4  
The front elevation of the "Yacht House," of 1985 (4) designed by Richard Horden conceals a structural frame made from aluminum sailboat spars (5). The panelized assembly (6) also uses boat-deck hatches as skylights and roller-reefing devices to retract saillike shades. Other architects have used semi-truck side screen tie-downs to secure fascia gaskets, and made homes of sulfur blocks, byproducts of oil refining. In Tripoli, ancient-looking water containers have been made from worn-out truck tires.



5



6



Fiat Auto SpA

7  
Though the car production line was the Modernist's dream of technology transfer (7), the reality was more like Foster Associates building B3 (8) at Stockley Business Park (1988), where varied glass shading effects were produced through ceramic-frit dots—an auto-glass technology. Foster's 1986 HongKong Bank (9) used car-body techniques to achieve uniform panel reveals.



8



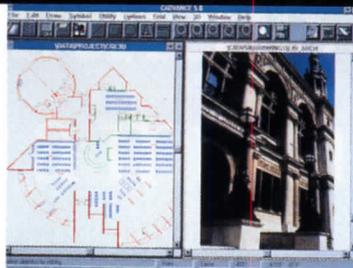
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For more information, write item numbers on Reader Service Cards.



## 1. Engineering copier

The Xerox 2515 plain-paper engineering copier makes full-size copies up to 36-in. wide of any manageable length. It copies diazo blue-line prints, sepias, original drawings, CAD plots, cut-and-tape composites, other Xerographic copies, and rigid originals up to 1/8 in. thick. Xerox Engineering Systems, Rochester, N. Y.



## 2. CAD for Windows

CADVANCE 5.0 was designed for use with Microsoft Windows. It has full-file compatibility with Autodesk, Inc.'s AutoCAD Release 12 and can both read and write AutoCAD native .DWG files. It can bidirectionally link data with other applications software, such as spreadsheets and databases by way of OLE and DDE. ISICAD, Anaheim, Calif.



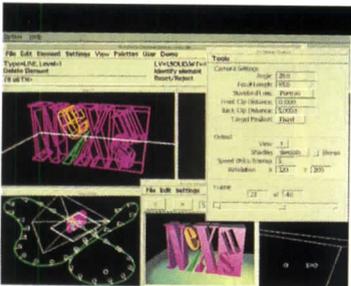
## 3. CAD program

MiniCad+4 Macintosh software includes tolerancing; 3-D walk-throughs and flyovers; automatic section generation; hybrid symbols; automatic roof, floor and wall tools; cavity walls; on-screen chamfers; a mode/message bar that gets rid of hidden features through on-line prompts; and a 3-D Smart-Cursor. Graphsoft, Inc., Ellicott City, Md.



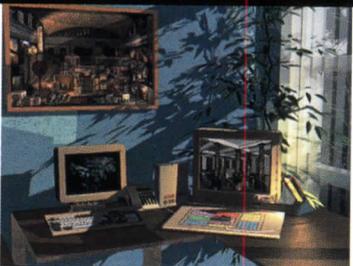
## 4. Design system

The 1-800-IBM-4AES architecture and engineering system for the RISC System/6000 family is an integrated three-dimensional, computer-aided design, engineering, and drafting system for all phases of building design. New electrical layout and interference-detection applications are offered. IBM Corporation, Waltham, Mass.



## 5. CAD extender

MicroStation Nexus software offers a Window connection for running CAD in Microsoft Windows, AutoCAD access to bring AutoCAD .DWG files into MicroStation, configurability tools, and a fly-through producer for dynamic visualization of 3-D designs. Intergraph Corporation, Huntsville, Ala.



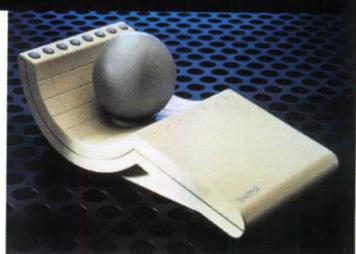
## 6. Enhanced CAD visualization

The eXtension-24 is an additional module to RenderStar 2, a generator of images and animation from 3-D CAD models. Full-color images can be used as bitmaps in RenderStar materials. Images can be shown on 8-bit graphics adapters. eXtension-24 can be hooked up to film and video equipment. Modern Medium, Inc., Portland, Ore.



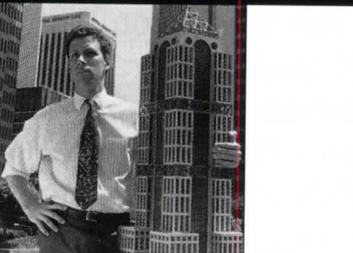
## 7. Architectural software

Auto-Architect, software for designing, inputting, and editing in plan, elevation, and 3-D inside AutoCAD, has been enhanced. The improved version includes an expanded repertoire of wall combinations, smart placement of doors and windows and door-editing capabilities, and more-versatile stair routines. Softdesk, Inc., Henniker, N. H.



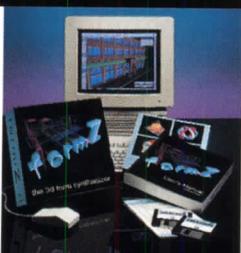
## 8. Input device

The Spaceball 3000 interactive input device offers simultaneous six degrees of freedom control for 3-D screen manipulation. It is a tennis-ball-size sphere fixed on a stand. The user grasps the ball at the equator and pushes, pulls, or twists to move the object on the screen in the same direction. Spaceball Technologies, Inc., Lowell, Mass.



## 9. AutoCAD support

AutoCAD Release 12 speeds and simplifies frequently used CAD operations. Its 174 enhancements include improved plotting, easier-to-use interface, support for SQL and PostScript data exchange, integrated rendering, enhanced drawing tools, and bi-directional file compatibility with AutoCAD Release 11. Autodesk, Inc., Sausalito, Calif.



## 11. 3-D form synthesizer

The form-Z 2.0 program, running on Macintosh II or Quadra computers, is a solid and surface modeler. The user can mix the two types in a single work environment, transforming surface to solids and back. Forms include spatial enclosures, Boolean operations, terrain modeling, and NURBS-based curved surfaces. auto.des.sys, Inc., Columbus, Ohio.



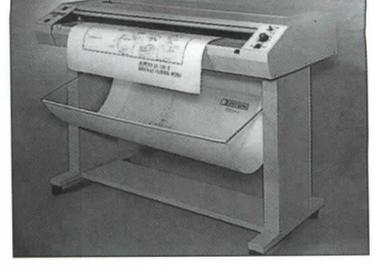
## 12. Modeling material

The chess pieces seen during the AIA convention in Boston were made of GraphiKore PBO Panels, which are produced from a core of end-grain balsa wood with PBO laminates on both sides. The pre-primed, phenolic-impregnated, kraft-paper facings are paintable. In 4- by 8-ft panels, from 1/2-in. to 2-in. thick. Baltek Corporation, Northvale, N. J.

## 10. Modelmaking cutter

The LaserCMM is a high-speed, computer-controlled cutter for model-making. Produces detailed and precise laser-cut components for architectural models. Will cut up to 1/4-in.-thick sheet material from any CAD drawing in a .DXF format. Small enough to fit into an office environment. Envision Design Centers, San Francisco.

For more information,  
write item numbers  
on Reader Service Cards

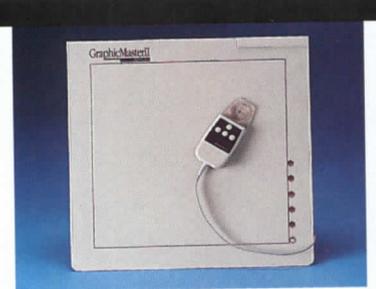


**13. Financial software**  
A Windows version of the Wind-2 Financial Management System is under development. First program in the graphic-oriented series will be Wind2 Invoice. Later software products will be Wind2 General Ledger, Wind2 Accounts Payable, Wind2 Business Management, and Wind2 Payroll. Wind-2 Software, Inc., Fort Collins, Colo.\*

**14. Eight-color pen plotter**  
DesignMate produces hardcopy in up to eight colors in sizes A through D. Compatible with all popular computers, workstations, and CAD systems. Plots at speeds up to 20 ips. User can mix and match liquid ink, liquid ball, and fiber-tip pens for plotting on bond, polyester film, or vellum. Price: \$1,192. CalComp, A Lockheed Company, Anaheim, Calif.

**15. Inkjet plotter**  
The HP DesignJet 600, a high-resolution, monochrome, inkjet plotter, uses commonly available media. Has three output-quality levels. Highest uses addressable 600- by 600-dots-per-inch (dpi) resolution. Final and Draft levels are 300 dpi. E size (36 in.) for \$9,995 and D size (24 in.) for \$8,495. Hewlett-Packard Company, Santa Clara, Calif.

**16. Diazo copiers**  
The Dietzgen 148 fluorescent whiteprinter, a single-lamp 180W copier, is ideal for checkprints and satellite applications. Dietzgen 348 has three 160W lamps and processes a variety of diazo media, including sepia intermediate and polyester. Operates from 120-v outlet and needs no venting. Dietzgen Corporation, Des Plaines, Ill.

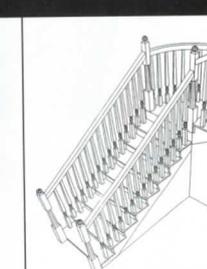
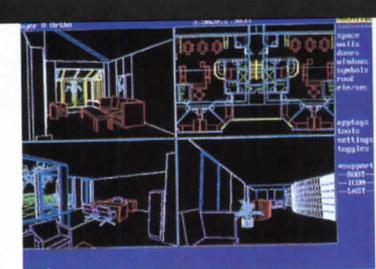


**17. Laser plotter**  
The Xerox 8810 is the first 11- by 17-in. machine to accept HP-GL2 data. It has 400-points-per-inch resolution and outputs at speeds of 15 pages per minute at A size and eight pages per minute at B size. Is compatible with the VersatecV-80 series of monochrome printer/plotters. Prices begin at \$9,995. Xerox Corporation, Rochester, N. Y.

**18. Digitizing tablet**  
The GraphicMaster II has one-touch softkeys for quick change of emulations. An ADI driver allows fast interfacing with Autodesk products. Has audible feedback, up to 5,000 lpi resolutions, and accuracy of +.010-in. No power supply needed. Size 12 by 12 in. Tilt angles of 2 and 11 deg. Numonics Corporation, Montgomeryville, Pa.

**19. Plotter for Macintosh**  
The new ExpressPlotter II line gives Macintosh-based designers vector plotting and QuickDraw printing. Operates on roll feed, with automatic cutting and stacking. Comes in Model E (36-in. wide) and Model D (24-in. wide), on paper to 328 in. Has SCSI I/O communications and RS-232C serial ports. Japan Digital Laboratory Co., Camarillo, Calif.

**20. Adjustable desk**  
The Veri-Task multifunction workcenter is adaptable to the ergonomic needs of its user. Power pedestal allows adjustment of height and angle of two work surfaces. Front work surface is 24 by 48 in. and back surface is 25 by 35 in. Each pedestal has 250-lb lifting capacity. Footprint is 25 by 35 in. Mayline Company, Sheboygan, Wis.



**21. Internal inspection**  
The Olympus borescope allows investigation inside soffits, behind wall panels, and into other hidden areas of buildings without damage or disturbance. Borescope needs only a 1-in. hole. A fiberoptic system provides light and a train of lenses, visibility. Olympus Corporation, Industrial Fiberoptics Division, Lake Success, N. Y.

**22. Design software**  
The ASG Architectural 5.0 AutoCAD system includes automatic construction of 2-D roof plans and 3-D roof models, automatic storefront insertion, one-step generation of schedules, enhanced tree and people symbols, ability to draw veneer lines, option to draw walls with centerlines, and faster door and window insertion. ASG, Sausalito, Calif.\*

**23. Parametric modeling macro**  
3D Stairs software creates detailed 3-D models of stairs and is fully integrated with DataCAD. Provides seven different predefined stair types. Stair components can be customized. Adheres to AutoCAD hierarchical menu structure. Quick-help status line gives user a description of an option and its current settings. Cadkey, Inc., Windsor, Conn.\*

**24. Monochrome plotter**  
The desktop ProTracer inkjet printer produces A- to C-size single-tone drawings. Output is 360 dots per inch. Plots on all common media. Combines Intel i960 RISC-based controller and Canon engine. Adding HP/GL and/or PostScript emulation cards can customize printer to match software application. Pacific Data Products, San Diego, Calif.

\* Product data on CAD disk

# These architects survived the recession Now you can learn from them

Few firms in the building and construction industry have remained immune to the recession. But TAG Architects of Southern California has fared much better than most.

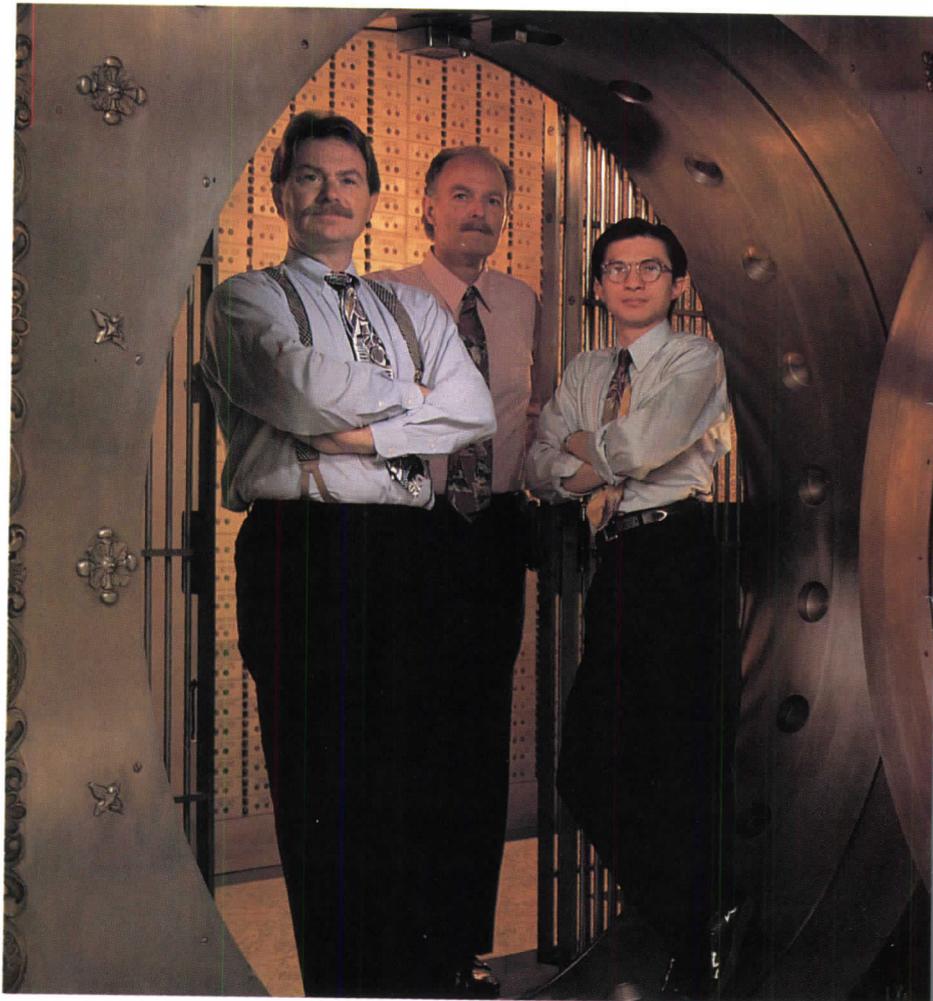
TAG's strategy was to go after banks. But instead of taking along the usual hacksaws and explosives, they selected a more powerful tool: AutoCAD software.

"AutoCAD allowed us to grow beyond the traditional role of the architect," says TAG's managing partner, Robb Axton, A.I.A. "It gave us more control over project coordination and let us offer new services, like facilities management consulting. That's critical if you want to keep winning new clients during a recession."

"We've already helped three major financial institutions cut costs by standardizing their facilities and building operations on AutoCAD," Axton says. "Now we're using that expertise to attract other kinds of clients."

Axton also sees AutoCAD as the most viable way for architects and other trades to streamline their operations. "With AutoCAD, we no longer need design-development drawings. We just move back and forth between schematics and working drawings, coordinating every aspect with our engineers along the way."

The ability to share AutoCAD files and drawings with other disciplines—like structural, mechanical



# aved a man half n his cleaning bill.

And that's just a cleaning bill. With AutoCAD, you can put all kinds of expenses under the microscope: leasing, space design, all kinds of construction and maintenance services, furniture and equipment management, inventory tracking, asset depreciation and long-range facility planning. So the potential for cutting costs is enormous.

Of course, any form of computer-aided facilities management is better than those coffee-stained lists you inherited. So why use AutoCAD? Because intelligent facilities management requires accurate information in a *standardized* form that even computer novices can use. And

AutoCAD is *the world CAD standard*. Many of the architects, contractors, designers and equipment suppliers you'll be working with are already using it. That makes it easier and cheaper for you to get things done. In fact, there's a good chance the firm that designed your facilities did it on AutoCAD. So, much of the information you need may already be available to you.

Even starting from scratch, you can develop a master plan for your facilities on AutoCAD for a few cents a square foot, maybe less. Or you can set up your own AutoCAD system—with any optional add-on facilities program—for less than \$10,000. Either way, your investment should pay for itself in a matter of months. Or at least by the time your first cleaning bill arrives.

To learn more about how enlightened facilities management can save your company money, call 1-800-964-6432, ext. 800. And ask for our comprehensive facilities management guide. It's quite useful and it's free.





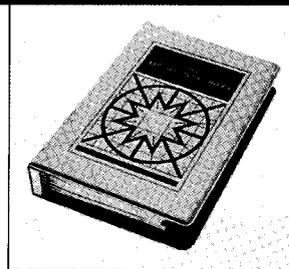
**25. CD-ROM drive**

The Apple CD300 ROM drive is said to be two times faster than most CD-ROM drives. A switch allows users to select single- or double-speed mode. This and a 256K buffer allow speedy access to large files, such as high-quality video. The CD300 can read multisession Kodak Photo CD disks. Price: \$599. Apple Computer, Inc., Cupertino, Calif.



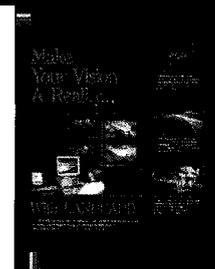
**26. Plotter supplies**

The 80-page Dataprint catalog offers a wide selection of brand-name drafting, plotter, and graphic supplies at discounts of up to 60 percent with same-day shipment. Also included are furniture, filing systems, office supplies, surveying equipment, and reference books. Competitive quotes for large orders. Dataprint Corporation, San Mateo, Calif.



**27. Magazine index**

A booklet-format index offers rapid access to articles and news published annually in ARCHITECTURAL RECORD and eight other architectural publications: more than 15,000 pages of professional magazines. Typical categories: airport, hotel, residence, shopping center, transportation. Price: \$24. The Architectural Index, Boulder, Colo.



**28. Land-planning software**

LandCADD folder details a series of integrated software modules for landscape- and site-plan/design. Among them are contour mapping and terrain modeling, site-volume calculations, plant selection, street layout, landscape design, construction details, and irrigation design. LandCADD International, Franktown, Colo.



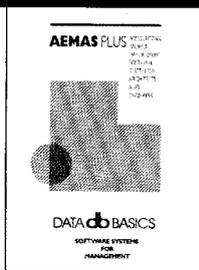
**29. Microcomputer**

An information sheet describes the Decision 486si microcomputer, which is said to offer superior graphics performance. Among its features are integrated local-bus VGA Hyper16 Video, scalable processor capability to accept i486 class CPUs, RAM expandable to 64MB, and external cache expandable to 256KB. Wyse Technology, San Jose, Calif.



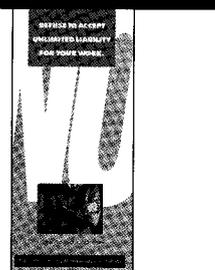
**30. AutoCAD guide**

The 48-page Ventana Press Fall 1992 catalog highlights the fourth edition of AutoLISP in Plain English: A Practical Guide for Non-programmers. Enables those with rudimentary knowledge of AutoCAD and no programming experience to use new programming features in AutoCAD Release 12. Ventana Press, Chapel Hill, N. C.



**31. Accounting software**

A 12-page catalog illustrates the capabilities of Version 1.4 of AEMAS Plus, an integrated accounting/job costing/project invoicing system designed for architects and engineers. Permits tracking of vendors and consultants on a pay-when-paid basis. It is compatible with Windows 3.1 and has full mouse control. Data-Basic, Inc., Cleveland.



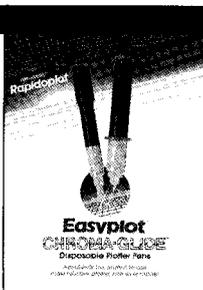
**32. Liability insurance**

Brochures explain how to insert limited-liability clauses in contracts and how DPIC offers credits on premiums of from 2.5 to 25 percent for liability insurance to architects who do this. Case histories illustrate how credits for premiums are calculated. Credits available for up to \$5 million in policy limits. DPIC Companies, Inc., Monterey, Calif.



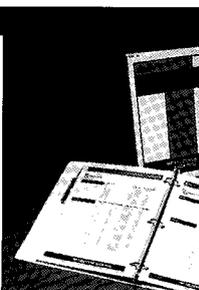
**33. AutoCAD workstation**

Described in four-color folder, the DEC5000 workstation combined with AutoCAD can perform 2-D design and production drafting as well as high-performance 3-D modeling, analysis, and visualization using Advance Modeling Extension, finite-element analysis, NC part programming, and technical illustrations. Digital Equipment Corporation, Maynard, Mass.



**34. Plotter pens**

Easyplot disposable plotter pens have large ink supplies for hours of plotting. Non-clogging ink comes in black, blue, green, and red. Available in four line widths: 0.25, 0.35, 0.50, and 0.70 mm. Resist clogging with media fibers. Will not wear on paper or vellum. Described in a four-page brochure. Koh-I-Noor, Inc., Bloomsbury, N. J.



**35. Reprographic supplies**

The Teledyne product catalog has seven sections: manual drafting media, plotter media, Xerographic copier media, printed media, specialty media, engineering field books, and miscellaneous. Each section includes detailed product information, sizes and formats available, order numbers, and prices. Teledyne National, Indianapolis.



**36. Design-office equipment**

A 48-page catalog contains everything for graphic operations. Included are illustrations, descriptions, and prices of plotter supplies, drafting media, technical instruments, graphic workstations, furniture, and storage equipment. All items are discounted from suggested list prices. Graphic Supplies Direct, Inc., Bloomington, Minn.



### 37. Steel-mesh fence

The Omega System fencing is a 6-gauge steel wire with a tensile strength of 75,000 psi welded into a mesh. Zinc-coated wire is finished in high-adherence electrostatic polyester powder available in 10 colors. Comes in 8-ft sections in heights of 4, 5, 6, and 8 ft. Posts are of galvanized 16-gauge cold-rolled steel. Omega Fence Systems Inc., Laval, Quebec.



### 38. Planters

Jeff Johnson/Urban Planters are designed for interior or exterior use. Made from marine plywood, the boxes/planters are hand-painted with marine enamel and have a finish resembling lacquerware. Custom and stock designs and colors from 18 to 36 in. Sheet metal and rubber liners available. British-by-Nature, Beverly Hills, Calif.



### 39. Gazebo

The Grand Pavilion is over three-stories high and stretches 105 ft from end to end, 1,400 sq ft under cover. A three-tiered structure, it has a 30-ft-dia central unit connected by trellised walkways to 21-ft-dia units on either side in a 135-deg arc. Ideal for open-air dining areas, or theme-park entrances. Vixen Hill Manufacturing Co., Inc., Elverson, Pa.



### 40. Concrete pavers

Terra Paving introduced a new surface for its line of Type 3 concrete pavers by shot-blasting the blended granite surface, giving a weathered granite appearance. These pavers are made with an aggregate mix using granite fines and a matching or contrasting matrix. Available in 12, 18, and 24 sq in. Wausau Tile Inc., Wausau, Wis.



### 41. Tower clock

A tower clock is illuminated from the front by a concealed neon tube, which gives a subtler lighting than fluorescent lighting. Dial and hand styles can be selected from 50 designs. Clock is automatically reset after power failures and for daylight saving/standard times by a micro-processor. Electric Time Co., Inc., Medfield, Mass.



### 42. Seamless play surface

The Vitriturf cushioned seamless-flooring playground system exceeds the standards set by CPSC and has been tested under ASTM-F-1292 for shock attenuation. Manufactured with shredded rubber tires as a base and multicolored granules as a wearing surface. Trowel-applied to a minimum thickness of 3/8 in. Vitricon, Inc., Hauppauge, N. Y.



### 43. Fiberglass benches

A line of fiberglass benches is designed for either indoor or outdoor use. Contour models feature 2-in. tubular steel frames with black powder-coat finish. All benches in this line are available in 27 high-gloss gelcoat colors. The benches are coordinated in their design with other furniture. Peter Pepper Products, Inc., Compton, Calif.



### 44. Modular granite pavers

Unitized Pavers are made up of small, natural-granite pavers mounted on a strong matting backing so that they may be laid in place as a single unit. Available in standard square and fan-shaped patterns in reds, pinks, grays, mahogany, and other colors. Pavers have a split-edge treatment. Granite Specialties, Cold Spring, Minn.



### 45. Seated outdoor table

The Carousel has six seats that are attached to a table frame. Seats can be flat or with a metal grid or perforated-metal panel back. Table top available in molded fiberglass or heavy-gauge steel. Metal parts finished with a powdercoat system in 10 standard colors that resist rusting, chipping, peeling, and fading. Landscape Forms, Inc., Kalamazoo, Mich.



### 46. Tactile pavement

The Flextech detectable warning pavement, produced from recycled rubber, conforms with the Americans with Disabilities Act, Section 4.29.2 for Detectable Warning Pavement nominal dimensional requirements. Can be used for exterior or interior applications. Variety of colors and blends. Bomanite Corporation, Madera, Calif.



### 47. Aluminum fencing

Structural components of the Jerith aluminum ornamental fence are extruded from HS-35 alloy, which has a minimum-yield strength of 35,000 psi. This is said to give the material the maintenance-free ease of aluminum and the strength of steel. The residential fence can support 300 lb per section. Jerith Manufacturing Company, Inc., Philadelphia.



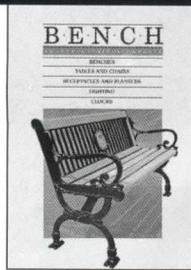
### 48. Play equipment

The TimberForm-2 and Pipeline accessible play equipment in wood or metal systems addresses the needs of all children, including those with physical disabilities. Entire structures or the selection of appropriate accessories can make play equipment accessible. Over 50 structure designs and 1,900 accessories. Columbia Cascade Co., Portland, Ore.



### 49. Hardwood furniture

This handsome color brochure offers a variety of original furniture for interior/exterior that is rot-resistant, repels moisture, and naturally resists decay. A wide range of colors and finishes is available. Easy maintenance. Weatherend Estate Furniture, Rockland, Maine.



### 50. Site furnishings

Handcrafted metal stanchions and hardwood components are said to provide durability against the toughest outdoor environments. Custom design and fabrication available. Benches are described as easy to assemble and maintain. Bench Mfg. Co., Inc., Concord, Mass.



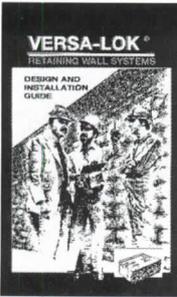
### 51. Artificial construction

"Is it real, or is it Larson's?" booklet describes custom exhibit-fabrication services for architects, including design and construction of naturalistic habitats for a variety of public sites such as zoos, resorts, shopping centers, restaurants, and theme parks. Products are said to be one-quarter the weight of pre-cast. Larson Architectural Products, Tuscon, Ariz.



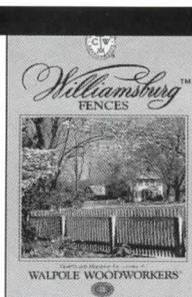
### 52. Commercial gates

Eight-page brochure describes swing-, slide-, and barrier-arm operators and vertical-lift gates. Installations include plants, factories, and secure-area enclosures. Hy-Security Gate Operators, Seattle, Wash.



### 53. Gravity wall

New four-page brochure provides easy reference to the product profile, advantages of the system, guide specifications, building hints on curves, corners, steps, and other innovative project applications for a system of building-block retaining walls. Versa-Lok Retaining Wall Systems, N. St. Paul, Minn.



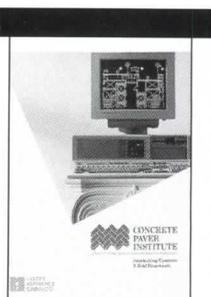
### 54. Picket fences

Eight-page brochure illustrates formal and rustic-design wood fences from the Colonial era in Williamsburg. Walpole Woodworkers, Inc., Walpole, Maine.



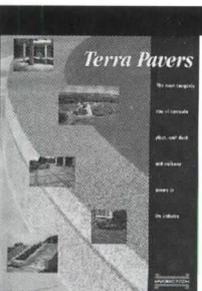
### 55. Planters

1992-1993 catalog has a variety of planters with descriptions, applications, colors, finishes, materials availability, specifications, and accessories. Describes self-watering feature. Planter Technology, Mountainview, Calif.



### 56. Concrete pavers

Catalog and CAD software provide information on high-strength concrete material used in pavements, pavers, and surface graphics. Available for immediate-use, low-cost repair installations, pavers come in a variety of shapes, patterns, and colors. The Concrete Paver Institute, Herndon, Va.\*



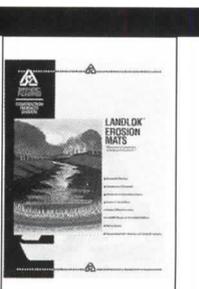
### 57. Plaza and roof pavers

American Hydrotech offers a new four-page brochure on roof-deck and plaza-deck precast-concrete pavers. They are available in standard and custom colors, and a range of sizes and weights. Surface textures include slate, broomed, travertine, sand, diamond, or the look of weathered concrete. American Hydrotech, Inc., Chicago.



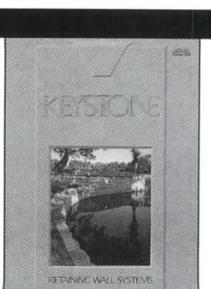
### 58. Playground equipment

This 26-page catalog describes the Durascape playground, which utilizes recycled-aluminum uprights and new roto-molded panels with colorful graphics. Available in 10 colors, a wide variety of components, and innovative features. Important safety information and illustrated installation instructions are included. GameTime, Fort Payne, Ala.



### 59. Anti-erosion mat

Eight-page technical/application brochure details Landlok's TRM 1060 for turf reinforcement and ECRM 450 for erosion control and revegetation. Discusses the concept of reinforced vegetation, and illustrates how these products effectively perform their erosion-control functions. Synthetic Industries, Chattanooga, Tenn.

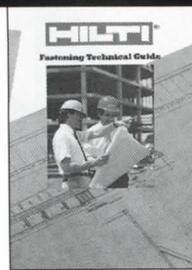
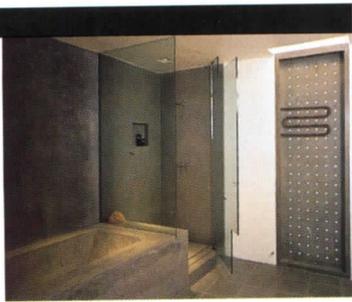


### 60. Retaining-wall systems

An eight-page technical brochure provides product profiles, design criteria, installation guidelines, geogrid (soil stabilization) criteria, and specifications for a rock-face modular retaining wall. Photos depict a wide variety of applications. Keystone, Edina, Minn.

\* Product data on CAD disk

For more information, write item numbers on Reader Service Cards.



## 61. Stay-in-place concrete forms

PolySteel Forms, made of CFC-free expanded polystyrene, are panels linked by expanded-metal fasteners to form interlocking blocks 16-in. high and 48-in. long. The resulting cavity, 6- or 8-in. wide, is filled with poured concrete. The forms, left in place and finished, provide a 22+ R factor, and extend hydration. 3.10 Insulated Forms, L. P., Omaha, Neb.

## 62. Lightweight concrete

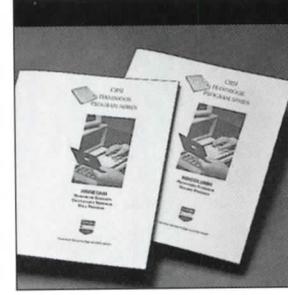
Syndecrete is a precast, fiber-reinforced concrete that is custom-mixed, molded, and hand-poured to create unique countertops, sinks and basins, and furniture for exterior and interior use. Material has a smooth, warm feel. Made in 11 standard colors and over 200 custom colors, with choice of cast-in glass or metal bits. Synthesis, Inc., Santa Monica, Calif.

## 67. Cement and concrete

The Portland Cement Association's 1992 Catalog cites over 400 technical, educational, and promotional items, including 42 new publications, videos, computer-software programs, and slide sets. Material is oriented to the contractor, fabricator, and engineer, as well as the architect. Portland Cement Association, Skokie, Ill.\*

## 68. Construction fasteners

The 90-page Hilti Fastening Technical Guide describes fasteners and anchoring systems for concrete, steel, masonry, hollow block, tile, and brick. Use of application tools and installation methods are described and illustrated in detail to assure efficient performance. Specifications for all fasteners and anchors. Hilti, Inc., Tulsa, Okla.



## 63. Cementitious underlayment

The Level-Right self-leveling floor underlayment is a flowable mortar that fills depressions and flows over high spots, seeking its own level. It creates a smooth surface over irregular or damaged concrete, worn ceramic tile, terrazzo, and adhesives. No hand troweling or hand finishing is necessary. Gyp-Crete Corporation, Hamel, Minn.\*

## 64. Concrete cleaners

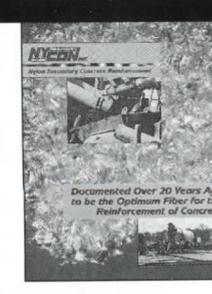
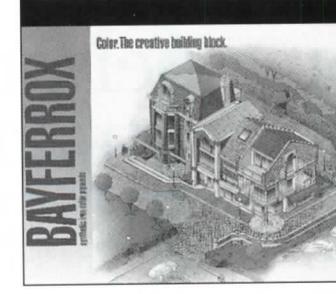
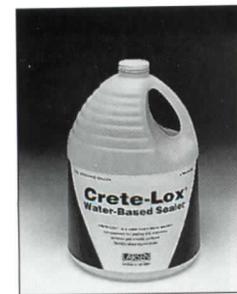
The ProSpec line of cleaners, sealers, water repellents, and paint strippers is applicable to most substrates, including terra cotta (pictured), concrete, brick, limestone, marble, stucco, and precast. The product may be used on exterior, vertical, and horizontal features of structures. Watson Bowman Acme Corp., Amherst, N. Y.

## 69. Rebar software

Two software programs, HBColumn—Reinforced Concrete Column Design—and HBRetain—Reinforced Concrete Cantilevered Retaining Wall Program—are the first in a series of applications that draw data from the 1992 CRSI Handbook. Price \$95 each. Concrete Reinforcing Steel Institute, Schaumburg, Ill.\*

## 70. Brick-faced precast

Four-color brochure describes the Scott System method of casting thin brick or tiles integrally in concrete panels. System eliminates the need for weep cavities, lintels, and anchor clip designs. The Scott Brick Gasket Liner produces the mortar joints as well as arches, radius panels, soldier, or running-bond brickwork. The Scott System, Inc., Denver.



## 65. Water-based sealer

Crete-Lox water-based sealer is designed to protect most interior and exterior surfaces, architectural concrete, stucco, exposed aggregate, concrete pavers, terrazzo, block, tile, and stone. It also works as a primer-sealer for wood, plaster, wallboard, masonry, and other porous surfaces. Dries within one hour. Larsen Products Corp., Rockville, Md.

## 66. Concrete sealer

Clear Sealer is a ready-to-use, water-base clear sealer for colored or natural gray concrete flatwork. It creates a semigloss finish for new or old, interior or exterior concrete paving or floors. Effective over exposed aggregate, imprinted concrete, and chemically stained concrete. Minimizes surface staining. L. M. Scofield Co., Los Angeles.

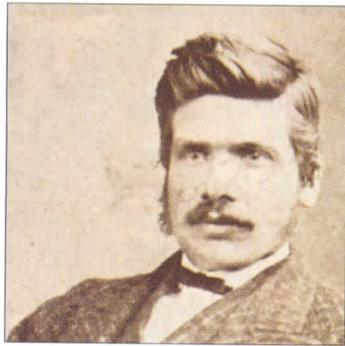
## 71. Colored concrete products

A 12-page booklet describes and illustrates the use of integral color in concrete pavers, concrete segmental retaining-wall blocks, concrete brick, block, and mortar, and concrete roof tiles. Drawings and photographs of modular concrete products provide a sampling of the many colors and shapes available. Miles Inc., Pittsburgh.

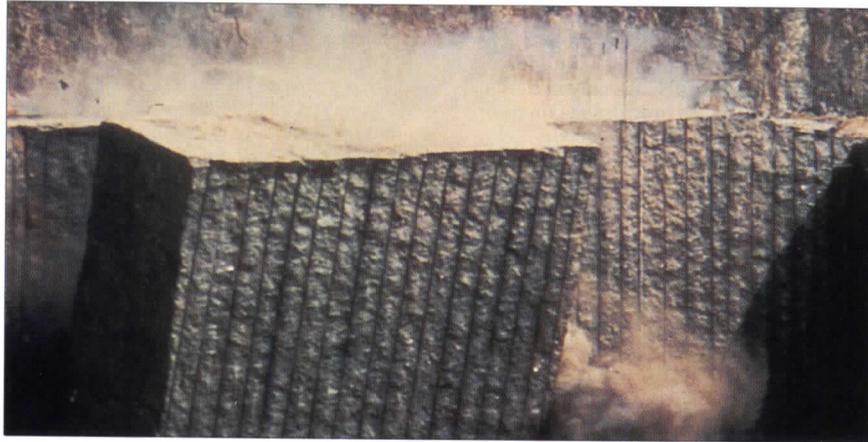
## 72. Nylon reinforcement

Covers the use of nylon fiber as a secondary reinforcement of concrete in place of wire mesh, reducing plastic shrinkage and cracking by stopping microcracks and producing a more-durable concrete product with a nonhairly surface. Suggested for ready-mix concrete for slabs, walks, curbs, pools, foundations, and roads. Nycon Inc., Westerly, R. I.

\* Product data on CAD disk



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For details, refer to Sweet's catalog #04400/COL.



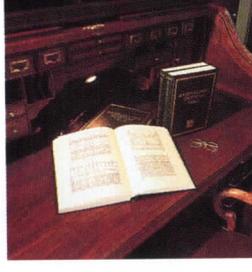
### 85. Powder coatings

The Southern Aluminum Finishing Company is an approved applicator of Kynar 500 PC AAMA 605 powder coatings. The architectural coatings are available in dozens of stock and custom colors that meet or exceed the requirements of AAMA 605.2-92, including corrosion and weathering specifications. Southern Aluminum Finishing Co., Atlanta.



### 86. Fiberglass handrail

This corrosion-resistant, architectural-fiberglass handrail was developed specifically for hotel balcony railings in coastal areas, traffic control in amusement-park queues, and similar applications exposed to corrosive atmospheric elements. Constructed of 1- and 2-in.-square tube. Morrison Molded Fiberglass Company, Bristol, Va.



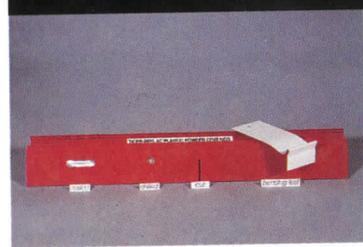
### 87. Macfarlane's castings

The 1882 Macfarlane's Cast Iron Catalogue of cast-metal architectural details and systems has been reproduced in a 700-page, two-volume edition. It contains more than 10,000 engraved illustrations of railings, columns, windows, signage, roof cresting, grilles, gates, bridges, finials, and more. Historical Arts and Casting, Inc., West Jordan, Utah.



### 88. Textured metal

The Rigid-Text selection of metals, patterns, and finishes, for applications such as this signature building top/ventilation screen in stainless steel, includes a wide choice of materials resistant to scratches, dents, and mars, reflecting sunlight and spotlighting evenly. Available in gauges as thick as 1/8 in. Rigidized Metals Corp., Buffalo, N. Y.



### 89. Architectural coatings

Drylac powder coatings are available in 150 smooth, high-gloss finish colors. Colors are formulated as Series 19 architectural grade and Series 49 weather-resistant, both based on Polyester TGIC thermosetting powder technology. Custom colors available. Tiger Drylac U. S. A., Inc., Rancho Cucamonga, Calif.



### 90. Expansion-joint covers

Flush Thinline expansion-joint covers, in 1- and 2-in. widths, offer a smooth surface and very low profile. A thermoplastic gasket in an aluminum frame enables it to blend into adjacent surfaces. Dual-durometer gasket has rigid edges friction-locked to the frame, and a flexible core allows full movement. The C/S Group of Companies, Muncy, Pa.



### 91. Concrete expansion joint

The Interspan Flexible Expansion Joint System is a factory-produced, epoxy and fabric product cemented in place with Interspan Bedding Compound and Butt Joint Adhesive. It provides a weather-resistant expansion-joint for concrete that accommodates all normal structural movement. IJS, Inc., Feasterville, Pa.



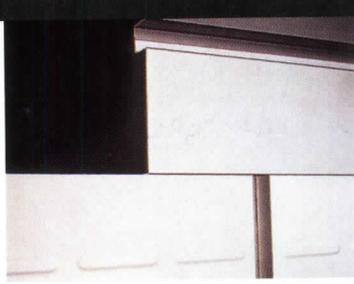
### 92. Perforated metal

Custom-perforated metals offered for wall or ceiling assemblies, decorative elements, acoustic applications, and lighting systems. Available in stainless steel, copper and copper alloys, and aluminum and steel in a variety of finishes or in combination with other decorative materials. Fixtures delivered ready to install. A. Zahner Company, Kansas City, Mo.



### 93. Parking-deck joints

The surface of the Iso-Flex textured, factory-molded, expansion-joint sealing system meets ADA guidelines and provides good traction for pedestrian and automotive traffic. The ribbed surface channels away moisture. The urethane elastomer joint comes in standard widths of 3 to 12 in. Harry S. Peterson Co., Inc., Orion, Mich.



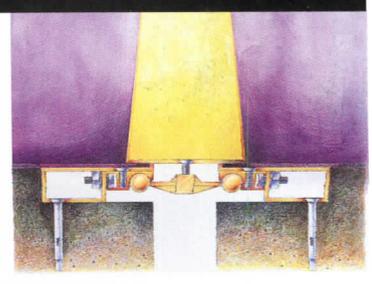
### 94. Customized metal panels

The Metal Wall System is a group of standard, pre-engineered and detailed components that reduces the cost of a custom metal wall. Menu of panel sizes, edges, and components suit most job-site conditions. Panels are hung on mechanically attached concealed wall clips. Wide variety of finishes available. Forms + Surfaces, Santa Barbara, Calif.



### 95. Metal-roof finish

A Kynar 500 fluoropolymer-resin finish from Elf Atochem North America created an innovative coloration for a Snapseam standing-seam metal roof by AEP-Span. The high-performance architectural coating has the appearance of a weathered-copper patina. Elf Atochem North America, Philadelphia.



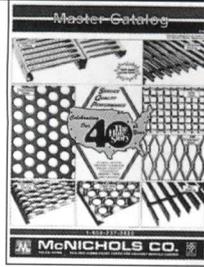
### 96. Architectural-joint systems

The JointMaster line of architectural controls provides fire-rated designations to meet specific needs, a unitary tension/centering bar, a one-piece molded centering device, a sinusoidal bond breaker for more elasticity for urethane joints, and multi-option wall systems. Pawling Corporation, Standard Products Division, Pawling, N. Y.



## 97. Steel joists

The 1992 Catalogue of Specifications and Load Tables lists all new revisions up front, with an expanded section on fire-resistive assemblies. Also includes standards for use of K-series joists and a five-step procedure for selecting joists. More than 70 roof and floor assemblies in a simple chart. Price: \$10. Steel Joist Institute, Myrtle Beach, S. C.\*



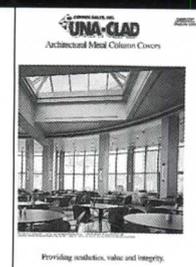
## 98. Grates and screens

The 48-page McNichols catalog gives detailed specifications, load tables, and ordering guides on a broad line of perforated and expanded metal, wire cloth, and safety gratings made of carbon steel, stainless steel, aluminum, fiberglass, and plastic for applications such as flooring, guards, screens, mezzanines, and catwalks. McNichols Co., Tampa, Fla.



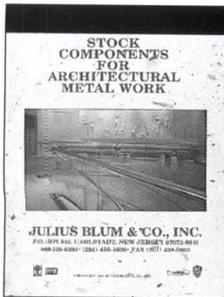
## 99. Industrial railings

The Vanrail system is designed for on-site fabrication with simple hand tools. No welding needed. Low-cost system is often speeded for processing, manufacturing, and sewage-treatment plants. Elements are aluminum alloy with stainless-steel fasteners. A brochure illustrates applications and details. J. G. Braun Co., Skokie, Ill.



## 100. Metal column covers

The UNA-FAB system, described in four-page brochure, converts concrete columns and I-beams into finished, decorative columns in a wide range of colors and finishes. Round, square, and rectangular column covers available in lengths to 16 ft in stainless steel, muntz metals, or aluminum. Easy installation. Copper Sales, Inc., Minneapolis.



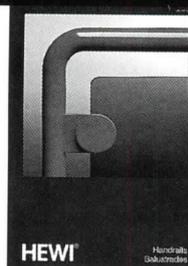
## 101. Railing components

A 52-page catalog describes and illustrates four proprietary lines of railing, handrail mounting, and brackets, elevator saddles, and tubing, bars, and shapes. Systems in complete range of materials, finishes, and colors. Only stock materials supplied; no custom design or fabrication. Julius Blum & Co., Inc., Carlstadt, N. J.



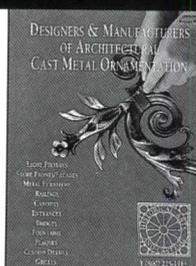
## 102. Framing systems

Six different space-frame systems to meet a wide variety of requirements for span, geometry, esthetics, and structural support are described in a 20-page, heavily illustrated brochure. For new construction or renovation, systems can be produced in steel, aluminum, plastic, and wood. Unistrut Space Frame Systems, Inc., Canton, Mich.



## 103. Handrails and balustrades

In a 12-page brochure, eight full-color photographs and diagrams illustrate the variety of rail designs, panel holders, installation possibilities, and fastening types in the HEWI line. Nylon and steel materials and features are detailed in specifications. The 13 HEWI colors are reproduced on back cover. HEWI, Inc., Lancaster, Pa.



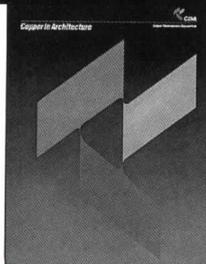
## 104. Cast-metal ornamentation

A four-color folder describes the design, reproduction, and manufacture of light fixtures, store fronts, metal furniture, railings, canopies, entrances, bridges, fountains, and plaques for either restoration or new construction. Castings in iron, aluminum, bronze, or bronze alloys. Historical Arts & Casting, Inc., West Jordan, Utah.



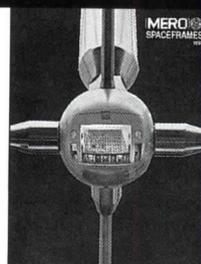
## 105. Metal coating

Hylar 5000, a PVDF resin used in finishing systems for metal substrates, is described in an eight-page brochure. Coatings can be applied by conventional coil- and spray-coating methods to aluminum, galvanized steel, and aluminized steel. Resists degradation by UV radiation, salt, and wind-driven sand. Ausimont USA Inc., Morristown, N. J.



## 106. Copper in architecture

An eight-page folder describes recent work by the Copper in Architecture Program to provide the architectural community with copper-design details and specifications used in actual buildings, and with technical information containing both general and specific data on copper usage. Copper Development Association, Inc., New York City.\*



## 107. Spaceframes

A four-color, 16-page 1993 booklet describes and illustrates Mero structural-spaceframe systems for a variety of applications. Features the KK ball, the Tube System, and other specialty structural innovations. Specifications and information on code approvals are also included. Mero Structures, Inc., Germantown, Wis.\*



## 108. Custom-glazing design

A 12-page booklet describes design/build services for custom space enclosures that integrate structure and glazing. Uses a standardized construction process not limited by proprietary products or connection systems, with technologies such as tension trusses, fabric structures, and variable-radii domes. Advanced Structures, Inc., Simi Valley, Calif.

\* Product data on CAD disk



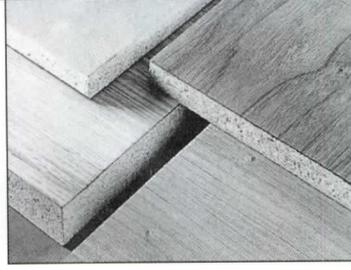
### 109. Patterned laminates

Formica has expanded its Formations Collection, adding five new colors and a new pattern, bringing the total line to seven designs offered in 25 colorways. The new pattern is Scorpio, an abstraction with regular and free-form designs offered in pearl gray, light taupe, and rich red/brown Sienna. Formica Corporation, New York City.



### 110. Engineered studs

Both 2 by 4s and 2 by 6s in lengths to 10 ft are produced by bonding shorter pieces of lumber together with finger joints. The resulting studs are said to be dry, straight sections of lumber that have better dimensional stability than conventional solid studs. The producer says they have equal strength. Louisiana-Pacific Corp., Portland, Ore.



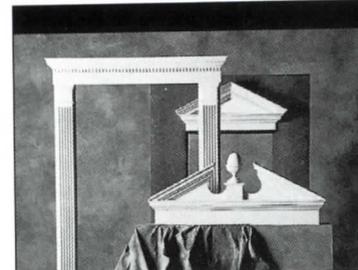
### 111. Labeled substrate

Duraflake FR is a smooth, grain-free, Class 1 fire-rated particle board. A substrate for fine wood veneers, high- and low-pressure laminates, and vinyls in wall systems, furniture, and fixture applications, it can be routed, drilled, bullnosed, beveled, and precision-machined. Willamette Industries, Duraflake Division, Albany, Ore.



### 112. Solid surfaces

Swanstone solid-surface kitchen and vanity countertops are manufactured in five solid colors and 10 aggregate colorways. A homogeneous, nonporous material with color molded throughout, it is also available in integral bathtub surrounds, shower walls, kitchen sinks, drop-in lavatories, and undermount bowls. Swan Corporation, St. Louis.



### 113. Exterior elements

The Compositions line of seven entrance trims and four window styles includes a selection of traditional mantels, pediments, dentil moldings, and pilasters. A traditional flatback style is for masonry and stone. An engineered version has a built-in nailing flange and side receiving channels. CertainTeed Corporation, Valley Forge, Pa.



### 114. FRP ornamentation

Cornices (straight, gable, outside, and corner), frieze panels and molding, columns, balustrades, archways, domes, cupolas, spandrel panels, and entablatures are made of fiberglass-reinforced polyester to replicate antique elements. Standard and custom colors and finishes. Baycraft Fiberglass Engineering, Inc., Havre de Grace, Md.



### 115. Plastic facing

An Italian firm, Abet Laminati, has added a new design to its Serie Milano line of high-pressure decorative laminates. Reflecting the image of the city of Milan, pastel colors, dark grays, and browns are punctuated by splashes of subdued secondary color. Available in a choice of two decors and 46 colorways. Abet, Inc., Teterboro, N. J.



### 116. Greenhouse covering

Lexan polycarbonate sheet in a corrugated configuration can serve as a roof for quonset-style and gable-roof greenhouses. It transmits 90 percent of visible light but filters out ultraviolet radiation. Carries a 10-year warranty against yellowing and loss of clarity. At a thickness of .033 in., it can withstand 240 in.-lb of impact. GE Plastics, Pittsfield, Mass.



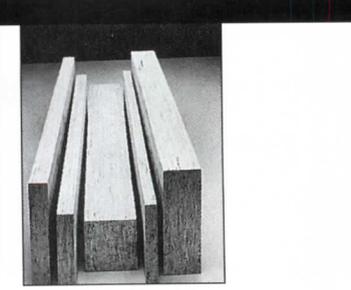
### 117. Lumber hallmark

A certification program, the APA-EWS mark appears only on products manufactured by American Wood Systems (AWS) members, signifying a commitment to quality verification and testing. Trademarked products conform to ANSI Standard A190.1 for structural glued laminated timber. American Plywood Association, Tacoma, Wash.



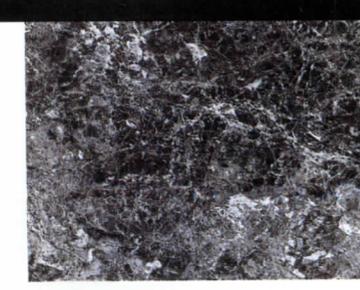
### 118. Custom sinks

The Industry First line of sinks, available in 18 colors, is fabricated from DuPont Corian for integral, undermount, and drop-in applications. In addition to customizing standard sizes, Surface Technology offers such unusual shapes as 18-in. round, European D, and a 30-in. single bowl. Surface Technology Corp., Stoughton, Mass.



### 119. Composite wood

PSL 300 laminated-strand lumber is made by bonding 12-in. strands of aspen to form mats 35-ft long, 8-ft wide and 1- to 1.55-in. thick. The wood can be used as rim board, core material for doors and window frames, beams, headers, and core stock in furniture. Said to provide good dimensional stability. Trus Joist MacMillan, Boise, Idaho.



### 120. Black and white laminate

From tiny stipple effects to computer-scramble patterns and marble simulations, Wilsonart decorative plastic surfacings are variations on a classic theme. The latest is Canyon Black, which brings the Design Group offerings up to 234 standard colors and patterns. Ten-day delivery assurance. Ralph Wilson Plastics Co., Temple, Tex.

# Translucent Danpalon

Once you know the facts, you'll know why Danpalon® translucent insulating system is **PREFERRED**

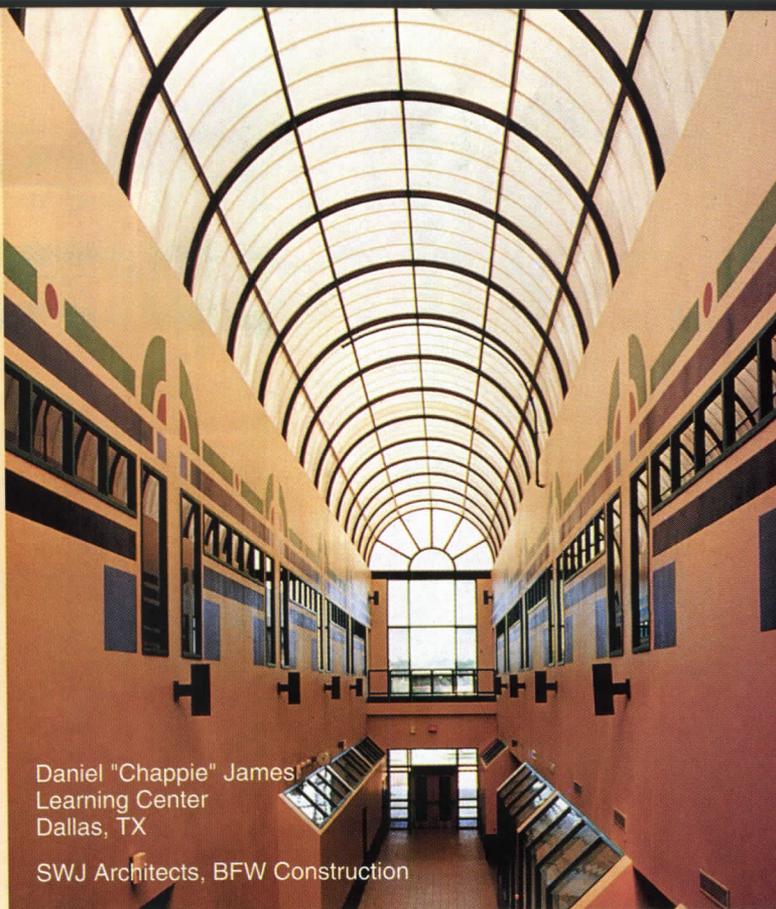
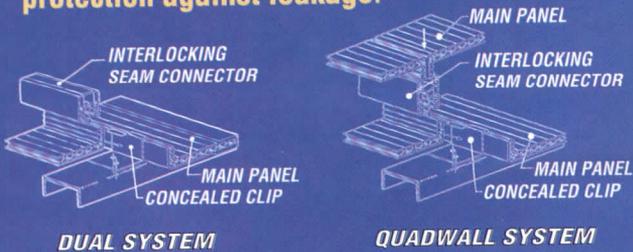
Danpalon's use of modern technology produces a panel that keeps its distinctive structural properties, original color, and high-tech architectural appearance year after year. The Danpalon system you install in 1992 will still be like new in 2002.

Danpalon's QUADWALL multilayer prismatic design provides superior light quality and thermal performance, with better shading factors. *Only roof system of its kind that can meet Class A fire rating standards.*

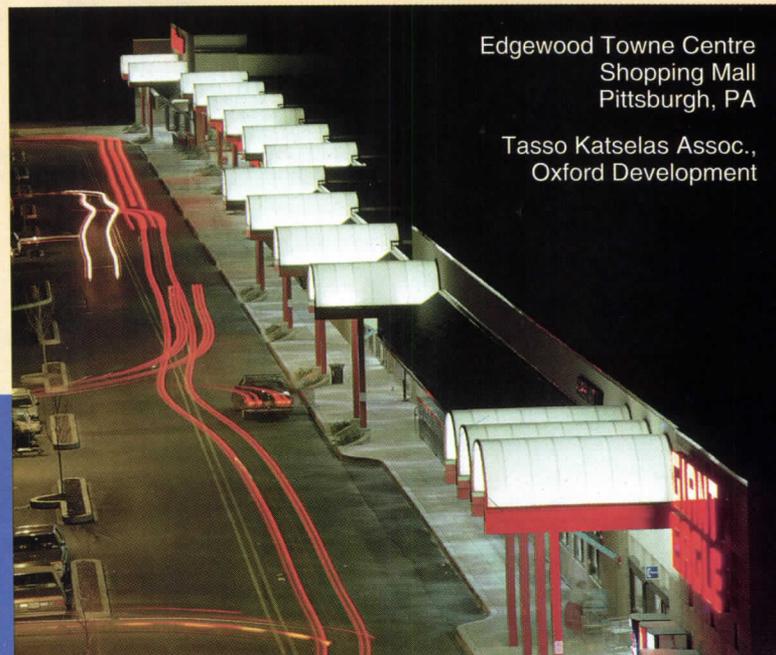
Danpalon's cutting-edge technology delivers a panel that will not delaminate, discolor, or "bloom", and requires no maintenance.

Danpalon gives you unequalled design freedom, polished performance, and unmatched durability — in a system that is competitive, and warranted to outperform products of dated technology.

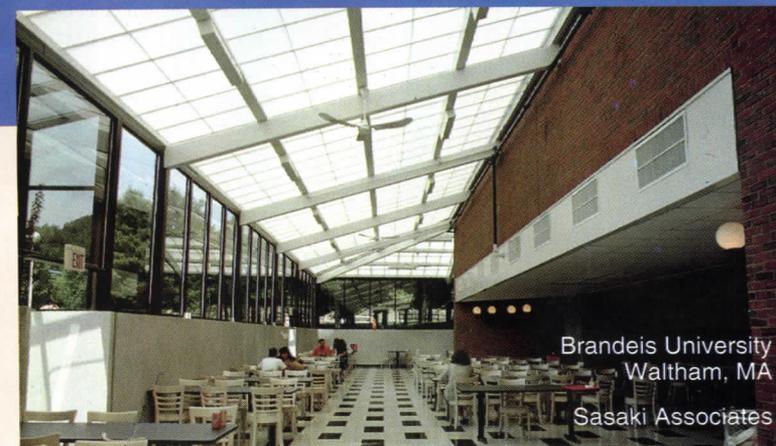
Danpalon's dry/mechanical standing seam technology does not rely on adhesive bond, provides ultimate short and long term protection against leakage.



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SWJ Architects, BFW Construction



Edgewood Towne Centre Shopping Mall  
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# Old wives' tales about copper roofing.

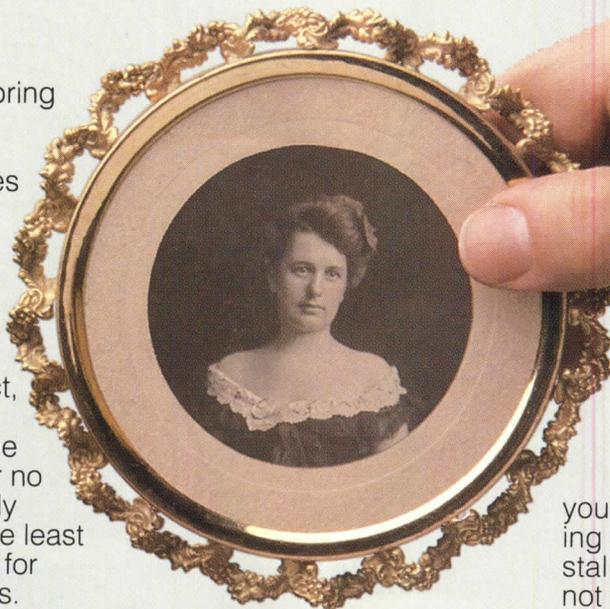
If you still believe storks bring babies and toads cause warts, then you probably believe the old wives' tales about copper roofing.

■ First, there's the one about *cost*. Some people think copper is more expensive than other roofing materials. A myth if we ever heard one. In fact, given copper's longevity and ability to withstand the test of time — with little or no maintenance — a properly installed copper roof is the least expensive in the long run for most building applications.

■ What's more, copper is being installed more easily and cost effectively than ever before, thanks to such labor-saving equipment as automatic panformers and seamers. These devices are now so widely used that



Christ Church, Philadelphia, Pennsylvania.



Revere maintains a stock of specially processed copper in coil just for these machines.

■ Then there's *expansion*. Many people are under the impression copper expands and contracts more than other metals after it's been put in place. Aluminum expands 50 percent *more* than copper. Although stainless steel expands at the same rate as copper, it's much more difficult to install.

■ Finally, there's the tale about *lightning* — that copper attracts it. Again, not true. Copper is non-magnetic and simply doesn't attract lightning. On the other hand, if a copper roof is struck by lightning, copper's superior conductivity dissipates the charge over the entire roof instead of concentrating it in one area.

Revere has much more to tell you about modern copper roofing applications and proven installation techniques. It's fact, not fiction, and it's all in our 103-page book *COPPER AND COMMON SENSE*. To order your copy, call



Marquette Electronics Research and Development Center, Milwaukee, Wisconsin. William Wenzler and Associates Architects, Inc.

us toll free 800-448-1776 (NY State 800-962-2150).

We think it's time to set the record straight about copper roofing. There are a lot more old copper roofs around than there are old wives' tales.

Copper for your roof is available through your local Revere distributor.



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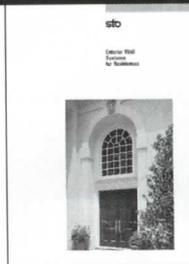
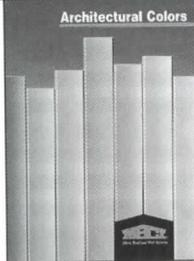
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# 7 • THERMAL & MOISTURE PROTECTION Literature

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## 169. Aluminum-composite panels

Reynobond aluminum-composite panels can be used for canopies, signage, exhibits, booths, and covers as well as interior and exterior building cladding. Panels are thermoplastic cores between aluminum skins. A descriptive brochure includes color chips. Construction Products Division, Reynolds Metals Co., Richmond, Va.

## 170. Metal roofing

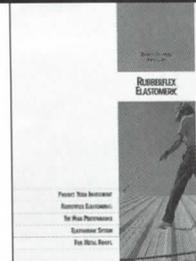
A four-page booklet displays the range of colors for MCBI metal-roof and wall systems. Three paint systems available are Duranar/Kynar 500, a fluorocarbon system; Duranar XL, an enhancement of Duranar that provides premium colors; and Dexstar 850, a thermoset system. Chart of panel profiles is included. MBCI, Houston.

## 171. Exterior wall systems

The Sto line of residential exterior-finish systems is illustrated in a four-page, four-color booklet. Options range from one-coat stucco to a full-exterior-insulation and finish system and include a product for below-grade use. All finishes are 100 percent synthetic and resist fading, cracking, and chipping. Sto Industries, Atlanta.\*

## 172. Asphalt shingles

The CertainTeed Roofing Collection is a ring-binder file of three roofing groups: premium, custom, and commodity. Information on shingle styles, textures, colors, sizes, and weights. Installation instructions on recommended ventilation and underlayment and shingle warranties. Shelter Materials Group, CertainTeed Corp., Valley Forge, Pa.



## 173. Building products

The 1992 Georgia-Pacific catalog describes the company's wide range of building materials. Among the new products are FlameBreak fire-retardant structural panels, Premium 25 heavy-weight organic shingles, ThermaBond all-weather shingle sealant, and Accuchoice metal fasteners. Georgia-Pacific Corp., Atlanta.

## 174. Roof insulation

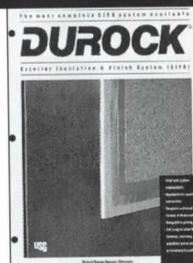
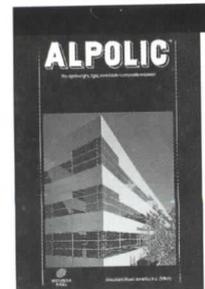
An eight-page brochure outlines the uses of Fesco Board roof insulation in commercial and industrial applications. It may be used with built-up roofing, modified bitumen, and single-ply membrane. Also described is Tapered Fesco Board, used to create a slope for positive drainage on new and retrofit roofs. Manville Roofing Systems, Denver.\*

## 175. Building-enclosure systems

A 28-page catalog of roofing, siding, and ventilation products contains information on panels, coating systems, and roofing accessories, including the SRS standing-seam roof system and CAP System curved architectural panels. Also carried are a color-selector guide and specifications for panels, SRS, and coatings. Steelite, Inc., Pittsburgh.\*

## 176. Elastomeric roof coating

Rubberflex Elastomeric, a one-piece monolithic seamless coating for metal roofs, is detailed in a four-page booklet. The white Rubberflex surface is said to reflect up to 85 percent of the sun's harmful rays, to resist yellowing and chalking, and to act as a barrier to water but allow moisture to escape. Republic Powdered Metals, Inc., Medina, Ohio.



## 177. Composite material

Alpolic is a lightweight composite-aluminum paneling used for interior and exterior sheathing, signs, displays, and column covers. A brochure illustrates applications and gives specifications. Available in anodized or painted finish in panels of 4- and 6-mm thickness. Core is viscoelastic resin. Mitsubishi Kasei America, Inc., St. Charles, Mo.

## 178. Silicone microemulsion

Rising damp, a menace to masonry buildings, is caused by deterioration of a structure's horizontal damp course. An information sheet explains the effectiveness of silicone microemulsion injections in establishing damp-proof courses in masonry-restoration applications. Wacker Silicones Corporation, Adrian, Mich.

## 179. EIFS

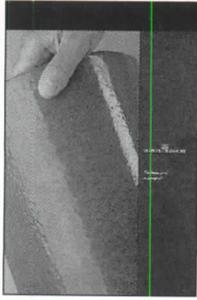
An illustrated folder describes the Durock exterior insulation and finish system (EIFS). Durock cement board used as sheathing is made from aggregated portland cement reinforced with polymer-coated glass fiber mesh embedded in both surfaces. U. S. Gypsum supplies all the other elements as well. United States Gypsum Company, Chicago.\*

## 180. Roofing systems

The Goodyear catalog of Elastomeric Sheet Roofing and Re-roofing Systems has two new Versiweld weldable roofing products, a 10-ft 3-in.-wide black membrane for ballasted applications and a 10-ft 4-in.-wide white membrane for mechanically fastened applications. Goodyear Tire & Rubber Company Roofing Systems, Akron, Ohio.

\* Product data on CAD disk

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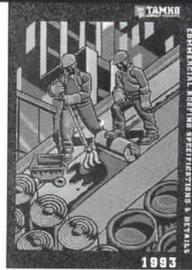
**181. Clay tiles**

Roofing tiles in styles such as barrel, flat, and flat interlocking, as well as pans and covers, are described in a four-color brochure. Made from Ohio shales and fire clays, the tiles are available glazed or unglazed in standard and custom colors, with 50-year limited warranty against defects. Ludowici-Celadon, Inc., New Lexington, Ohio.



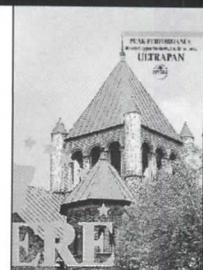
**182. Silicone firestops**

A four-page folder highlights flexible sealants against fire and smoke. Pensil 200 foam accommodates vibration of pipes and conduits. Pensil 300 achieves fire-rated seal of joints subject to movement. Pensil 500 intumescent putty is for seals around combustible pipes and conduits. GE Silicones, Waterford, N. Y.



**183. Modified bitumen**

A 48-page manual, 1993 Commercial Roofing Specifications and Details, contains specifications, flashing and construction details, and other technical information related to a line of BUR and SBS-modified roofing. It includes sections on modified bitumen and fiberglass built-up roofing practices. TAMKO Asphalt Products, Inc., Joplin, Mo.\*



**184. Copper roofing**

A four-page folder introduces Ultraplan, said to be the first engineered copper designed to produce roof panels. Copper is noncombustible, resistant to UV, and virtually immune to acid rain. It won't chip, fade, curl, lift, split, dry out, break, or fracture. Can be installed over almost any substrate. Reverse Copper Products, Inc., Rome, N. Y.



**185. Skylights**

Custom translucent skylights and curtain-wall systems are described, and built installations are illustrated in an eight-page booklet. The daylighting projects provide high energy savings, low weight, and insulation value. They are said to be almost shatterproof and need little maintenance. Skywall, Inc., Chattanooga, Tenn.



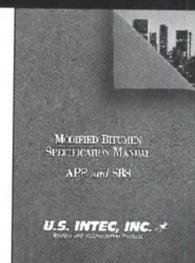
**186. Cladding panels**

Superplastically formed aluminum panels provide low-cost, low-maintenance facades for commercial buildings. The panels are custom designed for each project with ribs for rigidity, which leads to lower weight. They can be coated with polyester. Designed initially to serve the aerospace industry. Superform USA, Inc., Riverside, Calif.



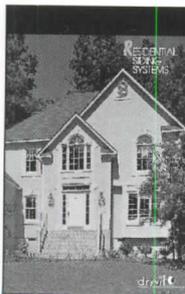
**187. Building panel**

The R-Control structural building panel, described in an eight-page booklet, is made of a rigid core of non-CFC expanded-polystyrene insulation that is adhesively welded between OSB facings to form a structural panel. Available in 4- by 8-ft sizes to 8 by 24 ft. Core thickness from 3 1/2 to 11 1/4 in. AFM Corporation, Excelsior, Minn.



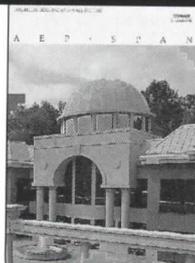
**188. Modified-bitumen manual**

Fifty-four detailed pages cover definitions, warranty details, installation recommendations, and specifications for Intec Brai APP membrane roofs and Brai/Flex SBS membrane systems. Installation and reroofing sections cover many anticipated roofing situations. U. S. Intec, Inc., Houston.\*



**189. Synthetic stucco**

Residential Siding Systems, a 12-page booklet, reviews Dryvit exterior insulation and finish systems for home use. Spring is a residential finish. Outsulation is for custom-home construction. Fastrak is designed for buildings in mild climates. Systems form a continuous, seamless surface. Dryvit Systems, Inc., West Warwick, R. I.\*



**190. Metal roofing systems**

A well-illustrated, 28-page brochure describes weatherproof metal roofing and wall systems. Included are snap-seam, structural-batten, high-seam, and curved panels, as well as Bermuda roofing, composite fascia panels, flush panel, mansard/fascia roofs, and cap-seam systems. Broad range of colors and finishes. AEP-Span, Dallas.



**191. Foundation protection**

The waterproofing membrane around a foundation can be protected from damage during backfill operations by using Styrofoam Brand Protection Board. The 1/4-in. fan-folded sheet is manufactured in a 4- by 50-ft dimension. It is pressed into a coated membrane and trimmed to fit. Booklet. The Dow Chemical Company, Midland, Mich.

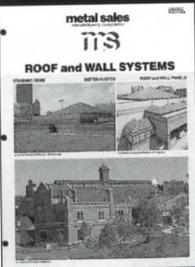


**192. Plastic roof deck**

The Tuff Span fiberglass-reinforced plastic roof deck is featured in a four-page folder. Designed for single-ply, built-up, modified bitumen, and IRMA roofs, the decks are lightweight, inexpensive, and will not spall, flake, rust, chip, or peel. Composite Technology Inc., Division of W. R. Grace & Co., Fort Worth, Tex.

\* Product data on CAD disk

For more information,  
write item numbers  
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**193. Roof and wall systems**

A 12-page booklet describes a line of standing-seam and batten-system steel roofs and steel architectural roof and wall panels. Seam-Loc 24 standing-seam system comes in 22, 24, and 26 gauge. Batten system is 26 gauge. Both come in either zinc-aluminum coating or galvanized with a polyester coating. Metal Sales Manufacturing Corp., Louisville.

**194. Masonry sealant**

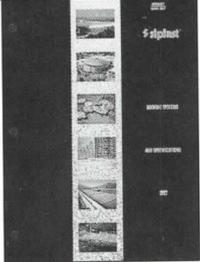
Specstain, a waterbase acrylic waterproofing and stain for porous surfaces, is described in a data sheet. Applicable with spray, roller, or sprayroller. VOC compliant. Two coats recommended. Comes in white, black, three shades of gray, five shades of brown, and two shades of red. Shipped in 1- and 5-gal. containers. Specco Ind., Inc., Lemont, Ill.

**195. Roofing manual**

A detailed, 42-page handbook, SBS Modified Bitumen Roofing Systems, gives precise definitions of roofing systems and their components. Complete directions for the application of torch, hot mop, self-adhesive, and cold-adhesive roofing systems. SpecTech software for AutoCAD available. MBTechnology Corporation, Fresno, Calif.\*

**196. Roofing calculator**

The 1992 Life Cycle Costing Kit is a guide to understanding life-cycle costing factors of roofing systems, such as energy efficiency, installation, maintenance, and repairs. JPS CADalog is a specification and details software program for Hi-Tuff roofing systems. JPS Elastomeric Corp., Stevens Roofing Systems Division, Northampton, Mass.\*



**197. Shingling guide**

A 15-minute video shows how to install a cedar shake or shingle roof properly. Film explains the difference between shingle and shake installation, shows the various tools of the trade, and describes the ways that chimneys, skylights, valleys, hips, and ridges are installed. \$39. Cedar Shake & Shingle Bureau, Bellevue, Wash.

**198. Bitumen roofing systems**

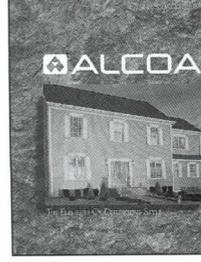
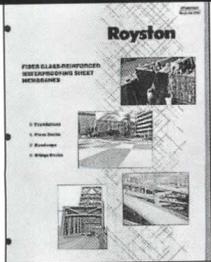
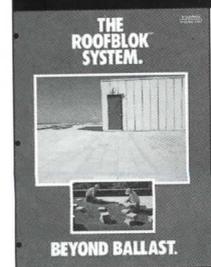
The Siplast 1993 Sweets Modified Bitumen architectural catalog describes the company's roofing systems in detail. Also included are a product-information chart, slope-requirement chart, fastening chart, and information on roof insulations, deck construction, and reroofing approvals/classifications. Siplast, Inc., Irving, Tex.

**199. Modified-bitumen roofing**

A 12-page color brochure describes the performance of dual-reinforcement SBS modified-bitumen roofing systems and single-reinforcement SBS. Roofing accessories CAD-compatible specification-software program gives product information. Manville Roofing Systems, A Division of Schuller International, Inc., Denver.\*

**200. Stonelike finish**

An information sheet describes Ful-O-Mite stone finish, a mixture of colored quartz aggregate and 100 percent acrylic binder. After mix is troweled onto a prepared substrate, a second coat is spray-applied for a three-dimensional appearance. Eight colors available. TEC Incorporated, An H. B. Fuller Company, Palatine, Ill.



**201. Roof-ballast pavers**

The 1993 Roof Ballast Paver Systems Catalog describes the 1200 and 1600 series of interlocking pavers for use over single-ply roofing for protection from wind, membrane punctures, and UV exposure. A ballast-paver selection chart is based on building heights, basic wind speed, and exposure. Roofblok, Ltd., Fitchburg, Mass.

**202. Waterproofing membrane**

Royal-Gard architectural membrane, designed for installation on vertical surfaces, is described in a brochure. It is said to offer impermeability, internal strength, uniformity of thickness, and ease of application. Its nonwoven fiberglass-mesh reinforcement is impregnated with rubberized asphalt. Royston Laboratories, Pittsburgh.

**203. Asphalt shingles**

The Elegance line of shingles, described in a colorful folder, is said to have the look of European slate tile. Its three tabs are less rectangular, with wider cut-outs. Special notches facilitate horizontal alignment. No special hip and ridge shingle is required. Weight is 285 lb/square. Comes in five colors. BPCO Inc., Totowa, N. J.

**204. House accessories**

A catalog illustrates a broad range of designer accessories: open-louvered or raised-panel shutters, window mantels, door surrounds, dentil molding, wide corner posts, fixture mounts, gable vents, and columns. Broad range of colors and materials available. Alcoa Building Products, A Division of Stolte Corporation, Sidney, Ohio.

\* Product data on CAD disk

## 8 • DOORS & WINDOWS Products

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### 205. Entrance locksets

A line of five solid-brass entrance locksets comes with 12 matching interior knobs and levers. Four finishes: polished brass, antique brass, antique nickel, and polished chrome. Made with an adjustable 1-in. steel deadbolt for 2 3/8- or 2 3/4-in. backset. Fits doors of 1 3/4- to 2 1/4-in. thickness. Kwikset Corporation, Anaheim, Calif.



### 206. Designer windows

A broader range of colors is available for Eagle's line of aluminum-clad windows. The new shades match popular colors used in vinyl siding and exterior paints. In addition to colony white, pebble tan, and sierra bronze, there are 46 designer colors that include pastels and earth tones. Eagle Window and Door, Inc., Dubuque, Iowa.\*



### 207. Window walls

The Folding-Wall Window provides unobstructed opening widths to 24 ft. Can be custom-designed in a variety of panel sizes in mahogany, hemlock, cherry, oak, or other timber. Joints are double-mortised, tenoned, and bonded. Energy-efficient glass up to 1 1/2 in. thick is standard. Architectural Openings, Inc., Somerville, Mass.



### 208. Round-top roof window

The Model GIR is an arched fixed light designed specifically for the roof. It is made to install above the operable Model GGL roof window for a combination of light and ventilation. For roof pitches from 18.5 to 85 deg. Available in two sizes. Solid-wood frame with exterior aluminum cladding. Velux-America Inc., Greenwood, S. C.\*



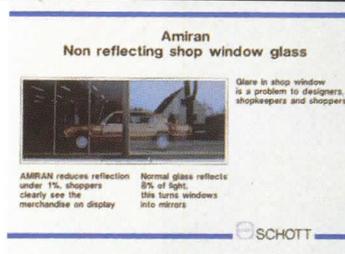
### 209. Post-free casement

The French Casemaster, a French-style casement window, provides a wide, unobstructed window opening. It has two operating sashes and no center post. A multipoint locking system incorporates pins at the header and sill and sliding pins at the astragal. Comes in standard sizes or to order. Marvin Windows & Doors, Warroad, Minn.\*



### 210. Reflective glass

Clear Eclipse pyrolytically coated reflective glass combines a high level of reflectance, good daylight transmission, and low heat absorption. Designed for neutral color application. After it has been coated and sized it can be heat-treated, cut, bent, insulated, and laminated. Available only in 1/4-in. thickness. Libby-Owens-Ford Co., Toledo, Ohio.



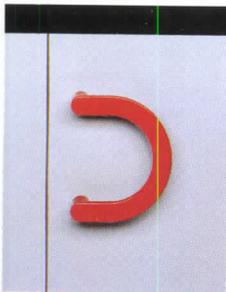
### 211. Nonreflecting glass

Ordinary shop-window glass reflects 8 percent of light, but Amiran reflects less than 1 percent, making goods in the window more visible and improving a shop's lighting levels. High UV absorption reduces fading of goods. Available in panels up to 3.75- by 3.09-m, and in thickness of 4, 5, 6, 8, and 10 mm. Schott Corporation, Yonkers, N. Y.



### 212. Window software

The Designer version 3.0 AutoCAD package has been enhanced to include the Architect series of wood windows, a sunroom program, a bow/bay program, and a circlehead and transom-matching routine. A toggle allows rapid movement between 2-D and 3-D. The 3-D models can be shaded or textured. Pella Corporation, Pella, Iowa.\*



### 213. Pull handle

The 550.31 GKR pull handle for doors and cabinets, made of high-quality nylon with a steel core, has center-to-center fastening points at 6 5/16 in. Concealed fasteners are available for through-bolt, surface-mount, and back-to-back installation on wood, metal, and glass doors. Broad color range. HEWI, Inc., Lancaster, Pa.



### 214. Paneled door

The Cotillion II, an all-panel door, is made of fine-grain Douglas fir or western hemlock of selected vertical grade. The door is designed to integrate with Cotillion sidelights. Produced in 1 3/4-in. thickness, in widths of 3 ft or 3 ft 6 in., and in heights of 6 ft 8 in., 7 ft, and 8 ft. Simpson Door Company, Portland, Ore.



### 215. Cold-storage doors

The Mark III Auto-Clear cold-storage doors feature see-through, UV-resistant PVC panels. A two-speed, 1-hp motor provides fast opening and slower closing. Designed for temperature ranges to -30F. Infrared heaters keep doors from frosting. Fully gasketed top and sides enhance energy efficiency. Jamison Door Company, Hagerstown, Md.

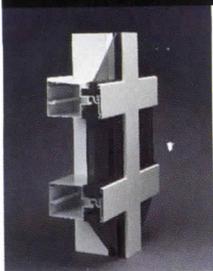


### 216. Windows for stucco

The Milgard C Series vinyl window line is designed specifically for stucco-construction applications. A multiposition nailing fin is available at 1, 1 3/8, and 1 3/4 in. from the outside frame edges to match the many typical stucco installation practices. The line includes sliding, projection, and specialty windows. Milgard Manufacturing, Inc., Tacoma, Wash.

\* Product data on CAD disk

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**217. Pressure-equalized wall**

The new Vector curtain wall features thermal efficiency, full-depth gutters at window heads, and resistance to water penetration through pressure-equalization. Options include conventional glazing, two-sided structural glazing, and a four-sided structural-spacer glazing system. Robertson, A United Dominion Company, Pittsburgh.



**218. Patio door**

The S-702 tilt-slide has tracks and ball-bearing rollers on top and bottom for easy operation. In addition to sashes that tilt inward for ventilation, the door has a multipoint locking system that is operated from one lock handle. Available in larger than standard sizes for prime and replacement applications. Rehau, Inc., Leesburg, Va.



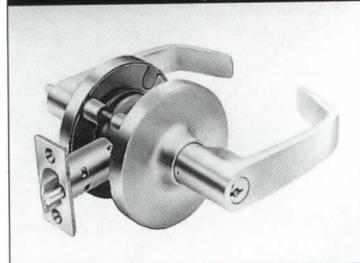
**219. Office door**

The KriegerShield 60dB, acoustical/EMI/RFI steel door and frame assembly has an appearance appropriate to a high-profile office. Ease of operation meets ADA requirements. Uses standard builders' passage sets. Equipped with radial-bearing cam-lift hinges. Krieger Steel Products Co., Pico Rivera, Calif.



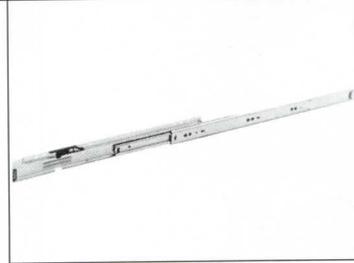
**220. Lever handle**

From Denmark, the D-Line Squiggle is an elaborate variation on the safety lever. All D-Line levers are matched to full-size, UL-approved mortise locks with screw-in cylinders for all contract applications. All lever handles in this series are available in polished or satin stainless steel or polished brass. The Ironmonger, Inc., Chicago.



**221. Cylindrical lever lockset**

The heavy-duty 800 Series ANSI Grade 1 model meets code requirements for accessibility for the handicapped. Comes in a wide range of finishes. Solid levers are standard and have no plastic appliques. Independent level spring prevents sag. Corbin Architectural Hardware, A Black & Decker Company, Berlin, Conn.



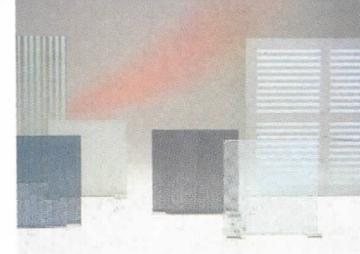
**222. Drawer slide**

The Accuride 2632, is only 1.48 in. high and 1/2 in. wide, described as the least-intrusive of drawer hardware. It provides the benefit of full extension for complete access to drawer depth. It has a 75-lb load rating and a rail disconnect for easy drawer removal. Ideal for cabinets, desks, and kitchen tables. Accuride, Santa Fe Springs, Calif.



**223. Gliding window**

Two movable sash with adjustable glides pivot into lock position. Interior is clear, unfinished pine. PermaShield exterior frame and sash designed to resist rust, pitting, or corrosion. Multiple locking system integrates top, middle, and bottom locks with a handle that is activated in one motion. Andersen Windows, Inc., Bayport, Minn.\*



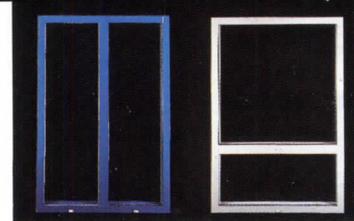
**224. Silkscreened glass**

Expanded graphics technologies create standard and custom silkscreened designs on architectural-glass lights as large as 84- by 122-in. Frit-enamel patterns can control light transmittance, reduce solar-heat gain, and fine-tune shading coefficients. Colors can match other building details. Tempglass, Perrysburg, Ohio.



**225. Steel door**

The new Series 5000 model differs from heavy intermediate design in three ways: it can be engineered and fabricated in larger sizes; door construction permits use of a wider array of hardware, including heavy-duty closure mechanisms; and the design will withstand increased traffic flow. Hope's Architectural Products, Inc., Jamestown, N. Y.



**226. Strip window**

The Equine models for strip and punched-opening applications offer consistent exterior sightlines on fixed and operable units. Offered in thermal and nonthermal designs. Manufactured in project-in, inswing casement, top-hinged inswing, and fixed types. Available in sizes up to 5 by 8 ft. Kawneer Company, Inc., Norcross, Ga.



**227. Windows**

Fibron construction employs an inner core of rigid Fiberglas thermal insulation and an outer skin of polyester resin reinforced with continuous-strand fiberglass. The sash is finished with a baked-on, two-part polyurethane coating. All windows feature double-pane insulating glass. Owens-Corning Fiberglas Corporation, Toledo, Ohio.



**228. Opening glass wall**

An exterior, bifolding French door system allows openings up to 16 ft. Latest model is a six-panel unit (3 + 3) that can be installed side by side or at a corner with a dividing post. For storefronts, restaurant dining spaces, and access to residential courtyards, decks, patios, and pool areas. Nana Windows & Doors, Mill Valley, Calif.

## 8 • DOORS & WINDOWS Products

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### 229. High-purity glass

Starphire is a glass of enhanced clarity and light transmission. Made with 15 times less iron than regular glass, it has no green cast. Transmits 90 percent of available visible light spectrum. Developed for furniture, mirrors, appliances, showcases, aquariums, photocopiers, and commercial-building entrances. PPG Industries, Pittsburgh.



### 230. Corner-opening casement

The French corner casement window, part of the Architect Series, opens to leave a post-free, unobstructed view at a structure's corner. When closed, the operable sashes make a secure weather-tight, meeting at the corner. Produced in customary weatherproof Pella cladding and finishes. Pella Corporation, Pella, Iowa.\*



### 231. Door hardware

The Images Collection of entrance locksets with coordinated interior hardware is available in contemporary and traditional styles, including sectional trim, outside decorative escutcheon trim, and decorative emergency locksets. Finishes include polished brass and polished chrome. Fits all standard wood and metal doors. Baldwin Brass, Reading, Pa.



### 232. Interior latchsets

The Builders' Selection line of six solid-brass knob and lever latchsets comes in traditional and contemporary designs. Available in polished brass, polished and satin chrome, and shaded bronze protected by a baked-on lacquer finish. Designed for doors with standard bore up to 2 1/8 in. Omnia Industries, Inc., Cedar Grove, N. J.



### 233. Entry door

Illusions is a door constructed of a compression-molded composite that has the appearance of real wood and can be finished with stain or a latex paint. It has foamed-in-place polyurethane core insulation and a weather-tight bottom sweep. Resists corrosion, dents, and scratches, and does not swell or shrink. Johnson Metal Products, Richmond, Ind.



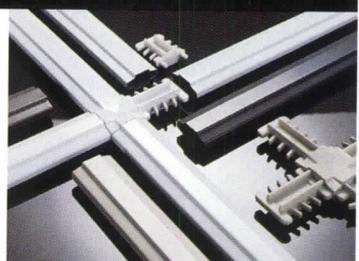
### 234. Folding glass walls

The Mirage system unlocks and opens at the flip of a finger and accordion-style glass panels fold to provide a 92 percent screened opening. The folding glass wall operates on a trolley system of stainless-steel bearings and nylon rollers. Aluminum frame in widths to 20 ft and heights up to 81 3/4 in. Skytech Systems, Bloomsburg, Pa.



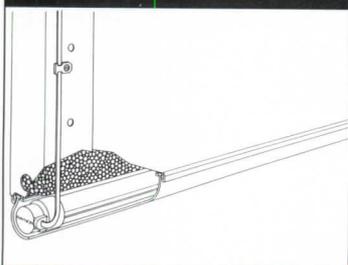
### 235. Glass exterior wall

The GlasWal IG insulated glass-wall system has double-sealed panels that permit large expanses of glass. The system allows an uninterrupted glass wall in which the outer glass sheets are mounted edge-to-edge, with no limit to wall length. Concave and convex segmented curves and true curves can be erected. W & W Sales Ltd., Spring Valley, N. Y.



### 236. Muntin bar

Allmetal's simulated-wood, contoured muntin bar for insulated windows or doors creates an attractive appearance while providing energy efficiency. Contoured and flat muntin is offered in a variety of colors and sizes. An external contoured muntin intersection provides true 90-deg grids. Allmetal, Inc., Itasca, Ill.



### 237. Garage door

Safety Sure is a sensing edge on the Raynor garage door that protects against entrapment by automatic garage doors. Installed along the leading edge of sectional or rolling steel doors, the edge causes the door to reverse direction when it comes in contact with an obstruction. Flexible to -32F. Raynor Garage Doors, Dixon, Ill.



### 238. Fire and smoke control

The fire-protection benefit of FS-3 Fire and Smoke Control System was demonstrated by engineering this intumescent material into door-sealing gaskets for a three-hour fire-rated door sealing system. The material foamed and expanded to fill the air space between door, frame, and saddle. Zero International, Inc., Bronx, N. Y.



### 239. Climate-control windows

Heat Mirror 66 windows protect interiors without heavy tints or shades. Heat Mirror 88 minimizes radiant heat loss while letting in the sun's light and warmth. Both lower noise levels, control condensation, and provide high UV protection to reduce fading of furniture, drapes, and carpets. Hurd Millwork Company, Inc., Medford, Wis.\*

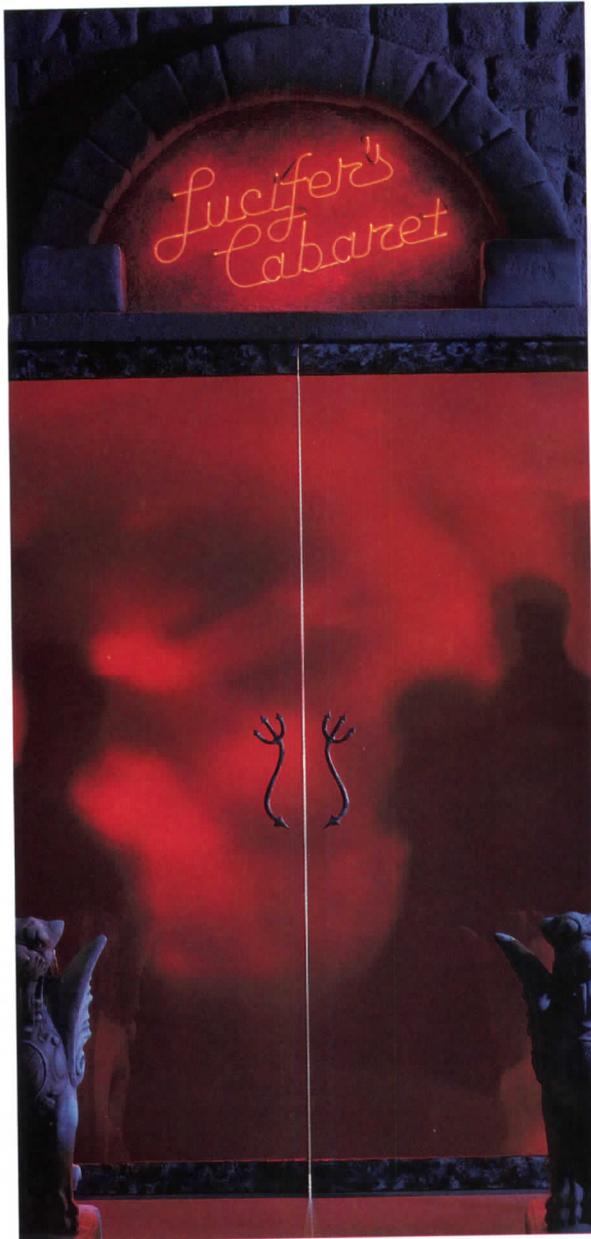


### 240. Customized exit device

Designed to reflect the pyramidal motif of the Steelcase Corporate Development Center, (Grand Rapids, Mich.), exit push-bars were made in a pyramidal shape and a coordinated color. The 33EL devices are fitted with electric latch retraction that uses security proximity-badge readers. Von Duprin, Inc., Indianapolis.

\* Product data on CAD disk

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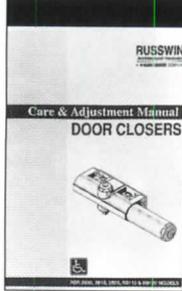
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# 8 • DOORS & WINDOWS Literature

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## 241. Door closers

A well-illustrated 12-page manual explains clearly how to care for and adjust the Russwin line of regular, top, jamb, and parallel-arm door closers. A troubleshooting page provides solutions to many closer problems. Maintenance advice assures smooth operation. Russwin Architectural Hardware, A Black & Decker Company, Berlin, Conn.



## 242. Glass-block door

The only door on the market made of glass block is detailed in an information sheet. An aluminum grid enables installation of blocks without mortar. The 3 1/8-in.-thick door provides a glowing entry without compromising security, privacy, energy efficiency. Hung on Soss invisible hinges. Innovative Building Products, Fort Worth, Tex.



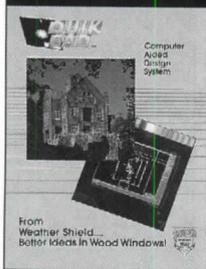
## 243. Wood doors

Distinctive interior and exterior doors in premium woods are illustrated and described in a 10-page brochure. Materials are walnut, maple, teak, mahogany, cherry, oak, redwood, and white fir. Panels are hand matched. Built on solid cores with floating construction. Edges sealed against moisture. Forms + Surfaces, Santa Barbara, Calif.



## 244. Key-management software

A leaflet sums up the operation of Keytek, an IBM-compatible program that allows easy management of one or more key systems. Supports all major key systems. Will prepare pinning schedules based on manufacturer's specifications and product types. Arrow Lock Mfg Co., Subsidiary of Securities Lock Group, Inc., Brooklyn, N. Y.\*



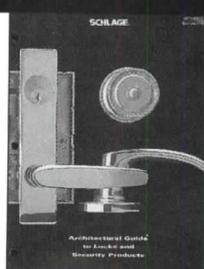
## 245. Window and door program

Quik-CAD computer-aided-design system will solve window and door specification problems. Folder describes how system allows user to insert window and door specifications plus elevations into any CAD drawing. Program operates under AutoCAD Release 10 on either fixed- or floppy-disk drives. Weather Shield Mfg., Inc. Medford, Wis.\*



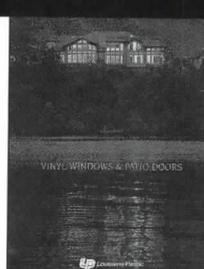
## 246. Aluminum protection

Anodized Plus, a protective coating for anodized architectural finishes, is a vertically orientated, two-step anodizing process combined with an organic film. Benefits are said to be finish consistency, protection of the aluminum substrate, superior color and gloss retention, and resistance to chemical corrosion. YKK AP America, Inc., Atlanta.



## 247. Security products

A 32-page catalog exhibits a full line of locks and security products. Included are A Series (residential and commercial); B Series (security deadbolts); D Series (heavy-duty commercial), and E Series (grip-handle entrance). Finishes include treatments of solid brass, bronze, and stainless steel. Schlage Lock Company, San Francisco.



## 248. Vinyl windows

A colorful, 16-page booklet tells the advantages of a complete line of vinyl windows and patio doors. Through-color eliminates scraping and painting. All models have insulating air chambers, fusion-welded frame and sash, 3/4-in.-thick insulating glass. Special shapes can be produced. Louisiana-Pacific Corp., Portland, Ore.



## 249. Commercial windows

New and replacement windows that meets standards for application in office buildings, hotels, institutions, and department stores are described in an illustrated booklet. Precise replication of historically significant designs a specialty. Broad range of custom colors. EFCO Corporation, Monett, Mo.\*



## 250. Windows

A 100-page catalog describes a complete line of casement, awning, double-hung, sliding, skylight, circular, elliptical, and arched windows. The Andersen CADD-I Version AC2.2 software helps architects select, specify, draw, and tabulate Andersen windows in plan, elevation, or detail modes. Andersen Windows, Inc., Bayport, Minn.\*



## 251. Industrial sliding door

The RapidSlide automatic industrial sliding-door system offers full or partial opening. Photoelectric safety devices in all models. Door sizes 4- to 12-ft-wide and 7- to 12-ft high. Four-page folder provides model descriptions and specifications. Horton Automatics, Division of Overhead Door Corporation, Corpus Christi, Tex.

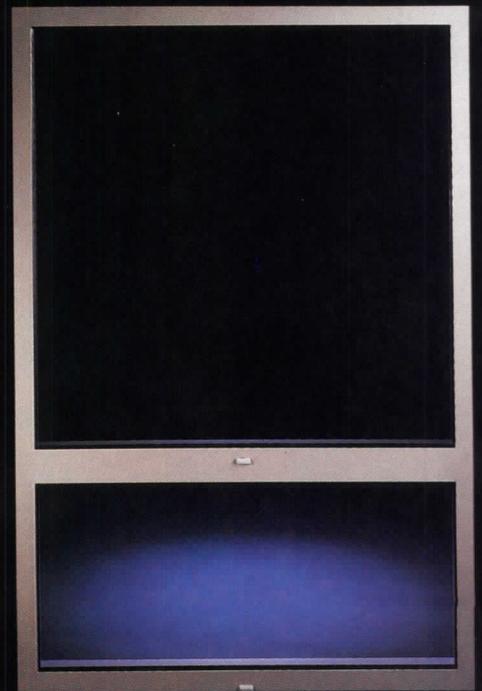
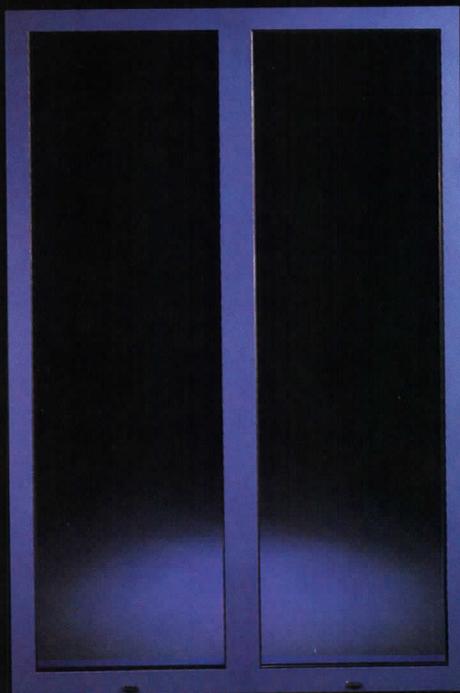
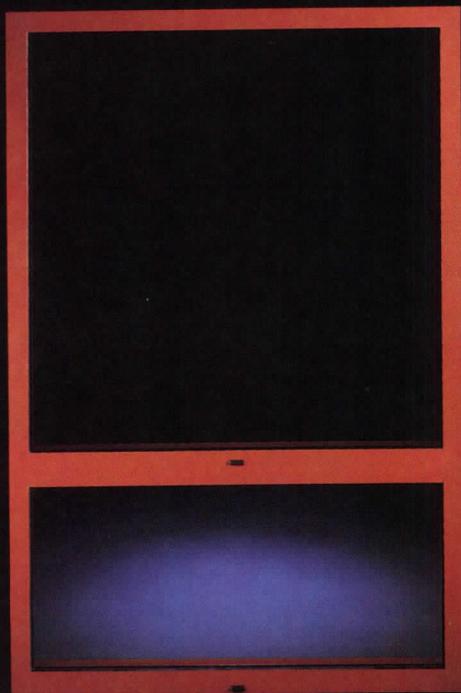


## 252. Sliding door

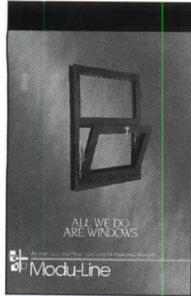
The Dura-Glide telescoping door opens 25 percent wider than standard sliding doors. Synchronized panels all move at the same time. Fits standard 6-in. jambs. ICU versions available. For emergency egress, full breakout of all panels is available. Widths up to 14 ft. Stanley Magic-Door, Division of Stanley Works, Farmington, Conn.

\* Product data on CAD disk

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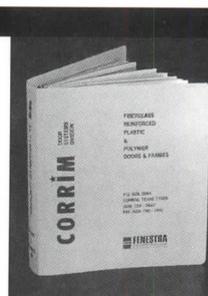
**265. Aluminum windows**

An eight-page brochure depicts a wide range of aluminum windows made for hard wear in commercial, industrial, and institutional applications. Included are casement and projected windows, top-hinged and vertically pivoted windows, institutional and detention windows, and sliding and hung windows. Modu-Line Windows, Inc., Wausau, Wis.\*



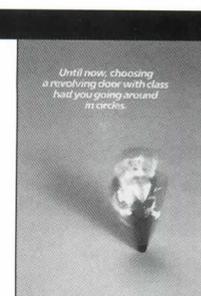
**266. Storefront framing**

An elaborate catalog displays the KLIL 2000 system of extruded-aluminum glass frames for storefronts, commercial buildings, shopping malls, facades, partitions, display standards, hotel lobbies, greenhouses, and sunrooms. A KLIL 2000 software program is available to architects for use on AutoCAD. PEP-CO, Cliffside Park, N. J.\*



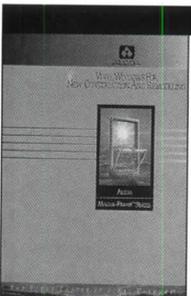
**267. Durable doors**

A three-ring binder describes lines of fiberglass (FRP) and thermoplastic (ABS) doors and frames, hardware, and custom-panel systems. Used widely in environments of a chemical nature, the doors are designed to resist chemicals, bacteria, radiation, rust, salt air, and termites. Corrim Door Systems, Division of Fenestra Corporation, Conroe, Tex.



**268. Revolving doors**

The Brite Vue revolving door, subject of a six-page folder, is built to design in satin- or mirror-polished stainless steel or muntz metal. The four-panel door is said to accommodate up to 2,400 passages per hour. Optional power device automatically moves wings to quarter-point position for positive seal. Kawneer Company, Inc., Norcross, Ga.



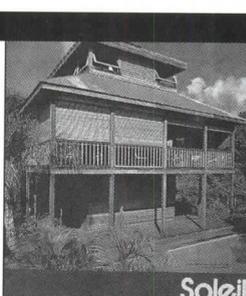
**269. Vinyl windows**

The Magna-Frame series of vinyl windows for new construction and remodeling embraces a complete line of single-hungs, sliders, picture windows, and architectural shapes. Units come in white, desert sand, and earth brown, with white interior. An eight-page catalog gives dimensional and performance data. Alcoa Vinyl Windows, Springboro, Ohio.



**270. Commercial screen door**

The Sereanguard service door has perforated slats forming a curtain that allows full visual access to interior spaces while providing security. Doors made of 22- or 20-gauge galvanized steel. Come in 186 powder-coat colors and standard baked-on gray polyester enamel. Information sheet. Cornell Iron Works, Inc., Mountaintop, Pa.



**271. Roll-down shutters**

Wood and extruded-aluminum shutters roll up and down to desired height and permit slats to be parted at regular intervals. Provide security as well as protection from sun and wind. Heights from 40 to 160 in. All shutters are field- or shop-trimmed to exact dimensions. Illustrated six-page folder. Soleil Shutters, Inc., Bronx, N. Y.



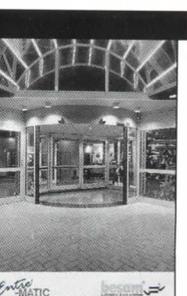
**272. Applied window film**

A laminate of polyester and metalized coatings bonded by adhesives, Vista window film is said to deny penetration to 99 percent of ultraviolet radiation. The result is reduced energy consumption and protection of furnishing fabrics, carpets, and finishes. Described in illustrated folder. Courtaulds Performance Films, Martinsville, Va.



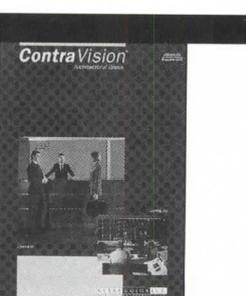
**273. Pocket doors**

The Johnson Pocket Door Frame Kit can create a space-saving door that slides into a wall, instead of swinging on a hinge. There are kits for doors up to 5-ft wide and 9-ft high. Works with all doors 1 1/8- to 1 3/4-in. thick. Folder shows examples of doors and illustrates the installation process step-by-step. L. E. Johnson Products, Inc., Elkhart, Ind.



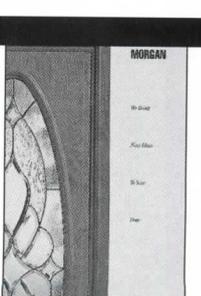
**274. Automatic revolving door**

The Besam Entre-Matic door has a two-wing revolving element that eliminates the need for a center shaft while providing greater volume of access. Wings act as a barrier to noise and weather. For such high-volume use as airports, hotels, and hospitals. Four-page brochure. Besam Automatic Door Systems, Inc., East Windsor, N. J.



**275. One-way glass**

ContraVision uses an opaque dot matrix to produce an image or color that is clearly visible on one side of the glass but optically disappears when viewed from the other side. Any bold image is reproducible. Design protected by encapsulation between layers of glass. Described in eight-page booklet. Cesar Color Inc., Burlingame, Calif.



**276. Wood doors**

A 32-page catalog illustrates an inclusive line of entry doors, sidelights and transoms, interior doors, French doors, patio doors, and bi-fold doors for homes. Some styles come in families for coordinated design throughout the house. Doors made of pine, fir, and oak. A line of mantels is also shown. Morgan Manufacturing, Oshkosh, Wis.

\* Product data on CAD disk

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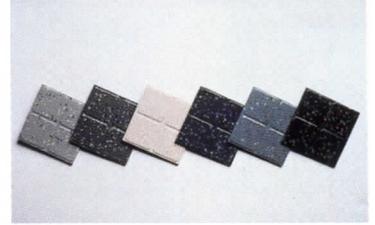
**277. Computerized paint specs**  
A CAD-format painting schedule that arranges selections by substrate for exterior and interior exposure is offered on 5 1/4- and 3 1/2-in. disks. Specs are compatible with Macintosh, ASCII, MultiMate, Word-Perfect, and similar systems. Automatic updating on disks for users. The Sherman-Williams Company, Cleveland.\*



**278. Wallcovering**  
Sierra is a new pattern in the Virectex line of 54-in. contract-vinyl wallcoverings. A Type II, Class A, 20-oz covering, Sierra is a small-scale, granite-flecked crackle print of light and mid-tone values over embossed natural texture. Comes in 25 colors derived from geological origins. Forbo Industries, Inc., Hazleton, Pa.



**279. Hardwood flooring**  
Designed especially for the kitchen, Contemporary Maple flooring is protected by Robbins' no-wax, ForEver polyurethane finish. Rated 12 percent harder than oak and southern maple. Comes in pieces 3/8 in.-thick, 3-in. wide, and 48-in. long that can be glued or nailed down on, above, or below ground, even over radiant-heating floors. Robbins, Cincinnati.



**280. Rubber tiles**  
Flecksibles is a line of six multi-colored rubber floor tiles designed for high-traffic areas, such as airports, lobbies, hospitals, and convention centers. The pattern is made up of flecks of two accent colors on a gray, beige, blue, or black background. Pattern extends completely through tile for long life. Endura Flooring, Waltham, Mass.



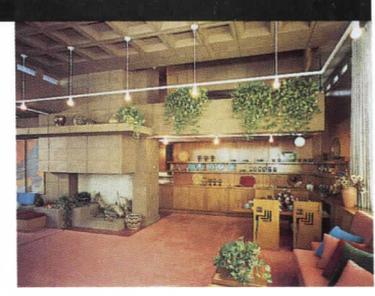
**281. Decorative wallcovering**  
The Displawall line of merchandise-display panels now offers marble-like surfaces for applications where a natural look is desired and durability and maintainability are needed. Granite designs are also available. Patterns produced by multistep print process. Displawall grooves are painted a harmonizing color to match the face. Marlite, Dover, Ohio.



**282. Fireplace surrounds**  
The New American Fireplace is a series of terra-cotta fireplace designs in natural earth, red, glazed antique white, and other glazed finishes. The surrounds will fit masonry, zero-clearance, and gas fireplaces. Broad range of styles. Modules can be installed by a tile setter, mason, or homeowner with common tools. Architerra Austin, Austin, Tex.



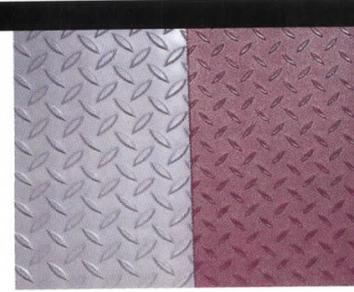
**283. Floor tiles**  
Mission, a new Marazzi line of pavers, comes in Manarola (white), Monterossa (light terracotta), Riomaggiore (burnt orange), and Vernazza (dusty mauve). Single-fired for strength and scratch resistance. Semimatte glazed; 12- by 12-in. Recommended for moderate- to heavy-traffic areas. American Marazzi Tile, Sunnyvale, Tex.



**284. Stone-look interiors**  
Dryvit exterior finish has been adapted for interior surfaces. Colors and textures such as Quartzite, Stone Mist, Demandit, and Metallics add interest to offices, stores, and institutions. Dryvit was used on the walls of a recreated Frank Lloyd Wright Usonian house on permanent display in Scottsdale, Arizona. Dryvit Systems, Inc., West Warwick, R. I.



**285. Wall tile**  
Combinations wall tile in a 4- by 4-in. size offers over 70,000 design possibilities in gloss and matte glazes. Tiles are 5/16 in. thick with cushion edge and self-spacers for perfect alignment with 1/16-in. grout joint. Ideal for healthcare facilities, schools, food courts, restaurants, swimming pools. American Olean Tile Company, Lansdale, Pa.



**286. Sheet-vinyl flooring**  
Lonplate II is a new, resilient sheet flooring that has an embossed diamond pattern that gives it the high-tech look of steel floor plates. Slip-resistant and long wearing, it is suggested for malls, restaurants, stores, and other commercial applications. It comes in 6- by 60-ft rolls and is offered in eight colors. Lonseal, Inc., Carson, Calif.



**287. Vinyl wallcovering**  
The new Tatami Collection of 54-in. vinyls incorporates vertical, diagonal, and triangular elements to complement corners and high ceilings in commercial and hospitality applications. Colors range from straw and grass to vivid floral patterns. Treated with antimicrobials to resist bacteria and mildew. Koroseal Wallcoverings, Fairlawn, Ohio.



**288. Tile stair tread**  
A pre-fabricated tread and riser system using Wausau terazzo floor tiles is now available. Tread tiles are 11 13/16-in. sq by 7/8-in. thick and weigh 10 lb. They feature three 1/2-in.-wide inserts that are filled with epoxy on site, and a beveled nosing. Matching risers custom-cut to specified height. Wausau Tile, Inc., Wausau, Wis.

\* Product data on CAD disk

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### 289. Reflective tile

Metal oxide embedded in the finish of glazed ceramic wall tiles produces soft reflections of surroundings. The Arum Metalloid Series tiles come in nine gold and three silver combinations of glaze on standard Chroma colors. Available in nine standard sizes, from 4 by 4 in. to 16 by 16 in., as well as a collection of trim. Buchtal, Roswell, Ga.



### 290. Marble tiles

Marble from Italy, Spain, Mexico, Portugal, and Taiwan is available in 20 colors that include snowy and creamy whites, pale grays, taupe, terra cottas, dark greens, and black. Ideal for floors and walls of residential and commercial projects. Material offered in 12 by 12 by 3/8 in. and custom sizes. Summitville Tiles, Inc., Summitville, Ohio.



### 291. Wall fabrics

Maharam has introduced two new collections to its Tek-Wall woven polyolefin line of materials, Tek-Wall/4 and Tek-Wall/5. The fabrics are designed to provide the healthcare industry with durable, washable wall coverings at modest cost. The two new collections offer a total of 182 colorations in a variety of textures. Maharam, New York City.



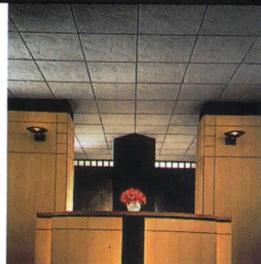
### 292. Sisal-look carpeting

The SisalWool Collection has three patterns typical of natural rough-textured sisal floorcoverings, but made of easy-on-your-feet wool. They are Agave, a herringbone pattern; Zanzibar, a prism design; and Belize, a basketweave. In bamboo, driftwood, hemp, and laurel colors. Karastan Bigelow, Div. of Fieldcrest Cannon, Inc., Greensboro, N. C.



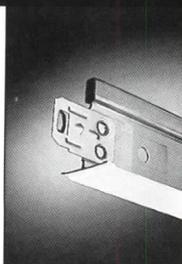
### 293. Vinyl-film surfacing

Belbien decorative film, produced with an adhesive backing, is designed as surfacing for walls and furniture. It can be applied to steel, plastics, wood, cement, dryboard—any flat and solid surface, interior and exterior. Its flexibility adapts to rounded surfaces. Offered in 150 pattern and color choices. Nishiyama Corporation of America, Great Neck, N. Y.



### 294. Acoustical ceiling

The Acoustone Sandrift ceiling panel was designed to capture the texture of the beach. Panels measure 2 by 2 ft and are 3/4-in. thick. Made of mineral fiber, they come in white and 24 colors. They have high NRC and STC ranges and carry Class A and a variety of fire ratings. Said to have high durability. USG Interiors, Inc., Chicago.



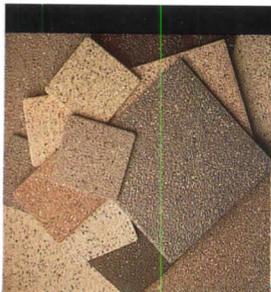
### 295. Seismic ceiling grid

The new 1200 system has a stainless-steel end tab coupled with a specially designed cross-tee slot so that components interlock to protect against lateral pullout. Compatible with 200 Snap-Grid system main runners and cross tees. The grid is rated for Seismic Zone 4 and can be installed in California. Chicago Metallic Corporation, Chicago.



### 296. Acoustical wall panels

Soundsoak Scores are 6- to 10-ft-high fabric-wrapped panels scored at 16-in. intervals to resemble individual modules. Custom scoring available from 12- to 60-in. intervals. Panels have mineral-fiber substrate. Available in fabric finishes from Soundsoak Woven line and Concert Collection. Armstrong World Industries, Inc., Lancaster, Pa.



### 297. Floor tile

KPT has added the Pompeii porcelain series to its line of heavy-commercial tiles. Pompeii tiles come with a textured surface in seven "environmental" colors that are compatible when mixed. Suitable for residential use. Available in 4- by 4-in. and 8- by 8-in. sizes, as well as 4 by 8 in. on special request. KPT USA, Bloomfield, Ind.



### 298. Hidden access panel

The Schluter-REMA door kit has four magnets and matching steel counterplates that attach to the back of tile module and to the perimeter of framed space to create concealed access to plumbing, heating and cooling ducts, and hidden vaults. Color-matched elastomeric sealant fills the grout space. Schluter-System Inc., Plattsburgh, N. Y.



### 299. Wall tile

Amaru Tile introduces Geo-Viola, an Italian ceramic wall tile in eight art deco-inspired silk-screened colorways with coordinating fabrics. To be used as accent borders. Abstract design comes in yellow, blue, green, and pink tones. Standard 3/8-in. thickness in two sizes, 8 by 8 in. and 4 by 8 in. Amaru Tile, Saxony Carpet Co., New York City.



### 300. Commercial carpet

Peerless International has introduced the Agenda, a level-loop graphic design that has been performance-certified by BASF for Class III (extra-heavy) commercial wear. Made of space-dyed and solution-dyed nylon. Comes with BASF's Zefwear 10-year carpet wear limited warranty. Peerless International, Acton Vale, Quebec.

For more information, write item numbers on Reader Service Cards.



**301. Concrete coating**

Sonoglaze CRU is a two-component aliphatic-urethane coating system for concrete floors that is resistant to chemicals, ultra-violet light, and abrasion. It is designed to seal, bind, strengthen, dustproof, and enhance the beauty of new or aged horizontal surfaces. VOC compliant. Sonneborn Building Products, Division of ChemRex, Inc., Minneapolis.



**302. Floor tiles**

Composition Plus is a vinyl-composition tile with increased vinyl content for better flexibility, lower porosity, higher abrasion resistance, and a greater static-load limit. Precise edge cutting makes for a seamless appearance. Made in 12- by 12-in., 1/8-in. gauge tiles in nine traditional and contemporary colors. VPI, Sheboygan, Wis.



**303. Agglomerate marble**

Dal-Tile announces the Dal-Marmitec Grani-Chip Series, which is manufactured in the style of marble. This fine-textured marble agglomerate is available in 12 colors, from subtle to bold. Recommended for residential and light-residential interior applications. Stocked in polished surface; other finishes can be special ordered. Dal-Tile, Dallas.



**304. Nylon carpet**

Security is a loop carpet made of DuPont Antron Lumena solution-dyed nylon that offers high durability and stain resistance for use in healthcare, corporate, education, and retail installations. Two coordinating patterns, Expressions and Imagery, come in a variety of organic earthtones and deepened chromas. J & J Industries, Dalton, Ga.



**305. Rubber flooring**

The Noremant Grano line of flooring has a textured surface and a non-directional scattering of rubber particles, making it a midpoint between classic studded floors and smooth-surface floors. Its slip-resistance recommends it for schools, housing for the elderly, hotels, and retail. Freudenberg Building Systems, Inc., Lawrence, Mass.



**306. Acrylic wall treatment**

Resistex is an acrylic copolymer-based textured coating for retrofit or new construction of interior walls in hotels, restaurants, offices, lobbies, and other areas where durability is desired. It is scrubable, vapor-permeable, and mildew-resistant. It can be sprayed or troweled on a variety of substrates. Parex, Incorporated, Redan, Ga.



**307. Hard-wear carpet**

S.P.E.C. 6' is a new line of 6-ft-wide carpet designed for applications where there is a premium on performance and durability, such as schools and high-traffic retail. Backing system is a reinforced-vinyl composition that resists delamination and raveling. Stratton Commercial Carpet, Division of Shaw Industries, Inc., Dalton, Ga.



**308. Monocottura tile**

The Designer line has added five colors—deep horizon, red sienna, teal, forest, and stonewash—to its five original colors of white, cadet blue, winestone, ebony, and black. Monocottura tiles are 8 by 8 in. and 5/16-in. deep. Designed for residential walls and floors and protected exterior areas. Mannington Ceramic Tile, Lexington, N. C.



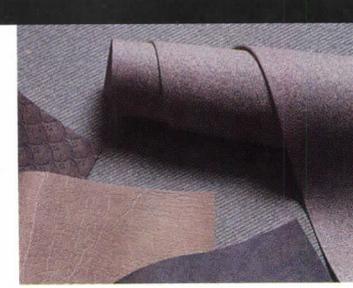
**309. Multicolor paint**

Plectone spray-on, water-based multicolor paint is now being marketed to architects and interior designers, as well as to paint contractors and dealers. Up to six hues and shades can duplicate fine fabric, cork, marble, slate, and granite. Specifiers control particle size, shape, and color. Seagraves Coatings Corp., Carlstadt, N. J.



**310. Vinyl-composition tile**

Complement pattern of Azrock vinyl-composition tile has random multicolor chips on neutral backgrounds. Through-thickness patterning lasts the life of the floor. Multicolors are glacier, canyon, mirage, sierra, capstone, and seaside, and matching solid colors. 12- by 12-in., 1/8-in. gauge. Azrock Industries, Inc., San Antonio, Tex.



**311. Covering fabrics**

The Specialties Collection includes wallcoverings and upholstery in lizard-and animal-skin look-alikes; gold, silver or copper Mylar; red, green, bright blue, black patent leather; and faux stones, Japanese rice paper, ceramic, clay, or marble. J. M. Lynne Company, Inc., Smithtown, N. Y.



**312. Interior panels**

DesignWall interior paneling is composed of Guilford of Maine FR 701 fabric laminated to 1/2-in.-thick recycled-fiber board. For offices, conference rooms, schools, and residential use. Quartz, cherry neutral, blue neutral, and gray mix color-ways. Boards are tackable and surface conceals tack holes. Homasote Company, West Trenton, N. J.

For more information, write item numbers on Reader Service Cards.



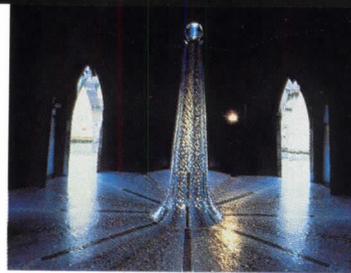
**313. Gypsum ceiling**

The Gridtex ceiling panel has a rigid, noncombustible, 5/16-in. gypsum core and a white, latex-finished textured surface. Designed for commercial interior and unexposed-exterior applications, its gypsum core is said to prevent sagging and warping problems, eliminating hold-down clips. Gold Bond Building Products, Charlotte, N. C.



**314. Perforated metal panels**

Industria perforated, corrugated aluminum panels can be placed in most 2- by 4-ft suspended ceiling-grid systems. The .024-in.-thick panels wipe clean, are noncombustible, and come perforated for functional levels of noise reduction or through-air movement. Standard panel finish is T-bar white. Ceiling Designs, Inc., Los Angeles.



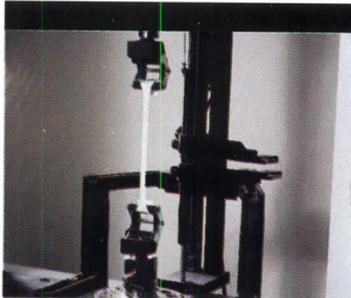
**315. Venetian-glass mosaics**

Vetrocolor and Oro 20- by 20-mm glass-mosaic tiles, created in the Venetian tradition, offer a palette of 87 colors to architects and designers. Glass-mosaic tiles experience virtually no water absorption. Colors will not fade or change in appearance because of environmental or chemical factors. Bisazza Mosaico, Newton, Mass.



**316. Paint remover**

Enviro Klean paint and coating removers rely on lower chemical concentrations and substitute solvents to reduce risks. Well-suited for lead-base paint abatement. Comes in gel and paste form. Gel suitable for masonry, concrete, plaster, wood, and metal. Paste works on heavy accumulations. ProSoCo., Inc., Kansas City, Kan.\*



**317. Elastomeric paint**

For interior or exterior walls, SToSilco Lastic is a silicone-emulsion elastomeric paint that is flexible enough to absorb movement without cracking. Applicable on sound concrete, masonry, plaster/stucco walls, and over new or old acrylic textured wall finishes. Said to provide water repellency and high-vapor permeability. Sto Industries, Atlanta.\*



**318. Epoxy floor topping**

Series 222 Deco-Tread is a seamless floor topping that combines multi-colored ceramic quartz aggregate with clear liquid epoxy to create a floor resistant to impact, abrasion, and chemicals. A smooth or textured finish can be obtained. Recommended for commercial buildings and correctional facilities. Themec Company, Inc., Kansas City, Mo.



**319. Non-slip flooring**

Tiny pellets of PVC embedded in clear and colored layers of pure vinyl provide a slip-resistant, finely pebbled surface on Rocklock sheet flooring. Recommended for high-traffic areas, locker rooms, indoor pool areas, and ramps. Available in 10 colors. Rocklock is covered by a 20-year wear warranty. Toli International, Commaek, N. Y.



**320. Linoleum**

The new Marmoleum Fresco is a collection of all-natural, marbled floor coverings in 12 light-hued colors, from neutrals to pastels. Created from natural ingredients, Marmoleum is said not to shrink, ripple, or gap, and to be easily cut to create inlays. Needs no special waxes and resists dirt and bacteria. Forbo Industries, Inc., Hazleton, Pa.



**321. Heavy-duty carpet**

Crown Colony carpeting from Shaw Commercial has a densely constructed tip shear pattern that is suited for high-traffic areas in healthcare, hospitality, and retail installations. The line is made of DuPont Antron Legacy BCF nylon, which offers good texture retention. Shaw Industries, Inc., Dalton, Ga.



**322. Multicolor paint**

Individual flecks of different colors are blended to create a spray paint of various compatible shades. Multispec 86 architectural spray is for interior application with conventional air-spray equipment. Multispec Fine Fleck is for one-pass airless spray. Multispec WaterBorne is for air and HVLP equipment. Multicolor Specialties, Inc., Cicero, Ill.\*



**323. Mosaics**

Using marbles, hard stones, and semiprecious stones, Lodestar produces floor medallions, tabletops, vanities, murals, and tiles. Designs range from ornate, traditional florals to art deco and art nouveau treatment to geometric patterns. In addition to stock designs, original art is possible. Lodestar, Statements in Stone, New York City.



**324. Interior coverings**

Concourse fabric is a tightly woven 80/20 blend of wool and nylon that can cover floors, walls, and other interior surfaces. Among backings available is UniBac for walls or floors and EZroll, which is designed to allow for easy movement of rolling traffic, such as wheelchairs and carts. Masks floor irregularities. Eurotex, Philadelphia.

\* Product data on CAD disk

# ANDRÉE PUTMAN

*Andrée Putman, ASID, interior designer  
and founder of Ecart, a Paris-based architecture and design firm.  
Putman strongly adheres to following her own beliefs.*

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"I believe in freedom. We should all have the strength and authority to think for ourselves, to turn against what is expected. To pick up something in the dust or in the worst condition. Maybe it's not miraculous for everyone, but certainly for you this object has immense charm. "I like mixing things.

Adding things that were never together before. Mixing rich materials with poor. Mixing something remarkably funny with a sad, boring material.

There is always balance, which is full of contradiction. But after all, life is full of contradiction. "Carpet is like the sand in the desert. It brings something very sensual that is not only visual. It has to do with sound. And the charm of walking barefoot. In so many places there's no other solution."

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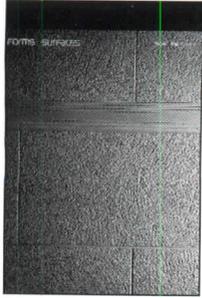


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## 9 • FINISHES Literature

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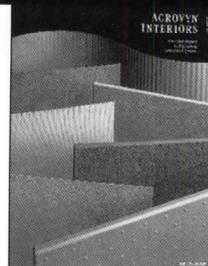
### 325. Wall-finish system

Paleo, a cementitious, glass-reinforced modular wall system, is described in a 12-page booklet. The travertine-look material comes as prefinished panels with a wide assortment of components to create new or renovated interiors in classic modes. Elements available in three textures and six colors. Forms + Surfaces, Santa Barbara, Calif.



### 326. Paint

A four-page booklet describes the full range of Pittsburgh paints, for base coats, interiors and exteriors, oil and latex, metal siding, epoxy coatings, masonry, wood stains, varnishes, fire-retarding, low-VOC, and heavy-duty. Card to request specific product information included. Pittsburgh Paints, PPG Industries, Inc., Pittsburgh.



### 327. Panels and wall coverings

A four-color, 16-page catalog describes the C/S Group's Acrovyn Interiors line of high-impact wall covering and prelaminated panels. Offered in 11 stone patterns, 72 solid colors, and 16 textures. Line includes column covers, door and frame protection, and accent molding. Class I fire-rated. Construction Specialties, Inc., Muncy, Pa.



### 328. Tile-setting materials

Mapei's 1993, 16-page architectural catalog introduces six new products and has the latest information on a line of mortars, additives, grouts, and specialty products for ceramic tile, marble, granite, and other natural stone. Detailed technical drawings illustrate typical installations. Many reference charts. Mapei Corporation, Elk Grove Village, Ill.\*



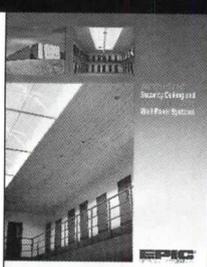
### 329. Solid-color stains

A four-color folder serves as information source and color chart for O.V.T. solid-color oil stains and O.V.T. solid-color acrylic stains. Stains are said to cover like paint and perform like stains. Provide protection to new or previously coated surfaces. Water-repellent, mildew-resistant. Samuel Cabot, Inc., Newburyport, Mass.



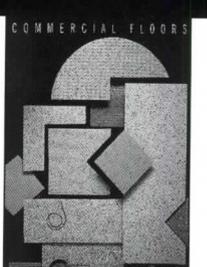
### 330. Metal coating

Visulure 2, a premium metalescent system for coating metal building components, is described in a four-page brochure. The coating, which uses Kynar/Hylar 5000, is a two-coat process. Both coats are coil-applied and baked on metal substrates. Twelve colors. The Glidden Company, a member of ICI Paints World Group, Westlake, Ohio.



### 331. Prison ceilings

A welded, double-panel acoustical insulation for medium- and maximum-security conditions is described in a four-page pamphlet. Other products are a single-panel design for minimum-security facilities and acoustical security-wall panels to reduce noise levels and reverberations in prisons. Epic Metals Corporation, Rankin, Pa.



### 332. Commercial vinyl floors

A 46-page catalog, rich in illustrations, charts, and specifications, demonstrates a broad range of sheet and tile flooring and accessories for educational, light industrial, hospital, retail, office, and hospitality applications. Detailed information on installation and maintenance. Armstrong World Industries, Inc., Lancaster, Pa.



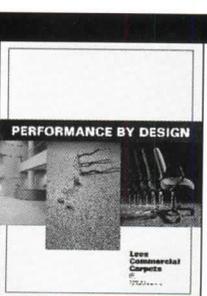
### 333. Glazed paver tile

An eight-page folder illustrates a broad variety of styles, patterns, colors, and sizes of a line of single-fired glazed tile for residential and moderate- to heavy-commercial applications indoors and outdoors. Marble and granite available. Products said to be resistant to impact and acid and designed to inhibit skidding. Interceramic USA, Carrollton, Tex.



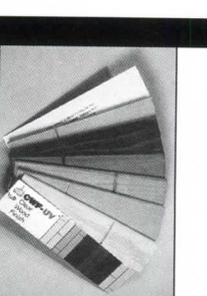
### 334. Vinyl sheet flooring

Congoleum's 1992/1993 Specifier's Guide is a 16-page, colorful examination of the range of the Marathon and Flor-Ever/Endurance lines of commercial vinyl-sheet flooring. Colors, performance characteristics, and physical data given in detail. Information on installation and maintenance included. Congoleum Corporation, Mercerville, N. J.



### 335. Heavy-duty carpet

Performance By Design is a six-page folder describing a line of carpeting for commercial use. The nylon pile is supported by Unibond thermoplastic backing. Uniplus System I includes an attached cushion and Uniplus System II is a Unibond carpet with a separate, high-density, rubber cushion. Lees Commercial Carpets, Greensboro, N. C.



### 336. Wood finishes

A fan-deck sample of wood chips demonstrates the effectiveness of CWF-UV wood finish in clear and tone preparations. Finish is resistant to sun and moisture. Products preserve and protect natural wood in new construction and restore the beauty of existing wood surfaces. For exterior use only. The Flood Company, Hudson, Ohio.

\* Product data on CAD disk

For more information,  
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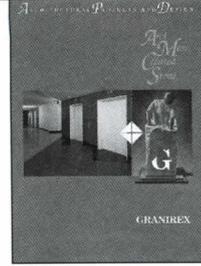
**337. Antistatic tile**  
Included in the 24-page Flexco catalog of floor coverings is a solid-vinyl tile of homogeneous construction that dissipates static electricity in hospital operating rooms, anesthesiology areas, computer rooms, and chemical laboratories where explosive elements are used and static electricity is a hazard. Flexco Company, Tuscumbia, Ala.



**338. Sports floors**  
Tuflex is a resilient rubber flooring that is slip- and spike-resistant and adaptable to weight-lifting areas. A folder describes its suitability for school gymnasiums, golf shops, locker rooms, and ice rinks. Flooring comes in 27- by 27-in. squares and 18 standard colors. Can be epoxy-sealed against moisture. Tuflex Rubber Products Flooring, Tampa, Fla.



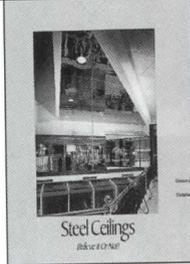
**339. Carpet specifying**  
The 18-page Allied Fibers Guide to Specifying Commercial Carpet includes everything from choosing an installation contractor to subfloor preparation and post-installation clean-up. Step-by-step specification worksheet and a complete glossary of terms is included. Free copy by calling 1-800-545-ANSO. Allied Fibers, Petersburg, Va.



**340. Agglomerate tiles**  
Folder describes marble and quartzite (granite) flooring made from 93 percent natural stone with a mineral-pigment/resin binder. Tiles are 3/8-in. thick, and come in 12-, 16-, and 24-in. squares and 12- by 24-in. rectangles. Slabs are 48- by 120-in. Polished, honed, and textured finishes available. Granirex, Inc., Thetford Mines, Quebec.



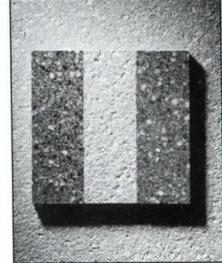
**341. Seamless floors and walls**  
A 16-page brochure describes aggregate-filled polymer floor systems for heavy industrial, retail, and other demanding applications. Many color schemes and terrazzo patterns available. Coatings, mastics, and reinforced-resin systems enhance the appearance and durability of walls. Master Builders, Inc. Beachwood, Ohio.



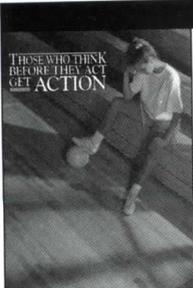
**342. Attenuation ceilings**  
A 12-page catalog details the variety and benefits of steel and aluminum ceiling panels. Available in metallic and painted finishes, panels can be smooth, textured, or perforated. Aluminum and stainless-steel sanitary systems create both ceilings and walls. Panels are durable, incombustible, damage-resistant. Steel Ceilings, Coshocton, Ohio.



**343. Antique lumber**  
Planks retrieved from structures 75 to 200 years old (mostly barns) are described in a four-page folder. After milling, the planks have the patina of wind, rain, sun, and wear and tear. Species include oak, poplar, American chestnut, cypress, hemlock, and white, yellow, and heart pine. Random widths, lengths to 12 ft. Aged Woods, Inc., York, Pa.



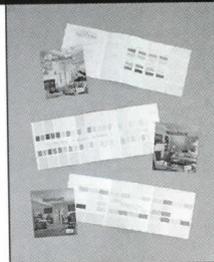
**344. Cast-marble tiles**  
Along with a catalog, PermaGrain offers a composite sample of its cast-marble floor tiles and wall panels. A 6- by 6-in. piece of tile, the sample shows three finish options: polished, honed, and textured. The range of 18 classic and contemporary cast-marble colors provides 52 design options. PermaGrain Products, Inc., Media, Pa.



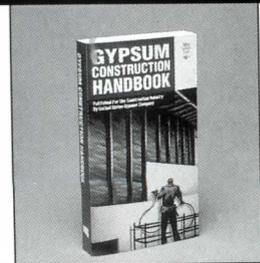
**345. Floors for active sports**  
Different activities need different floor systems for optimum performance to be realized. A four-page booklet describes five systems designed for handball courts, ballet, running tracks, gymnasiums, ballrooms, roller rinks, stages, and racquetball. Made from maple and other hardwoods. Action Floor Systems, Inc., Mercer, Wis.



**346. Italian tile**  
A 32-page Guide to Italian Ceramic Tile includes sections on types of tile and production processes; properties of ceramic tile and its suitability to different applications; designing with Italian tile; methods, materials, and basic steps of installation; maintenance of tiles; and how to go about buying tile. Italian Tile Center, New York City.



**347. Interior paints**  
Three six-page folders carry paint chips for Benjamin Moore's Regal AquaVelvet latex eggshell finish 319, Regal AquaPearl latex pearl finish 310, and Regal WallSatin latex interior flat 215. Literature also includes recommended substrates and preparation, drying times, and maintenance directions. Benjamin Moore & Co., Montvale, N. J.



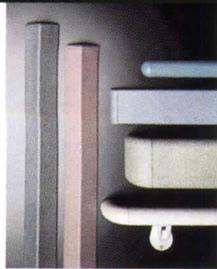
**348. Drywall handbook**  
The fourth edition of the Gypsum Construction Handbook is for sale at building-trade bookstores and by mail. The 528-page book is said to be the ultimate source of information on drywall construction technique, indispensable for persons working with drywall, cement board, and plaster. United States Gypsum Company, Chicago.\*

\* Product data on CAD disk



### 349. Custom wall system

A to-order installation for a large investment house involved 6,000 lin ft of movable interior walls. The result was a demountable partition system with slim muntins and Mullions and recessed wire-chase base and head. The project included doors decorated with ceramic-frit glass. Frames for the system were made of 18-gauge steel. Acme, Brooklyn, N. Y.



### 350. Wall protection

Handrails, crash rails, bumper guards, corner guards, and accent moldings are available in the new Acrovyn Collection of integrated stone and wood patterns available in 53 colorways. A clear top coat over the patterned vinyl increases abrasion resistance and repels stains and graffiti. Construction Specialties, Inc., Cranford, N. J.



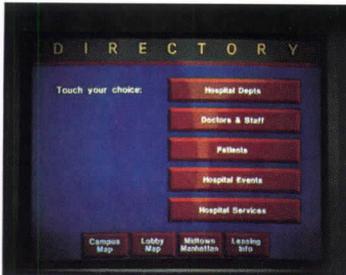
### 351. Solar screening

SunScreen shades for windows and glass doors reduce air-conditioning requirements by keeping out 70 percent of the sun's heat. Vinyl-coated fiberglass-mesh fabric protects glass surface from hot sun rays. Increases daytime privacy and reduces glare and furniture fading. Insulates in winter. Phifer Wire Products, Inc., Tuscaloosa, Ala.



### 352. Movable wall system

The Benchmark Series I floor-to-ceiling, unitized steel-wall system can be moved repeatedly without damage. Lay-in wiring is concealed in the base. Vertical raceways are in power panels with easily removed covers. Broad palette of trim colors, fabric coverings, and glazing. Dowcraft Movable Wall Division of Dowcraft Corporation, Falconer, N. Y.



### 353. Electronic wayfinding

New software and platform improvements are available for the Touchcom Computerized Directory and Wayfind System. The new configuration will be an update console connected to directory stations. The signage software offers owners new ways to distribute information. Digital Techniques, Inc.—Touchcom, Burlington, Mass.\*



### 354. Euro-style

Kemmlit has added Type C solid-core cubicles to its line of sanitary partitions and lockers. Type C partitions are said to be absolutely water-resistant, rot-proof, not prone to damage, and easy to clean. Construction is melamine-covered phenolic core with aluminum profiles. Cleanable with damp cloth. W & W Sales Ltd., Spring Valley, N. Y.



### 355. Graphics-support systems

Meroform tube-and-node display, exhibit, and signage-support components come in aluminum, colorful plastic, and mahogany-finished wood. Incandescent, neon, and fluorescent lighting can be integrated into the self-supporting system. MERO Systems Group, A Division of MERO Structures, Inc., Germantown, Wis.



### 356. Fireplaces

Taller and deeper than most conventional, factory-built fireplaces, the woodburning LBR-3824 and LBR-4324 measure 20-in. deep and 24-in. high, with screen openings of 38 or 43 in. Full brick-to-brick pattern refractory gives a realistic custom masonry look. Steel-bar fuel grate. Superior Fireplace Company, Fullerton, Calif.\*



### 357. Sun-control devices

A line of vertical and horizontal louvers is designed to reduce heat gain by 85 percent. Custom-fabricated, the controls do not come at the expense of natural light: glass areas can be increased. Offered in fixed and operating models that save energy both on air conditioning, as well as heating. Brown Manufacturing Company, Cranford, N. J.



### 358. Modular cabinets

A new Stacking System allows Robern M Series cabinets to be mounted one above the other on a wall, as well as side-to-side to create full-room mirrored storage. Cabinets are mirrored inside and out, and have interior power outlets. Units are 16-, 20-, and 24-in. wide and 30- to 40-in. high. Robern, Inc., Bensalem, Pa.



### 359. Lockers

Dual wardrobe lockers are designed to stack two high, but allow enough length for wrinkle-free storage of jackets, coats, skirts, and trousers in half the space of larger single units. Z-Locker interiors are resistant to staining and marring, and are fitted with garment hangers and door-number plates. Fiberesin Industries, Inc., Oconomowoc, Wis.



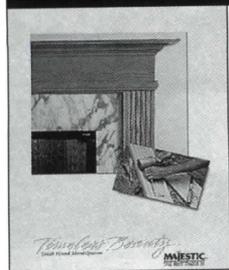
### 360. Toilet compartments

The Thriflington Series of toilet compartments offer an interesting alternative to architects, construction specifiers, and building owners. The design has won awards for flexibility, strength, and durability, superior vandal-resistance, and the user privacy provided by its 6-ft panels. Bobrick Washroom Equipment, Inc., North Hollywood, Calif.

\* Product data on CAD disk

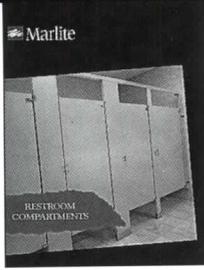
# 10 • SPECIALTIES Literature

For more information, write item numbers on Reader Service Cards.



### 361. Wood mantelpieces

A line of six mantels, three trim sets, and five mantel shelves in hardwood is described in a six-page folder. Units come finish-sanded, ready for stain or paint. Mantelpieces are affixed from the back with a heat-proof adhesive. Full-return mantels are designed to accommodate standard face brick. Majestic Fireplaces, Huntington, Ind.



### 362. Restroom compartments

All the elements to house toilets and urinals in public and semipublic restrooms are pictured and described in an eight-page booklet. Marlite lines are based on melamine-component panel and high-pressure laminate systems for partitions, doors, and screens. Die-cast hardware is chrome-plated. Marlite, Dover, Ohio.



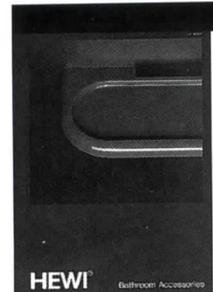
### 363. Movable partitions

A four-color, eight-page brochure describes several movable wall lines: the Corporate Executive and Designer series for upper-management offices; the Twinline for computer facilities and classrooms; and the Sounddivider for visual and acoustical privacy. (There is an AutoCAD program for the Sounddivider line.) Transwall Corp., West Chester, Pa.\*



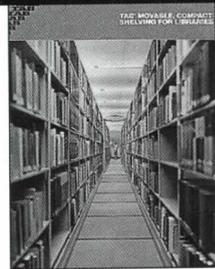
### 364. Extinguisher cabinets

The new Decorline and Economyline semirecessed and surface-mounted aluminum fire-extinguisher cabinets are described in a 16-page illustrated catalog. Cases will accommodate most 2 1/2-, 5-, and 10-lb ABC dry-chemical extinguishers. Corrosion-resistant and finished in white baked enamel. Samson Products, Bloomington, Minn.



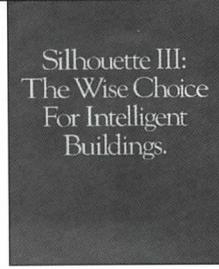
### 365. Bathroom accessories

A 12-page brochure, numbered US 150.00, contains specification information and full-color photographs on more than 60 bathroom products, including towel bars, paper holders, mirror units, shower rods, shelves, cup holders, and soap dishes. Nylon used in manufacture is colored throughout in 13 shades. HEWI, Inc., Lancaster, Pa.



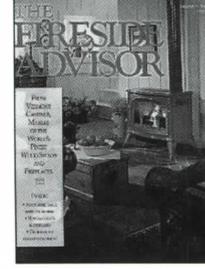
### 366. Library shelving

Library capacity can be doubled through the TAB Mobile Compact Shelving System of rail-mounted book- and records-storage units. The system, described in an eight-page booklet, gangs shelves that are not in use. Easy-to-operate mechanical or electrically assisted systems move shelves to create access. TAB Products Co., Palo Alto, Calif.



### 367. Movable office walls

The Silhouette III is a full-height, movable office-wall system that can be installed without drilling holes. A six-page folder describes its properties, which include 100 percent reusability. Single panels can be moved without disturbing adjacent panels. Large top and bottom channels for wiring. Virginia Metal Industries, Inc., Orange, Va.



### 368. Gas-heating stove

The Radiance Gas Stove, a cast-iron home heater in black, red, blue, or sand enamel, is cited in a 50-page Fireside Advisor catalog. Seen through a 22- by 15-in. fire-viewing area, its ceramic logs and glowing coals resemble a wood fire. Burns at 30,000-Btu-per-hour and can be installed on a combustible floor. Vermont Castings, Bethel, Vt.



### 369. British changing rooms

A colorful 10-page folder details products for disrobing. Benches, some with hook racks attached, hanger units with shelves and benches, single- and multiple-hook systems, hat racks, umbrella stands, lockable units, rod hangers, and captive hangers are featured. Available in red, yellow, black, brown, gray, and silver. A. J. Binns Ltd., Colchester, Vt.



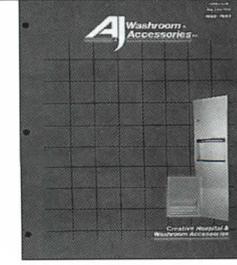
### 370. Sanitary fittings

Brass faucets, fixtures, and accessories, designed by Danish architect Arne Jacobsen for kitchen and bath, and washbasins for commercial and residential use, are illustrated and described in detail in a 20-page catalog. Included are single-control ceramic-disk faucets. Kroin Incorporated, Cambridge, Mass.



### 371. Display aids

The complete spectrum of chalkboards appears in a 48-page catalog. These include modular hung boards, factory-built boards, large wall chalkboards, boards with radius corners, horizontal sliding units, ruled and lettered chalkboards, all in a variety of surfaces. Bulletin boards included. Claridge Products and Equipment, Inc., Harrison, Ark.



### 372. Washroom accessories

The 48-page Creative Hospital & Washroom Accessories catalog embraces the full range of stainless-steel equipment for commercial, hospital, school, and hotel/motel washrooms. It includes a broad variety of products designed especially for the needs of the physically disabled. A & J Washroom Accessories Inc., New Windsor, N. Y.

\* Product data on CAD disk



**373. Restroom booths**

A 12-page Toilet Compartment Catalog introduces the 1010 StainlessSteel Series. All components feature graffiti- and corrosion-resistant, type-304, satin-finish stainless-steel surfaces mounted on particle board. Stiles are steel-core reinforced. Bobrick Washroom Equipment, Inc., North Hollywood, Calif.



**374. High-density filing**

A four-color brochure, No. SC-9142, uses 10 case studies to illustrate the ways to increase filing and storage capacity through the use of the movable aisle. Storage units for books, records, artifacts, supplies, and other objects are mounted face-to-face on rails and moved apart for access. Spacesaver Corporation, Fort Atkinson, Wis.



**375. Office wall system**

The DoubleWall, as described in an eight-page booklet, presents a monolithic look, yet is demountable and reconfigures easily. Steel wall panels are finished in baked-on polyester enamel. Other finishes available. Panels are 40-in. wide and 7- to 12-ft high. Walls come in full glass or steel/glass combination. Clestra Hauserman, Inc., Solon, Ohio.



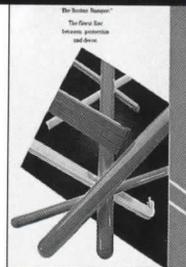
**376. Personal compartments**

A complete range of enclosures for toilets, showers, dressing, and urinals is illustrated in a 16-page catalog. The compartments are available in stainless steel, baked enamel, and plastic laminate, in configurations for overhead-braced, floor-mounted, and ceiling-hung installations. Complete range of hardware. Metpar Corp., Westbury, N. Y.



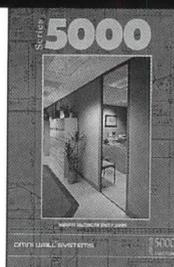
**377. Pedestrian shelter**

An eight-page booklet details a line of walkway covers, including a new soffited 2 3/4-in. decking. Walkways made of roll-formed, extruded, or acrylic decking come in several architectural finishes. Support systems accommodate the total range of applications. Mapes Industries, Inc., Lincoln, Neb.



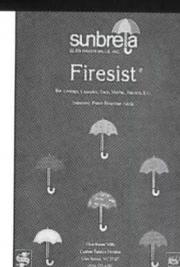
**378. Wall protection**

A catalog demonstrates the Boston Bumper, a wall-protection device made of flexible vinyl mounted on an aluminum channel. Custom color and matched ends and corners available in seven profiles. For walls, counters, check-out stations, and schools. Boston Retail Products, A Division of Boston Metal Products Corp., Medford, Mass.



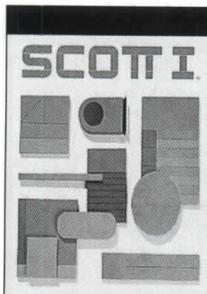
**379. Relocatable wall panels**

The Series 5000 wall system is pictured and described in a 12-page brochure. The floor-to-ceiling panels build interior spaces with solid panels, glass panels, and/or door panels. They are fitted with aluminum components for easy assembly. Panels come in fabric or vinyl facing. Accommodates wall furniture. Omni Wall, Inc., Clearwater, Fla.



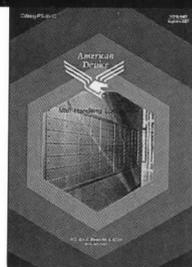
**380. Awning fabrics**

A swatch card demonstrates the variety of shades and the texture of Sunbrella Firesist acrylic awning fabric. Said to meet most fire codes for interior and exterior fabric use, to be color-fast and resistant to mildew, and not to melt-drip. Woven 46- in wide, 9.25 oz./sq yd. Glen Raven Mills, Inc., Custom Fabrics Division, Glen Raven, N. C.



**381. Signs**

The Scott One is a modular signing system comprised of a series of back frames, sub plates, and face plates that come in a broad range of sizes, shapes, and colors. Comes with dimensional molded-acrylic, surface-vinyl-mounted, and screen-printed letters, as well as engraved face plates. 10-page catalog. Scott Sign Systems, Inc., Tallavast, Fla.



**382. Mailboxes**

A wide range of mail-handling equipment for centralized delivery situations, such as apartment buildings and dormitories, is the subject of a 20-page catalog. Front- and rear-loading models. Lockable boxes for from three to 210 tenants. Directories and key keepers included. American Device Manufacturing Company, Steepleville, Ill.



**383. Awning systems**

An eight-page, full-color brochure includes application photos, functional diagrams, and specifications for fabrics, framing materials, and hardware for awnings, canopies, and back-lit signage. Also described is a line of self-storing, retractable awning systems for commercial and residential shelter. Astrup, Cleveland.

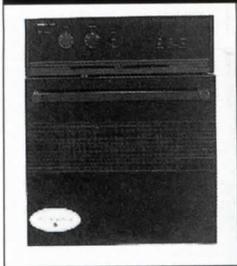


**384. Toilet partitions**

Information sheets give details on the Elegance line of hardwood toilet partitions and the Infinity line of solid-surface toilet compartments and shower stalls. Elegance units come in solid oak, cherry, walnut, or mahogany. Infinity units are said to be durable and easy to maintain. Comes in five colors. Columbia Partitions, Inc., Columbia, S. C.

# 11 • EQUIPMENT Products

For more information, write item numbers on Reader Service Cards.



### 385. Wall ovens

Jenn-Air has introduced two convection wall ovens in 24- and 27-in. widths, which offer the interior space of the next-size-larger unit. They come with three heavy-gauge wire racks with seven usable rack positions, triple-pane safety-glass windows, and porcelain interior. Jenn-Air Company, Indianapolis.



### 386. Kitchen cabinetry

The Ventnor door style in Quaker Maid cabinets comes in a Teal Mist finish that is available on oak, cherry, and birch. The hand-applied Mist finishes bring out the natural beauty of the wood and intensify grain patterns. The Ventnor door style also comes in all of the Quaker Maid finishes. Quaker Maid, A Division of WCI, Inc., Leesport, Pa.\*



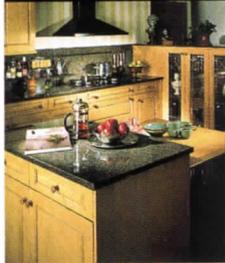
### 387. Trash compactor

The Broan 12-in.-wide trash compactor has been redesigned to accommodate 1/4-in. wood panels to give the space-saving unit a true built-in look. The compactors are still shipped with optional colored panels, which slide out if a laminate or wood panel is used. Broan Mfg. Co., Inc., Hartford, Wis.



### 388. Modular shelving

The Aurora Quik-Lok library shelving system is said to use less floor space than conventional filing cabinets. The modular components—vertical upright, shelf support, and shelf—can be assembled quickly by one person. Comes in a wide range of standard sizes, heights from 40 1/2 to 121 1/4 in., depths from 9 to 36 in. Richards-Wilcox, Aurora, Ill.



### 389. Finished cabinets

The Brandywine line of custom cabinetry features a raised-panel design that is available in maple, cherry, and oak. Frameless construction has concealed hinges, epoxy-coated drawer sides and roller tracks, adjustable shelves, and laminate interiors. Doors made with mortise-and-tenon joints. Wood-Mode, Inc., Kreamer, Pa.



### 390. Professional range

The Thermador 36-in. professional gas range has a 4.8-cu-ft oven that includes an infrared broiler. The cooktop comes with six 15,000-Btu/hr burners, or four burners with either grill or griddle. Burners have S-style grates that accommodate a wide variety of cookware sizes. Range available on special order. Thermador, Los Angeles.



### 391. Chef-quality cooktop

Gourmet Series of cooktops offers a commercial-level model for homes. Heavy-duty stainless-steel body available for natural gas or propane. The 36-in. model comes with six open burners, or four burners and charbroiler or griddle. The 48-in. model has eight burners, or six burners and charbroiler or griddle. Wolf Range Company, Compton, Calif.



### 392. Meeting-room equipment

A line of accessories to raise the productivity of meetings includes a wall-mounted easel that is easily stored, a communications shelf with room enough for a telephone and note-taking (pictured), and a schedule scanner that displays what group is using a meeting space for what reason and for what period. Nevers Industries, Minneapolis.



### 393. High kitchen-range hood

For kitchens with gabled or high ceilings, Abbaka can hand-build one-piece range hoods up to 98 in. tall for a 13-ft ceiling line. Extensions available for higher ceilings. All hoods equipped with double-blower, 600-cfm centrifugal exhausters. Wall-mount and island models from 36 to 54 in. Variety of finishes. Abbaka, San Francisco.



### 394. Accessible kitchen units

The Series AH compact kitchens combine range, refrigerator, and sink and have countertops adjustable from 28 to 36 in. The EHC60SC (pictured) has a 6.1-cu-ft refrigerator, two surface-cooking units, a nonduct exhaust hood, and optional built-in microwave. Kitchens engineered to meet ANSI 117.1. Dwyer Products Co., Michigan City, Ind.



### 395. Architectural weathervane

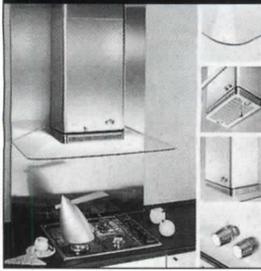
A flag-shaped weatherproof weathervane, inspired by banners used in the Palio celebration at Siena, is a Michael Graves design. Made of durable, sand-cast aluminum, the vane is sectioned into deep reds and soldier blues accented with yellow stars and stripes. 25-in. high, 20 3/4-in. long. \$225. The Markuse Corporation, Woburn, Mass.



### 396. Closet storage system

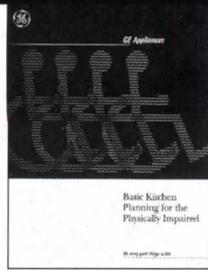
The Easy Track system for organizing closets includes rods, shelves, doors, drawers, cubes, and trays that can be arranged for optimum efficiency. System is installable with screwdriver, level, and hacksaw. Components are made of sturdy particleboard with a durable white-laminate finish. Laminations, Inc., Holland, Mich.

\* Product data on CAD disk



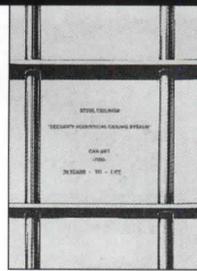
### 397. Range hoods

An imported line of 20 wall-mounted and ceiling-hung motor-powered range hoods is described and illustrated in a folder. Most models available in stainless steel, black, or white. Equipped with washable filters in stainless steel or aluminum. Full metal, fire-retardant construction. The Best Consortium, Inc., Lake Success, N. Y.



### 398. Kitchens for the disabled

Two brochures treat kitchen design for the handicapped. Appliance Help for Those With Special Needs tells about Braille controls for electrically powered appliances. Basic Kitchen Planning for the Physically Impaired has a sample layout and advice on placing equipment to meet special needs. GE Appliances, Louisville, Ky.



### 399. Pilfer-resistant ceilings

The Security Acoustical Ceiling System, described in a six-page brochure, is designed for prisons, psychiatric hospitals, and correctional facilities. It is said to be economical, abuse-resistant, and non-accessible, with a sound absorbent rating of up to .95 N.R.C. Made in 20- and 24-gauge galvanized steel. Steel Ceilings, Coshocton, Ohio.



### 400. Built-in appliances

A 40-page catalog displays a wide selection of German-made single and double built-under and wall ovens; ceramic, cast-iron, and gas cooktops; and cooking accessories such as a deep fryer, barbecue, steam cookers, or griddle. Dishwashers, washing machines and tumble driers can also be built in. Miele Appliances, Inc., Somerset, N. J.



### 401. Institutional laundries

A four-color brochure, On-Premise Laundry Equipment, describes a line of drying tumblers and flatwork finishers for the large volume of laundry encountered in hotel/motel, restaurant, school/university, correctional, and athletic facilities. Includes selection and specification guide. Huebsch Originators, Ripon, Wis.



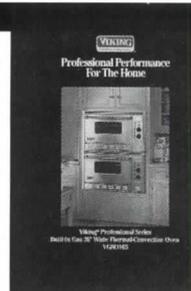
### 402. Special equipment

Refrigeration Concepts, a 10-page catalog, features a line of refrigerators, freezers, ice makers, combination appliances, beer tappers, and wine closets. Cabinets and doors are 22-gauge steel covered with baked acrylic enamel. Most models have fan-cooled condensers and can be built-in under counters. Marvel Industries, Richmond, Ind.



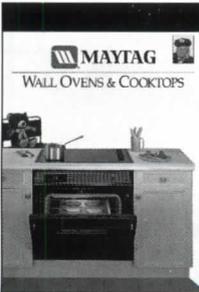
### 403. Roof safety anchor

The Pro-Bel fall-arrest system, described in a four-page catalog, is based on the patented U-bar safety anchor to provide the final link between a safety line and a structure. Designed to handle all loads of a fall. Suited to new construction and adaptable to existing buildings. Pro-Bel Enterprises, Ltd., Don Mills, Ontario.



### 404. Thermal-convection oven

The VSGO 165 is a built-in gas, 36-in.-wide thermal-convection oven with a 3.3-cu-ft capacity. A six-page catalog describes its six operation modes, combinations of conventional baking, 1,500 F infra-red broiling, and convection baking. Stainless-steel. Viking Range Corporation, Greenwood, Miss.



### 405. Wall ovens and cooktops

An eight-page catalog describes a line of electric and gas built-in ovens and cooktops. Another Maytag booklet, Smart Solutions to Problem Kitchens: A Professional's Portfolio, provides step-by-step advice for kitchen remodeling. It includes 15 before-and-after projects and advice on hiring professional design help. Maytag Company, Newton, Iowa.



### 406. Kitchen appliances

A distributor of residential kitchen equipment provides information on high-design European and domestic appliances. Among them are Asko washers, driers, and dishwashers from Sweden and the Blanco line of sinks, faucets, and cooktops. The condenser drier needs no vent. D'Elia Associates, New York City.



### 407. Fume hoods

A 96-page, color catalog details the full line of Protector laboratory fume hoods and accessories. These include fiberglass hoods and specialty hoods. Among accessories are base cabinets, work surfaces, and fixtures. Cutaway illustrations demonstrate the operation of hoods and other equipment. Labconco Corporation, Kansas City, Mo.



### 408. Traditional ranges

Cooking appliances reminiscent of early 20th-century models are described in a catalog that includes stoves that derive heat from gas, electricity, wood, or coal. Widths from 29 3/4 to 49 in. Coal and wood models offer optional reservoir for heating water. Trim in white porcelain and nickel. Heartland Appliances, Inc., Kitchener, Ontario.

## 12 • FURNISHINGS Products

For more information, write item numbers on Reader Service Cards.



### 409. Patient chair

A stable-base rocker made of upholstered solid red oak has a base that remains stationary while only the upper seat rocks. Ballbearing mechanism of Olive's Chair reduces stress on patients' joints. Stable base preserves chair life and minimizes wear on carpets and flooring. Designed for rigors of healthcare. Adden Furniture, Inc., Lowell, Mass.



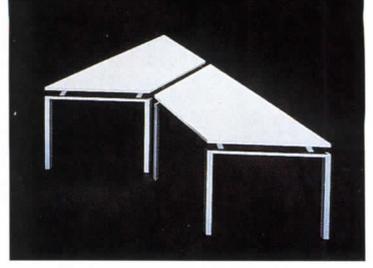
### 410. Stand-up workstation

A high desk is new to the Agenda line of furniture. It comes in two heights and includes a pencil drawer, open shelving, storage cabinet with doors, and a footrest. Can be used alone or in combination with pedestals on one or both sides and with overhead storage to create a complete workstation. Halcon Corporation, Stewartville, Minn.



### 411. Healthy chairs

The Credo 3000 Series is designed to make sitting a beneficial experience. Chairs offer adjustable seat height, back height, arm rests, and tilt tension. The line includes eight task/managerial chairs and three complementary side/conference chairs. An optional feature on all chairs is an adjustable headrest. HAG, Inc., Greensboro, N. C.



### 412. Work tables

Designed for conference rooms, training areas, or group work areas, the Mosaico tables have rectangular and trapezoidal tops that interlock to form a wide variety of polygonal shapes. Tops are Unifor standard laminates and veneers. Aluminum legs and undersides are painted with baked epoxy powders. Unifor, Inc., Long Island City, N. Y.



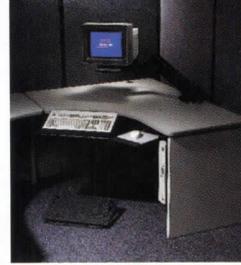
### 413. Casegoods

Marlowe Series desks, credenzas, and storage units are contemporary pieces designed for mid-management and private offices. Credenzas accommodate computer workstations. Available in cherry and maple, top options include bow fronts, ebonized inlaid reveal, and etched-metal surfaces. Lunstead, A Haworth Portfolio Company, Holland, Mich.\*



### 414. Rugged textiles

For architects and designers who must have the perfect color for wallcovering or upholstery, Xorel fabrics are now available in 1,690 colors. Each Carnegie sales office has a Xorel blanket (pictured) that shows most of the hues. Material is stain-resistant, puncturable, nontoxic, flame-retardant. Carnegie, Rockville Centre, N. Y.



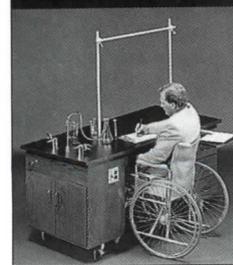
### 415. Work-station supports

ErgoActive Series holders for computer equipment, controlled by finger touch, place the elements in the most productive position for each user. MA28 VDT arm offers three-dimensional positioning. EK75 keyboard tray positions for efficiency and moves under work surface when not in use. Ergo Systems Inc., East Hartford, Conn.



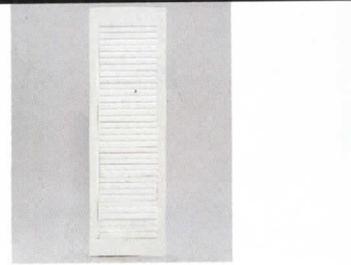
### 416. Furnishings fabric

Ebb & Flo is a combination of texture, line, and pattern in wool-jacquard weave designed for contract, residential, and hospitality upholstery applications. Palette includes wishbone/white, camel/oxford, and greige/oxford. Made of worsted wool, the design has a small-scale repeat. Gretchen Bellinger, Cohoes, N. Y.



### 417. Mobile laboratory unit

A movable desk fitted for wheelchair-bound instructors of chemistry or biology comes equipped with a cold-water supply, gas cock, 120V wiring, sink, and an aluminum cross-bar assembly. Made of Appalachian red oak with a work-top of 1-in.-thick black Chemsurf or Rhearesin material. Drawers on both sides. CampbellRhea, Paris, Tenn.\*



### 418. Flush-face shutters

The latest in a broad range of louvered shutters is the Architectonic Shutter. Its lines are uninterrupted by the control bar, which is recessed in the stile. Shutters are available in many forms, shapes, and sizes, with louver profiles that include flat, curved, narrow, wide, and fixed, and tops in fan, rake, and arch configurations. Pinecrest, Minneapolis.



### 419. Neutra chair

The Boomerang chair, designed by Richard Neutra in 1951, has been reissued by ICF as part of the Neutra furniture line. The chair can be specified in a variety of wood colors, with webbing available in bright red, orange, yellow, green, blue, tan, and black. For indoors or outdoors. International Contract Furnishings, Inc. New York City.



### 420. Office furniture

The Miller ergonomic workstation is designed for multiuse by shift workers. The furniture is fully adjustable, from the electrical height-adjustable surface to the fully articulating keyboard tray to the Equa VDT high-back chair. The combination allows control, support, and comfort for every user of the station. Herman Miller, Inc., Zeeland, Mich.\*

\* Product data on CAD disk



**421. Office system**

Panels, freestanding desks, file cabinets, and bookcases comprise the Premise collection of office furniture. The panels feature "integrated alignment," which is said to eliminate visible connecting hardware. Work surfaces have radius edges. Haworth, Inc., Holland, Mich. \*



**422. Table**

Dakota Jackson's Ariel table is constructed from natural straight-grain ash and has black-lacquer accents and edges. The 72- by 36-in. table top can hold two 18-in. extension leaves and is supported by two stationary pedestals. Custom wood and finish variations can be specified. Dakota Jackson, New York City.



**423. Wood chair**

The seat and back rests of the Bola collection of side and arm chairs can now be specified in a variety of wood finishes. Arm rests and structural frames come in bright colors. Glides allow the chairs to slide on carpets or hard floors, and a retractable gang permits stacking. Fixtures Furniture, Kansas City, Mo.



**424. Training tables**

The tables shown here are part of the manufacturer's Tutor office-furniture system. Tops are seamless surfaces of cast urethane. The tables can be used in conjunction with a variety of computer-support units, which come equipped with a concealed wire-management system. Howe Furniture Corp., Trumbull, Conn.



**425. Concealed beds**

A line of space-saving folding beds can now be specified with System 2000 cabinetry—modular drawer, shelf, and display units. The storage units are made of plastic laminate and come in three colors: white, almond, and washed oak. Murphy Bed Co., Inc., Farmingdale, N. Y.



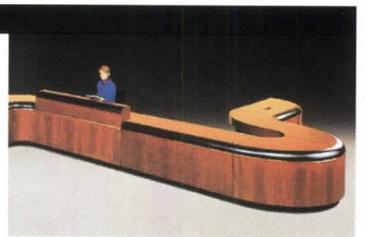
**426. Side chair**

The Willow chair designed by Timothy deFiebre has a solid maple frame and a laser-cut back rail. Intended for pull-up seating applications, the chair can be specified with a wood or upholstered seat. A variety of wood finishes is available. Brickel Associates, Inc., New York City.



**427. Children's play furniture**

A jungle-theme pattern has been added to this line of children's play furniture intended for use in hospital, library, and retail waiting areas. Low-voltage lighting is standard; options include slides, giant clocks, and fun mirrors. Playscapes, Inc. Children's Environments, Madison, Wis.



**428. Free-form circulation**

Allusion is a collection of modular library-furniture components that is available in cherry, light oak, natural oak, and mahogany with brass accents. The units come in 39-in. standing or 29-in. seating heights and in 36- or 72-in. depths. Gaylord Bros., Syracuse, N. Y.



**429. Walk-off grating**

The Drain-Well II recessed grating system is constructed of aluminum-alloy rail sections with radiused corrugations for slip resistance and easier dirt removal. The treads are 0.8-in. wide and are spaced 3/16-in. apart. Pawling Corp., Pawling, N. Y.



**430. Pedestals**

A line of wood or plaster table-base pedestals is based on the design of the Tuscan column capital, and comes complete with a projecting astragal and entasis. A plain or fluted shaft can be specified. Chadsworth Columns, Goldsboro, N. C.



**431. Fabric**

Ave is said to be inspired by the work of Antonio Gaudi. Made from 100 percent worsted wool, the fabric has a calendar finish that gives a luminous sheen. The fabric is 56-in. wide. Unika Vaey USA, Orangeburg, N. Y.



**432. Adjustable workstation**

A hand crank allows this new workstation to be adjusted to heights between 24 and 34 in. The unit comes in widths of 48 and 60 in. and is 30-in. deep. Surface grommets and covered leg channels conceal wires and cables. The Marvel Group, Inc., Chicago.

\* Product data on CAD disk

For more information, write item numbers on Reader Service Cards.



**433. Decorative fabric**

Metropolis is an art deco design, an abstract city-scape, adapted from a drawing for a textile from the 1920s. Made of 70 percent viscose and 30 percent cotton in cut and uncut velvet, it is available in three colorways. Appropriate for light-use contract environments. Schumacher, New York City.



**434. Casual furniture**

Reminiscent of the Adirondack chair, the Monterey lounge has wood arms and back rails as dominant features. Zinc castings link the upholstery frame with the arm and back. Arms come in a variety of finishes. The series includes a lounge, loveseat, and sofa, and a small settee. Metropolitan Furniture Corporation, Burlingame, Calif.



**435. Upholstery fabric**

A new Donghia upholstery pattern, Soissons, is made up of narrow stripes intersected by tiny floating squares and triangles. Comes in 11 colorways. Woven from a 65/35 blend of cotton and polyester, the pattern is produced in 55-in. width with a 6 1/2-in. vertical repeat and 12 3/4-in. horizontal repeat. Donghia Textiles, New York City.



**436. Office furniture**

Additions to the Myrtle traditional and contemporary line of executive office furniture include an electronic work table, a corner-unit surface and executive-height work bridge that complement the work table, and freestanding and credenza bookcases with beveled-glass doors. Myrtle, A Haworth Portfolio Company, Kalamazoo, Mich.\*



**437. Commercial furniture**

The Downtown lounge was designed to demonstrate both efficiency and comfort. On the outside, the upholstery is taut and stretched closely to the frame. On the inside, it is generously cushioned. Maple-frame lounge is 30 1/4 in. wide, 28 3/4 in. high, and 29 in. deep. Available as settee in 60- and 70-in. widths. Brickel, New York City.



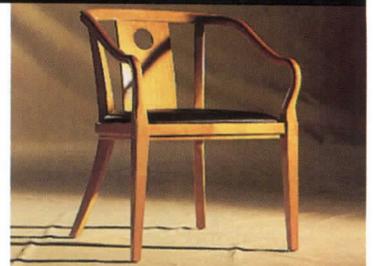
**438. Upholstery materials**

Brunschwig has introduced four durable, moderately priced fabrics for hospitality and executive-suite application. Ambroise Tapestry is a cotton reproduction of 17th-century upholstery fabric. Deco Rose is a cubist pattern in mohair. Brigham mohair is a figured velvet. Polo is an antiqued-finish cowhide. Brunschwig & Fils, New York City.



**439. Pull-up chair**

The DeTriana chair, designed by Perry King and Santiago Miranda, is made of beechwood, has an upholstered seat, and is available in DesignTex and Atelier International fabrics, vinyls, and leathers. Wood finishes include natural, mahogany, pear, honey, and ebony stains on beech. Atelier International Ltd., Long Island City, N. Y.



**440. Side chair**

The Helios collection of seven office chairs of related theme has been introduced by Alma. They vary in the use of geometric shapes in their design. The Helios/Sphere has a spherical shape in the back insert and a honey finish. The Helios/Ribbed has a six-ribbed back and is finished in black aniline. Alma Desk, High Point, N. C.



**441. Adjustable work surfaces**

Worksurfaces compatible with any Steelcase system come in manually and electrically adjustable heights. Single worksurfaces have a range of 23 to 35 in. Dual surfaces adjust 5 in. above or below the monitor surface. Sit-stand models have a range of 23 to 42 in. All meet or exceed ANSI recommendations. Steelcase, Grand Rapids, Mich.\*



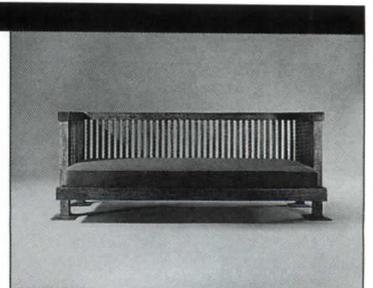
**442. Office storage**

Kwik-File Marcadet cabinets offer space-saving opportunities and flexibility. Sliding tambour doors do not project into aisle clearances. End-tab filing offers twice the capacity of lateral files. Interchangeable components can store binders, diskettes, suspended files, and multimedia equipment. Kwik-File, Inc., Minneapolis.



**443. Contract wall hangings**

Tapestries for offices, office-building lobbies, hotels, and institutions combine old-world artistic traditions with new-world technology to produce works of art with appealing contemporary graphic designs. The designers have produced new subject matter, colors, and fabric combinations. Renaissance Woven Art, CSI, New York City.



**444. Frank Lloyd Wright sofa**

The spindle couch designed in 1912 by Frank Lloyd Wright for a house in Aurora, Ill., has been reproduced by Heinz & Co. in authentic detail. Like the original, it is constructed of quarter-sawn oak to bring out the flake and radial grain. Quarter-sawn board also is said to provide more stability. Grand River Guild, Grand Rapids, Mich.

\* Product data on CAD disk



**445. Office seating**

The Assisa swivel-tilt office chair has an articulating back that adjusts to a variety of positions. A lockable knee-tilt mechanism enables the user to properly lean back in the chair. The two-piece injection-molded polypropylene shell has an upholstered seat and back. Vecta, Grand Prairie, Texas.



**446. Etched glass**

The decorative glass shown here consists of three layers of 1/2-in. thick etched plate glass assembled into an 18-in. by 24-in. by 6-in. mural of the Southeastern United States. Other custom designs incorporate sandblasting and color tiles. Palmer-Pohlman Studio, Inc., Doraville, Ga.



**447. Architectural casework**

Part of the manufacturer's line of custom cabinetry, a new fluted key-stone design can be used as both a window valance and a decorative feature of book wall cabinetry, while the Palladium Pediment, a 15-in.-high arch, can be used atop a corner cabinet. New beaded and dentil fascia assemblies are also available. Rutt, Goodville, Pa.



**448. Upholstery**

Menswear designer Jhane Barnes created Chronology, a collection of four highly textured upholstery fabrics and one multipurpose fabric: Infinity, a chenille stripe; Continuum, a "handwoven" pattern; Lineage, a wool/nylon blend; Era, a tweedlike fabric; and Transition, a solid with an iridescent sheen. KnollTextiles, New York City.\*



**449. Power-protection system**

Steelcase has joined with NPS, manufacturer of the Smartwall power processor, to provide a system of power protection for electrically networked offices. NPS's power systems are now incorporated into Steelcase furniture panels, thereby eliminating unnecessary wiring and "shoebox" devices. Steelcase, Inc., Grand Rapids, Mich.\*



**450. Oversized office chair**

The +Size chair has a 26-in. wide seat—7 in. wider than the manufacturer's standard chair seat—that is reinforced with a steel plate. Oversized backrests are 15 1/2-in. wide, 16 1/2-in. high, and 3-in. thick. Biofit Engineered Seating, Inc., Waterville, Ohio.



**451. Panel system**

A new panel system is intended to coordinate with the manufacturer's Connections collection of desks. Standard features include enlarged electrical/communications raceways, flipper door cabinets, and postformed waterfall-edge worksurfaces. GF Office Furniture, Ltd., Canfield, Ohio.\*



**452. Drapery fabric**

Visa, a 100-percent polyester fabric intended for drapery and bedspread applications, has flame-resistant properties. Other benefits of fabric construction are color retention and soil resistance, according to the manufacturer. Milliken & Company, Spartanburg, S. C.



**453. Office furniture**

The Eco Group of wood office furniture and seating is intended for use in middle-management offices. The furniture comes in a choice of 29 stains and 20 Tinacoat colors, the manufacturer's three-step catalyzed coating process which consists of solid and metallicized paint finishes with a polyurethane clearcoat. Geiger International, Atlanta, Ga.



**454. Rocking chair**

A rocking chair intended for use in healthcare facilities has a solid-cherry frame. Cushions come in either wool upholstery or simulated leather and are removable. Coordinating high-back chairs, side chairs, ottomans, and headboards are also available. Thos. Moser Cabinetmakers, Inc., Auburn, Maine.



**455. Upholstery**

The Cordura Group, a contract upholstery collection, consists of three nylon-fabric patterns: Eternity, Ovation, and Mirage. Intended for healthcare, hospitality, and general office/public-space seating applications, the fabric is said to resist stains, punctures, pilling, and fading. Adam James Textiles, Inc., Smithtown, N. Y.



**456. Desk collection**

The Stephens collection of wood desks designed by longtime Knoll designer Bill Stephens includes single- and double-pedestal desks, table desks, credenzas, freestanding closets, hutch storage units, and wall-mounted storage units. Standard finishes include nine natural-wood veneers. The Knoll Group, New York City.\*

\* Product data on CAD disk

# 12 • FURNISHINGS Literature

For more information, write item numbers on Reader Service Cards.



## 457. Solar-control blinds

The merger of Bali and Graber consolidated a wide range of window treatments: horizontal aluminum blinds, verticals, fabric shades, and drapery hardware for commercial applications. A 36-page catalog gives dimensions, insulating and shading values, and flame-spread data on all products. Spring Window Fashions Division, Inc., Montgomery, Pa.



## 458. Hospital casework

Modular components designed for hospital use are made of 18-gauge, furniture-grade, cold rolled steel. Drawers are one-piece molded polyurethane with rounded corners for easy cleaning. The laminate top is available in seamless sections to 12 ft. Door fronts have no seams. Four-page booklet. Midmark Corporation, Versailles, Ohio.\*



## 459. Office ease

The Details group defined three major office-task problems as physical trauma, eye strain, and clutter, and developed a line of office furnishings and equipment to solve them. Computer-support tools make working more comfortable. Personal lighting resolves eye strain. Organizing tools eliminate clutter. Details, Division of Steelcase, Inc., New York.



## 460. Public-space

A 16-page catalog describes a line of garden and park furniture designed for long life under heavy use. All chairs, benches, and seats have wire-mesh seats and frames of tubular steel. Tables have heavy-walled tubular frames and melamine-surface tops. Sintered synthetic coating is applied to all items. Kroin Incorporated, Cambridge, Mass.



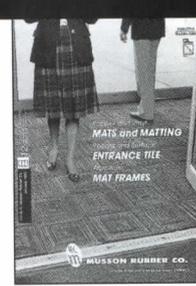
## 461. Corporate furniture

Ten table groups with a variety of heights, sizes, top shapes, and base options are featured in a 12-page catalog. Chairs have tubular steel frames. Tables have steel bases and tops in glass, laminates, and veneers. Designed for cafeterias, workstations, conference rooms, and offices. Kinetics, A Haworth Portfolio Company, Holland, Mich.\*



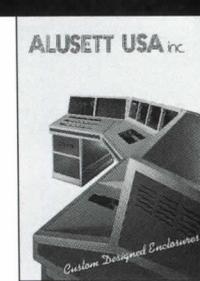
## 462. Lateral files

Designed to accommodate either legal- or letter-size folders, the 8900 plus line of lateral files is available in two-, three-, four-, and five-drawer heights in fixed-front, lift-up, and hinged-door configurations with widths of 30, 36, and 42 in. Forty standard colors. Has no-tip system. Six-page folder. Office Specialty-Storwal, Holland Landing, Ontario.\*



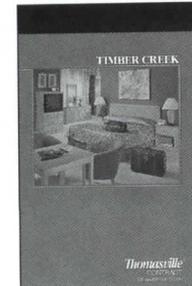
## 463. Entrance mats

Neatness underfoot is the theme of the eight-page Musson catalog. Walk-off mats come in rubber, vinyl, vinyl link, inlaid rubber, track strip carpet and vinyl, vinyl-backed cocoa, deep-rib rubber, aluminum/vinyl roll-up, and fluff-cord strip tile. Wide range of sizes and colors. Aluminum recess frames keep mats in place. Musson Rubber Co., Akron, Ohio.



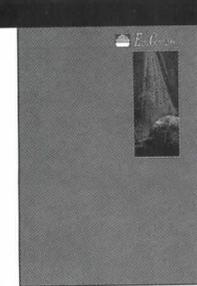
## 464. Electronic enclosures

An illustrated folder describes the International Alusett System, which provides trading desks, security, consoles, control desks, racks, and small-instrument housings for electronic equipment. Installations are designed by Alusett or the owner from a set of more than 80 aluminum extrusions, connectors, and system hardware. Alusett USA Inc., Peekskill, N. Y.



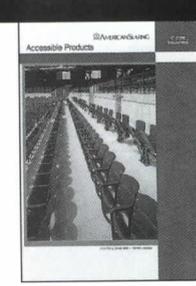
## 465. Hotel furniture

A 12-page brochure displays the Thomasville Timber Creek line of hospitality furnishings. Produced in solid white oak or maple veneer, Timber Creek has a casual, contemporary look. Line includes seven tables, five chairs, three beds. Cases have mar-resistant tops. Thomasville Furniture Industries, Inc., Thomasville, N. C.



## 466. Extended-care bed

The Easy Care 2000 bed, described in a four-page folder, comes with electric or manual operation, 500-lb lift capacity, recessed frame, link-fabric or pan-mattress deck, removable headboard, electric position control, and selection of side rails and casters. Joerns Healthcare, Inc., A Division of Sunrise Medical, Stephens Point, Wis.



## 467. Auditorium seating

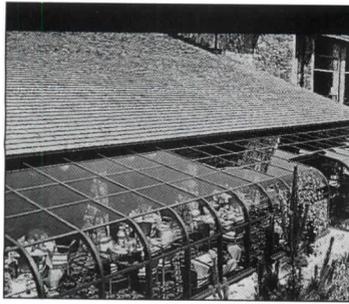
Equal Access, which meets the ADA requirements for public and commercial facilities, is said to be the only fixed chair that can be used as a regular chair or converted to an empty space to accommodate a wheelchair. When wheelchair sections go unfilled, Equal Access seats may be sold for conventional use. American Seating Co., Grand Rapids, Mich.



## 468. Workstation components

System One Desk-Based Workstations brochure shows wide variety of elements to create office bases for various levels. A fold-out in the 10-page brochure demonstrates the passageways for distributing and managing wires within or between workstations. Worksurfaces in six veneers or laminate colors. Haskell of Pittsburgh, Inc., Verona, Pa.

\* Product data on CAD disk



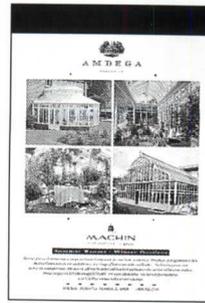
### 469. Sun for low eaves

The straight-eave Catalina Edition and the curved-eave Bel-Aire Edition have a sill-to-height range of from 6 ft 3 in. to 7 ft 7 in. They provide nine standard models of solariums as deep as 13 ft 5 in. for lower-eaved buildings. Built-in shade tracks and Tear-Duct weepage control are included. Sunshine Rooms, Inc., Wichita, Kan.



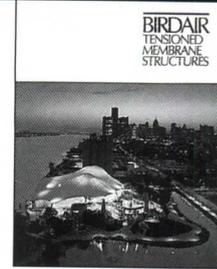
### 470. Electromagnetic windows

Communications equipment atop commercial buildings can be concealed by fabric panels that allow antenna signals to pass through with minimal interference. Raydel Teflon-coated fabric can be colored and sized to custom needs. A self-cleaning fabric, it does not accumulate water film. CHEMFAB Corporation, Buffalo, N. Y.



### 475. Conservatories

Free introductory literature illustrates traditional English garden rooms in many different designs. Products are year-round rooms—outdoor living without inclement weather. Wood or aluminum construction is available and double-glazed glass is standard. Prices: \$17,000 through \$100,000. Amdega Conservatories, Glenview, Ill.



### 476. Fabric shelter

Fifty color photographs in a 28-page capabilities brochure illustrate the versatility of Birdair's tensioned-membrane structures. Sheerfill, a Teflon-coated, woven-fiberglass material, provides the shelter. Applications include retail operations, transportation centers, sports facilities, and special-use structures. Birdair, Inc., Amherst, N. Y.



### 471. Tensile spaceframe

The MT-Tensile Spaceframe System provides a lightweight structure with a spare appearance. Glazing is attached directly to the top chord. Secondary purlins are used to integrate cladding with the KK-Ball Node System. An illustrated project is the Montreal Museum of Fine Arts. MERO Structures Inc., Germantown, Wis.\*



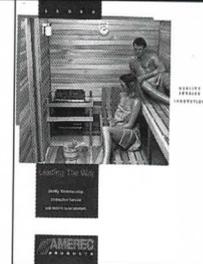
### 472. Modular buildings

Mobile and modular space for expansion, branch offices, engineering facilities, classrooms, and medical centers is available for lease, rent, or purchase. Buildings may be custom-designed or drawn from an inventory of 30,000 units. Urgent space problems solved without the delays of conventional construction. Gelco Space, Bala Cynwyd, Pa.



### 477. Soft shell structures

Striking examples of tensioned membrane structures and air-supported membrane structures appear in an eight-page brochure. They are applied where visual impact is important—gateways, frontage structures, and stage and audience coverings. Design, engineering, and fabrication provided. Helios Industries, Inc., Hayward, Calif.



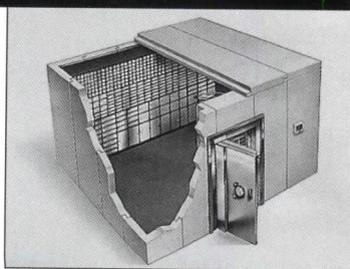
### 478. Saunas

A room for a dry heat bath comes ready to install, in standard sizes from 4 by 4 ft to 8 by 12 ft and in pre-cut packages from 3 by 4 ft to 12 by 12 ft. Sauna kits include all elements: electric, rock-equipped heater; benches; duckboard floor; insulation; and knot-free western red cedar ceiling, walls, and door. Amerec Products, Bellevue, Wash.



### 473. Acoustic panels

Textured Functional Panels can be inserted into a wall-mounted track system and slid into various positions for day-to-day acoustic tuning of broadcast studios, practice rooms, and auditoriums. Panels are 2-in.-thick fiberglass, 30-in. wide, and come in standard lengths up to 10 ft. Eckel Industries, Inc., Acoustic Division, Cambridge, Mass.



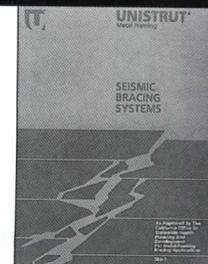
### 474. Flexible safes

A lightweight, modular vault system with only one-third to one-fifth the weight of concrete vaults is expandable in any direction, available in almost any size, and relocatable. Meets standards for torch and tool attack for UL classifications: Class 1—one-half hour; Class 2—one hour; Class 3—two hours. Mosler, Inc., Hamilton, Ohio.



### 479. Sunrooms and skylights

Come Into The Light, a 12-page, four-color booklet, explains the Pella way to let the sun shine in. Potentials are sunrooms, extensions to a room or home; sunspaces, pushing walls and ceilings to the out-of-doors; and skylights that open a roof to the sky. Exterior elements are aluminum clad. Pella Corporation, Pella, Iowa.\*



### 480. Earthquake protection

The Seismic Bracing Systems brochure details metal-framing applications for the seismic restraint of nonstructural components in buildings. It includes design procedures, guidelines for trapeze hangers and single pipe hangers, details of metal-framing products, and directions for structure attachments. Unistrut Corporation, Ann Arbor, Mich.

\* Product data on CAD disk

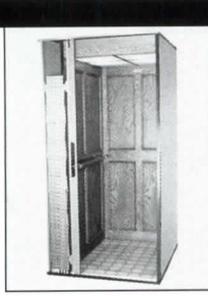
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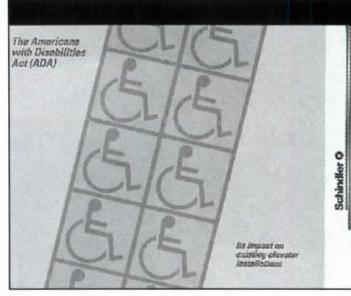
## 481. Hydraulic elevators

For installations where drilling is a problem, Leistritz offers a line of hydraulic elevators with holeless and semiholeless jacks. Direct-acting telescopic cylinders provide constant speed between starts and landings over the entire rise. Custom Euro-made cabs are available for specific applications. Leistritz, Allendale, N. J.



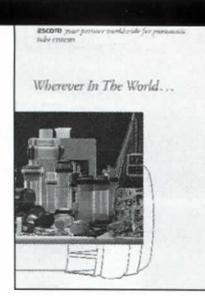
## 482. Residential elevator

The new Custom-Lift hydraulic elevator, equipped with the Estate cab, can be installed in new and existing homes. It has a 750-lb capacity and can make up to six stops or 44 ft of travel at 36 fpm. Requires a 12-in. pit for flush loading. In power failure, cab moves automatically to lowest landing. Waupaca Elevator Company, Waupaca, Wis.



## 487. Elevator accessibility

The ADA—Its Impact on Existing Elevator Installations is a 16-page handbook that focuses on ease-of-use factors. The booklet is designed to serve as a checklist for surveying buildings for accessibility compliance and planning for compliance in future projects. Schindler Elevator Corporation, Morristown, N. J.



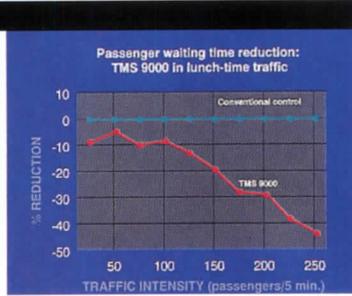
## 488. Delivery by air

A four-page folder announces introduction of the GCT series pneumatic-tube systems. Models range from the GCT 50 for small operations to the GCT 3000, which is capable of multizone configurations with over 1,000 stations. Series includes micro-processor controls and cushion-carrier arrival. Ascum Communications, Ltd., Boca Raton, Fla.



## 483. Pneumatic-tube system

The AutoBanker PT system is designed for fast, secure, and gentle transportation of materials or currency in hospitals, retail stores, banks, and offices. The system consists of two terminal units, interconnecting tube, and a power source to move carriers from the operator to remote terminals. Mosler, Inc., Hamilton, Ohio.



## 484. Intelligent elevators

The TMS 9000 elevator-control system uses artificial intelligence to predict passenger demand and reduce crowded lobbies and cars, says the manufacturer. A computerized traffic forecaster analyzes use and predicts peak periods. Gives control over supervision, maintenance, and security. Armor Elevator Company, Louisville.



## 489. Elevator-cab trim

A four-page bulletin, Elevator Cab Stock Components, illustrates a line of elevator-door saddles in aluminum, bronze, and nickel silver; handrail moldings in aluminum, bronze, stainless steel, and acrylic/wood; and vertical mounting brackets in aluminum, bronze, and stainless steel. Julius Blum & Co., Inc., Carlstadt, N. J.



## 490. High-rise maintenance

Facade Maintenance Systems, which are permanently installed on buildings and other structures, are described in a brochure. Rigging solutions range from outriggers and rigging sleeves to sock-davit systems and track-mounted roof carriages for such work as cleaning, caulking, and glass replacement. Spider, Seattle, Wash.



## 485. Elevator control

The Miconic A/M Elevator Modernization System for mid-rise buildings is said to reduce elevator waiting time through real-time management and advanced information processing. Improves ride quality by regulating acceleration and deceleration, door opening and closing, and floor-to-floor times. Schindler Elevator Corporation, Morristown, N. J.



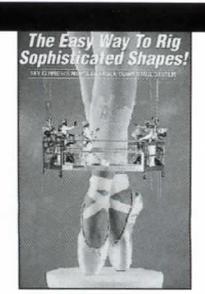
## 486. Pneumatic-tube station

A compact and easy-to-access dispatch/receive station for a computerized pneumatic-tube system fits beneath either sitting-height or standing-height counters. Each station is 6 1/2-in. wide and 13 5/8-in. deep and either 26- or 39-in. high. Cushioned and insulated for quiet operation. TransLogic Corporation, Denver.



## 491. Elevator planning

The Dover Planning Guide provides information on sizing, design, construction, and operation for architects, builders, designers, engineers, and building owners. Also included are details of a wide variety of pre-engineered elevator options and information on Dover's custom-design capabilities. Dover Elevator Systems, Memphis, Tenn.



## 492. Building rigging

The Sky Climber brochure offers a short course in putting suspended scaffolding on complicated buildings. Topics range from modular stage equipment to angles and platform design, all aimed at understanding the challenges of rigging. A range of modular knockdown staging platforms is described. Sky Climber, Inc., Stone Mountain, Ga.



### 493. Water coolers

The Design 2000 Series of 14 pressure coolers and six drinking fountains surpasses Safe Drinking Water Act standards. Waterways are completely lead-free. All joints use only silver-solder brazing alloy. Filtrex System traps waterborne particulates as small as 140 microns in diameter. Elkay Manufacturing Company, Oak Brook, Ill.



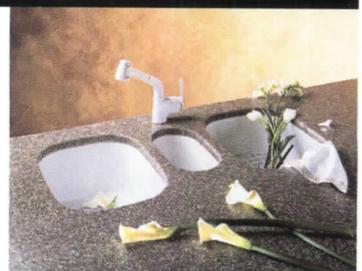
### 494. Wash fountain

A passive-detection system controls operation of the Sanispray automatic lavatory. A sensor reacts to the warmth of an approaching hand to activate an electromagnetic valve. Battery pack assures system power for five years. Fountains available with a single spraying unit or individual nozzles. Intersan Manufacturing Co., Phoenix.



### 495. Ceiling fan

The Stealth ceiling fan comes plated in gold, silver, or bronze with blades of rosewood, snow white, or glossy black. Each fan has Comfort-Touch remote control, a sensor to maintain interior climate at a pre-set level, a winter setting that reverses blades, and programmable lighting. Casablanca Fan Co., City of Industry, Calif.



### 496. Kitchen sink

Franke has introduced color quartz-composite components to its Elements undermount sink line. The Color Elements include rectangular and elliptical sinks that can be mounted alone or in combination. Color Elements components are available in neutral almond and white. Franke, Inc., Kitchen Systems Division, North Wales, Pa.



### 497. Pedestal lavatory

A new Reveries pattern, Russian Teacup, is available in Kohler's Anatole sculptured pedestal washbasin. It is a latticework of cobalt blue on white accented with black, jade, and gold. Also available in the Russian Teacup pattern are three covered jars and a soap dish, and ceramic tile in 6- by 6-in. and 6- by 2-in. sizes. Kohler Co., Kohler, Wis.



### 498. Vandal-proof fountain

Designed for parks, schools, public buildings, and other sites where vandals strike, the Model 3202 drinking fountain defies damage through 1/8-in. sheet-steel construction and with an antisquirt bubbler of chrome-plated solid brass. Trough drain eliminates flooded bowls. Accessible to handicapped. Haws Drinking Faucet Co., Berkeley, Calif.



### 499. Illuminated bathtub

The Kisho Kurokawa Collection of bathroom furnishings includes an acrylic tub that has a translucent lit bottom, two armrests, and a removable headrest. Other elements are a lavatory with option of pedestal or trap cover, a semi-encasso lavatory, and a bidet. Both lavatories offer barrier-free characteristics. Porcher Ltd., Chicago.



### 500. Solar water heater

The Double Copper Cricket uses heat from the sun to produce enough hot water for two to 10 families. It has no moving parts, is immune to freeze damage, needs no roof-mounted tanks, is completely self-regulating and maintenance-free, and comes with a full 10-year parts and labor warranty. Sage Advance Corporation, Eugene, Ore.



### 501. Kitchen faucet

The Deluxe Gourmet Spray is a single mount European-style kitchen spigot with a 59-in. retractable hose. The pull-out spray has many uses, such as washing vegetables and watering plants. An atmospheric vacuum breaker in the spray prevents backflow and back siphonage. In white, almond, or chrome. Delta Faucet Company, Indianapolis.



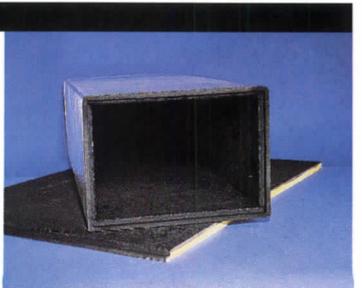
### 502. Bathroom suite

The Heritage Suite, an art-deco-style vitreous china line of bathroom furnishings, now includes a two-piece water-conserving toilet that uses only 1.6 gal. per flush. There is a matching petite (24-in. wide) pedestal lavatory. Both models are 20-in. deep. The two models come only in black. American Standard Inc., Piscataway, N. J.



### 503. Air cleaner

The SelectAir 2000 unit filters air in a two-stage operation and distributes the clean air quietly. High-density particle filter traps microscopic airborne particles and an activated carbon filter absorbs or neutralizes gaseous pollutants and odors. Unit designed to operate in suspended ceilings. SelectAir, Inc., Charlotte, N. C.



### 504. Fiberglass air duct

SuperDuct board-type hvac ductwork has an acrylic polymer interior coating that encapsulates fibers, permits cleaning, inhibits mold and absorbs equipment noise. In 48 by 120 in. or 96 by 120 in. for new residential/commercial construction. Replaces sheetmetal ductwork. Manville Mechanical Installations, Denver.

For more information, write item numbers on Reader Service Cards.



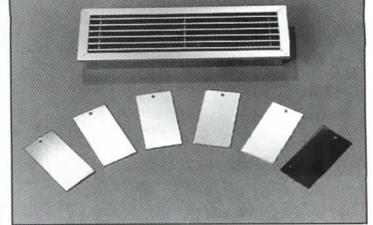
**505. Automatic flush-retrofit**  
Self-contained Optima Plus Flushometers use infrared to detect the presence of a user and flush automatically. Suitable for upgrading public restrooms in hospitals, airports, schools, convalescent homes, sports complexes. Operates on four AA batteries. Installs quickly on Sloan Royal flushometers. Sloan Valve Company, Franklin Park, Ill.



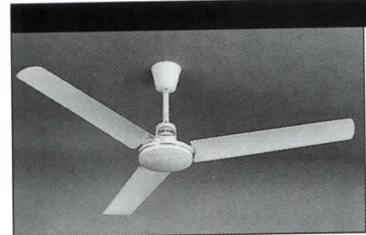
**506. Concealed toilet tank**  
The Capella water-closet bowl and Geberit concealed tank are installed as a single fixture. The tank is recessed in the wall and the bowl is wall hung. The unit effectively adds 6 in. to bathroom dimension and makes cleaning under the bowl easier. Built on a 16-gauge galvanized-steel frame. Laufen Bath Fixtures, Romulus, Mich.



**507. Lavatory faucet-spray**  
The EuroPlus Pull-Out Spout and Cast Spout washbasin spigots are made with Grohe ceramic-disc cartridge and solid brass construction. The Pull-Out spout can be extracted as much as 21 in. from the faucet body, useful for rinsing the sink bowl, cleaning food, bathing infants; and washing hair. Grohe America, Inc., Wood Dale, Ill.



**508. Air-diffuser finishes**  
The Titus ML and CT lines of diffusers are available in new Series 100 finishes, a polished or high-luster treatment that gives the appearance of chrome, brass, bronze, or pewter. A sample kit is available to architects and interior designers. Titus, Richardson, Tex.



**509. Air circulator**  
Con-Tech ceiling fans can save as much as 44 percent on temperature-control costs, says the manufacturer. Straight-blade fan is standard on 36-, 48-, and 60-in. models. The 56-in. model has swept-back design. Comes with 9 1/4-in. steel down rod and two steel J hooks to accommodate mounting. Conservation Technology, Ltd., Deerfield, Ill.



**510. Copper bathtub**  
A handcrafted, solid-copper tub is not only long (65 in.) and wide (32 in.) but unusually deep. The manufacturer says it is big enough for even two bathers to achieve a refreshing soak. Fluted-shell faucets are shown with the tub. A matching under-counter copper basin is available. Kallista, Inc., San Leandro, Calif.



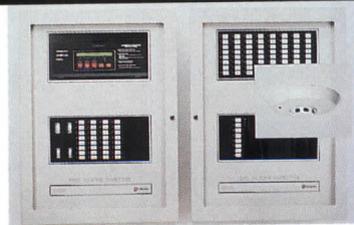
**511. Surgical sinks**  
Scrub sinks in on-floor or off-floor models are made from heavy-gauge, Type 304 stainless steel. Equipped with a gooseneck faucet and a sprayhead that can be removed for sterilization. Activated by pushing on a knee-operated front panel, a second push turns faucets off. Whitehall Manufacturing Inc., City of Industry, Calif.



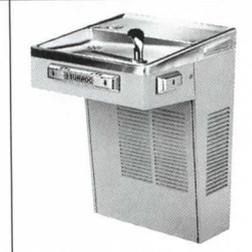
**512. Lavatory tap**  
The Arco lav mixer has an impressive arc shape that traces the natural movement of water flow. A curved lever handle is easy to reach and use. A Turbodont high-pressure mouth spray can be connected directly to the mixer. Available in chrome and white. Hansgrohe, Inc., Soquel, Calif.



**513. Whirlpool bath**  
The latest addition to the Jacuzzi collection is the Fontana, a bath designed for two. It measures 72-in. long, 54-in. wide and 28-in. deep, and is equipped with four PowerPro whirlpool jets, a European-style hand-held shower, and dual Water Rainbow spouts. Full range of designer colors. Jacuzzi Whirlpool Bath, Walnut Creek, Calif.



**514. Smoke detector**  
TrueAlarm, a microprocessor-based smoke-sensing system, gives early warning of dangerous conditions while minimizing potential for false alarms. Each sensor's trigger level is programmable and can be varied on a timed basis with automatic compensation for temperature, humidity, and dirt. Simplex Time Recorder Co., Gardner, Mass.



**515. Wall-mounted water coolers**  
The NWC Series of barrier-free, wall-mounted water coolers are readily accessible from wheelchair height and meet all state and federal disability regulations. They are operated by self-closing bars on front and sides. Timed water flow stops automatically. One-piece design eliminates need for wall cutout. Sunroc Corporation, Media, Pa.



**516. Commercial faucet**  
The 797 lavatory faucet is designed for the demands of public washrooms at hotels, offices, and high-rise buildings. A 4-in. spout equipped with the E12 aerator provides a smooth stream of water. The Quatern cartridge valve moves from full-on to full-off with a quarter turn of a handle. The Chicago Faucet Company, Des Plaines, Ill.



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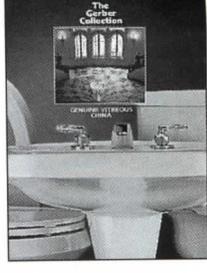
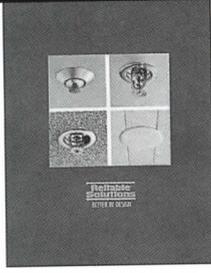
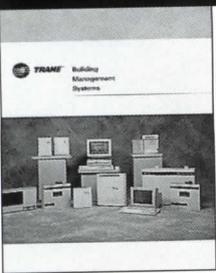
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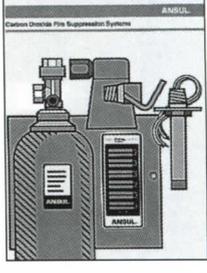
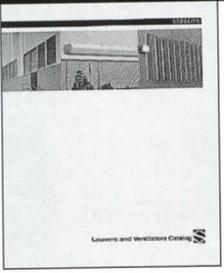


**517. Hvac-control software**  
The Tracker and Tracer building-management systems are described in a 24-page catalog. Tracker provides microelectronic control and monitoring of hvac in small commercial buildings. The Tracer controls hvac and related building systems, providing building automation and energy management. The Trane Company, La Crosse, Wis.\*

**518. Unobtrusive sprinklers**  
Full line of Quick Response and residential fire-suppression devices is described in a brochure. Residential sprinklers are designed to distribute water in a high-wall wetting pattern to cool temperatures and minimize toxic gases that collect in the room of fire origin. The Reliable Automatic Sprinkler Co., Inc., Mount Vernon, N. Y.

**519. Plumbingware**  
The vitreous-china Gerber Collection of lavatories, toilets, bidets, urinals, and tanks is illustrated in an 18-page catalog. Lavatories include pedestal, countertop, and wall-hung models. Most toilets are water-saving, 3 1/2-gal./flush models. Available in nine pastel colors. Gerber Plumbing Fixtures Corp., Lincolnwood, Ill.

**520. Duct liner**  
A folder gives performance data for Ultra-Lite fiberglass liner for sheet-metal ducts. A Certa-Edge coating can eliminate the need for adhesive spray on edges during straight-duct fabrication. Reduces sound transmission and thermal loss or gain. CertainTeed Corporation, IG Industrial Sales, HVAC Dept., Valley Forge, Pa.

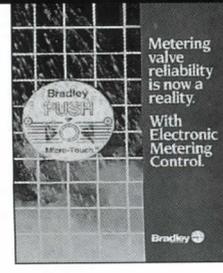
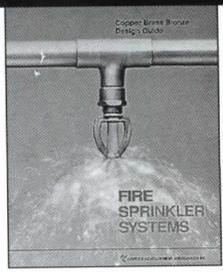
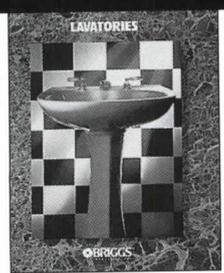


**521. Faucets**  
The Ruby series of bathroom faucets, designed by Amabrogio Rossari, is pictured in a 16-page catalog. The line includes single-lever basin mixers in stainless and white, bath-shower mixers with diverter, a shower head, and a shower rod with soap dishes. Also included is an angled stop valve and supply union. Watercolors, Inc., Garrison, N. Y.

**522. Louvers and ventilators**  
Steelite Econo-Aire gravity-ventilation products, including continuous-ridge and clamshell ventilators of various throat sizes, are described in a 20-page catalog. Louvers are fixed, adjustable, architectural, continuous blade, and combination. Louvers can match building-panel profiles. Steelite, Inc., Pittsburgh.\*

**523. Vacuum toilet system**  
The Securvac toilet system uses 1/2-gal./flush vacuum-operated equipment. This results in reduced capital and operational costs because of low water consumption, small-diameter piping, and effluent reduction, which can generate smaller sewage-treatment plants. Venting of lift stations not required. Acorn/Evac, City of Industry, Calif.

**524. Fire-extinguishing agent**  
A pamphlet describes the Ansul total-flooding fire-extinguishing system, which injects carbon dioxide gas to a level that will not support combustion. Data sheet describes nonconductive Inergen, a replacement for Halon 1301. Inergen lowers oxygen level to a point that puts out fire, but allows people to breathe. Ansul Fire Protection, Marinette, Wis.



**525. Workstation hvac**  
The Personal Environments module allows each worker desktop control of temperatures, air flow, lighting levels, and noise suppression. An under-desk electrostatic air filter removes particulate matter. A sensor turns off the system when the workstation is unoccupied. Described in an information sheet. Johnson Controls, Milwaukee.

**526. Sanitary fixtures**  
Four illustrated catalogs provide size, color, and model information on Briggs bath and restroom products. They describe lavatories, toilets, porcelain-enameled steel whirlpools and bathtubs, and commercial fixtures. Each catalog has product specifications, line drawings, and rough-in measurements. Briggs Industries Incorporated, Tampa, Fla.

**527. Sprinkler-design guide**  
Technical data on the use of copper tubing in sprinkler installation is treated in a 12-page manual. Among the subjects are: copper-tube characteristics, friction-loss tables, friction losses for fittings and valves, tube-bending guide, hanger sizing, solder and brazing, and material specifications. Copper Development Association, Inc., Greenwich, Conn.

**528. Water control**  
The Micro-Touch electronic-control system, described in a six-page brochure, minimizes water waste in vandal-prone bathrooms and multiuse shower rooms in schools, recreational facilities, prisons, and other public applications. Controlled-touch system limits water use to regulated intervals. Bradley Corporation, Menomonee Falls, Wis.

\*Product data on CAD disk.

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**529. Residential lighting control**  
The LiteCom system provides control of 256 on/off lighting points and has an additional 16 dimming channels. Components for the low-voltage system include a central-control unit, relay panels, wall switches (pictured), remote-control units, and one or more master-control panels. Honeywell Home and Building Control, Golden Valley, Minn.\*



**530. EMI shielding**  
An architectural shielding system includes air-vent panels, copper foil and fabric tapes, door gaskets, and copper-shielding paint that can be used to control electromagnetic interference (EMI). A design guide shows how these materials can be used to solve EMI problems. Tecknit, Cranford, N. J.



**531. Self-luminous exit signs**  
Series 700 Omni-Glo exit signs are illuminated by tritium luminescent tubes sealed inside the sign face. They require no electricity, can be installed with a screwdriver, and can last up to 20 years depending on which model is installed. The Series 700 signs are NFPA-101 approved, and UL listed. SPL, Inc., Illuminated Sign Division, Elmsford, N. Y.



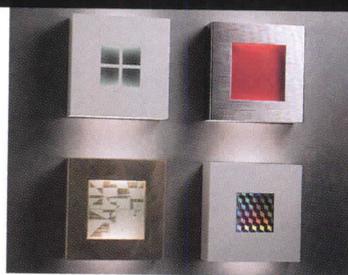
**532. Fluorescent PAR/R lamps**  
A double biaxial compact-fluorescent lamp used with either a PAR38 or R30 lamp adaptor can replace higher-wattage incandescent PAR or R lamps. The lamp and built-in ballast together consume only 14.5W and screw into an ordinary 120V light socket. The lamp has a CRI of 82 and has a 10,000-hour life. General Electric, Nela Park, Ohio.\*



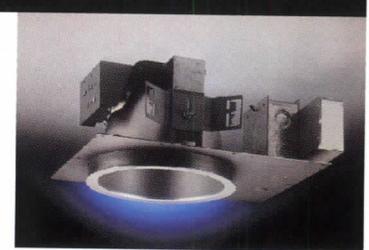
**533. FRC path lights**  
The Stoneforms family of precast fiber-reinforced concrete (FRC) path lighting is available in four different styles, ranging from the contemporary to the traditional, and six colors. Luminaire choices include incandescent, fluorescent, and high-intensity discharge. All models are UL wet-location listed. Woodform, Inc., Portland, Ore.



**534. Opaline-glass table lamp**  
The Masha Table lamp, designed by Jeannot Cerutti, combines handblown opaline Milano glass with chrome stems and base. The 24 3/4-in.-tall lamp utilizes a 150W incandescent lamp, controlled by a dimmer concealed in the base. VeArt, A Division of Artemide, Farmingdale, N. Y.



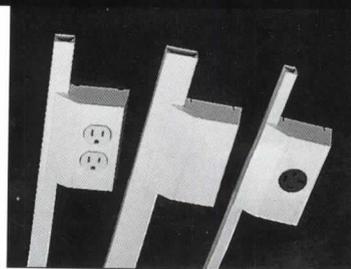
**535. Corridor illumination**  
The Art Sconce collection is a series of direct/indirect wall-mounted light boxes which accept custom graphics, signage, logos, or original art. The light boxes project no more than 4-in. from the wall and meet ADA requirements. They require two 26W fluorescent lamps and are UL listed. Visa Lighting Corporation, Milwaukee.



**536. Dimmable quad fixture**  
A compact-fluorescent downlight that can be dimmed using an ordinary fluorescent wallbox dimmer is now available. The fixture uses two 26W compact-fluorescent lamps to provide 3600 lumens, and can be dimmed from 5 to 100 percent. Aluminum or gold reflectors are available. Edison Price Lighting, New York City.



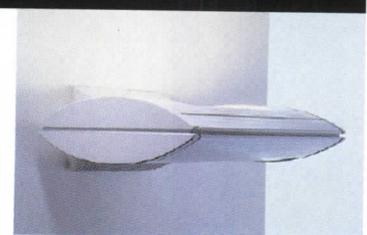
**537. Adjustable lamp**  
Cricket was designed by Riccardo Blumer, and comes in table, clamp, or wall models. It is fully adjustable by means of a canvas cable and adjustable aluminum diffuser. The cable and metal frame come in five different color combinations and the lamp accommodates a 60W incandescent lamp. UL listed. Sidecar Division of Artemide, Farmingdale, N. Y.



**538. Non-metallic wireway**  
A two-piece surface-mount wire raceway made of PVC is suitable for new-construction or renovation projects. Offset switch and outlet boxes allow the wireway to be mounted directly adjacent to doorframes or baseboards. The UL listed wireway is available in three sizes. Walker, A Division of Butler Mfg., Parkersburg, W. V.



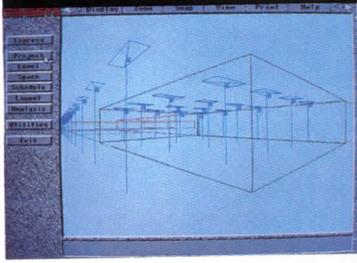
**539. Fiberglass light poles**  
The Essex 201 series of fiberglass lighting poles conveys a turn-of-the-century look. The poles are integrally colored, and finished with UV-resistant polyurethane coatings. They can be direct-embedded, eliminating the need for heavy foundation work, and are nonconductive to assure electrical safety. W. J. Whatley, Commerce City, Colo.



**540. Indirect fluorescent sconce**  
The SI-W is the wall-mounted version of the Spheros luminaire series designed by Hartmut Engle. The fluorescent-lensed fixture is completely indirect, and utilizes an asymmetric reflector to push light away from the wall. A unique mounting bracket permits the die-cast-aluminum fixture to be leveled after installation. Zumtobel Lighting, Garfield, N. J.

\* Product data on CAD disk

For more information, write item numbers on Reader Service Cards.



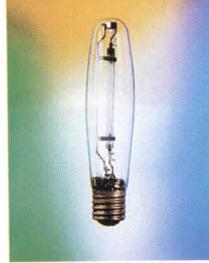
**541. Lighting software**

GeneSys lighting workstation software includes indoor and outdoor design and analysis in one program, 3-D color rendering, economic analysis, and the ability to import and export CAD files. Accepts all IES-formatted photometric files. Contains an electronic catalog of Genlyte or Canlyte fixtures. Genlyte, Secaucus, N. J.\*



**542. Display lighting**

MR-16 bicolor lamps use dichro-reflector technology to refract light and create shimmering iridescent effects in red, yellow, green, and blue, while the reflector shines in the complementary color. Units are small enough for use with track lighting. The 12V lamps are available in 20W, 35W, 50W, and 75W. Osram Corporation, Trenton, N. J.



**543. HPS lamps**

The Ceramalux Econ-o-watt high-pressure sodium lamp offers energy savings without reducing light output. The 225W and 360W lamps directly replace 250W and 400W standard HPS lamps, effecting an energy saving of up to 8 percent. The 225W lamp delivers 27,500 lumens and the 360W, 47,500 lumens. Philips Lighting Company, Somerset, N. J.



**544. Flexible spot system**

Helix is a 12V flexible track with a minimum bending radius of 12 in. Ready-to-install kits contain 15 ft of track, six spotlights, and wall and ceiling mounts. Spotlights use quartz-halogen MR-16 lamp types to 50W. Spots in blue, black, or chrome. Remote-mounted transformer needed. Lucifer Lighting Company, San Antonio, Tex.



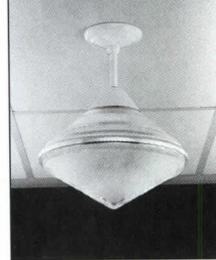
**545. Desk lamps**

Panasonic has introduced two fluorescent desk lamps for home or office. They are finished in matte black and have heights of 16 and 18 in. Efficient fluorescent lamps reduce energy use by 70 percent, yet are as bright as 100W incandescent. Built-in dimmer can adjust brightness. Panasonic Lighting Products, Secaucus, N. J.



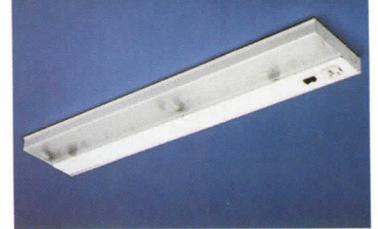
**546. Downlights**

Trilux-Downlights have a specular hexagonal-faceted reflector that provides precise photometric performance. They use either one or two 13W or 18W compact-fluorescent quad lamps. A crystal, frosted, conical lens is available for high-design interiors. Fixtures come in either white or chrome. Litecontrol Corporation, Hanson, Mass.



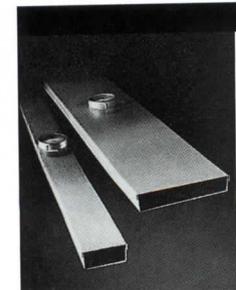
**547. Up-down luminaires**

The PrismGlo series of commercial and industrial lighting fixtures is available in five designs in compact sizes. They come in 13-in. width with heights from 8 1/2 to 10 in. Said to provide efficient 50 percent up/down light. Lamp options are 70W to 150W HPS, 50W to 175W metal halide, and 18W quad fluorescent. Holophane Company, Inc., Newark, Ohio.\*



**548. Undercabinet lighting**

The UC Series of task/accent lights for concealed mounting under shelves and cabinetry comes in two styles. The 1-in.-thick model for T5 lamps comes in lengths from 12 3/16 to 42 7/16 in. The 1 3/4-in. model for T12 or T8 lamps from 18 1/16 to 48 1/16 in. Concealed fasteners, translucent acrylic diffuser. Lumax Industries, Inc., Altoona, Pa.



**549. Wiring distribution**

The 7000 Series underfloor duct is designed for large-area commercial construction with poured-concrete floors that need many service points. Made of galvanized steel, the duct is available in two sizes: 7000 K—1 3/8 by 2 7/8 in., and 7000 H—1 3/8 by 6 15/16 in. Preset inserts take 2-in. standard pipe. The Wiremold Company, West Hartford, Conn.



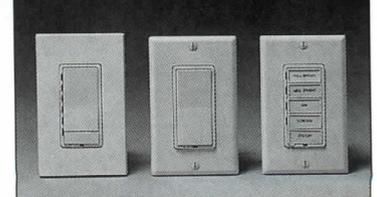
**550. Nurse-call system**

The DirectSelect Responder 3000 system provides patient-nurse communications, displaying all calls at once with LCD illumination of the highest priority call. It can be interfaced with pocket paging systems that instantly notify staff of incoming calls. The system can network with other Responder 3000 systems. Rauland-Borg Corporation, Skokie, Ill.



**551. Luminaire**

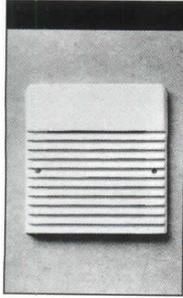
Sun Light is suitable for both ambient and accent lighting. A concealed adjustment mechanism permits maximum aiming flexibility and the unit may be rotated 350 deg on its mounting plate. Uses either HID light sources or low-voltage lamps. Available in white, black, and pewter. Reggiani USA Inc. Illumination, New York City.



**552. Light controls**

MicroDim microprocessor-based lighting controls soft-start lighting, smoothly rising to desired brightness and gently fading to off. Controls vary from style to style, from a simple rocker to a rocker and keypad for on/off to a model with five keypads for selection of desired light intensity. Leviton Manufacturing Co., Inc., Little Neck, N. Y.

\* Product data on CAD disk



**553. Site lights**

The updated mcPhilben square and round recessed site lights have die-cast aluminum housing that provides unabridged louvers spanning the faceplate for glare control and resistance to vandals. Accept HPS and MH lamps to 11W. Fluorescent models use two 28W lamps. Come in 10-in. square or 11-in. round. mcPhilben Outdoor, San Leandro, Calif.



**554. Table lamp**

Miss Sissi is the name of a table/task lamp designed by Philippe Starck. Made of high-impact technopolymer, it is 11-in. tall with a 4-in.-dia weighted base. Available in uniform, semitranslucent terracotta red, sea green, deep violet, and opal white, it uses 40W or 60W incandescent lamps. FLOS Incorporated, Huntington Station, N. Y.



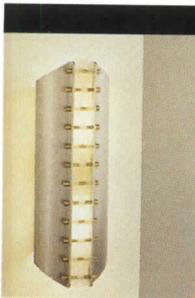
**555. Fluorescent fixture**

Regina, a light designed for indoor and outdoor application, uses T8 or T12 fluorescent lamps powered through an electronic ballast for energy efficiency, immediate illumination, minimal heating, and absence of stroboscopic effect. Designed to IEC Standards 598. Has an antivandal polycarbonate body. Beggelli, Inc., Jacksonville, Fla.



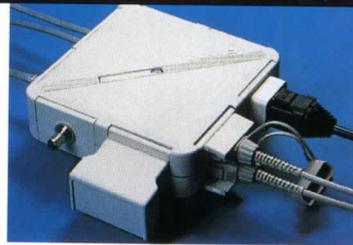
**556. Halogen task lamp**

The System-2 halogen lamp has a dual-hinge, articulated, omnidirectional arm. One hinge links the arm with the base. The midpoint hinge permits a swing of up/down and left/right for 180 deg in each plane. Arms come in 20- or 29-in. length. Seven mounting options available. Luxo Lamp Corporation, Port Chester, N. Y.



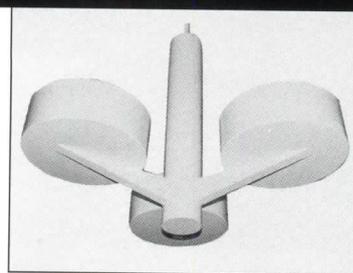
**557. Wall bracket**

The Niagara wall-mounted light is made of etched, slumped glass flanked by satin-finish brass or aluminum. Glass tones are champagne, cobalt blue, clear, or smoke. Lamping is incandescent or fluorescent, 16-in. high, 5 1/2-in. wide, 4-in deep. For corridors, lobbies, and reception areas. Boyd Lighting Company, San Francisco.



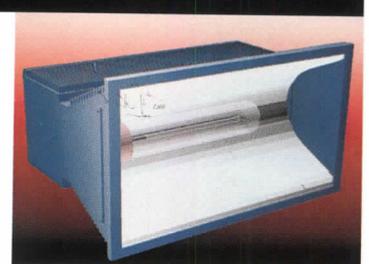
**558. Surface-mount outlet**

The AMP low-profile, workstation outlet is designed for mixed-media, local-area-network applications. Supports eight individual ports, with adapter inserts for Thinnet Taps, BNC couplers, modular jacks, the AMP Communications Outlet, and AMP FSD- and ST-style fiber-optic connections. It is 2-in. high. AMP Incorporated, Harrisburg, Pa.



**559. Indirect lighting**

Voigt's Indirect Collection is based on 24-in.-dia, 8 1/2-in.-deep drums suspended as a single, twin, or triple fixture. Lamp types are high-pressure sodium, metal halide, or a combination HID. Variations are a wall-mounted round and a wall-mounted semiround. Made in white, bronze, and black. Voigt Lighting Industries, Inc., Leonia, N. J.



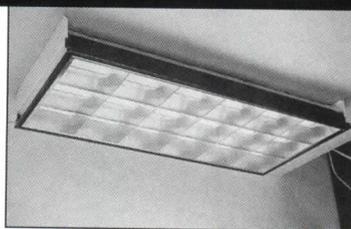
**560. Indoor/outdoor lighting**

Collins Enterprises ER3000 offers energy-efficient, specification-quality lighting with UL wet-location approval for both indoor and outdoor application. Construction is of extruded aluminum. Available in quartz, metal halide, HQI, and HPS. Can be modified from Nema 1 though Nema 7. William J. Collins Enterprises, Ltd., Boulder, Colo.



**561. Ceiling-mounted fixture**

The Options series of fixtures offers a low-profile design well suited to low-ceiling application. The 2 3/16-in.-deep fixture provides balanced indirect light through multireflective rebound optics. Twin-tube fluorescent lamps from 27W to 50W are the light sources. Options series models also in scone and pier-mount. SPI Lighting, Mequon, Wis.



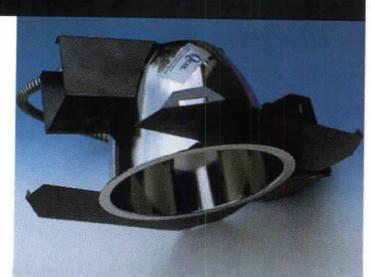
**562. Fluorescent troffers**

Para-Spec parabolic-louver troffers for fluorescent lighting are designed for office applications, particularly computer-intensive tasks. They are said to produce a comfortable, glare-free environment and eliminate iridescence and rainbow effects. Available in six louver configurations of from eight to 32 cells. Simkar Lighting, Philadelphia.



**563. Surface raceway**

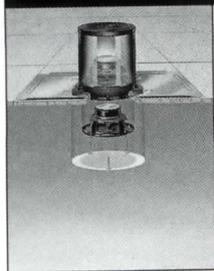
The Egaline PVC surface-raceway system comes in a range of single-channel styles, including standard, tapered, self-adhesive, and cornice design. Light in weight, it can be cut with a hacksaw or PVC cutter. Fittings snap onto channel. Grounding and bonding of the channel is not required. Carlon, A Lamson & Sessions Company, Cleveland.



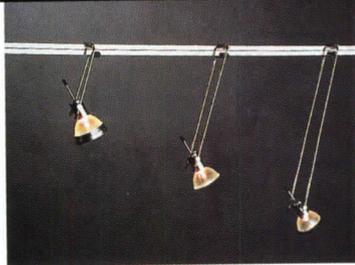
**564. Recessed fluorescent**

The Miro-QR compact-quad fluorescent luminaire has been designed for easy installation as a replacement for incandescent fixtures. Mounting frame will fit between studs or beams on 16-in. centers in a minimum plenum of 7 in. Uses fluorescents from 13W to 52W. UL-listed for damp location. Miroflector Company Inc., Inwood, N. Y.

For more information, write item numbers on Reader Service Cards.



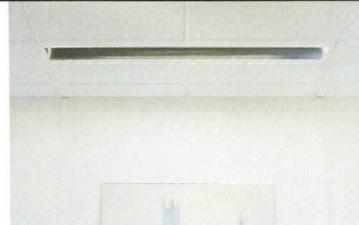
**565. Concealed loudspeakers**  
Series of 6-in. ceiling loudspeaker systems is available as coaxial, delivering 50W, or regular, delivering 25W. Both types offer full-frequency response and wide dispersion. Accessories include acoustic enclosures and a tile bridge designed to prevent ceiling-tile sag. Atlas/Soundolier, Fenton, Mo.



**566. Track with fixtures**  
Track consists of two nickel-plated hollow brass rods for light weight and good conductivity. Manufacturer offers two basic fixtures with Basis Line system, depending on track orientation and type of object being lit. Both swivel full-circle, with legs from 4- to 16-in. long. Finish is nickel or special order. Translite Systems, Redwood City, Calif.



**567. Large-scale pendant**  
Over 42-in. high, LP Centrum pendant is designed for very large spaces, with ceiling heights of at least 16 ft. Hung by a single stainless-steel aircraft cable, the glare-free unit has symmetrical light distribution, with light source concealed from all angles. Takes up to 500W incandescent or 250W HID lamps. Poulsen Lighting, Inc., Miami.



**568. Walls washed**  
The Wall/Wash wall-illumination system attains a luminance ratio of 4:1 within inches of wall and floor. The aluminum reflector produces a wide distribution, avoiding scallops with fixtures spaced up to 8 ft. on center. Absence of reflectors or baffles below the ceiling line makes for clean appearance. LiteControl, Hanson, Mass.



**569. Ergonomic lighting controls**  
Maestro and Diva are two dimmers forming part of manufacturer's Symphony series of lighting controls. Maestro unit (shown) offers full-range dimming of incandescent or low-voltage lighting, for up to 10 locations. Available in choice of six colors. Fits any designer-style wallplate. Lutron Electronics Co., Coopersburg, Pa.



**570. Lighting for walkways**  
Compact Bollard lighting is designed to illuminate walkways and to meet other low-level lighting needs. Units are made of cast aluminum with a polyester coating and come with hardy polycarbonate lenses. A 20-year warranty against corrosion is provided. Twelve styles come in black, white, or patina finishes. Noral Lighting, Inc., Cleveland.



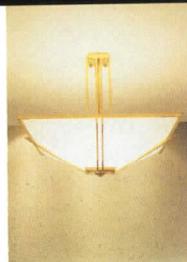
**571. Chandeliers for large spaces**  
Manufacturer's chandelier collection is designed for large spaces such as auditoriums and concourses. Series comes in two- or four-bowl configurations, and offers fluorescent, incandescent, tungsten-halogen, and metal-halide lamping up to 250W per bowl. Bowls come in painted, polished solid brass, or chrome. Visa Lighting Co., Milwaukee.



**572. Flexible vertical luminaire**  
Two reflector types offer choice of distribution (symmetric square or asymmetric). Luminaire series also comes in two beam spreads and three housing sizes, for sources from 70W to 1000W. Pole-top and arm-mounted mountings make for greater adaptability to site. KIM Lighting, Inc., City of Industry, Calif.



**573. Outdoor fixture**  
Manufacturer's Alcesti 130/230 model, designed by Ernesto Gismondi, is for use in gardens and for other outdoor applications. Pole is made of zinc steel; diffuser frame of die-cast aluminum. Both parts are coated with powder polyester paint. Unit comes in 48- and 86-in. heights, and 41-in. width. Artemide, Inc., Farmingdale, N.Y.



**574. Bowl-shaped chandeliers**  
Pyramis series of bowl-shaped chandeliers comes in two design styles. One is highly detailed and is offered with polished finishes. The other is simpler, with brushed finishes. Pendant styles come in 26- and 39-in. squares. Lamping is incandescent, fluorescent, and HID metal halide. Winona Lighting, Winona, Minn.



**575. Commercial exit light**  
Edgelit Exit series combines clear acrylic wedge-shaped panel with molded letters and large-scale NFPA directional chevrons for sharply defined exit information. Units use two F8T5 fluorescent lamps and are self-powered. Finishes include brushed aluminum (standard), brass, chrome, white, black, and bronze. Sure-Lites, Elk Grove Village, Ill.



**576. Low-luminance fixtures**  
Manufacturer's Neolux Series-13 fixtures comes in three categories: direct/indirect with integral ballast; direct/indirect with remote ballast; and indirect with integral ballast. Recommended for offices, classrooms, conference facilities, and other spaces where long-term visual comfort is important. Neoray, Brooklyn, N.Y.

\* Product data on CAD disk



**200 Architects  
and interior designers  
told us exactly what  
they wanted in the  
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specification grade  
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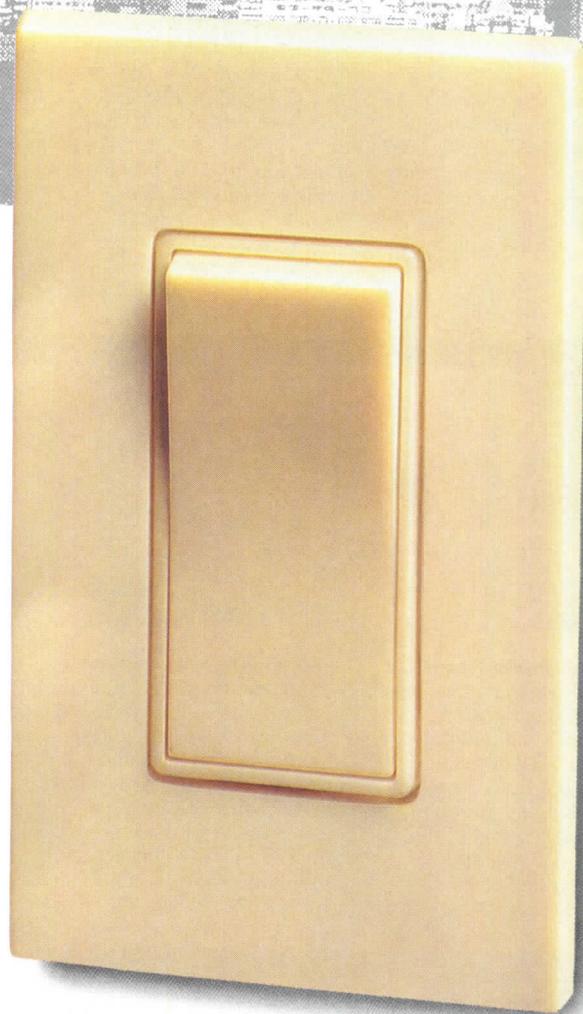
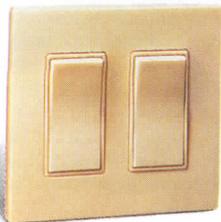
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 Ceiling, wall or track mounted  
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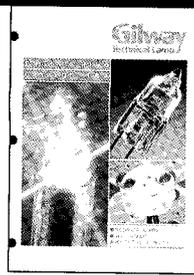
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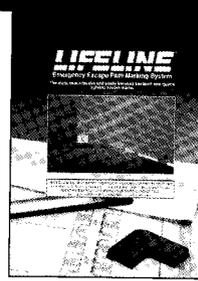
**577. Recessed metal-halide**

Kirlin offers a 66-page catalog with many detail drawings to highlight its line of round and square fixtures for high-efficiency metal-halide, HPS, and mercury lamps. Designed to be rust-free in hard service, the fixtures are made of aluminum and stainless steel. Housings and ballast have a three-year warranty. The Kirlin Company, Detroit.\*



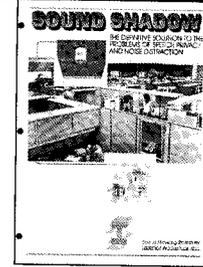
**578. High-output halogen**

Engineering Catalog 164 provides 32 pages of details and illustrations on new products such as halogen lamps operating directly on 3.5-, 5-, 6-, 12-, and 24-v AC or DC, to provide up to 30,000 lux/5,750 lumens. A section is devoted to metal-halide lamps that provide 12,000 lumens when operated at 150W. Gilway Technical Lamp, Woburn, Mass.



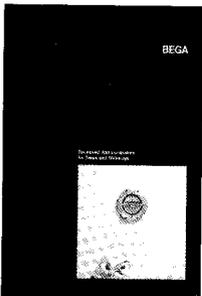
**579. Emergency-path lights**

The Lifeline emergency escape-path lighting system is an electroluminescent (EL) system that consists of illuminated path markings and low-level exit signs, with a power supply. A four-page folder explains the installation of the EL strip inside Lexan housing. Loctite Luminescent Systems, Inc., A Subsidiary of Loctite Corporation, Lebanon, N. H.



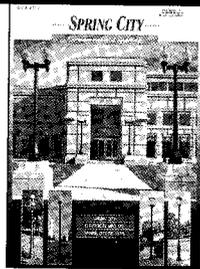
**580. Sound masking**

Because silence—or the lack of it—bothers many persons in open-plan offices, the Sound Shadow has been devised to create masking noise, a comfortable, unobtrusive background sound level that establishes speech privacy. A booklet explains how one master unit can provide masking sound to 3,600 sq ft. Interior Acoustics, Inc., Somerville, N. J.



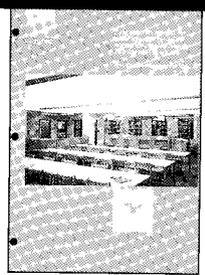
**581. Recessed wall luminaires**

A line of versatile, small-scale (4 3/4- and 6 3/4-in. dia) cast-aluminum path- and stair-lighting fixtures is covered in a 12-page catalog. Fitted with tungsten-halogen light sources, low-voltage luminaires have heavy lens materials under faceplates and cross guards. Need only a 4-in. recess. BEGA/FS, Carpinteria, Calif.\*



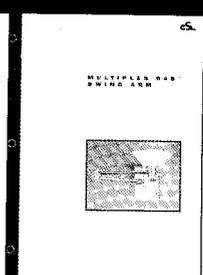
**582. Street lamps**

A six-page, four-color folder illustrates a number of unusual cast-iron and steel ornamental lighting posts and luminaires installed in many U. S. cities. Posts are designed and engineered for specific projects. A specialty is the authentic period-design post fitted with a contemporary light source. Spring City Electrical Mfg. Co., Spring City, Pa.\*



**583. Indirect lighting**

The Envision linear high-performance fluorescent fixture is described in a four-page booklet. Extruded-aluminum housings come in 8- by 3-in. round and 7 3/4- by 3-in. rectangular shapes, and lengths from 4 to 24 ft. Offers one-, two-, and three-lamp options, and compact-fluorescent sources. Peerless Lighting Corporation, Berkeley, Calif.\*



**584. Swing-arm fixtures**

The Multiples 948 line of swing-arm fixtures, illustrated in a four-page brochure, comes in single- and double-arm models for halogen lamps. Uplight or downlight available in polished brass, polished chrome, black and white, and combinations. Over 15 shades and diffusers. Pin-up versions of both models available. CSL Lighting Mfg., Valencia, Calif.



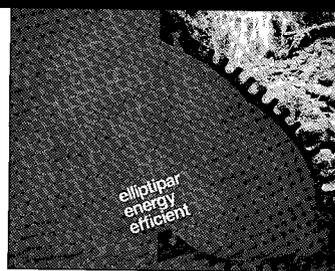
**585. Furniture/partition feed**

The Station Master is a semiflush, omnidirectional fitting that provides for a variety of power and low-tension cables: 10 #12 power outlets, five 4-pair communication, and five IBM-class II data cables. A catalog describes how the workstation feed offers more-protected data and voice capability. Raceway Components, Inc., Paterson, N. J.\*



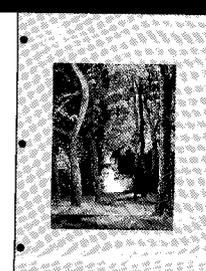
**586. Task lighting**

Designed for persons for whom lighting control is important, the Dazor 2000 line of desk lamps offers a floating arm that glides into position at a touch, without squeaks or sags. Available in fluorescent and fluorescent/incandescent models. The 8MC-200 and the 8MG-500 have built-in magnifiers. Dazor Manufacturing Company, St. Louis.



**587. Wall-wash fixtures**

Elliptipar fluorescent and HQI/metal-halide energy-efficient luminaires for wall washing and uplighting are described in a four-page illustrated booklet. Low-wattage, high-efficiency illumination is said to emulate the flow of natural light. Asymmetric reflectors concentrate and aim uniform light. Elliptipar, Inc., West Haven, Conn.

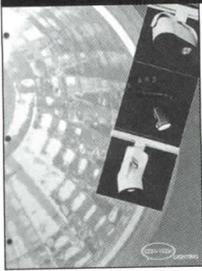


**588. Well lights**

The 9300 Series of in-grade fixtures for uplighting of trees, shrubs, structures, and signs is displayed in a 14-page catalog. Designed to defy water intrusion, condensation, and heat buildup. Protective grills reduce glare. Easy lamp replacement. Made with 6-, 8- and 10-in. well. Lamps to suit particular illuminating needs. Hydrel, Sylmar, Calif.\*

\* Product data on CAD disk

For more information,  
write item numbers  
on Reader Service Cards.



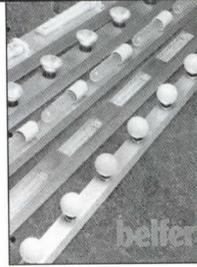
**589. Track lighting**

A new 24-page four-color catalog illustrates a complete line of track-mounted lampholders, including flat-back, round-, and step-cylinder, classic bell, baffled sphere, universal, and gimbal-shaped designs. All styles are available in either low-voltage or 120-v models and a variety of finishes. Contech Lighting, Deerfield, Ill.



**590. Metal-halide lamps**

This data sheet illustrates a variety of compact double-ended metal-halide lamp applications as well as the advantages of using them. Characteristics listed include consistent lamp-to-lamp color performance, efficacies of up to 80 lumens per watt, and 6,000-hour lamp life. Drawings show typical dimensions. Ushio America, Inc., Torrance, Calif.



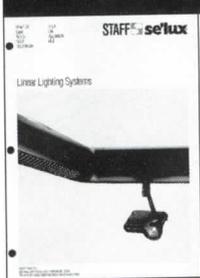
**591. Architectural lighting**

A wide variety of lighting products are illustrated in this 40-page catalog, including incandescent and fluorescent strip lights, step lights, cove and canopy lighting, halogen uplights, and more. Product dimensions and specifications are included. Four pages of color photographs show successful installations. Norbert Belfer Lighting, Ocean, N.J.



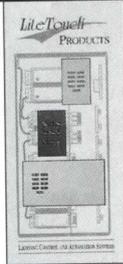
**592. Track fixtures**

A data sheet illustrates the Gemini track fixture. The stem-mounted fixture comes in black, pearl, or 24-karat gold plate, and accommodates either a 50W or 75W PAR30, or a 50W PAR20 lamp. The reflector has a squared-off shape, similar to the barn doors found on theatrical fixtures. Inlite Corporation, Berkeley, Calif.



**593. Linear luminaires**

A complete line of pendant and wall-to-wall tubular lighting fixtures is illustrated in a 28-page color catalog. For both ambient and task illumination in general-office and commercial settings, se'lux fluorescents offer a wide range of housing-profile, lens, and louver configurations. Staff Sales, Inc., Highland, N. Y.



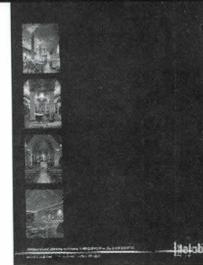
**594. Lighting-control system**

A color brochure describes the capabilities of the Scenario lighting-control system. The system comes in three models and can interface with many different devices, including motion detectors, photocells, and security systems, and can be operated remotely by phone or wireless device. LiteTouch, Salt Lake City, Utah.



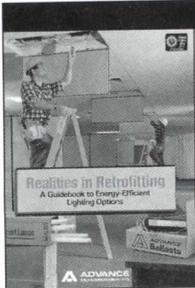
**595. Exterior luminaires**

New Lightcolumns are slim, cast-aluminum stanchions, 4 or 6 in. in diameter, that are placed like bollards to provide up-, down-, and accent lighting. In heights from 2 1/2 to 12 ft, fixtures use HID, low-temperature compact-fluorescent, and MR-16 lamps to provide low- and mid-level lighting. Gardco Lighting, San Leandro, Calif.



**596. Dimming systems**

A detailed brochure, LiteSet... Pre-set Dimming Made Simple, describes the operation and installation of devices that adjust emissions from light sources. Units range from a four-light control to more extensive devices that give four levels of illumination on a timed basis to many different light sources. Litelab Corp., Buffalo, N. Y.



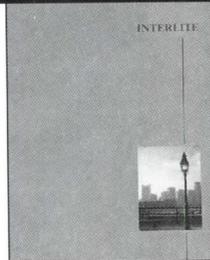
**597. Retrofitting**

Realities in Retrofitting is an 18-page guidebook for installation of replacement lighting. It covers pre-retrofit assessment, product evaluation and comparison, and product selection. Formulas for cost savings on ballast/lamp combinations. Advance Transformer Co., A Division of North American Philips Corp., Rosemont, Ill.



**598. Cable lighting**

A 28-page catalog explains and illustrates the operation of the Kable Lite System. Two parallel taut wires provide both support and live current for fixtures that can be mounted horizontally, vertically, or at an angle to any wall. This 12-v system uses MR-11 and MR-16 lamps. Accommodates up to 350W in 30 ft of cable. Tech Lighting, Chicago.



**599. Outdoor lighting**

A line of outdoor lighting fixtures, most of them designed in period motif, is illustrated in a 30-page catalog. Models include wall brackets, wall luminaires, lanterns, posts, pillar mounts, uplights, moonlights, and bollards. Manufactured in copper, steel, and aluminum alloy. More than 200 products. Interlite-USA, Wakefield, Mass.



**600. Suspended luminaire**

The Perforated Quad fixture, designed to optimize the attributes of the biaxial lamp, is described in a four-page folder. It combines efficiency with wide bat-wing distribution. This results in minimal ceiling heights and wide spacing patterns so that fewer fixtures are required. Architectural Lighting Systems, Inc., Taunton, Mass.

For more information, write item numbers on Reader Service Cards.



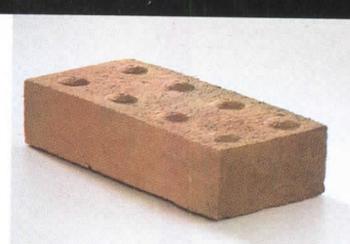
**601. Wheelchair shower**  
The Freewill line of barrier-free, wheelchair-accessible shower units is manufactured to meet ANSI criteria for interior dimension and accessories. Bathing units are designed for compatibility with residential settings, while meeting institutional requirements. Acrylic models available in Kohler colors. Kohler, Kohler, Wis.



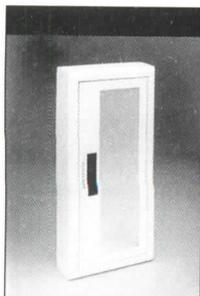
**602. Barrier-free water cooler**  
The ENO2-8-C operates at two levels. A lower basin is completely exposed and sensor-operated for wheelchair accessibility. An infrared light beam activates the fountain. Maximum running time of 30 seconds prevents malicious damage. Pressure panel operates basin at conventional height. Elkay Manufacturing Company, Oak Brook, Ill.



**603. Compliance signage**  
The full range of Innerface signage for corporate, healthcare, and institutional application can be made to comply with the tactile (raised and braille messages) and visual requirements for ADA while still retaining the modular changeable features that Innerface has specialized in. Innerface Architectural Signage, Inc., Lilburn, Ga.



**604. Signal paver**  
The exposed face of the Guardian paver has eight slightly raised domes that create a texture which makes the presence and location of areas such as crosswalks, curb cuts, ramps, and entrances easy to detect. It was developed in accordance with ADA requirements for tactile warning of hazardous crossings. Cushwa Brick, Inc., Williamsport, Md.



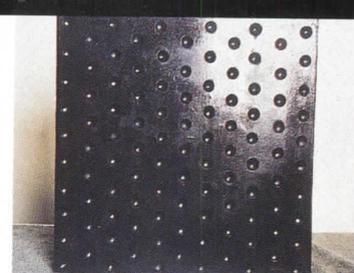
**605. Fire-extinguisher cabinet**  
A shallow fire cabinet allows the installer to recess it partially into thin walls, yet comply with the 4-in. corridor-projection requirement mandated by ADA. The cabinet, which is capable of housing a 10-lb dry-chemical extinguisher, will fit into walls as thin as 2 1/8 in. Cabinet is fitted with a flush pull handle. J. L. Industries, Bloomington, Minn.



**606. Tactile signage**  
The Graphic Blast process can carve custom-designed raised or sunken copy and graphics in most man-made materials, wood, and stone. Designs and braille letters are raised 1/32 in. and are integral with the material. Design range extends from the conventional to the classic look. Best Manufacturing Sign Systems, Montrose, Colo.



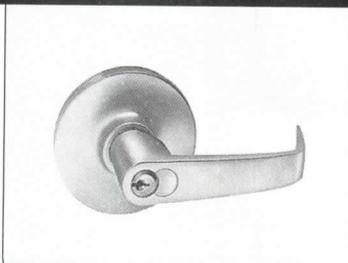
**607. ADA compliance software**  
As an aid in performing ADA compliance inspections, BOMA has produced a computer-software program based on its book, ADA Compliance Guidebook: A Checklist for Your Building. Available in DOS and Macintosh-based systems. Cost: \$545 for non-members. Building Owners and Managers Association International, Washington, D. C.\*



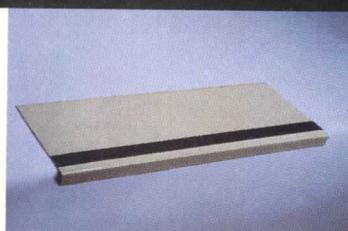
**608. Walking-surface warning**  
The Rapidcrete retrofit system for installing truncated domes on transit platforms and curb ramps saves money by eliminating the need to remove curbs and platforms. Stamping tools create domes on an applied mixture of modified resin and high-abrasive grout mix. Mix integrated with color. Stamperete Decorative Concrete, Liverpool, N. Y.



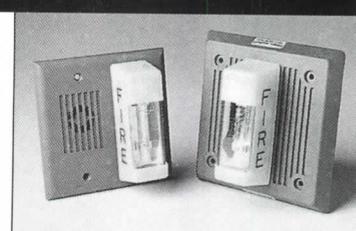
**609. Shower for the disabled**  
The SC4883 shower for the physically impaired has a molded-in soap holder and a rear corner seat. Measures 48-in. wide by 36-in. deep by 78-in. high. Two stainless-steel grab bars are bolted into the wall. Made of seamless sanitary-grade gelcoat in decorator colors. Has self-caulk brass drain. Aqua Glass Corporation, Adamsville, Tenn.



**610. Compliant locksets**  
Corbin Hardware has introduced three new cylinder options for its ADA Compliant 800 Series heavy-duty lever lockset. They include locksets that will accept a Corbin interchangeable core, a Best-type interchangeable core, and standard Sargent cylinder. Corbin Architectural Hardware, A Black & Decker Company, Berlin, Conn.



**611. Stair perception**  
The Grip Strip VI (visually impaired) Series has a 2-in.-wide colored grit strip imbedded 1 in. from the front edge. Some building codes require that the top and lower tread of each stairway must be marked by a contrasting color strip. Strips in yellow, black, brown, gray. Treads in a variety of surface and nose designs. Musson Rubber Co., Akron, Ohio.



**612. Fire alarms**  
The TA-AD series of strobe light and horn fire-alarm signals complies with ADA requirements. Strobes have 117-candela ratings and horns have outputs of up to 106 dbA. Each model can be mounted to standard, low-cost electrical boxes. Units are finished in red and have high-impact thermoplastic lenses with red F-I-R-E letters. Tork, Mount Vernon, N. Y.

\* Product data on CAD disk

# 17 • A.D.A. COMPLIANCE Products

For more information, write item numbers on Reader Service Cards.



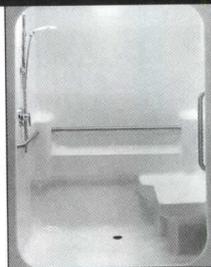
### 613. Folding shower seats

Shower-Seats are fold-up seats designed for use in shower or steam rooms. They can be installed during original construction or added to existing bath facilities. Made in white with white, chrome, or bone trim. Materials said to be impervious to humidity or water. Mr. Steam, Division of Sussman-Automatic Corporation, Long Island City, N. Y.



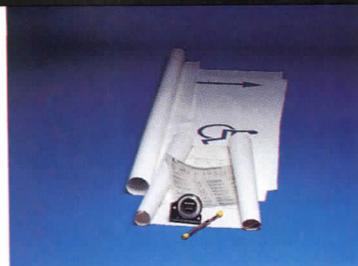
### 614. Straight-stair lift

The Carrier Lift II Inclined Platform Lift can carry up or down stairs a passenger who uses a wheelchair or, on a fold-down seat, a passenger who does not. Operates on 110V AC power. Can be installed on straight-run stairs. Available in three platform sizes: 28 by 35 in., 30 by 41 in., and 30 by 48 in. Access Industries, Inc., Grandview, Mo.



### 615. Barrier-free showers

The FreedomLine of showers features textured, slip-resistant, reinforced flooring, easy wheelchair crossing dam, handheld showers with sliderails, mixing valves, curtain rods, and ANSI-approved grab bars at logical places. Steel-reinforced plastic seats are optional equipment. Lasco Bathware, Anaheim, Calif.



### 616. ADA compliance kit

Kit contains a door-pressure gauge to check opening force, an angle gauge to measure ramp-slope ratios, floor templates to determine wheelchair-approach clearances at accessible openings, and an architect's template to check wheelchair-approach clearances on blueprints. The National Hardware Network, Inc., Fife, Wash.



### 617. Swing-door operator

The Series 7000 EasyAccess self-contained, slow-opening, electro-mechanical operator converts a swing door into a barrier-free entrance. Operable by push button/plate or with Push-N-Go power assist at touch. Can function manually for general public. Horton Automatics, Division of Overhead Door Corporation, Corpus Christi, Tex.



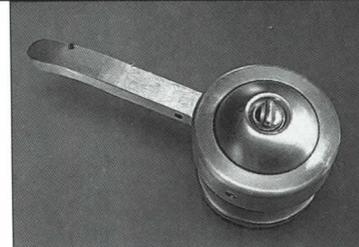
### 618. Recessed wheelchair lift

The Everhard wheelchair lift is hidden underground until it is needed. Before it rises, enclosing safety rails emerge around the wheelchair. Then the wheelchair is lifted from ground level to entry level. Unobtrusive platform can be covered with concrete, asphalt, brick, or paving stone. Lift travels from 42 to 144 in. Aging Technologies, Inc., Lexington, Ky.



### 619. Palpable signs

The ASIIntouch sign system employs the photopolymer-imaging process to make one-piece signs to comply with ADA requirements for minimum 5/8-in. high, 1/32-in. raised characters and Grade 2 Braille translations. Braille characters and letters are sharply defined for rapid perception by visually handicapped. ASI Sign Systems Inc., New York City.



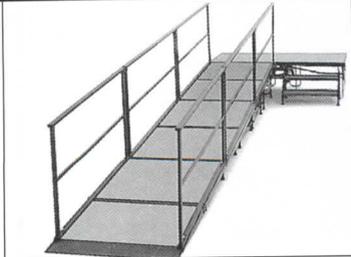
### 620. Door-lever adapter

The Model ADA-I lever handle fits onto standard doorknobs to meet the ADA guidelines for door access. The machined-aluminum device is nonhanded and fits 2 1/8- or 2 1/4-in. knobs. Quickly mounted using Allen wrenches. Comes in brushed aluminum or anodized bronze or black. Access Specialties and Products, Inc., Bensenville, Ill.



### 621. ADA locksets

Best Lock's mortise and cylindrical levered locksets comply with the door-hardware requirements of the Americans with Disabilities Act for public accommodations. The 30H Mortise Series Locksets are available in five different styles of levers, of which three come in 9K heavy-duty cylindrical series. Best Lock Corporation, Indianapolis.



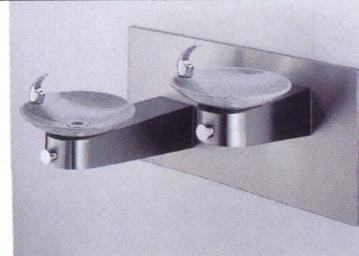
### 622. Ramps for the disabled

Sico stage ramps are mobile for quick set-up and take-down. Heights available in 8-in. increments to 48 in. Insertable leg units can handle stages up to 72 in. The first unit comes with a mobile cart and subsequent units are mobile-folding. Ramps can curve around a stage or make an S shape behind stage. Sico Inc., Minneapolis.



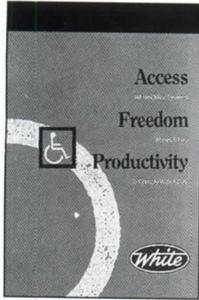
### 623. Automatic door system

The Magic-Access door operator converts most conventional doors into power-operated doors to allow compliance with ADA standards for barrier-free entry. Works on wood, metal, metal-framed, and glass doors up to 125 lb and 44 in. wide. Door opens automatically at touch. Stanley Magic Door, Division of The Stanley Works, Farmington, Conn.



### 624. Accessible drinking fountain

The Model 088A dual-level drinking fountain has two brackets at different heights in order to accommodate adults, children, and both standing and wheelchair-seated disabled persons. Activated by front-mounted push-button valves. Stainless-steel brackets and polymarble bowls. Haws Drinking Faucet Company, Berkeley, Calif.



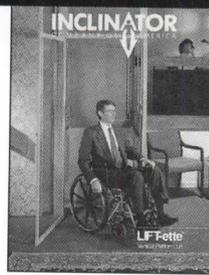
### 625. Accessible files

An eight-page booklet describes how automated or mobile filing systems can be used to meet ADA requirements. It explains how an employee in a wheelchair would operate a White Power File and gain accessibility to the White Aisle-Saver high-density mobile-storage system. White Storage & Retrieval Systems, Inc., Kenilworth, N. J.



### 626. ADA tax incentives

An updated, 16-page manual from Von Duprin, a manufacturer of exit devices, outlines three specific business-tax provisions related to improved access for the disabled and shows ways to accomplish these improvements. The booklet covers walks, parking lots, ramps, doors and doorways, stairs, and floors. Von Duprin, Inc., Indianapolis.



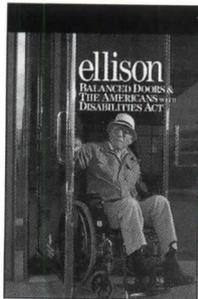
### 627. Platform lift

The Lift-ette vertical platform lift for wheelchairs is described and its specification supplied in a four-page folder. The Lift-ette can raise 750 lb as much as 12 ft. It can be adapted for indoor and outdoor usage, including steps, porches, landings, and loading docks. Platform has 12-sq-ft area. Inclinator Co. of America, Harrisburg, Pa.



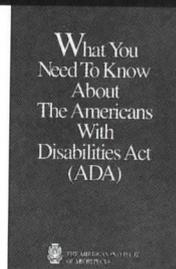
### 628. Door closers

The ADA accessibility requirements and the selection of door closers to meet them is addressed in a color brochure, Opening Doors to People with Disabilities. The brochure illustrates some of the problems that can be encountered when conforming to the ADA requirements and how to solve them. Dorma Door Controls, Inc., Reamstown, Pa.



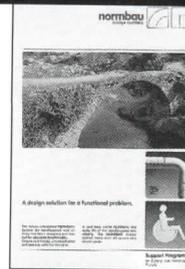
### 629. Balanced doors

An illustrated, four-page brochure, Ellison Balanced Doors & the Americans With Disabilities Act, explains how the architectural entrances meet minimum ADA requirements without using electro-mechanical door operators. Details of door performances under a variety of wind loads. Ellison Bronze, Div. Dowercraft Corporation, Falconer, N. Y.



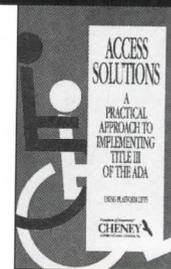
### 630. ADA videos and software

The AIA's ADA Educational Video Series is based on the ADA videoconferences broadcast by PBS. ADA Searchware is a software version of the complete text of the Americans With Disabilities Act and related requirements. Indexing system helps assess potential liabilities. American Institute of Architects, Washington, D. C.®



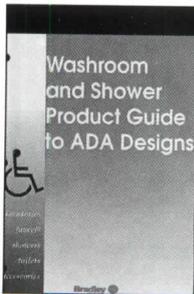
### 631. Bathroom accessories

A four-page folder describes and illustrates the Normbau line of support bars and shower seats designed for the bathroom safety and comfort of the elderly and handicapped. All elements are reinforced with steel cores and come with a smooth or knurled surface and in a wide range of colors. Hafele America Co., Archdale, N. C.



### 632. Access guide

Access Solutions: A Practical Approach to Implementing Title III of the ADA Using Platform Lifts presents information in a series of problem/solution scenarios. Examples of barriers to the handicapped and how they are overcome take place at a school, a public library, and a health club. The Cheney Company, New Berlin, Wis.



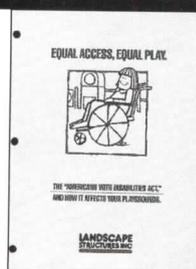
### 633. Washroom, shower guide

A 10-page manual, Washroom and Shower Product Guide to ADA Designs, explains how Bradley products will aid in complying with ADA codes. The booklet gives details of lavatories, faucets, showers, toilets, and washroom accessories that meet the ADA standards for accessibility. Bradley Corporation, Menomonee Falls, Wis.



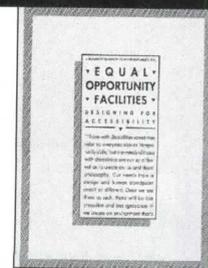
### 634. Accessible water

A four-page folder illustrates a line of water outlets for kitchen, shower, and lavatory that can be easily and safely used by the physically impaired. Hand showers come with a variety of spray heads. Faucet spouts arch high and forward. Grohmix Thermostat valves allow presetting of bath and shower water. Grohe America, Wood Dale, Ill.



### 635. Accessible fun

Equal Access, Equal Play is a brochure that provides answers to common questions about the ADA and playground design. It discusses cost-effective ways to make a playground more accessible and cites products developed to encourage physical, mental, and social play among children of all abilities. Landscape Structures Inc., Delano, Minn.



### 636. Universal design principles

Equal Opportunity Facilities: Designing for Accessibility advocates universal design. This is defined as "for those companies that want . . . a strategy that will not only help them comply with the ADA as it changes, but also ensures that the work environment allows all employees to function at the top of their abilities." Herman Miller, Inc., Zeeland, Mich.\*

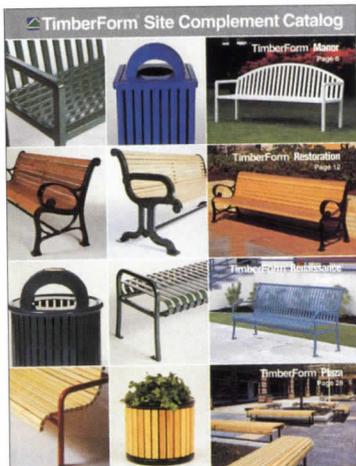
\* Product data on CAD disk

# CATALOG PREVIEW '93

To Advertise Call 1-800-544-7929  
Fax 212-512-2074

## New 88-Page TimberForm Site Furnishings Catalog

More than 350 products made of cast iron, perforated metal, steel, welded wire & wood are offered in a dozen different design series in styles from traditional to contemporary. Ash receptacles, benches, bike racks, bollards, litter containers, picnic & game tables are presented in design coordinated families. Over 170 designer colors available. Photos, technical data & product dimensions are shown. Call 1-800-547-1940 (ext. 502).



Columbia Cascade Co.

Circle on 1050 on the inquiry card

## CHADSWORTH COLUMNS™

Offers architectural columns crafted in wood, marble/fiberglass and foam/stucco. Interior and exterior columns are available in a variety of styles and sizes for structural as well as ornamental applications. Shipped direct to job site. CHADSWORTH...The Column Source. Free filer. Catalog requests 800-394-5177. Sales order 800-486-2118. Other inquires 404-876-5410.

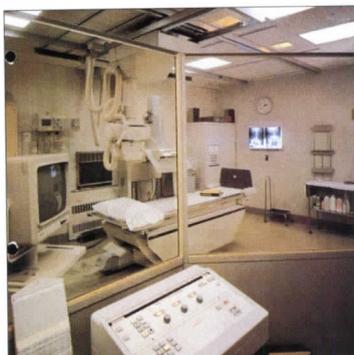


Chadsworth Inc.

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## Free X-Ray Room Planning Guide

New guide illustrates user-designed installations of CLEAR-Pb Lead-Plastic Modular Barriers and Windows in hospitals, radiation therapy centers. CLEAR-Pb is a transparent, lead-impregnated plastic sheet in lead equivalencies from 0.3 to 2.0 mm; over 200 stock sizes up to 6 x 8 ft. (larger on special order). Nuclear Associates.



PLANNING GUIDE

**CLEAR-Pb**

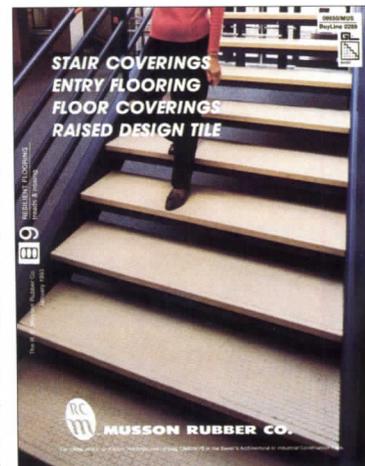
LEAD-PLASTIC MODULAR X-RAY BARRIERS & WINDOWS

Nuclear Associates

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## FLOOR AND STAIR SAFETY

Learn more about VI (Visually Impaired), Fire Safety and other rubber floor and stair tread systems featuring marbled or plain, raised and surface designs in new popular colors. Also included is the latest entry flooring such as Disco, Low Disc, Square, Diamond, Fluff Cord and Traffic Tiles along with colorful illustrations and helpful specifications. To request copies, write Musson Rubber Co. P.O. Box 7038, Akron, OH 44306, 216-773-7651. FAX 1-216-773-3254

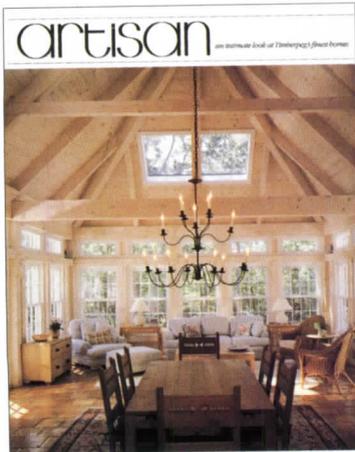


Musson Rubber Co.

Circle 1053 on the inquiry card.

## Pre-engineered post & beam building system

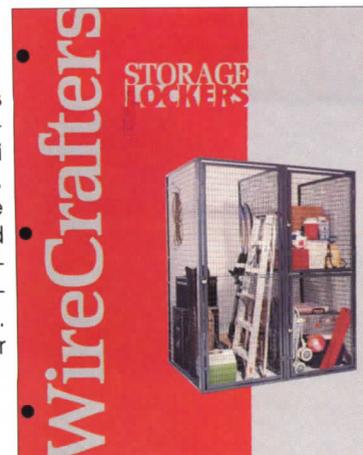
Timberpeg allows architects the freedom to design post and beam structures without worrying about beam sizes or joinery. Frames are pre-engineered for typical conditions, and feature Douglas fir or eastern white pine. Our architect-led Design Department is happy to work with you to achieve the look and effect you want. Frame erection or shell construction can be arranged.



Timberpeg

## WOVEN WIRE STORAGE LOCKERS

Woven Wire Storage Lockers from Wire Crafters are the heaviest lockers available for multi family building storage areas. Choose from single or double tier styles. A variety of standard sizes, and custom units are available. Specify the best for building owners and residents. Choose Wire Crafters for your next storage area project.



Wire Crafters

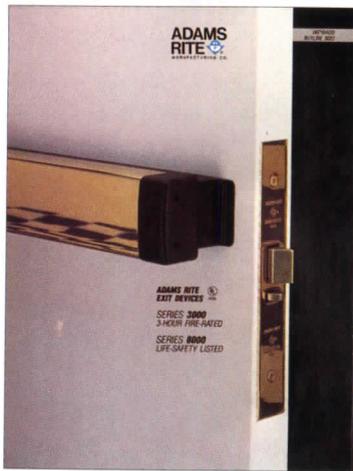
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# CATALOG PREVIEW '93

## Touchbar Exit Devices

32 page color catalog of UL listed (either for life safety only or fire-rated for up to 3 hrs.) exit devices. All have matching one-piece touchbar. They are available in bright or satin brass; bright, satin or oil-rubbed bronze; bright or satin stainless steel and aluminum anodized clear, dark bronze or black.

Included in the catalog are a choice of entry trim: pullevers, levers, knobs, thumbturns or key-only functions. Electric operation, monitoring, mullions and other accessories are also shown. 4040 So. Capitol Ave, City of Industry, CA 91749. Phone 310-699-0511.

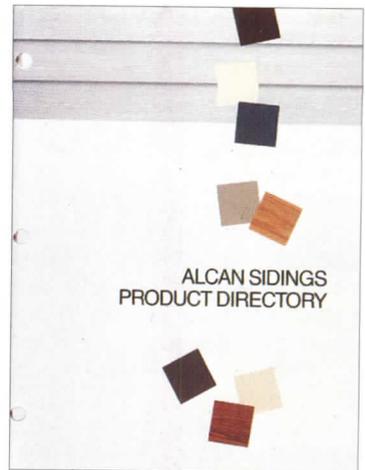


Adams Rite

Circle 1056 on the inquiry card.

## "Make Us A Part Of Your Home"

The Product Directory from Alcan Building Products describes the extensive line of building products available from this leading manufacturer. A wide selection of residential sidings, soffit systems, trim coils & accessories are available in aluminum, steel or vinyl. Included is a Color Guide that provides a visual aid to the extensive array of colors offered. Alcan's "Color Fusion" process recreates the beauty of real stained cedar sidings in a fade resistant, low maintenance KYNAR 500®/HYLAR 5000™ finish.



Alcan Building Products

Circle 1057 on the inquiry card.

## The Quality Style "K" Gutter System

Benjamin Obodyke founded in 1868, manufactures a complete line of quality roof drainage products in copper, aluminum and galvanized steel. The gutters and downspouts are available in a broad range of sizes and shapes to meet every architectural need. "K" and "Half-Round" styles can be coordinated to match windows and trim. 1-800-523-5261.

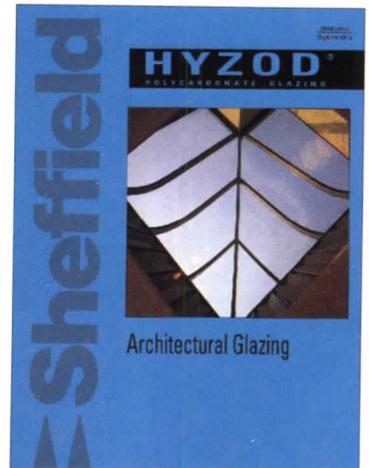


Benjamin Obodyke Inc.

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## The Superior Architectural Glazing

HYZOD Polycarbonate Sheet is a tough, versatile glazing combining superior breakage protection and broad design latitude. With impact strength 250 times that of flat glass, HYZOD sheet provides lasting protection with the freedom to design and construct curved architectural glazing at a considerable cost savings compared to glass and acrylic. Sheffield Plastics (800)-628-5084.

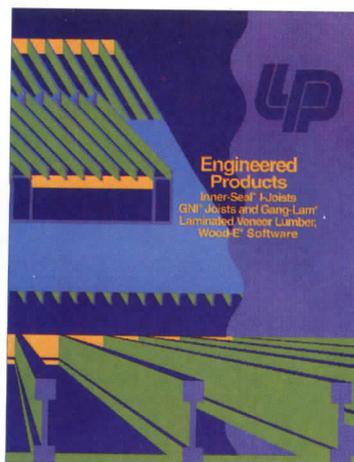


Sheffield Plastics

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## Engineered Wood Products

Engineered wood products are designed to eliminate the common problems of solid sawn lumber. Gang-Lam LVL, Inner-Seal-I-Joists and GNI Joists are stronger, more stable and easier to handle than solid sawn lumber. Catalog includes span and uniform load charts, and information on new Wood-E® Cut and Wood-E® CAD engineering software also available.

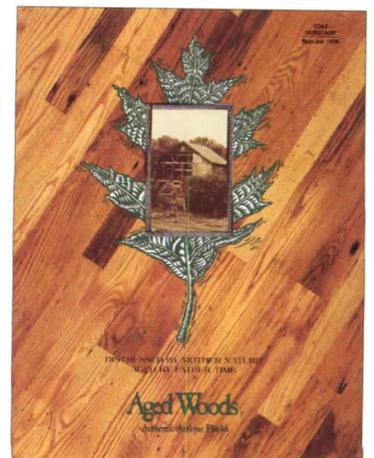


Louisiana-Pacific

Circle 1060 on the inquiry card.

## Antique Plank Flooring From Recycled Barnwood

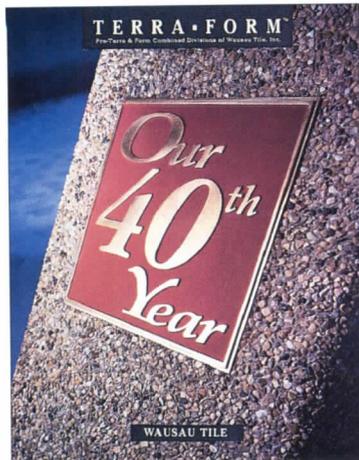
Our planks are naturally Distressed by Mother Nature, Aged by Father Time™ and can be used for flooring, panelling or millwork. From old barnwood emerges a precision-milled plank that retains the patina and character imparted by decades of wind, rain and sun, and the signs of old-time craftsman. Free brochure.



Aged Woods, Inc.

### Wausau Tile, Inc. Celebrates 40 Years

Terra-Form Div. of Wausau Tile celebrates 40 years of quality and service by introducing a new 36-page full color catalog. Precast concrete waste cans, signs, tables, planters, ash urns, and more are beautifully photographed and complete details are included with each item. Shipped from WI, CA, FL. (800)-388-8728.



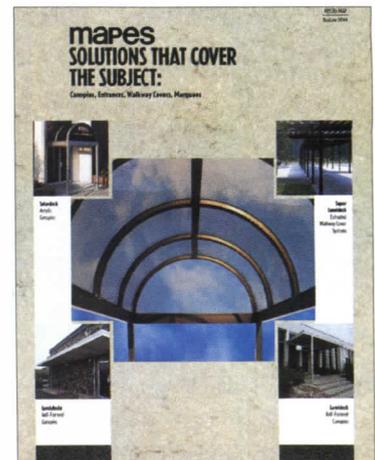
Wausau Tile, Inc.

Circle 1062 on the inquiry card.

### Walkways Help Comply With A.D.A. Regulations

Aluminum and acrylic walkway covers are available in a myriad of designs and profiles to aid in conforming to A.D.A. requirements. Flat deck, pyramid and barrel vault designs provide unlimited design flexibility. Walkways are available in both standard and custom finishes and are designed for use in any part of the country.

Mapes Industries, Inc.  
P.O. Box 80069  
Lincoln, NE 68501  
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Mapes Industries, Inc.

Circle 1063 on the inquiry card.

### The Industry's Widest Range of Access Control Systems

For 30 years, Continental has manufactured state-of-the-art Access Control systems, controlling one door to hundreds and up to thousands of card holders...all delivered on time and on budget. Architectural specs are available on floppy disk for your convenience. For your free catalog, call 516-334-0900 or write to: Continental Instruments Corp., 70 Hopper St., Westbury, NY 11590.

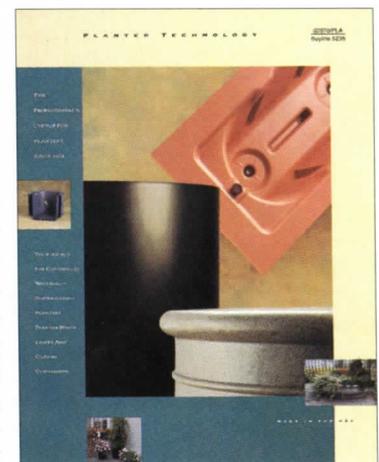


Continental Instruments

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### Automatic Watering Planters - Since 1979

NATURAL SPRING Controlled Watering Planters are self-contained watering units for interior & exterior plantings. They feature a patented moisture sensor which releases water precisely on demand by the plant(s) from a built-in reservoir. They are available as free standing ornamental planters and as linear one-step drop-in units which are waterproof, provide significant labor savings and are available in many standard sizes, colors & custom.



Planter Technology

Circle 1065 on the inquiry card.

### Fire Retardants and Preservatives

Hoover Treated Wood Products' new 12-page Sweet's Catalog features Pyro-Guard third generation interior fire retardant lumber and plywood for roof sheathing and other structural uses; Exterior Fire-X FRT lumber and plywood for decks, balconies, siding and other outside uses; and CCA preservative treated lumber and plywood that's kiln dried after treatment.



Hoover Treated Wood

Circle 1066 on the inquiry card.

### Worthington Group Ltd.

The Classical Tuscan Column, based on designs of Vitruvius and Vignola, crafted in pine. Our authentic replications of classical designs are offered at prices far more reasonable than other companies. Worthington also offers Balustrading in fiberglass and concrete reinforced with fiberglass, plus moulding and much more. 44 page color catalog, \$3.00. Call (800)-872-1608.



Worthington

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# CATALOG PREVIEW '93

## Cellular Ceilings

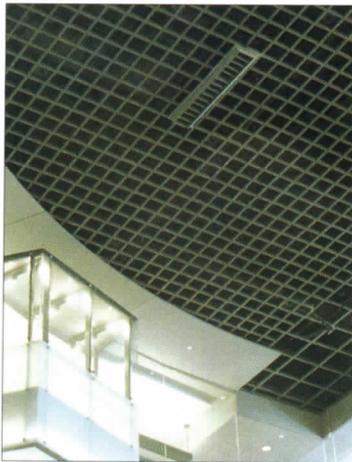
CELLULAR CEILINGS are subtle, distinctive, and monolithic in appearance. Ceiling accessibility is generally 100%.

Various modules, face widths, and blade depths are available.

Finishes: standard colors, custom colors, and mirrored.

American Decorative Ceilings  
4158 East 71st Street  
Cleveland, Ohio 44105  
(216) 341-2222

under section 09545



**American Decorative Ceilings**

Circle 1068 on the inquiry card.

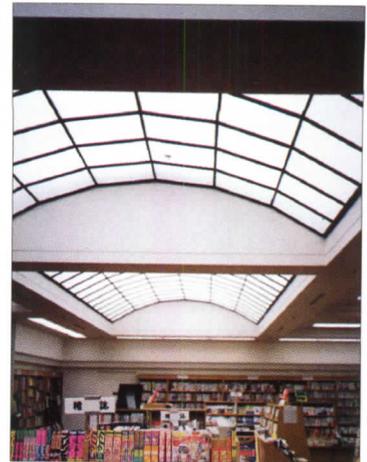
## Interior Skylight Ceilings

INTERIOR SKYLIGHTS produce intriguing visual results when used as a decorative lighting medium.

Our six skylight systems range in plan from square shapes to round, and in section from graceful slopes to acute angles.

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**American Decorative Ceilings**

Circle 1069 on the inquiry card.

## Modular Buildings Permanent & Fast

Steel and concrete prefabricated units combine to create a two-story Cancer Center in a fraction of the time needed for conventional construction. Design-build capabilities enable BESTEEL to meet specifications. Complete units include factory placed concrete or wood floors and are assembled in the BESTEEL plants. Designed for schools, medical facilities and prisons.

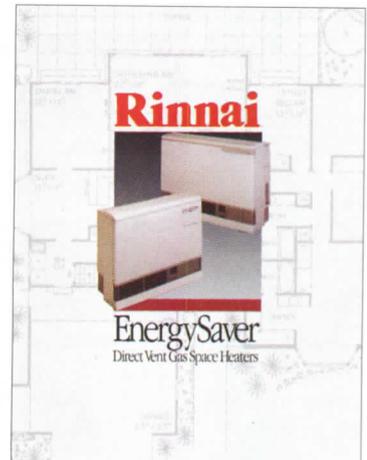


**BESTEEL INDUSTRIES**

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## DIRECT VENT GAS HEAT SYSTEMS

Talk about home improvements! Rinnai EnergySavers are versatile, easy-to-install heating systems. Ideal for condos, apartments, offices, mobile homes, sun rooms, rec rooms--even a whole house! Beautiful neutral color, cool-to-the-touch cabinetry. Slimline styling blends into your decor like a fine piece of furniture. Send for your free brochure today.



**Rinnai America Corp.**

Circle 1071 on the inquiry card.

## Open & Private Offices A Single Source

Transwall combines these two basic wall requirements for today's high tech office with its Sounddivider open plan system and the full height Corporate series. The two systems offer complete interchangeability of wall mount components, as well as compatibility in design and appearance. Modular furniture blends with panel mounted work surfaces. Electrical and electronic support is system integrated.

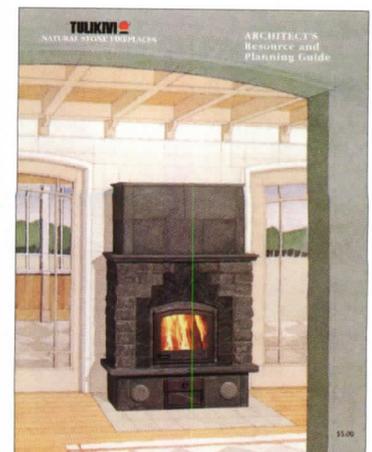


**Transwall Corporation**

Circle 1072 on the inquiry card.

## Natural Stone Fireplaces Resource Guide

TULIKIVI Fireplaces and Bake-ovens combine an internal contraflow combustion system with nature's finest material for retaining heat: soapstone-to provide a highly efficient and clean-burning fireplace. A brilliant 2 hour fire radiates heat for up to 24 hours. Call 800-843-3473 for a FREE 28-page, color Resource and Planning guide.

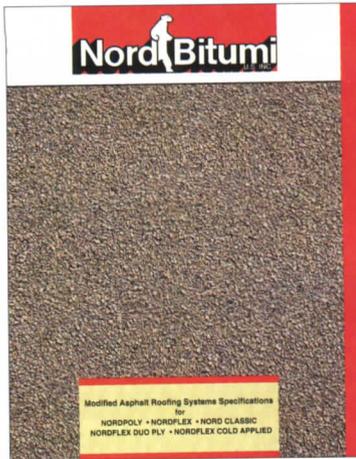


**Tulikivi Group**

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## MODIFIED ASPHALT ROOF SPECIFICATIONS

**Nord Bitumi**



**Nord Bitumi U.S., Inc.**

Modified Bitumen Membrane Systems Specifications from Nord Bitumi U.S., Inc., a leader in the research, development & manufacture of roofing and waterproofing systems for over a quarter of a century. APP, SBS and Classic Systems for torch, mop, or cold adhesive applications. Nationwide Technical Service Assistance with a network of Registered Contractors.

Circle 1074 on the inquiry card.

## Porcelain Architectural Panels

Ideal for retrofit projects including window replacement, curtainwall, fascia and soffit applications. Mapes architectural panels upgrade the appearance and security of any building and are graffiti proof. Panels are available in almost any color and thickness to provide total design flexibility.

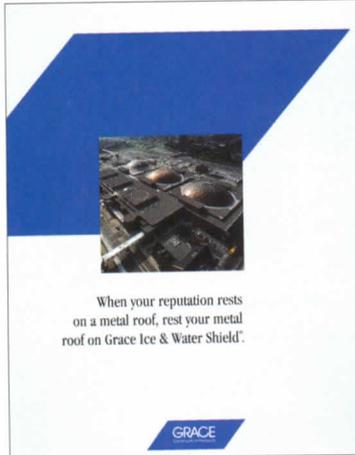
Mapes Industries, Inc.  
P.O. Box 80069  
Lincoln, NE 68501  
800-228-2391



**Mapes Industries, Inc.**

Circle 1075 on the inquiry card.

## Rest Your Metal Roof On Grace Ice & Water Shield®



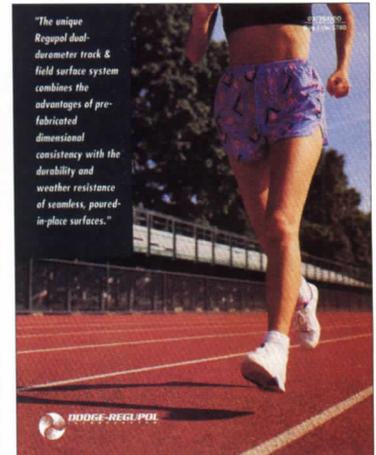
**Grace Construction  
Products**

If you have chosen a metal roof, choose the best in an underlayment - Grace Ice & Water Shield. It is the premier roofing underlayment membrane for protection against leakage from ice dams and wind-driven rain because its features provide a level of performance superior to methods such as felt and roofing cement. Also used under shingles, tile, shakes or slate.

Circle 1076 on the inquiry card.

## Regupol is right on track!!

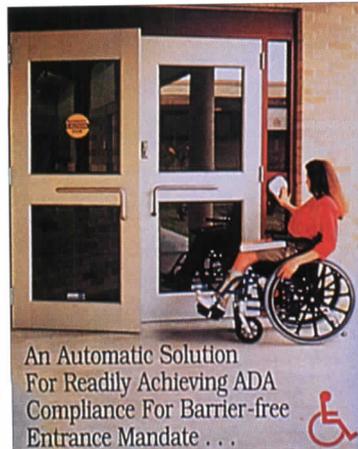
Dodge-Regupol, Inc. offers turnkey installations of its premier synthetic track. The Regupol track provides a completely safe & environmentally sensitive product combining all necessary performance properties in one system: use of mercury/toxin free & 100% recycled materials, dual durometer system with prefabricated basemat for uniform thickness & density, spike resistance & durability, recoatable seamless surface, minimal installation risk & controlled application rate. Sales, service & installation 800-322-1923.



**Dodge-Regupol**

Circle 1077 on the inquiry card.

## Barrier-Free Entrances With Swing Door Operator



**Horton Automatics**

Our EasyAccess™ swing door operator makes complying with the ADA 1990 mandate "readily achievable." ADA defines this as "easily accomplishable . . . without much difficulty or expense." The EasyAccess operator, installed without structural modifications, creates an affordably priced, barrier-free entrance for the physically disabled. Automatic operation with a push of a button.

Circle 1078 on the inquiry card.

## HANG-TIGHT PARTITION MOUNTING SYSTEM

Dazor Mfg. Corp. manufactures a full range of adjustable-arm lighting designed for a variety of applications. The most exciting solution for integrating task lighting with office workstations is the DAZOR PC-LITE plus the HANG-TIGHT wall partition mounting system. The PC-LITE uses an energy-efficient 18-watt compact fluorescent with a parabolic louver to control the light & eliminate glare. The HANG-TIGHT system frees up valuable desktop space by mounting Dazor task lights on workstation wall partitions.



**Dazor Manufacturing**

Circle 1079 on the inquiry card.

# CATALOG PREVIEW '93

## Roll Vent™ Attic Ventilation System

Roll Vent™ is a self-contained continuous ridge vent available in 20ft. and 50ft. rolls. The low profile shingle-over design does not detract from the appearance of the ridge while effectively venting hot air in the summer and damaging moisture in the winter. Available for asphalt, cedar and tile roof applications.

1-800-523-5261.



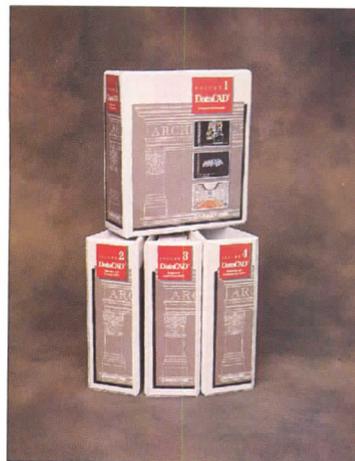
Benjamin Obdyke Inc.

Circle 1080 on the inquiry card.

## DataCAD for Architects

Architectural CAD that's easy to learn, easy to use and affordable! Designed by architects, DataCAD offers full-featured, integrated, 2-D/3-D design and drafting, which will help reduce production costs and improve profitability. Call us today for a free PC demonstration disk.

1-800-654-3413.

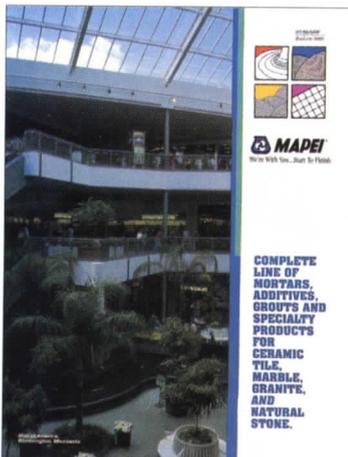


Cadkey, Inc.

Circle 1081 on the inquiry card.

## Mapei Sweet's Catalog Expands For 1993

MAPEI Corp. introduces its 1993 Sweet's Catalog. The 16-page catalog introduces 6 new products & features the latest information on every MAPEI product. In addition to product characteristics & spec. compliances on MAPEI products, the catalog contains technical drawings illustrating typical installations utilizing MAPEI products. MAPEI also offers an exclusive finished installation brochure, which illustrates past projects to assist you with your current plans. For more info on MAPEI call Sweets BuyLine service or 1-800-42-MAPEI.



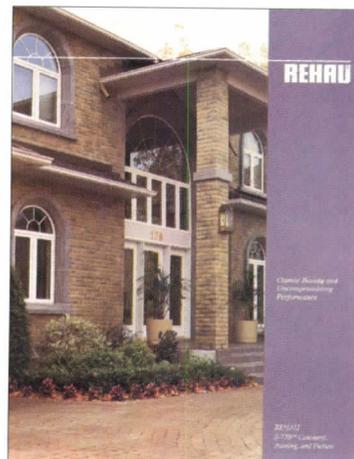
Mapei Corp.

Circle 1082 on the inquiry card.

## VINYL WINDOWS THAT FIT YOUR STYLE

Nothing has more impact on the look of a building than its windows. Our vinyl windows give you a clear line of sight from every angle. Elegant styling. Concealed hinges. Clean lines. These beautifully proportioned windows elevate the craftsmanship of window design to an art.

REHAU, Inc.  
P.O. Box 1706  
Leesburg, VA 22075  
1-800-247-9445

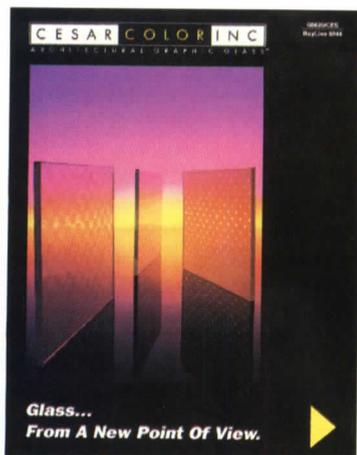


REHAU, INC.

Circle 1083 on the inquiry card.

## ARCHITECTURAL GRAPHIC GLASS™

New design & color technology creates decorative interlayers permanently laminated between two lites of glass, for interior & exterior glazing, or surfacing. Choose standard or custom designs/images/colors. New catalog helps you specify ChromaFusion® to manipulate light and redefine space...or ContraVision®, for unique one-way graphics and viewing -- without mirrors. Call: 415-259-9700.

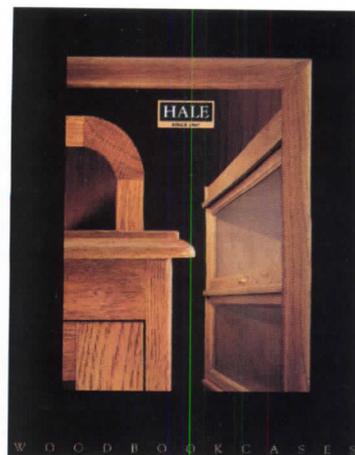


CESAR COLOR, INC.

Circle 1084 on the inquiry card.

## Hale Manufacturing For The Finest Bookcases

Hale's new catalog features their traditionally beautiful and functional bookcases, including the new LTD Series. All distinctively hand-crafted wood bookcases enhance their 85 year old reputation as "The Finest" bookcase builders. Bookcases are available in a variety of heights, woods and finishes. Call 1-800-USE-HALE for free catalog.



HALE MFG.

Circle 1085 on the inquiry card.

### ADA Access Control By Design

To control access in lobbies and other major entrance/exits, Omega combines two highly specialized technologies, proximity readers and infrared sensors, to provide both unobtrusive and aesthetically pleasing traffic lanes through which persons can pass with safety and security whether in large numbers or disabled. Design options can complement any decor. Complete specs or a free video is available. Call (510)-256-3700.



### Omega Optical Turnstiles

Circle 1086 on the inquiry card.

### Cedar Breather

Cedar Breather, an innovative new product, prevents costly cedar shingle damage, maximizing the performance and life of cedar roofs by allowing continuous air flow between the roof deck and shingles. This reduces excess moisture and the potential for rotting and cupping. Easily installed, Cedar Breather prolongs the life of cedar shingles resulting in significant savings for homeowners. 1-800-523-5261.



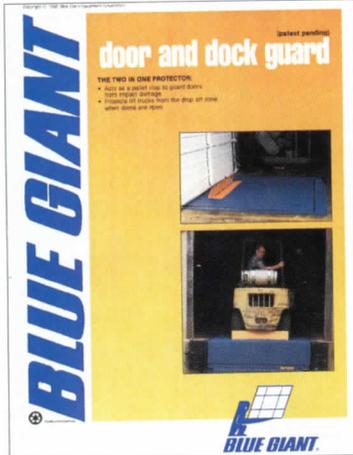
### Benjamin Obdyke Inc.

Circle 1087 on the inquiry card.

### THE TWO IN ONE PROTECTOR

The latest Blue Giant innovation in loading dock equipment (Section 11160) is the "DOOR AND DOCK GUARD". It acts as a stop to protect overhead doors from impact damage and it protects lift truck operators from the drop off zone created when overhead doors are left open.

BLUE GIANT EQUIPMENT CORP.  
One Industrial Park Drive  
Pell City, AL 35125  
800-USA-BLUE  
Fax: (205)-884-1504

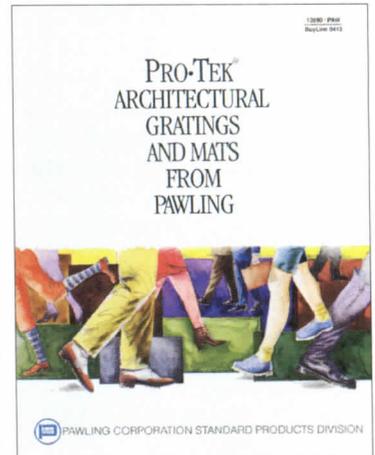


### Blue Giant

Circle 1088 on the inquiry card.

### Pawling's Pro-Tek Architectural Gratings & Mats Catalog

Pawling "Two-Step-Scrape & Dry" floor protection system created using a wide selection of mats, matting & attractive "first line of defense" carpet floor finishes to protect expensive interior flooring from tracked-in dirt & water. Entrance systems are ideally suited for interior/exterior entrances, lobbies, vestibules, elevators-any traffic area requiring high style yet low maintenance. Many styles & colors available. More info: 800-431-3456, Pawling Corp., Standard Products Div., 157 Charles Colman Blvd., Pawling, NY 12564-1188.

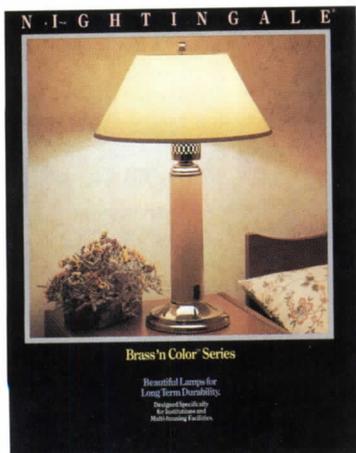


### Pawling Corp.

Circle 1089 on the inquiry card.

### Adjustable Fixture Co.

New heavy-duty, tamper-resistant lamps for public areas, lounges, resident rooms & university apartments. Handsome Brass 'n Color table & floor lamps available in 7 designer colors or the Benjamin Moore color of your choice. Options include a night light, plug-in receptacle, theft-resistant Perma-Mount base & Safety Guard to prevent bulb removal. UL listed & CSA approved. Free 30 day trial offer. (800) 558-2628, or fax (414) 964-2944 for info. & samples.

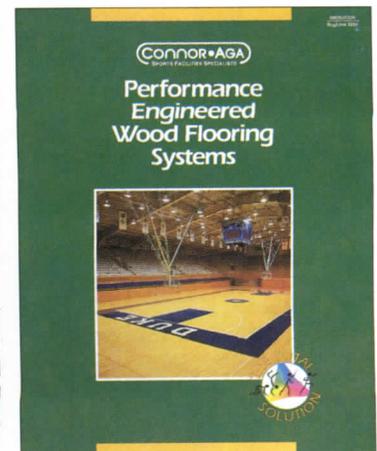


### Adjustable Fixture Co.

Circle 1090 on the inquiry card.

### Performance Engineered Wood Flooring Systems

New 1993 wood flooring systems specifications brochure provides complete information about Connor.AGA's expanding line of top quality systems. Included are specs, grades, DIN test results, customer support services and information on the newest system...Rezill-Channel. Learn about Connor.AGA's "Total Solution" program today...call 1-800-833-7144 for your free copy.



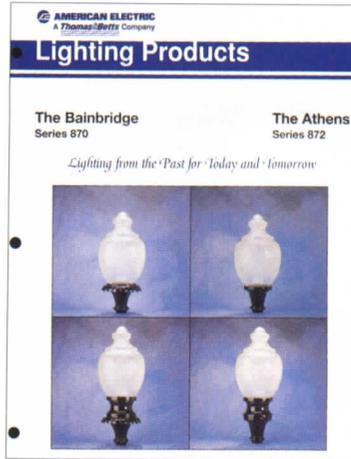
### Connor.AGA

Circle 1091 on the inquiry card.

# CATALOG PREVIEW '93

## Nostalgic Post-Top Ornamental Luminaire

AMERICAN ELECTRIC LIGHTING is introducing a new luminaire to the ornamental/nostalgic lighting market. The ATHENS/BAINBRIDGE luminaire features old-fashioned style & grace with modern performance & materials. These luminaires are available with a variety of globe styles, ornamental accessories, colors and a range of wattages of High Pressure Sodium, Mercury Vapor & Metal Halide light sources.



### American Electric Lighting

Circle 1092 on the inquiry card.

## Heat-N-Glo Fireplace Products

Looking for quality fireplaces that combine efficiency and aesthetics? Call for our brochure on energy-saving built-in gas or woodburning fireplaces. Including see-thru, three and four sided glass fireplaces, inserts for pre-existing fireplaces or our direct-vent (no chimney) gas fireplace available with remote control. Call 612-890-8367.

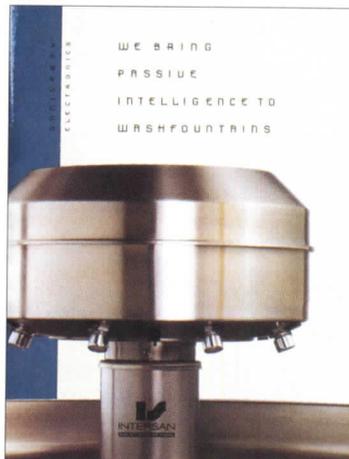


### Heat-N-Glo

Circle 1093 on the inquiry card.

## WE HAVE AN EYE ON YOU

INTERSAN'S new brochure "We Bring Passive Intelligence to Washfountains" is a 16 page booklet that describes INTERSAN'S new electronic battery operated sensor washfountain product line. The Sanispray electronic washfountains are available in either Collective HI-TRAFFIC, INDIVIDUAL MINI SPRAY or INDIVIDUAL MAXI SPRAY MODELS.

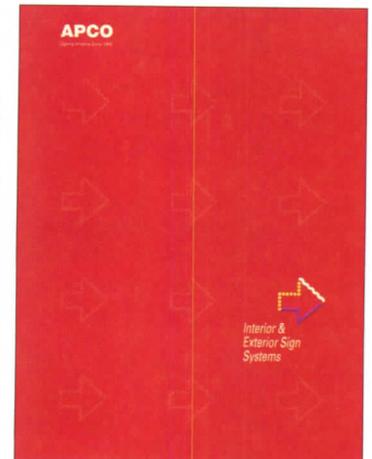


### INTERSAN

Circle 1094 on the inquiry card

## APCO Offers ADA Sign Solutions

APCO manufactures the broadest line of architectural signing products in America. Included in our product line are three different graphic processes designed to help you achieve full compliance with the Americans with Disabilities Act. APCO is ready to help you with your wayfinding needs! Call (404) 688-9000.

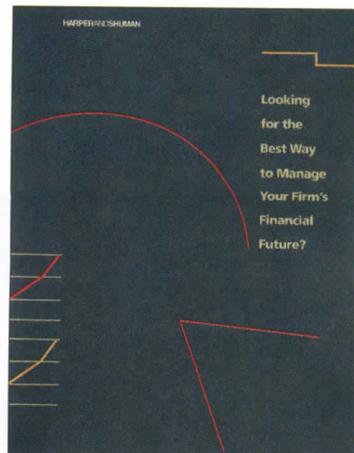


### APCO

Circle 1095 on the inquiry card

## Financial Management Systems

The only systems sponsored by the AIA. Harper and Shuman develops, sells and supports financial management software specifically for architectural and engineering firms. CFMS (Computer-based Financial Management System) runs on the DEC VAX and MICRO/CFMS runs on PCs and networks. A modular approach lets you buy only what you need. Call today 1-800-872-4050.

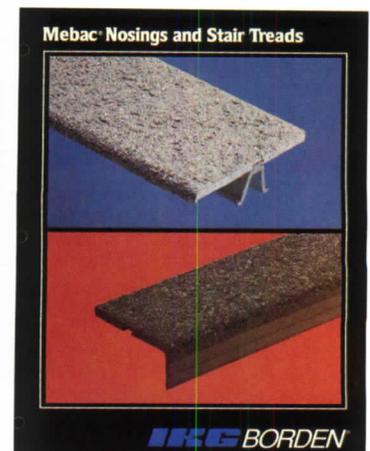


### Harper and Shuman, Inc.

Circle 1096 on the inquiry card

## Aluminum Stair Tread Nosings

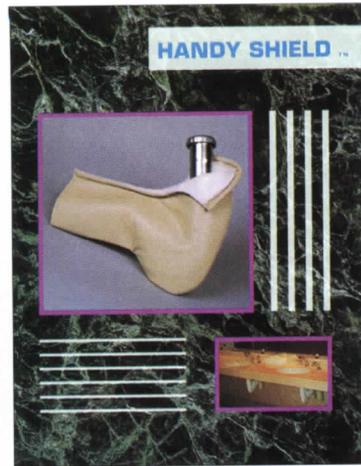
Extruded aluminum, with Mebac® anti-slip surface. Won't crack like cast abrasive nosings. Corrosion resistant. Metal bonded surface of AL<sub>2</sub>O<sub>3</sub> grit exceeds OSHA standards, lasts indefinitely. For concrete embedment on filled-pan or formed-in-place stairs, or use drilled anchors for existing stairs. Available in clear anodized or bronze Duranodic finishes.



### IKG Borden

Circle 1097 on the inquiry card

## HANDY-SHIELD™ BY PLUMBEREX PROD.

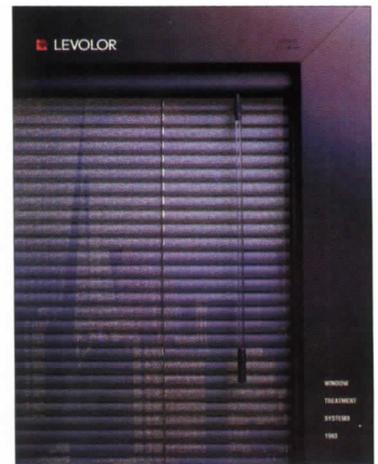


Plumberex

Circle 1098 on the inquiry card.

## Window Treatment Systems By Levolor

Levolor offers a comprehensive selection of commercial window treatment systems which meet a variety of design criteria. The Levolor product line includes Horizontal, Vertical, Shades, & Specialty blinds offered with a wide array of colors, features, & options to simplify window treatment selection & coordination. This catalog contains data on the complete line of Levolor Contract Window Treatment Systems. Call 1-800-222-8830.



Levolor

Circle 1099 on the inquiry card.

## Neo-Ray 50/50 Series 90 Indirect/Direct Luminaire

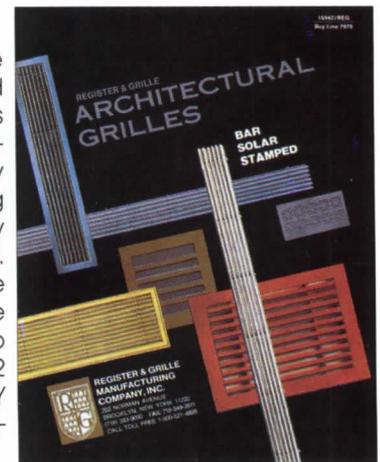


Neo-Ray Lighting

Circle 1100 on the inquiry card.

## Decorative Grilles

Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R & G offers architects & interior designers many ways to express the changing forms of metal with the integrity of R & G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Avenue, Brooklyn, NY 11222. 800-521-4895. Fax 718-349-2611.

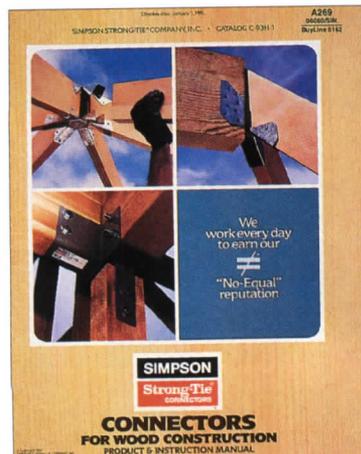


Register & Grille Mfg., Co.

Circle 1101 on the inquiry card.

## Largest Timber Connector Catalog

Simpson Strong-Tie Company's 1993 catalog, at 72 pages, is the largest, most comprehensive, in the connector industry. It's a necessary reference manual for specifiers, building officials, architects, contractors, & building materials dealers. It includes updated connector specifications, load charts, application drawings, & building code acceptance information. The complete catalog appears in Sweet's Catalog File & electronic SweetSearch. Simpson Strong-Tie Company, P.O. Box 1568, San Leandro, CA 94577.

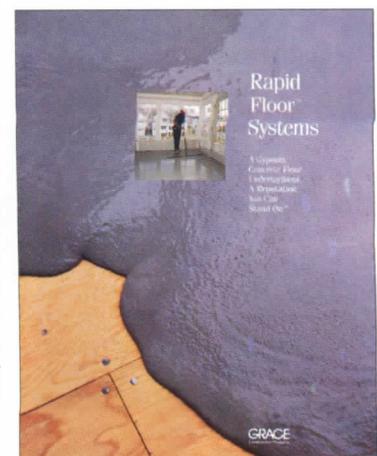


Simpson Strong Tie

Circle 1102 on the inquiry card.

## Gypsum Concrete Floor Underlayment

Rapid Floor® Systems from Grace Construction Products now offers a gypsum concrete floor underlayment for new construction and renovation projects. Product offerings provide compressive strengths anywhere from 1650 to 4000 psi, depending on which product you choose: Rapid Floor, Rapid Floor Plus or Rapid Floor Ultra. This brochure gives all the details.



Grace Construction Products

Circle 1103 on the inquiry card.

# CATALOG PREVIEW '93

## NEW 1993 CERAMIC TILE CATALOG

DAL-TILE's new full color 48 page catalog for 1993 provides the architect with a valuable reference guide for the selection of ceramic tile. Installation photos; specification, application, size, color and trim information is listed for each product. Contact DAL-TILE Corporation, 7834 Hawn Freeway, Dallas, Texas 75217, request catalog 09300/DAL.

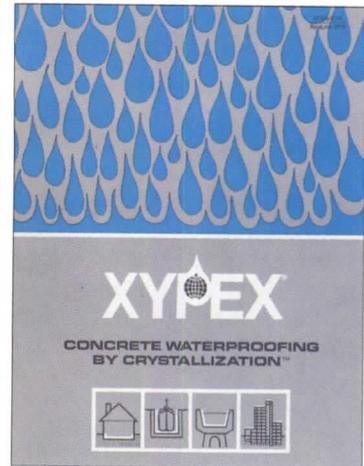


**DAL-TILE**

Circle 1104 on the inquiry card.

## Concrete Waterproofing by Crystallization

Applied as a slurry coating, Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that 'plugs' the pores of the structure preventing water seepage. Xypex is ideal for use on the 'inside' of wet underground structures.



**Xypex Chemical Co.**

Circle 1105 on the inquiry card.

## KROY ADA SIGNAGE

For more than a decade, Kroy Sign Systems has been working with architects and designers to specify professional, cost-effective signage. Let us worry about ADA signage compliance for your next projects while you concentrate on the rest. Whether you're bringing a facility up to code, renovating, or designing for new construction, it's imperative you know how to comply -- before you begin. Call (800) 733-5769 or Fax (602) 951-7033.



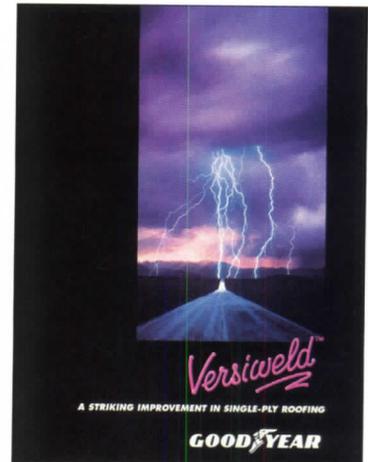
**Kroy, Inc.**

Kroy Sign Systems  
14555 N. Hayden  
Scottsdale, AZ 85260

Circle 1106 on the inquiry card.

## Two New Membranes at Goodyear

Goodyear, Akron, Ohio introduces two additions to its family of Versiweld heat-weldable roofing products. One of the new additions is a 10' 3" wide, black Versiweld membrane for ballasted applications. The second is a 10' 4" wide, white membrane for mechanically fastened applications. Call 1-800-992-7663. In Ohio call 1-800-231-5867.



**Goodyear Tire and Rubber Co.**

Circle 1107 on the inquiry card.

## ROOFTOP HELIDECK The Next Generation

The new Marine Aluminum pre-fabricated helicopter deck has several advantages over the older one. It is made from the *same maintenance free alloy*, but is even lighter and easier to assemble. No welding or drilling is required in the field, and the pre-engineered package can be simply disassembled and relocated. The deck weighs only about 10 lbs./sq. ft. yet will support nearly all helicopters in use today. Phone 215-380-0905.

## ROOF-TOP HELIDECK

IMPROVED SAFETY  
A LIGHTWEIGHT ALUMINUM HELIDECK -- FOR HOSPITALS, HOTELS, OFFICE BUILDINGS AND OTHER ELEVATED APPLICATIONS



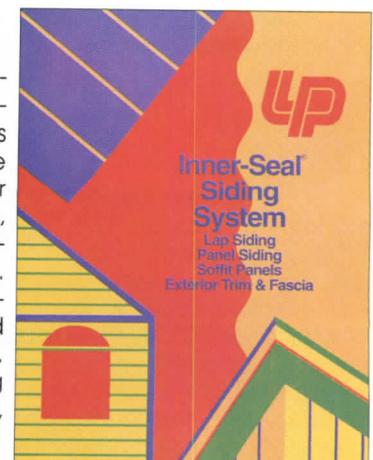
EASY FOUNDATION -- EASY INSTALLATION, WITHOUT WELDING.  
\* COMPLETE DESIGN/MANUFACTURING PACKAGE, TAILOR MADE FOR EVERY ROOFTOP A "TURN KEY" PROJECT  
\* MAINTENANCE FREE MATERIALS -- ANTI-SKID SURFACE.  
\* DELIVERED WITH APPROVALS FROM INVOLVED AUTHORITIES.

**Gerard Technology**

Circle 1108 on the inquiry card.

## Inner-Seal Lap Siding

Inner-Seal® lap and panel siding is made from small-diameter, fast-growing trees and has exceptional moisture resistance to resist weathering, splitting or curling. Uniformly light in weight, they are unsurpassed in dimensional stability and durability. Siding is finished with a protective over-layer that's pre-primed to hold paint and stain longer. The look of solid sawn siding without the expense, the waste, or the work.



**Louisiana-Pacific**

Circle 1109 on the inquiry card.

## FIBER-CEMENT SLATE SHAKE AND SHINGLES

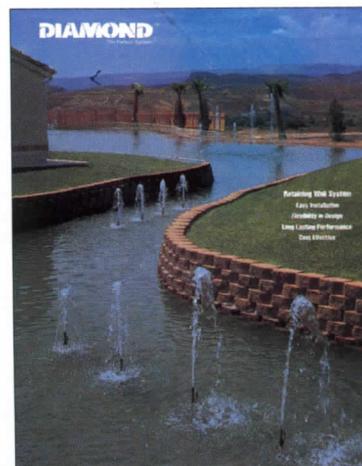


**Supradur Mfg.**

Supradur Manufacturing Corporation has been manufacturing shingles, shakes and slate for more than 40 years. All product lines are manufactured from environmentally-friendly, asbestos-free fiber-cement. Used for historic restorations, commercial construction and residential property, these materials are made in the U.S.A. and are available through a network of 500+ distributors.

Circle 1110 on the inquiry card.

## Diamond® Retaining Wall System

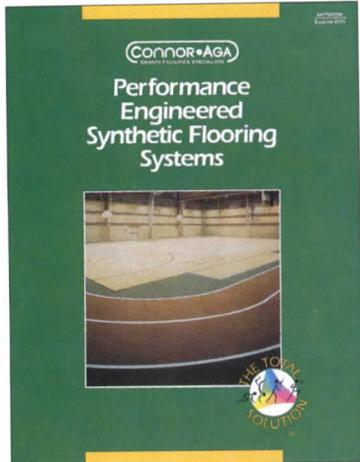


**Anchor Wall Systems**

Anchor Wall Systems offers a complete full-color catalog with product specification information, installation guidelines and reinforcement usage for its pinless and mortarless segmented retaining wall system that is flexible in design, easily installed, long lasting and a cost effective choice for any commercial or residential retaining wall need. Call (800)-473-4452 for a free catalog and manufacturer's name.

Circle 1111 on the inquiry card.

## Expanding Line of Environmentally Safe Synthetic Flooring Systems

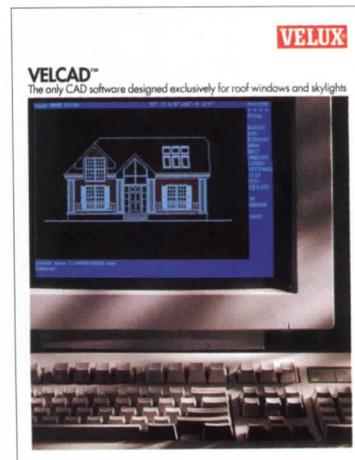


**Connor.AGA**

The latest catalog from Connor.AGA details all of the "Total Solution" system specifications, performance data and environmental and user friendly synthetic systems to meet all of your facilities needs and applications. Call 1-800-833-7144 today for a copy.

Circle 1112 on the inquiry card.

## VELCAD SOFTWARE BROCHURE



**Velux Roof Windows  
and Skylights**

FREE brochure profiles VELUX's new VELCAD software, the first CAD software designed exclusively for roof windows and skylights. Designed in Microsoft Windows™ 3.0 Operable within or out of AutoCAD. Accommodates two levels of user experience. Can generate and receive DXF files. Allows printing of detail drawings and specs and, with AutoCAD, manipulation of elevations, drawings and schedules. Contains a drawing viewer for printing and viewing head, jamb and sill details.

Circle 1113 on the inquiry card.

## Slate-Simulated FibreCem Roof Slates



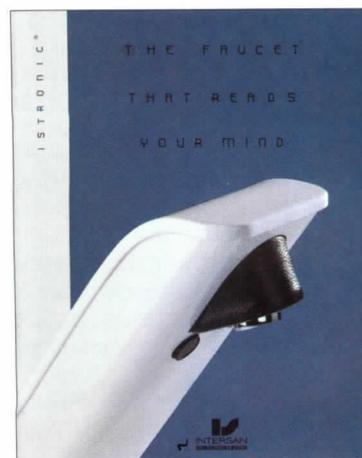
**FibreCem Corporation**

Four-color brochure describes features of non-asbestos fiber cement simulated slate roof slates in creating elegant & appealing rooflines. Four slate products available. Slate characteristics, general uses & applications (including freeze-thaw) & various Roofscaping<sup>SM</sup> designs are among features detailed. Color chart on 16 new optional colors also included. 50-year limited transferrable warranty. Call 1-800-346-6147 or Fax 704-588-2096.

Circle 1114 on the inquiry card.

## THINK CLEAN THOUGHTS

INTERSAN'S new brochure "THE FAUCET THAT READS YOUR MIND" is a 12 page booklet that describes INTERSAN'S new electronic battery operated sensor faucet system. The ISOTRONIC battery operated electronic passive infrared faucets are available in either a stainless steel finish or white epoxy coating. The ISTRONIC can also be equipped with a liquid sensor soap system.



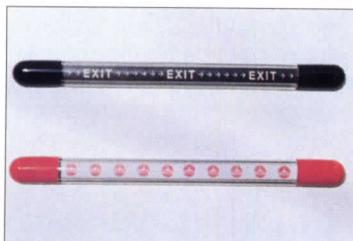
**Intersan**

Circle 1115 on the inquiry card.

# CATALOG PREVIEW '93

## Exit/Custom Signage and Wall Protection

A new clear bumper from Boston Retail Products, combines superior wall protection with a signage system. Emergency exit signage installs within the clear bumper and is visible to occupants of a building during emergency evacuation. The signage glows brightly in the dark and does not require wiring or batteries. Call 800-225-1633 for more information.

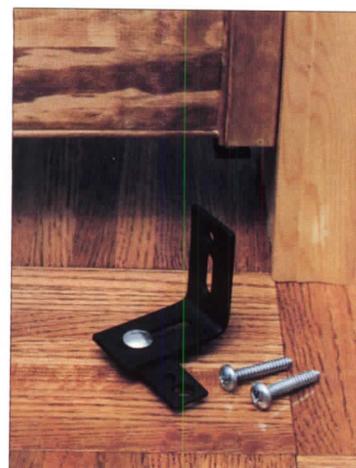


**Boston Retail Products**

Circle 1116 on the inquiry card.

## THE CLEAN CONNECTION STATE-OF-THE-ART HINGE

The Clean Connection bi-fold door hinge beautifies and strengthens your bi-fold door. This easy to install hinge mounts directly on the door jamb, out of view, using existing pivot pins. Now your beautiful flooring will no longer be marred by ugly, dust catching brackets or tracks. For more info contact: R & D NASS, INC., The Clean Connection, 4545 Pratt Rd., P.O. Box 260, Hadley, MI 48440 or call 1-800-6-BI-FOLD.



**R & D NASS, INC.**

Circle 1117 on the inquiry card.

## New Building Image

Quickly transform the architectural design & increase the value of old high & low-rise buildings with a Senergy engineered retrofit system, while ensuring minimal disturbance to occupants. The ERS provides simple guidelines for cost-effectively covering a variety of exterior wall substrates with a Senergy exterior insulation & finish systems (EIFS). The new highly insulated EIFS facade provides the appearance of stucco, granite, marble or other natural stone finish in a wide choice of colors & textures. Made with 100% Acrylic Polymers. For more info: Call 401-467-2600.

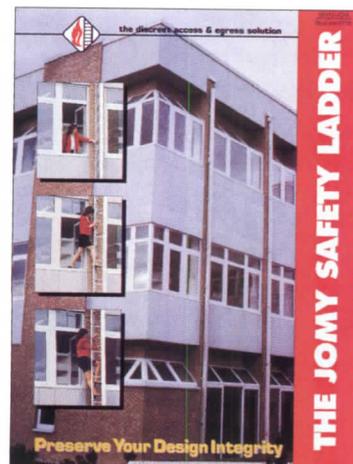


**Senergy**

Circle 1118 on the inquiry card.

## THE DISCRETE ACCESS & EGRESS SOLUTION

Security requirements, space constraints and aesthetic considerations are a few of the problem-solving applications for the JOMY Safety Ladder. The ladder's discrete appearance makes it an ideal solution for access and egress requirements. The JOMY Safety Ladder looks like a drainpipe when closed, but opens to a heavy-duty ladder with slip-resistant rungs and a safety rail.



The JOMY Safety Ladder Co.  
1728 16th St., Ste 201  
Boulder, CO 80302  
800-255-2591

**JOMY SAFETY LADDER**

Circle 1119 on the inquiry card.

## New upholstered seating

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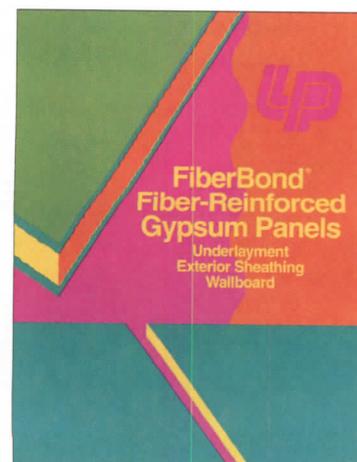


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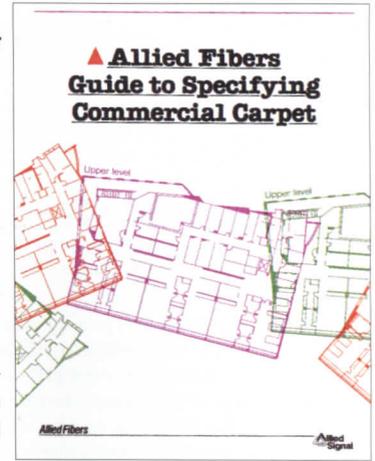


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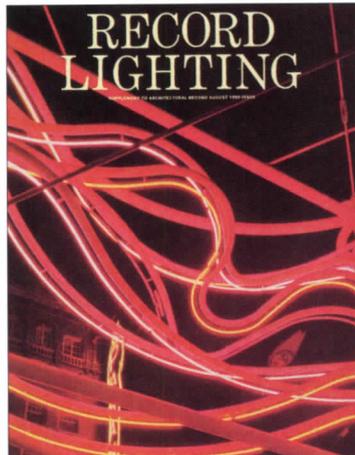


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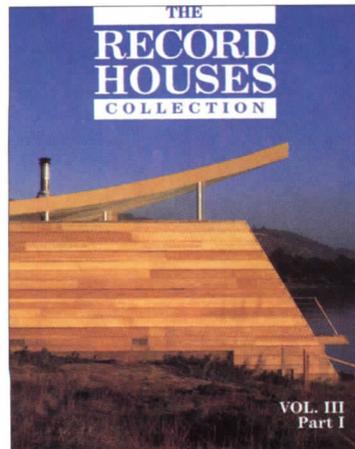


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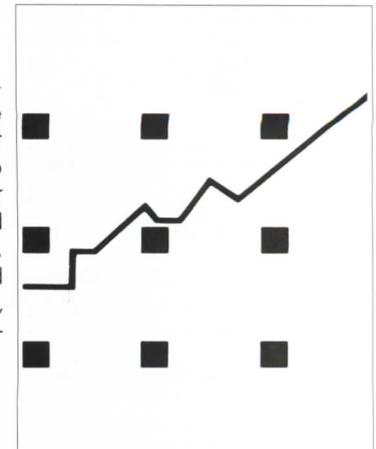


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Copper Development Association,  
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Dowcraft Corp., **98**; *1035* [G]  
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DuPont Co.-Textile Fibers, **90-91**;  
*1032* [D]  
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**F**  
Follansbee Steel, **63**; *1021* [G]  
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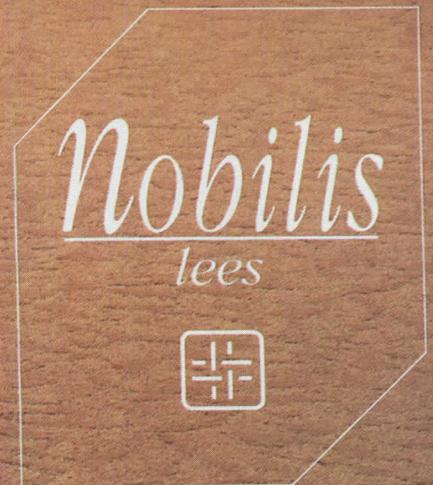
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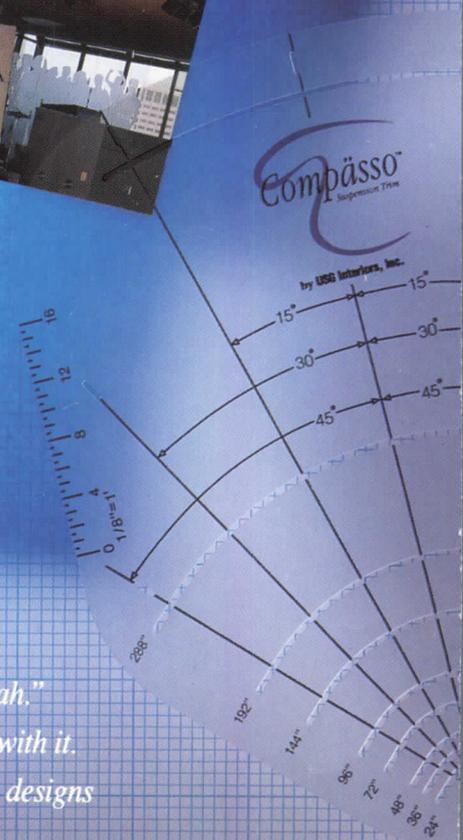


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