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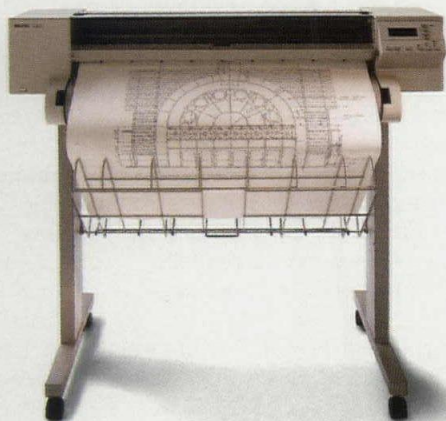
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More on design for access

An architect friend shared with me Robert Campbell's Observations ["It's Accessible . . . But Is It Architecture?"] RECORD, August 1991, pages 42-44]. While I generally agree with the themes presented, several items require clarification:

Laws relating to people with disabilities are not "written and interpreted by the advocates for the disabled themselves." The laws which have been passed have come about after considerable debate, and are compromise documents which most people consider to be fair and balanced. Mr. Campbell's "commandment" regarding the environment is well taken: any change in the built environment for any particular group should not degrade the environment for anyone else. But that requirement works both ways. Over the years, there have been many developments in the built environment which have restricted or even eliminated the possibility that that environment could be used by someone with a mobility impairment. Stairs, narrow doorways, and small bathrooms have to a large extent "degraded" the environment relative to people with disabilities.

The world doesn't have to get uglier to meet the needs of people with disabilities: it does have to get sensitive and creative. Access which is attractive can be provided where there is a will to meet the need.

Stanley J. Kosloski
Assistant Director
Office of Protection
and Advocacy for
Persons with Disabilities
State of Connecticut
Hartford

Robert Campbell's Observations

asked "Why can't architecture for special needs be just as good as architecture for every day?" The answer seems apparent. None of the 106 schools of architecture has graduation requirements including barrier-free design and few practicing architects seem able to grasp a universal design concept. Although professional registration exams have questions concerning barriers to disabled folk, they're woefully inadequate.

Mr. Campbell said he didn't want "to take a controversial position, but merely to start a debate." The Americans with Disabilities Act makes it clear, even with hundreds of examples of good, accessible architecture, that access to buildings for disabled persons is coming, and architects are to be dragged, kicking and screaming, into a design arena which they are unable, or unwilling, to solve. The only debate is whether the fault lies with architects or educators.

Thomas G. Deniston
Barrier Free Design Officer
Office of Facilities
Department of Veterans
Affairs
Washington, D. C.

L. A. Acropolis

Richard Meier's "Acropolis" is the most brilliant work of our time [RECORD, October 1991, pages 80-87]. It is a wonder that he was able to avoid the pitfalls of current vogues and applied archeology. The Getty Center has restored my faith that the spirit of architecture lives in the heart and mind of at least one of our peers. And thank you for the Kahn retrospective [pages 94-104]. Superb reminder of an extraordinary visionary.

E. Manny Abraben, Architect
William Dorsky Associates
Cleveland

January 15-18

"The Edge of the Millennium," symposium sponsored by the Cooper-Hewitt National Museum of Design, Smithsonian Institution. At Cooper Union School for the Advancement of Science and Art, New York City. 212/860-6930.

January 21

"The White House: A Mirror of Time," lecture by William Seale at Accent on Architecture. Stouffer Mayflower Hotel, Washington, D. C. 202/626-7461.

February 13-16

"Voyage to Success," National Roofing Contractors Association (NRCA) 105th annual convention and exhibit, Anaheim Convention Center, Anaheim, Calif. 708/299-9070.

Competitions

- The Architectural League of New York 11th annual nationwide Young Architects Competition. Deadline: February 8. Architectural League, 457 Madison Ave., New York, N. Y. 10022. 212/753-1722.
- Olympia Fields, Illinois, is sponsoring a competition featuring cash awards and a commission for its Park District. Olympia Fields Design Competition, Olympia Fields Park District, P. O. Box 297, Olympia Fields, Ill. 60461.
- Armstrong World Industries has a new interior design competition. Elements of Style Commercial Flooring Design Competition, Armstrong World Industries, P. O. Box 3001, Lancaster, Pa. 17604.
- "New Urban Housing," a nationwide competition. Write New Urban Housing Competition, Jill Watson, Community Design Center of Pittsburgh, 470 The Landmarks Building, One Station Square, Pittsburgh, Pa. 15219. 412/391-4144.

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This Was the Year That Was

For years there was a popular program on British television—for all I know there still is—called *TWTWTW* (for *That Was The Week That Was*). It took a deft and often quizzical look at highlights of the previous week. Now, as architects near the end of a long and difficult year, it makes sense to take stock of what the profession accomplished and what still remains to be done:

- The recession has taken its toll on the architectural workforce, especially in junior and middle-level positions. It hurts, in dollars and self-respect. Some daylight beckons in the residential area, typically a leading indicator; the bottom is likely to stay out of the commercial market for quite some time; and the action will continue to focus on institutional work for at least a year.
- Styles have taken a visible turn away from the more historically derivative Postmodern work. The old tenets of Modernism;—light, air, machine technology, and a certain social concern—started again to come to the fore, but this time clothed in a more humane coat than the juiceless excesses of the 1950s, '60s and '70s. Postmodernists never actually renounced Modernism; they merely concealed it under a cloak of granite.
- The architect's role, as perceived by clients and the public, has continued to fluctuate. The 1980s archetype of the star performer who makes bold statements and creates facades has begun to subside in favor of the truer picture of a hardworking, qualified but underpaid professional. Many owners have continued to exploit architects with unreasonable demands for unpaid or underpaid precontract services. And the public still persevered in its narrow view of the architect as a designer of buildings, rather than the far broader notion of one qualified to provide an all-round service comparable to doctors and lawyers.
- Glimmers of progress began to emerge on the community front. The mindless sprawl of suburbs and the desecration of open country is being matched slowly but surely by the gradual completion of livable new towns, and realistic plans are afoot in a number of areas to use zoning creatively to shape suburban growth toward more congenial communities.
- Growing numbers of architects are using their training to find happiness in alternate careers outside private practice.

The new year leaves a great deal undone. The lot of the voiceless user—those without a direct path to owner, builder, architect, or public agency: the poor, the sick, the displaced—must be met, supported by increasingly pragmatic approaches. The concept of the new, closeknit town community, not necessarily carless, still needs acceptance by local public policymakers. The architect's public image still needs to place competence ahead of glamor. Minority architects still lack a voice commensurate with their talents. Concern for the environment has yet to find a methodology for making sound decisions and to learn to get by without throwing out the architectural baby with the ecological bathwater. It still remains for practicing professionals to pull their weight in the education of the architect.

This new year is not a milestone; it doesn't inaugurate a new decade or a new century. But it is time again to set up priorities, short and long term, and with a combination of confidence and realism work toward the goals we first set ourselves when we entered this profession. *Stephen A. Kliment*

THREE BTU-TIFULTM WAYS TO BEAT THE SUMMER HEAT.

Chill it. New chillers driven by natural gas engines are the ideal way to cool multi-story buildings faced with high summer electric rates and demand charges.

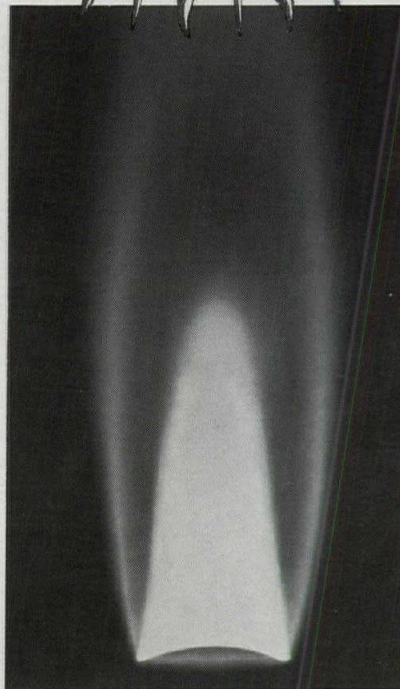
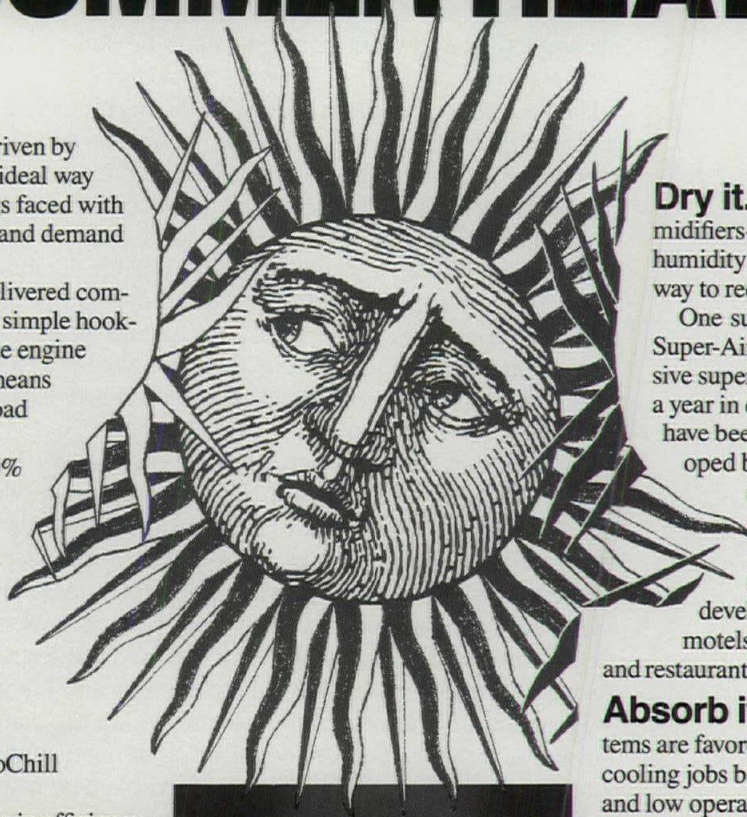
These gas chillers are delivered completely packaged, ready for simple hook-up. Their ability to modulate engine speed to varying demand means much more efficient part-load performance.

Cooling costs 40% to 60% less than electric air conditioning are reported by users of the 150-ton TecoChillTM unit from Tecogen, Inc. No wonder it's so popular with hotels, motels, hospitals, nursing homes, schools and office buildings.

250-ton and 500-ton TecoChill units are now in field tests.

Smaller in size but similar in efficiency is the 15-ton rooftop unit from Thermo King Corp. It can be packaged with an efficient 240,000 Btu/hr gas furnace for year-round comfort and savings.

The initial cost premium for these systems usually can be recovered in less than three years. All were developed with the funding and support of Gas Research Institute.



Dry it. Gas desiccant dehumidifiers—systems that control the humidity in the air—are another way to reduce cooling costs.

One such unit, called Super-Aire,[®] saves energy-intensive supermarkets 10% or more a year in energy costs. Over 140 have been installed. It was developed by Cargocaire Engineering Corp. with support from GRI.

Other gas desiccant systems are now being developed for hotels and motels, healthcare facilities and restaurants.

Absorb it. Gas absorption systems are favored for large commercial cooling jobs because of their reliability and low operating costs. An important bonus is that they cool without CFCs.

GRI and the Trane Corporation are now working on the development of a new gas-fired absorption technology—a triple-effect system—that will lower cooling costs even more.

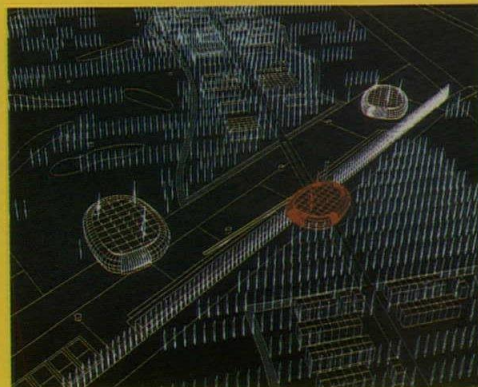
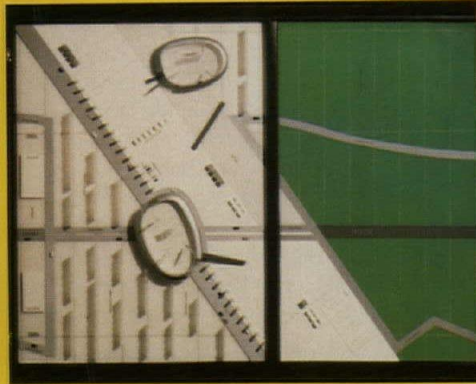
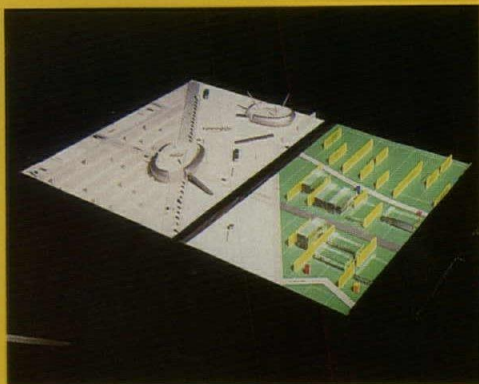
To learn more about your options in commercial cooling, write to Mr. John J. Cuttica, Vice President, End-use Research & Development, Gas Research Institute, Dept. CBW, 8600 West Bryn Mawr Avenue, Chicago, IL 60631. Or call your local gas company.

Gas.America's best energy value.

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France

Tschumi Charts Chartres



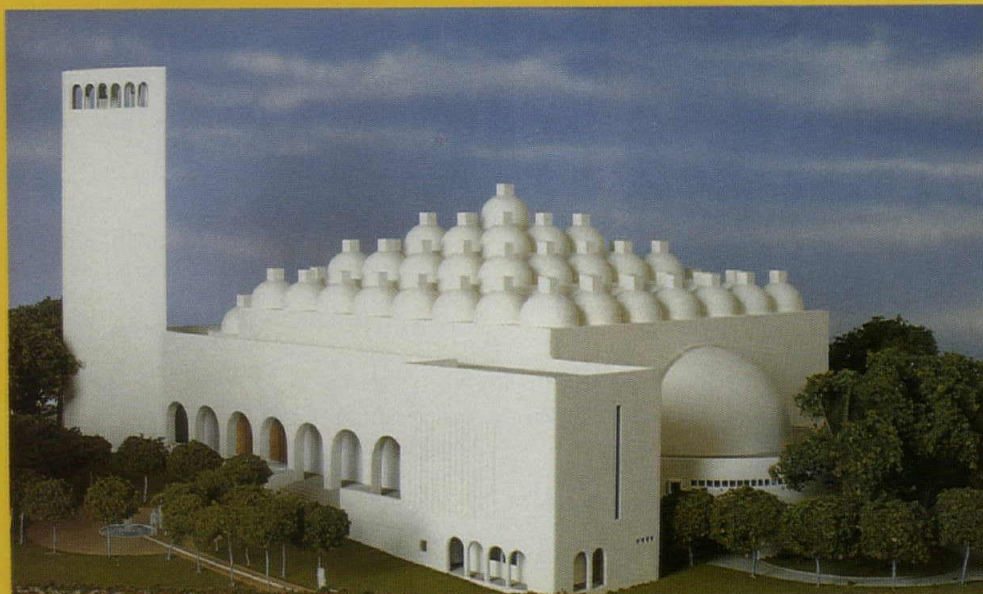
Borrowing from the language of physics, Bernard Tschumi has won a competition for a 450-acre extension of Chartres, organizing the landscape outside the French cathedral town with a proposed array of "vectors." Along a new east-west main road, or *long*

cours, Tschumi placed curved, flexible public halls appropriated from his own plan for the city of Tours. Gridded areas defined by tree plantings run both parallel and perpendicular to the highway. The grid parallel to the highway is intended for office build-

ings, and comprises the first phase of the project. The perpendicular vector sets up sports, entertainment, and outdoor facilities. The first phase should be complete by 1993. "The whole scheme," says Tschumi, "is a search for a new urban strategy." ■

Nicaragua

Legorreta's Cathedral for Managua Symbolizes Rebirth



Lourdes Legorreta

Architecture doesn't often get the chance to be a healer of nations. But in fractured Managua, survivor of Nicaragua's decade-long civil war and still rebuilding 20 years after a devastating earthquake, a major new cathedral could help unite a divided people. Designed by Mexico's Ricardo Legorreta, the Roman Catholic cathedral reflects its community and Managua's tropical climate. Decoration has been kept minimal, and natural lighting and ventilation conform to local design traditions. The cathedral also contains a small chapel and a sanctuary. Though the nave accommodates 1,000 people, an outdoor plaza adjoining the church in its hillside setting above the capital holds 100,000 worshippers. The cathedral, which is being sponsored by American Pizza Magnate Tom Monaghan, should be completed by next September. *P. D. S.*

Designer's Saturday Goes Green on Environment, Economy

Greenthink—environmental and economic—was touted full force at “The Greening of Design,” the theme for Designer's Saturday, held October 17-19 at the International Design Center of New York. Panels at the annual showcase for the struggling furniture industry focused on environmental issues or marketing strategies, sometimes on both. Seminars ranged from the client-weighted (“Corporations Take On the Environment”) to studio concerns (“Environmental Design: The New Aesthetic,” which included SITE's James Wines). RECORD Senior Editor James Russell moderated “Environmental Design Makes Dollars and Sense,” which included architect Kirsten Childs of the Croxton Collaborative and lighting consultant Scott Matthews of H. M. Brandston. The seminar examined design products and processes that not only are environmentally sound, in that

they conserve energy or are free of toxic emissions, but also save money in the long run. Two leading architects veered away from the encroaching green to focus on recent work. Architect and urban planner Oriol Bohigas of Barcelona-based Martorell Bohigas Mackay was on hand to give the keynote lecture, sponsored by Formica Corporation in conjunction with The Architectural League of New York. Bohigas focused on his firm's master plan for the Olympic Village, a sprawling waterfront residential district that will serve as athletes' housing during the summer games in Barcelona, and on MBM's Pavilion of the Future for Expo '92 in Seville, scheduled to open in mid-April. Pritzker Prize winner Robert Venturi examined his recently completed Sainsbury Wing in London, and other museum projects, and discussed the cyclical nature of style. ■

Japan

Huge Kyoto Rail Complex Raises Outcry in City of Temples



Tomio Ohashi

Tokyo architect Hiroshi Hara was recently declared winner of a controversial competition for the Japan Railway Station Building in Kyoto. The other finalists were Tadao Ando, Kisho Kurokawa, James Stirling, and Bernard Tschumi. The proposed complex has drawn fire for its immense scale, and is the latest flashpoint in an ongoing battle between developers and preservationists for

the future of this historic, shrine-filled city. Though Hara's scheme was the most self-effacing proposal of the lot (and had the lowest roofline), it still exceeds the area's 175-foot height limit. At almost 1 million square feet, the complex comprises, in addition to a railroad station, a convention center, hotel, department store, and cultural facilities. *Naomi Pollock*

Briefs

AIA Cites RECORD

RECORD has been awarded a Presidential Citation by AIA President James Lawler on its 100th anniversary. It reads: “Citation to ARCHITECTURAL RECORD, within whose pages the art and science of architecture become the poetry of ideas, and innovation is always celebrated but always held accountable to the architect's mission of service. More than a mirror of present achievement, it has been for one hundred years a lamp, illuminating the verities of form and commodity with a style that brings delight.”

Stanleys Join RECORD Panel

William J. Stanley III and Ivenue Love-Stanley have joined RECORD's reconstituted Editorial Advisory Panel. The Stanleys are partners in the Atlanta firm Stanley, Love-Stanley, P. C. Mr. Stanley is president of the National Organization of Minority Architects.

Awards

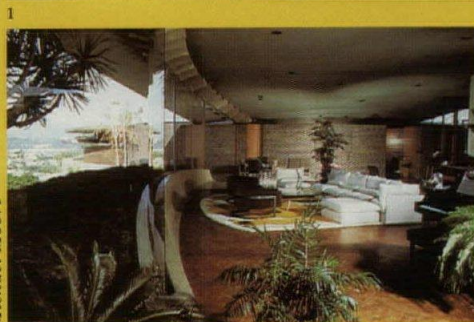
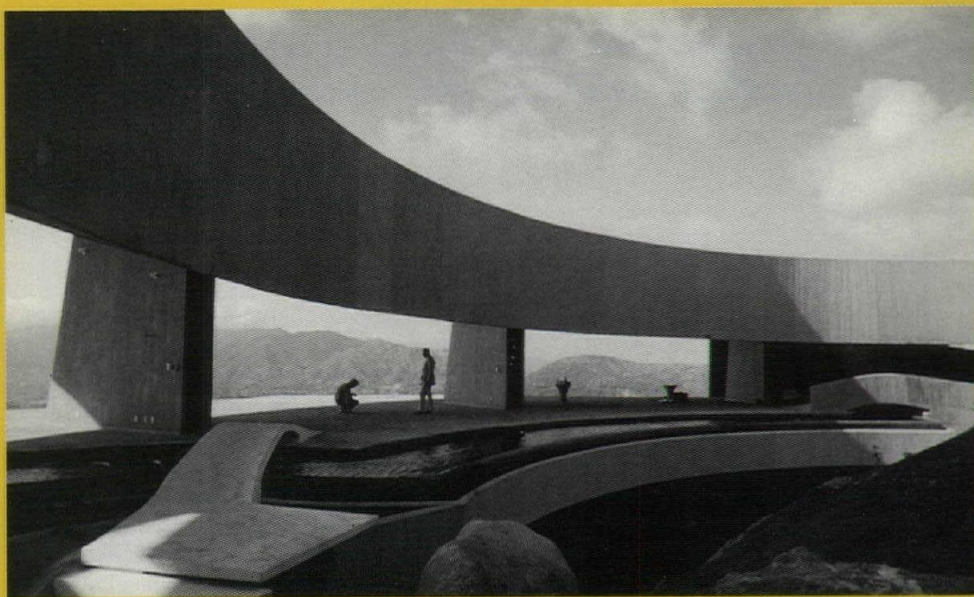
The Boston Society of Architects announced its Design Awards for 1991. *Honor Awards:* Tufts University Science and Technology Center, Boston; Cannon, Architects. John B. Hynes Veterans Memorial Convention Center, Boston; Kallmann, McKinnell & Wood, Architects. Peter and Emily Luchetti Residence, Sausalito; Robert Luchetti Associates. Charlestown Navy Yard Rowhouses, Charlestown, Massachusetts; William Rawn Associates. Firehouse Civic Center, Newburyport, Massachusetts; Schwartz/Silver Architects. Whanki Museum, Seoul; Kyu Sung Woo Architect. *Merit Awards:* 1150 18th Street N. W., Washington, D. C.; Hisaka and Associates. Coastal Cement Corp. Headquarters and Terminal, Boston; HMFH Architects. Grainger Observatory, Phillips Exeter Academy, Exeter, New Hampshire; Leers, Weinzapfel Associates. M. I. T. Library of Art, Architecture and Planning, Cambridge; Schwartz/Silver Architects. Smith Residence Hall, Massachusetts College of Art, Boston (renovation); Stein + Associates. Woo House, Cambridge; Kyu Sung Woo Architect. *Special Awards for Urban Infrastructure:* Post Office Square Park Structures and Garage, Boston; Ellenzweig Associates. Park Street Station Entry and Exit Structures, Boston; Leers, Weinzapfel Associates. The jury comprised architects Charles Gwathmey, Susan Maxman, and RECORD editor Stephen Kliment. ■

John Lautner at 80: A Life in Design

John Lautner turned 80 this year, but that hasn't slowed him down. Like a latter-day Howard Roark, Lautner is designing houses we all should live in but few of us can understand or afford. Revered in Southern California, he is the subject of a full-length documentary and a traveling exhibit (at Chicago's Graham Foundation in December).

Lautner's model is "Mr. Wright," for whom he worked between 1933 and 1939. Born and raised in Minnesota woods he claims to miss to this day, Lautner moved to Taliesin and then on to Los Angeles. He set up his own practice, carrying Wright's post-World War II interests in angular and organic form forward in his own designs of car washes, coffee shops, apartment buildings, and houses such as the Pearlman Cabin of 1957 (4). He pushed his clients to the extreme, and soon only singular (and wealthy) homeowners could afford him. Most notable among these was the inventor Kenneth Reiner, for whom Lautner spent eight years designing Silvertop (2), a sprawling nest of curves growing out of a Silver Lake mountainside. The house is as famous for the codes it broke and the engineering innovations it proposed as for its expansive spaces. His best-known work is the 1960 Chemosphere House, a circular pod, reached by a little funicular, that hovers benignly over its impossibly steep site in the Hollywood Hills on a 30-foot concrete pole. Today Lautner is working on a giant house in Malibu he calls "a contemporary castle" (3); its arched concrete shells resemble sails blowing in the Pacific Ocean breeze.

The cantilevers, glue-lam beams, and expressive shapes of Lautner's houses have certainly caught the imagination of the public as the settings for films, from several James Bond classics to *Body Double* and *Lethal Weapon II*. He speaks of creating "timeless, free, joyous spaces for all activities of life," yet delights in grand statements that overwhelm anything but the posed contemplation of a view few can afford. The swimming pool of the Arango House in Acapulco (1) is archetypal Lautner. Tracing the outline of a precipitous cliff, this 300-foot-long lap pool winds around an "open living room" sheltered by the giant concrete shapes of the house. It is the bravura gesture of a wasteful genius. *Aaron Betsky*



Michael Moore



Helena Arbuete



Don Higgins

Environment / Resources

Hard Choices in Tropical Woods

By Cymie Payne

Architects who want to design with tropical woods without contributing to forest destruction will continue to face limited sources of sustainably managed timber for the next few years. An International Tropical Timber Organization study indicates that less than 0.1 percent of the commercial timber trade is produced in a sustainable manner. Industry and environmental groups agree that the most important step toward saving the tropical forests is to nurture a market that returns enough revenue to provide an incentive for good management. Architects are in a position to take the lead in promoting wise use of the forests because the industrial wood market is dominated by the building industry.

The reasons for deforestation vary by country and by region, and the possible solutions are just as diverse. In Brazil, logging roads open the forests to immigrant farmers, who burn trees to clear land. In Southeast Asia, an even more important source of tropical timber for the United States, logging alone is the primary cause of deforestation.

Finding alternatives

Several programs offering information about available alternatives, sources of supply for sustainably produced wood, and advice on "designing around the forest" are to debut in the next six months. These will supplement existing guidelines agreed to by organizations as diverse as the International Hardwood Products Association, the AIA, and the rainforest-oriented nonprofit organizations (see Resources, right).

Efficient and appropriate use of the material is essential. Says Andrew Poynter of A & M Wood Specialty, Inc., and a board member of the Woodworkers' Alliance for Rainforest Protection, "If we are to supply sustainably harvested wood to the major user market, veneer has to be a much larger part of that portfolio." Worldwatch Institute estimates

that 29 million cubic yards could be saved by reducing construction-site waste.

Architects should request sources of sustainably managed timber. Specifications can go beyond familiar woods to sustainably managed lesser-known species—there are over 100 already on the market. Some environmental organizations are sponsoring tests of unfamiliar varieties of wood, in an effort to relieve pressure on overused species such as mahogany. Temperate hardwoods often provide excellent substitutes for tropical woods, and are generally managed on a sustained-yield basis in the U. S. Using plantation-grown wood has the advantage of reducing logging in natural forests. Plantations are usually far more productive of commercially valued species, and some tropical foresters believe they can be used for reforestation.

The most aggressive organizations, such as the Rainforest Action Network, advocate a selective boycott affecting only unsustainable wood. Other groups, such as Rainforest Alliance, sponsors of the "Smart Wood" certification program, urge the purchase of only sustainably produced wood.

Buyer beware

Virtually all tropical forests are at risk. Sales pitches that claim that a product isn't from a rainforest skirt this issue. For example, although teak does not grow in the rainforest, it represents an ecosystem threatened by overcutting. John Ryan of the Worldwatch Institute points out that while most countries have management plans, they are often poorly enforced.

While the thicket of options and caveats about tropical woods rivals the densest jungle, the continuing increase in the number of imports from well-managed forests offers real hope for the future.

Cymie Payne is director of Earth Access.

Resources

American Institute of Architects Committee on the Environment Rainforest Task Group

2950 Nelson Way No. 311
Santa Monica, Calif. 90405
Preparing environmental resource guide.

Earth Access

87 Cherry Street
Cambridge, Mass. 02139
617/868-0758

Publishes periodic *Wood Reports*.

Green Cross Certification Co.

1611 Telegraph Ave., Suite 1111
Oakland, Calif. 415/832-1415
Certification effort with Knoll Group.

International Hardwood Products Assoc.

P. O. Box 1308
Alexandria, Va. 22313
703/836-6370
Trade association for hardwood industry.

Rainforest Action Network

301 Broadway, Suite A
San Francisco, Calif. 94133
415/398-4404
Publishers of *The Wood Users' Guide*.

Rainforest Alliance

295 Madison Ave., Suite 1804
New York, N. Y. 10017
212/599-5060
"Smart Wood" certification program.

Sierra Club

408 C Street, N. E.
Washington, D. C. 20002
202/547-1141

Sponsoring legislation.

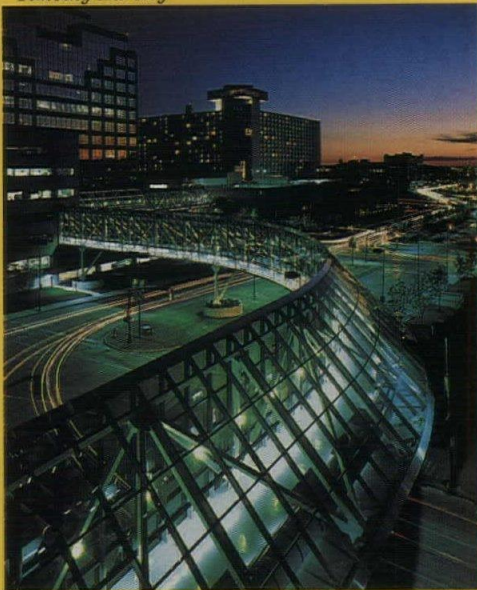
Woodworkers Alliance for Rainforest Protection

P. O. Box 133
Coos Bay, Ore. 97420
503/269-6907
Developing product-testing programs.

Kansas City

ZGF Link Wins Steel Award

© Timothy Hursley



The American Institute of Steel Contractors heeded E. M. Forster's admonition in *Howard's End* to "Connect, only connect," when it awarded its 1991 Prize Bridge Competition, in the Special Purpose category, to The Link. Designed by the Portland, Oregon, firm of Zimmer Gunsul Frasca Partnership, this elevated glass and steel walkway brings together five buildings in the Kansas City, Missouri, Crown Center. Spanning 880 feet, The Link is composed of three curving sections, the longest of which is 325 feet. Exposed tubular steel reinforces the glass-enclosed 18-foot by 18-foot triangular walkway. Alternating diagonal members acting with The Link's triangular form provide stability. KPFF Consulting Engineers, also of Portland, were structural engineers on the project, which was completed in July 1988. ■

Technology

Publication Briefs

1991 NFPA 101 Life Safety Code, 1991 Life Safety Code Handbook, Fire Protection Handbook, Quincy, Mass: National Fire Protection Association, 1991, \$27.50 (code), \$62.50 (code and fire protection handbook each).

NFPA 101 is an essential resource for the office because it is the authority referenced in most local codes. Using easy-to-understand diagrams and examples, the Code Handbook explains each provision—if only all codes were this clear. The Fire Protection Handbook is described accurately as encyclopedic, and may be too detailed for all but specialized practices. To order: (800/344-3555). (See story, right.)

Managing Indoor Air Quality, by Shirley Hansen. Lilburn Ga: The Fairmount Press, Inc., 1991, 317 pages, \$62.

Though oriented primarily to owners and building managers, this comprehensive book is useful to architects whose practice faces this concern.

Joint Sealants, by The American Architectural Manufacturers Association. This 17-page, \$12 booklet gives a treatment of sealant types and uses in curtain walls that is neither too complex nor too simplistic. AAMA, 1540 E. Dundee Rd., Suite 310, Palatine, Ill. 60067 (708/202-1350).

Finishing Concrete Slabs with Color and Texture, published by the Portland Cement Association, covers requirements for patterns, colors, and textures in slabs, plazas, and terrazzo. Specification guidelines are included. \$17.50. PCA, Department S, 5420 Old Orchard Rd., Skokie, Ill. 60077. ■

Fire Codes

Flammable Seating Heats Up in States

A nationwide lobbying effort has brought together contract-furniture manufacturers and fire fighters to push legislation designed to ensure that public seating has passed a nationally recognized flammability standard. The new and pending codes are based on California's Technical Bulletin 133, known as Cal 133. First published as a voluntary test standard in 1984 and slated to become mandatory next spring, according to Gordon Damant, chief of California's Bureau of Home Furnishings, Cal 133 measures the fire-safety performance of individual pieces of furniture, using an open gas flame in an enclosed room.

The requirements would go beyond those that typically call for fabrics that meet a flame-spread test. In fact, use of customer's own material (COM) might be curtailed by the rules. "Tests of components are totally useless," says Damant. "The philosophy of Cal 133 is that there are no components that can comply, only furniture." Performance is measured in peak rate of heat release, carbon-monoxide emissions, weight loss of furniture, room temperature, smoke obscuration, and total heat release over the first 10 minutes.

Using Cal 133, the International Association of Fire Fighters (IAFF) and the American Furniture Manufacturers Association (AFMA) drew up the "Furniture Fire Safety Act," model legislation aimed at state legislatures. Along with California, Illinois, Minnesota, and Ohio have passed laws, and bills are pending in New Jersey, Massachusetts, and Washington State.

The thrust of the legislation is simple: to ensure a uniform standard in flammability testing for contract furniture in public architecture. The model law was designed to cover jails, healthcare facilities, public auditoriums and stadiums, and public areas in hotels and motels, where a large percentage of fire deaths occur. P. D. S.

Evaluating Lightweight Wall Systems

By Joseph Iano

Modern building-construction methods in America have consistently moved toward two goals: reducing the weight of building materials, and reducing the use of skilled labor on the construction site. Expanding use of a variety of increasingly thin cladding materials over stud framing is one manifestation of this trend. While these products are inexpensive and thermally efficient, and offer wide decorative possibilities, their performance as a system has rarely been proven over the long term, and technical support by manufacturers and standards-setting groups is fragmented. As their use expands beyond cost-driven light-commercial and residential markets to other building types, their unique strengths and weaknesses must be fully considered.

The benchmark products in this category are exterior insulation and finish systems (abbreviated EIFS, but widely known by the tradename Dryvit). These typically consist of stud framing covered with gypsum-board sheathing, foam-plastic insulation board, and a synthetic-stucco coating. As EIF systems have successfully moved up from light-commercial and multifamily markets to larger, more prestigious, and more profitable projects, they have had to prove themselves against longer-established products in terms of performance, durability, and fire safety—the same concerns that apply to other products in this class.

Expanding options

With stud backup and thin exterior facings as the common denominator, many more cladding systems are available today. Architects can specify facings of ceramic tile, thin brick, thinly sliced true or synthetic stone, or panels of fiber-reinforced cement, aluminum, or steel (sometimes with composite cores or backings). The facings can be fastened to the supporting substrate with surface screws, exposed or concealed extrusions or clips, or with adhesives. Assemblies can be insulated with rigid boards of various types or with fiberglass batts in the stud

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cavities. Sheathing boards, if needed, can be made from gypsum (often improved with water-resistive additives), portland cement, or plywood. Studs can be steel or wood. Vapor or moisture barriers may be added; panels are fabricated either on- or off-site.

Standing behind the product

Comparing these newer products to longer-established ones is instructive. While the architect can rely on standard details from the National Roofing Contractors Association for built-up roofs (a 100-year-old technology), and technical data from the Brick Institute of America for masonry walls, many new cladding products are proprietary—the specifier must accept the manufacturers' assertions of performance. Architects may be accustomed to more technical support than they will receive with these systems before, during, and after construction. In this product category, only EIF systems are now backed up by a trade association (the Exterior Insulation Manufacturers Association—EIMA), which coordinates research and testing, technical guidance, and standards setting.

But cost-conscious clients are making it harder for architects to hold specifications that entail quality-assurance measures. Richard Wood, director of sales and marketing at Laticrete—a maker of mortar and grout additives—explained that his company feels it is at a competitive disadvantage when specifications don't recognize design-phase technical support, attendance at preconstruction job meetings, and company-provided inspections of substrate conditions and installation. According to Wood—and his sentiments are echoed by many manufacturers—the company loses bids to those who don't provide such support.

Though many products are warranted, manufacturers' warranties often extend for as little as five years, and generally are limited to material defects. Since a system may be assembled using parts from several sources, and installed by more than one subcontractor, there is little accountability for the performance of the completed wall.

In response to these concerns, some manufacturers have begun to coordinate

Lightweight wall systems can be used on such demanding projects as the North Carolina Supercomputing Center. O'Brien/Atkins has clad the project in glass, tiles, and metal panels.



© Allen Weiss/Weisstudio photos

components into a single-source wall. USG, for example, promotes a wall system that uses its own cement sheathing board, offers recommended details and specifications, and provides a full range of accessories, permitting use of the company's or other suppliers' face materials.

Despite such developments, gaps remain. Structural engineers are sometimes reluctant to design stud walls for wind loads if information on the combined performance of the components isn't available from the manufacturers. Others are concerned that the walls will be assembled by tradesmen used to partition work who are not aware of the structural characteristics of the exterior wall. Richard Wood, of Laticrete, worries that architects don't look closely enough at expansion-joint spacing, optimum panel size, and the method of attaching panels to the supporting structure.

Keeping water out

A prudent assumption is that a wall will always admit some water, and many assemblies are designed to capture moisture and redirect it back to the outside. In its most elaborate form this is known as rainscreen design, and is applied at every level of sophistication from custom curtain walls to ordinary lapped clapboard siding. In contrast, most systems considered here are designed so that the outermost layer is vir-

Although claddings for stud-wall construction offer many advantages, their relative newness challenges both detailer and specifier.



tually watertight, and lack means to convey water to the exterior, should the barrier be breached. While this approach is simpler and cheaper, guaranteeing a perfectly watertight system is its weakness. Small gaps in the integrity of the outer skin of a building can admit large quantities of water under wind-driven rain. Even the most carefully made factory-fabricated panels must be erected on-site and completed with hundreds—or even thousands—of feet of field-applied sealant. And, once completed, the outer skin of a building undergoes constant stress due to structural loads, solar radiation, temperature variation, physical impact, wetting, and freeze-thaw cycling. Should water penetrate the outer face of the panel, it can attack any sensitive materials within, such as paper facings, gypsum sheathing, wood, steel, or open-cell foam plastics, or it can find its way to the interior of the building.

Code compliance

As these products are increasingly proposed for larger structures in more dense locations, fire performance in particular becomes a greater concern. [See also RECORD, December 1989, pages 20-21.] Due to the relative newness of many of these systems, however, code acceptance is still in flux. In general, when panels with combustible components (such as foam plastic) are used on buildings classified as noncombusti-

ble, testing of the panel is required to verify its resistance to flame spread over the exterior surface. For this requirement, the BOCA building code currently accepts a modified version of the ASTM E 108 test, originally designed for roofs (ASTM doesn't sanction the modified test). Meanwhile, industry efforts are underway to develop an improved procedure, which eventually will be submitted for formal adoption. The UBC requires a more elaborate test (UBC 17-6), which is considered state-of-the-art but is, according to Donald Belles (a fire-protection engineer who has developed widely used tests), expensive and difficult to perform. Other tests, such as for resistance to radiant-heat exposure, are also appearing in the latest editions of some codes. The specifier should verify local acceptance of a contemplated assembly and be sure that variations from the accepted system (if any) are permitted.

Evaluating probable performance

Use of newer systems inevitably causes more uncertainty than other, more time-tested methods. According to Thomas Schwartz, a principal at the Arlington, Mass., consulting-engineering firm of Simpson, Gumpertz & Heger, which does a good deal of forensic work, exterior cladding systems represent "one of the most important issues for liability exposure by design professionals." Having investigated dozens of

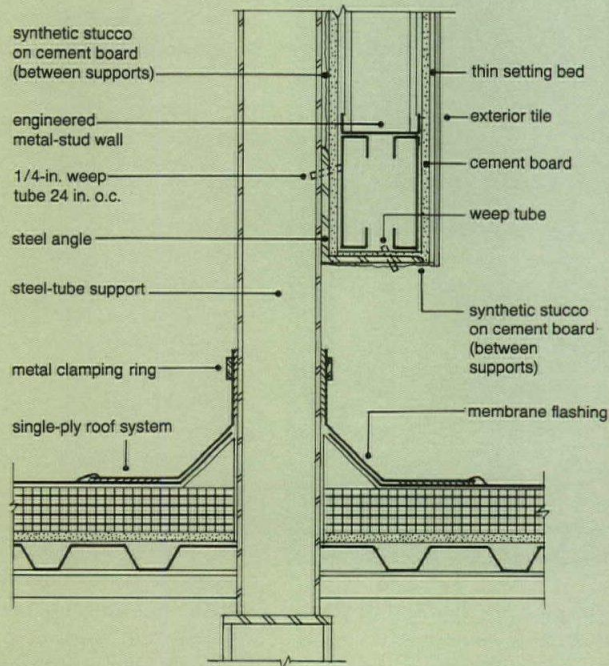
building failures, Schwartz sees a tendency toward excessive optimism on the part of manufacturers and insufficient evaluation of products' potential performance by design professionals. His recommendations include:

- *Investigate comparable installations.* Contact users (building owners, architects, contractors). If necessary, look at similar components. For a panel system with a face material that is similar to brick in porosity, for instance, check the way moisture is kept from damaging sheathing, studs, and fasteners in brick-veneer systems.
- *Investigate the manufacturer.* Consider financial condition, production capacity, and track record with other products.
- *Engineer the wall.* The wall should be evaluated for strength, stiffness, and response to temperature, moisture, and other performance-altering elements. Will the method for attaching the panel to the substrate limit thermal movement of the panel, causing stresses that may lead to cracks? Is the use of vapor retarders or air barriers appropriate for the panel construction *and* the conditions under which it will perform? If a system provides the basic elements of a rainscreen design, do the critical details show the necessary flashings, weep holes, and drips? Any evaluation should account for specifics such as climate, exposure conditions, wind loads, or the larger structural movements of taller buildings.

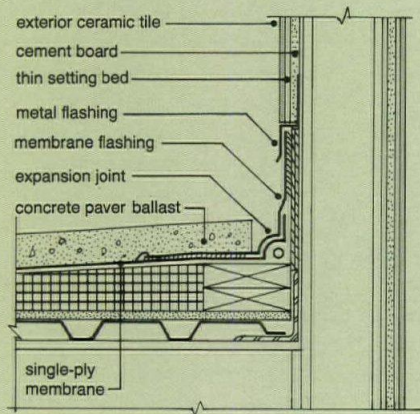
The designer must also look at broader questions. What is the intended life span of the wall system? What is the risk of water leakage, and is it tolerable to the building's expected occupants? Can the wall sustain close visual scrutiny? Can the wall be damaged by vandals, daily use, or maintenance activities? Can it be readily and invisibly repaired? Are maintenance needs realistic for a particular owner? Schwartz emphasizes that these are questions for the owner, not just the design team, because they involve the crucial balance among costs, performance, and expectations.

Quality assurance

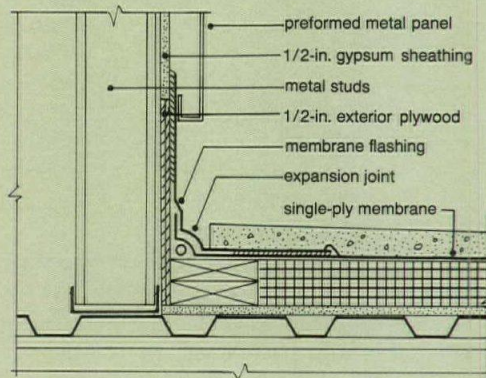
With little built-in redundancy, these systems must be built to very high standards. Once a manufacturer has been selected, according to Mark Williams, principal of the Maple Glen, Pa., building-diagnostic firm,



TILE AND SYNTHETIC STUCCO PARTITION



TILE AT ROOF



METAL PANEL AT ROOF

Kenney/Williams/Williams, the architect should submit proposed details to the manufacturer to verify compliance with requirements. But don't count on a manufacturer to qualify or monitor even certified installers. Set minimum-experience requirements for installers, and define the owner's right to reject any who are judged unacceptable. Meet with the installer and the supervisor who will run your project; visit their completed projects, and speak with those buildings' owners to find out how the installations have performed.

Williams also recommends erecting a full-scale mock-up on the building frame to verify compliance with critical details and establish an agreed basis for acceptance of work. Though standard forms of agreement make the contractor responsible for following requirements of the manufacturer and the construction documents, don't hesitate to be present during installation of assemblies that will be hidden when complete. Look for adherence to requirements for substrate attachments, joint spacing, reinforcements, and other internal components. Don't rely on representatives from the manufacturer or distributor to understand the total design of the wall.

The cladding of the North Carolina Supercomputing Center (left and preceding pages) includes a metal-and-glass curtain wall, painted metal panels, and tile. The architect, O'Brien/Atkins, was initially concerned with the use of tile over metal studs in the project (in some areas the tile covers block), according to project architect Ken Field, though it had clear advantages in time and cost. Field researched existing installation of both tile and thin brick, and collected data from materials suppliers, trade associations, and journals. A manufacturer of sheathing and tile adhesives was especially helpful, he says, providing typical details, panel-deflection criteria, guide specifications, and other technical support. The firm concluded that it had enough data and that the system had a track record sufficient to proceed with confidence. (And it is happy with the results.) The client took part in the decision-making process, but the message was clear: the burden to get the project right rested squarely with the architects. ■

Worth Less?

Though it offers real benefits, value engineering is often a process more abused than used.

© Peter Aaron/ESTO photos



Even with their rich detail, Walt Disney's Yacht Club and Beach Club resorts, designed by Robert A. M. Stern Architects, were subject to careful value-engineering review.

Although value engineering has been around since World War II, it's a phrase that architects haven't often heard until recent years. Ideally, it is a process intended to consider the costs of a design decision rationally in terms of operations, maintenance, useful life, and replacement costs, as well as first costs. There is, however, a widespread consensus among architects that it is something else entirely: "My experience has always been that it's sitting down and taking money out of the budget." "You foresee that the project will be nicked and dined to death." "It's just cost cutting." "It's a euphemism for cost-cutting today." "I've found on the whole what contractors call value engineering is just cost-cutting."

It's easy to see why value engineering in the architectural field has gotten a bad name. There are all too few clients who can distinguish between cost and value, the latter considered here, "worth in usefulness or importance to the possessor; utility or merit" (American Heritage Dictionary). In the fields of civil engineering and process engineering, where the practice is most prevalent, choices are, in general, clearly framed: does saving two months on construction time translate into enough added value to cover increased costs? Will propulsion system X be less expensive to operate

over an expected 15-year life than system Y? When you look at typical architectural assemblies, however, the choices are less quantitative, and reliable information on performance is often lacking. Can we say that a more expensive granite-and-glass curtain wall will perform better than an all-glass curtain wall? Do we agree to low-first-cost carpet in heavy-traffic public areas, knowing it will have to be pulled up and replaced every few years, or go with ceramic tile that costs more up front, may demand more maintenance, but is essentially permanent?

In theory, all of these aspects can be quantified, discussed with the client, and decisions made. But in practice, assumptions made during design sometimes prove unrealistic (the client may overstate an ability to maintain roofs, for example), and many architectural design decisions mix "hard" concerns (e.g., operating cost of lighting) with "soft" decisions: what lighting will convey an appropriate image for a high-end clothing store? And, in the end, a tight pre-established budget may simply preclude the most desirable options.

Most architects would argue that assessing performance and life-cycle implications of design decisions is an ongoing process, part of the service they perform for clients every

day. As Thomas J. Snodgrass, who teaches value engineering at the University of Wisconsin, notes, "The title implies that the design professional didn't *do* value engineering." Design decisions are today more complex (as are owners' needs) and value engineers contend that a systematic method of analyzing needs versus costs versus resources is often required.

Whom do you trust?

Value engineering, like construction management and design/build, is part of an evolutionary process in the construction industry. It leaves many professionals wondering whether the architect's role in construction is diminishing. What is more, owners, increasingly conscious not only of the cost of operating structures but also of the value of buildings as a tangible asset, are concerned with performance on a much more detailed level. Though this fact should lead owners to thoroughly consider design decisions, even value-engineering experts decry the debasement of what should be a carefully defined, formalized process. Says Snodgrass: "Where value engineering is applied properly, and the techniques properly administered, there are substantial improvements in performance without compromising costs." Much more widespread, however, is "value engineering" by construction managers, who may or may not be qualified to evaluate any aspect of products beyond first cost and constructibility. In CM-style value engineering, almost any aspect of the project that isn't functional in the most literal way is fair game for cost cutting. Yet construction managers' success in portraying themselves as value engineers reflects a general belief among clients that architects can't stick to budgets and schedules.

Those who have benefited from value engineering practiced as intended agree that it cannot succeed unless it is formalized, with adequate periods of time set aside during the design and construction phases to evaluate issues of cost *and* quality. While there is consensus on the *methodology* of value engineering, there is little agreement—surprisingly—on the roles played by the design team and outside experts. Following, are ways some prominent experts have structured the process. And on pages 24-25,

is a description of the way Walt Disney Company's development arm resolves an intense dedication to detail and visual richness (using some of America's highest-profile architects) with rigid construction budgets and a dizzying number of operational requirements.

Easing the analysis process

Value engineering can be formalized as early as the programming or site-selection stage. The greater the owner's concerns about the allocation of costs, the greater the need to periodically review and evaluate them. A restaurant catering to an executive clientele, for example, would probably benefit little from a process intended to analyze locations. The advantages or disadvantages of various sites are not likely to require extensive investigation. A hospital client, on the other hand, may learn a great deal from a review of the implications of adding to an existing structure or locating new functions on a new site—a choice that requires the resolution of many complex questions. The critical issue for design professionals, according to Howard Ellegant, an architect with a value-engineering practice outside Chicago, "is that it is a process that is established *separate* from everything else you do." It's essential, he says, "to bring owner, users, and people involved with the maintenance of the building together with architects and engineers in the same room for a finite period of time." There are aspects of any project that, examined early, may save a lot of pain later. Are programmatic space allocations too generous? Can separate work groups share support staff or storage space? Can assumptions about equipment power usage be validated in case they are overstating cooling- or heating-capacity requirements?

As design progresses, architect and client can review early decisions to see if they remain valid. Since the process not only identifies items that can be cut but also uncovers needs that entail *higher* first costs, value engineering can be used to define elements that might offset those costs. "It's important that the people involved in the process have a stake in the outcome," says Ellegant. He sees value engineering as an ongoing process that will maintain the integ-

ity of the design because "it has established the owner's real needs."

Ellegant views himself not primarily as an expert on construction costs or operations and maintenance costs, but as a facilitator, "who brings to the table knowledge of how to maintain the integrity of the process." He continues, "In the final analysis, it's very important to distinguish how the owners will use the building, what their operational requirements are, how long they're going to keep the building. What the owner wants enters into questions of esthetics as well as functionality. *Then* you get into first costs versus lifecycle costs." To help resolve some of these issues, Ellegant does not hesitate to introduce outside consultants (to look at tilt-up concrete versus precast concrete, for example).

"Applied properly, value engineering offers major improvements in performance without compromising costs."—Thomas J. Snodgrass

Third-party expertise

Arthur Schwartz looks at the process another way. "It's more effective to do value engineering with third-party objectivity, to hire people who don't have a stake in things as they are." Schwartz is a registered architect whose practice in Plano, Texas, is focused on value engineering, and he is the spokesman for the Society of American Value Engineers. While he agrees with Ellegant that the process can begin on "day one," he sees the value engineer's role as an intermediary as well as facilitator. "We know the first costs, lifecycle costs, and maintenance costs of, say, carpet versus terazzo." He uses a five-step methodology generally recognized by value engineers. In the first step, all of the relevant information about the project and the owner's operations is collected. Then the participants sit down together for a brainstorming session, which is freewheeling, with anyone offering ideas in any area, not just in their own area of expertise. "We don't permit any negatives—anyone saying, 'that's a crappy idea,'" admonishes Schwartz. At the third stage,

the ideas are evaluated and ranked by the participants from one to five. "This is when people break out real opportunities," says Schwartz, and the best are developed into formal value-engineering proposals in the fourth step. "Three things make a proposal acceptable," he explains. "The owner must find it acceptable, it must be technically feasible, and it must either improve function at the same cost or reduce cost at the same level of functionality." The final step: the owner's decision on each proposal.

When asked which technique he uses, Alphonse Dell'Isola, director of value management at Smith Hinchman & Grylls, says, "We do it halfway. You want the design team involved because they've got the sensitivity. But you want an outside team because they've got *objectivity*." Dell'Isola

has been applying value-engineering principals in hundreds of projects since 1962. He continues, "You want to work in value-engineering proposals before decisions get locked in, and you maintain owner and user input into the process so that elements that are going to be problems or irritants can be looked at again."

Peer review

Though it is not called peer review, this is essentially what takes place in the value-engineering component of many public projects, particularly large projects sponsored by some federal agencies. A "value specialist" sets up a team separate from the project's design team. Says Snodgrass, "They'll audit the project and return it to the designer or whomever to review and approve changes." But Snodgrass, for one, says, "I've never felt that was the way to do it. We'd rather have the designers and people involved as team members." Typically the project is reviewed when the design is 20 to 30 percent complete. Lee Askew, III, president of Askew Nixon Ferguson Wolfe, of

Memphis, and a member of the AIA's practice committee elaborates: "You may have a building that has a pitched roof for all kinds of good reasons and the VE firm says, put flat roofs on them. You just shudder at some of the things you see [as value-engineering proposals]."

Construction-phase incentives

Both public and private clients are increasingly including value engineering incentive clauses into construction contracts. Many construction managers promise value engineering as part of the service they offer, agreeing to split savings developed through the process by some preset percentage with the owner. Lee Askew says, "I think we've got to recognize that there is a wide range of materials available for virtually any type of building. If the owner keeps a level head,

must be compared, the consequences for other parts of the building must be considered, and costs for changing related assemblies must be developed or verified. "Contractors that sell value engineering usually can't give you systems analysis," comments Jane Stansfeld, a vice president at CRS Architects, in Houston. "A steel parking garage might seem cheaper than a concrete one, but by the time you fireproof and paint the structure, it might cost more."

Owners themselves often send conflicting signals. According to Lee Askew, "Clients will take drawings and hard-bid them and ask the successful contractor to do some value engineering. They'll say, how can you pull money out of the project?" With construction-phase value engineering, decisions must often be made quickly to avoid holding

value engineering are called) assert that an appropriate value-engineering process is the best means to avoid this outcome. "A contractor will make plenty of good proposals," says Alphonse Dell'Isola, "but many will represent tradeoffs in quality. They'll say, eliminate the granite steps and use precast instead. Is that value engineering? No. Is it cost reduction? Yes. In a proper value-engineering process, this could have been put on the table much earlier." There is no reason not to involve the construction manager or general contractor in a structured value-engineering process. Considerations of site logistics, constructability, market conditions, or schedule may mean big differences in cost for otherwise similar products or systems.

The "client" is more often today a multiheaded organization representing users, owners, and operations and maintenance people, and much more deeply involved in the management of construction. Value engineering offers opportunities to ensure that all the relevant individuals or groups are heard. And, when tough decisions must be made, all of the parties have been privy to and participated in the decision-making process. As long as the procedure is structured, and the decision points are known by the participants, it can remain a process that is about *value*. When it is clear that costs are exceeding the budget, however, no one should confuse cost-cutting with "value" engineering. But one can use value-engineering techniques to assess cost-cutting proposals in order to retain as much value as the budget will allow. By continually examining options over the course of the design process, the client will be much better informed when it comes time to consider substitutions during the construction phase. *James S. Russell*

Further information:

The Society of American Value Engineers offers a directory of consultants and oversees Value Specialist certification programs. Society of American Value Engineers, 60 Revere Drive, Suite 3500, Northbrook, Ill. 60062 (708/480-1730).

Value Engineering in the Construction Industry, by Alphonse Dell'Isola. Washington, D. C.: Smith, Hinchman & Grylls, 1988, 364 pages, \$41.95.

"Anyone can come in after the documents are done, change things, and pull money out of the job."—Christopher R. Clark

then why not take savings if the integrity of the design can be maintained?" Many architects see design integrity as precisely the problem. "Anyone can come in after the documents are done, change things, and pull money out of the job," asserts Christopher R. Clark, director of designpractice at the AIA. Robert Barnett, director of design technology at the Hillier Group, claims, "the biggest savings in the construction phase come from buying the job competitively. Other savings based on value engineering at that point are pretty minimal." If the relationship between architect and contractor becomes adversarial or the contractor is looking to bring the project in line with a too-low bid, "value-engineering" proposals fly fast and furious, and any considerations beyond first cost are subsumed.

An architect can easily dispose of most spurious proposals if the client has been deeply involved in the design process. Some proposals, however, might entail considerable research, for which the architect may not be compensated. The attributes of products

up the project, which can lead to a certain amount of client vertigo as they try to assess competing claims. "They begin to wonder who is giving them the straight skinny, the contractor or the architect," comments Askew.

Some regard this tension as healthy, while others see it as a process that requires architects to repeatedly justify decisions. (It also can induce fear in the owner—dollars in hand begin to look better than "value" that seems abstract.) Since many architectural decisions are actually compromises among a wide range of issues, and usually reflect qualitative judgments as well as quantitative analysis, the whole rationale of the design can unravel under a sustained barrage of cost-reduction proposals. It is this result that causes many architects to see value engineering, as eroding the architect's role as the agent who translates an owner's intentions into a design.

Living with value engineering

Value specialists (as those certified to do

Value Engineering the Disney Way

When the Walt Disney Company unveiled Michael Graves's Dolphin and Swan hotels, calling them "entertainment architecture," there were more than a few critics who wondered if Orlando was not the ultimate meeting place of architecture and movie-set design. The reality of these projects, as well as Robert A. M. Stern's Yacht Club and Beach Club (this page and opposite) and Gwathmey Siegel's convention complex, among others, is anything but skin deep. The architects involved have been gratified by the company's commitment to distinctive design and, at least in areas visible to the public, rich detailing. Yet many have come away bruised by the design and value-engineering process. The flip side to Disney's dedication to innovative design is rigid adherence to budgets, which the company claims are consistent with the cookie-cutter projects with which they compete.

Nevertheless, many people contribute to every project, and the company's hotels tell us a great deal about how to balance what Robert Stern calls the "grace notes" with budgetary and functional requirements. One

reason Disney has chosen well-known architects is that the hotel projects are *not* like the theme parks, where the intricately detailed facade of "Main Street" is just a false front for mall-like shops within. "Everything we design is for the guest's eye," says Wing Chao, senior vice president in charge of master planning, architecture, and design at Disney Development, and in the hotel projects that philosophy extends to the look of the soap-bar package (by graphic designers Sussman-Prejza). "It's a credit to the clients *and* the designers that you have such significant detail," says Stern. "Michael Eisner [Disney's chairman and CEO] is obsessed with details and has a very clear sense of what makes things consistent. You're meant to know that you'll never find anything like it anywhere."

How Disney works

Disney is an unusual client in the number of construction-related functions it maintains in-house. Architects not only are handed a program and budget, but an in-house team may also have prepared detailed information on room configurations and net-to-gross cal-

culations. And, as Wing Chao says, "the budget we give the architect is very detailed. We have already allocated amounts for sitework, landscape, and improvements; for the building core and shell; and money for interior architecture." Though Disney does not use specialized consultants, value engineering is highly structured, involving operations and maintenance groups and the operators of the hotels and the food and beverage facilities. As many as 40 people may contribute to periodic design reviews, which often include full-scale mockups of rooms and other design elements.

Nevertheless, some sessions are planned during the design phase in which Disney asks architects to propose any ideas they think should be incorporated into the project. "If they come up with 10 ideas, we want to see all 10 even if they sense we can't afford them," explains Chao. "We may choose to go ahead with the more creative ideas."

Throughout the process more ideas are debated and cost estimates are updated. Because overall budgets rarely change, the



1



2

Value engineering at the Yacht Club and Beach Club resorts lowered first costs by reducing the number of trellises (1). Trim

was fabricated in fiberglass to reduce maintenance (2, 3). The client did choose custom-designed lobby light fixtures (4).

selection of one item often means something else must go—a disconcerting process, at times, since higher-cost elements may be chosen for reasons of maintenance (Stern's project, for instance, is faced in a composite product called Werzalit because cedar siding used in an earlier project had rotted in central Florida's humid atmosphere), but at other times design elements close to the heart of the architect are cut out. As Robert Stern puts it, "There are keepers of the flame and keepers of the purse."

At times participants' exchanges make the process sound like a board game: I'll trade you these custom light fixtures for that metal roofing. But it is a serious business in which players rigorously analyze alternatives. Since Disney had never used synthetic stucco, for example, Tishman Construction tested the material in a facility used for high-rise curtain walls before using it in the Dolphin and Swan (with some changes in standard application). Designers have been impressed with Disney's ability to analyze and make available information on what has and has not worked on previous projects.

Can success come cheaper?

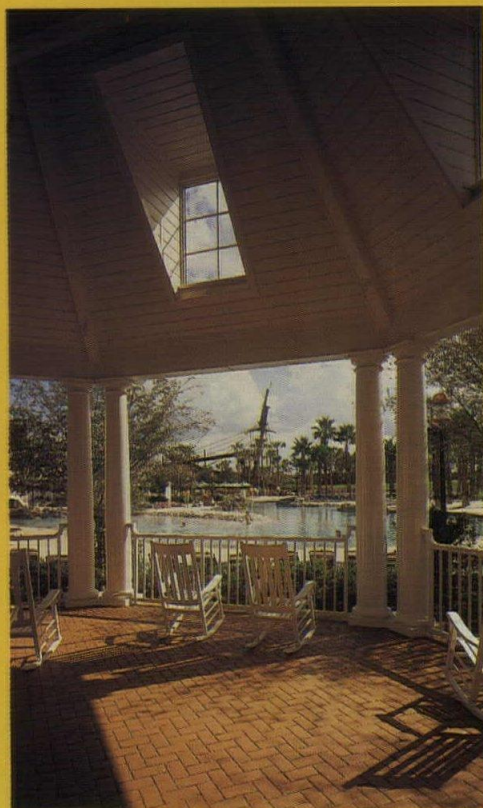
While the Dolphin and Swan, and the Yacht Club and Beach Club are oriented to high-end travelers, Disney also has been successful with mid-level projects such as Dixie Landings and Caribbean Village. To lower costs, Disney uses a proprietary "tunnel form" to fully cast as many as eight room units per day. The boxiness of these basic units is disguised by themed roof profiles and porches. Even these have many touches that separate them from their ultra-consistent competitors. Closets don't have doors, and there are no sit-down restaurants in the complex. But each room has tile baths and two sinks, the television is inside a cabinet rather than atop a counter, and enough of the theme is carried into the room that you know you're not in Kansas anymore.

The company is currently engaged in finding a way to build projects for budget-oriented travelers. Arquitectonica has developed (but the company has not yet released) "All-Star Villages" in which giant-sized iconic elements (a three-story football or a four-story marimba) would create a Pop-Art theme. Ac-

ording to Bernardo Fort-Brescia of Arquitectonica, Disney provided a T-shaped building configuration, room dimensions for the tunnel-formed units, and even locations for hardware, light fixtures, and electrical receptacles—all accepted based on previous success in meeting performance criteria and budgets.

Contracting practices

Disney does not have a consistent policy of bidding projects or using construction management. Since it intends to identify the major value-engineering options early in the process, it does not emphasize incentives for value-engineering proposals during construction. Nevertheless, builders have often contributed significant savings. Patrick Burke, of Michael Graves's office, says that Tishman Construction (a part owner as well as the builder of the Dolphin and Swan) was "much more analytical" in value engineering, while Disney was "line-item oriented," though he gave credit, as did others, to representatives of operating groups: "They know what kids do to a hotel room." *J. S. R.*



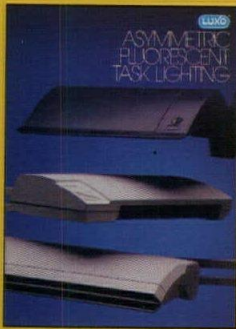
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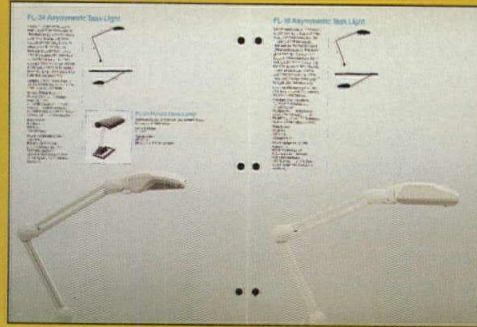
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First Class

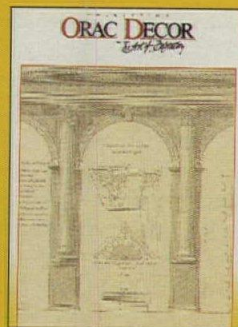
Winners in RECORD'S second annual review of new literature were chosen by a panel consisting of Anna Egger-Schlesinger, Senior Associate Design



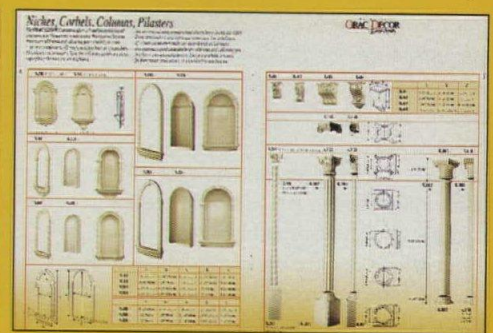
Luxo Lamp Corp.
Asymmetric Fluorescent Task Lighting
Special Construction & Engineering
Eight pages or less



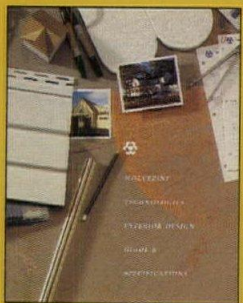
Strong, visual solution. Spatially, they did a beautiful job laying it out. Impresses you on the visuals of the product. Fully backed up with diagrams. Well documented, and focuses on range of motion. Would buy that lamp on the basis of that catalog.



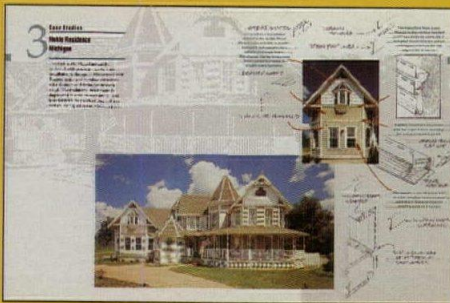
Outwater Plastic/Industries
Orac Decor catalog
Materials
64 pages or less



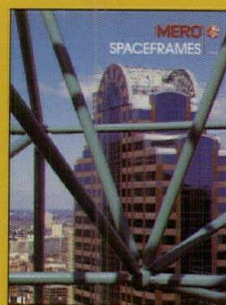
Good walk-through. Know where you're going. Very pleasing to look at. They don't overwhelm. Sense of scale. Cover is an undersell, but in keeping with the feel of the brochure. Interesting presentation, details, and close-ups.



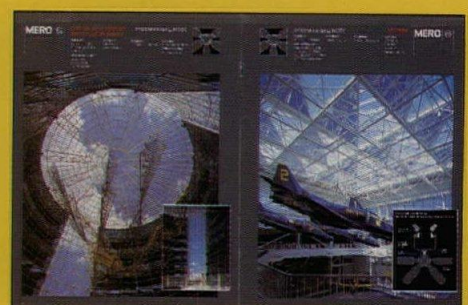
Wolverine Technologies
Exterior Design/ Applications Guide
Enclosure Systems
64 pages or less



Engaging conversation with vinyl siding. Brought me into what I do daily; they understand the process involved, not just the materials. Simple navigational tool. Consistent visual. Scale change and integration of components very well conceived.



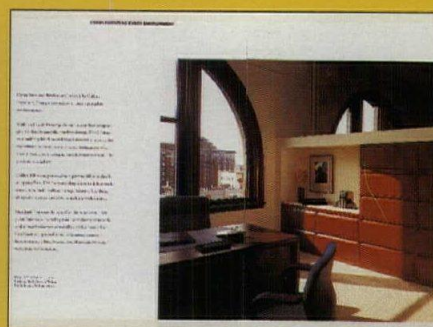
MERO Structures
Spaceframes 1992
Materials
16 pages or less



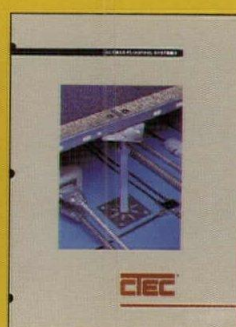
Places lacy white drawings on a glossy black ground in reverse line to give feeling of the lightness of the product. Integrates visuals with the supportive data. Sets up a systems approach by an intelligent use of the page. Tight but done so well.



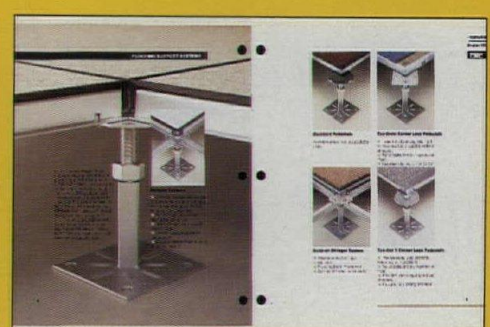
The Knoll Group
Calibre Files & Storage
Finishes & Furniture
64 pages or less



Lots of graphic skill. Took a subject that can be overwhelming. Landmarks to give me clues. Clear product in place. One-stop shopping. Big package. Lets me make comparisons rapidly. Consistency in the photography, selection and cropping.



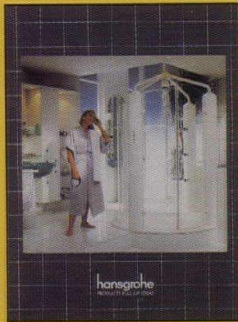
C-Tec, Inc.
Access Flooring Systems
Special Construction & Engineering
16 pages or less



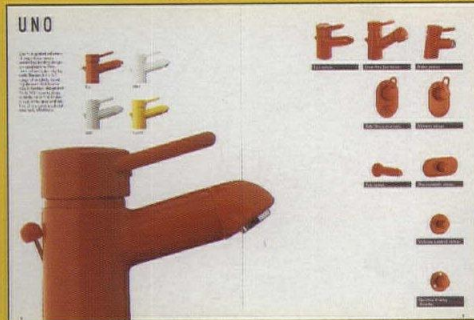
An excellent example of a nonvisual product presented in an attractive way. You find the same category of information in the same place, page to page. The organization enables you to extract information and make comparisons in a way that works.

Director; Daniel T. Casey, AIA, Associate with Edward Larrabee Barnes/John M. Y. Lee & Partners, New York City; and George A. Salinas,

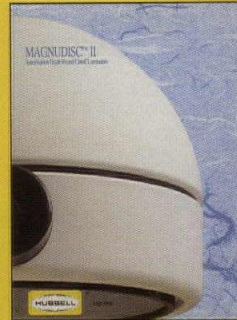
AIA, CSI, Consultant to the Sweet's Group. Moderator was Joan Blatterman, New Products Editor. Juror's remarks accompany each citation.



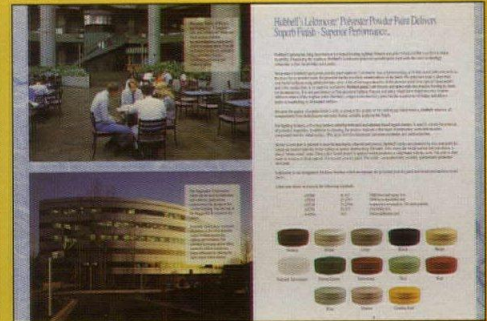
Hansgrohe, Inc.
Full-Line Consumer Catalog
Special Construction & Engineering
64 pages or less



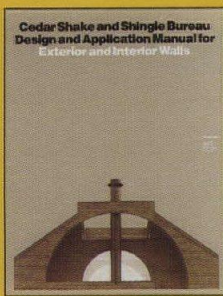
A working catalog on faucets and plumbing accessories. Shows how they differ from one another. Photography gives good sense of textures and appearance of finish options. Walks you through selection process for each product.



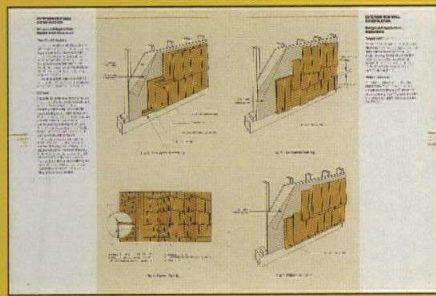
Hubbell Lighting
Magnudisc II catalog
Special Construction & Engineering
16 pages or less



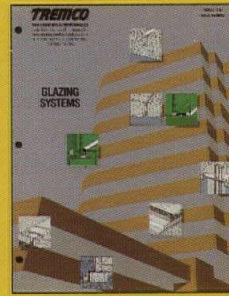
Builds a focus on that product. Runs through the course in a complete manner. Good color. Missing: photo showing the luminaire illuminated at night.



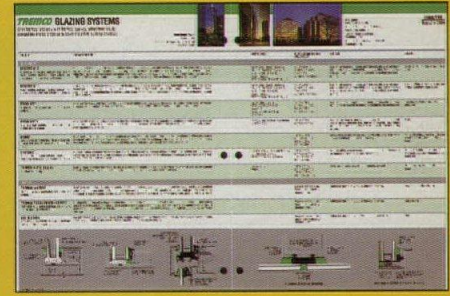
Cedar Shake & Shingle Bureau
Wall Design Manual
Enclosure Systems
16 pages or less



I wanted to read what they have to say. Liked tone. Clear diagrams and explanations. Modest, but with a lot of miles to the gallon. Consistent visualization.



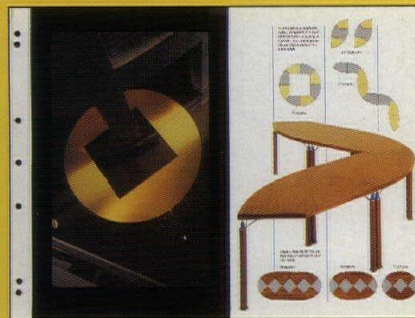
Tremco, Inc.
Glazing Sealants brochure
Enclosure Systems
8 pages or less



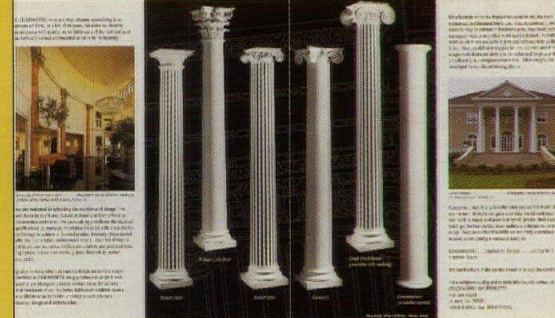
Takes drawing to another level. Tells where the product would appear in the context of a building. In two seconds, gives an overview of the building process. Had a difficult problem; did a competent job. Covers highlights of the system within a catalog family.



Westnoffa Contract
Collage Table Series
Finishes & Furniture
8 pages or less



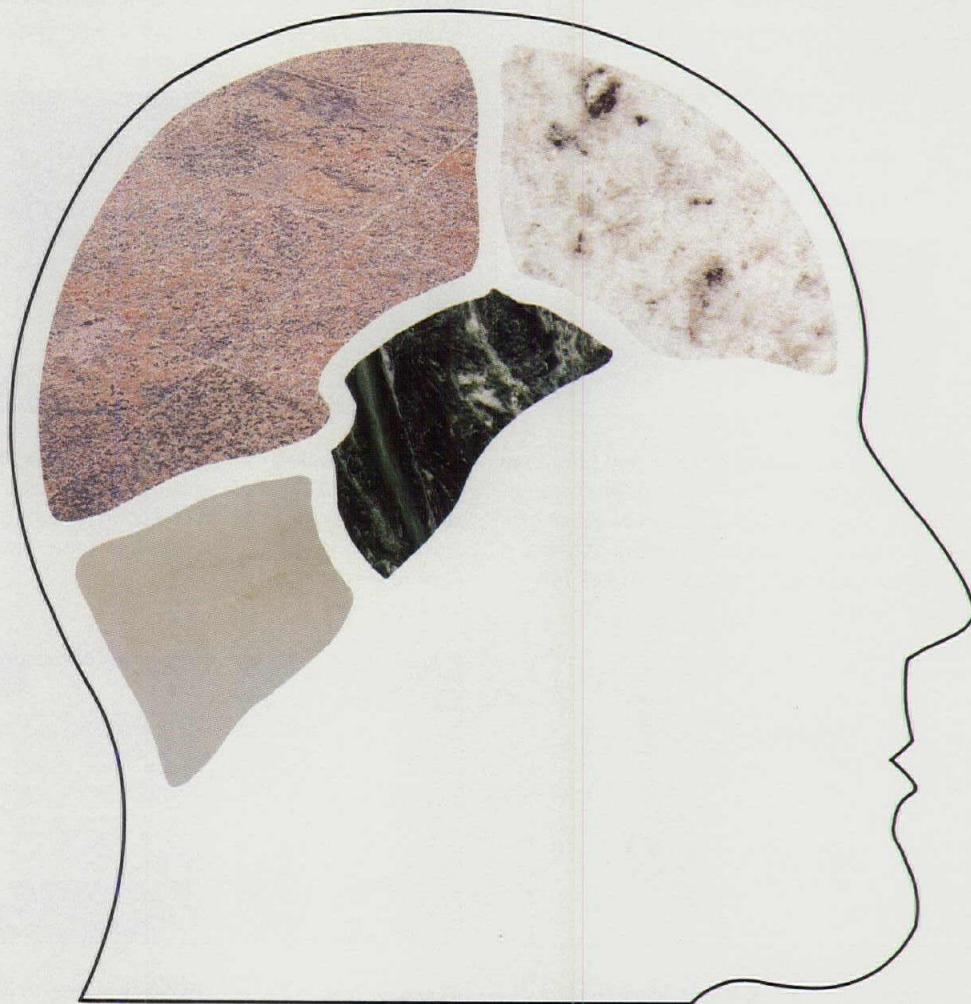
Though foldout is a little cumbersome, it is visually very enticing. Shows options, diagrams, and sections. Supports with technical information. Points up the unique features of the product. Not necessarily easy to navigate, but fun to cruise through.



Chadsworth, Incorporated
'Columns' mailer
Materials
8 pages or less

Simple and to the point. Takes a black and white product and presents it in black and white. Visually pulled me enough to know if I wanted to know more. ■

THINK.



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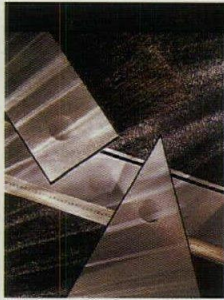
Twenty wonderful years! This Product Reports issue is RECORD'S 20th annual state-of-the-art snapshot of new architectural materials and professional literature. And it is the largest ever, in terms of total pages as well as number of products. This would have been impossible without participation by all the manufacturers and agencies that took the time to answer our request for information. To all who did: thank you.

Beyond the evolutionary process of the building-product marketplace—cladding materials are lighter, finishes more fire-resistant, coatings meet VOC regulations—how is this year different? Well, for one thing, there are the prefab and pre-engineered prison cells, detention-grade hardware, pilfer-proof ceiling panels and air grilles. There's new CAD software that simplifies (and integrates) data and drawing management. Building products—lifts, signage, hardware—have been designed to meet new accessibility standards. And there's an entire new generation of VDT-compatible task, up, and downlight fixtures.

Another construction-industry response to economics of the current marketplace is the product-specification process called Value Engineering. On pages 18-25, Senior Editor James Russell looks at it from three viewpoints (including Disney's). And on pages 26-27, we illustrate the 1991 winners of RECORD'S citation program for product literature.
J. F. B.

1 • GENERAL DATA Products

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1. Designer tools

Created by Chicago designer Cindy Coleman, the three anodized-aluminum and colored-plastic tools—45-deg triangle, architect's scale, and drafting brush—that constitute this set are esthetically pleasing and functionally elegant. Triangle and scale glide on ball bearings that recess when tools are pressed down. Rosenzweig, Chicago.



2. 3-D CAD renderings

The Upfront 3-D version for IBM-compatible personal computers is an architectural rendering program with the ability to automatically create shadowing for a particular time, day, and latitude. It also shades objects automatically and works with CAD files in DXF and other popular formats. Alias Style!, Toronto.



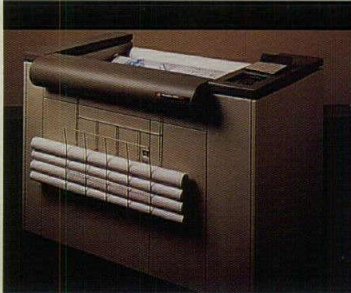
3. Shared CAD

CADVANCE Version 4.0 is a 2-D/3-D CAD drafting program that runs on PCs compatible with the IBM AT. The software package works with graphic and nongraphic files stored in a database, such as dBASE, thus allowing teams of designers to share information over a local-area network run by Novell's Netware, for example. ISICAD, Inc., Anaheim.



4. Site-modeling CAD

SiteWorks, the first in a set of integrated CAD programs, is compatible with Intergraph's MicroStation PC V4.0 CAD software. It can model a proposed construction site using data from field surveys or photographs. Designers can modify the model for construction effects and display the result in various ways. AEC Group, Inc., Huntsville, Ala.



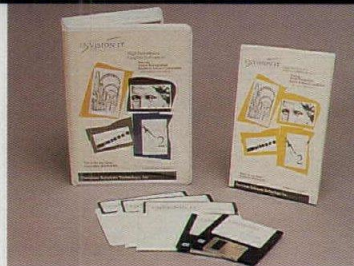
5. Wide color printer

The Versatec CADcolor series of electrostatic color printers work with networks of Sun Microsystems' SPARC workstations or PCs with 386 microprocessors, or with stand-alone systems. The printers can produce drawings as large as E size in full color with a visual resolution of 300 dots/in. XES, Inc. Santa Clara, Calif.



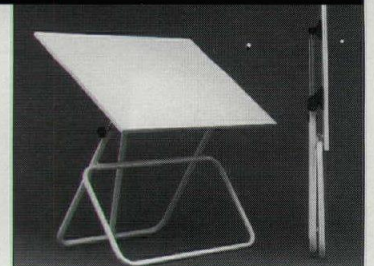
6. Money managers

Computer-based Financial Management System (CFMS) software for PCs (MICRO/CFMS) and for Digital Equipment Corp.'s VAX minicomputers (CFMS/VAX) helps architectural, engineering, and environmental firms manage their businesses more efficiently in tight economic times, or control expansion. Harper and Shuman, Inc., Cambridge, Mass.



7. CAD image translator

"Envision It" is a software package for personal computers that changes scanned or other bit-mapped (raster) images into a file containing a vector description of geometric shapes. The resultant computer file can be used directly by programs such as AutoCAD to create new drawings or views. Envision Solutions Technology, Inc., Burlingame, Calif.



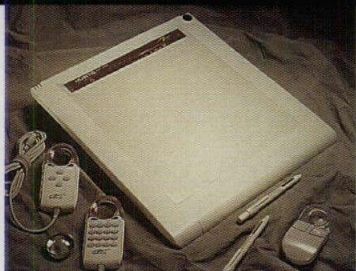
8. Table where?

The Ultima Foldaway is a drafting table that folds to a 4 in. width for easy storage or transportation. With a clean, contemporary design, it has a white melamine top and white base with nonskid floor levelers. The unit can be set up for use or folded up in a matter of minutes. Chartpak/Pickett, Leeds, Mass.



9. Wide fax

The model 7124 engineering facsimile/copier is a Group 3 thermal fax that sends and receives full-sized drawings as large as 24- by 36-in. A regular fax receives the drawing in segments (marked for easy assembly into full-sized drawings) in as little as 3 minutes. As a copier, it can enlarge 200 percent. Xerox Engineering Systems, Rochester, N. Y.



10. Mac tablet

Designed for use with Macintosh computers (running System 6.0 or higher), the XGT/ADB is a 12- by 12-in. digitizer tablet that a user can draw on with a cordless, pressure-sensitive pen. One can also define the functions of the pen's buttons, use it in airbrush mode, and scale the tablet for desired screen dimensions. Kurta Corp., Phoenix.



11. Digitizer tablet series

The DrawingBoard II series of cordless and corded digitizer tablets have high resolution (up to 2540 lines/in.) and accuracy (+/- 0.010 in.). They range in size from 12- by 12-in. to 44- by 60-in. and work with Macintosh computers, Sun and UNIX workstations, PCs running DOS and Windows software, and a variety of CAD programs. CalComp, Anaheim.

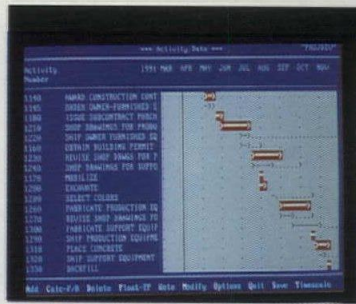


12. CAD files manager

The Clip-It software package for PCs and UNIX workstations works with Intergraph's MicroStation CAD software to help manage design files. It creates a new file with both master file (with 2-D or 3-D drawings) and associated references files so users can easily deliver a complete electronic file with correct views. DGI, Huntsville, Ala.

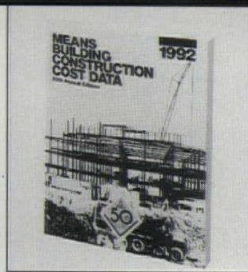
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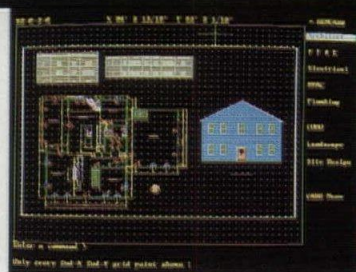
13. Project scheduler

SureTrak is a program for scheduling and managing small to large engineering and construction projects that run on a PC. Once the user defines relationships between project events and tasks, this software generates schedule charts and progress reports based on actual occurrence data. Primavera Systems, Inc., Bala Cynwyd, Pa.



14. Cost estimation data

Means Building Construction Cost Data 1992, a 452-page reference for unit costs, is organized by the Construction Specifications Institute MASTERFORMAT numbering system. It has over 20,000 prices for materials, fixtures, hardware, and equipment as well as local-cost indexes for estimate adjustment. R. S. Means Co., Inc., Kingston, Mass.



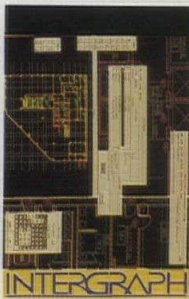
15. Architectural CAD

A general drafting program that works with AutoCAD and other programs, and runs on IBM PCs and compatibles, GenCADD Architectural has commands for laying out space and drawing walls, footings, doors, windows, stairs, and elevations. DCA Softdesk, Henniker, N. H.



16. Digital level

Not only does the SmartLevel Series 200 measure level and plumb, it measures angles too. Its liquid-crystal display rights itself depending on how the tool is held, showing angles to an accuracy of 0.5 (deg) or to 0.1 (deg) within 1 (deg) of level or plumb. If dropped, the tool recalibrates itself at the push of a button. Wedge Innovations, San Jose, Calif.



17. PC CAD

Version 4.0 of the popular CAD software system, MicroStation PC is designed for personal computers with 386 chips. It has the same look and feel (the "Motif" standard) as versions that run on more powerful workstations and supports sophisticated file storage (relational databases) and networking capabilities. Intergraph Corp., Huntsville, Ala.



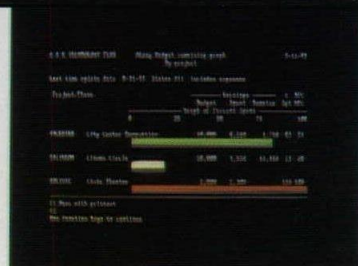
18. Rendering software

For 386 or 486 PCs with math coprocessors, Big D version 6.0 lets architects easily create photo-realistic images from AutoCAD 3-D and other DXF files. To render the desired view, the designer positions a "camera" on screen and chooses a lens type. Lighting effects and materials are also selectable. Graphics Software Inc., Bullard, Tex.



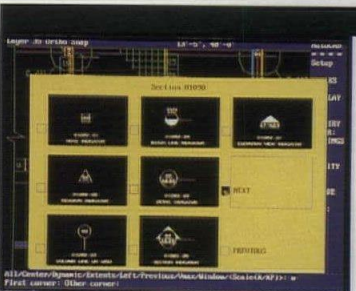
19. Faster plotters

Because they use a new type of digital logic, the XP-501 (D-size) and XP-500 (E-size) pencil/pen plotters can produce drawings with higher-quality lines in less time. The cut-paper plotter senses paper weight automatically to adjust speed and pen pressure; maximum plotting speed is 44.5 in./sec. Mutoh America Inc., Elk Grove Village, Ill.



20. Time and money

AEasy Plus is a software package for managing costs and hours spent on architectural and engineering projects. Its users can track time and billing on a departmental basis, taking into account overhead rates for project management and setting up individual department ledgers and time sheets. Timberline Software Corp., Beaverton, Ore.



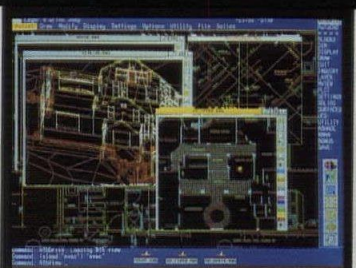
21. CSI-standard CAD symbols

This program lets AutoCAD designers place any of the Construction Specifications Institute (CSI) standard reference symbols in their drawings with the click of a mouse button. Symbols and materials representations are grouped by CSI divisions represented by icons. It works with other DOS programs too. Vertex Design Systems, San Francisco.



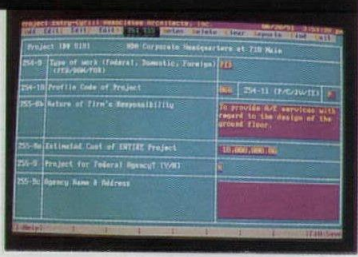
22. Walk-through software

With ASG Model Vision, architects can create animated tours of their designs on a PC, using CAD files in DXF or IGES formats and texturing from "paint" programs or scanned photos. (Rendering of Evanston, Illinois Public Library courtesy of Kenji Murokami with Rasmussen Ingle Anderson Architects and Engineers.) ASG, Sausalito, Calif.



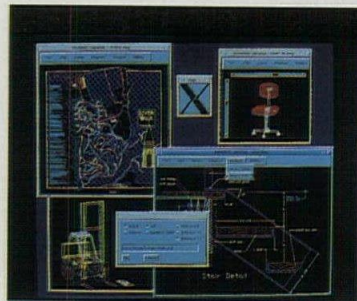
23. Fast zooming

Nth ViewAC, an add-on software package for AutoCAD, lets designers view, zoom, and plot DWG drawing files inside AutoCAD, without having to reread the files. Thus it can pan and zoom instantly. It also can display several views simultaneously and accepts scanned and other bit-mapped image files. Nth Graphics, Ltd., Austin, Tex.

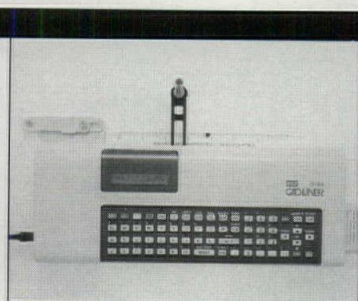


24. PC accounting software

Sema4 Financial Manager, designed for architectural and engineering firms, can now be tailored to a company's specific needs. The latest release, Version 6.0, allows an unlimited number of simultaneously open accounting periods, two-level budgeting, and multiple file querying for generating custom reports. Semaphore, Inc., New York City.



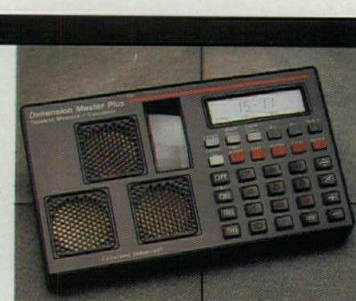
25. Drawing manipulation
Available for Windows 3.0 PCs, UnixMotif workstations, and Xwindows terminals, DRAWING Librarian lets a user display or print drawings created with AutoCAD—without having to actually run AutoCAD. Further, it lets you create new drawings by cutting and pasting existing ones, zooming, or panning. SoftSource, Bellingham, Wash.



26. Lettering machine
The Cadliner CD-850 can print letters in tolerance, superscript, and subscript formats and in two forms of fractional printing. Automatic enclosure gives circle, square, rectangle, or oval frames and, for making revisions, a table creation mode lets you letter and draw lines from the bottom up. MAX Business Machines Corp., Garden City, N. Y.



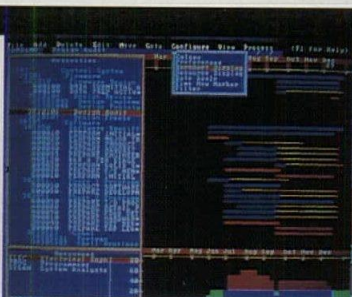
27. Realistic renderings
Using 3-D drawings created in MicroStation or AutoCAD, ModelView PC creates photorealistic renderings of architectural and interior designs. A feature called View-Finder lets designer modify perspective, adjust perspective, and merge and match scanned site photos, and save views for use in animations. Intergraph Corp., Huntsville, Ala.



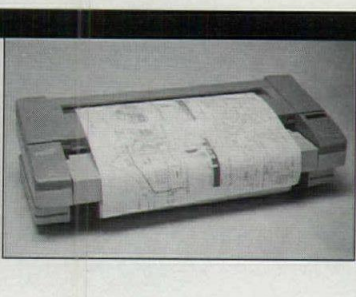
28. High-tech tape measure
The Ultra-Sonic Measuring Device records distances up to 60 ft in three directions, and can automatically calculate area and volume. Readings, in inches, feet, yards, or meters, are accurate to 99.5 percent. A light beam pinpoints the spot from which measurements are taken, and prior readings can be recalled. Seton Name Plate Co., New Haven, Conn.



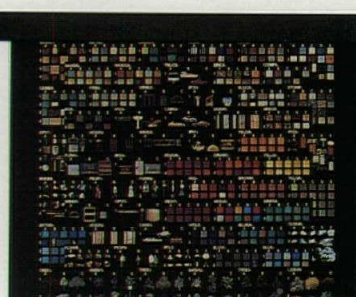
29. Improved CAD visualization
Release 2 of RenderStar for PCs and Sun SPARCstations, which generates and animates designs from 3-D models created with AutoCAD, has new features such as bit-mapped textures, gradient colors for colored-light effects, better shadow generation, and spot lights. Up to 50 light sources can be used at once. Modern Medium, Portland, Ore.



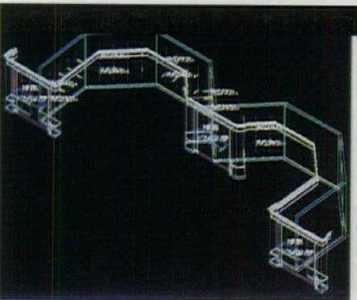
30. Project management
Open Plan has been upgraded (4.0) to include a graphical interface called Program Executive that lets you view data in terms of the work breakdown structure, a network of project activities and relationships, or interrelated bar charts and histograms. Welcom Software Technology, Houston.



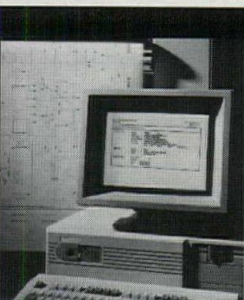
31. Large-scale MAC plotter
The ExpressPlotter is targeted to Macintosh users who generate medium to high volumes of drawings as large as 24 in. by 6 ft. The low-cost thermal technology unit, which accepts data in both vector and raster (bit-mapped) formats, works with CAD output from MicroStation and VersaCAD as well as Mac Archित्रon. JDL, Camarillo, Calif.



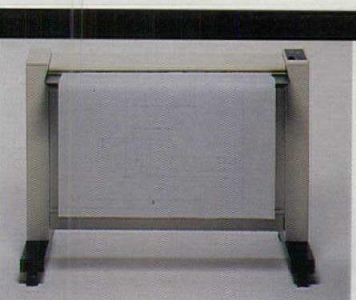
32. Textures on CD-ROM
Photorealistic images of brick, marble, metals, tiles, trees, clouds—1,150 textures in all—are included on a CD-ROM disk in a wide variety of common file formats. Large areas can be seamlessly covered, dimensioned, and scaled with these patterns, which can be displayed using any VGA graphics adapter. IMAGETECTS, San Jose, Calif.



33. CAD suite
Developed jointly with Skidmore, Owings & Merrill, the Architectural & Engineering Series (AES) is an integrated set of eight discipline-specific programs: graphics, rendering, structural, energy, hvac, power, lighting, and piping. All applications can share data and be tailored to the needs of a particular firm. IBM, Atlanta.



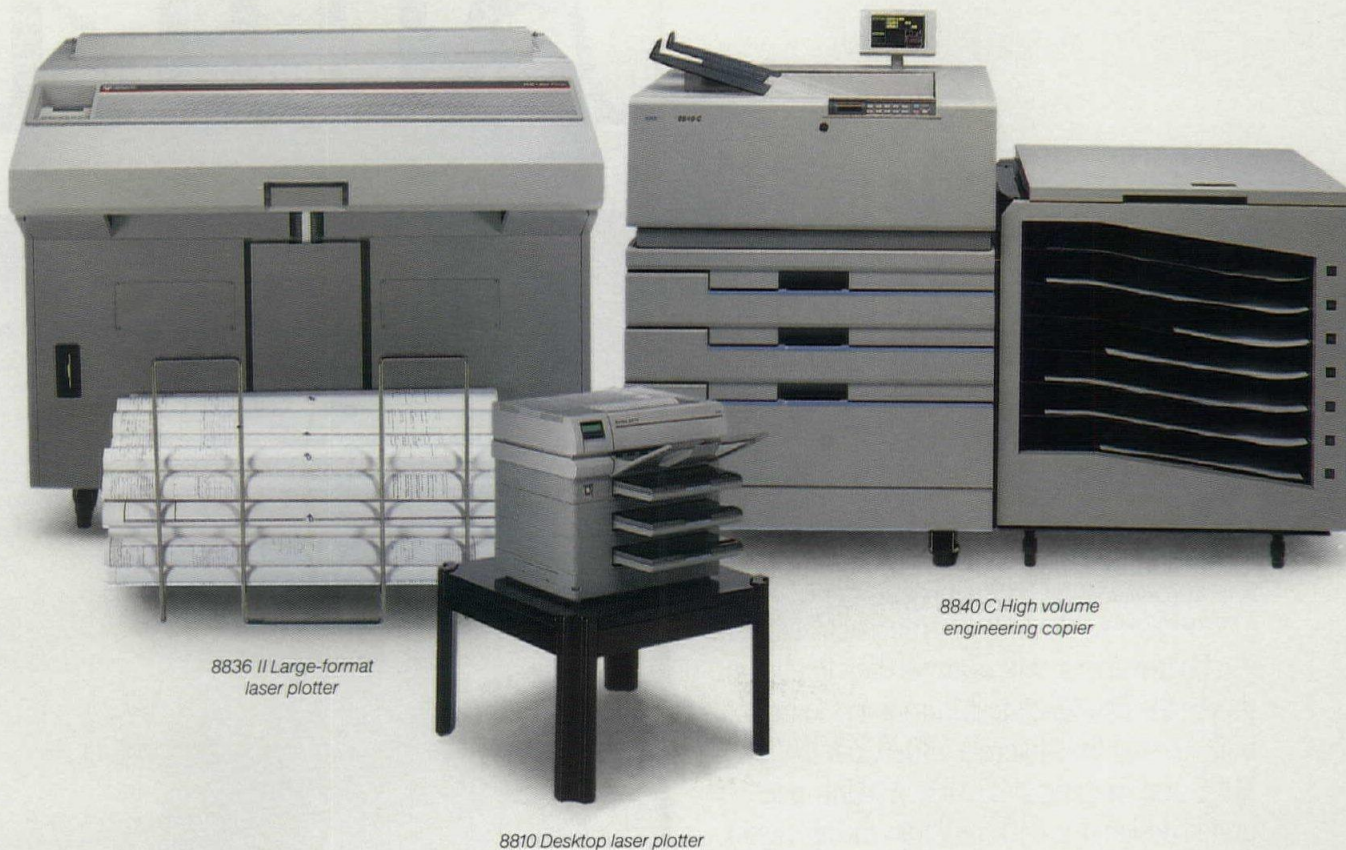
34. Plotting manager
For networked CAD systems with high volumes of plotting, Plot Station software maximizes plotter utilization while freeing CAD workstations for more design work. It can run on a PC, control several different plotters efficiently, and be used with MicroStation, AutoCAD, and VAX-based CAD systems. Byers Engineering Co., Atlanta.



35. Large-scale scanner
For converting volumes of large drawings (up to 40 in. by 100 ft), the LDS 4000 Plus can turn an E-size drawing into a computer (raster) file in as little as 30 seconds. The unit's controlling software runs on a PC AT; optional software converts files from raster to vector format for direct use with CAD programs. Houston Instruments, Austin, Tex.



36. Drawing copier
The plain-paper Oce 7000 copies opaque or translucent drawings up to 36 in. wide onto plain or translucent paper or polyester film. A novel copying method shortens the travel path for paper thereby reducing the likelihood of jamming. The relatively compact unit takes up less office space than typical large-format copiers. Oce-USA, Inc., Chicago.



8836 II Large-format laser plotter

8840 C High volume engineering copier

8810 Desktop laser plotter

Step Savers.

If getting your engineering drawings plotted and printed is costing you shoe leather, you need to talk to Xerox.

Because with our advanced "step-saver" plain paper engineering plotters and printers, you can print, cut, roll, label, stack and sort plots and copies—all without leaving your workstation.

Take our 8836 II—the world's most popular E size large-format laser plotter. It's a high-performance system that's perfect for both fast check plots and presentation-quality plots.

Add our 8810 desktop laser plotter and you have a high-speed solution for generating manageable A and B size check plots and final plots.

And for fast high volume prints of drawings and documentation in mixed sizes and formats, there's our 8840 printer family. The 8840 takes data from a variety of sources and makes crisp, high resolution prints and plots in A through D sizes.

For economy and flexibility, all these step-saver systems use plain paper. And at 400 ppi resolution, they deliver laser-sharp lines, smooth diagonals and superior gray scales. Even better, they work with all your favorite applications, like AutoCAD®.

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So much power in so little space. The Quadra 900 is just 18.6" high and fits comfortably next to your desk. The Quadra 700 fits comfortably on top of it.

While the engineering and architectural disciplines have always prized the elegant solution, there are times when brute strength is imperative.

Introducing the Apple® Macintosh® Quadra™ 700 and Quadra 900 computers.

Awesomely powerful. Ferociously fast. But each is still very much a Macintosh.

Up to twice as swift as any of their forebears, they're the first Macintosh computers to be built around the Motorola 68040, rated at 20 MIPS and running at 25 MHz. A highly integrated design, the 040 combines the processor, math coprocessor, memory controller, and cache memory all onto one chip.

More important than merely technical measurements, the Macintosh Quadra computers are totally harmonized systems. The hardware architecture, operating system, interface, peripherals, and networking were all designed from the start to optimize the 040's power and work together smoothly as a single integrated system.

Anyone using compute-intensive applications — like 3-D modeling and stress analysis — will immediately appreciate the difference.

Popular software packages like Infini-D, MicroStation Mac, and Virtus WalkThrough perform more nimbly and

Big just got bigger. The new Macintosh 21" Color Display gives you more drawing board to work on. Colors are vivid, focus is crisp, brightness and contrast are high.

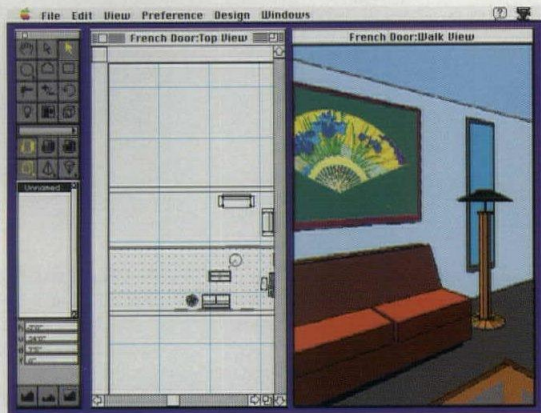


*24-bit video support for up to 16" monitors; 8-bit video support for up to 21" monitors. **There are two easy ways to do it. Simply add an application called SoftPC, or one of two cards from Orange Micro, the Mac286 or Orange386. © 1991 Apple Computer, Inc. Apple, the Virtus Corp. Camera 1 image was created in Infini-D. Infini-D is a trademark of Specular International, Ltd. Orbiter image was created with MicroStation Mac. MicroStation is a registered trademark of Bentley Systems Inc., an Intergraph affiliate. ORACLE is a registered trademark of Oracle Corporation. Lotus and 1-2-3 are registered trademarks of Lotus Development Corporation. SoftPC is a registered trademark of Insignia Solutions Inc. WordPerfect is a registered trademark of WordPerfect Corp. By the way, this ad was designed, typeset, and otherwise

he Mac.

responsively than they ever did before.

And because you do more than design and engineering, these computers also run thousands of Macintosh productivity programs like Lotus 1-2-3 and WordPerfect. Accounting programs like Great Plains. Database programs like ORACLE and FoxBASE +/Mac. And presentation programs like PowerPoint.



In addition, RAM is expandable up to 20MB.

The Quadra 900 is a standing tower of immense capacity with five NuBus expansion slots, SuperDrive, plus three additional half-height expansion bays for CD-ROM drives, magneto-optical disk drives, tape backups, or hard disk storage of over 1 gigabyte. RAM can be added up to 64MB. It also features a key lock, not only



Because it's a Macintosh, extremely sophisticated programs for interior spatial emulation, 3-D modeling, and CAD/CAM are easy to use. Because it's a Macintosh Quadra, they've got the muscle to run nimbly and quickly. Pictured in action, Virtus WalkThrough and Infini-D.

Both Mac® Quadra models offer a generous array of expansion slots. Which you may never need since so much is already on board.

That includes sound input and output ports. And high-performance 24-bit color video controllers built onto the logic boards which will run any Apple and many third-party monitors.* Saving both a slot and the cost of a video card. And both come with Ethernet. So you can move large CAD files around the office at warp speed.

The Macintosh Quadra 700 is the same compact size as the popular Macintosh IIfx.

It also comes with a SuperDrive™ disk drive, two NuBus™ slots, and a hard drive of up to 400MB.

for security, but to protect against interruption of your long, compute-intensive jobs.

Despite their unprecedented abilities, the Quadra computers are as easy to set up and use as every Macintosh and are capable of running not only thousands of Macintosh applications, but MS-DOS** programs as well.

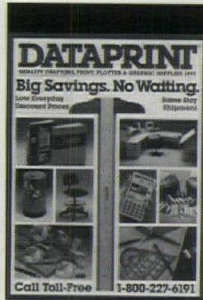
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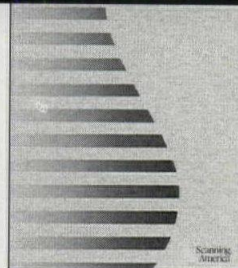
Introducing Macintosh Quadra.

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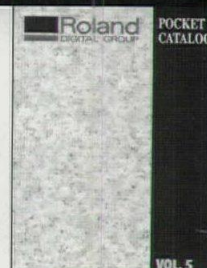
37. Design-office supplies

This 64-page catalog contains a wide selection of brand-name graphics, drafting, printer, and plotter supplies at discount. It also includes furniture and lighting for the designer, as well as architectural reference books and CAD handbooks. Relevant specifications are included for all products listed. Dataprint Corp., San Mateo, Calif.



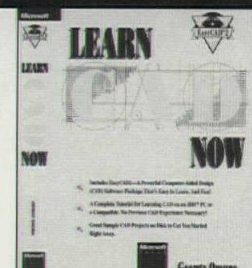
38. Scanning service

This firm's ability to convert drawings as large as J size into CAD-compatible electronic format is described in a full-color glossy brochure. On-site conversion services for highly sensitive drawings and special handling for drawings that must meet Federal requirements are but two added offerings. Scanning America, Lawrence, Kan.



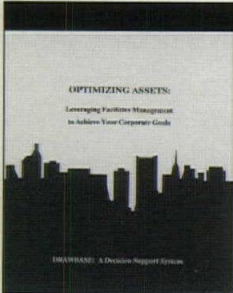
39. Plotter catalog

This pocket-sized catalog is a quick reference to the company's broad line of thermal and pen plotter products. In addition to large drafting units and compact X-Y plotters, the booklet lists modeling machines, a data buffer, and optional pen holders, inks, and cables for use with the plotters. Roland Digital Group, Irvine, Calif.



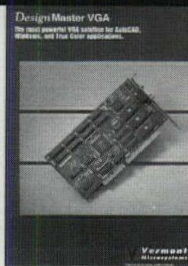
40. CAD teacher

For \$39.95, architects and draftsmen new to computer-aided design can teach themselves how to use CAD tools in just a few hours. "Learn CAD Now," which consists of a 464-page textbook and two 5 1/4-in. disks for a basic PC with mouse, presents CAD fundamentals using practical projects and exercises. Microsoft Press, Redmond, Wash.



41. Asset rein

This 24-page booklet tells businesses how to gain control over the use of one of their prime assets: facilities. In particular, the paper describes how DRAWBASE, a decision support program, can organize the facility information needed to make cost-control choices and give management access to it. CADworks Inc., Cambridge, Mass.



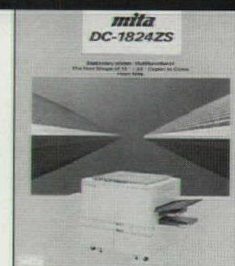
42. Display capabilities

This four-page leaflet tells how AutoMate/PRO software's features—such as real-time anti-aliasing, pan/zoom functions, and Bird's Eye and Magnifying Glass viewing capabilities—enhance the performance of AutoCAD. The software is free with the purchase of any of the company's line of graphics boards. Vermont Microsystems, Winooski, Vt.



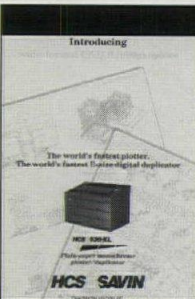
43. Preservation information

The National Park Service's "Preservation Briefs" are an invaluable source of information about materials and techniques for restoring the interiors and exteriors of buildings from bygone eras. Two of the latest issues in the series discuss the repair of stucco and ornamental plaster work. U. S. Government Printing Office, Washington, D. C.



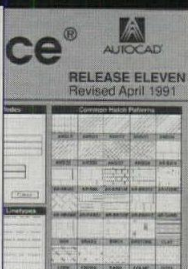
44. Size-conscious copier

A six-page brochure gives specifications and features of the compact DC-1824ZS. It duplicates 18- by 24-in. (as well as 11- by 17-in. and 8 1/2- by 11-in.) drawings, and can automatically resize pages for larger or smaller formats. Reduction/enlargement range is 50- to 200-percent. Mita Copystar America, Inc., Hasbrouck Heights, N. J.



45. Fast plotter/copier

The HCS 536-XL, described in this four-page brochure, can print E-size architectural drawings at 10-in./sec, or more than 10/min; liquid-toner imaging and parallel processing electronics (for vector-to-raster conversion) make it possible. Resolution is 400 dots/in. HCS/Savin Engineering Systems Inc., Stamford, Conn.



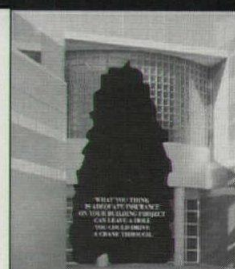
46. AutoCAD menus poster

"Menu-at-a-Glance" was created for designers as a quick reference to AutoCAD Release 11's control functions. The double-sided sheet—which has screen and pull-down menus not shown in the AutoCAD manual in addition to type fonts, line types, hatch patterns, dialogue boxes, and more—is free to users. AutoCAD HELPLINE. Cleveland.



47. Drawing instruments

The Blue Dot Premium line of stainless-steel drafting tools includes large and small bow compasses, drop and speed bow compasses, beam compasses, friction dividers, ruling pens, and accessories. A six-page catalog explains how the instruments' open-truss design provides increased strength without bulk. Vemco Corp., San Dimas, Calif.



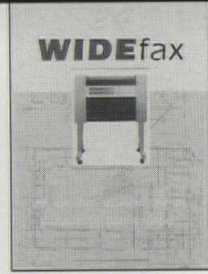
48. Project insurance

Liability insurance requirements—and ways to minimize its costs without placing a design team at risk—are the subjects of this pamphlet. It also discusses loss prevention and insurance attributes such as noncancelable coverage and guaranteed premiums for a specified insurance amount and period. DPIC Companies, Inc., Monterey, Calif.



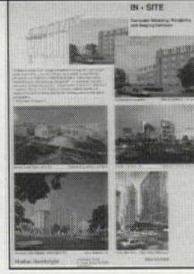
49. Site planner

LANDCADD is an AutoCAD-compatible software package for land-planning professionals. The program consists of seven modules for terrain model creation, site analysis, planning and landscaping, plant specification, irrigation, construction details, and cost estimating. LANDCADD International, Franktown, Colo.



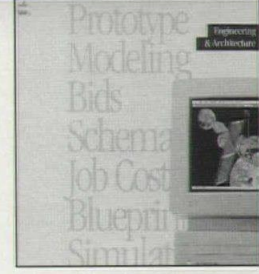
50. Wide faxes

Facsimile machines able to send and receive drawings as wide as 24 in. and as long as 200 ft are the subject of this four-page pamphlet. In addition to transmission speeds from 2,400 to 9,600 bits/sec, one model provides proprietary high-speed transmission modes of 14,400 and 12,000 bits/sec. WideCom Group, Inc., Mississauga, Ont.



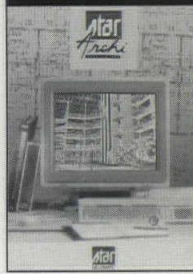
51. Imaging service

This full-color glossy flier shows the firm's ability to combine CAD files with digitized site photographs using Macintosh computers. The result—a photorealistic view of the modeled building in the form of a photo transparency or negative—can be produced in as little as seven hours. Harlin Hambricht, St. Simons Island, Ga.



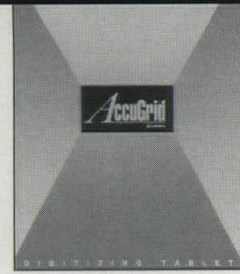
52. CAD computers

This introduction to the full line of Macintosh computers explains how they can be applied to a wide range of business functions in engineering and architectural firms. It lists an assortment of available software for 2-D and 3-D CAD, modeling, visualization, engineering, analysis, and project management. Apple Computer, Inc., Cupertino, Calif.



53. CAD family

A compatible series of seven software applications—covering 2-D and 3-D drawing, rendering, terrain mapping, materials estimating, report and specification generation, and more—is described. Of French design, the software is for 486-based PCs, Macintoshes, and other workstations. Ridgeline Software, Irvine, Calif.



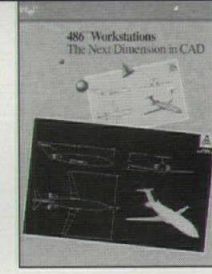
54. Digitizing system

A four-page pamphlet describes the specifications and features of the AccuGrid electromagnetic digitizing tablet. Available in four sizes ranging from 20- by 24-in. to 44- by 66-in., the unit can emulate other tablet formats, including CalComp, Summagraphics, and GTCO, under software control. Numonics Corp., Montgomeryville, Pa.



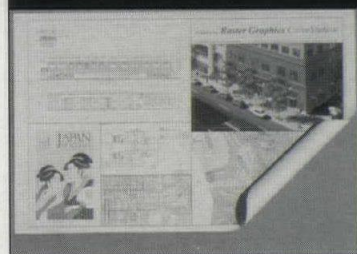
55. Color CAD prints

A 12-page, full-color brochure explains how to get high-quality color prints and overhead transparencies from computer-generated artwork using the firm's ColorMaster Plus thermal transfer printer. A section on CAD explains the unit's usefulness in making check-plots and how to benefit from its screen-capture feature. CalComp, Anaheim, Calif.



56. Visualization chips

Specialized microchips (math coprocessors) can speed high-quality renderings for CAD users. Designed to work with 286, 386, and 486 microprocessors found in IBM and compatible PCs, the chips plug into many systems for an immediate boost in performance. Intel Corp., Santa Clara, Calif.



57. Collage sample

A full-color, 24- by 36-in. plot demonstrates the capabilities of the ColorStation 424 electrostatic printer. Included in the 200 dot/in. poster are a detailed CAD drawing of a 1902 Pullman railway car and a solid model rendering of a building redesign. (The system can also plot at 400 dot/in.) Raster Graphics, Inc., Sunnysvale, Calif.



58. Graphics supplies

This 44-page catalog contains descriptions of hundreds of items for the professional draftsman. It offers cutting devices, drawing tools, technical pens and pencils, drafting tables, taborets, flat and vertical files, workstation furniture, plotter supplies, and more, some at discounts to 35 percent. G. S. Direct Inc., Bloomington, Minn.



59. Macintosh CAD

The \$699 CAD software package described in this 16-page brochure was created specifically for Macintosh computers. With a unified way of representing surface, wireframe, and solid geometries that ensures design consistency and accuracy, the program is supported by many libraries of architectural/construction elements. DesignCAD, Inc., Pryor, Okla.



60. Pocket planners

The line of pocket-sized electronic organizers described in this pamphlet keeps a record of telephone numbers; daily, weekly, and monthly schedules and appointments; memos, and more. Optional modules add spreadsheets, financial calculations, expense reports, and data communication with PCs; and other computers. Sharp Electronics Corp., Mahwah, N. J.

2 • SITEWORK Products

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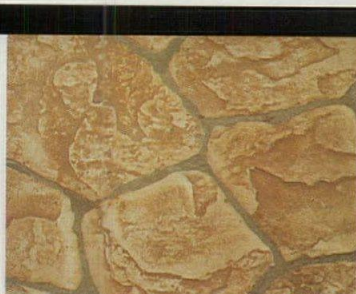
61. Stately gate

The large wooden Palace Gate, flanked by tall finials, was designed for Colonial Williamsburg in the 1930s by landscape architect Arthur Shurcliff, who based his design on an 18th-century English gate. The design is one of a series of Williamsburg-type fences and gates offered by the company. Walpole Woodworkers, Inc., Walpole, Mass.



62. Steel bench

The manufacturer's Oglethorpe and Northgate benches are built of steel straps on a cast-steel frame. Designed by architects Thompson, Ventulett, Stainback, they are intended for all-weather installations, have rubber glides to protect floors, and are available in a number of standard, as well as custom, lengths. Leisure Craft, Hendersonville, N. C.



63. Patterned pavement

The manufacturer has added Sandstone to its line of patterned, colored, and textured cast-in-place concrete paving. Designed to be reminiscent of a New England garden patio, the new style is darker than the manufacturer's existing colorations. Bomanite Corp., Madera, Calif.



64. Wirework furniture

A line of fanciful wirework includes large assemblies such as arbors and gazebos and small pieces such as chairs, tables, and planters. Made in England by R & A Rayment of galvanized iron on a galvanized-steel frame, the furniture comes in painted white, black, or green, or an unpainted gray antique finish. British-by-Nature, Beverly Hills, Calif.



65. Outdoor seating

The company's TimberForm series now includes the Madison Bench with center armrest. The furniture is built of square tubular steel frames and 3-in. slats, the heavy-duty construction tough enough for urban use. The bench is also available without a back and without an armrest, and with a matching litter basket. Columbia Cascade Co., Portland, Ore.



66. Self-watering planter

The Natural Spring Controlled Watering planter uses a sensor to detect dry soil and activate a reservoir. The system is available in a number of sizes, including one large enough to accept 36-in. boxed trees, and can be incorporated in custom-designed shapes such as this office-entry configuration. Planter Technology, Mountain View, Calif.



67. Rocking loveseat

The manufacturer has added a slatted double rocker to its collection of wooden landscape furniture, along with a complementary slatted planter. The Southport range, constructed with boatbuilding techniques, is available in clear-finished mahogany, natural teak, or with a glossy white finish. Weatherend Estate Furniture, Rockland, Maine.



68. Decorative fountain

The Botanical Gardens Fountain has a 5-ft-wide bowl, with a flared rim that encourages the water to overflow with the visual effect of a liquid sheet. The iron bowl is supported by a pedestal that is ornamented with subdued traceried patterns. Robinson Iron, Alexander City, Ala.



69. Wooden benches

The Kenworthy collection—Prairie, Logan, Cumberland, Trellis, and Cimarron—can be finished for either interior or exterior installation. For interiors, maple is finished with catalyzed enamel, red oak with clear catalyzed acrylic lacquer. Exterior benches are made of jarrah with an oiled- or catalyzed-enamel finish. LFI/Landscape Forms, Kalamazoo, Mich.



70. Penetrable pavers

Uni-Ecostone, a system of interlocking concrete pavers, was designed to eliminate wasteful run-off. Rain water penetrates the pavement through funnel-shaped openings filled with coarse-grained material. At the same time, the manufacturers say, the pavers allow a generous area for walking and driving. Uni-Group U. S. A., Palm Beach Gardens, Fla.



71. Stacking chairs

The AE4205 Pin Chair has a gridded seat of steel or stainless steel; tiny .188-in. pins within the frame support the seat so that it seems to float. The manufacturer also offers the more economical AE4204 Chair, with a similar but less delicate appearance. Both models can be coated for exterior use. Forms + Surfaces, Santa Barbara, Calif.



72. Three-seat bench

Meant for outdoor locations in healthcare and senior-citizen facilities, the Siesta three-seat bench has an angled seat and back for comfort. The bench has a frame of 1 5/16-in. tubular steel and welded mounting clamps for stationary placement. The surface has an abrasion-resistant powdered coating. Kroin Inc., Cambridge, Mass.



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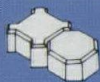
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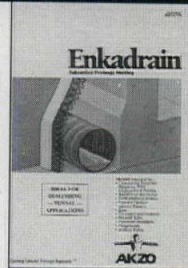


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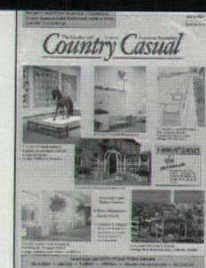
73. Carved-concrete planters
Westlake site amenities—two planters, a trash container, bollard, and urn—are set off by a cast-in design of stylized leaves that looks as if it had been carved into stone. Furnishings and a companion bench come in a Weatherstone finish in a choice of 10 concrete colors. Form Products, Wausau Tile, Inc., Wausau, Wis.



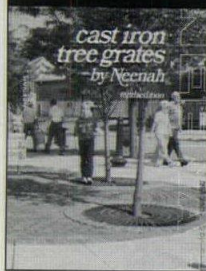
74. Subsurface drainage
Catalog describes Enkadrain matting, designed to dissipate hydrostatic pressure from backfills abutting below-grade structures. It provides a lightweight alternative to heavier drainage media such as gravel, stone, and sand blankets, and replaces gravel in landscaping applications and planters. Akzo Industrial, Asheville, N. C.



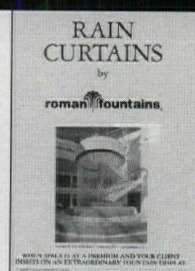
75. Cobblestones
Eldorado concrete landscape pavers come in realistic patterns replicating bluestone, brick, wood planks, and tree rounds. Color brochure introduces a new Cobblestone design, a 17 1/2-in.-sq unit that looks like 16 individual hand-chiseled stones. Eldorado Stone Corp., Carnation, Wash.



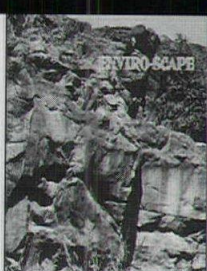
76. English-style amenities
Architectural catalog highlights the Country Casual line of garden and site benches, chairs, tables, and planters made primarily of plantation-grown teak. Traditional styles recall the landscape furniture designed by Sir Edwin Lutyens, in construction suitable for public spaces. Country Casual, Germantown, Md.



77. Tree grates
A specification catalog covers this maker's full line of cast-iron grates—square, round, rectangular, and multisided—in dozens of patterns of openings. Also explains Perma-Grip, a new skid-resistant surface, and illustrates custom-design grates. Neenah Foundry Co., Neenah, Wis.



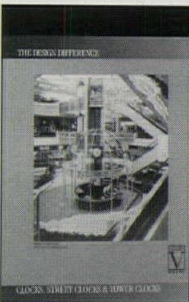
78. Water features
A fact sheet describes this manufacturer's Rain Curtains, based on the ancient concept of water running down bamboo shoots or chains. The effect is appropriate for interiors with high ceiling heights and limited floor space. Roman Fountains, Albuquerque, N. M.



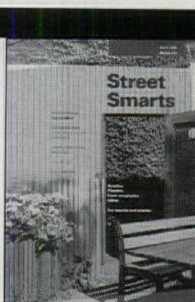
79. Fabricated rock
Enviro-scape brochure illustrates site treatments that combine manmade rock with water and vegetation to create a natural environment in shopping malls, office parks, zoos, lobbies, and other spaces. Cost of Wisconsin, Rockfield, Wis.



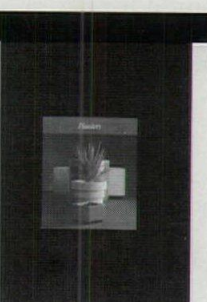
80. Landscape structures
A Redwood Landscape Guide lists the benefits of redwood lumber in the construction of shelters, decks, planters, and fencing, such as insect- and rot-resistance, dimensional stability, and finish retention. Illustrated with color photography of built projects. California Redwood Assn., Novato, Calif.



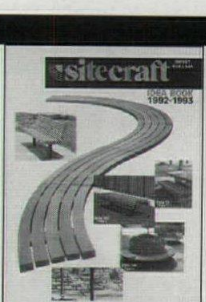
81. Tower clocks
Comprehensive specification brochure presents tower clocks and street clocks, including design drawings, timepiece details, and clock-hand styles. The literature also describes custom-design services. The Verdin Co., Cincinnati.



82. Contemporary benches
Street Smart catalog covers the rugged A Bench, built with hardwood slats, heavy cast-metal frames, and vandal-resistant countersunk hardware. Also available: picnic-style tables with wood-slat, solid-wood, or stone top options. Boston Design Corp., Boston, Mass.



83. Architectural planters
A series of brochures features an extensive line of fiberglass planters, offered in almost 50 colors and finishes including terra cotta, cement, and granite representations. Some designs incorporate seating. KI, Green Bay, Wis.



84. Wood furnishings
Sitecraft's 1992 Idea Book gives all dimensional and finish-option information for the manufacturer's planters, benches, and site accents of California redwood and other woods. Custom site furniture is a specialty, and new installations are illustrated. Sitecraft, Long Island City, N. Y.

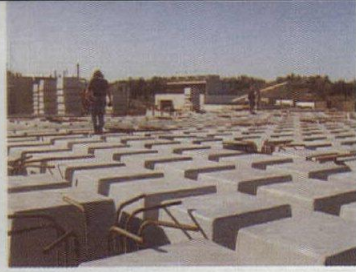
3 • CONCRETE Products

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85. Colored mortar

Heritage Buff Masonry Cement was developed to offer "a true replica of colonial buff masonry cement" with authentic period appearance; the coloring materials are preblended for mixture with sand and water. The new product expands the company's line of custom-color cements. Lehigh Portland Cement Co., Allentown, Pa.



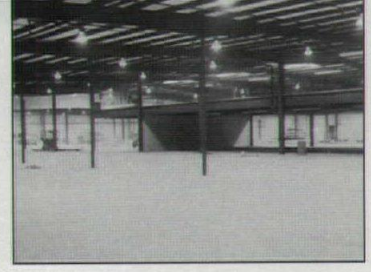
86. Fiberglass forms

Lightweight customized dome waffle forms are said to offer substantial savings in time and labor costs compared to steel forms, especially when extra deep or large forms are needed. Fiberglass formwork releases quickly and produces a smooth concrete finish. Molded Fiber Glass Concrete Forms Co., Union City, Pa.



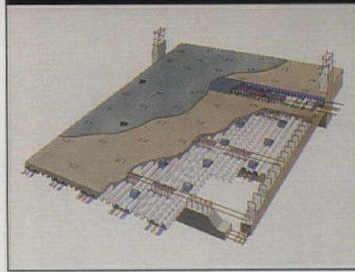
87. Buff cement

Its makers say that TXI Buff cement offers exceptional uniformity of color—the light tan is achieved through a manufacturing process rather than with the addition of pigments. The portland pozzolan cement is suitable for either cast-in-place or precast concrete, and can be shipped in 94-lb bags or in bulk. Texas Industries, Inc., Dallas.



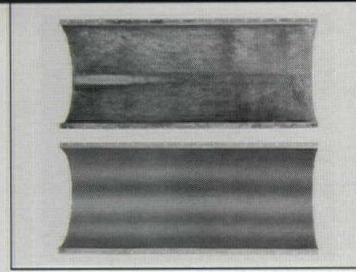
88. Reinforcement fibers

When used as three-dimensional concrete reinforcement, Caprolan-RC high-strength nylon fibers dramatically reduce plastic shrinkage cracking and increase impact resistance, say the material's manufacturers. Moreover, the fibers produce concrete with a smooth finished appearance. Allied-Signal, Inc., Morristown, N. J.



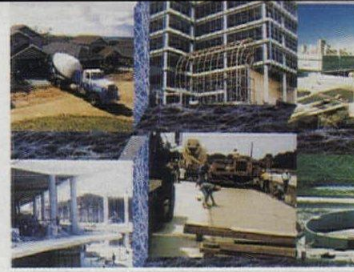
89. Cellular floor

Among the benefits of the hybrid Cellcast Floor System claimed by its manufacturers: built-in electrical raceways; stay-in-place steel forms; lower building height through the use of the concrete slab's 5.5- to 6-in. depth. Robertson developed the system in conjunction with Ceco Concrete Construction. H. H. Robertson Co., Pittsburgh.



90. Seamless forms

To form a continuous seamless coating, hard plastic is applied to steel forms to provide a protective layer between steel and concrete. The layer protects against rusting and other corrosion, and facilitates stripping. The coating resists gouging and other rough handling, allowing the forms to be re-used often. Deslauriers, Inc., Bellwood, Ill.



91. Concrete reinforcement

The Fibermesh reinforcement system incorporates fibrillated polypropylene fibers to reinforce against plastic-shrinkage cracking; impact forces, shattering, and abrasion; and water migration. It is rustproof and nonmagnetic, according to the manufacturer. Fibermesh Co., Chatanooga.



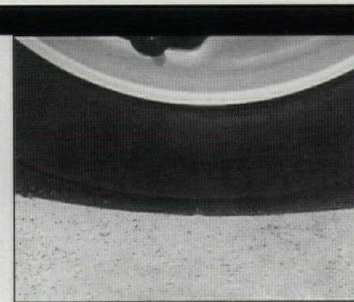
92. Mortar admixture

Laticrete 8510 Hi-Strength Mortar Admix replaces water in masonry mortar for brick, concrete block, and glass block. Its makers say that the bond is strong enough for such demanding applications as singlewythe walls, brick arches, and loadbearing walls, and that it will not corrode metal anchors. Laticrete International, Inc., Bethany, Conn.



93. Precast panels

Precast modular panels incorporate insulation, reinforcement mesh, ties, and concrete. The Thermomass Building System has predrilled holes to receive rods that penetrate insulation to connect inner and outer concrete wythes. The system has been used for bridges, stadiums, and prison cells. Composite Technologies Corp., Ames, Iowa.



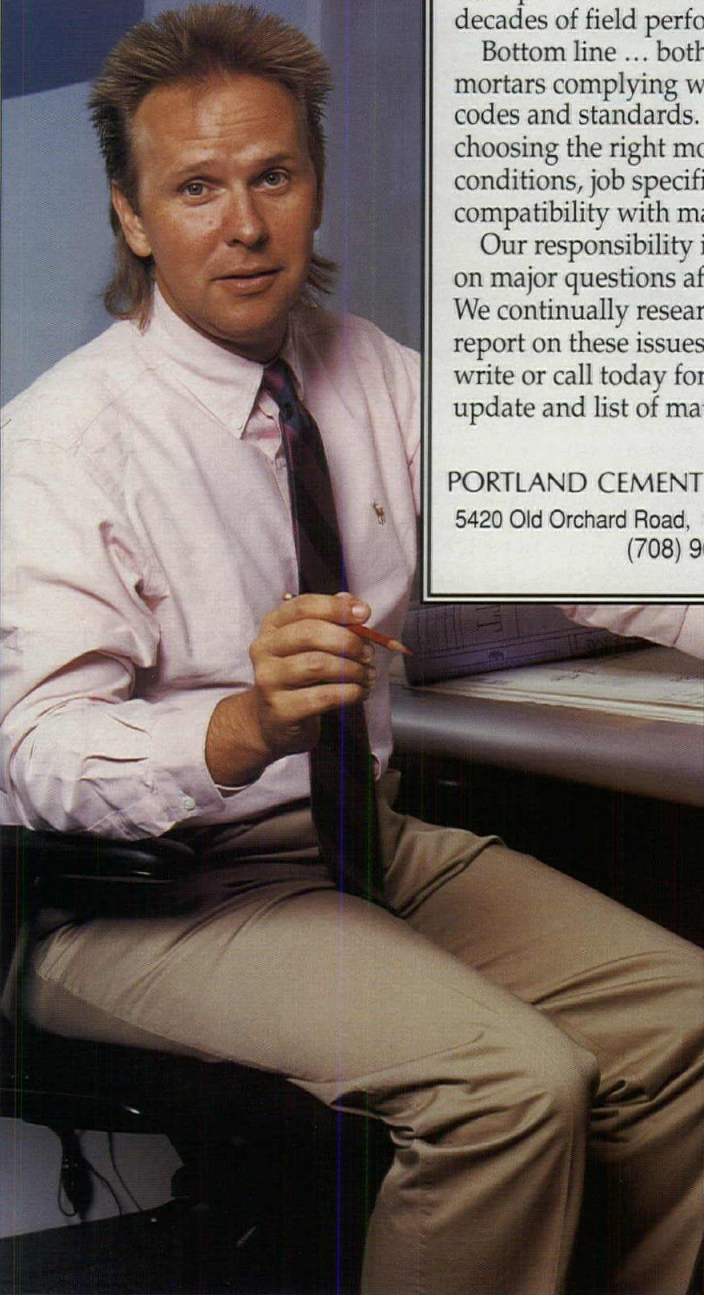
94. Surface seal

The water-based Enviroseal Surface Guard provides a clear seal for masonry and concrete, repelling moisture as well as preventing oil and chemical stains. The sealant is designed to maintain the natural appearance of the protected material without film build-up. The product meets VOC requirements. Hydrozo, Inc., Lincoln, Neb.

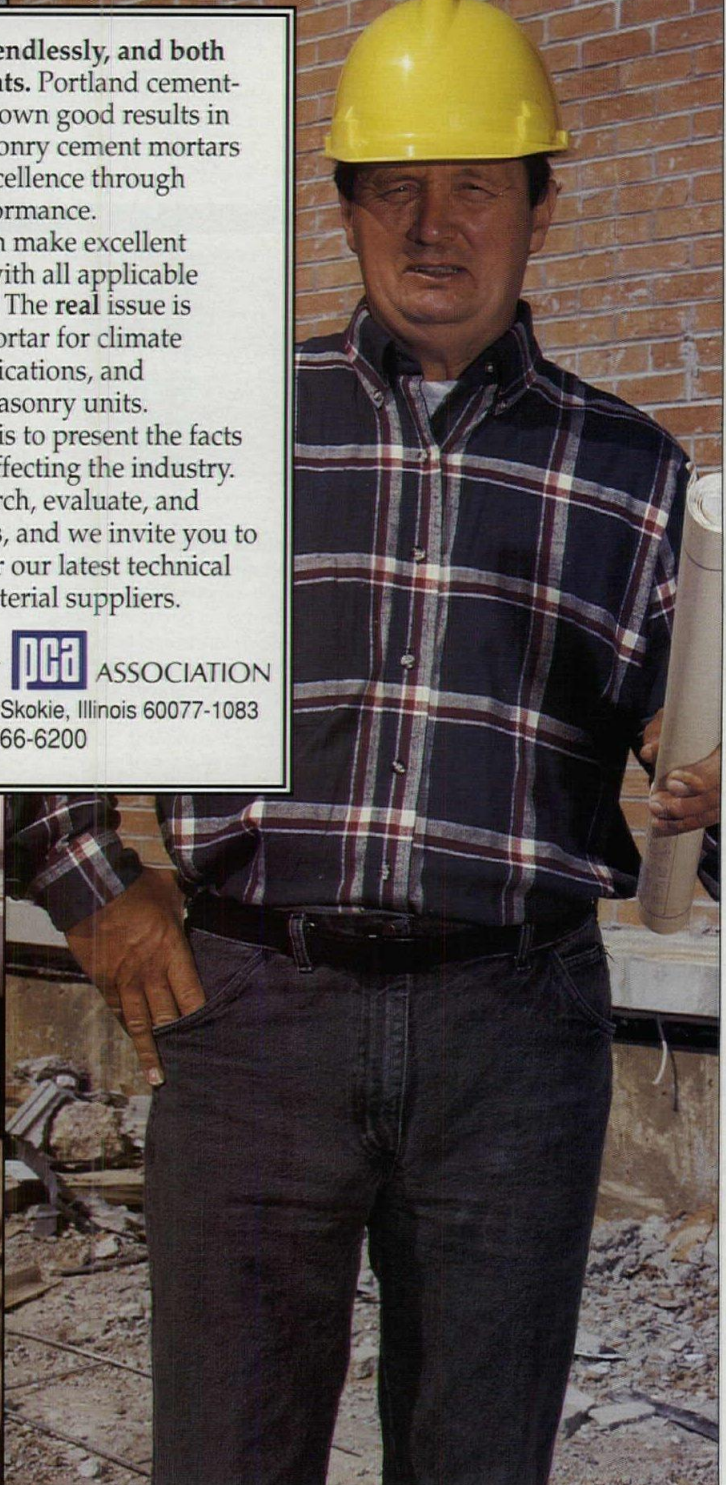


95. Curing compound

Designed as a curing and finishing material for colored concrete, Lithochrome Colorwax, Water Base, replaces the manufacturer's solvent-based curing compound. Its maker says the compound needs no thinning, dries quickly, and can be cleaned with water. The seal is available in 51 standard colors. L. M. Scofield Co., Los Angeles.



"I specify portland
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for strong, watertight
walls."



"I use masonry
cement mortars.
Their consistency and
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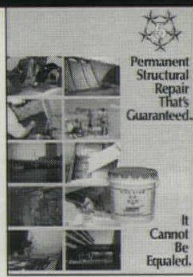
Bottom line ... both make excellent mortars complying with all applicable codes and standards. The real issue is choosing the right mortar for climate conditions, job specifications, and compatibility with masonry units.

Our responsibility is to present the facts on major questions affecting the industry. We continually research, evaluate, and report on these issues, and we invite you to write or call today for our latest technical update and list of material suppliers.

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97. Integral water repellent
Technical brochure explains how Acme Shield, added to the concrete mix at the plant, fills and coats the capillaries and disperses throughout the material to minimize absorption, prevent efflorescence, and improve color distribution. Can also be used with mortar. Acme-Hardesty Co., Jenkintown, Pa.



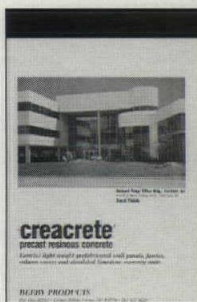
98. Concrete repair
Five Star Structural Concrete, which forms a permanent bond to existing concrete, effectively repairs spalled or deteriorated surfaces whether horizontal, vertical, or overhead. Data sheet lists compressive strength and other properties. Five Star Products, Inc., Fairfield, Conn.



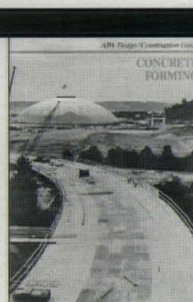
99. Bonding agents
Technical brochure describes several products intended for high-performance bonding of cementitious material—concrete, cement plaster, terrazzo, setting beds—direct to structural surfaces, as well as Plaster-Weld, a plaster-bonding agent for interior use. Larsen Products Corp., Rockville, Md.



100. Precast quality-control
An 84-page binder prepared for the specifying professional defines fundamental requirements for quality control in precast-concrete plants. Outlines ASTM standards for materials, mixing, production, and evaluation. Small charge. National Precast Concrete Assn., Indianapolis.



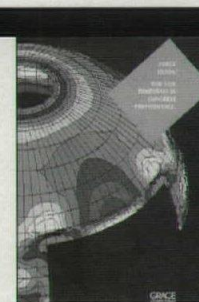
101. Resinous concrete
Updated manual explains Creacrete, a lightweight, high-strength concrete that offers versatility in sizes, shapes, colors, and finishes for precast panels, fascias, column covers, and architectural elements such as sills and lintels. Illustrates recent projects such as the Crown American building. Beeby Products, Grosse Pointe Farms, Mich.



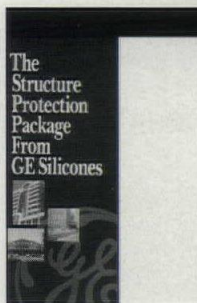
102. Concrete forming
A 24-page Design/Construction Guide contains a grade-use listing for the plywood panels most used in concrete forming, and recommends pressures, maximum spans or framing, and form maintenance procedures. American Plywood Assn., Tacoma, Wash.



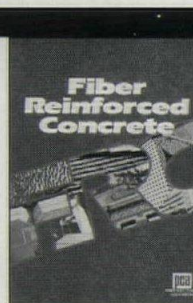
103. Materials for precasting
The Preco Precast Division Product Handbook, all 296 pages, covers exposed-aggregate retarders, decorative and protective concrete coatings, and concrete accessory items for use by the precast and concrete construction industry. Fosroc, Inc., Plainview, N. Y.



104. Microsilica concrete
Color brochure includes in-use case studies that describe how Force 10,000 microsilica improves the compressive strength, chloride- and chemical-resistance, and other performance characteristics of concrete in structural applications. W. R. Grace & Co., Cambridge, Mass.



105. Facade weatherproofing
Literature describes GE's Structure Protection Package, a single source for products that protect concrete, masonry, and dimension-stone facades, whether on new or old buildings, from water intrusion and its resultant damage. General Electric, Silicone Products Div., Waterford, N. Y.



106. Fiber-reinforced concrete
A detailed, 56-page treatment of concrete technology describes how fiber-reinforced concrete is made, the properties of its materials, and the major applications of the leading FRC systems. Small charge. Portland Cement Assn., Skokie, Ill.



107. Reinforced concrete
One of a series prepared for the architect, Case History Report 40 discusses the two tallest reinforced-concrete buildings in the world, both in Chicago. Techniques described include top/down construction and custom-made flying forms. Concrete Reinforcing Steel Institute, Schaumburg, Ill.



108. Concrete technology
Illustrated in color, a capabilities brochure highlights the construction chemicals offered by a division of Sandoz, Ltd., including admixtures, cementitious products, floor surfaces, and polymer technologies. Master Builders, Inc., Cleveland.

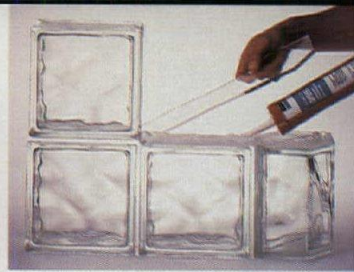
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109. Granite

This granite quarrier and fabricator offers a 10-minute videotape, free to architects and designers, highlighting granite applications in residential and commercial settings. The video focuses on the company's 28 colors of granite slabs and tiles. Cold Spring Granite Co., Cold Spring, Minn.



110. Glass-block joint system

Acrajoint is a new system for bonding glass block that combines clear 3/8-in.-thick acrylic strips with clear silicone. The system, which eliminates the need for mortar in glass-block construction and provides an all-glass look, is made available for most narrow and wide glass-block sizes. Acrymet Industries, Inc., Long Island City, N. Y.



111. Flagstone

This quarrier's high-density limestone is now available in random shapes. The stone is offered in 3/8-1/2-in. thicknesses, in light beige with gray dendrites. The stone can be thinset or mudset, and a textured surface makes it suitable for commercial-traffic or wet areas. Solnhofen Natural Stone, San Francisco.



112. Cast-stone ornament

The Regency Range is a line of architectural and garden ornament cast in reconstituted stone dust with white cement as a bonding agent. The ornament is offered in four colors and includes planters, vases, urns, benches, finials, and balustrades. British-by-Nature, Beverly Hills, Calif.



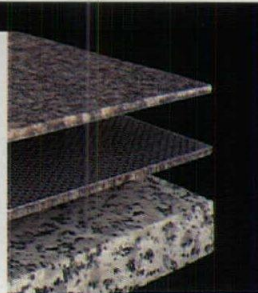
113. Ceramic wall units

Millennium 12 x 12 is a structural glazed ceramic wall product that lays up as fast as concrete block, with a finished wall buildable in one step by one trade. The unit is said to be unaffected by sun, resistant to acid rain, and fire-safe. Stark Ceramics, Inc., Canton, Ohio.



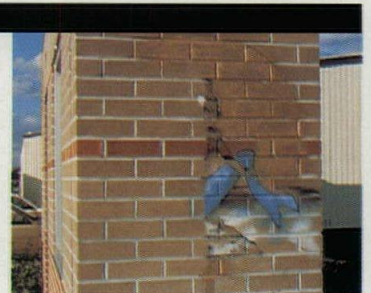
114. Engraved masonry units

Spectra-Glaze preglazed concrete masonry wall units are now offered with integrally engraved designs and signage. Face sizes range from 2-in.- to 16-in.-square. The units are available in 80 satin-finish colors, and may be specified in mural form or individual modular elements. Burns & Russell Co., Baltimore.



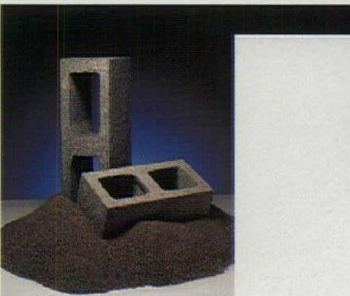
115. Reinforced stone

Reinforced Stone is a new technology, developed in Italy, that laminates under vacuum 1/4-in.-thick marble, granite, or limestone sheets to a thin steel mesh and epoxy resin. The resulting composite is said to be stronger than much thicker conventional stone cladding (below). Marble Technics Ltd., New York City.



116. Graffiti protection

Defacer Eraser is a new line of graffiti removal and protection systems that prevent aerosol sprays and other media from penetrating masonry surfaces. Products offered include Graffiti Control for dense masonry and Graffiti Stop for porous substrates. ProSoCo, Kansas City, Kansas.



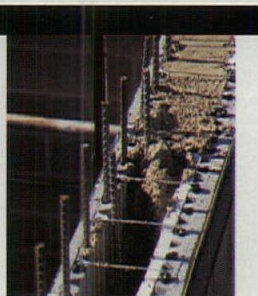
117. Lightweight CMU

Q-Lite concrete masonry units are available in lengths up to 24 in. The units are a blend of 70 percent expanded clay aggregate and 30 percent natural aggregates. The units are said to offer the advantages of light weight and a U. L.-certified fire rating. Big River Industries, Marietta, Ga.



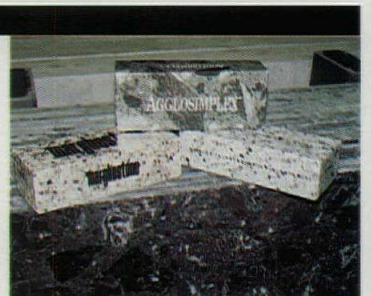
118. Glass block

The Tridron 45 is a new triangular glass-block unit used to form 45-deg corners in windows, walls, partitions, and panels. The 8-in.-high block is available in two patterns—moderately distorted Decora and clear Vue—and can be installed with the company's 3 7/8-in.- or 3 1/8-in.-thick glass-block units. Pittsburgh Corning Corp., Pittsburgh.



119. Masonry form system

Formwall is a concrete masonry form system that consists of two thin-shell units joined together by a thermally broken clip tie. The system accommodates integral insulation to form a weep cavity and reinforcing bars for reinforced applications. National Concrete Masonry Assn., Herndon, Va.



120. Marble aggregates

This manufacturer of agglomerate marble now offers its line in over 50 colors and several textured finishes. The material resembles granite or brecciated marble and is suitable for high-traffic flooring and wall cladding. The aggregates are available in modules from 12-in.-square to full-size slabs. Verona Marble Co., Dallas.

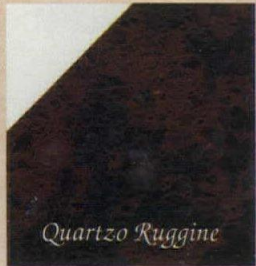


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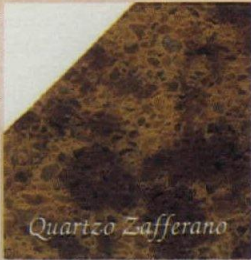
MARBLE AND QUARTZ BASED
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stone*

Q U A R T Z I T E S



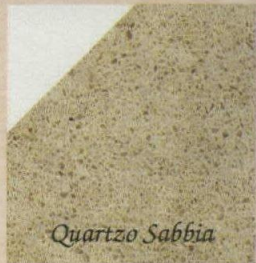
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Quartzo Zafferano



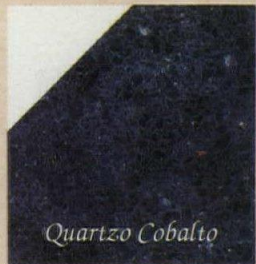
Quartzo Assoluto



Quartzo Sabbia



Quartzo Arancio



Quartzo Cobalto



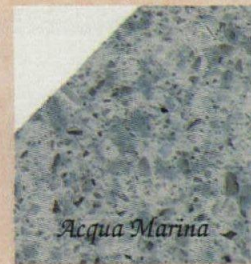
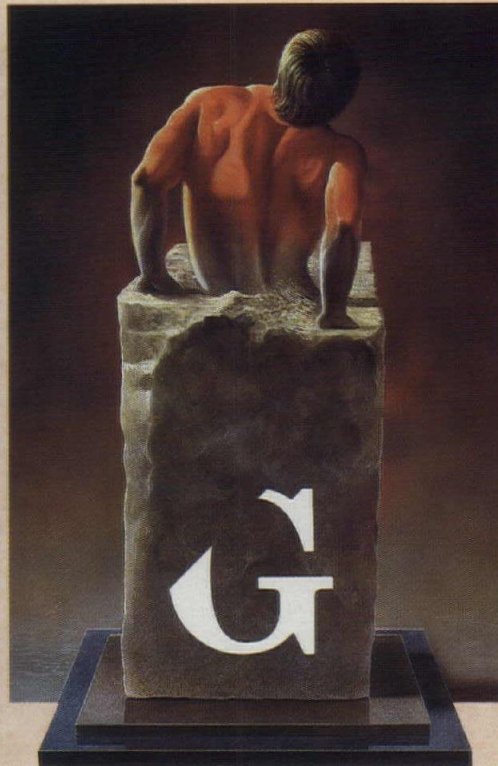
Quartzo Carboncino



Quartzo Fogliame



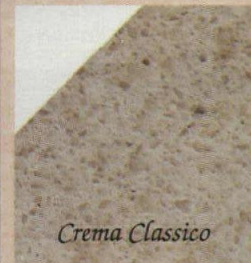
Quartzo Grigio



Acqua Marina



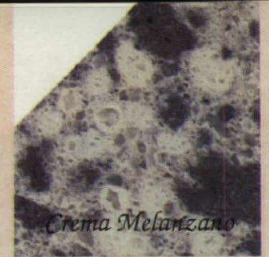
Grigio Cristallo



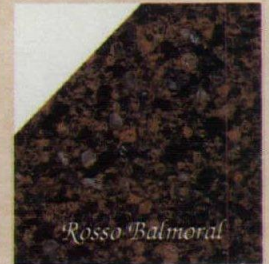
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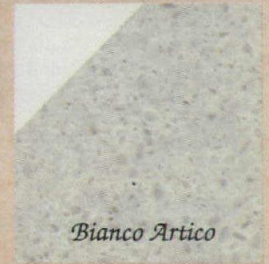
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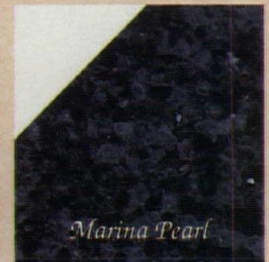
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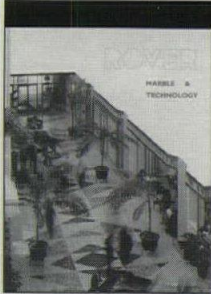
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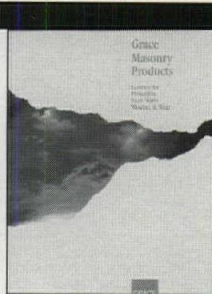
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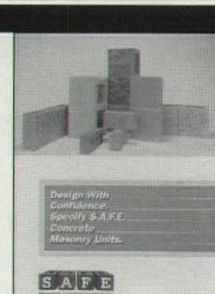
121. Marble agglomerate tile
Twelve-page catalog describes manufacturer's six collections of marble agglomerate products. Included are 12- by 12-in. and 16- by 16-in. tiles and marble slabs. Product is made from marble chips bonded together by polyester resin. Color samples are provided, along with technical data and maintenance instructions. Trans Ceramica, Ltd., Bensenville, Ill.



122. Masonry protection system
Brochure describes manufacturer's Dry-Block integral water-repellent system, Perm-A-Barrier air and vapor barrier products, Zonolite loose fill, and Thermo-Stud insulations. Also described are manufacturer's admixtures for extending mortar life and controlling set, and other masonry products. Grace Masonry Products, Cambridge, Mass.



123. Stain protector
Described in this four-page bulletin is 511 Pre-Treat, a polymeric formulation designed as a prime coat penetrant to be used with manufacturer's 511 Impregrator on porous stone and masonry surfaces. It is said to make porous materials resistant to stains, reduce slip, and allow vapor transmission. Miracle Sealants Co., Azusa, Calif.



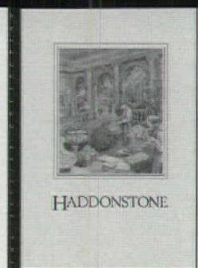
124. Concrete masonry safety
File folder provides data on National Concrete Masonry Association's Standard for Acoustical, Fire and Energy Performance of concrete masonry (S. A. F. E.). Fact sheets offer charts, tables, and text derived from NCMA testing program designed to simplify specification of concrete masonry units that meet performance needs. NCMA, Herndon, Va.



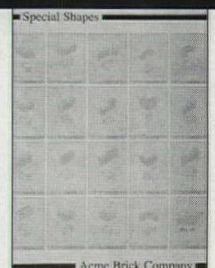
125. Caring for stone
Spiral-bound booklet offers step-by-step instructions on the care, protection, and restoration of stone, marble, and granite, using the manufacturer's stone-care system. Sections give details along with information on chemicals and tools. HMK Stone Care Products, San Francisco.



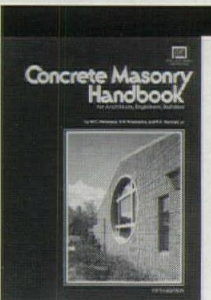
126. Cultured stone
Some 100 color photographs are used to show the manufacturer's two products, Cultured Stone and Pro-Fit. The former is a re-formed stone molded with a combination of portland cement, lightweight aggregates, and iron-oxide colors. Included are installation instructions and technical data. Stucco Stone Products, Inc., Napa, Calif.



127. Reconstituted stone
Lavishly produced 88-page color booklet shows examples of sills, copings, urns, paving, and whole porticos made out of reconstituted limestone, with a texture resembling Portland stone. Information covers choice of finish, and illustrates a wide range of actual applications. Haddonstone (USA) Ltd., Bellmawr, N. J.



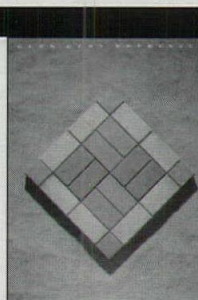
128. Special-shaped brick
Dimensioned plans and elevations of available specially shaped bricks are given in brochure. Architects may also order custom shapes. Bricks are available to match manufacturer's King Size and Utility size brick, as well as standard modular brick. Acme Brick Co., Ft. Worth.



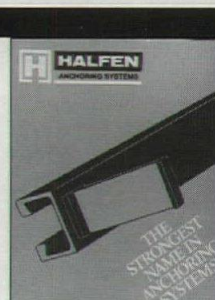
129. Concrete masonry handbook
Revised, fifth edition of Portland Cement Association's established handbook references American Concrete Institute's new building code and specifications for masonry structures. New photographs, charts and tables round out the revisions. 264 pages. Available for \$31.50, shipping included. Portland Cement Assn., Skokie, Ill.



130. Face brick and pavers
Full-color brochure illustrates manufacturer's range of face brick and paver products, and includes a special section on its Ironspot face brick colors. Also shown are available textures and construction details. Endicott Clay Products Co., Fairbury, Nebr.



131. Repressed paver
This six-page color pamphlet illustrates manufacturer's line of repressed chamfered pavers. These pavers are first extruded, then compressed a second time to increase density and strength. Chamfered edges are added to reduce chipping. Glen-Gery Corp., Wyomissing, Pa.



132. Anchored
Updated version of manufacturer's general line catalog illustrates several new anchoring products, including Hand Set Stone Anchors and Heavy Duty Channel Inserts. Includes construction details. Halfen Anchoring Systems, Charlotte, N. C.

RECLAD • UPGRADE • RETROFIT

WITH

ULTRA-THIN STONE SYSTEMS

NATURAL MARBLE • GRANITE

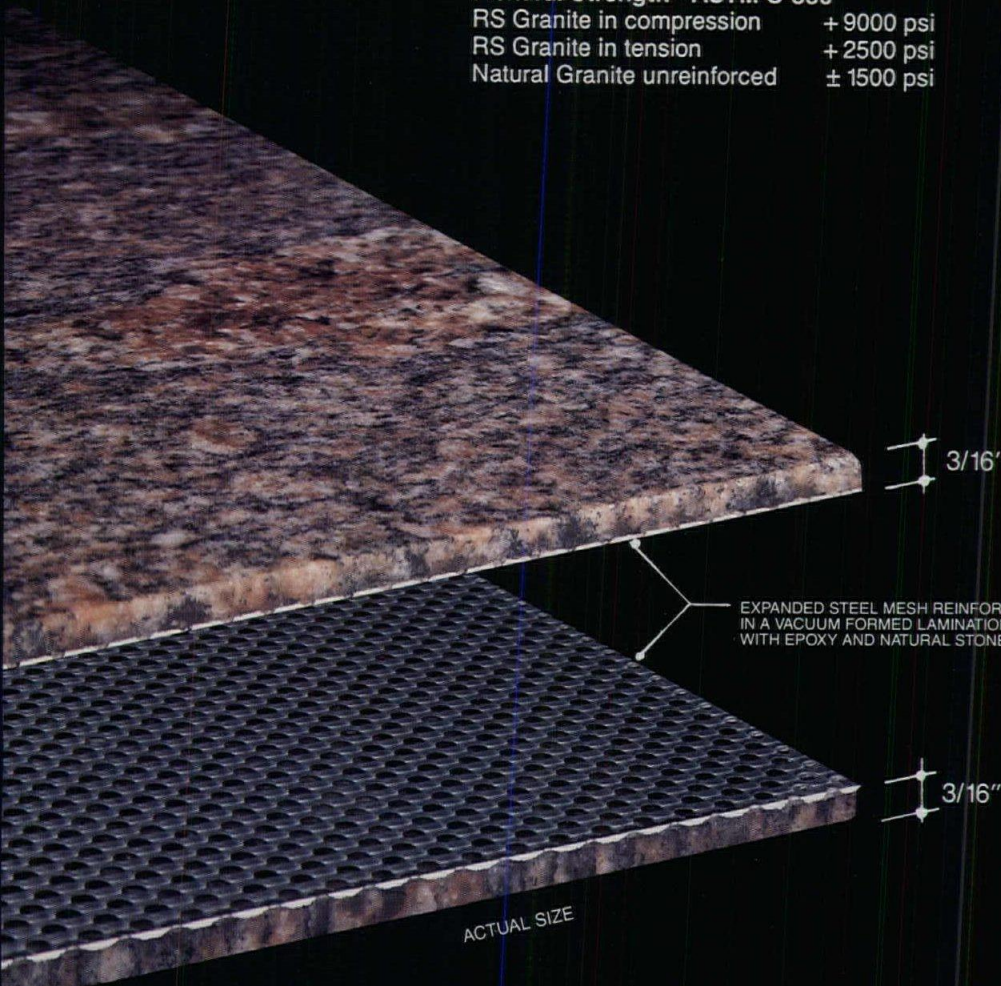
Marble Technics and Technomaiera have been pioneering thin stone systems for more than 10 years. Recent improvements in the technology of reinforcement opens dramatic new vistas for these ultra-thin high-strength natural stone composite panels.

These thin stone systems can produce substantial economies when designed into new construction but the advantages in renovation projects can be dramatic!

ITEM	THICKNESS	WEIGHT	MAX. DIMENSION	APPLICATION
RS1	5/16"	4.5 psf	5'x10' Granite	Ext. Curtainwall
RS7	3/16"	2.7 psf	5'x10' Granite	Int. Floors, Walls

Flexural Strength • ASTM C-880

RS Granite in compression	+ 9000 psi
RS Granite in tension	+ 2500 psi
Natural Granite unreinforced	± 1500 psi



ACTUAL SIZE

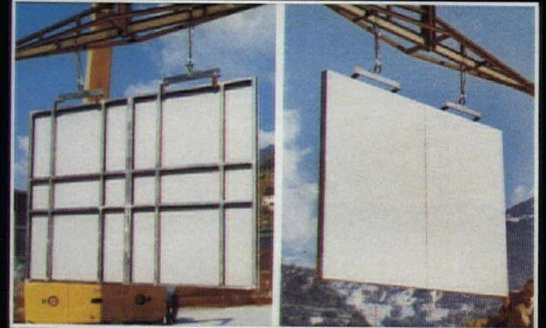
MARBLE TECHNICS LTD

A DIVISION OF TECNOMAIERA-FORNARA GROUP ITALY

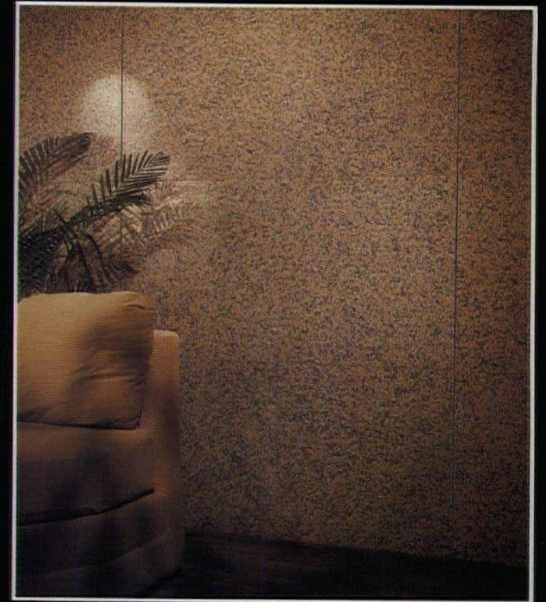
ARCHITECTS & DESIGNERS BLDG
150 E 58 ST. NEW YORK NY 10155
TEL 212 750 9189 FAX 212 319 8349



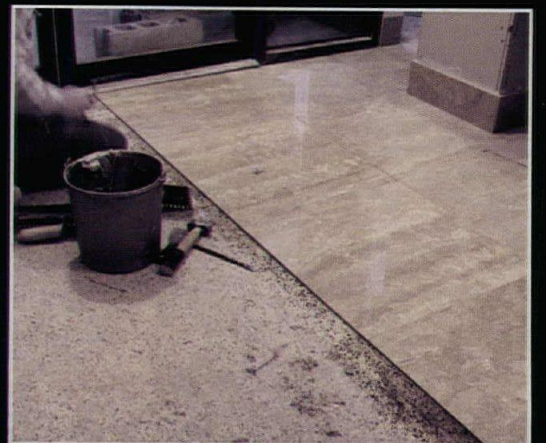
CURTAINWALL



PREFABRICATION



INTERIOR WALLS, FLOORS



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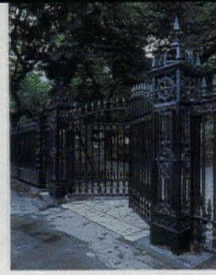
133. Copper design

Produced as a new technical and design tool for the architect, six short videotapes offer a close-up look at the fundamental forms, shapes, and details made possible by the use of copper as a roofing material. Copper Development Assn., Inc., Greenwich, Conn.



134. Stainless-steel railings

Architect David Berner designed an almost "transparent" waterfront railing that met spacing and loading codes without view-blocking infill members, using this maker's system of small-diameter, high-strength stainless-steel infill rods. A tensile-rod support system is also available. TriPyramid Structures, Inc., Concord, Mass.



135. Restoration cast-iron

A source for decorative cast metal—bronze, aluminum, or iron—Robinson created new elements and restored existing fabric for ornate gates in New York City's Stuyvesant Square Park. Custom architectural metalwork, site amenities, and furniture offer a wide range of finish options. Robinson Iron, Alexander City, Ala.



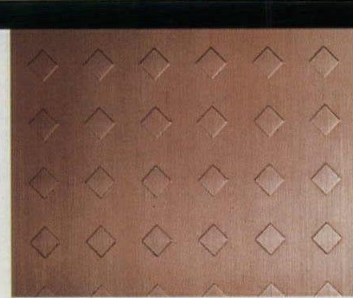
136. Flush expansion joints

Available in widths from 1- to 16-in., interior flush joint covers blend with most floor or wall surfaces, and permit multidirectional movement of up to 50 percent. Made of thermoplastic, the gasket withstands wheeled traffic, and will remain flush throughout the full movement cycle. Construction Specialties, Inc., Muncy, Pa.



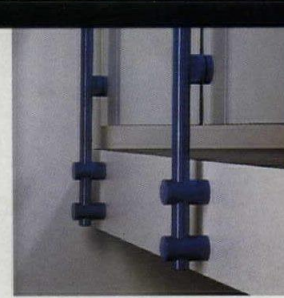
137. Illuminated spiral

A new Helixstair design is lit by measured amounts of light beamed through a prism from a low-voltage light source in the central column. Each tread is evenly illuminated for safety and esthetic effect. Treads may also be of 3/4-in. frosted tempered glass, lit from below, or a metal diamond plate. Boston Design Corp., Boston.



138. Embossed metal

MetaBump panels are stainless steel, copper, aluminum, or steel available in a wide variety of custom surface-design options. In sizes up to 47- by 144-in., panels may be laminated with rated cores and adhesives for interior or exterior applications, or formed into a design feature. A. Zahner Co., Kansas City, Mo.



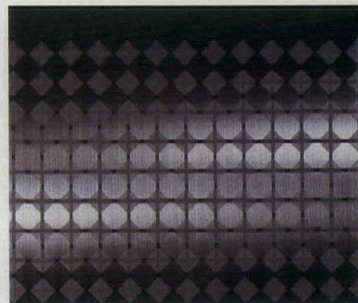
139. Seamless railings

Hewi rail components, offered in 13 colors of nylon, feature straight nylon tubes injection-molded without lengthwise seams. Uprights and rails are reinforced with inner tubes of galvanized and chromated steel. Connections can be in matching or contrasting colors. Hewi, Inc., Lancaster, Pa.



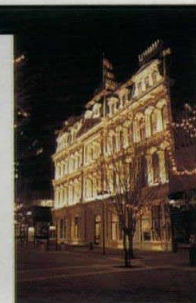
140. Off-the-shelf space frame

The Harley System, developed in Australia, uses conventional fasteners to join web components and horizontal chords, eliminating the cast and machined hubs used in other space frames. It is said to offer great flexibility in layout and supporting-structure options. The Ceco Corp., Oakbrook Terrace, Ill.



141. Decorative metal

A source of custom-decorated etched and patterned metals is now offering a less-costly line of standard designs in stainless steel and brass. The Alpha Collection includes 12 patterns, which may be specified with custom border treatments. Surface Design+Technology, Hialeah, Fla.



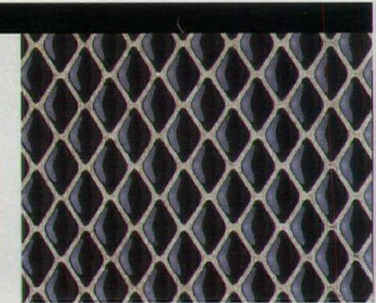
142. Architectural metalwork

An example of the authentic techniques used by this metalworking firm are the cast details of this 19th-century storefront in Baltimore. Specializing in restoration requiring historic research, projects range from bronze railings and copper canopies to entire cast-iron facades. Historical Arts & Casting, Inc., Salt Lake City.



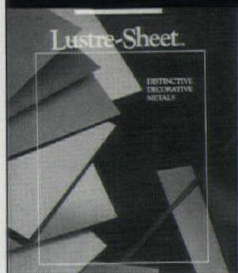
143. Lattice

Aluminum channels, clips, and z-bars support aluminum and vinyl lattice panels for use on porches, and building facades, as arbors, and for other decorative or shading applications. The system permits such custom details as the racetrack screen pictured. CrownAluma Corp., Atlanta.



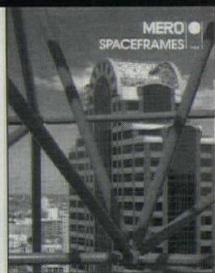
144. Textured metals

Rigid-Tex patterns have a deep texture that is said to be highly resistant to marks, scratches, and dents, and that also improves the metal sheet's strength-to-weight ratio. Available in gauges up to 1/8-in. thick, dozens of patterns, and a wide choice of finish and color options. Rigidized Metals Corp., Buffalo, N. Y.



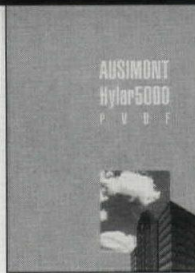
145. Metal sheets

Literature describes the company's Lustre Sheet line of polished- and brushed-finish decorative surfacing metals. Pre-anodized and solid finishes are offered in gauge ranges from .020 to .080. Standard-sheet sizes are 4-ft by 8- or 10-ft. Custom gauges and sizes are available. Dynamic Metals, Grand Haven, Mich.



146. Spaceframes

A 16-page color booklet describes and illustrates structural space-frame systems for a variety of applications. Classic round node and tube systems are shown, along with newer frame types that incorporate tensile structures, and bowl-shaped and cylindrical nodes. Mero Structures, Germantown, Wis.



147. Architectural coatings

Folder explains the provenance of Hylar 5000, a tradename for high-performance fluoropolymer coatings for architectural metal surfaces formerly sold as Kynar. Highlights the range of decorative and protective products, including polymeric, liquid-applied, and elastomeric fluorinated materials. Ausimont USA, Inc., Morristown, N. J.



148. Anodized aluminum

"Anodized Aluminum Color Standards for Architectural Applications" identifies six anodized colors—champagne bronze, light bronze, medium bronze, dark bronze, deep bronze, and black. The publication includes color samples and data on alloys and anodic coatings and seals. Cost: \$30. Architectural Anodizers Council, Wauconda, Ill.



149. Railings

Aluminum balcony railings are described in a 16-page brochure that includes application photos, specifications, and drawings of available cap styles, top rails, bottom rails, fittings and mountings, and pickets and posts. Standard rails and specialty rails for French doors and historic buildings are offered. Robern, Bensalem, Pa.



150. Formed-metal products

Color photos in a four-page brochure illustrate sample applications of the manufacturer's aluminum, stainless-steel, and bronze grilles, panels, column covers, canopies, and other specialty metal products. Custom and standard designs are available. Wausau Specialty Products, Wausau, Wis.



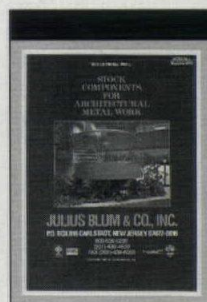
151. Crowd-control accessories

A 64-page catalog reviews crowd-control products for use in hotels, theaters, transit terminals, malls, and other public facilities. Products offered include portable traffic-control posts and ropes, turnstiles, and lobby accessories. The catalog includes charts of available sizes, colors, and materials. Lawrence Metal Products, Bay Shore, N. Y.



152. Handrails

The company's 1992 catalog features handrail components, hardware, and accessories, along with 400 stock extrusions commonly used for window, door, and curtain-wall fabrication. Stock items are available in aluminum, bronze, brass, and steel. J. G. Braun, Skokie, Ill.



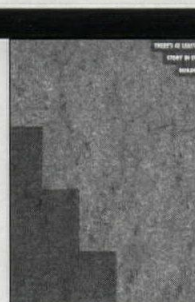
153. Architectural metals

A catalog describes architectural metal components and handrail systems. Featured designs include Glass Rail, a metal railing system that incorporates tempered glass; Connectorail nonwelded pipe railings in aluminum, bronze, and stainless steel; and Colorail extruded-plastic handrail in 12 stock colors. Julius Blum & Co., Carlstadt, N. J.



154. Metallic laminates

Vortex decorative metallic laminates are available in a variety of abstract patterns embossed in either aluminum or solid brass. A two-page information sheet includes technical data and sample swatches of the laminates, which can be used in vertical and light-duty horizontal interior applications. The October Co., Easthampton, Mass.



155. Steel joists and girders

Photos and text in a 22-page color brochure detail the advantages of Vulcraft steel joists, girders, and deck in a range of building types. Speed of construction, long floor spans, interior-plan flexibility, and seismic resistance are some of the benefits cited. Nucor Corp., Charlotte, N. C.



156. Medical support framing

A color brochure highlights metal framing systems engineered to support medical devices such as X-ray equipment, surgical lighting, service columns, and microsurgery units. Literature is also offered on the manufacturer's space-frame and seismic-restraint product lines. Unistrut, Canton, Mich.

The \$40 million 312 Walnut Building overlooks the Ohio River in downtown Cincinnati.

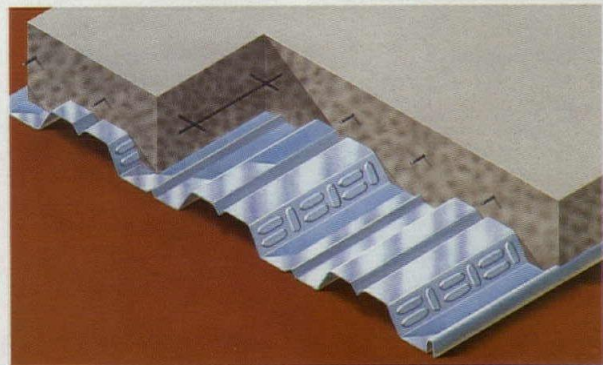


WITH OUR COMPOSITE DECK, THE BUILDERS Poured LESS MONEY INTO 312 WALNUT.

Compared with the cost of poured-in-place concrete, our composite deck was far more economical in Cincinnati's 312 Walnut Building. Because it saved time and was less labor intensive to install. Plus it was easier to put in place since it didn't require the installation and subsequent removal of cumbersome forms needed for pouring concrete.

In addition, our deck saved the builders \$35,000. That's because we showed them the option of using painted deck that met UL fireproofing requirements instead of using the more expensive galvanized deck originally specified. Yet for all our economy, our decking offered more than enough strength to satisfy the builders. In fact, it's so strong it can allow for fewer steel beams in many applications.

When all was said and done, we furnished 556,700 square feet of 18-gauge composite metal deck used with 4-1/2" of normal weight concrete. And the 35-story office building became a striking addition to the Cincinnati skyline. Find out how Vulcraft composite deck and our complete range of steel decking can help with your next project. Contact any of the Vulcraft plants listed below. Or see Sweet's 05300/VUL.



Our 18-gauge composite deck in combination with 4-1/2" of normal weight concrete.

VULCRAFT

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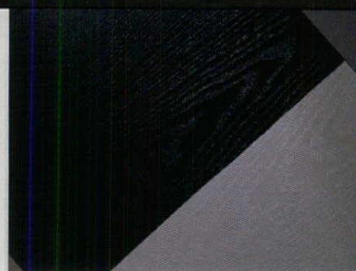
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157. Colored laminate

Wilsonart laminates have expanded the collection called Design Group I with 69 new colors and patterns, thus increasing the number of possible standard choices to 234. The additions include a group of designs inspired by building stone—Canyon, Caldera Grey, Romano Travertine, and Aegean. Ralph Wilson Plastics Co., Temple, Tex.



158. Decorative laminate

Laqwood is a new finish introduced by the manufacturer to its collection of decorative laminates. The pattern means to re-create the appearance of lacquered hardwood, with the glow of lacquer and the texture of wood. Suggested applications include residential and commercial surfaces. Forbo-Arborite, Inc., Montreal.



159. Architectural millwork

Casework and millwork executed by the Wigand Corporation is now offered by Stow & Davis Custom and Classics. This Steelcase division is a national source for custom furniture and decorative woodwork. The paneling shown, built of cherry for offices in Texas, was designed by architects 3D/I of Houston. Stow & Davis, Grand Rapids, Mich.



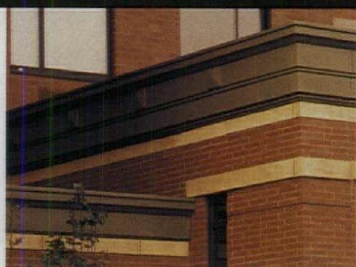
160. Laminated abstraction

Formica's Volcano pattern, a new member of the company's Formations series, represents "the ultimate abstraction," referring to natural chemical processes. Undulating multicolored eddies emerging from a different colored background are available in three colorways: Russet, Bayou, and Stone. Formica Corp., Cincinnati.



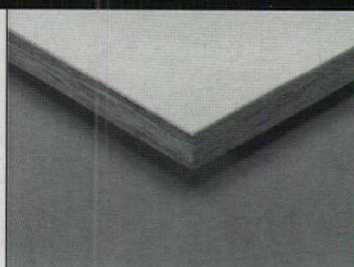
161. Crystalline finish

The company's line of solid-color Micarta Laminate has been expanded to include a crystalline finish, which its makers say reflects light randomly to impart a textured sheen. Although the new material is available in the firm's entire palette, white, almond, pale earthtones, and pastels are especially recommended. Micarta Laminate, Hampton, S. C.



162. Copper-colored FRP

What appears to be a copper cornice above the arcade of a Manhattan apartment house designed by Schuman, Lichtenstein, Claman, & Efron is in fact molded copper-colored FRP, finished with an ocean-green gelcoat to suggest verdigris. The material was also used for a parapet at the 13th floor. Molded Fiberglass Co., Union City, Pa.



163. Built-in sprinkling

Blazeguard Fire-Rated Sheathing protects structural wood panels. Outside and within the substrate, a .040-in. laminate holds chemically bound water molecules that release moisture when the temperature reaches 425F, whereupon the crystals serve as a built-in sprinkler system. Weyerhaeuser Fire Protective Products, Tacoma, Wash.



164. Nonporous surface

Gibraltar Solid Surfacing, a nonporous material for interior walls, countertops, and tub surrounds, is a proprietary mixture of acrylic and polyester resins, fire-retardant fillers, and coloring agents. Minor burns, scratches, and stains can be sanded or washed away. It comes as sheet panels and vanity bowls. Ralph Wilson Plastics Co., Temple, Tex.



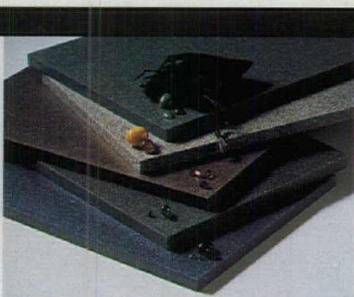
165. Corinthian polyurethane

To replace the Corinthian pilasters of the Old South Church in Weymouth, Mass., which was destroyed by fire, Amtech, Inc. cast 350 pieces of the capital's acanthus leaves in RP 6405 polyurethane. The resin captured the finest details of the original carving; reproduction capitals were finished with white paint. CIBA-Geigy, East Lansing, Mich.



166. Laminated I-joists

Its new Performance Plus Series of TJI joists demonstrates major technological improvements in both web and flanges, says the manufacturer. Oriented-strand technology gives the web greater shear strength and stiffness, and a laminated veneer lumber process allows smaller yet stronger flanges. Trus-Joist Corp., Boise, Idaho.



167. Additional colors

The makers of Corian have added five new colors, called the Jewel Series, to its Sierra Collection. The natural stone colors include Burnt Amber, Garnet, Black Pearl, Sapphire, and Jade. The additions coordinate with the manufacturer's other 13 colors in the Sierra Collection and its series of plain colors. Du Pont Co., Wilmington, Del.



168. Elliptical domes

Recessed elliptical domes are available for installation upon order. Two styles include the 36- by 45-in. Sandford dome and the 4- by 6-ft Wilton. Both are made of the manufacturer's Fabucast, a fiberglass reinforced polyester, and they can be ornamented with medallions and other details of the same material. Focal Point, Atlanta.



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strands to create an exceptionally stable, uniform OSB panel that resists moisture from the inside out. And a primed protective overlay adds extra weather resistance while it extends the paint life.

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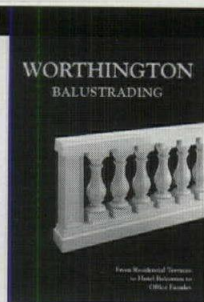
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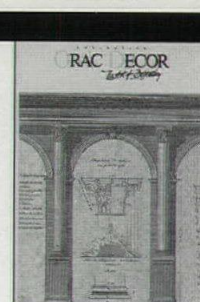
169. Stone-look composite
A full-color folder illustrates capabilities of Avonite granitelike polymer as used in commercial applications such as bank counters, airline ticket stations, and carved signage, as well as the more usual kitchen countertops and formed lavatory basins. Fabrication and performance data is included. Avonite, Los Angeles.



170. Fiberglass balustrade
Using forming technology learned from building yachts and structural beams in fiberglass, new Fiberstone balusters have a stone-textured gel-coated surface that is an integral molded component of the finished product. Literature also describes custom-design services for stairs and complex shapes. Worthington Group, Ltd., Atlanta.



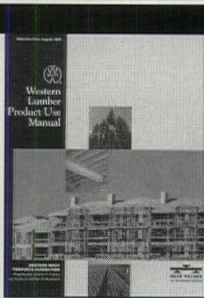
171. Engineered-wood products
Design catalog explains how engineered-wood components such as Gang-Lam LVL, Inner-Seal I-Joists, and GNI Joists are stronger and easier to handle than similar-capacity solid-wood products. Includes span and load charts, and describes Wood-E engineering software. Louisiana-Pacific, Portland, Ore.



172. Architectural details
Orac Decor brochure illustrates cornice and panel moldings, niches, corbels, columns and capitals, pilasters, window surrounds, and pediments made of high-density polyurethane. Material accepts paints, stains, and faux-effect treatments. Outwater Plastic/Industries, Woodbridge, N. J.



173. Classic columns
Foldout brochure describes wood architectural columns that incorporate the authentic dimensions, proportions, and capital details of the original Greek and Roman orders. For both exterior and interior use, the columns come in diameters of from 6 to 36 in. and heights to 40 ft. Chadsworth, Inc., Atlanta.



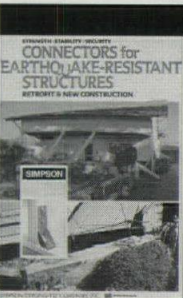
174. Dimension-lumber values
A completely revised Product Use Manual reflects the changes brought about by the Association's In-Grade testing program for structural, appearance, and industrial lumber categories. End-use recommendations and specification guidelines are included. Western Wood Products Assn., Portland, Ore.



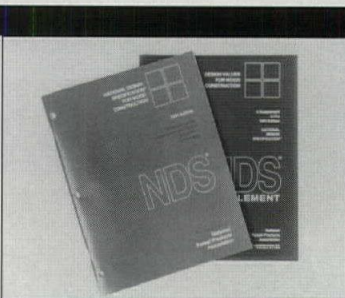
175. Fibrous-plaster decoration
A four-page color pamphlet demonstrates the Georgian style effects possible with a line of replica cornices, niches, fireplace surrounds, and other ornamental details, and describes services available for restoration of historic plasterwork. Aristocast Originals, Smyrna, Ga.



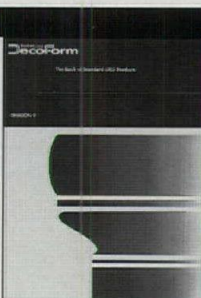
176. Moisture-resistant board
Data sheet on Duraflake MR explains how this new particleboard, made from Western wood species, offers greatly increased moisture resistance to enhance performance in flooring systems, counter underlayments, and other damp-exposure interior applications. Willamette Industries, Inc., Albany, Ore.



177. Holdown retrofit
Quake-resistant connections are said to increase the safety of one- and two-story wood-frame structures in seismic zones. A 16-page brochure illustrates connectors for use with foundations, pier systems, floor girders, and shearwalls, as well as hurricane and seismic anchors. Simpson Strong-Tie Co., Inc., San Leandro, Calif.



178. Structural design in wood
Extensively revised, the 1991 National Design Specification and Design Values for Wood Construction incorporate newly developed test and in-use data and provide an improved methodology for wood structural design. Includes data on both sawn and glulam-type lumber. \$25 charge. National Forest Products Assn., Washington, D. C.



179. Reinforced-gypsum details
A 36-page portfolio of detail drawings illustrates some of the standard profiles available for cornices, light troughs, capitals, and other architectural elements made in fiberglass-reinforced gypsum, fiberglass-reinforced concrete, and cast stone. Decoform Corp., Etobicoke, Ont.



180. Hardwood interiors
A 44-page idea booklet with full-color photography, "Imagination Within" illustrates the design impact of hardwood used for flooring, wall treatments, doors, cabinetry, and as architectural millwork. A selection chart has close-up photos of various hardwood grain patterns. Hardwood Institute, Memphis, Tenn.

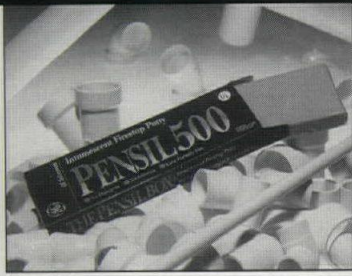
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181. Vinyl-siding color guide

An elevation of your building's exterior is rendered by computer with recommended color-combination alternatives. For a fee, this vinyl-product company will take the elevation you send in and supply presentation folders containing matted boards, color chips, and material recommendations. Wolverine Technologies, Livonia, Mich.



182. Flexible firestop putty

Pensil 500 Intumescent Putty blocks openings around PVC and insulated pipe, conduit, cables, and ducts where they penetrate fire-rated structures. One of several firestopping products from the same company, this orange silicone bears a UL 1479 classification and can be molded by hand, removed, and reused. GE Silicones, Waterford, N. Y.



183. Imitation-stone facing

Lightweight panels for exterior facing simulate limestone, sandstone, granite, or marble with a glazed cementitious-aggregate finish. Panels are said to be durable, provide thermal insulation, and can be cut on site and fastened to many structural backings. Thermalbar Div., Watson Bowman Acme Corp., Mount Laurel, N. J.



184. Simulated-cedar siding

Panels take up the space of 18 individual shakes on walls and mansards. Crushed-stone and manmade-resin composition is reinforced with fiberglass and is claimed to provide a natural appearance without rotting, warping, splitting, or termite. Six color choices are integral with material. Supradur Mfg. Corp., Rye, N. Y.



185. Chameleon skylight glazing

"Thermochromatic" acrylic glazing changes from clear to white with rising temperature to block sun's heat on warm days. This is inherent in chemical composition and consumes no energy. Standard acrylic's durability and six-times its impact strength are claimed, as well as life-long retention of behavior. Bristolite Skylights, Santa Ana, Calif.



186. Wood-look roof tile

These clay tiles were first produced to mimic the appearance of wood shakes at Williamsburg for humidity- and fire-protection reasons. High thermal insulation is also attributed. The tiles are flat and interlocking, have a striated texture, and come with a 50-year limited warranty. Ludowici-Celadon, Inc., New Lexington, Ohio.



187. 30-year asphalt shingles

The Grand Manor Shingle is designed for "estate-scale homes and prestigious light commercial projects." Built of 430-lb laminate with 8-in. tabs and three shingle layers, it comes with a 30-year limited warranty and a 10-year total replacement warranty. Certain-Teed Corp., Valley Forge, Pa.



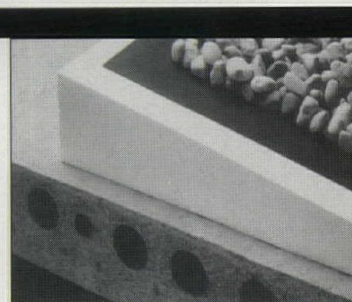
188. Recycled insulation

Nature Guard insulation is made from recycled newspaper and has a major benefit in saving other insulation sources including trees. It comes in loose-fill and cavity-spray versions. Loose fill is claimed to have a higher R value than fiberglass with none of the possible health problems. Louisiana-Pacific Corp., Portland, Ore.



189. Fire-tested insulation

Paroc Curtain Wall Insulation, Sound Attenuation Batts, and Safing Insulation are made of rock wool designed to resist fire and smoke penetration, having passed both the modified ASTM E119 Fire Test of Building Construction and Materials and the unmodified UL test. Partek North America, Inc., Englewood, Colo.



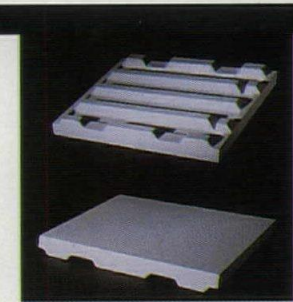
190. Recyclable insulation

Contour Taper Tile Roof Insulation is made of polystyrene and is said to have a constant R value and membrane compatibility. Contains no CFCs, HCFCs, or fluorocarbons, and it can be mechanically broken apart for other uses. Landfill safe, and not toxic when burned. AFM Corp., Excelsior, Minn.



191. Expansion-joint sealant

THC-900 is a polyurethane, chemically curing, self-leveling sealant designed for expansion and control joints in parking garages, open decks, floors, and sidewalks where resistance to moisture, movement, and abrasion are important. Premolded lengths come up to 60 ft long and 13-in. wide. Tremco, Beachwood, Ohio.



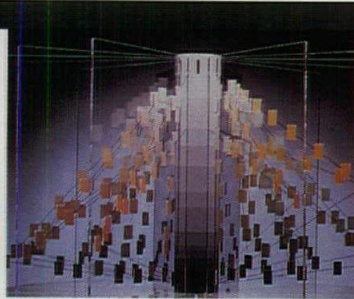
192. Pavers for single-ply roofs

Roofblok 1600 concrete tiles interlock, and have beveled edges and smooth fluted bottoms that are cross channelled to allow water to run off in two directions. Nominal tile dimensions are 12- by 16 1/2- by 1 1/2-in. CAD-generated trial layouts are available from the manufacturer. Roofblok, Ltd., Fitchburg, Mass.



193. Plastic shakes

The Roofvantage system includes shakes of Noryl resin, made by GE Plastics, and a two-coat acrylic polymer finish. The material is highly resistant to weather, and its Class "A" flame protection has a minimum self-ignition temperature of 1,014F, according to the manufacturer. Nailite International, Inc., Miami.



194. Nearly 400 colors

The Stocolor System has been devised for Sto's paints and Exterior Insulating Finish System (EIFS) coatings. The color system uses 15 base colors plus black and white to produce 24 monochromatic tones, adding up to a total of 390 colors "in harmony with each other." Sto Corp., Atlanta.



195. Exterior panels

Duraform Architectural Panels can be custom-designed in many colors. The sandwich panels incorporate nonflammable backer board, a polyurethane core, and an ABS encasement with a skin of Fluorex K. The panels offer insulation, fire-resistance, and superior weatherability, says the manufacturer. Vacuform Industries, Columbus, Ohio.



196. Rubberized membrane

Ram-Tough 250 is a hot-applied rubberized asphalt membrane intended for roofs, foundations, and parking decks, as well as interior installations. The membrane, which combines SBS polymers and blended asphalts, incorporates triple-reinforced flashing to provide sealing in difficult conditions. Barrett Co., Inc., Millington, N. J.



197. Spray-on insulation

The K-13 Spray On Systems were designed for both thermal and acoustic insulation. The specified depth of the installed cellulose-fiber layers can be varied according to acoustic and thermal analyses. Standard colors are white, gray, beige, tan, and black, but special matched colors are also available. International Cellulose Corp., Houston.



198. Curved metal panels

The manufacturer has added a Curved Architectural Panel (CAP) System to its line of metal roofing and siding panels. The panels are provided in a number of different profiles, and possible finishes include a choice of colors, both standard and custom, and coatings, including a system of corrosion protection. Steelite, Inc., Pittsburgh.



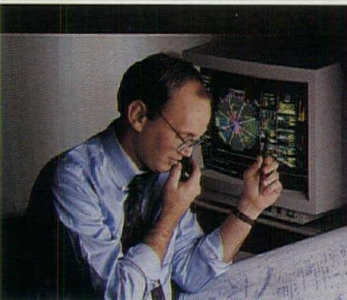
199. Insulation sheath

The Thermax Blackore Sheathing has an R-value of 7.7 per in., which its maker claims is "the highest R-value per in. of any polyisocyanurate insulation with specialized fire-performance characteristics." The sheathing, which can be applied in exposed locations, may be as thin as 3/8 in. The Celotex Corp., Tampa.



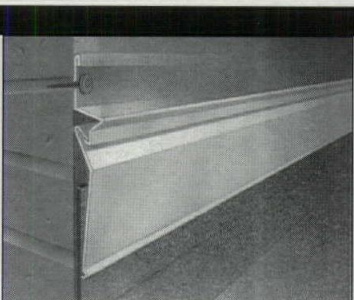
200. Panel core

The P-CEL thermoset polymer composite core is designed to allow curved applications for Weyerhaeuser's architectural panels; it is also suitable for moisture-sensitive locations. The new material will be standard for the company's Mirage Premier panels and an option for its Envelope 2000 panels. Weyerhaeuser Co., Tacoma, Wash.



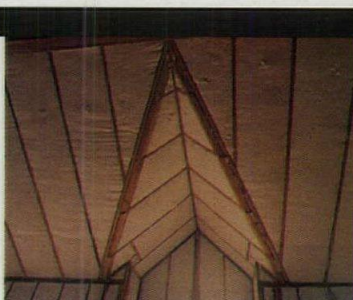
201. Electronic catalog

CADalog, an electronic catalog of ASC-Pacific's four standing-seam roof systems, will allow the architect to build a library of specifications and details for roofs. It contains 19 roofing specifications, 51 exportable detail drawings, and 14 view-only isometrics. The program runs on ordinary PCs. ASC Pacific, Inc., West Sacramento, Calif.



202. Roofing reglet

The STX Reglet, one of the manufacturer's Springlok Flashing Systems, was designed for a surface of stucco over concrete block. It is constructed of 24-gauge galvanized steel with a 1/2-in. overlap, meant to ensure alignment and watertightness. The fixture eliminates the need for a wood nailer. Fry Reglet Corp., Alhambra, Calif.



203. Blow-in insulation

Its maker reports that the Blow-in-Blanket System (BIBS) combines fiberglass, rockwool, or cellulose with a latex adhesive binder as a custom-fit insulation material to reduce air and noise infiltration. The company also points to BIBS's suitability for retrofitting and remodeling. Ark-Seal International, Inc., Denver.



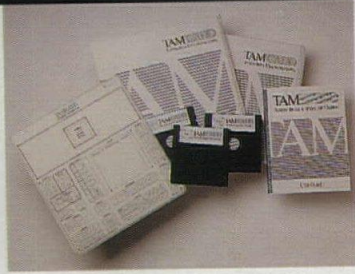
204. Roofing membrane

The manufacturer has added Dibiten Black Granite to its line of bitumen roofing membranes, which are applied with propane torch and have a non-woven polyester core. The new product is surfaced with fine slag particles for a durable protective finish that "almost sparkles," and has a capability of elongation up to 50 percent. Dibiten USA, South Gate, Calif.



205. Sky view

Heavy-duty, cold-rolled copper-flashed skylights for flat roofs come with 1-in. low-E roof-insulated safety glass or as acrylic double domes. Both versions are clear or in bronze tint. A rain diverter hinge channels water away from skylight. Special colors and custom sizes available on request. Thermo-Vu Sunlite Industries, Edgewood, N. Y.



206. Detailing roofs by CAD

Interactive CAD software known as Tam-CADD allows designer and specifier to generate CSI-formatted roofing specifications, drawings, and details. Runs on IBM PC or compatible, with 640K RAM and 30mb hard drive. Software is now UL-intelligent, denying choices that are not class A. Tamko Asphalt Products, Joplin, Mo.



207. Curtain-wall panel

Composite building panel is made of heat-strengthened ceramic-backed glass on the outside, along with various insulation materials (typically polystyrene in various thicknesses) and interior finishes. Suitable for installation in curtain-wall systems as a single unit. Mapes Industries, Inc., Lincoln, Neb.



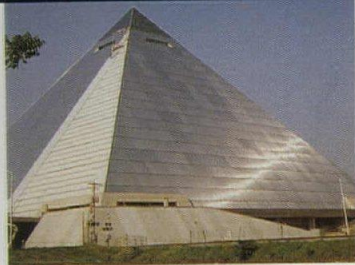
208. Space-panel cladding

Aluminum materials developed for the aerospace industry are available for use as curtain-wall panels, bringing with them high dimensional accuracy due to a fabrication process using aluminum alloys that behave like plastic when heated, and like metals when cooled. Superform USA, Inc., division of Alcan Aluminum, Ltd., Santa Ana, Calif.



209. Concrete roof shake

No, Virginia, it's not a cedar roof shake, but a shake with concrete's durability and the look and warmth of cedar. Product comes in several natural color variations, patterns, and textures. Known as Split Shake, it is 16 1/2-by-13-in. and carries a Class-A fire rating. Monier Roof Tile, Orange, Calif.



210. Insulated wall panels

Smooth or patterned exterior stainless steel is backed by 2-in. of insulated foam and a galvanized steel liner. Lengths come up to 12 ft. (smooth surface) and 15 ft. (patterned). Seven patterns are offered. Options include horizontal and vertical applications. E. G. Smith Construction Products, Pittsburgh.



211. Design for security

Line of security products suitable for correctional facilities, as well as embassies and laboratories, includes roof scuttles, floor doors and automatic fire vents, bullet-resistant review windows and gunports. Roof scuttle is made of 3/16-in. steel plate and heavy-duty manganese bronze hinges. The Bilco Company, New Haven, Conn.



212. Panels in color

Ceramic-on-steel panels offer flexible detailing, according to manufacturer. They are suitable for new construction or renovation. Face is said to be highly resistant to chemicals, UV light and scratching. Comes in 40 standard colors and five metallic finishes. Alliance America Corp., Norcross, Ga.



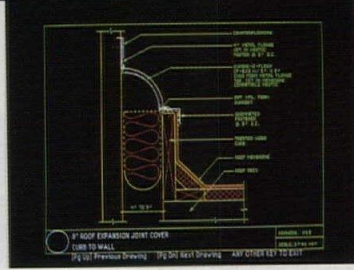
213. Cedar shingles fit curves

Cedar-shingle panels are fabricated to adjust to curves, by means of an interlocking system that conceals panel joints for end-to-end applications. Panels come in standard and custom patterns from up to 12 different handcut designs. Cedar Valley Shingle Systems, Hollister, Calif.



214. Metal-roof retrofit

Metal-roof retrofit system typically can be installed over existing metal roofs without requiring tear-off or extensive surface treatment. The system is made of single-ply roofing components including, on top, a polyester-reinforced sheet that comes in 11 ft. and 20 ft. widths. Carlisle SynTec Systems, Carlisle, Penn.



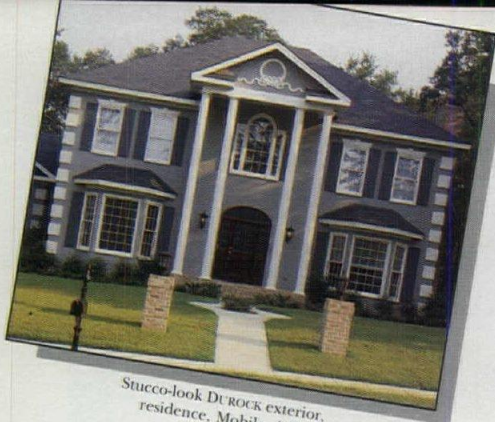
215. Computer-aided roof design

Electronic CADalog allows specifiers to generate up to 31 CAD-exportable scaled and dimensioned roofing detail drawings for manufacturer's accessories, including roof/seismic expansion-joint covers, roof drains and vents, and roof-edge fascia. Two-disk set operates on IBM AT or clone. Manville Roofing Systems Div., Denver.

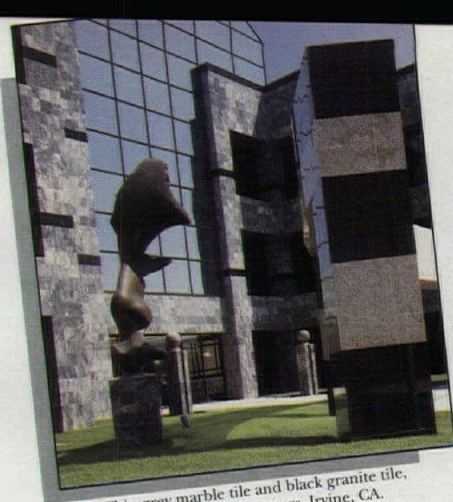
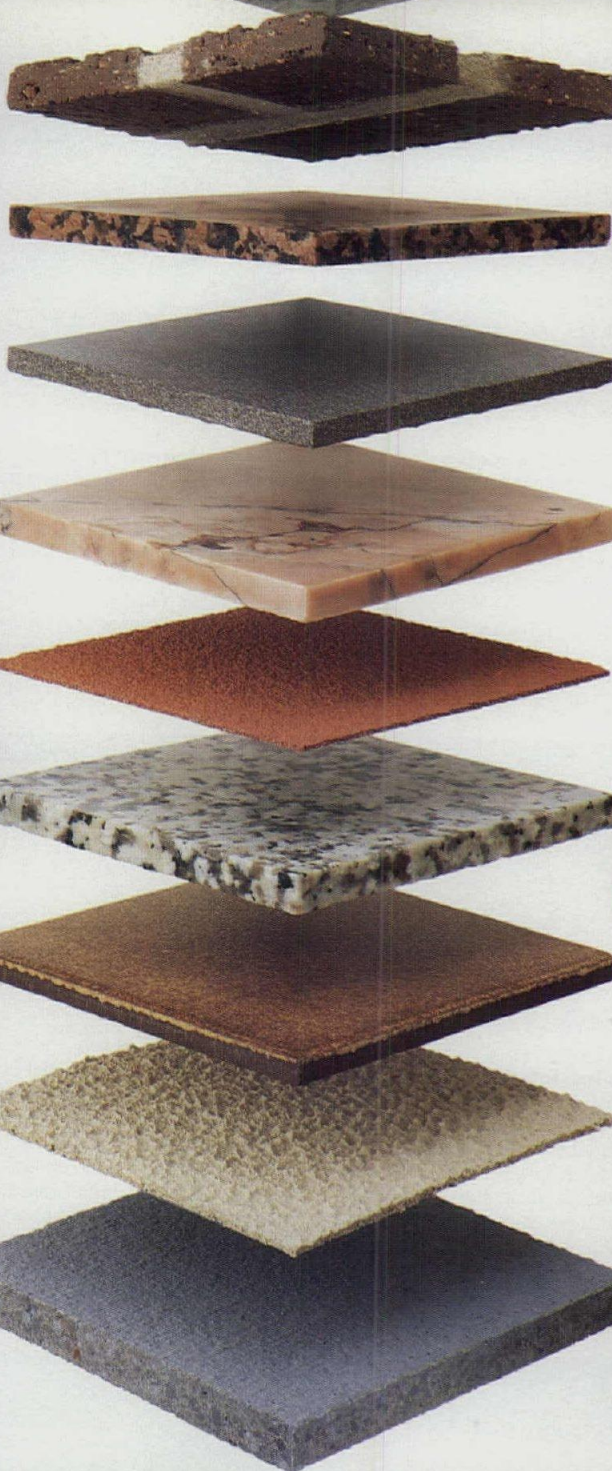


216. Looking out

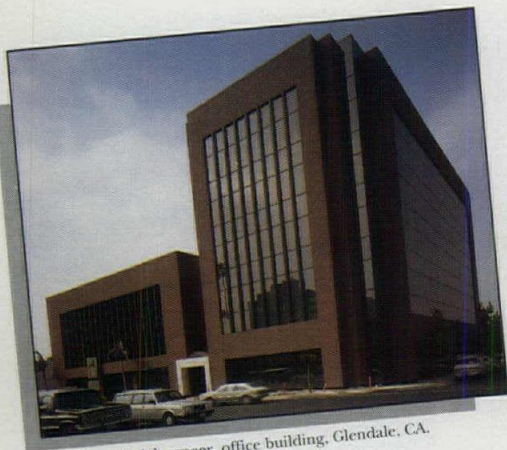
Translucent skylight system fits onto conventional and shingle roofs. It is low-profile, self-sealing, and self-flashing, and comes in any dimension so long as it fits into a 5-by-22-ft. opening. Custom Curb, Inc., Chattanooga, Tenn.



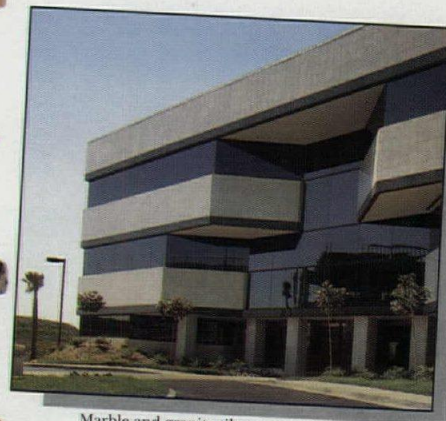
Stucco-look DUROCK exterior, residence, Mobile, AL.



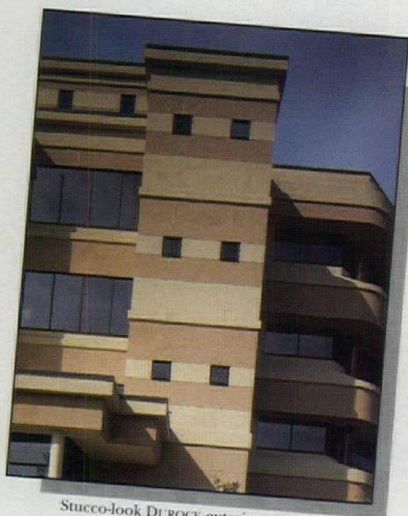
Thin grey marble tile and black granite tile, corporate headquarters, Irvine, CA.



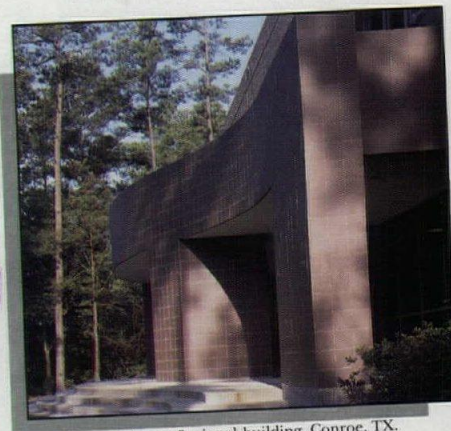
Thin-brick veneer, office building, Glendale, CA.



Marble and granite tiles, corporate center, Laguna Hills, CA.



Stucco-look DUROCK exterior, medical office building, St. Petersburg, FL.



Ceramic tile, professional building, Conroe, TX.

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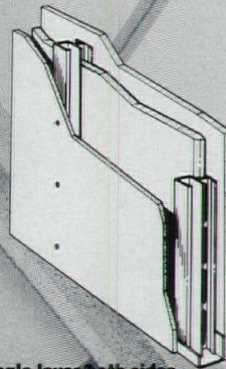
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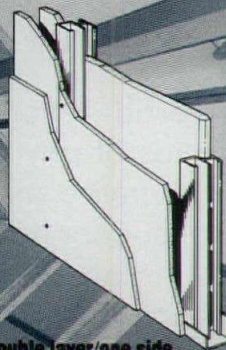
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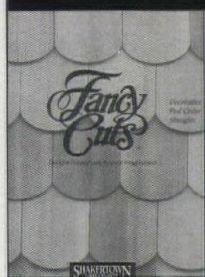
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Project: Saddlewood Retail Center
Architect: Healy Snyder Bender & Associates
Developer: Contract Development Inc.
Contractor: Nesterowicz & Associates Inc. - Elgin, IL
Color: Colonial Red & Forest Green
Profile: PAC-CLAD Snap-on Standing Seam Panels





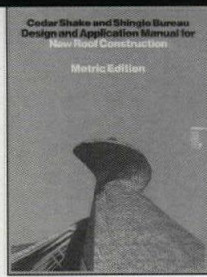
217. Cedar shingles

This brochure shows a range of applications of the Fancy Cuts line of Western red cedar shingles. The shingles come in nine different cut patterns (including square, hexagon, arrow, and round) and are available either as individual shingles or 8-ft panels with 5- or 7 1/2-in. exposures. Shakertown Corp., Winlock, Wash.



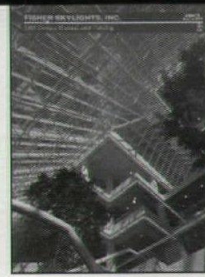
218. Skylight glazing

Published by the American Architectural Manufacturers Association, these guidelines explain the advantage of two-sided structural glazing for aluminum-framed skylights, as opposed to more conventional cap-glazing systems. The guidelines deal solely with edge or shear-bead designs. AAMA, Palatine, Ill.



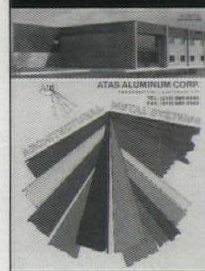
219. Cedar roofing

A convenient guide to cedar shingles, this 20-page brochure explains general design and application details, and then shows how to handle a variety of situations—including mansard and hip roofs, vapor barriers, cold-weather roofing, and ventilation. Cedar Shake & Shingle Bureau, Bellevue, Wash.



220. Skylights

Custom-designed skylights—ranging from single-pitch configurations to more complex pyramids, vaults, and segmented rafters—are the subject of this brochure. Topics discussed include single- and double-glazing, tinting, finishes, and metal framing. Fisher Skylights, Inc., West Nyack, N. Y.



221. Metal panels

This brochure features roof, ceiling, and wall systems made of aluminum, copper, and steel. Multipurpose, concave and convex, and standing-seam systems are among those covered. Custom-made accessories and channels can also be fabricated in matching or coordinating stock. Atas Aluminum Corp. Allentown, Pa.



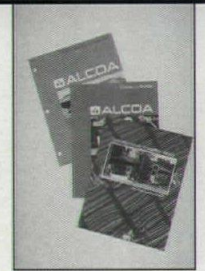
222. Metal building systems

A broad range of metal roofing and siding systems is covered in this brochure. Included are exterior panels, liner panels, and accessories for industrial, commercial, and institutional buildings. Standard and customized products are available in a variety of finishes and colors. N. A. T. Industries, Inc., Fontana, Calif.



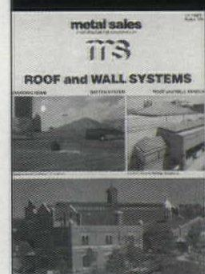
223. Roofing systems

A four-page pamphlet outlines the physical properties, performance characteristics, and long-term value of rubber-based, single-ply EPDM roofing systems. The publication also explains some of the company's manufacturing, R&D, and contractor-training capabilities. Firestone Building Products Co., Carmel, Ind.



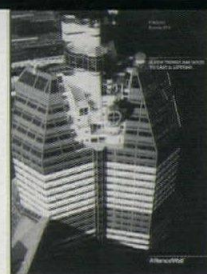
224. Roofing

Three brochures explain options available with Alcoa aluminum roofing products. Literature covers design possibilities for new construction and remodeling in both the residential and commercial sectors of the building industry. Alcoa Building Products, Sidney, Ohio.



225. Roof and wall systems

A 12-page publication outlines the properties and design possibilities of metal roof and wall systems, available in 17 standard profiles. Products include standing-seam roofs, batten systems, and architectural roof and wall panels, in a range of colors and finishes. Metal Sales Manufacturing Corp., Louisville, Ky.



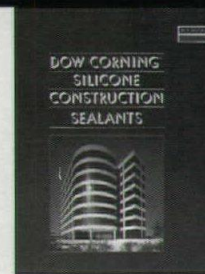
226. Enamel-on-steel panels

Everything you wanted to know about porcelain enamel-on-steel panels is included in this brochure. Product specifications, application photographs, and technical illustrations are shown for interior-wall panels, writing-surface panels, and veneer and insulated-exterior panels. Alliance America Corp., Norcross, Ga.



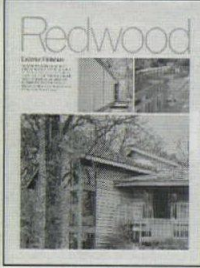
227. Acrylic roofing

Brochure explains why Rhoplex water-based elastomeric roof coatings are appropriate for both new roofs and retrofit use. The fully adhered membranes add energy-efficiency and UV protection to built-up, modified bitumen, metal, and other roofing materials, according to the manufacturer. Rohm & Haas Co., Philadelphia.



228. Sealants

A convenient one-page line card lists application guidelines and basic product information on Dow Corning's line of silicone building sealants. The seven adhesive/sealants are identified by application (glazing, structural glazing, and weathersealing). Dow Corning Corp., Midland, Mich.



229. Redwood finishes

A four-page color brochure describes the characteristics of exterior redwood finishes. A chart reviews the uses, effects, application, and maintenance of natural-appearance, pigmented-stain, and painted finishes. Text offers guidelines for restoring damaged redwood surfaces. California Redwood Assn., Novato, Calif.



230. Sheet steel

A 40-page product-selection guide reviews a line of prefinished and unfinished sheet-steel panels, tiles, and shakes, designed primarily for roofs, fascias, and soffits, but also suitable for walls. The literature includes photos of sample applications, specifications, and a guide to 26 available colors. Berridge, Houston.



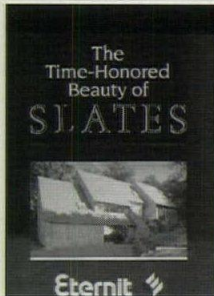
231. Caulk and sealant

A four-color presentation kit comprises a series of data sheets on the manufacturer's window and siding caulk, rubber sealant, and silicone sealant. The package includes a color-selector guide and a cross-reference that matches specific sealant and caulk colors with colors offered by major siding manufacturers. Ohio Sealants, Inc., Mentor, Ohio.



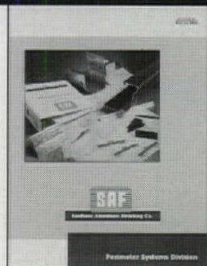
232. Roofing manual

Newly reorganized along a Construction Specifications Institute format, a 54-page technical manual outlines application procedures for the manufacturer's line of modified bitumen roofing products, including MWeld prefabricated and reflashed accessories. Detailed drawings and installation photos are included. U. S. Intec, Port Arthur, Tex.



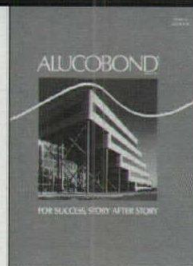
233. Cement shingles

A four-page foldout color brochure describes and illustrates a line of fiber-reinforced cement roofing shingles. The shingles, which are said to have an authentic slate texture and feature rough-hewn edges, are available in blue-black, gray-green, and rose-gray. Eternit, Blandon, Pa.



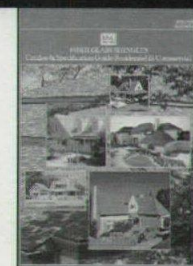
234. Metal roofing finishes

Anodized-aluminum perimeter roofing products—including gutters and downspouts, gravel stops, coping systems, accent panels, and trim—are described and illustrated in a 12-page color brochure. Specifications and section drawings are included. Southern Aluminum Finishing, Sanford, N. C.



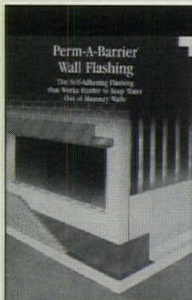
235. Aluminum panels

The advantages of Alucobond panels, a material that consists of two sheets of .020-gauge aluminum surrounding a low-density polyethylene core, are reviewed in an eight-page color brochure. The literature includes a color chart, specifications, and an introduction to the company's Steel-O-Bond cladding panels. Alucobond Technologies, Benton, Ky.



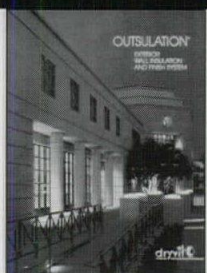
236. Fiberglass shingles

Fiberglass-reinforced asphalt roofing shingles for new and reroofing applications in commercial and residential buildings are featured in a 36-page color catalog. The literature includes photos of seven available shingle styles, a color-selection chart, product installation drawings, product-selection data, and detailed specifications. Manville, Denver.



237. Wall flashing

Perm-a-Barrier self-adhering flashing for masonry walls is described and illustrated in a four-page brochure. The product's waterproofing benefits come from bonding 32-mil-thick rubberized asphalt compound to an 8-mil-thick polyethylene film. Parapet, sill, and base details are included, along with specifications. W. R. Grace, Cambridge, Mass.



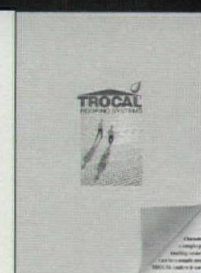
238. Wall insulation

Testing data, typical details, and color photos of new and retrofit applications are included in a 16-page catalog on the manufacturer's Outsulation exterior wall insulation and finish system. The system's four key components—insulation board, reinforcing mesh fabric, adhesive, and exterior finish—are reviewed. Dryvit Systems, West Warwick, R. I.



239. Silicones

The advantages of silicones in new or restored buildings are discussed in a four-page color brochure. Text suggests specific techniques and materials for preserving such surfaces as concrete, ceramic tile, gypsum, stucco, brick, stone, and glass. Wacker, Adrian, Mich.

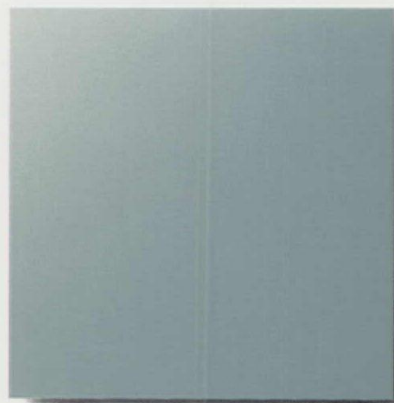


240. Roofing systems

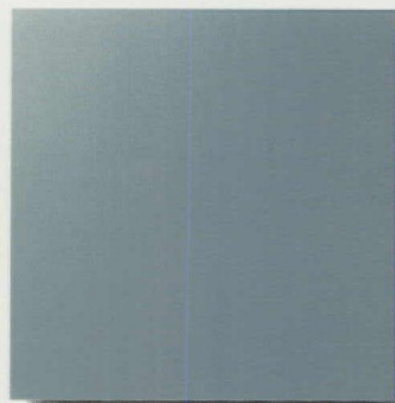
A 12-page general-information catalog is designed to acquaint architects with the capabilities of the manufacturer's Trocal single-ply, thermoplastic roofs. A roofing-selection guide is included, along with information on criteria to consider when evaluating a roofing system. Hüls America, Piscataway, N. J.

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APPLICATION:

BUILDING:	Q The Sports Club Austin, TX
OWNER:	Sports Club, Southeast Akron, OH
ARCHITECT:	Cedarwood Architectural, Inc. Akron, OH
GENERAL CONTRACTOR:	Tri-C Construction Co., Inc. Akron, OH
INSTALLER/ DISTRIBUTOR:	Steel and Roof Structures Memphis, TN
PANEL SYSTEM:	Weyerhaeuser Envelope 2000™



THE NEED: A metal system capable of delivering a dramatic presence through deep horizontal reveals on the radius walls that buttress the tiled arch and glass atrium entrance.

THE SYSTEM: Q The Sports Club involves nearly 2,400 square feet of Envelope 2000 panels with a custom Kynar® matte black finish. Envelope 2000 was selected for its ability to provide the aluminum finish.

The prefabricated system carried the advantage of in-field adaptability which led to the customized installation solutions developed in-field by the architect, installer and Weyerhaeuser technical specialists.

INSTALLATION: The buttress area involves a substructure with 6" metal stud framing. The aluminum reveal was leveled and set the width of the panels, which then attached to the reveal. Horizontal reveals were set at 4' with a 1 1/2" depth. Vertical reveals were designed considerably finer, and achieved through butt-joints finished with silicone caulking.

Edge treatments were handled by running the panel out past the building edge, and then double-routed to finish the wall.

In comparing the system installation with that of other systems, the architect and installer both

applaud the flexibility of the Envelope 2000 system.

INSTALLED COST: Including scale models, installer travel costs and costs associated with custom color and installation, per foot installed cost was \$17. Standard installations average \$12-15 per square foot.

“Envelope 2000 delivers a dramatic presence and clean look. Comparable metal skins are available, but the Weyerhaeuser advantage is in the system. They worked with us to develop the deep reveal solution. They worked with us in-field on the best installation approach. Overall, their flexibility contributes to a very good system.”

— Jim Jarvis, Architect
Cedarwood Architectural, Inc.

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Surface finishes include full-strength Kynar 500, Kynar 500 metallic or anodized treatments.

Core materials include 5.5mm hardwood plywood, 6.0mm cement board, or Weyerhaeuser's proprietary P-CEL™ polymer composite substrate.



The panel features .024" aluminum on the front and .010" aluminum on the back, pretreated on both sides with Chromate for long-lasting corrosion protection.

COLORS AND FINISHES*

Kynar 500 Finish

Arctic White	Evening Grey	Colorado Russet
Wet Limestone	Texas Sage	

Kynar 500 Metallic Finish

Gun Metal	North Sea Mist	Atlantic Sunrise
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Anodized Finish

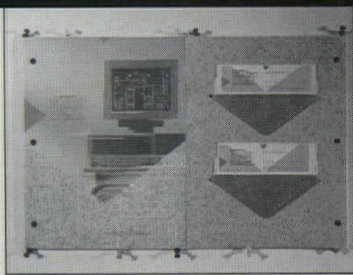
Clear	Dark Bronze
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*Colors indicated are approximations only due to printing limitations. Actual samples available on request. Moldings available in all standard colors. Custom colors available.

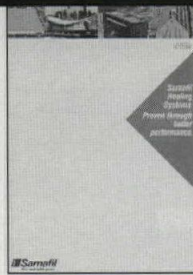
ENVELOPE2000™
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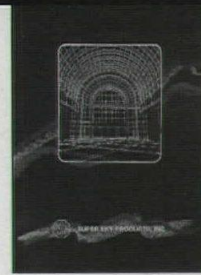
241. Residential skylights
This year's edition of the now-classic "The Complete Guide to Roof Windows and Skylights" features electronic controls for operable units and a selection of glazing options such as tempered-over-laminated, low-E argon-gas-filled ig units. Full-color installation photos included. Velux-America, Inc., Greenwood, S. C.



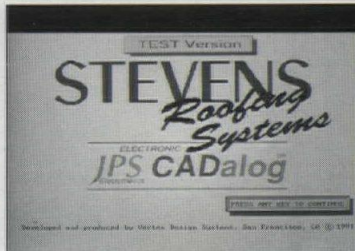
242. BUR CAD
Described as easy to use, menu-driven Compu-Spec software facilitates designing and specifying Black Armor coal-tar roofing systems. Compatible with most CAD programs, it includes 73 detail drawings and guidelines for deck and insulation selection. Allied-Signal, Inc., Morristown, N. J.



243. Reinforced single-ply
Architectural catalog highlights the number of options offered by Sarnafil PVC roof membrane: 21 colors; polyester or fiberglass reinforcement; four attachment methods suitable for dead-level to no-limit slopes; and resistance to environmental contaminants. Sarnafil Roofing Systems, Canton, Mass.



244. Monumental skylights
Illustrated with color photography of recent high-profile projects, a 28-page architectural guide stresses the CAD/CAM capability, framing options, and long-term engineering skills offered by this manufacturer of glass and aluminum structures. Super Sky Products, Inc., Mequon, Wis.



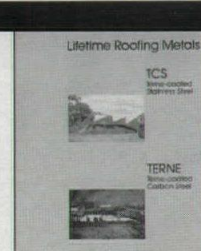
245. Customized roofing systems
Offered free to qualified design professionals, Stevens Roofing's electronic catalog can be used to write custom specifications in three-part format, and to create job-specific drawings from any of the 93 details supplied. Runs under DXF-based CAD, including AutoCAD 10. JPS Elastomerics Corp., Northampton, Mass.



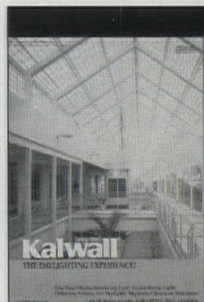
246. EIFS
1992 catalog explains the decorative and functional benefits of the Ful-O-Mite exterior insulation and finish system, including its performance under impact, weathering, and fire-resistance tests carried out following UL, UBC, ASTM, and other protocols. TEC, an H. B. Fuller Co., Palatine, Ill.



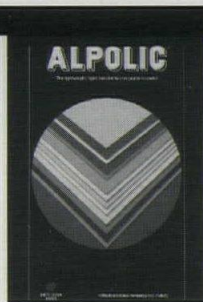
247. Tile-look metal roof
Pamphlet introduces new color-matched accessories such as Spanish ridge-hip-gable flashings, crickets, curved panels for use over French windows, and other trim pieces for a line of tile-configured metal roofing panels. Met-Tile, Inc., Ontario, Calif.



248. Terne roofing
Design catalog shows how Frank Lloyd Wright (and other architects) have used terne metal and terne-coated stainless steel on homes, college and religious buildings, and commercial structures for 230 years. Historic-roof restoration projects featured. Follansbee Steel, Follansbee, W. Va.



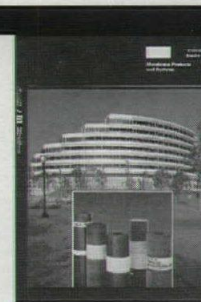
249. Insulating glazing
Updated catalog illustrates recent Kalwall projects, some using the new tinted panels. The literature lists thermal, fire-, weathering, light-transmission-, and impact-test data, and details several possible vault and arch configurations. Kalwall Corp., Manchester, N. H.




250. Bendable composite
Color brochure shows Alpolic panels, in anodized, fluorocarbon, and urethane finish options, as used in projects ranging from White Castle hamburger outlets to the Ronald Reagan State Office Building in Los Angeles. Technical and performance data included. Mitsubishi Kasei America, Inc., South Plainfield, N. J.



251. Paver-stone pedestal
A four-page brochure has technical information on a Model 6X paver-stone pedestal with 1/8-in.-wide spacer ribs that reduce the gap between pavers by 50 percent, while increasing the load-bearing area. System is said to be easy to cut-to-fit and shim-to-level. EnviroSpec, Inc., Buffalo, New York.



252. Roofing membrane systems
Fiberglass roofing products, including Derbigum modified-bitumen, Perma Ply asphaltic/glass felts, and SBS flashings, are covered in a 28-page technical catalog. Features and benefits are listed, along with pertinent installation and warranty information. Owens/Corning Fiberglas Corp., Toledo, Ohio.



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253. Sound-reducing door

A new acoustical wood door achieves an STC rating of 47 with a thickness of 1 3/4 in. and a weight of 7 psf. The assembly includes an acoustic seal at the floor, adjustable seals around the welded-steel frame, and radial-bearing cam-lift hinges. The door is available in a variety of wood veneers. Krieger Steel Products Co., Pico Rivera, Calif.



254. Post-free casement

Like the traditional French door, the French Casemaster window provides broad openings without a center post. Constructed with a continuous header and sill and extra-heavy frame and hardware, the window features a multipoint locking system employing sliding steel pins controlled from an interior lever. Marvin Windows, Warroad, Minn.



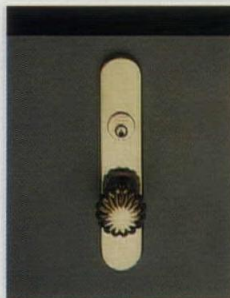
255. Glass-block entry door

An aluminum grid allows mortarless installation of 3 1/8-in.-thick glass block in entry doors as well as side-lights and transoms. The grid system, which includes insulation, weatherproofing, and a continuous hinge, is available in varied colors and stock sizes; glass-block patterns use clear and colored glass. IBP/Acme Brick Co., Fort Worth.



256. Cherry-wood windows

The Weather Shield line of high-end wood windows is now made in cherry heartwood as well as oak and pine. Additional options include polished brass hardware and Supersmart and Kleen-Shield glass for energy efficiency and infrequent window washing. Weather Shield Mfg., Inc., Medford, Wis.



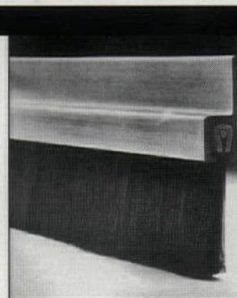
257. Mortise locksets

Omnia's line of heavy-duty solid-brass mortise entry locksets includes 50 trim options in four finishes. The locksets use knobs or levers and feature backplates mounted inside-to-outside, with screwless outside plates or roses. Single- and double-cylinder and panic-proof sets come with Schlage C keyways. Omnia Industries, Inc., Cedar Grove, N. J.



258. Custom wood windows

A German door and window manufacturer supplies custom products featuring impact-resistant security glazing, R values to 4.54, and UV filtration to 99.5 percent. Muntins as narrow as 7/8 in. are offered in a variety of profiles. All units, are operable. Tischler und Sohn, (U.S.A) Ltd., Greenwich, Conn.



259. Smoke-control gasket

The Therm-L-Brush II door gasket has been listed as a retrofit warm-smoke gasket said to exceed NFPA smoke-control standard 105, which is soon to be adopted under the Uniform Building Code. The gasket is also UL-labeled for application on 3-hr fire doors. Sealeze Corp., Richmond, Va.



260. Sand-tone windows

Andersen Windows has added Sandtone, a neutral beige-taupe, to the white and Terratone finishes now available on its windows and patio doors. The new color will be offered for casement/awning, circle-top, quarter-round, Flexiframe, and arch windows. Andersen Windows, Inc., Bayport, Minn.



261. Fire-rated glass

FireLite, a clear glass-ceramic product that looks like regular glass and fits in standard fire-rated frames, carries UL and Warnock Hersey listings for the maximum fire rating of three hours in sizes to 100 sq in., and 60 minutes to 1,296 sq in. A low coefficient of expansion allows quick cooling without breakage. Technical Glass Products, Kirkland, Wash.



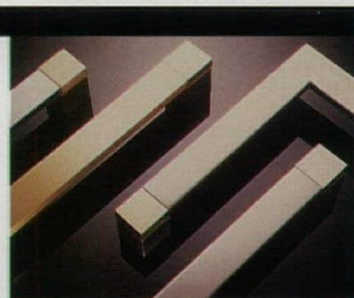
262. Heavy-traffic entrance

The Delta Entrance is set at an angle, and is said to be especially appropriate where banks of doors are required. Designed to seal tighter as the wind blows harder, doors still meet all ADA accessibility codes; paired doors do not need an astragal mullion. Vistawall Architectural Products, Terrell, Tex.



263. Bent-glass windows

Curved and angle-bent glass shapes designed for use with vinyl window frames include a garden window with one piece of tempered glass stretching up over the top for an unobstructed view. Shapes can be made in laminated, insulated, reflective, and tinted glass as well as standard glass. Great Lakes Window, Inc., Toledo, Ohio.



264. Segmented doorpulls

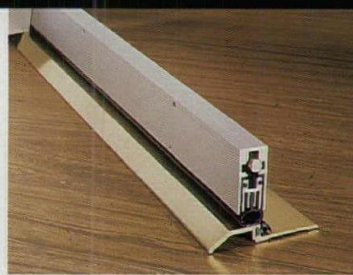
The DP6900 series of doorpulls features grip, cap, and standoff sections in contrasting metals and finishes: satin and polished brass, bronze and aluminum; oil-rubbed bronze; black anodized aluminum; and an abraded pattern on polished stainless steel. Five styles can be had in a range of center-to-center sizes. Forms + Surfaces, Santa Barbara, Calif.



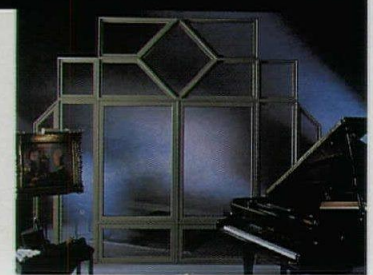
265. Cylindrical lockset
A new series of cylindrical locksets with heavy-duty lever handles is available from Best Lock Corp. Designed with four different rose styles, the hardware features independent lever springs to prevent sagging, and conforms to most handicap codes. Best Lock Corp., Indianapolis.



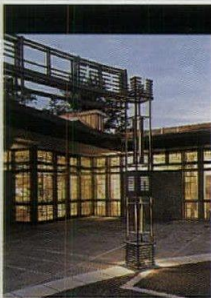
266. Paneled door
This eight-paneled door with transom is modeled after that of the George Wythe house in Colonial Williamsburg. Although adjusted in size to fit modern standards, the solid-wood door incorporates stiles and top, lock and bottom rails that are proportionally the same as the Williamsburg original. Morgan Products Ltd., Oshkosh, Wis.



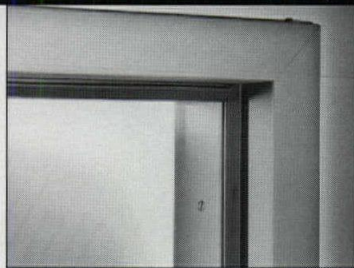
267. Automatic door bottom
Thanks to its double neoprene seals and stainless-steel flat spring mechanism, this "High Sound" automatic door bottom significantly reduces sound penetration. The system's activating plunger and spring mechanism are housed within a profiled aluminum frame. Zero International, Inc., Bronx, N. Y.



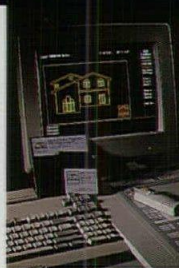
268. Spandrel-frame window
These spandrel-frame wood windows are available in a variety of geometric shapes, including trapezoids, pentagons, triangles, rectangles, and octagons. Although double-pane insulated glass is standard, the windows also come with low-E glass. Exteriors can be either clad or primed. Carado, Rantoul, Ill.



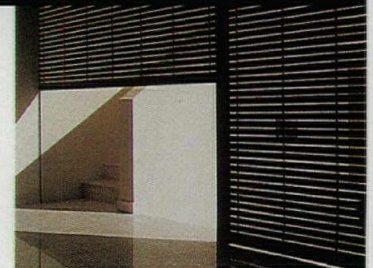
269. Architectural glasswork
Inspired by the Arts and Crafts Movement in America and Europe, Michaela Mahady and John Pietras of Pegasus Studio have created custom glasswork for residences, libraries, and churches. Mahady's experience as an architect makes for smooth collaboration with other architects. Pegasus Studio, Minneapolis.



270. Metal door frame
A hollow-metal door frame available in jamb depths of 4 1/8- through 14-in., the Curriseal frame features an integral kerf formed into its stop to receive gasketing. The gasket material is a modified foam core clad in an embossed, nonvinyl, paint-resistant liner. Assemblies are fire-rated up to 3 hours. Curries Co., Mason City, Iowa.



271. Window file and program
A new architectural tracing file with 324 pages of information (including energy-performance data) is now available for Hurd windows. The file also comes on computer diskettes integrated with Hurd's CADD window program and allows architects to view products in plan, section, and elevation. Hurd Millwork Co., Medford, Wis.



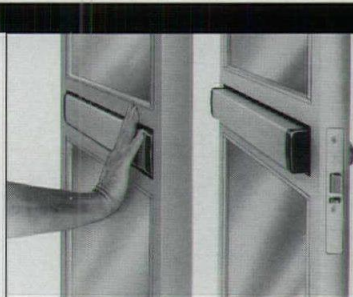
272. Roll-down shutters
Roll-down shutters, available with mahogany and vertical-grain Douglas fir slats, meet marine standards for wood preservation. Stainless-steel linkages separate the slats and enable them to admit sunlight and breezes. Soleil Shutters, Inc., Bronx, N. Y.



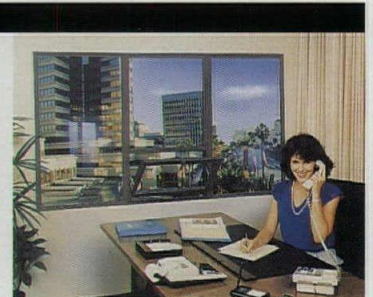
273. Switchable glass
Windows that change from transparent to frosted, at the flick of a switch, let light in during the day and ensure privacy at night. When electric voltage runs through the windows, liquid crystals align so the glass is clear. When the voltage is switched off, the glass becomes translucent. Taliq Corp., Sunnyvale, Calif.



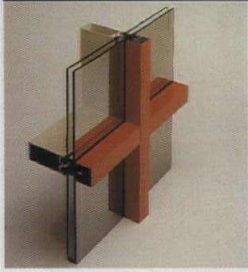
274. Door lever
The crescent-shaped Linea Rondine Model H218 RR was designed in Italy by Peiro Sartogo and Nathalie Grenon. The 24-karat-gold finish door lever is available in passage, privacy, and dummy models for interiors and in mortise and deadlock models for exterior use. Valli & Colombo (U.S.A.) Inc., Duarte, Calif.



275. Exit devices
New exit devices designed for aluminum/glass doors feature mid-panel pushbars that match those on other doors. Installed deep in the mid-panel doors, the bar rests just an inch above the door face and goes nearly flush when activated. Adams Rite Manufacturing Co., Industry, Calif.



276. Aluminum windows
Projected, hopper, and casement windows for the commercial building industry are available in configurations designed for both high- and low-rise projects. A variety of standard and custom accessory shapes are available for installation in new and remodeled buildings. United States Aluminum Corp., Waxahachie, Tex.



277. Versatile glass wall

Adaptable to most wind load requirements, the aluminum-framed 960 Wall is said to be stronger than storefront systems and more affordable than a true curtain wall. The frame comes in depths from 2 3/4 in. to 7 3/4 in., accommodating 1/4-in. and 1-in. glazing. Options include integral door frames and varied finishes. EFCO Corp., Monett, Mo.



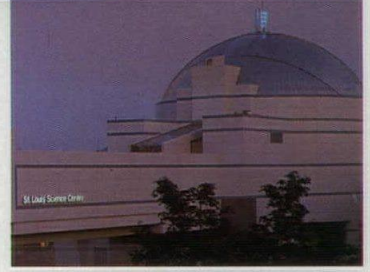
278. Louvered glazing

Vision control panels incorporate pivoting aluminum louvers sealed between insulating glass for low-maintenance light, sound, and heat control. Available in various shapes, the metal-framed panels can be used for slopes or skylights in addition to vertical applications. Operation can be manual or motorized. Unicel, Inc., Boucherville, Quebec.



279. Acoustical window

A double double-hung window features a 4 1/2-in.-deep frame for high structural, acoustical, and thermal performance. Suitable for retrofit, historic renovation, and new construction, the window offers such options as between-the-glass blinds, two-tone finishes, and half or full screens. Milco Div., Wausau Metals Corp., Wausau, Wis.



280. Colored laminated glass

The Saflex OptiColor system combines several layers of pigmented polyvinyl butyral (PVB) with clear, tinted, or reflective glass to produce hundreds of colors and light transmission levels from 9 percent to 86 percent, with acoustic and structural benefits. Above: OptiColor used to create illuminated signage. Monsanto Co., St. Louis.



281. Glazing options

New glass-coating technologies allow the Smartsash III window to achieve a total-window R-value of 4.1. Features include argon-filled, double-coated clear low-E insulating glass, removable coated-glass in-board panel, and between-pane blinds or pleated shades. Pella/Rolscreen Co., Pella, Iowa.



282. Extra-height doors

Selected Mastermark wood entry doors and sidelights are being offered in 8-ft heights. Available designs, each featuring vertical beveled glass and brass came, include the Cotillion, Stratford, and Chateau Michelle models. Simpson Door Co., McClary, Wash.



283. Glass-wall system

The Tempglass Stack-Wall glass wall system employs tempered glass panels and stabilizing fins joined with custom-fabricated corner "patches." Designed for high or wide configurations, the wall system is coordinated with the same manufacturer's Clear-Core revolving doors. Tubelite Architectural Products, Reed City, Mich.



284. Punched-window frame

An aluminum framing system for punched openings from 1- to 4- lights wide features simple fabrication and flush exterior lines. The frame's 2 1/4-in. by 4 1/2-in. profile accommodates 1-in. and 1/4-in. infills, inside glazed. Thermal and nonthermal versions are available. Kawneer Co., Inc., Norcross, Ga.



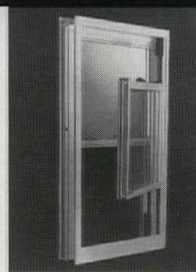
285. Counter fire door

Available in 3-hr, 1 1/2-hr, and 1/2-hr ratings, the FD10 series comprises rolling counter fire doors with small slats that give a flat face profile. The curtain is constructed of galvanized steel strip or polished stainless steel, or may be finished with powder coating in a variety of colors. Cookson Co., Gastonia, N. C.



286. Swing-door operator

The Series 3000 swing-door operator uses a compound epicyclic planetary gearing system for smooth, quiet operation. It can also be had with two interchangeable springs which vary the door's closing force to accommodate varied applications, including automated swing fire doors and barrier-free entrances. Horton Automatics, Corpus Christi, Tex.



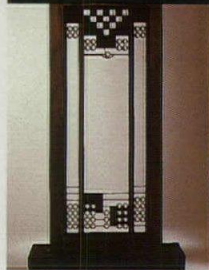
287. Inswinging window

Opening on a side hinge, both top and bottom sections of a new inswinging double-hung window swing into the room on release of a Lexan latch, and both can be reversed for easier cleaning. The window is also available with the Ren-Bar balance system to reduce the force needed to open it. Mannix Industries, Inc., Brentwood, N. Y.

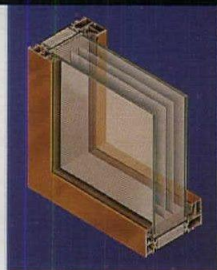


288. Art glass

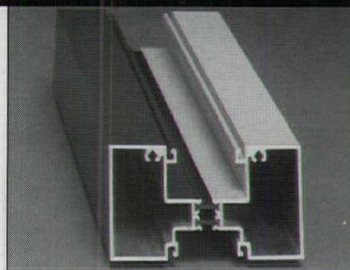
Elysian Art Glass handles custom projects from design through production. Specialties include etched, sandblasted, and carved windows; stained, leaded, zinc, and copper-foil windows; etched, sandblasted, beveled, painted, and kiln-fired screens and room dividers; and copper-foil and zinc lamps and domes. Elysian Art Glass Co., Boulder, Colo.



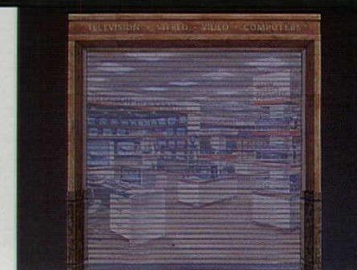
289. Architectural glass
Leaded-glass compositions for windows, doors, screens, and skylights are custom-designed and built by Shelley Jurs. Her recent work includes a window wall for a Kaiser-Permanent medical office in Napa, Calif., and doors and transoms at the Pleasant Hill, Calif., city hall. Jurs Architectural Glass, Berkeley, Calif.



290. Curtain-wall system
Designed for commercial, institutional, and residential applications, the Visionwall window and curtain-wall system helps create energy-efficient building envelopes. The system includes a low-E glazing unit with an R-8 insulating value and high-performance aluminum framing. Visionwall Technologies, Inc., Stow, Mass.



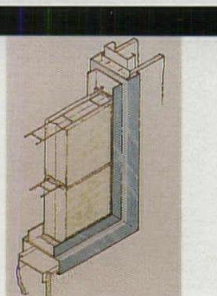
291. Thermal-break
MegaTherm is a thermal-break system that employs an extruded polyamide glass-reinforced pressure bar joined to an aluminum frame to reduce condensation and energy consumption. The bar will not crack, shrink or degrade, and has a higher melting point than polyurethane ones. YKK AP America, Inc., Atlanta.



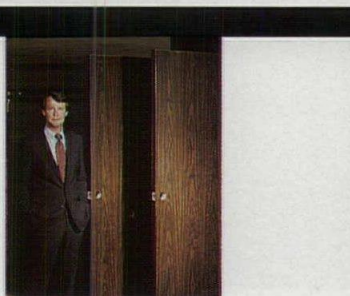
292. Perforated service door
Made of perforated aluminum or steel, this rolling service door provides greater security for mall storefronts than typical grille doors. The perforations allow air flow and visibility through 31 percent of the curtain surface and offer a contemporary look. Raynor Garage Doors, Dixon, Ill.



293. Entry door
Patterned on an 18th-century New England door designed to withstand sea winds, the Prodigy door is made of fiberglass-reinforced-composite materials and won't warp, crack, rot, or peel. The door is backed by a lifetime limited warranty. Stanley Door Systems, Troy, Mich.



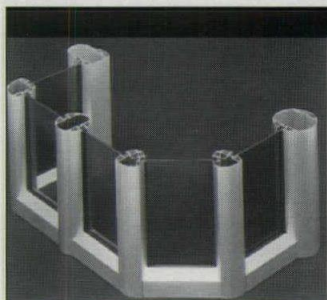
294. Glass-block frame
A new hollow-metal frame, developed by Glashaus for securing glass blocks, is the first to pass the UL-9 test for 45-min protected openings in one-hour-rated gypsumboard walls. A simplified frame may also be used in applications where fire ratings are not required. Glashaus, Inc., Arlington Heights, Ill.



295. Door laminates
Graham Manufacturing has introduced a new line of plastic laminates for its premium-grade wood doors. The laminates come in a range of colors and patterns, including wood grains to match existing millwork. Applications include health-care and educational facilities. Graham Manufacturing Corp., Marshfield, Wis.



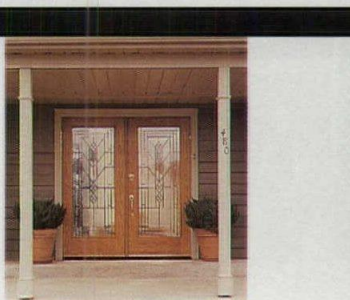
296. Floor-access cover
Aluminum or brass floor-hatch and trench components for slab-on-grade construction are custom fabricated for prices comparable to off-the-shelf units. Covers are designed to stay in place without rocking. But for extra security, socket-head-cap screws can be added. Arden Architectural Specialties, St. Paul, Minn.



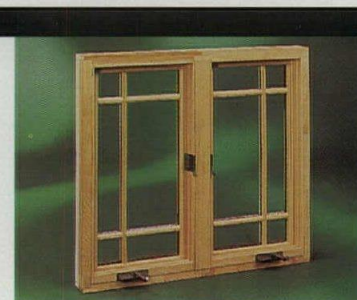
297. Aluminum building system
An extruded aluminum building system with round-profile components, the KLIL 2000 can be used for storefronts, lobbies, and conservatories. The interlocking components snap together for quick installation and come in a variety of finishes. KLIL Industries, Ltd., Cliffside Park, N. J.



298. Triple-hung window
Based on a design from Thomas Jefferson's time, the Magnum triple-hung window has been updated to include 3/4-in. insulating glass and vinyl jamb tracks. Made of Ponderosa pine, the window has a counterbalance system that allows top and bottom sashes to operate simultaneously. Marvin Windows, Warroad, Minn.



299. Beveled-glass door
Beveled-glass designs set within kiln-dried red oak, mahogany, or paint-grade poplar doors are available in both standard and custom sizes. Glue chip and stained glass can also be included in designs, as can insulating glass and custom-specified woods. Pinecrest, Minneapolis.



300. Aluminum window
Modern Divided Lights combine the traditional look of divided lights with the convenience of only two panes of insulated glass. Exterior muntin are pre-finished aluminum extrusions and interior muntins are ready-to-finish clear pine. Both sash and casement windows are available. EAGLE Window & Door, Inc., Dubuque, Iowa.

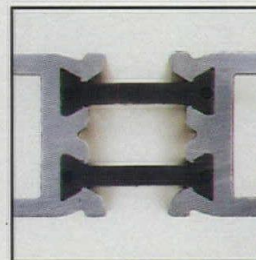


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All too often punch list time is a time to get in your jabs. Instead of checking the alignment of your jambs.

Because that's when all the problems surface. Including the door and hardware problems. The ones everyone claims are someone else's fault.

It's always been a terribly frustrating experience. And an expensive one.

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So inside Alveus panel products you'll find a rigid aluminum honeycomb core. Making them lightweight, yet still able to maintain exceptionally high strength-to-weight ratios.

It also gives you surfaces with absolute flatness.

And lets you curve them into almost any configuration you want. From rounded corners to column covers.

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Kawneer
Panel Products

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A VERY
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This is The Berkeley-Carteret Hotel in Asbury Park, New Jersey. Rich with history, it fell on hard times. Fell so far that local authorities boarded it up. It became a haven for transients. A shooting gallery for drug addicts.

Others saw the problems, but one developer saw an opportunity. Working with an extremely tight budget, he bought The Berkeley-Carteret from the city and went to work.

One of the first and most important jobs was to replace 1,200 old, well-worn windows. The original cypress frames were still beautiful, but the sash were beyond repair.

Something had to be done. Something smart, beautiful and efficient. It began with a phone call to Marvin Windows.

Considering the building's condition and the budget constraints, sash replacement was an economic alternative to total window replacement. Our E-Z Tilt Pac sash replacement kit met the need nicely.

With the support and coordination of our distributor's Field Rep and, replacing only the sash, the developer was able to retain the beautiful original frames and realize significant savings on installation costs.

In fact, a crew of seven people, working from inside the building, replaced all 1,200 sash in just three weeks.

Seven people. 1,200 sash. Three weeks.

The economics will continue for years to come. Thanks to features like tight-fitting weather-stripping and insulating glass, these sash are energy efficient. And, thanks to a tough factory cured finish, they're also virtually maintenance free.

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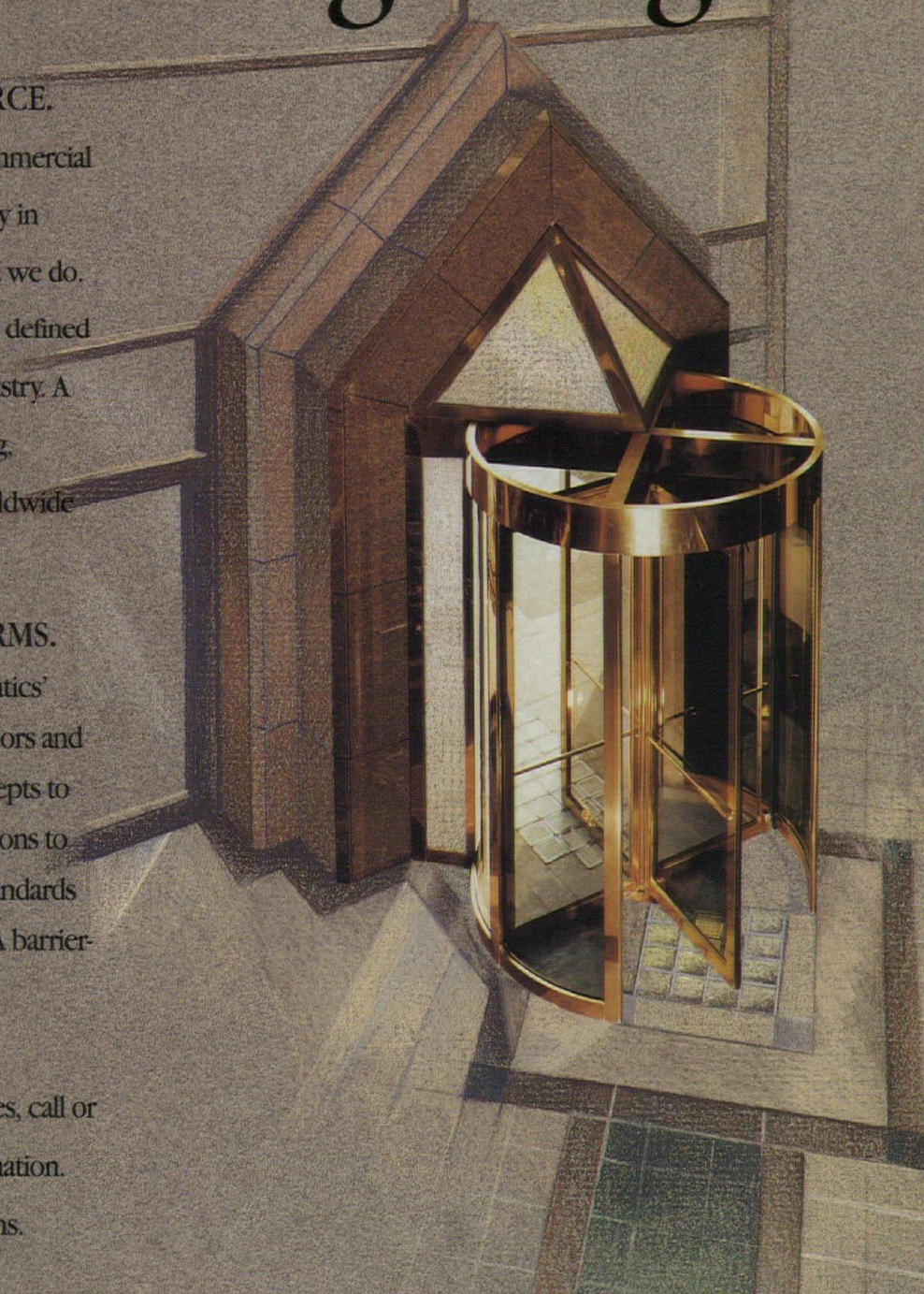
You'd expect the originator of the commercial automatic sliding door to lead the industry in automatic door selection and quality. And we do. For over 30 years, Horton Automatics has defined the standards for the automatic door industry. A single source supplier of automatic sliding, swinging and revolving doors with a worldwide distribution and service network.

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Contact Kawneer, Department C, Technology Park – Atlanta, 555 Guthridge Court, Norcross, GA 30092. 404-449-5555.



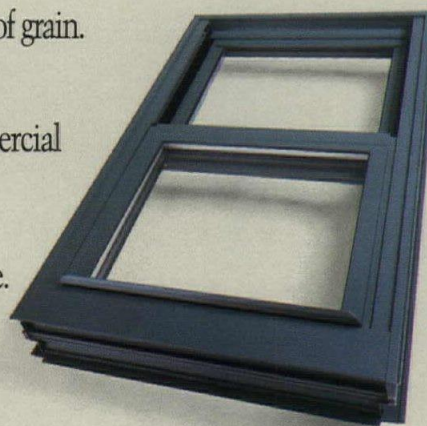
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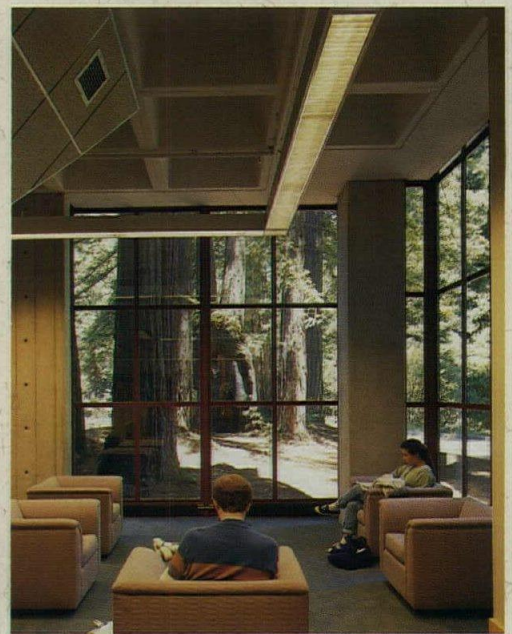
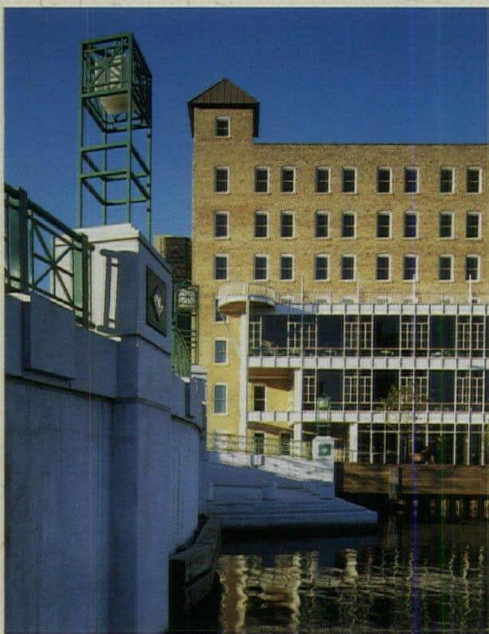


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A HEAVY DOOR DOESN'T HAVE TO OPEN LIKE ONE.

You Can Open An Ellison Balanced Door With One Finger.



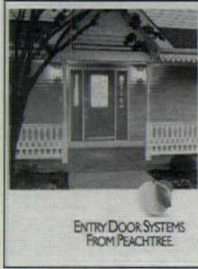
Any bronze door is hefty. Wind and building pressure can make it seem even heavier. In fact some entrances invite a tug of war. Ellison solved this weighty problem long ago by literally taking doors off their hinges, substituting an ingenious yet uncomplicated system of counterbalancing hardware. The result — entrances that are exceptionally easy to open and just as easy to maintain.

And for those designers not concerned about mechanical advantage, there is the other kind of Ellison advantage. Craftsmanship. Plenty of architects specify Ellison because they simply want the best bronze, stainless steel or aluminum custom made door they can get. For a brochure and video that show how Ellison doors work and how they're made contact us at:



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301. Insulated entry doors
Fiberglass-, composite-, and steel-faced entry systems have polyurethane-foam cores said to provide six times the insulating value of wood doors. Fold-out pages illustrate all possible styles and glass-light configurations for the Newport, Newport Vintage, and Avanti door lines. Peachtree Doors, Inc., Norcross, Ga.



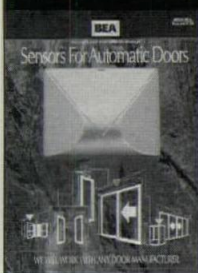
302. Cabinet hardware
A four-page catalog covers over 50 pulls, knobs, and hinges made of solid nylon in 13 different colors that blend with or accent interior casework. A full-line hardware catalog is also available. Hewi, Inc., Lancaster, Pa.



303. Wood windows and doors
This maker's full line of aluminum-clad Ponderosa pine windows and doors are featured in a 64-page design catalog (primed-exterior windows have their own brochure). Each product illustrated by installation photos, line drawings, and cut-away views that explain construction features. Wenco Windows, Div. of Jeld-Wen, Mt. Vernon, Ohio.



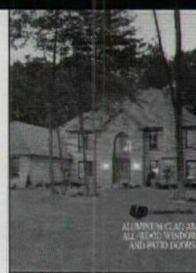
304. Curtain-wall sealants
An 18-page manual stresses how important sealants are to the total performance of a curtain wall, and describes basic joint types and the sealant properties critical to their success, calling out areas that require particular care in design and installation. American Architectural Manufacturers Ass'n., Palatine, Ill.



305. Microwave door actuators
Motion-detection equipment for many automatic-door applications can fit into the architecture of the entry as well as provide safe and energy-efficient control in commercial, hospital, transportation, and other high-traffic areas. B. E. A., Inc., Pittsburgh.



306. Accessible hardware
A summary of the Americans with Disabilities Act calls out sections of the legislation that relate to the specification and application of door locks, exit devices, and door controls, and highlights acceptable hardware products. Discusses requirements for door trim, tactile warnings, and door-opening force. Russwin Architectural Hardware, Berlin, Conn.



307. Residential windows
Aluminum-clad Cierra and all-wood Prestige windows are shown in double-hung, casement, glider, and awning styles, as well as picture-window, bay, and multiple-light configurations. Optional features include simulated divided lights and snap-in, all-wood muntin grilles. Louisiana-Pacific Corp., Portland, Ore.



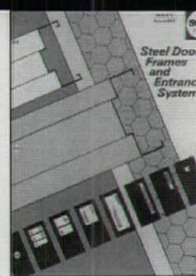
308. Tinted architectural glass
Data from performance tests on EverGreen glass demonstrate how it achieves a low shading coefficient and reduces the infrared and ultraviolet portions of the solar spectrum without compromising visible light transmittance. Color photographs provide an "inside-out" view through large glass lights. Libbey-Owens-Ford Co., Toledo, Ohio.



309. Commercial window designs
An 84-page catalog covers all of this maker's architectural products—windows, doors, sunrooms, and skylights—with color photographs, jamb and sill details, and glass- and frame-performance data. Historic renovation projects are included; a chart lists glass, shading, screen, and muntin options. Pella/Rolscreen Co., Pella, Iowa.



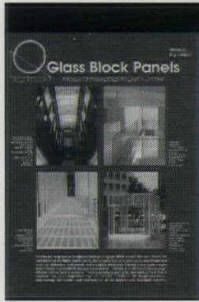
310. Steel windows
A 20-page catalog shows how custom hot-rolled steel sections are made into corrosion-resistant windows and entry doors, and includes a portfolio of color photos illustrating some of the ways architects have used steel fenestration products in homes, colleges, and commercial buildings. Hope's Architectural Products, Inc., Jamestown, N. Y.



311. Commercial doors, frames
Complete line of steel doors, frames, and frame components illustrated in a format that matches the requirements of a particular application. Includes security and fire-labeled products, and highlights the metals, gauges, sizes, light arrangements, louvers, and finishes offered. Steelcraft Mfg. Co., Cincinnati.



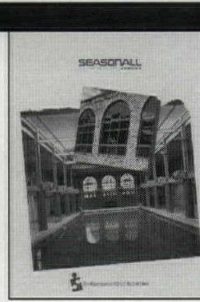
312. Cabinet hardware
Catalog features slides for residential and contract furniture and cabinetry, including designs for pull-out storage of such heavy items as television sets or audio equipment, and flipper-door slides for use with concealed-hinge cabinets. Accuride, Santa Fe Springs, Calif.



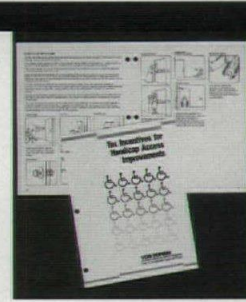
313. Glass-block panel systems
Structurally engineered preglazed glass-block assemblies, offered for installation as skylights, barrel vaults, skybridges, floor- and deck-lights, stair treads and landings, wall panels, and complete structures, are shown in an eight-page catalog. Circle Redmont, Inc., Wallingford, Conn.



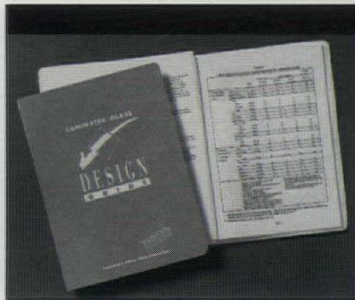
314. Curtain-wall technologies
A handsome 50-page booklet illustrates this maker's world-wide capabilities in the design and installation of architectural aluminum windows and curtain walls. Highlights the firm's almost 100-year history with photographs of major projects, citing the design firms involved. Kawneer Company, Inc., Norcross, Ga.



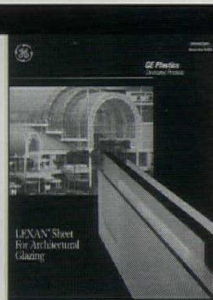
315. Architectural windows
Color catalog describes and illustrates a full line of window designs for commercial and historic-renovation applications. Featured products include the Sitaline window, replicating the narrow sightlines and beveled edges of old single-glazed steel casement windows. Season-all Industries, Inc., Indiana, Pa.



316. Accessibility tax incentives
A 12-page illustrated manual outlines ways to improve access for the handicapped, and the business-tax incentives available for making these improvements. Areas covered include walks, parking lots, ramps, doors and doorways, stairs, water fountains, and other public amenities. Von Duprin, Inc., Indianapolis.



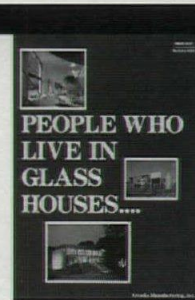
317. Laminated glass
The Laminated Glass Design Guide, a newly compiled manual, has been written to assist construction-industry professionals with the proper selection and specification of laminated glass. It includes information about glass strength, design loads, skylights, and security applications. \$20 charge. Laminators Safety Glass Ass'n., Topeka, Kan.



318. Impact-resistant glazing
Color brochure details architectural applications of lexan polycarbonate sheet, an abrasion- and breakage-resistant glazing said to provide excellent light transmission, weatherability, and energy efficiency. Glazing, installation, and maintenance tips included. GE Plastics, Structured Products Dept., Pittsfield, Mass.



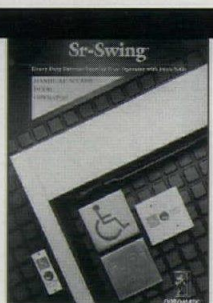
319. Metal entrance systems
Catalog on the Balanced Door covers custom-fabricated stainless-steel, bronze, and aluminum doors with color photos of various installations that illustrate the architectural possibilities offered by the system. Line drawings compare balanced door technology with conventionally hinged entrances. Ellison Bronze, Div. Dowcraft Corp., Falconer, N. Y.



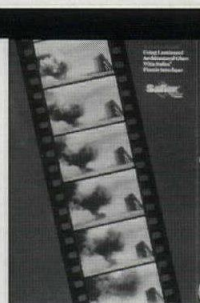
320. Sliding glass doors
Arcadia specializes in monumental (up to 12 ft high) glass doors and windows for both residential and commercial applications. A 12-page catalog details three framing styles, illustrating the glass-wall effects possible with each type. Arcadia Mfg., Inc., Bridgeport, Conn.



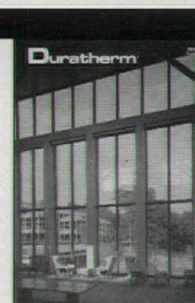
321. Structural glass wall
The first in a series of new product-specific literature, a color brochure covers the Stackwall structural glass wall, said to create a feeling of spaciousness by opening up lobby areas, building fronts, or entire elevations. An almost invisible support structure spans higher and wider than typical aluminum framing. Tempglass, Inc., Toledo, Ohio.



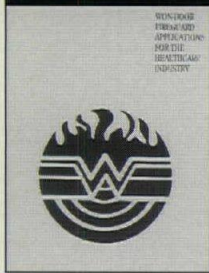
322. Door operator
A new operator described as meeting or exceeding all accessibility requirements, the Sr-Swing is entirely electromechanical. It needs no air compressors, tubing, guide rails, or safety carpets. A Push-N-Go feature speeds able-bodied traffic by permitting partial automation after the door is pushed. Dor-O-Matic, Harwood Heights, Ill.



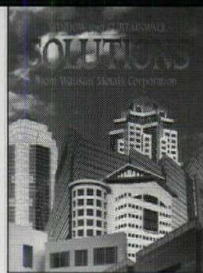
323. Security glazing
The Security Glazing Design Guide, a manual and PC-compatible software, assists in the configuration of windows in buildings where blast, ballistic, or main-force security is a design concern. Incorporating the results of extensive testing to failure, the guide is free to qualified professionals. Monsanto Co., St. Louis.



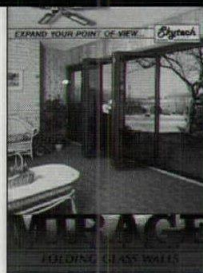
324. Mahogany windows
The Duratherm custom architectural window can be specified in all-mahogany construction, with a teak exterior and ash interior, or in a combination of these woods. A 12-page catalog includes sill and jamb details and full-color installation photos. Duratherm Window Corp., North Vassalboro, Maine.



325. Fire containment
A color brochure outlines the particular applications of the FireGuard DC-powered, smoke-activated accordion fire door in healthcare installations. Doors are said to help create functional spaces that fully comply with fire-protection requirements anywhere in the U. S. Won-Door Corp., Salt Lake City.



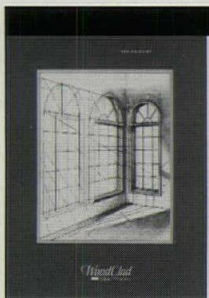
326. Custom curtain walls
Commercial glazing solutions for a range of design problems are identified in a colorful capabilities booklet. Projects featured include a custom picture-frame reveal on fixed windows, historically correct narrow-sightline replacement windows, and thermally responsive unitized curtain wall. Wausau Metals Corp., Wausau, Wis.



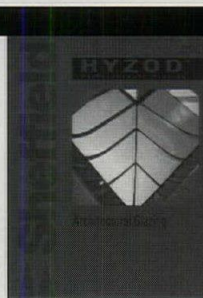
327. Glass wall system
Booklet explains how the Mirage Folding Glass Wall, which looks like a progression of standard windows, opens in accordion-fold style to create a mullion-free opening up to 20-ft wide. Trolley system is said to ensure almost effortless opening and closing of the wall. Skytech Systems, Bloomsburg, Pa.



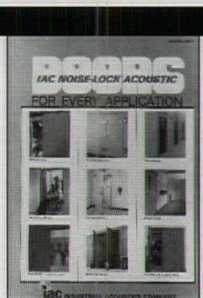
328. Architectural doors
Design catalog emphasizes the custom potential of the TruLine commercial door, including options that permit doors with a four-panel design on one side and a six-panel design on the other, in more than one species of wood. Fire doors are available for one-hour exposures. TruLine Mfg. Co., Redmond, Ore.



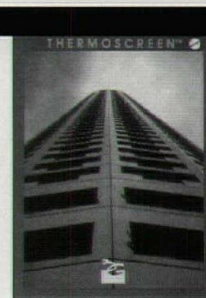
329. Uniform sight lines
The Milgard WoodClad window, made with a vertical-grain Douglas Fir frame, is dimensionally uniform regardless of size to give a harmonious appearance inside and out, from window to window. Exteriors may be aluminum-clad in a choice of colors, or sealed or primed to take stains or paints. Milgard Windows, Tacoma, Wash.



330. Polycarbonate glazing
Brochure details the superior breakage protection and broad design latitude claimed by the makers of Hyzod sheet. Described as 250 times stronger than plate glass with almost identical light-transmission values, the polycarbonate material can be cold-formed on-site in tight curves. Sheffield Plastics, Inc., Sheffield, Mass.



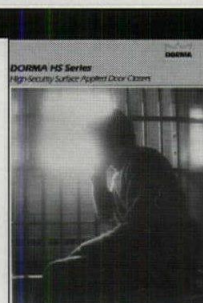
331. Acoustic doors
A four-page bulletin highlights the design and performance diversity of Noise-Lock doors, with sound ratings up to STC 70. For new construction and retrofit applications, there are acoustic doors for any commercial, industrial, and institutional use, including EMI- and radio-frequency shielding requirements. Industrial Acoustic Co., Inc., Bronx, N. Y.



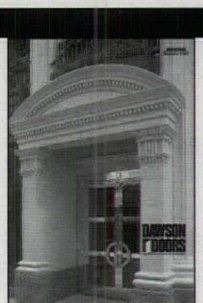
332. Sun-screening material
Brochure supplies samples of Thermoscreen fiberglass-fiber textiles, gives flame-spread and other technical data, and illustrates the glare-reducing screens as used in exterior and interior window-shading applications. 3G Mermet Corp., Cincinnati.



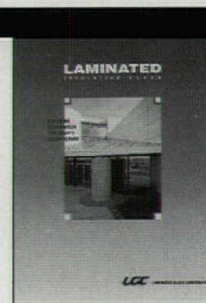
333. Hard-coated green glass
Sunglas Jade-Ice pyrolytic-coated architectural glass is said to deliver one of the lowest shading coefficients and relative heat-gain performances of this maker's glass products, reducing the solar load. The natural green shade can have either a subdued silver appearance or a low-reflectance finish. Ford Glass, Dearborn, Mich.



334. High-security door closers
Bulletin HS describes two new surface-applied closers recommended for use in correctional facilities, financial institutions, schools, public-access buildings, or any locations with a high risk of vandalism or damage and abuse of the door hardware. DORMA Door Controls Inc., Reamstown, Pa.



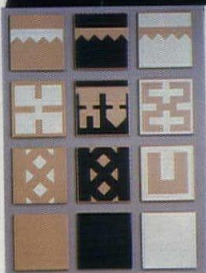
335. Entrance systems
A 16-page color catalog covers both custom-design architectural doors in stainless steel or muntz metal, and a standard-component entrance in the same metals. Elevations and construction details for all door types, and photography of recent installations, included in the literature. Dawson Metal Co., Inc., Jamestown, N. Y.



336. Laminated insulating glass
Brochure describes the benefits of laminated glass in IG units as the safety margin provided by the laminating interlayer and sound-control properties. Cutaway diagrams demonstrate the construction details of this maker's IG unit with laminated glass used as the inboard light. Laminated Glass Corp., Plymouth Meeting, Pa.

9 • FINISHES Products

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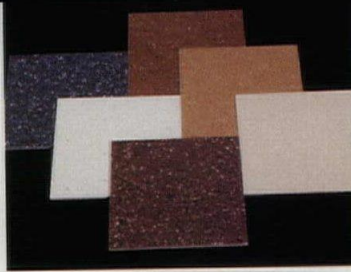
337. Tiles recall history

Series of 12 decorative tiles evokes historic symbols, and is available in blue and white on a cotto background. Designs are from the Italian Scrittura series by Bardelli, designed by Annabelle d'Huarte. Hastings Tile and Il Bagno Collection, Freeport, N. Y.



338. No-wax wood planks

Solid-oak planks, known as Shaker, are factory-cured under ultraviolet light to bond the finish securely to the wood. The 3/4-in.-thick random-length boards come in varying widths of 2 1/4 in. and 3 1/4 in. and two types of finishes—light or dark. Nail-down installation adds stability. Robbins Hardwood Flooring, Warren, Ark.



339. New tones in cast marble

Six new colors are available in manufacturer's ArmStone cast-marble floor tiles. Most shades are in the warm earthy color family except for its new Glacier White. The tile, made of over 90 percent marble in a proprietary polymer binder, comes in several sizes up to 24-in. square, all in a thin, 3/8-in. gauge. ArmStar, Lenoir City, Tenn.



340 Eight + seven = fifteen

Eight colors have been added to manufacturer's existing seven in its Endura line of rubber floor tile, stair tread, and cove bases. New colors include Malibu Sand, Teal, Taupe, Swiss Chocolate, Brook Pebble, and Coral Mist. Endura Flooring, Waltham, Mass.



341. Multicolor chip pattern

Responding to designers' requests for a brighter color palette, especially in healthcare and retail flooring, new Companion Square is a commercial-grade Premium Excelon VCT with a contemporary random-chip visual offered in 14 colorways. Armstrong World Industries, Lancaster, Pa.



342 To-order tile graphics

Custom murals, such as this country scene in a cooking niche, can be painted on ceramic tile by manufacturer's artists. Graphics appropriate for kitchen, shower, or tub-wall backslashes can be based on a submitted sketch or interpreted by the ceramic artists from the designer's idea. Summitville Tiles, Summitville, N. J.



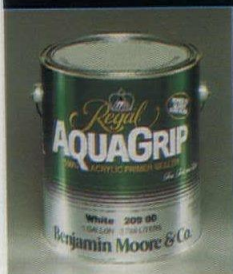
343. Silk from Thailand

The Rainforest Collection of 100-percent silk fabric handwoven in Thailand includes the Thai Dawn Group and the Thai Dusk Group, each with four colorways. Fabrics, 48-in. wide and fire-rated Class A, are suitable for wall upholstery, panels, and direct application. StretchWall Fabrics Co., Long Island City, N. Y.



344. No-slip pavers

Raised pattern of these natural clay unglazed 6-in.-sq pavers makes for high slip resistance, especially in commercial applications where grease collects and water may freeze. Pavers are acid-resistant, according to manufacturer. Available in red or gray. Dal-Tile Corp., Dallas.



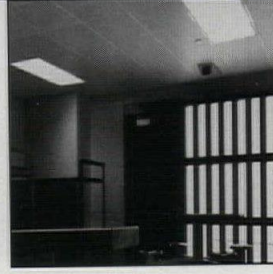
345. Difficult surfaces

This acrylic primer/sealer with its exceptional bonding properties (it's known as Regal AquaGrip) is a suitable undercoat for glossy hard surfaces, bare, nonbleeding walls, walls in humid areas, and other types of interior surfaces with adhesion problems, according to the manufacturer. Benjamin Moore & Co., Montvale, N. J.



346. Checkerboard carpet

A commercial-carpet pattern known as City Lights and forming part of the Firenze Premiere collection by Bentley Mills is made of DuPont Antron Legacy nylon. The carpet fiber is said to have particularly effective soil-hiding characteristics, and is now available in over 600 distinct carpet styles. DuPont Co., Wilmington, Del.



347. Better safe than sorry

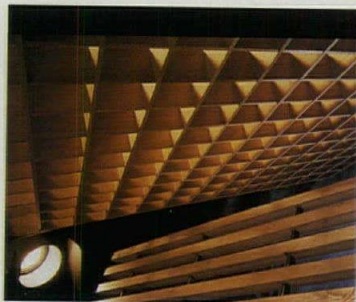
High-security ceiling-tile system protects the plenum from break-ins, according to the manufacturer. The 2- by 2-ft perforated pans come in steel or aluminum and a range of colors with or without acoustic backing. Ceiling is locked in place by a special device. Hunter Douglas Architectural Products, Inc., Atlanta.



348. Heavy-metal wallcovering

Collection of Italian wallcoverings has a high-tech look inspired by industrial applications of steel, aluminum, copper, and other metals. The pattern is expressed by pyramids. Composed of 85 percent PVC, 14 percent cotton, and 1 percent polyurethane, it comes in 10 metallic colorways. F. Schumacher & Co., New York City.

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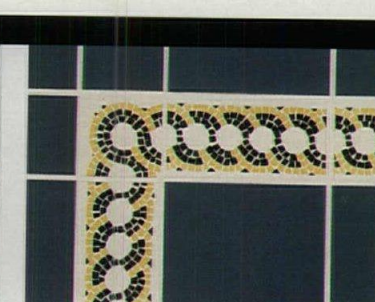
349. Wood ceilings

The manufacturer has added wood ceilings to its NaturaLines products. The standard design comes in four basic styles—linear (open and closed), louver, cellular (monolithic and modular), and coffer—and in oak, aspen, and maple, with a number of stains and finishes. The ceilings can also be customized. Conwed Designscape, Minneapolis.



350. Patterned tiles

The manufacturer has added a new set of patterns called Hot Lines. The 2 1/4- by 9-in. tiles are available in more than 60 colors and patterns, which their maker characterizes as “from subtle to wild.” The tiles are intended for borders and accent strips, and bullnose and corner pieces are also available. Liza Allen Tile & Clay Co., Oakley, Calif.



351. Porcelain tiles

The Byzantium Collection of porcelain tiles, based on Byzantine mosaics, includes five designs titled Ravenna Mosaics. The series also offers a border motif and 15 solid-color tiles, as well as hand-crafted mosaic patterns and three designs for large mosaic panels—one as large as 36- by 36-in. Crossville Ceramics, Crossville, Tenn.



352. Wild colors

The manufacturer has introduced a color line for carpets to be known as “Les Fauves.” The cut-pile finish of the carpeting—Monsanto Ultron 3D Fiberset nylon—is offered in 20 vivid colors, ranging from hot pink and magenta to intense greens and blues. Masland Carpets, Inc., Atlanta.



353. Grout color samples

In order to expedite color selection for its Hydroment grout, the manufacturer has issued a grout sampler kit to its distributors, containing 384 grout color samples. The company also provides combo kits, with 32 samples of the most popular colors, and a pocket-sized grout selector card as a quick color reference. Bostik, Middleton, Mass.



354. Slate flooring

Vermont slate is available in “Ready-Fit” units; the variably sized tiles are prefitted in the company’s Random Ashlar Pattern or in tiles of the same size. The pattern may also include the full range of the material’s colors—green, purple, and red. Vermont Structural Slate Co., Inc., Fair Haven, Vt.



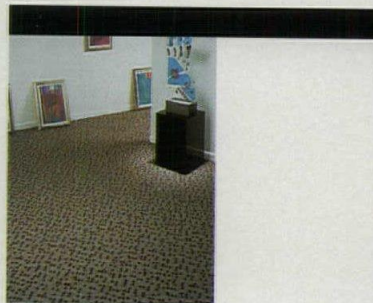
355. Wood coating

An exterior coating for wood provides 10 colors of an opaque satin finish. The acrylic system calls for Sikkens Rubbol BL22 primer, applied to new wood or to existing alkyd- or latex-based paint; a top coat, Rubbol BL33, is brushed or sprayed on after four hours or at any time within six months. Akzo Coatings Inc., Troy, Mich.



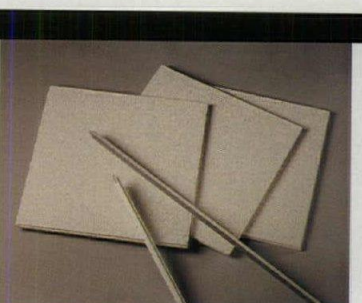
356. Gypsum wall tiles

The series of wall and ceiling panels called Exotic Wall Panels offers tiles textured to duplicate such fashionable skins as Crocodile, Shark, Frog, Ostrich, Alligator, Stingray, and Elephant. The finished appearance depends on the designer’s choice among 1,300 base colors and a number of special over-glazes. Above View, Inc., Milwaukee.



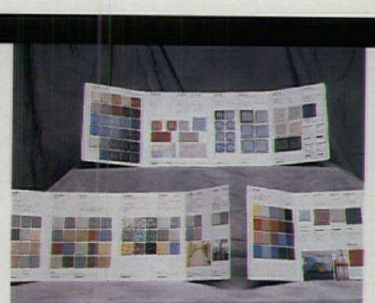
357. “Seamless” carpet

The manufacturer has introduced a new line of modular carpet tiles: the Invisible Seams collection. The patterns are said to greatly reduce the appearance of seams (Hopscotch is shown). Both traditional corporate statements and more adventurous motifs are projected, according to the company. Milliken & Co., LaGrange, Ga.



358. Acoustic panels

Its makers say that the Eclipse ceiling panels are virtually sag-free. Acoustic properties include an NRC of .65-.75 and an STC of 35-39. The company credits the product’s improved performance to its raw materials for enhanced porosity to increase sound absorption, and to foil backing to increase sound attenuation. USG Interiors, Inc., Chicago.



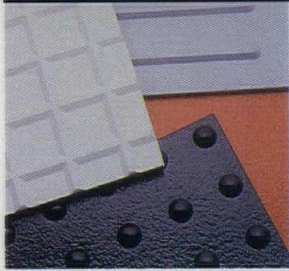
359. Two-toned flooring

Noramment Duo rubber flooring offers two-toned patterns, with eight complementary colors for base and pastilles, as well as the 25 colors in the Noramment 925B line. The manufacturer also offers new sample boards showing colors and patterns in its Noramment and Noraplan systems. Freudenberg Building Systems, Inc., Lawrence, Mass.



360. Wall panels

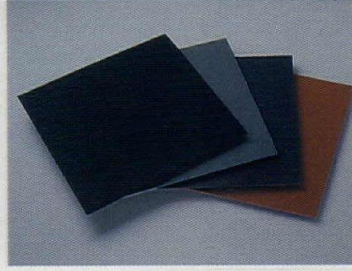
A new pattern of wall covering—Grid Diffusion Plank—offers two finishes for its 16- by 96-in. panels: Maple Frost has brown horizontal and vertical scorelines on 8-in. squares, and Silver Frost has dark gray scorelines. The panels have a Melamine surface for easy cleaning and to resist abrasion in high-traffic areas. Marlite, Dover, Ohio.



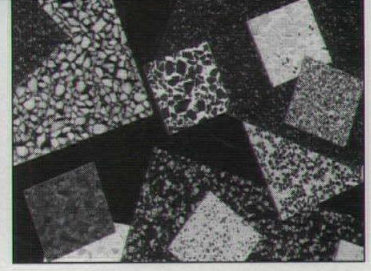
361. Cast wall panels
Fiberglass-reinforced wall panels featuring deep relief and geometric patterns look like metal but are lighter in weight and more economical. FS3 castings in 24, 30, and 36 in. widths and 96, 108, and 120 in. heights come in five patterns and 10 lacquer colors. Panels are installed by gluing to wall board. Forms + Surfaces, Santa Barbara, Calif.



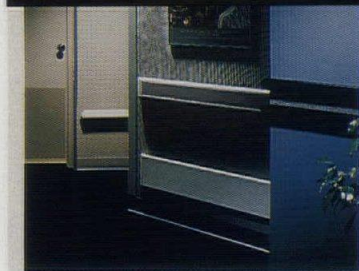
362. Silk-look wallcoverings
The Tradewinds collection of wallcovering fabrics includes 36 patterns in 112 colorways, with an emphasis on blue-grayed lilac, terracotta, and such neutrals as gray, beige, taupe, and cream. Line is woven of blends of polyester with rayon or silk, or all rayon. Vertical Surfaces, Wallcovering Div. of Maharam, Hauppauge, N. Y.



363. Rubber "slate" flooring
Pirelli Slate combines the look of slate with the resilience, sound absorbance, and antislip properties of rubber flooring. Despite subtle colors and shading, the floor is flat enough to overcome problems with maintenance and wheeled traffic. Pirelli Industrial Products Corp., Teaneck, N. J.



364. Marble-chip floor tile
A flexible terrazzo-like floor tile, Tuxedo Limited features black, white, and gray marble chips in 12 tonal combinations. The nominal 12-in.-sq tiles are said to be durable and easy to maintain. Fritztile, Dallas.



365. Rigid wall covering
Acrovyn is a high-impact, Class I fire-rated rigid wall covering that is backed with fiber for easy installation. Stain-resistant and easily cleaned, the wall covering is available in 16 textures and 48 integral colors. Construction Specialties, Inc., Muncy, Pa.



366. Resilient flooring
Two new lines of vinyl flooring are designed to emulate natural materials. The Lightstone collection of 18-in. square tiles includes look-alikes of travertine, granite, marble, slate, copper, and sand. Lightwood features 4- by 35-in. plank tiles and 18-in. squares in a broad range of woodlike grains and colors. Toli International, New York City.



367. Contract carpeting
Representative of the Nobilis line of carpets, Provenance is available in 54 stock colors as well as custom coloring. Class I fire-rated, the saxony-textured cut-pile carpet features a woven polypropylene backing and bears a lifetime warranty covering wear, static, edge ravel, delamination, and tuft bond. Lees Commercial Carpets, Greensboro, N. C.



368. Handcrafted ceramic tile
In addition to custom designs, Epro handmade ceramic tiles feature such collections as Heritage glazed and unglazed tiles, handpainted A La Carte, textured Sandstone, and desert-toned Chameleon. The mosaic courtyard pictured has handmade Gallery tile in custom-matched colors. Epro, Inc., Westerville, Ohio.



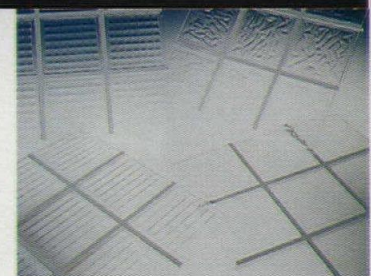
369. Coffered acoustic ceiling
The Metaphors system combines Class-A premitered molding, metal grid, and mineral or fiberglass panels into an easy-to-install coffered ceiling with the accessibility and acoustical performance of lay-in panels. Molding profiles include cove, crown, and step designs. Meets seismic codes. Armstrong World Industries, Inc., Lancaster, Pa.



370. Nonstreak grouts
New pigment technology for Keracolor wall and floor grouts promises to prevent pigment streaking and improve colorfastness. Available colors are pistachio, delft blue, misty blue, beajolais, bubble gum, and shrimp. Mapei Corp., Elk Grove Village, Ill.



371. Glazed tile
Sea Swept ceramic tile combines texture with a shimmering glaze in nine soft colors and 8- by 8-in. or 12- by 12-in. sizes. The Class IV glaze allows commercial as well as residential installations. Mannington Ceramic Tile, Lexington, N. C.



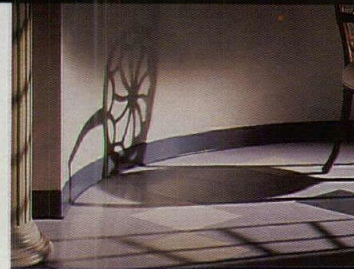
372. Luminous ceiling
The Transparencies line of luminous ceilings simulates the look of glass block with lighter-weight 2- by 2-ft acrylic panels laid into an exposed suspension system. Four patterns—crushed ice, ice cube, icicle, and melting ice—are available in clear or a pale green tint. USG Interiors, Inc., Cedar Rapids, Iowa.



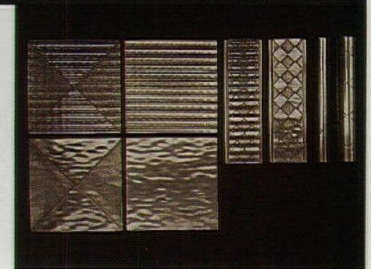
373. Traditional tile
Dura'ker Mediterranea from Floorgres is a line of traditional Italian ceramic tile that provides design and wear flexibility for use in all rooms. A wide palette in combination with a choice of glossy and matte surfaces offers versatility. Italian Tile Center, Italian Trade Commission, New York City.



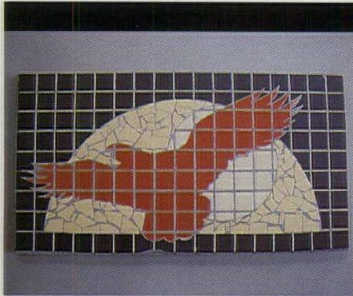
374. Simple ceilings
Simple swivel clips that snap into place are the basis for an updated ceiling system that suspends a series of baffles from Chicago Metallic Corp.'s standard T-bar grid. The variable system permits installation of acoustical tile as well. Chicago Metallic Corp., Chicago.



375. Flexible cove
High-grade rubber compound forms the base for Rubber Base Plus, for use with hard surfaces and carpeting. Offers dimensional stability, precision, and uniformity along with strong finish and color options. Flexco Co., Atlanta.



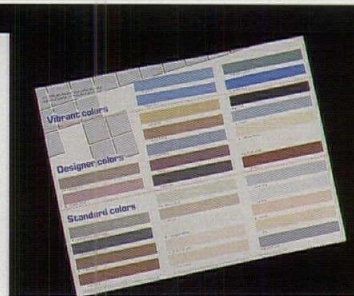
376. Light metal
Integrated metal composite (bronze, pewter, or copper, with a polymer and ceramic) wall tiles and trim are decorative, lightweight, and affordable. Questech tiles are easy to transport and install, and come in standard sizes for residential and commercial use. Intaglio, Middlebury, Vt.



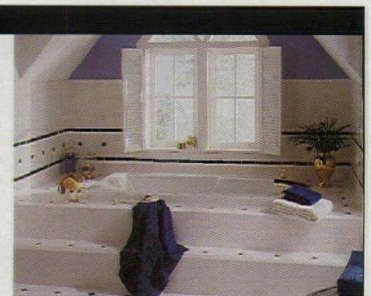
377. Mix and match
Robotically cut ceramic tiles can now be integrated with shattered mosaics and other contemporary execution techniques for a complex array of mosaics, including whole tile photomurals and graphics, and robotically controlled radius cutting techniques. Colorco, Merrimack, N. H.



378. Color coordination
A portable color specification system, ColorAnswers, comes in a compact case for on-site use. The package provides designers with samples of over 800 interior and 400 exterior paint colors; swatches include light reflectance values, and larger samples can be ordered. The Sherwin-Williams Co., Cleveland.



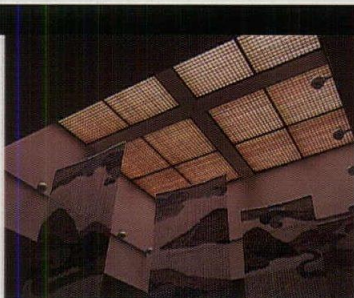
379. Versatile grout
Durabond LPG 250 is a latex-fortified floor grout containing dry polymers, allowing it to be mixed with water at the job site. For grouting of glazed or unglazed tiles, marble, thin-cut stone, quarry tiles, and brick. Available in 30 colors. DAP Inc., Dayton, Ohio.



380. Diamond showcase
A slightly abrasive finish to Companions 2 tiles gives the diamond-shaped tiles a leg up for installation in bathrooms and other slip-prone areas. The tiles can be matched with 18 available colors for center-floor or border decoration. Wenzel Tile Co., Trenton, N. J.



381. Stone cool
The look of quarry tile is the aim of the new vinyl-covered Quarry Collection of Durasan gypsum wall panels, available in Limestone, Claystone, Mica, and Blue Quartz finishes. The ready-made look avoids problems common to on-site faux-stone application processes. National Gypsum Co., Gold Bond Building Products Div., Charlotte, N. C.



382. Lovely louvers
A new 3/8-in. version of the nonmodular NWL-C-NM wood louver system offers a strong presence. Available in a variety of sizes and hardwoods, for luminous and nonluminous applications. Norton Industries, Cleveland.



383. Palette update
Newly added classic soft colors round out the Natura Vento residential floor tile series. The four new colors in muted tones bring the line of smooth, semi-matte tiles to 11 options. Florida Tile Industries, Inc., Lakeland, Fla.



384. Taking the floor
Arris Carpet Mills introduces its 20 carpet products with five new collections—Batik, Symphony, Tapestry, Interweave, and Variations—of four designs each. Made of Zeftron filament-dyed fibers, many are heathered for a broader palette and durability in a wide range of commercial installations. Arris Carpet Mills, Eton, Ga.



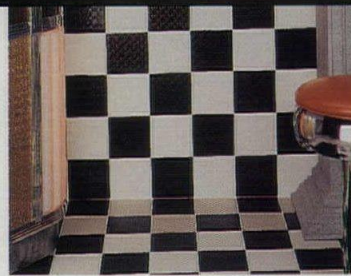
385. Carpet system

Flexflor carpets integrate woven interlock construction with attached-cushion features. The Tenure line, made of Antron Legacy continuous-filament nylon with soil-resistant properties, comes in a palette of cool and warm colors. Resists wear, edge ravel, zipping, delamination, and loss of tuft bind and cushion resiliency. Mohawk, Atlanta.



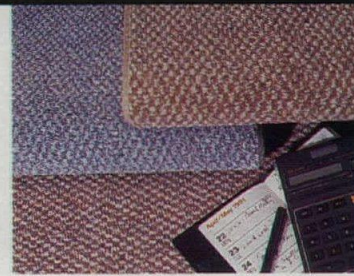
386. Ash hardwood flooring

The Longstrip line of five-ply prefinished laminated wood flooring comes in 7 1/2-in. wide, 7-ft 11 1/2-in. long, 1/2-in. thick boards in a variety of colors and woods. Pictured is Grand Canyon Natural, a golden-color ash. Harris-Tarkett, Inc., Johnson City, Tenn.



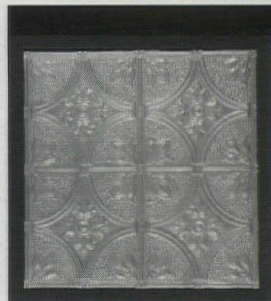
387. Wall tile

High-gloss, textured-finish Trix wall-tile series is available in three relief patterns: Rope, Houndstooth, and Contours. The 6- by 6-in. tiles come in black, white, and bone. Laufen International, Tulsa, Okla.



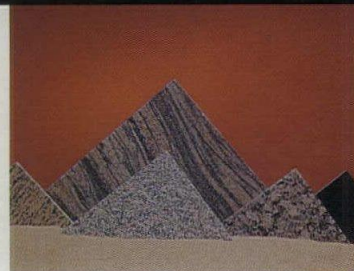
388. Contract carpet

Analogy 36 and Analogy 42 cut-pile carpet features Allied Fibers' Anso IV HP nylon fiber. The tightly tufted patterned carpet by Hollytex of California, suited for high-traffic areas, comes in 18 multicolors styled to coordinate with the Hollytex Ridgecrest II loop-pile and Reliant II cut-pile series. Allied Fibers Div., New York City.



389. Tinplate tradition

In a style suggested by the Victorian original, the 1-ft-sq pattern pictured comes in 2- by 2-ft sheets finished with electrolytic tinplate, which is said to have excellent paint-retention properties. A tinplate cornice is also available to match the ceiling panels. Chelsea Decorative Metal Co., Houston.



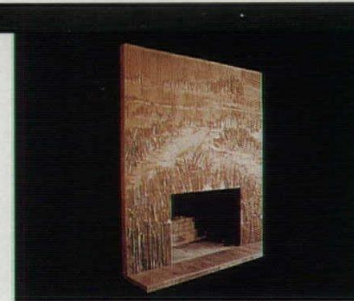
390. Granite tile

Quarried in North America, Tulinor tiles come in eight colorways, from Stanstead gray to Nordic black; others on request. Tile widths range from 8 in. to 24 in.; lengths from 8 in. to 10 ft.; thicknesses between 3/8 in. and 5/8 in. Suitable for interior walls and floors, and counter tops and sides. Tulinor USA, Garfield, N. J.



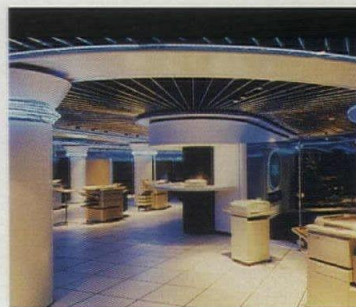
391. Golden Age wallcoverings

Inspired by the decor and furnishings from Newport summer "cottages," Gilded Age re-creations include Fusina, a hand-printed ceiling paper; Mezza Majolica, an architectural border; and Bernini, a companion wallpaper. The turn-of-the-century collection includes a line of fabrics and trimmings. Scalamantré, New York City.



392. Ceramic fireplace

Custom-designed and hand-textured, Marsh Grass is crafted from ceramic sculptural tiles for fireplace surrounds and walls. Also available is Fire and Clay, a wall relief in glazed black tiles; and Fired With Distinction, neutral tiles for custom fireplace walls and mantles. Design Technics, New York City.



393. Baffle system

The Intaline 440 baffle for commercial spaces is suited for vast ceiling areas such as shopping centers, large halls, public areas, and lobbies. Available in a variety of heights, lengths, and colors, the system creates a linear-patterned ceiling plane that may run at any angle to walls, or be arranged in patterns. Alcan Building Products, Mesquite, Texas.



394. Floor tiles

Raised-access tiles for open-office environments, labs, and control rooms come in 15 standard colors, coordinating with Endura rubber tiles, stair treads, risers, and cove bases. The nonglare tiles are 24- by 24-in., slip-retardant, sound-absorbent, and self-waxing and self-healing. Comfortable to work or stand on. Endura, Waltham, Mass.



395. Antislip safety flooring

Tractionfloor consists of aluminum oxide chips dispersed through industrial-strength sheet vinyl. Smooth and studded versions come in an extended color range. Recommended for high-moisture areas and industrial plants as well as restaurants and stores, each roll is 79 in. wide and 98 ft. long. Forbo Floor Coverings, GlenAllen, Va.



396. Ceiling panels

Additions to the Cirrus line of acoustical ceiling panels feature made-to-order fixture openings incorporating the same edge pattern as the panel itself. Ranging in size from 3 1/2 in. to 16 in. wide, the openings are centered in each panel, eliminating field cutting. With classic, bullnose, and beveled edge details. Armstrong World Industries, Inc., Lancaster, Pa.



Patent Pending

C/S ANNOUNCES THE DAWN OF A NEW AGE IN EXPANSION JOINT TECHNOLOGY

Unsightly floor joints with missing gaskets and dirt collecting voids have been a serious maintenance problem, tripping hazard and visual disgrace for years.

But now there's a solution! C/S has developed a flush expansion joint cover system with clean, simple lines. It provides for multi-directional movement — up to 50% — *without loss of seal* and is available for 1" through 16" openings.

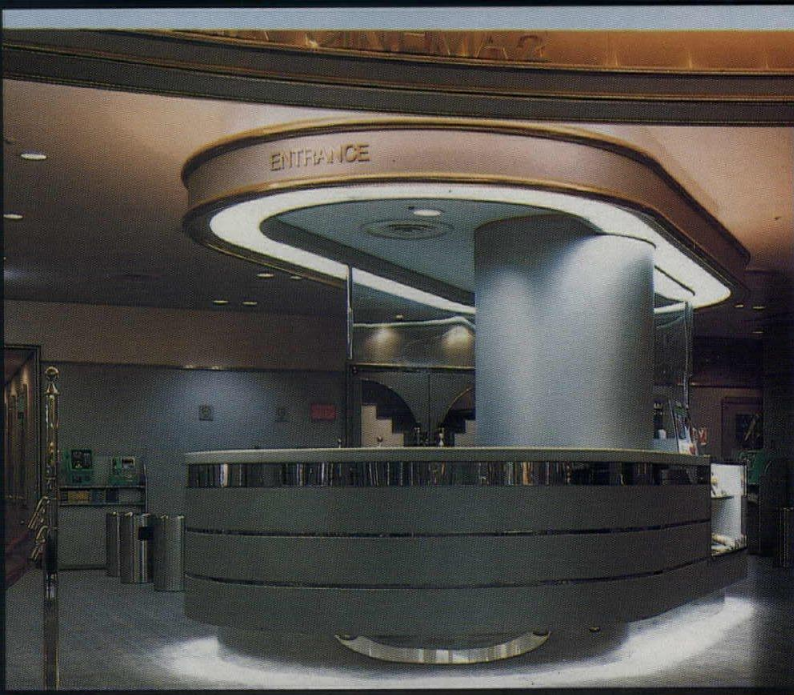
The design features rugged aluminum components and gaskets of a co-extruded thermoplastic material

to smoothly accommodate both pedestrians and wheeled equipment. Gaskets may be custom colored for larger projects and the center plate recessed to accept tile or carpet for the ultimate unobtrusive look. Best of all, C/S Flush Seals cost no more than conventional joint systems.

A new age in expansion joint technology is now here — even for seismic applications! Call 800-233-8493, our technical staff is ready to assist you.

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Introducing **belbien** durable vinyl film, a permanent surfacing as flexible as your imagination.

Belbien offers designers an extraordinary and large selection of patterns and colors. Add to this Belbien's unique flexibility that makes it easy to apply to rounded and curved surfaces. It is a combination of features that is unequalled.

Designers can select from striking designs and from patterns that simulate natural stones, sand tones and woods. Belbien provides an opportunity to enhance the appearance of any surface, exterior as well as interior. Literally, Belbien can create an atmosphere.

New to America, Belbien vinyl film has proven itself in over a decade of use in other countries. This is the beginning of a Belbien era in wall and surfacing design.

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Chicago Metallic offers you a broad range of products, exceptional beauty, outstanding performance and a comprehensive color palette.

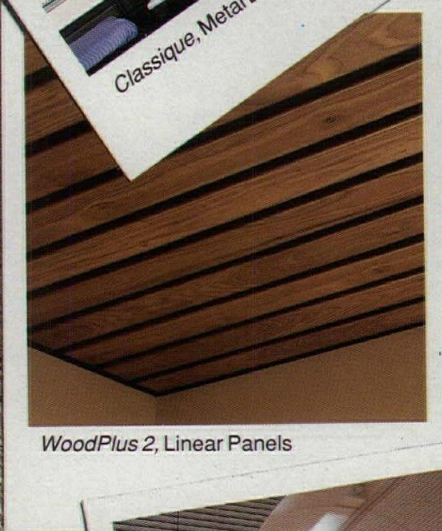
Linear parallel beam ceilings, metal lay-in ceiling panels and open cell systems all from a single source.

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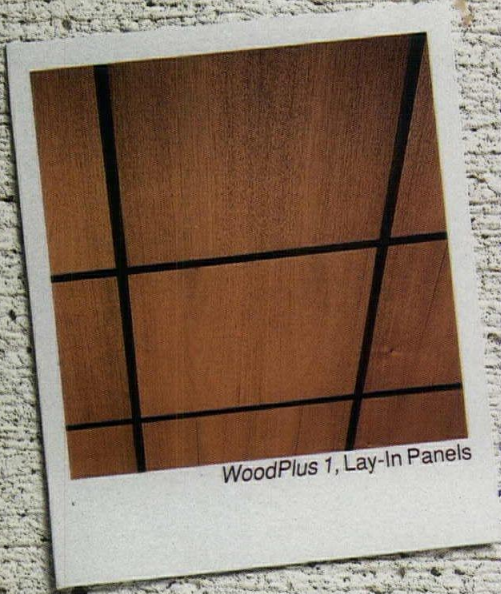
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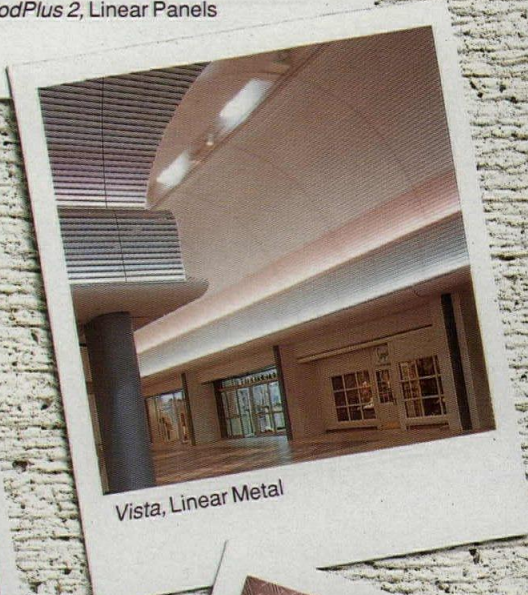
Classique, Metal Lay-In



WoodPlus 2, Linear Panels



WoodPlus 1, Lay-In Panels



Vista, Linear Metal



MirrImage, Metal Lay-In



Cube, Open Cell



Ornametal, Stamped Metal Panels

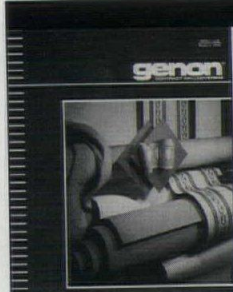
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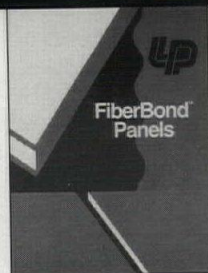
397. Contract wallcoverings

Catalog illustrates vinyl wallcoverings available in both 54- and 27-in. collections, and explains the Color System, which coordinates wallcovering colorations with laminates, upholsteries, carpet, and other interior-design materials. Complete performance specifications listed. GenCorp Polymer Products, Hackensack, N. J.



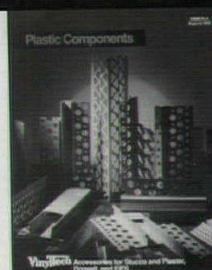
398. Acoustic wall treatments

Architectural design catalog shows how Soundsoak fabric-covered walls are put together, lists flamespread, noise-control, and other technical data, and includes product close-up and installation photography. Also shown are Painted Nubby panels, a durable panel for institutional walls. Armstrong World Industries, Lancaster, Pa.



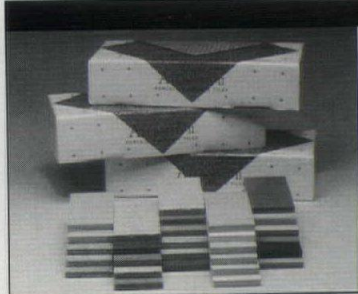
399. Reinforced-gypsum panels

FiberBond is a new, nonpaper-faced gypsum board reinforced with cellulose fibers from recycled paper. It offers fire-resistance ratings identical to the same thickness of gypsum board, but needs no joint taping prior to decorative treatment. Louisiana-Pacific, Inc., Portland, Ore.



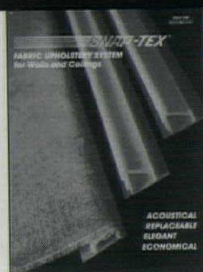
400. Plaster accessories

Illustrated technical brochure describes a line of PVC joints, reveals, beads, and other items for use with plaster, drywall, EIFS, and stucco. Material will not dent or crack, will not rust or react with plaster or cement, and takes paint well. Plastic Components, Inc., Miami.



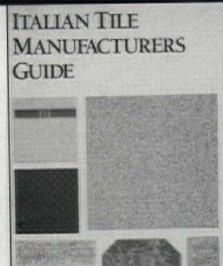
401. Porcelain tiles

A chip box offered to the design professional samples all 28 colors of Atlantis II porcelain-ceramic tile, with each 2- by 4-in. loose tile displaying its color in both polished and matte surface options. Buchtal, Roswell, Ga.



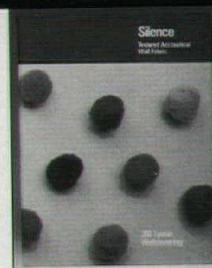
402. Wall upholstery

Catalog contains color photos and installation details on the Snap-TEX fabric upholstery system for walls and ceilings. The PVC splines are said to lock the material tightly for taut, slip-proof acoustic treatments. Snap-TEX Systems, Inc., Rockland, Mass.



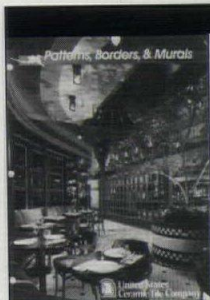
403. Italian ceramic tile

Produced by the Italian Trade Commission, a new guide lists all Italian manufacturers active in the American tile market, cross-indexing product information by tile type, use, and designer. An on-line computer service sources distributors and outlets for all tile. Italian Tile Center, New York City.



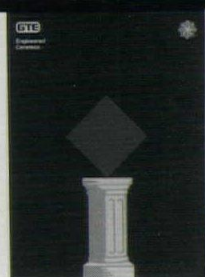
404. Acoustical wall fabric

Sample book highlights the range of contemporary colorations offered in Silence wall fabric, a Class A-rated line of textured wallcoverings said to be moderately priced. J. M. Lynne, Smithtown, N. Y.



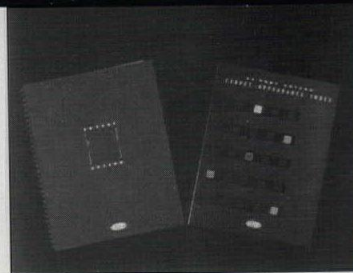
405. Tile mosaics

A Patterns, Borders & Murals brochure displays patterns in suggested two-color designs that can be augmented with tiles in any of over 50 colors to achieve a custom effect at a minimal cost. United States Ceramic Tile Co., East Sparta, Ohio.



406. Glass-bodied porcelains

Technical guide covers the performance benefits of Prominence tile, now available in 30 monochromatic and polychromatic colors. Made with glass reclaimed from the manufacture of light bulbs, the tile is very exactly dimensioned. GTE Engineered Ceramics, Wellsboro, Pa.



407. Carpet specification

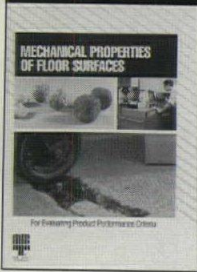
Designers kit includes information on Antron nylon fibers appropriate for specific commercial and institutional requirements, such as disinfection, and lists full carpet-performance data. An accompanying illustrated guide suggests carpet-maintenance procedures. DuPont Flooring Systems, Wilmington, Del.



408. Resilient flooring

A 36-page catalog illustrates all Azrock commercial vinyl-composition and solid-vinyl tile, cove base, and other floor products, including wood-plank styles, inlays, and realistic stone-looks. Expanded technical section includes data on light-reflectance values and adhesive selection. Azrock Industries, Inc., San Antonio.

For more information,
write item numbers
on Reader Service Cards



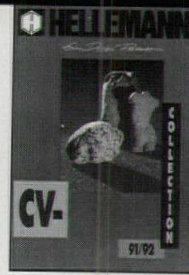
409. Floor-surface properties

A 10-page color manual details mechanical properties—toughness, abrasion and impact resistance, liquid absorption, and surface qualities—of concrete flooring treated with iron-aggregate dry-shake surface hardeners and topping. Master Builders, Cleveland.



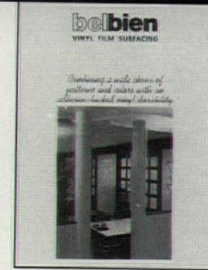
410. Fiberglass wall surface

A 32-page brochure illustrates and provides samples of the Interglas line of woven-fiberglass wall-coverings. Said to be particularly useful for renovation, the product reinforces underlying wall materials as well as provides a durable paintable surface. Interglas, Los Angeles.



411. PVC floor covering

A 72-page color brochure illustrates the Hellemann Collection, an extensive line of four-ply PVC floor coverings in a wide range of patterns and colors. Hellemann GMBH, Seminole, Fla.



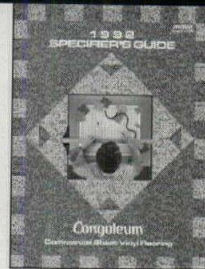
412. Vinyl film surfacing

Belbien, an adhesive-backed vinyl film designed as an interior or exterior surfacing for walls and furnishings with a variety of substrates, is detailed in a color brochure. Technical data and suggested specifications are included. C. I. Kasei Co. Ltd., New York City.



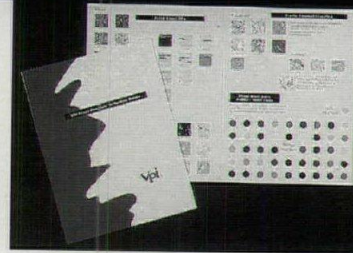
413. Broadcast epoxy flooring

Loose-leaf binder sheets illustrate and provide technical data on the Series 222 Deco-Tread flooring system, which combines ceramic granite aggregate with liquid epoxy to provide a durable broadcast flooring. Tnemec Company, Kansas City, Mo.



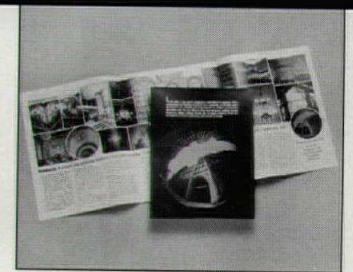
414. Sheet vinyl flooring

The 1992 Specifier's Guide gives performance and technical data on the Marathon and Flor-Ever lines of commercial sheet vinyl flooring. Patterns are illustrated in full color. Congoleum Corp., Mercerville, N. J.



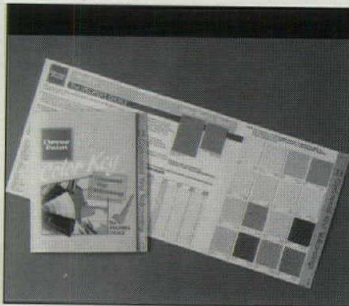
415. Flooring selection guide

Eight-page foldout displays all colors and patterns available in the VPI lines of solid-vinyl floor tile, static-control tile, vinyl and rubber wall bases, and sheet-vinyl flooring for commercial applications. Vinyl Plastics Inc., Sheboygan, Wis.



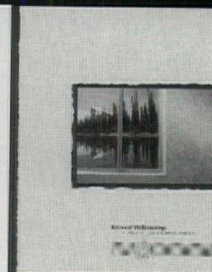
416. Decorative arts and crafts

Current installations are featured in a brochure describing the work of the Rambusch studio in the design and execution of architectural decorative arts including stained glass, art metal, woodworking, specialized painting, and murals, mosaics, and sculpture. The Rambusch Co., New York City.



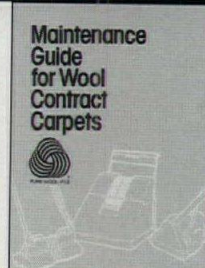
417. Color-matched wallcovering

The "Specifier's Choice" line of vinyl wallcoverings makes available several weights and color selections that include the 860 colors in Devoe's Color Key program, as well as made-to-match custom colors. Devoe & Reynolds Co., Louisville.



418. Wallcovering guide

A compact eight-page reference guide provides an overview of product features in addition to basic specifications for Koroseal vinyl and textile wallcoverings. Koroseal Wallcoverings, Fairlawn, Ohio.



419. Wool carpet maintenance

A maintenance guide for wool contract carpets gives illustrated step-by-step directions for daily and periodic cleaning. A pocket-size stain-removal guide is included. The Wool Bureau, Atlanta.



420. Stair- and floorcoverings

A 16-page, color brochure provides full selection and specification information for a complete line of rubber flooring, including entry flooring, stair coverings and treads, raised-design tiles, and specialty items. Musson Rubber Co., Akron, Ohio.



421. Textured-steel panels

Baked-on polyester finishes improve color control and reduce maintenance as well as initial costs, according to the manufacturer. The new textured-finish option is available on Designer Wall, Ultramovable, and Ready Wall systems. Clestra-Hauserman, Inc., Cleveland.



422. Clean-burning fireplace

The Free-Flame factory-built fireplace is said to reduce particulate matter in wood-smoke pollution by more than 50 percent. The UL-approved unit burns as cleanly as an EPA Phase II heater, says the manufacturer. Majestic, Div. of Majco Building Specialties, L. P., Huntington, Ind.



423. Commode compartments

Solid phenolic-core toilet, shower, and dressing compartments discourage warping and delaminating under high-moisture conditions. Nonferrous hardware permits hose-down cleaning. Overhead-braced, floor-mounted, and ceiling-hung versions come with Melamine surfaces in colors, wood grains, and textures. Metpar Corp., Westbury, N. Y.



424. Office panels

Segmented glass panels in clear, tinted, or frosted glass alone or in combination with acoustical fabric-covered flush inserts are part of the new Corporate Designer line. In addition to ceiling-high partitions, an open-office system, Sounddivider, is also available. Transwall Corp., West Chester, Pa.



425. Bath enclosure

Heavy (3/8-in.) clear tempered glass is available in "frameless" bath and shower enclosures, in standard designs and sizes as well as custom configurations. Doors are self-closing; minimal trim pieces come in gold, silver, and black-anodized metallic finishes, or any of five paint colors. Basco, Cincinnati.



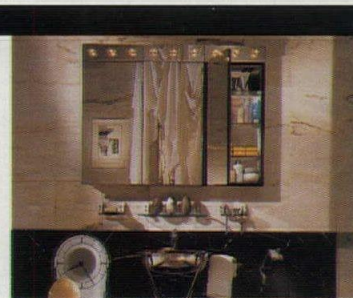
426. House numbers

A joint effort by architect Anthony Pellecchia and graphics designer Kathy Wesselman, house-number signs are 4 1/2-in. sq. and will retail for \$7.50 each. Backgrounds are silver- or gold-colored anodized metal. Numerals are a 16th-century typeface silkscreened in blue. The Markuse Corp., Woburn, Mass.



427. Signage system

The Manhattan identification concept is based on enamel-finished aluminum panels in 15 standard sizes, from 5- to 88-in. in height, that can be stacked in any combination to create over 700 individual shapes of self-supporting signs. Graphics can be vinyl cut letters, silk-screened, laser-cut for backlighting, etc. Modulex, Inc., Racine, Wis.



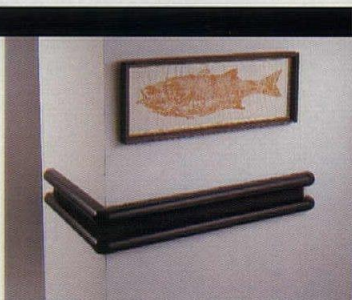
428. Illuminated cabinet

Mirrored top-lighting strips are a new option for this maker's MT series of decorative bath cabinets. The full-mirrored doors come in 16- and 20-in. widths that can be hung in series for a butt-glazed effect. Mirrors feature automatic electric defogging. Robern, Inc., Bensalem, Pa.



429. Tactile signage

Best's Graphic Blast process facilitates production of tactile and Braille-symbol signage that meets the requirements of the American with Disabilities Act for use by visually handicapped persons. Signage materials are fire-resistant, with integral color. Best Mfg. Co., Montrose, Colo.



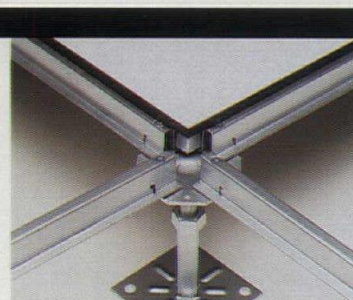
430. Wall protection

The Pro-Tek wall-covering bumper strip is a new decorative accessory for high-usage walls, one that also provides impact protection. Available in 13 colors, guards may be installed in parallel rows or at angles to create designs, or separated with a matching or contrasting strip of Pro-Tek wallcovering, as shown. Pawling Corp., Pawling, N. Y.



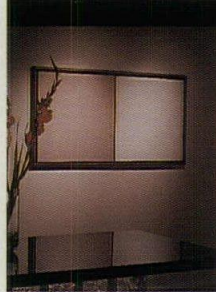
431. Electronic directory

Touchcom computerized directories are touchscreen monitors, which offer interactive, up-to-the-minute wayfinding. Housed in custom-design kiosks, as shown, or placed in a lobby wall, Meets ADA access requirements, with graphics that are easy to coordinate with static architectural signage. Digital Techniques, Inc., Burlington, Mass.



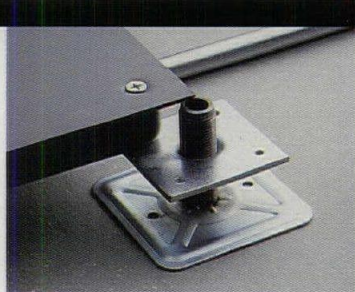
432. Quiet access floor

The Tec-Cor II panel is a steel/concrete composite said to be quiet and clatter-free under foot traffic, with minimal deflection under heavy rolling loads. It is noncombustible; its all-steel pedestal assembly permits a finished-floor depth as low as 4 in., with 1/64-in. adjustments. C-Tec, Inc., Grand Rapids, Mich.



433. Boards

Tactics is a collection of erasable "communication" boards constructed from porcelain enamel. Frames come in five different profile shapes and 12 wood and aluminum finishes. Tackable fabric and cork side panels can be specified. Peter Pepper Products, Inc., Compton, Calif.



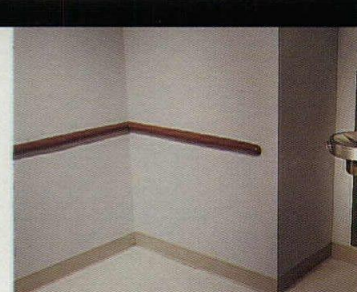
434. Low-height access floor

A new configuration of this manufacturer's raised-floor system, the Low-Loc pedestal can be used with finished floor heights as low as 3-in., and is said to make access floors practical in any general office area, including those with limited floor-to-ceiling space. USG Interiors, Inc., Chicago.



435. Bathroom cabinet

The Sonata over-sink bath cabinet features three beveled-edge mirrors matched to create a single curved arch. For surface mounting, the frameless design comes in widths of 30- and 36-in., each 32-in. high. Exposed side panels are bright-finish stainless steel. Broan Mfg. Co., Inc., Hartford, Wis.



436. Wall guard

The Boston Bumper wall and corner guard is made of flexible colored vinyl. Its channeled back configuration locks into a concealed, wall-mounted aluminum frame to achieve a vandal-resistant assembly, according to the manufacturer. Six profile shapes are available. Custom colors can be specified. Boston Retail Products, Medford, Mass.



437. Soap dish

Part of the manufacturer's line of bathroom accessories, the 476.2.110 soap dish has a base that can be affixed to the wall with toggle bolts. The nylon holder comes in 13 colors, and the soap-dish insert can be ordered in clear or smoked glass. Coordinating towel racks are available in three sizes. HEWI, Inc., Lancaster, Pa.



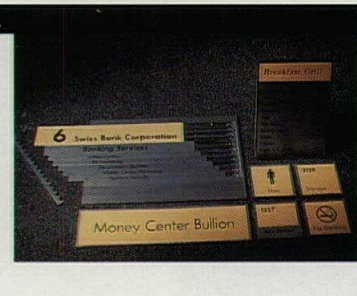
438. Wood-burning stove

Newly introduced in the U. S., the manufacturer's Series 8 cast-iron woodstove is made of recycled scrap metal. The unit burns 2 lb of wood/hour and has a 72.2-percent efficiency rating; meets EPA Phase II emissions standards. A graphite or porcelain enamel finish can be specified. Jotul USA, Inc., Portland, Maine.



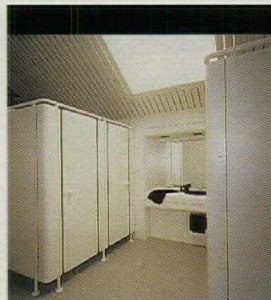
439. Carved signage

Flow International's Paser cutting system, which uses a thin stream of water mixed with common abrasives and pressurized to 55,000 psi, is used to make signage letters from such materials as steel, marble, and ceramic tile. A variety of baked enamel and matte or polished stainless-steel finishes is available. Steel Art, Boston.



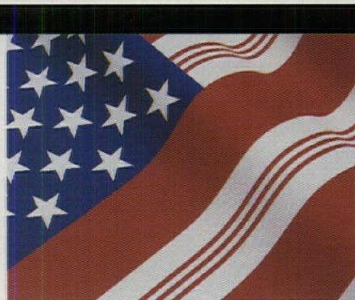
440. Interactive graphics

Infonorm is an extruded-aluminum sign system composed of a back plate with guides onto which interchangeable sign faces can be secured by a vandal-resistant locking device. Standard hardware can be used for installation. Infonorm, New York City.



441. Wall cladding

The manufacturer's Type W decorative wall panels for sanitary applications are constructed of the setting resins reinforced with cellulose fibers and covered with Melamine. The panels are said to be waterproof and rotproof. W & W Sales Ltd, Spring Valley, N. Y.



442. Awning canvas

Gulf Stream, a classic cotton-duck awning fabric, is now offered in an acrylic-painted polyester/cotton blend said to exhibit exceptional abrasion resistance and tensile strength. The fabric comes in a 31-in. width and a variety of solids and stripes. John Boyle & Co., Statesville, N. C.



443. Towel warmer

The manufacturer's new Cathedral arched towel warmer produces 1,650 Btuh and is 43 in. tall and 24 in. wide. The unit is available in chrome, brass, or gold plate. Myson, Inc., Fredericksburg, Va.



444. Fireplace

The Blair House Garden Room fireplace was designed by classically inspired architect Allan Greenberg. Part of the manufacturer's Masters Collection of hand-carved fireplaces, the unit—shown here in travertine—can be specified in one of 50 materials, including marble, onyx, and alabaster. Petrafinna, New York City.

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With Dowcraft's Benchmark Series I exciting executive offices can be here today, there tomorrow.



Elegant offices don't have to be hammered together with studs and drywall to look and feel permanent. By designing with Dowcraft's Benchmark Series I unitized steel movable walls, work spaces fit for a president can also fit into a program of flexible facility management.

Unitized steel construction means that these walls, whether they're solid or glazed floor to ceiling, can be moved over and over without the kind of inventory loss suffered when moving

demountable gypsum type panels. Most importantly, this system doesn't cramp good taste or limit contemporary design thinking. Benchmark Series I offers up an almost unlimited palette of trim colors, fabric coverings, and glazing possibilities — plus

customized design options.

For added flexibility, Benchmark's recessed feature strip can be removed to reveal a slotted vertical which accepts a variety of hang-on furniture. With optional unitized base and modular 8 wire electrical system, ultimate design freedom is achievable.

To help you design suites that move when the president wants them to, Dowcraft offers a complete package of literature and technical details. For information call, write or fax.

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Sunbrella® Gets Put Up In All The Best Places.

From grand hotels to office

to restaurants, most any building can accommodate Sunbrella acrylic canvas or Sunbrella Firesist® canvas. Sunbrella Firesist meets the specifications of the National Fire Protection Association and the California Fire Marshal's test.

Both fabrics are ideally suited for customized graphics, backlit or not. And indoors or out, our fabrics are perfect for everything from awnings to canopies to privacy screens to cabana covers, and we always have a design to suit. Sunbrella is available in over 90 handsome solids, stripes and patterns—more than any other acrylic—and Sunbrella Firesist is available in 23 styles.

buildings to shopping centers



But more than looking great, our fabrics are incredibly tough. Since they're solution-dyed acrylic, they retain their colorfastness and strength for years. And they resist damaging mildew and mold attacks. So it's no wonder we offer the best five-year limited warranty in the business.

Fact is, Sunbrella is the #1 acrylic awning and marine fabric in America, which means you can specify it without reservation. Just look in the Yellow Pages under "Awnings and Canopies" for the name of the dealer nearest you.

Sunbrella Firesist[®]

Glen Raven Mills, Inc., Glen Raven, NC 27217

[®]Registered trademark Glen Raven Mills, Inc. All fabric treatments made of Sunbrella Firesist



Circle 1037 on inquiry card

“Solid Phenolic” The Toughest Plastic You Can Buy

If your building renovation or new construction project calls for toilet, shower or dressing compartments that will never warp or delaminate under high moisture or humid conditions – even strong hose-down cleaning – Metpar Solid Phenolic is your answer.

Extreme rigidity and density provides high impact strength. Melamine surfaces are abrasion-resistant and easy to clean. Available in overhead braced, floor mounted and ceiling hung styles. Offered in a wide range of colors and wood-grain finishes, with stainless steel hardware that combines tempered strength, corrosion resistance and design excellence.

Of greatest importance, Metpar chooses phenolic, not H.D. polyethylene, because Metpar promotes safety.

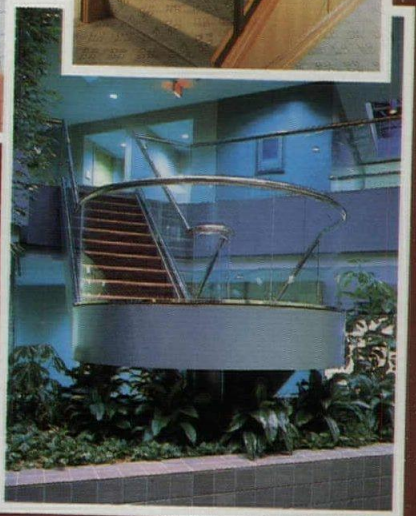
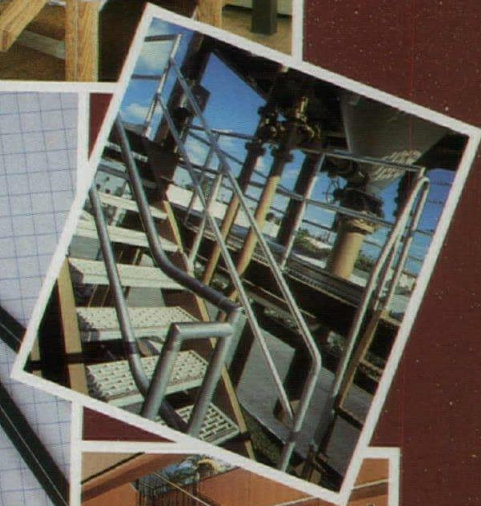
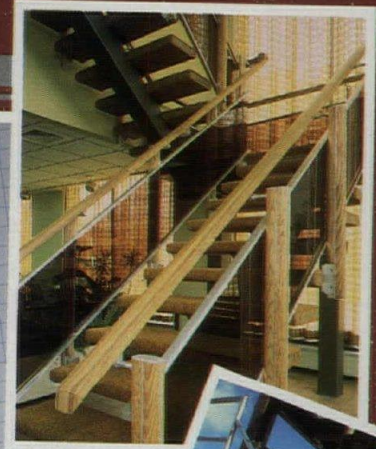
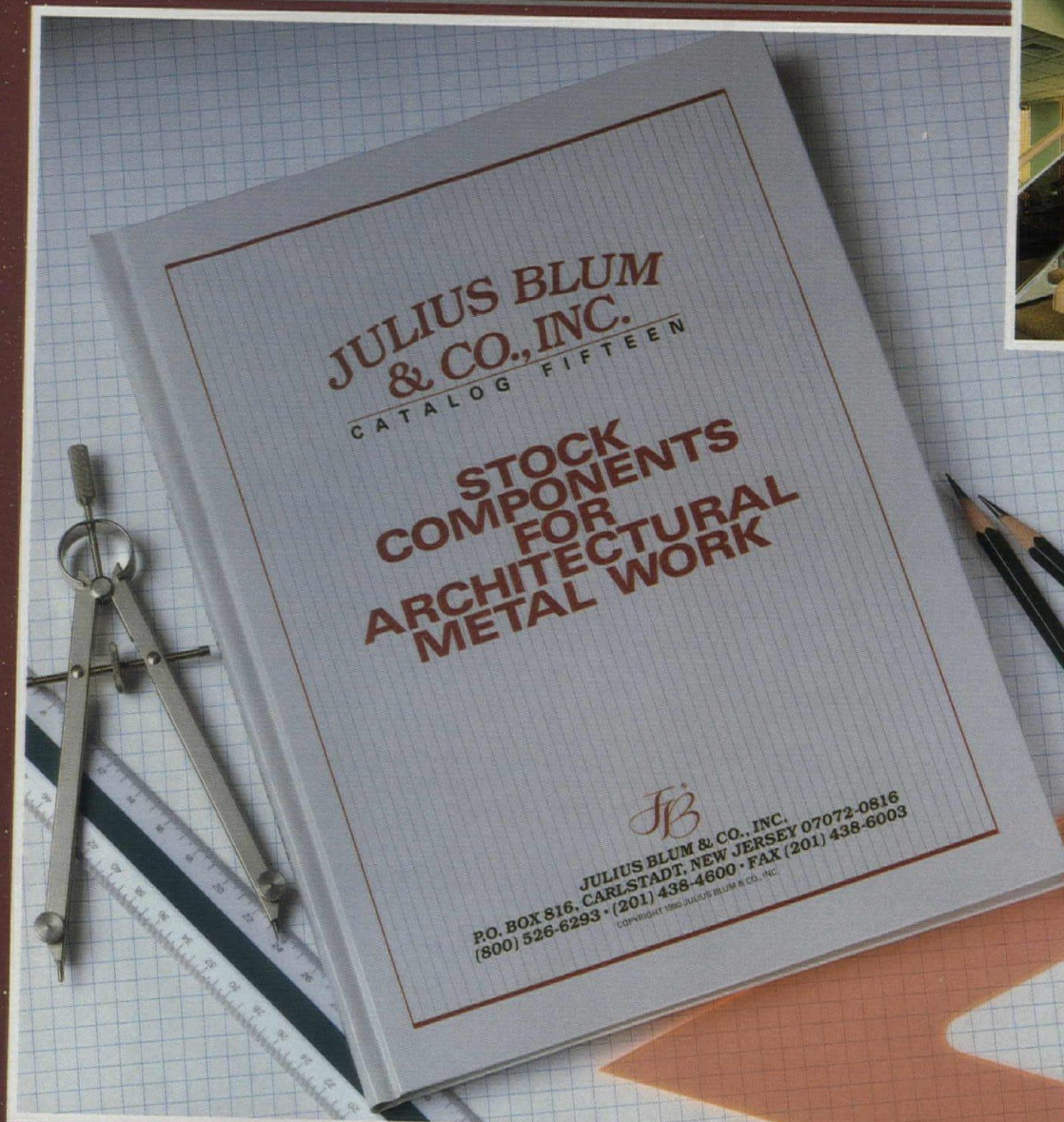
*To get the phenolic facts, and your **free catalog**, contact Metpar Corp., 95 State Street, Westbury, NY 11590
(516) 333-2600
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CATALOG 15

YOUR COMPLETE SOURCE



Since 1910, Julius Blum & Co. has provided ornamental metal components of high quality to the architectural trades. Today, Julius Blum & Co. is the industry's most complete source for architectural metals. Our latest publication, *Catalog 15*, describes our full line of architectural metal components:

JB® Glass Rail — Metal railing components for use with 1/2" and 3/4" tempered glass.

Connectorail® — Non-welded pipe railing system in aluminum, bronze and stainless steel.

Colorail® — Extruded plastic handrail in 12 stock colors and 10 stock shapes.

Carlstadt® Railing Systems — Versatile post and rail systems in aluminum, bronze, stainless steel, and acrylic/wood.

Traditional Railings — Handrail, trellage, fittings, and decorative ornaments in aluminum, bronze, steel, and stainless steel.

Elevator Cab Components — Elevator sills, handrail and brackets suitable for vertical mounting in elevator cabs.

Handrail Brackets — Wall, post and vertical mounting brackets for all handrail types.

Expansion Joints, Thresholds and Mouldings.

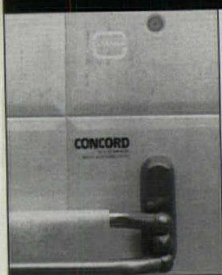
Tubing, Bars & Shapes in Bronze, Aluminum, Steel and Stainless Steel.

Catalog 15 also includes a complete Engineering Data section to assist in the proper structural design of various handrail systems.

Contact Julius Blum & Co. for your copy of *Catalog 15*.

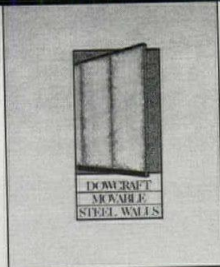
JB JULIUS BLUM & CO., INC.

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800-526-6293 (201) 438-4600 FAX: (201) 438-6003 Circle 1039 on inquiry card



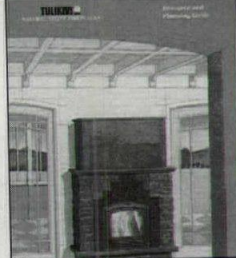
445. Bathroom accessories

Literature illustrates the Concord line of solid-brass bathroom fixtures. Products shown include single and double towel bars, towel rings, single and double hooks, glass holders, soap dishes, and toilet-tissue holders. Polished and lacquered finishes are available. Omnia Industries, Cedar Grove, N. J.



446. Movable walls

A color brochure describes a line of unitized steel floor-to-ceiling movable walls designed for commercial or institutional workspaces. Details on design and engineering characteristics and illustrations of cutaway sections accompany descriptions and photos of three offered systems. Dowcraft, Falconer, N. Y.



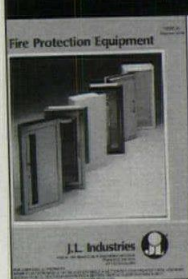
447. Fireplaces

A resource and planning guide explains the characteristics of wood-fired thermal mass fireplaces. In addition to information on such general topics as chimney draft and radiant and convective heat, the guide focuses on the manufacturer's 30 models of soapstone fireplaces, including designs by Eliel Saarinen. Tulikivi Group, West Lebanon, N. H.



448. Merchandising panels

An eight-page color brochure describes and illustrates Displawall grooved panel systems for versatile retail interiors. The slotted walls consist of a medium-density fiberboard core with a choice of standard and specialty finishes. The literature includes product specifications. Marlite, Dover, Ohio.



449. Fire protection

Fire extinguishers and extinguisher cabinets in a variety of styles and finishes are illustrated in a 12-page color brochure. Featured is the new FX Option for cabinets in fire-rated walls. Product photos, dimension tables, specifications, and ordering information are included in the literature. J. L. Industries, Bloomington, Minn.



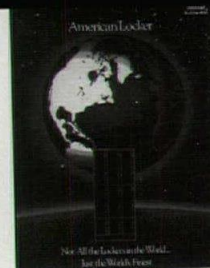
450. Toilet compartments

A 12-page color catalog features the Designer, TrimLine, and DuraLine Series of toilet compartments, screens, and dividers. The literature shows edge-detail photos and emphasizes fire-resistant solid-phenolic-core compartments of the company's 1180 DuraLine Series, including ASTM E-84 test results. Bobrick, North Hollywood, Calif.



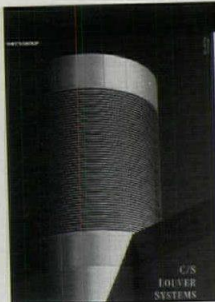
451. Cast-iron stoves

An eight-page color brochure features three models of cast-iron stoves that burn pellets recycled from waste wood. Cutaway drawings reveal the stoves' combustion systems, all of which have a screw-auger method of transferring pellets from storage hopper to combustion area. Pyro Industries, Burlington, Wash.



452. Lockers

Coin- and key-operated steel security lockers are featured in a 12-page color brochure. High-security evidence-room and pistol systems are offered along with lockers for large and small parcels. Specifications, installation data, and available sizes and colors are included in the literature. American Locker Security Systems, Jamestown, N. Y.



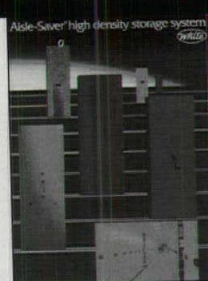
453. Louver systems

A 32-page booklet outlines a variety of single- and double-louver systems, focusing on the company's new 55% High Performance Standard and Drainable louvers. The louvers feature a patented external drainage system that directs water away from the building to minimize facade staining. Construction Specialties, Muncy, Pa.



454. Display equipment

Catalog 92 is the manufacturer's current 48-page directory of chalkboards, display cases, easels, projection screens, lecterns, and other display equipment. Drawings and photos illustrate available products, which come in a variety of sizes, materials, and finishes. Claridge, Harrison, Ark.



455. Storage systems

A 20-page color brochure describes and illustrates Aisle-Saver manual, mechanical-assist, and electric high-density storage systems. The systems, available in several colors and sizes, allow the user to open an aisle whenever necessary. The brochure shows sample applications and floor plans. White Storage & Retrieval Systems, Kenilworth, N. J.



456. Panels

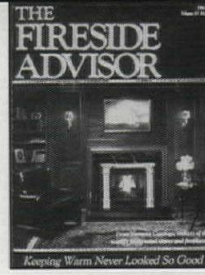
A 4-page insert gives general characteristics, specifications, and available colors of Trespa solid-phenolic-core panels. Suitable applications for the panels include public restrooms, labtops, and hospital and clean-room wall linings. The Mills Co., Cleveland.



457. Hospital and washroom
Stainless-steel accessories such as towel and soap dispensers, grab bars, cabinets, and trash bins are covered in a 48-page catalog. Intended for commercial, hospital, school, and hospitality applications, the line includes many products designed especially for those with special needs. A & J Washroom Accessories, Inc., New Windsor, N. Y.



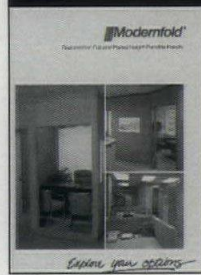
458. Decorative lockers
Fiberesin's Personal Storage Units are said to be made "in the tradition of fine furniture," with concealed hinges and finish options that include solid-oak raised-panel doors as well as colored and wood-grain laminates. Catalog illustrates locker styles and coordinated seating. Fiberesin Industries, Inc., Oconomowoc, Wis.



459. Wood-burning manual
The Fireside Advisor, a 50-page booklet available without charge to design professionals, explains the fuel-burning efficiencies of woodstoves and fireplaces, and illustrates different stove options, including pellet stoves and gas-heating fireplaces. Vermont Castings, Inc., Randolph, Vt.



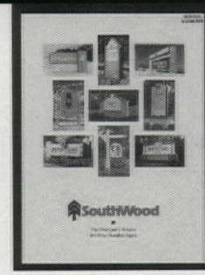
460. Fire-protection equipment
Decorative and utilitarian fire-extinguisher and hose-storage cabinets are covered in a 16-page catalog that also includes fire-suppression equipment and signage. Samson Metal Products, Inc., Los Angeles.



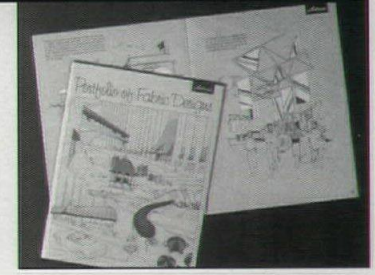
461. Operable partitions
"Creative Ideas in Space Division", a project portfolio included in the manufacturer's new architectural products manual, illustrates the concept behind operable walls, accordion partitions, and portable panels in settings compatible with each wall type. Modernfold, Inc., New Castle, Ind.



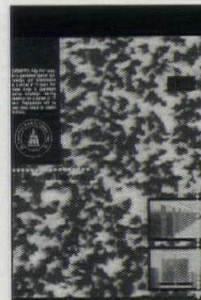
462. Building-component CAD
ThyCurb now offers its full building-product catalog on a PC-compatible disc. For use with AutoCAD, the program supplies detail drawings of roof curbs, hatches, equipment supports, expansion joints, smoke vents, exhaust hoods, louvers, and ridge vents, as well as ASCII-format specifications. ThyCurb, Addison, Ill.



463. Wood signage
A four-page architectural brochure demonstrates the decorative potential of dimensional signs made of carved wood. The signs are offered in standard and custom designs that supply identification, directions, and information for housing sites and other environments. SouthWood Corp., Charlotte, N. C.



464. Banners and awnings
A 24-page design portfolio has been prepared to demonstrate the dramatic esthetic impact possible with fabrics. The guide includes ideas from simple vertical banner treatments to the use of awnings and fabrics as an integral element in a building design. Astrup Company, Cleveland.



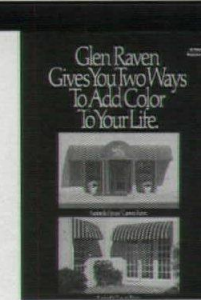
465. Toilet partitions
Cubicles rugged enough for washrooms in national parks, schools, and arenas are made of high-density polymer-resin and solid-phenolic-core panels. An eight-page catalog includes color photos and installation details, highlighting the systems' "virtually unbreakable" continuous hinge. Capitol Partitions, Inc., Columbia, Md.



466. Storage shelving
Brochure describes the Aurora Quik-Lok shelving system, said to yield more linear filing space than conventional shelving. Shelves assemble with no cross-bracing or exposed fasteners, and offer a range of color and finish options. Richards-Wilcox, Aurora, Ill.



467. Low-profile access floor
The Cablefloor is said to be a quick, economical, and space-saving way to distribute power and data wiring. Pedestals of UL-listed engineering plastic click together to form a continuous solid platform for the 18-in.-sq access panels; pedestals can accommodate uneven subfloors. CoDesign, Atlanta.



468. Flame-retardant fabric
Firesist is a solution-dyed modacrylic construction of Sunbrella canvas. An architectural catalog supplies test results and code approvals, and illustrates solid-color and striped patterns suitable for awnings, deck covers and screens, banners, and other shading and decorative applications indoors and out. Glen Raven Mills, Inc., Glen Raven, N. C.



469. Art Deco

Kitchen and bath wall cabinets evoke the '30s with their asymmetrical door inserts of glass or mirror, or all-glass doors with mullions. Offered in maple, cherry, oak, and painted finishes, the Deco line features chrome-plated wire fittings and cabinet drawers specifically designed to hold recyclable trash. Rutt Custom Kitchens, Goodville, Pa.



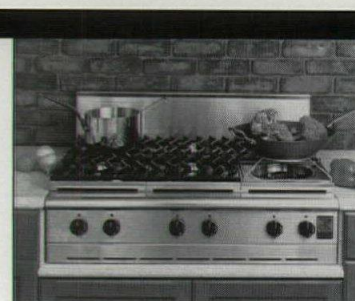
470. Movable storage

Push-button shelving system provides 30 sq ft of storage in a 40 1/4- by 31 1/2- by 92-in. cabinet. Vertical rotation of the 14-shelf system brings all stored items to one arm-reach height. Numbered key-pad panel has space to record stored items. Lexan doors secure shelved items; cabinet panels can be matched to kitchen decor. White Home Products, Inc., Atlanta.



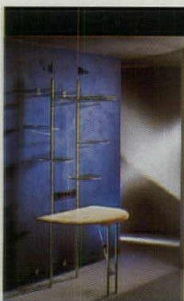
471. Rounding corners

Captiva Plus line features softly rounded vertical edges on doors and drawers and a choice of gold- or chrome-plated center strips. Available in almond, white, and Folkestone regular or gloss laminates as well as sand, black, and fog-gray gloss laminates. Wood-Mode, Inc., Kreamer, Pa.



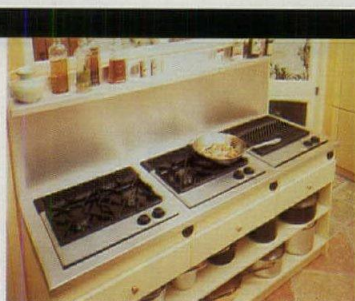
472. Pro's cooktop

A new range top has drop-in burner units that are installed on a countertop cutout. Porcelain-on-cast-iron top grate in "Z" style creates a uniform surface made up of individual Safe Slide sections so more than one burner can heat a large cooking vessel. Options include wok ring and lift-off griddle/grill. Russell Range, Inc., San Francisco.



473. Kitchen workstation

Captain Cook work space includes counter/table top, four circular shelves, and overhead wire rack attached to wall-mounted frame. When not in use, table and shelves retract so that unit is flush to the wall. Table top comes in solid beech wood or textured laminate; shelves are perforated metal or matte glass. Hastings Tile & Il Bagno, Freeport, N. Y.



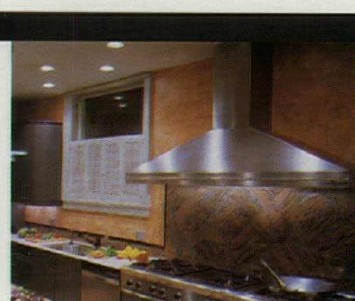
474. Cooktop components

The Monogram line of drop-in burner units affords the flexibility of installing the units parallel, perpendicular, or even diagonal to the countertop. Adaptable to any kitchen setting, even restaurants, the system includes such options as downdraft vent, grill/griddle, cutting board, and lift-out basket. GE Appliances, Louisville, Ky.



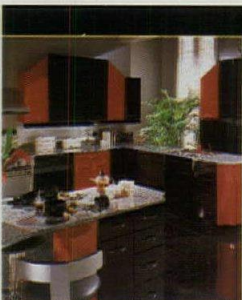
475. Built-in refrigeration

Designed to fit flush with most standard-base cabinets, the 24-in.-deep unit features removable decorative panels that can be matched to drawer fronts and appliances, blending in with the overall decor. An automatic ice maker fits neatly within a vertical door panel. SubZero Freezer Co., Inc., Madison, Wis.



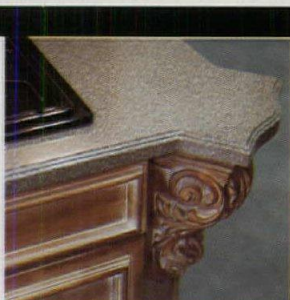
476. Commercial-style hood

In response to the trend toward restaurant-style cooking equipment in the home, Abbaka has created custom-sized hoods for use over a 48-in. gas cooktop. Available in modular, barrel, and conventional styles, the hoods come in polished brass, copper, stainless-steel, and enameled finishes. ABBAKA, San Francisco.



477. European-style cabinets

Two new lacquer-finish door styles are Cortina, with smooth, polished-look doors and beveled edges, and Avanti, with square edges. The frameless continental-look doors for kitchen and bath cabinets are hand-buffed and come in a varied selection of metallic and solid colors. UltraCraft, Liberty, N. C.



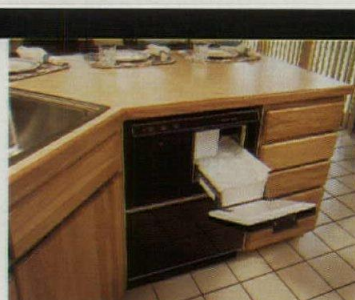
478. Cabinetry with a past

Borrowing from yesteryear, the Historic Collection consists of door designs reminiscent of Renaissance, Victorian, American Shaker, and European country home-furnishing styles in oak, maple, cherry, and ash. Applied solid-wood ornamentation is featured with two door styles in oak and maple. St. Charles Companies, Chesapeake, Va.



479. Home on the Range

Restaurant-type ranges for home installation are available in the new Gourmet Series. The line includes single- and double-oven models in 37 1/4-, 48 1/4-, and 59 1/2-in. widths in black or stainless-steel finishes. Other features: 18- and 29-in. ovens with porcelain interiors, electric broiler, and 11- and 22-in. griddles. Wolf Range Co., Compton, Calif.



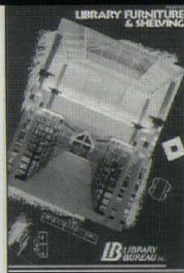
480. H₂O oasis

Contaminant-removing Water Centre purifies incoming water by filtering out most major pollutants such as lead, pesticides, and bacteria. The size and shape of a built-in dishwasher, the unit fits under most kitchen counters. Dispenses three temperatures of water—hot, cold, room temperature—and up to five lb of sediment-free ice. Elkay, Chicago.



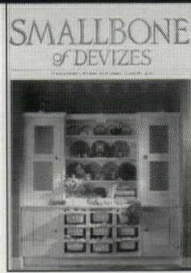
481. Detention equipment

A four-page catalog covers hardware, hollow metal and high-security locking devices, and control systems for many prison applications. Both manually operated and electro-mechanical devices are included. Adtec Incorporated, San Antonio.



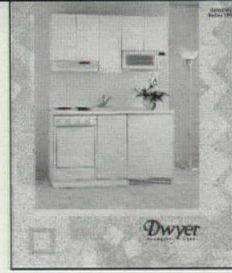
482. Library storage

Architectural catalog explains how SafeStak cantilever steel shelving is reinforced with sway braces and web stiffeners to surpass the strictest seismic codes. Wood-vener and laminate-surfaced carrels, magazine racks, reading tables, book stands, and charging desks are illustrated as well. Library Bureau, Inc., Herkimer, N. Y.



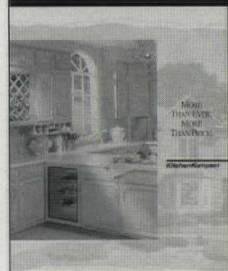
483. English cabinetry

Made primarily of pale-colored sycamore wood, the Inlay Collection of residential casework is the first in a contemporary style for this English firm. Boxwood and walnut inlay, acid-etched glass, and stainless steel accent the classic lines of fitted and freestanding pieces. Smallbone, Inc., New York City.



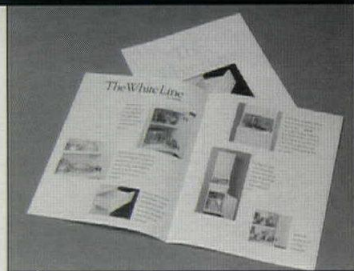
484. Space-saving kitchens

Dwyer makes cabinets and appliance enclosures for hospitality suites, senior living residences, healthcare nourishment centers, and employee lounge areas. A color catalog illustrates all styles and possible component configurations, with cabinets finished in wood, textured-steel, or laminate. Dwyer Products Corp., Michigan City, Ind.



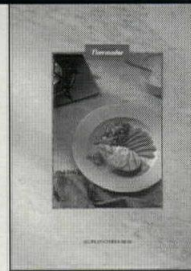
485. Kitchen cabinets

Design catalog highlights the construction features, finish options, and versatile layouts possible with economical, out-of-stock storage and counter units. All cabinets have adjustable shelves, full-drawer supports, and solid-oak, mortise-and-tenon frames. Kitchen Kompact, Inc., Jeffersonville, Ind.



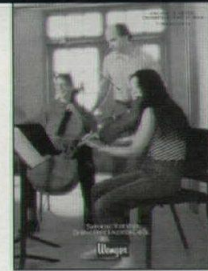
486. All-white cabinets

A color brochure shows the storage features, all-white-melamine interiors, and door styles in Frosty White and Sandrift White finishes offered in White Line by Coronado customized kitchen and bath cabinets. Quaker Maid, Div. WCI, Inc., Leesport, Pa.



487. Cooking equipment

Thermador full-line catalog features ranges, ovens, cooktops, and ventilation hoods in white, black, and stainless-steel finish options. The new Professional Collection has commercial-size, 15,000-BTU burners with Z-design modular grates. Thermador, A Masco Co., Los Angeles.



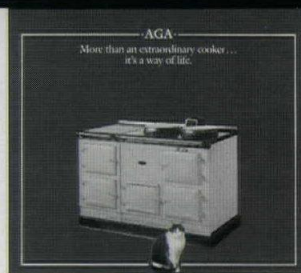
488. Music equipment

A 68-page catalog illustrates a range of music performance and education products from sheet-music stands to orchestral shells, audience cloud systems, and modular practice rooms that balance reflective and absorptive surfaces. Prices included. Wenger Corp., Owatonna, Minn.



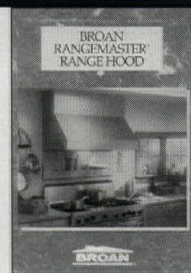
489. Laboratory furniture

Color photography of recent laboratory installations illustrates the custom-design potential of layout, planning, and casework-design services offered by this manufacturer of laboratory furniture, fume hoods, and scientific equipment. Labconco Corp., Kansas City, Mo.



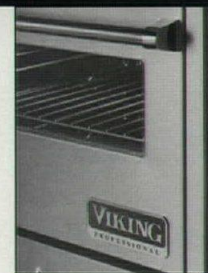
490. Radiant-heat cooker

The AGA heat-storage range is explained in a 16-page brochure, which covers operation, fuel efficiencies, installation requirements, and enamel-finish options. Fact sheet lists dimensions, weights, and prices. AGA Cookers, Stowe, Vt.



491. High-heat hood

The Rangemaster hood exhausts cooking fumes at up to 1,200 cfm, enough to handle the heat requirements of large commercial-type ranges. Color brochure describes features such as warming lamps, work lights, and stainless-steel backsplash with racks. Broan Mfg. Co., Inc., Hartford, Wis.



492. Restaurant range

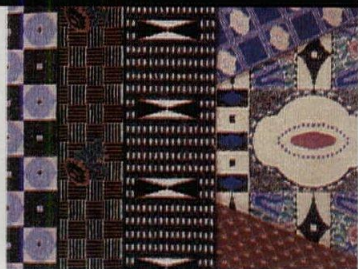
The Viking Range is said to perform like a professional, restaurant-type range, but needs no special construction, ventilation, or gas connections. It is A. G. A.-approved as a zero-clearance residential appliance. Catalog illustrates all features and appearance options, including blue, black, and green enamel. Viking Range Corp., Greenwood, Miss.

12 • FURNISHINGS Products

For more information,
write item numbers
on Reader Service Cards



493. Tough upholstery fabric
The Cordura Group consists of three new fabrics made of DuPont high-performance nylon in different patterns. It is said to be abrasion, fade, and puncture resistant, nonpilling, flame retardant, and suitable for health-care, hospitality, general office, and public-space seating. Adam James Textiles, Inc., Smithtown, N. Y.



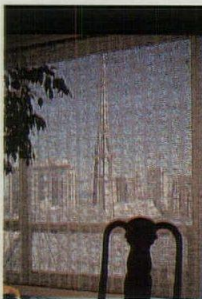
494. Reproduction carpeting
Available in 36-in. width, this wool-face, cut-pile carpeting is reproduced from early-20th-century designs by Josef Hoffmann and comes either in original colors or custom colors according to the customer's specification. Patterson, Flynn & Martin, Inc., New York City.



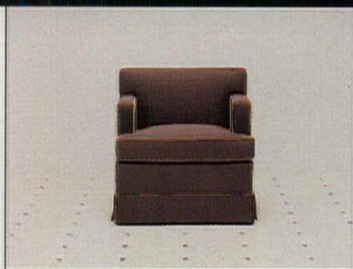
495. Adaptable table
The lightly scaled Zurich table comes in a round, square, or rectangular six-leg version (shown) and is suitable for occasional, side-, or small-conference-table use. Veneer choices include white oak, walnut, maple, cherry, or mahogany in a variety of colors. Tops are edged with a thin black inlay. Tuohy Furniture Corp., Minneapolis.



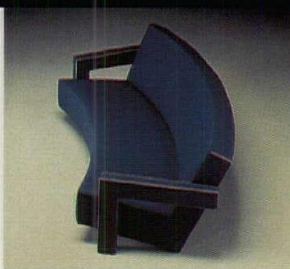
496. Ganged seating
Available in three-, four-, or five-seat groupings with optional arms and tabletops, these units come with composite seats covered in leather, the manufacturer's fabric, or the purchaser's own material on a steel frame finished in chrome, lacquered epoxy, or a metallic double coating. Brayton International Collection, High Point, N. C.



497. Grasslike shades
DesignerLine Window Shades are handwoven from wood-pulp fibers intended to look like natural grass. The standard line is designed to filter sunlight without obstructing views. Variations include linings, extra-density weaves, and separate black-out shades for more severe sun problems. There are nine color choices. Conrad, San Francisco.



498. Lounge seating
The Harvard Series has been designed on the lines of the Tuxedo sofa for both contract and residential use. Available in chair, loveseat, or sofa, it can be upholstered in either the manufacturer's fabric or COM. Options include a skirt, contrasting welting, and standard foam or down cushions. Hickory Business Furniture, Hickory, N. C.



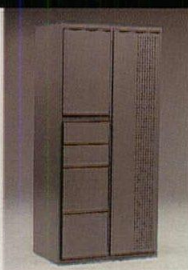
499. Reproduction seating
A chair and two-seat sofa are produced under license from the estate of Gerrit Rietveld and bear stamped signatures and serial numbers. The frames are wood over polyurethane foam and polyester padding with injection-molded glides. Upholstery is fabric or leather by the supplier. Atelier International Ltd., Long Island City, N. Y.



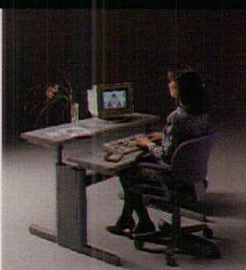
500. Office systems furniture
Elective Elements Systems Furniture has been redesigned to cost 15 to 20 percent less and have snap-on panels that weigh 20 to 25 percent less than previous models. Panels accommodate cables internally. Elements are finished with either wood or laminate. A large variety of heights and widths are offered. Steelcase, Inc., Grand Rapids, Mich.



501. Desk set
KnollExtra has introduced a new line of leather-covered desk accessories including letter trays, pen sets, memo trays, desk pads, pencil cups, calendars, picture frames, and waste baskets. Options include four leather colors—caramel, forest, mahogany, and black—and four belt stitching colors. The Knoll Group, New York City.



502. Office locker
The Workplace Locker is designed to store files, office paraphernalia, clothing, and athletic equipment in offices. Perforations in the clothing-storage door and top ventilate the interior to dry damp or wet items. Drawers come in a variety of sizes. Twenty-gauge-steel units are 30-in. wide and 18-in. deep. Office Specialty, Newmarket, Ont.



503. Automated computer table
Programmable to alert users to adjust positions at set intervals, the Trakker Table is designed to hold computers and to combat fatigue. An electric motor raises and lowers the tops to either sitting or standing heights. Haworth, Inc., Holland, Mich.

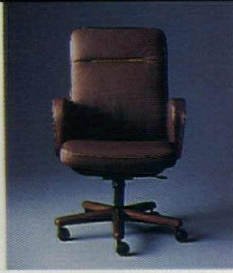


504. Heavy-duty fabric
Lines and Shapes, this manufacturer's new upholstery line, has been tested for abrasion, tear and tensile strength, and seam slippage. It comes in 54-in. widths of eight designs and 86 colorways, and is made of varying combinations of cotton, linen, nylon, polyester, rayon, and wool. Carnegie Fabrics, Rockville Centre, N. Y.



505. Lounge seating

Specially arched backrest and seats distinguish the Camden Series of lounge seating. Included in the collection are two- and three-seat sofas and chairs, all made with oak legs and base trim. The collection is designed to coordinate with the manufacturer's Groton end tables. Adden Furniture, Inc., Lowell, Mass.



506. Executive chairs

The new Artacula Plus collection of executive chairs is intended to complement the Artacula 2 line of management seating, while providing a wider and deeper seat and back frame with thicker padding. A variety of arm, base, and upholstery styles is available. J. G. Furniture Systems, Inc., Quakertown, Pa.



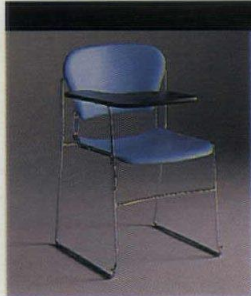
507. Tables

Collage is a collection of irregularly shaped modular tables with tops made from combinations of wood, plastic laminate, and linoleum panels. Tops come predrilled to accommodate legs made of solid wood with steel support brackets. The manufacturer uses CAD software to aid in specification. Westnofa Contract, Niles, Ill.



508. Desktop storage

WorkCenter, a desktop storage system, consists of a rigid steel frame that supports metal or plastic trays and dividers and tackable vertical surfaces. WorkCenter can be attached to conventional panel-based office furniture, installed directly on a wall, or placed atop any horizontal surface. Wolf Wire Corp., Ludington, Mich.



509. Stacking chair

Charles O. Perry has designed a stacking chair where the seat is hung from the lower backrest, allowing the weight of the occupant to counterbalance the tilting pressure on the upper portion of the backrest. The chair has a steel frame that can be specified in a chrome or powder-coated finish. A tablet-arm version is available. KI, Green Bay, Wis.



510. Fabrics

Priced between \$33 and \$40/yd, Apollo, Mercury, and Gryphon—all combination cotton/polyester blends—are intended as relatively inexpensive textiles for contract use. The collection of textured and iridescent solids and subtle jacquards was designed by Susan Lyons. Each pattern comes in 10 to 14 colorways. DesignTex, Woodside, N. Y.



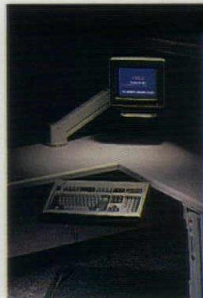
511. Shade fabric

ShearWeave is an open-weave fabric for window shades that reduces solar glare and heat gain while admitting natural light. The fabric is available in 14 colors and is said to help prevent the fading of carpets and other interior furnishings. Phifer Wire Products, Inc., Tuscaloosa, Ala.



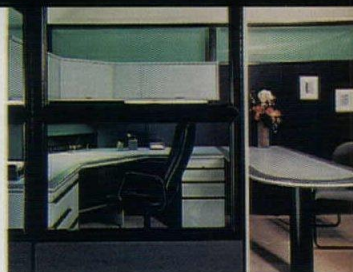
512. Office furniture

Glazed and half-glazed panels have been added to the manufacturer's system of office furniture. Also included in the line are panel-hung worksurfaces and a variety of storage products, ranging from pedestal to lateral files, in a range of heights. Quorum Office Furniture, Chicago.



513. Computer-support furniture

The Ergoactive Series of computer-support furniture is intended to facilitate the use of computer monitors and keyboards. Included in the collection are worksurfaces and monitor-support arms and keyboard trays with 360 deg swivel, horizontal pivot, and 12-in. height adjustment. Ergo Systems, Inc., East Hartford, Conn.



514. Stackable wall system

Vertical Tiers is designed to integrate with the manufacturer's integrally ventilated Spacemaker 2000 furniture. Standard module heights of 18 in. and 36 in. can be ordered in 13 different widths. Four types of glazing and over 90 surface finishes can be specified. CenterCore, Inc., Wayne, Pa.



515. Seating and tables

A collection of cantilevered leather-upholstered seating and coordinating tables by French designer Andrée Putman has enameled metal frames or support elements. Two- and three-seat sofas are also available. Tables have wood veneer bases and etched glass tops. deSede of Switzerland, Harrison, N. J.



516. Fabrics

Ranging from soft neutrals to brilliant jewel tones, Suzanne Tick's new Solids and Textures collection includes all-mohair Unika, textured silk/polyester EscudaTribute Satin worsted wool, Arena wool-cotton-rayon mix, Derrytown cotton-rayon-linen-polyester, and Premier Vachette aniline-dyed leather. Unika Vaev USA, Orangeburg, N. Y.



517. Reintroduce Frank classic
Vendor offers three versions of this 1930 classic sofa by designer Jean Michel Frank. Frame is solid hardwood covered with polyurethane foam. Feet are nutwood with beeswax finish, and cushions are filled with foam and natural down. Shown is two-seater sofa, 59 in. long, 35 in. wide, and 31 1/2 in. high. Palazzetti, New York City.



518. Clean entrances
A three-ply main entrance carpet mat, known as Hush-Step, and a heavy duty recessed entrance grating serve as the first line of defense between outdoors and indoors. Hush-Step is bonded to 100 mil vinyl backing and comes in seven colors. Grating comes in mill or bronze finish. Carpet inserts are available. Pawling Corp., Pawling, N. Y.



519. Executive suite
New collection for executive suite includes solid-looking double pedestal desks and credenzas with storage, as well as secretarial units, lateral files, and modular bookcases. Standard in solid cherry and veneers, desks are available with center modesty recess and flush top. Dar/Ran Furniture Industries, High Point, N. C.



520. Good indoors and out
Made of mahogany and finished with a marine-grade polyurethane paint, this furniture set, consisting of a standup chair and table, is suitable for indoor and outdoor use. Table is available with a Corian-granite top, clear-coat mahogany finish, and a range of high gloss and custom colors. Weatherend Estate Furniture, Rockland, Maine.



521. In conference
Conference table consists of quarter-sawn American cherry veneer with a sycamore-flake pattern. The border is made of zebrawood veneer with a solid American cherry edge. A solid ebony inlay separates the field from the border. Set includes matching wall-mounted credenza. Kentucky Millwork, Louisville, Ky.



522. Eisenman plays games
KnollTextiles' new line of upholstery fabrics, Peter Eisenman's first venture into textile design, is called Snakes and Ladders after the children's game and because of its winding geometric patterns. The five patterns are known as Cobra, Diamond Back, Steppes, Lattice, and Sidewinder. The Knoll Group, New York City.



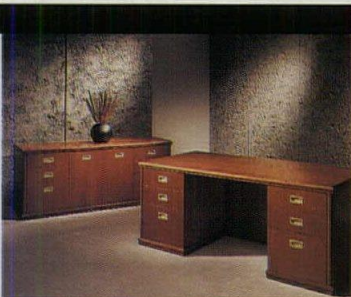
523. Small is beautiful
Two small-scale wovens feature John Hutton's adaptation of his wiggle stripe and diamond designs to current demand for smaller versions of the patterns. For both contract and residential use, the cotton fabrics pass abrasion testing. Siena carries a diamond pattern. Como has wiggle stripes. Donghia Textiles, New York City.



524. Almost leather
This leather-like nylon fabric known as Almost is made up of fibers laid down in a pattern that resembles the natural structure of collagen found in real leather. Material is said to adapt to the furniture frame and detailing the way leather does. Fabric comes 54 in. wide and has a class 1 UFAC flammability rating. Brayton Textiles, High Point, N. C.



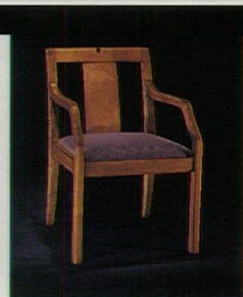
525. Armed stacking chair
Manufacturer's classic 40/4 stacking chair now comes in a new design with arms. A stack of 40 chairs is 4 feet high. Chairs come in fabric, painted steel, or wood. GF Office Furniture, Ltd., Youngstown, Ohio.



526. Customization
New desk and credenza collection allows for individualized edge and base designs. Includes double-pedestal, U- and L-shaped desks, full-storage and knee space credenzas, and overhead carrels. Details include dovetailed oak drawer boxes with finished interiors and full-extension file slides. Mueller, a Haworth Portfolio Company, Holland, Mich.



527. Hole in one
This Timothy deFiebre-designed chair, dubbed by its manufacturer the Golf Ball chair, employs wood embossing to create a golfball-sized pattern in seat and back. Light enough to work as pull-up seating, the maplewood chair may be finished in a variety of stains. Brickel Associates, Inc., New York City.



528. Five crossings
Crossings collection, designed by Marcel Beck, is available in five versions, consisting of various combinations of upholstered seat; upholstered, maple veneer or maple slat back; and open, upholstered-panel, or half upholstered arm. Versions are available in any of six wood finishes. Carolina Business Furniture, High Point, N. C.



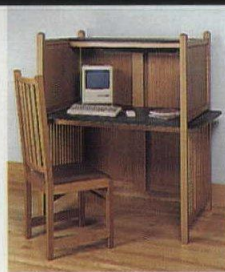
529. Intriguing weaves

Liberty Weave and March Balloon are based on 12 graphic designs created in 1926 by Frank Lloyd Wright as covers for *Liberty* magazine. The covers were never produced, but Wright continued to rework his designs. Their soft-edged geometries and subdued colors are reproduced in slightly reduced scale. Schumacher Contract, New York City.



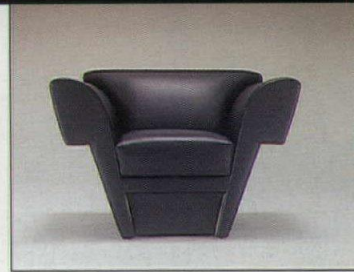
530. Shelving magic

This flexible metal shelving system by Zerodisegno can be reconfigured to accommodate shelving needs and floor-to-ceiling formats, or attached directly to walls. Though Abracadabra won't vanish, its lightness and simplicity should blend well with a variety of settings. In aluminium and black soft-coated steel finishes. Zero U. S. Corp., Lincoln, R. I.



531. Carrel comfort

This study carrel is specifically for heavy computer use, alleviating heat buildup and surface wear with its custom fireslate desktop. Task lighting is concealed behind the valance. The New Century Study Carrel is available in cherry or ash. Thos. Moser Cabinetmakers, Portland, Maine.



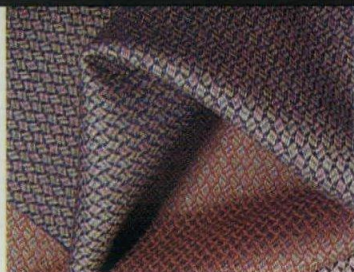
532. Right angles

Brueton Industries' new Angular seating group, designed by Stanley Jay Friedman, juxtaposes sharp contours and soft seating for an especially inviting combination of aesthetics and comfort. Angular comes in lounge chair, two-seat sofa, and three-seat sofa with ottoman. Brueton Industries, Inc., Springfield Gardens, N. Y.



533. Smooth operating

An operational model with arms is the newest addition to the Bira Seating series, which now includes two high-backed executive chairs, as well as manager chairs and seating in mid-back and low-back heights. The rounded and stitched backs are contoured for full support. Vecta, Grand Prairie, Tex.



534. Bright edges

Subtle geometries and iridescent colors are played against each other in Mosaic. Worsted wool and nylon ground combined with mercerized cotton to give a fine sheen to this 54-in.-wide upholstery, available in six patterns. Pollack & Associates, New York City.



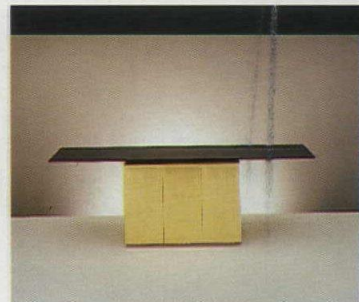
535. Conference call

Continuous flexibility along a broad spectrum of variables, including size, connectivity, and cost, is the hallmark of Prestige, a new modular systems furniture line aimed at streamlining office space. Threaded inserts provide ease of installation, relocation, and reassembly. TAB Products Co., Palo Alto, Calif.



536. Table tips

The Spectra Series II tables are designed to allow any conceivable end-to-end organization, equipped with a spring steel clamp that folds out from beneath the table for easy connection to one another. Available with squared and radiused edges and legs, and in folding and stationary models. Howe Furniture Corp., Trumbull, Conn.



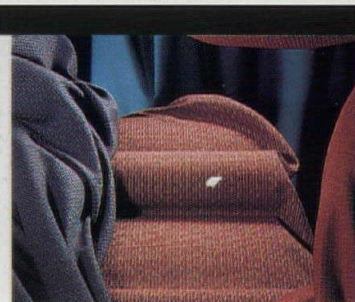
537. Pure forms

Massimo Vignelli combines light, line, and color in his geometrical designs for the new Forte collection of furniture. Squares and rectangles in solids and voids are paired with fine wood species and shimmering surfaces, which include a handcrafted process for applying a shiny golden material. Domus Design Center, New York City.



538. Corner court

Low-maintenance seating available in a wide variety of laminate colors and patterns, including combinations of colors on table tops and new seamless molded polyurethane side panels. Designed for either corner arrangements or grout-in configurations. Foldcraft, Plymold Seating Div., Kenyon, Minn.



539. New nylons

Antron nylon upholstery with mini-flamestitch, pin dot, check, and crepe patterns can also be custom ordered. The flame-resistant Neoclassic line has acrylic backing and is available with Healthguard antimicrobial finish for health-care industry applications. Douglass Industries, Egg Harbor, N. J.



540. Sweet Ledoux

The simple shapes of the arc-shaped center panel and pedestal storage, joined to solid wooden legs and rectangular top, were inspired by 18th-century French architect Claude-Nicolas Ledoux. The Ledoux Desk, designed as either centerpiece or office accessory, is part of the Ward Bennett Collection. Geiger International, Atlanta.



541. Stacking chair

Aimed at both the hospitality and residential markets, the 'vik-ter chair combines high design with the practicality of a stackable product. The chair's arched frame allows the seat-back to move backward and forward. Its color palette was inspired by Matisse's Morocco paintings. Dakota Jackson, New York City.



542. Designer fabric

Gretchen Bellinger's new fabric, Bramble moire jacquard employs a simple motif of leaves and berries, accented by a subtle moire finish and a tone-on-tone palette. Bramble coordinates with two other new Bellinger fabrics, Positively Dotty epingle and Delightfully Dotty jacquard. Gretchen Bellinger, Inc., Cohoes, N. Y.



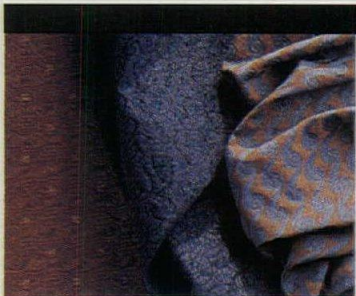
543. Table base

Available in pedestal and four-leg models, the "R" base is the latest addition to the KI Venue Table line of table bases and tops. The range comes in 25 powder-coated metal finishes and 5 standard colors, while its plastic-laminate table tops come in 30 different finishes. KI, Green Bay, Wis.



544. Keyboard support

By adjusting both vertically and laterally, the Details keyboard support responds to the various body types and workstyles of computer users. The keyboard tray also swivels 180 degrees to accommodate shared tasks and offers unlimited tilting options, while attaching to any work surface with 20 inches or more in depth. Details, New York City.



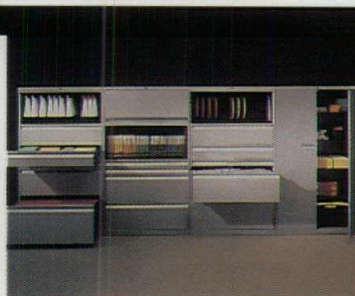
545. Cotton fabrics

Architect Robert A. M. Stern has designed three new fabrics for HBF Textiles—Feronnerrie, a cotton-blend jacquard punctuated by squares of a tight crepe weave; Dionysia, a more whimsical cotton-blend jacquard; and Volute, a cotton-and-wool weave inspired by the swirl of Ionic capitals. HBF Textiles, Hickory, N. C.



546. Table and chair collection

Ten separate table and chair designs comprise the first collection by the recently established company, Protocol. Ranging from the Kingman Occasional Seating group to Winslow and Amboy Table series, the furniture emphasizes simple lines with timeless shapes and fabrics. Protocol Contract Furniture, Fort Worth, Tex.



547. Files and storage system

Knoll's new Calibre Files and Storage line offers a full set of paper- and media-storage cabinets that can be used either as part of a system or as freestanding units. The cabinets feature radiused and perpendicular drawer-front bends, seamless-case design, and all-steel construction, with welded inner frames. The Knoll Group, New York City.



548. Man-made fabric

Cybele is the latest addition to Jack Lenor Larsen's Galaxy line of man-made fabrics. An iridescent material with a randomly dimpled surface, it comes in 10 colorways and requires no ironing. Because it is an inexpensive and heavy-duty fabric, it can be used for upholstery, draperies, and wallcoverings. Jack Lenor Larsen, New York City.



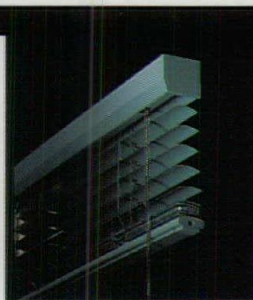
549. Task chair

Ergonomically designed to respond to the needs of the human body, the Kita chair features a "self-articulating" back that can tilt at the top while supporting the sitter's spine at the bottom. The chair comes in three sizes and with bases that are painted black or are polished aluminum or chrome. ICF, Inc., Orangeburg, N. Y.



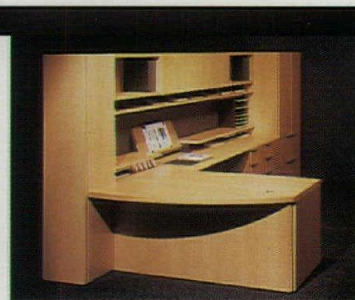
550. Upholstery

A new collection of seating upholstery, Angles is a jacquard weave of 54 percent nylon and 46 percent polyester, appropriate for either wood or steel work environments. The fabric comes in three geometric patterns—Abstractions, Blocks, and Geometry—that are designed to work together or alone. Steelcase, Inc., Grand Rapids, Mich.



551. Metal blind

The Riviera Mark I is a 1-in. metal blind with concealed mounting system and contoured headrail to reduce light leakage and eliminate the need for a supplemental valance. The blind's 8-gauge aluminum slats come in over 170 colors and finishes, and can be color-coordinated with accessories such as tassel and end caps. Levolor Corp., Sunnyvale, Calif.

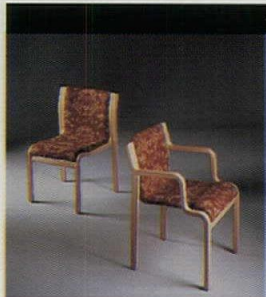


552. Desk organizers

Smart Caseloads is a line of office products that organize paperwork vertically, because "people work in piles." Designed by Brian Kenneth Graham and the Gensler Product Design Group, the fine-grain European-steamed-beech organizers can double the amount of effective worksurface in an office. Halcon Corp., Stewartville, Minn.



WHAT'S BEHIND
THE WINDOWS AT
LIBERTY PLACE?



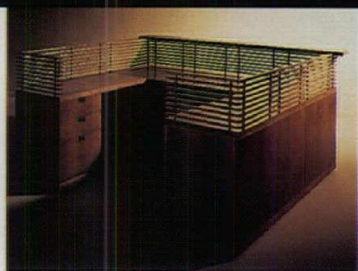
553. Plybent chair

The Nelson II chair, designed by Swedish architects Börge Lindau and Bo Lindekrantz, incorporates advanced plybent woodworking technology with traditional techniques such as mortise and tenon joints. The foam-padded chair can be upholstered in a range of fabrics, colors, and patterns. Sauder Manufacturing Co., Archbold, Ohio.



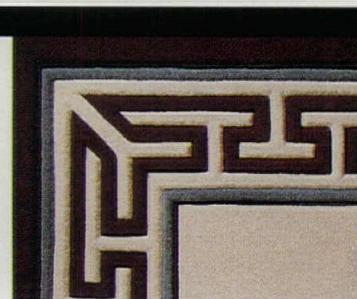
554. Upholstery fabric

Aztec is one of the patterns from Bogesunds's new Myth Collection of upholstery fabric. An interpretation of Native American themes, Aztec is available in four color combinations. The fabric is made from 100-percent worsted wool and comes in 59-in. widths and varying repeats. Bogesunds, Inc., Scarsdale, N. Y.



555. Desk set

Designed by Glenn Gee, Toria is an office-furniture collection that features a desk, credenza, and return, but can be expanded to include glass-front cabinets, and a grille or privacy screen. Because it is a modular system, Toria can be assembled in a variety of ways, depending on the office layout. Charlotte, Inc., Belding, Mich.



556. Area rug

Polo Club is a handcrafted rug program from Fabrica International that is designed with a Greek key motif. The standard- and custom-designed area rugs are made of a velvet-finished saxony constructed of 100-percent Tactesse 6. 6 nylon by ICI Fibres and are available in 40 solid colors. ICI Fibres, Greensboro, N. C.



557. Office-furniture system

A new vinyl-edge treatment gives this Trendway furniture system a streamlined look and the ability to adapt to rectilinear, curved, or cluster configurations. Worksurfaces come in wood and laminate combinations, and storage units feature a flipper door that is hidden when open. Trendway, Holland, Mich.



558. Seating system

System 18 is an ergonomically designed line of office chairs and stools that includes features such as a lumbar adjustment for lower-back support. Some of the chairs offer multi-position tilt-lock, mechanical, or pneumatic seat-height adjustment, and five-star bases. Comforto, a Haworth Portfolio Co., Holland, Mich.



559. Chair line

An ergonomically designed chair line, Primar features pneumatically adjusted seat height, independently adjustable and lockable seat and backrest inclination, and adjustable lumbar support. Built of lightweight polymers, the chairs are versatile enough to work in a variety of office applications. Girsberger Industries, Inc., Smithfield, N. C.



560. Tapestry

A contemporary design featuring a lush pattern of intertwining leaves and branches, Linden Tapestry is available in five colorways: beige, bordeaux, green, rust, and teal. Suitable for contract applications, the product is 54 in. wide and has a 9.5-in. repeat. Brunschwig & Fils, New York City.



561. Furniture system

Prism is a furniture system that offers both freestanding and panel-supported components. The line ranges in materials and price from handcrafted cabinetry and wood surfaces to metal files and plastic laminates. Options include five premium veneers, 20 wood finishes, and seven drawer pulls. The Gunlocke Co., Wayland, N. Y.



562. Textile pattern

Inspired by Greco-Roman architecture and 12th-century Byzantine mosaics, Colonnade is a textile that uses DuPont's new microdenier yarn, Micromattique, along with polyester and cotton to create the luster of silk. The textile is available in five colorways. Arc-Com Fabrics, Inc., Orangeburg, N. Y.



563. Reception seating

Designed by architect Antonio Citterio, AREA is a seating system for waiting areas that gives the appearance of individually designed furniture. The line features a bench on slim aluminum legs that can be supplemented with various backrests, armrests, and tables. Back-rests and seating angles can be adjusted. Vitra Seating, Inc., New York City.



564. Office system

Aurora is a new panel-based office system designed by ergo-guru Otto Zapf and textile designer Deepa Thomas. Twenty-degree radius curves used on worksurfaces, panel trim, and drawer pulls give the system its distinctive look, while 3-in.-thick panels provide more space for wiring. Allsteel, Inc., Aurora, Ill.

Why some of America's top companies have Bali to thank for their window treatments. Now that Bali supplies the broadest product offering in the industry, including Graber vertical blinds and drapery hardware, we can offer virtually any type of alternate window covering and hardware. And our service capabilities are designed to make doing business with us easy.

Horizontal Blinds. Our blinds are made from strong, energy-efficient slat material. Choose from over 140 colors including duplexes, metallics, pearltones, linens and our exclusive frost line. All colors are available for each blind type. **Premium Line:** • Classics 1" Mini • MidSize 3/4" (a Bali exclusive) • Micro 1/2"; **Ultra Line:** • All-in-One™ Control Cord (a Bali exclusive) in Mini, MidSize and Micro styles; **CustoMiser Line:** • Mini with 40 of our most popular

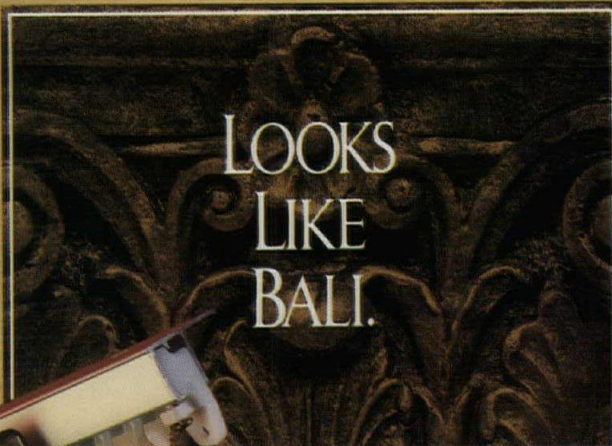
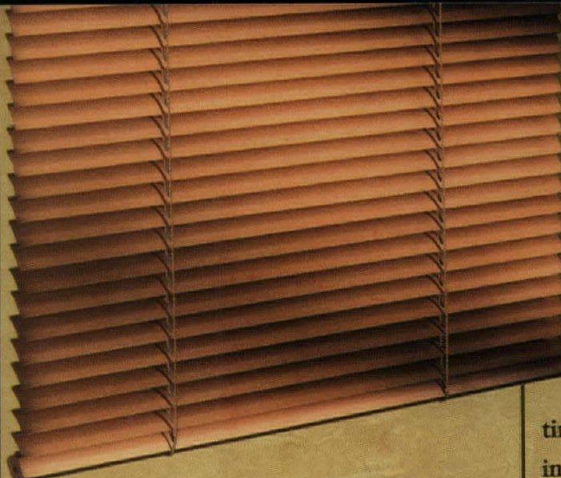
colors; **Architectural line:** • .008 slats in 40 architectural colors; **Apartment Blinds and**

Manufactured Housing Blinds.

Vertical Blinds. • Over 500 variations of fabrics, aluminums and vinyls, in a wide range of colors. • Fire-resistant fabrics. • Three track systems by Graber. • Perforated PVC vanes. • Special angled-track systems for bay or bow windows.

Pleated Shades. Bali's exclusive Neat Pleat™ Shade with a patented system that assures perfectly uniform pleat

Bali verticals and pleated shades are available in a variety of fire-resistant fabrics.



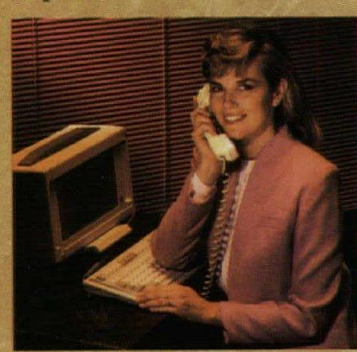
spacing from top to bottom. Hundreds of fabric and color combinations, including a fire-resistant line.

Drapery Hardware. • High-quality Graber drapery hardware. • Pinch Pleat, Stack Pleat and Roll Pleat track systems. • Track system for heavy-duty applications. • Slimline track system with the sleekest profile available. • A complete line of traverse rods, wood poles, decorative rods and cafe rods.

Trained Service Representatives. All of our headquarters' sales service representatives are trained to specialize in the contract market, and to respond to its unusually tight deadlines and need for accuracy.

Exclusive Instant Quoting System. When an authorized Bali customer requests a quote, we provide an instant response.

Phone Inquiries. We have a dedicated team ready to service your requirements and provide technical assistance. Our computer system also allows us to give you quick status on orders.



Field Sales Managers. Our nationwide field sales force knows the contract market, and is dedicated to helping you with presentations to your clients on new products and systems and to assist on current projects.

Exceptional Shipping

Performance. Our consistent on-time shipping performance leads the industry. Our computer tracking system keeps your order on schedule. National manufacturing and distribution from Pennsylvania, Illinois, Wisconsin and Nevada.

Comprehensive Sweets

Catalog Program. We've put a full contract product line in Sweets, including general data, special options and such specifications as shading co-

efficiency, thermal trans-

mittance, acoustical control and life safety.


Bali and Graber

"One-Stop" Service.

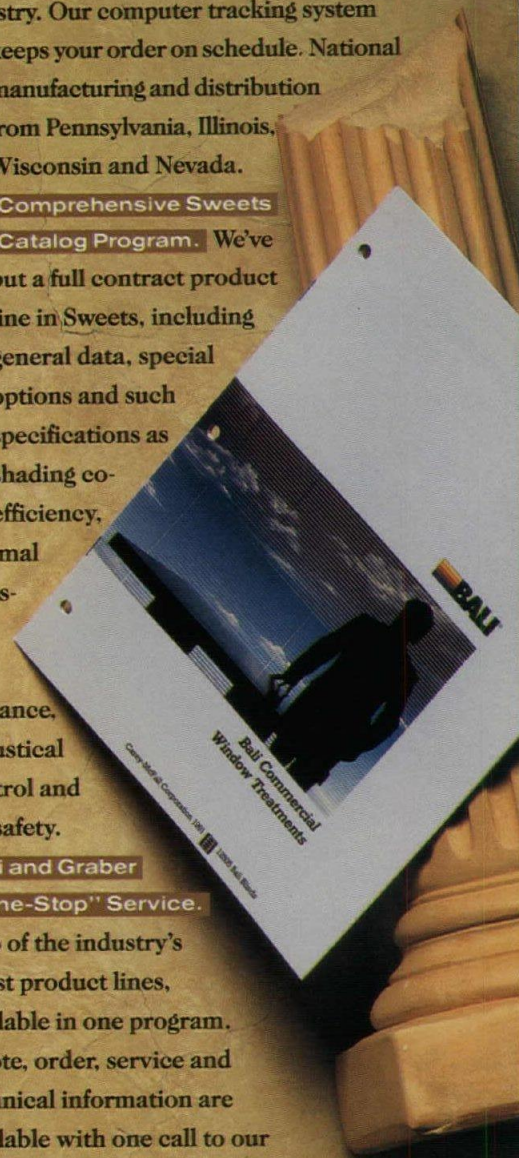
Two of the industry's finest product lines, available in one program. Quote, order, service and technical information are available with one call to our toll-free contract number. Find out how you can benefit from the

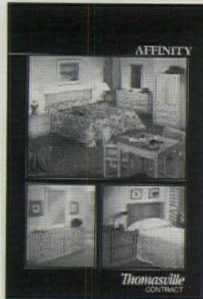
Bali Contract program today. Call our Contract Department at 1-800-544-4749, or fax: 1-800-628-9984.



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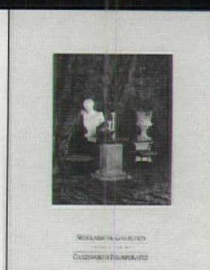




565. Contract furniture
Four-color 24-page brochure describes and illustrates the Affinity line of contract furniture for hotels and residence halls. A wide selection of pieces, including seating as well as case goods, comes in whitewashed, golden, and russet finishes. Thomasville Contract, Thomasville, N. C.



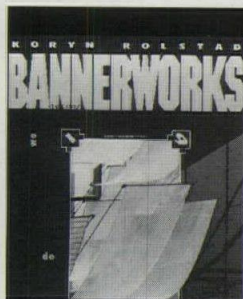
566. VDT operator's guide
An 8-page booklet provides employees with examples of proper positioning for VDT screen, keyboard, and chair, and outlines simple exercises to reduce muscular strain. Hamilton Sorter Co., Fairfield, Ohio.



567. Neoclassical columns
Color brochure describes columns and pedestals based on the Grecian orders, plus Art Deco and contemporary designs, to serve as columns, table bases, and accessories. All are available plain or fluted in several varieties of wood, with diameters from 6 in. to 36 in. and heights to 40 ft. Chadsworth, Inc., Atlanta.



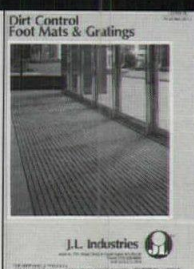
568. Metal storage system
Shown in a new brochure, the jazz storage system designed by architect Jeff Scherer of Meyer, Scherer and Rockcastle features extruded aluminum fronts in a rich palette of baked-enamel and anodized-metallic colors. The line includes pedestals, lateral files, and pulls for cabinets and drawers. Conwed, Minneapolis.



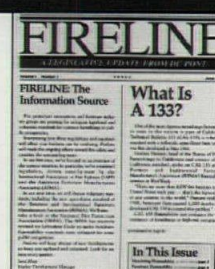
569. Fabric banners
A colorful poster depicts heat-shielding decorative banners of sheer fabric in several pastel tints. Bannerworks, Inc., Seattle, Wash.



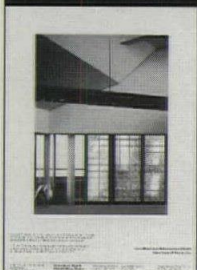
570. Window treatments
A new pamphlet illustrates the Bali line of contract window installations, including horizontal and vertical blinds, pleated and standard shades, and drapery hardware. Shading, insulation, flame-spread, and other performance criteria are listed. Carey-McFall Corp., Montgomery, Pa.



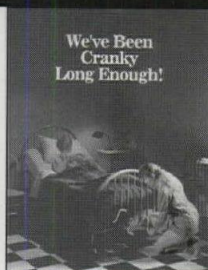
571. Dirt-control mats
A four-page brochure details a variety of dirt-collecting foot mats and gratings to protect finished surfaces. New features include the "Tuff Tread" surface and the ability to incorporate names or logos in the carpet tread. J. L. Industries, Bloomington, Minn.



572. Fire-safety standards
A quarterly newsletter, Fireline offers current information on fire-safety and furniture flammability standards, and tracks the status of legislation in various states. Du Pont, Wilmington, Del.



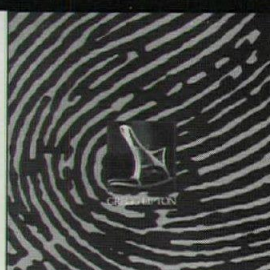
573. Custom mosaics
Case-study sheets illustrate varied architectural installations of custom-designed mosaic tile and stained-glass panels. Franz Mayer of Munich, Inc., Fairfield, N. J.



574. Health-care bed
An eight-page brochure illustrates the FreeStyle bed, a low adjustable hospital-type bed that operates manually without cranks. Adjustments can be made from a standing position or by patients from within the bed. Several wood furniture styles are available. Joerns Healthcare, Inc., Stevens Point, Wis.



575. Cafe furniture
Thin Cafe Site tabletops of high-pressure laminate are featured in a four-page brochure. Compatible with a broad selection of metal and concrete pedestals, the tabletops come in round, square, and rectangular shapes and a variety of surface finishes, all with a contrasting black edge. Forms + Surfaces, Santa Barbara, Calif.



576. Handcrafted furniture
Loose-sheet portfolio depicts a broad selection of furniture, including case goods, tables, and seating, designed and crafted by Gregg Lipton with a Shaker sensibility. Pieces are made primarily of ash, cherry, and maple. Many include such features as pin-stripes, inlays, or radial veneers. Gregg Lipton, Cumberland, Maine.

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589. Pre-assembled booth

This all-steel structure arrives on-site fully assembled. Designed for use as a parking-lot control booth, information kiosk, or ticket booth, the Ocean Park model includes an under-counter load-center cabinet that allows for easy installation of additional equipment. B. I. G. Enterprises, Inc., El Monte, Calif.



590. Modular building system

Incorporating noncombustible components of steel frames and concrete floors, the BESTEEL Modular Building System combines flexibility of construction with speed of delivery. Manufactured in a controlled environment, the modules come in a variety of interior and exterior finishes. BESTEEL Industries, Irvine, Calif.



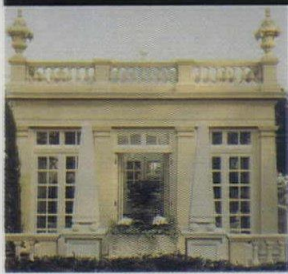
591. Enclosure system

The Advanced Wall System features pre-assembled modular sections shipped to the site. The framework-encased panels employ aluminum extrusions joined by internal steel connectors and are easy to assemble and disassemble. Walls may be incorporated into a track system. Advanced Wall Systems, Peekskill, N. Y.



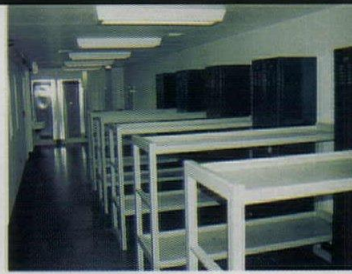
592. Modular solarium

A line of wood-framed solariums is the latest addition to Florian Glass's offering of modular greenhouses. Designed for either residential or commercial applications, the solariums are available in standard units with projections of 3 to 13 ft and either curved or straight eaves. Florian Greenhouse, Inc., West Milford, N. J.



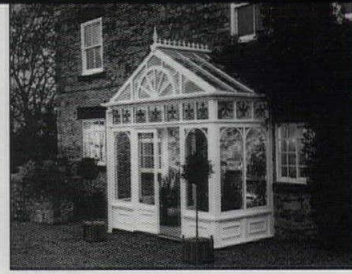
593. Orangerie

Inspired by designs of the 18th-century architect James Gibbs, this neoclassical greenhouse is built of cast-stone-encased reinforced concrete with painted seasoned hardwoods. Glazing can be either clear tempered glass or low-E glass with argon-filled cavities. Haddonstone (USA) Ltd., Belmar, N. J.



594. Modular prison dormitory

For correctional facilities that must expand, a modular dormitory might be the answer. The 10- or 12-person units have steel siding, EPDM roofing, and rubber flooring. Equipped with all finishes and furnishings, the units connect to existing power, water, and sewer systems. Gelco Space, Bala Cynwyd, Pa.



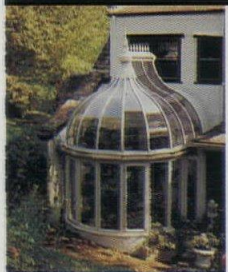
595. Glass porch

A 10-ft glass porch is the latest addition to Amdega's line of conservatories and garden buildings. The structure's frame is Western Red Cedar and is factory-treated with micro-porous primer and then finished. By protecting a house from drafts, the porch reduces energy loss. Amdega Conservatories, Glenview, Ill.



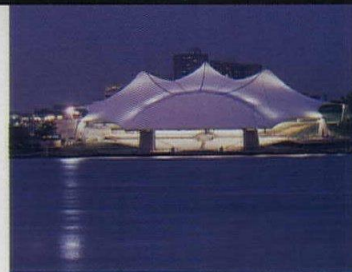
596. Wood building system

Because its wood framing locks together, the UniFrame building system stands as a single unit against environmental stresses. The system can be used for a variety of building types, including warehouses, office buildings, schools, stables, and restaurants. Butler Mfg. Co., Kansas City, Mo.



597. Conservatory

A bow-ended conservatory for \$10,000 is now being marketed by Machin Designs. Standard features include storm-proof automatic ridge vents, tempered-insulating glass, motorized roof shades, composite wood and aluminum construction, and solid-brass door hardware. Machin Designs (USA), Inc., Wilton, Conn.



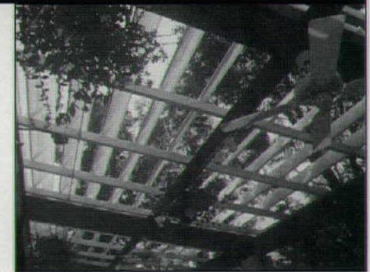
598. Fabric structure

Made of Teflon-coated fiberglass, Sheerfill membrane can create roofs and skylights resistant to fire, moisture, and weathering. Diffuse light filters through, but pollutants and ultraviolet rays do not. Pictured: Chene Park, Detroit; Kent Hubbell Architects, Fabric Architect. Birdair, Amherst, N. Y.



599. Prison-building system

The Moduline Detention System consists of prefabricated wall, roof, and ceiling components, along with joiners and connectors, designed specifically for prison construction. The acoustically engineered elements are filled with either concrete-aggregate or fiberglass and covered with steel. Industrial Acoustics Co., Bronx, N. Y.



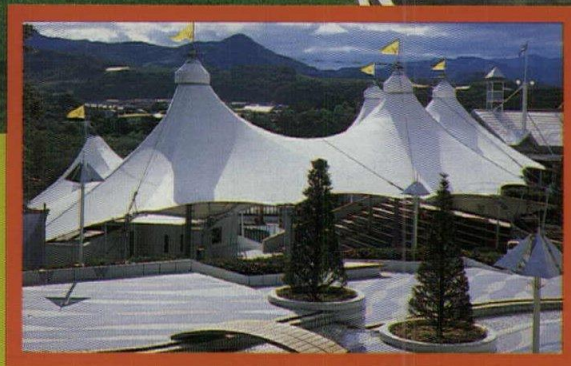
600. Adjustable awning

The SUNTROL awning system features aluminum panels that are louvered so they can form a weatherproof cover or open up to the sky. The motorized louvers are suggested for commercial applications such as covering a restaurant dining patio. SUNTROL, Costa Mesa, Calif.

HARMONY



Koumi Re-ex Hotel, Nagano Pref., Japan
Architects: Kenchiku Keikaku Architect & Associates



Lina World Amphitheater Shelter, Yamagata Pref., Japan
Architects: Toshio Homma & Associates

A clean-lined porte-cochère echos the natural landscape

This handsome tensioned membrane structure clearly signals "carriage entrance" in a fresh way at this luxury hotel. Matching the architect's vision, the design repeats semicircular stone walls while the structure's two peaks recall the surrounding natural landscape. Overall, the structure has a light, floating effect.

This light, non-intrusive quality of tensioned membrane structures appeals to architects. Their curved shapes seem more in tune with nature, able to serve as

contrasts to the rigid geometric lines of most buildings. The nearly infinite variety of membrane shapes make them ideal for amphitheatres, as in the smaller illustration above. Equally useful on level or steeper slopes, they convey a festive, light-hearted feeling we associate with entertainment.

If you would like more information on membrane structures like these, please write or call us. Helios Industries, Inc., the International Operations Division of

Taiyo Kogyo Corporation is a world leader in the design and utilization of fabric membrane structures. Our expertise is ready and available to help you.

Helios Industries, Inc.
20303 Mack Street
Hayward, California 94545, U.S.A.
Facsimile: (510) 887-0134
Telephone: (510) 887-4800

Helios Industries, Inc. has local representatives in the following countries:

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Avda. De Andalucia, Km.9
28021 Madrid, Spain
Facsimile: (1) 796-6892
Telex: 47964 BYNSAE
Telephone: (1) 797-8266

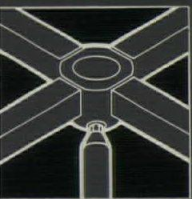
HONG KONG:
L.F. Sam (H.K.) Ltd.
7/F First Commercial Bldg.
33-35 Lighton Road, Hong Kong
Facsimile: 834-5283/836-0134
Telex: 62872 LFSAM HX
Telephone: 891-8448



Helios Industries, Inc.
International Operations Division

Taiyo Kogyo Corporation

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SYSTEM NK-BOWL NODE SYSTEM KK-BALL NODE

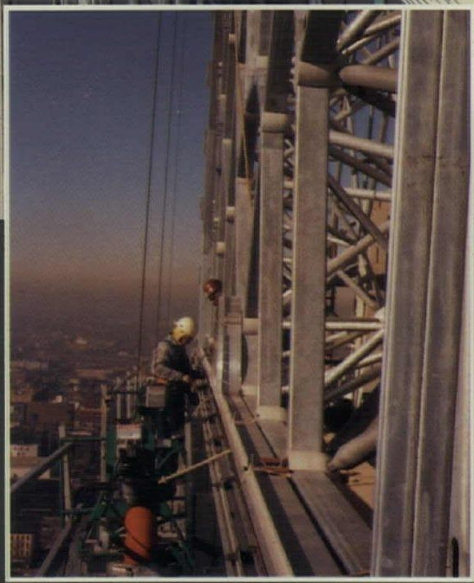
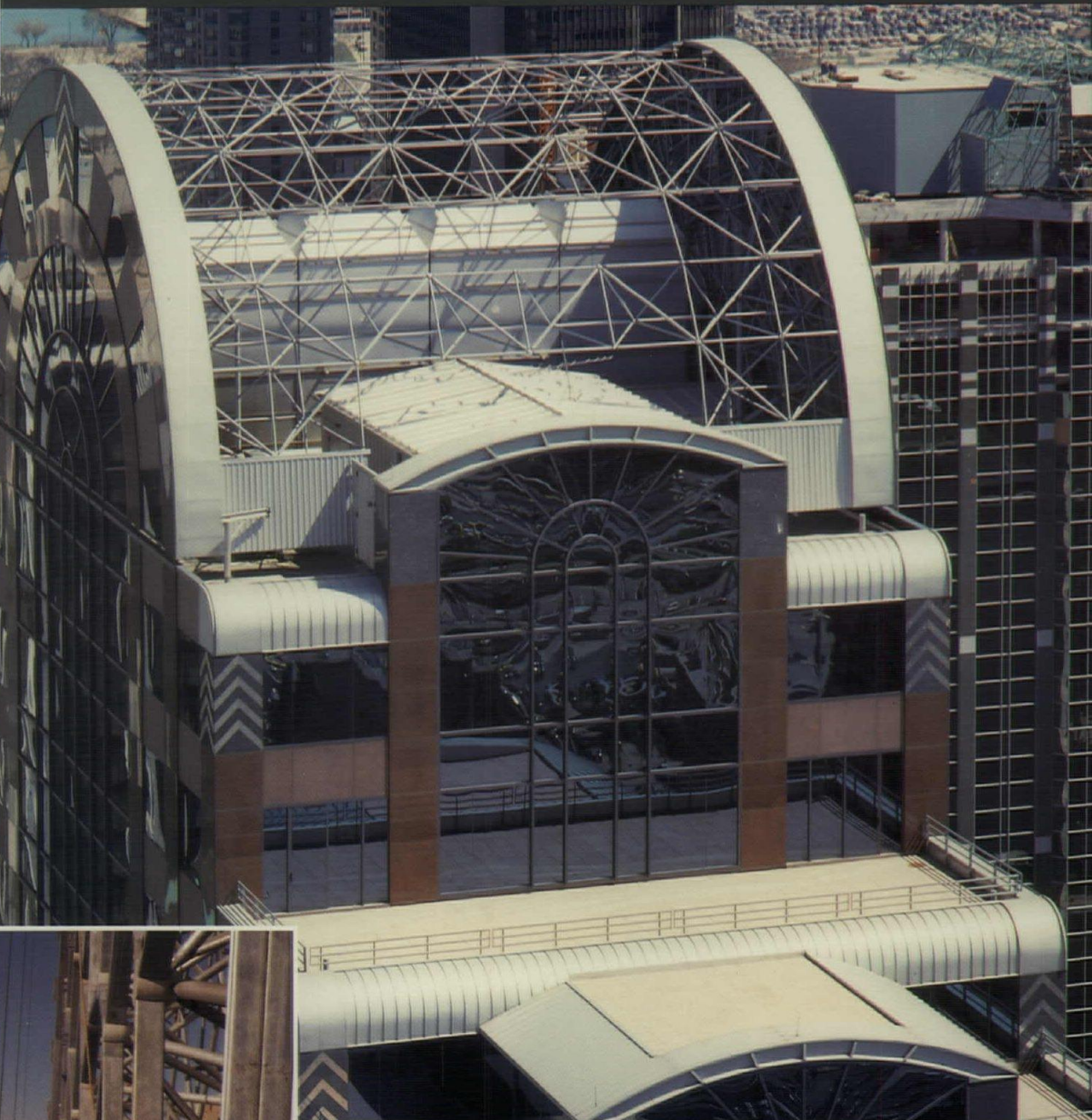
Solution
75' diameter barrel vault with direct attachment of curtain wall to NK-System. Horizontal KK trusses brace the vertical walls.

Architect
Loebl Schlossman & Hackl

Engineer
Chris P. Stephanos & Associates

Location
City Place,
Chicago, IL

MERO 
PLUS



CUSTOM SOLUTIONS WITH MERO SYSTEMS

The wide range of spaceframe systems available at MERO make virtually every architectural form achievable. While the classic KK-Ball Node remains the most versatile, MERO Plus extends the possibilities for custom solutions. On City Place, KK- and NK-Systems were combined to provide optimal structural efficiencies and direct attachment of the curtain wall. Together, these prefabricated systems provided superior performance and considerable cost savings as compared to conventional steel.

MERO PLUS

MUSEUM

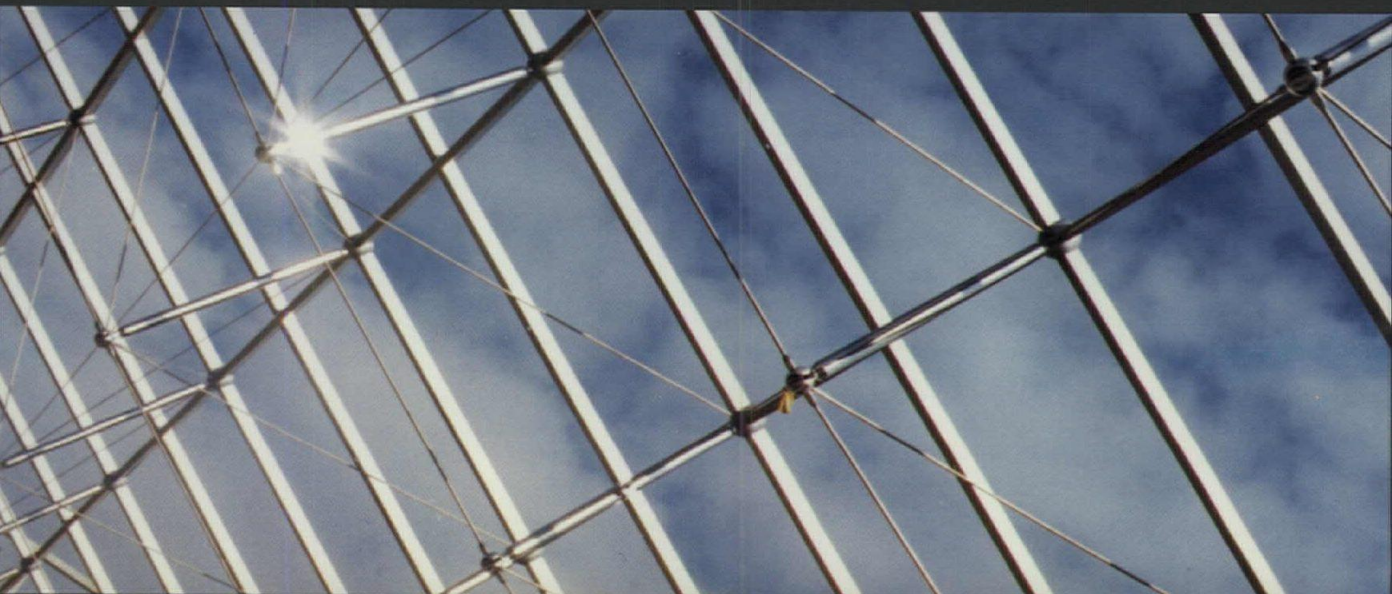
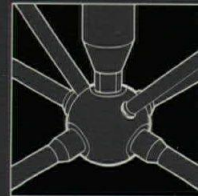
SYSTEM MT-TENSILE STRUCTURE

Solution
MT-Tensile *
System provides extremely light-weight structure with sparse appearance. Glazing attached directly to top chord.

Architect
Moshe Safdie & Associates

Engineer
Martineau Vallee Regin Bald, Inc.

Location
Montreal
Museum of Fine Arts,
Montreal,
Quebec, Canada



CLADDING INTEGRATION

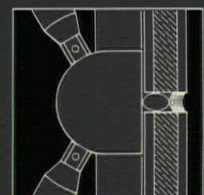
MERO takes a systems approach to design that includes the entire building envelope. The process begins with a detailed analysis of the performance requirements of the cladding system (e.g. deflection, expansion, infiltration, etc.). We believe that optimal integration of skin and structure can best be achieved when cladding performance criteria is fully understood.

The diverse systems available at MERO provide many options for cladding attachment. MERO Plus and MERO Deck minimize structural elements by providing direct attachment to flush outer chords. Superior structural efficiency and greater geometric flexibility result when secondary purlins are used to integrate cladding with the KK-Ball Node System. Aesthetics, performance, structural efficiency and budget constraints must all be considered in achieving optimal integration. To achieve these objectives, MERO is also prepared to develop custom attachment methods when necessary.

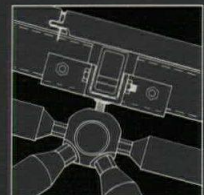
As the international leader in supplying both spaceframes and cladding, MERO has extensive experience with glass, acrylic, fabric, metal panels, metal decking and many other types of exterior materials. For clad spaceframe structures, MERO is the solution.

I.C.B.O.

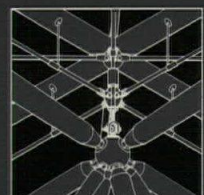
As a prefabricated product, spaceframes rely heavily on factory induced quality control. To help ensure a quality end product, MERO carries an I.C.B.O. number and is subject to periodic inspections by an independent agency. It is no wonder that quality at MERO remains unmatched in the industry.



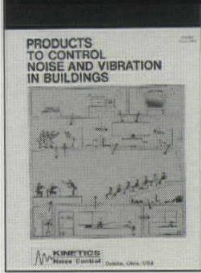
DIRECT ATTACHMENT



PURLIN ATTACHMENT



CUSTOM ATTACHMENT



601. Noise abatement

Three major groups of noise-control products—floating floor systems, vibration isolation equipment, and acoustic wall panels—are explored in this eight-page brochure. It also describes typical usage situations, gives installation details, and shows actual applications. Kinetics Noise Control, Inc., Dublin, Ohio.



602. Security shutters

This one-page flier introduces a line of shutters made of interlocking PVC slats that mount on the outside of a residential or commercial building and roll down over any window or patio door. Controlled from inside the structure, they can be used to block sun and wind as well as deter break-ins. Insolroll Div., Innovative Openings, Inc., Boulder, Colo.



603. Prefab saunas

Indoor and outdoor modular saunas that come in a wide choice of wood finishes and sizes are described in this glossy 12-page pamphlet. Packages include precut wall and ceiling boards, assembled benches, prehung glass doors, heaters, Peridotite stones, lights, vents, head- and back-rests, and more. Finlandia Sauna Products, Inc., Portland, Ore.



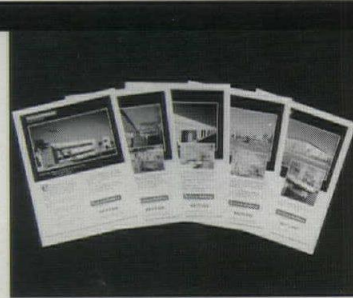
604. Noise containment

The applications of noise-control doors, wall- and ceiling-mounted acoustic absorption panels, plenums, and specially constructed rooms in a wide variety of architectural and industrial situations are described in this eight-page booklet. Photographs show the practical application of these products. Industrial Acoustics Co., Bronx, N. Y.



605. Contemporary saunas

Made with Nordic white spruce, the saunas described in this twelve-page brochure have a designed look that complements contemporary architectural styles. Saunas as large as 144-by-96-ft and models with exterior patios and changing rooms are offered. Interior options include contoured benches, arched leg rests, more. Finnleo Saunas, Cokato, Minn.



606. Flexible building systems

A series of project information sheets describes actual building and building-addition requirements and how they were met by the firm's engineered building systems. Projects include an office/research complex, a school addition, correction facilities, a high-technology building, and hospital projects. Scotsman Buildings, Baltimore.



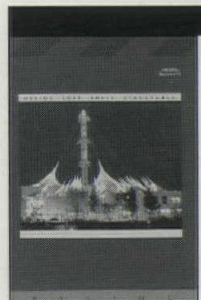
607. Lead-plastic barriers

The CLEAR-Pb planning guide illustrates the use of translucent lead-plastic radiation shielding with case histories of its application in X-ray, CAT, and special-purpose rooms in hospitals, medical schools, and radiation-therapy centers. Descriptions of modular products with technical data is also provided. Nuclear Associates, Carle Place, N. Y.



608. Modular sunrooms

Designed for both commercial and residential projects, the Sunbilt line of prefabricated sunrooms discussed in this eight-page booklet employ high-strength tubular steel rafters and cross bars to sustain wind and snow loads. Its glazing system for curved and straight eaves eliminates exterior caps. Sunbilt Solar Products by Sussman, Inc., Jamaica, N. Y.



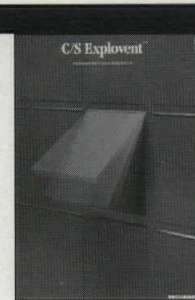
609. Membrane structures

Color brochure shows the latest Soft Shell Structures—high-tensile-strength fabric membranes supported by poles, beams, frames, or point hung. Describes such architectural services as computer design and wind tunnel analysis, and suggests materials for various applications. Helios Industries, Inc., Hayward, Calif.



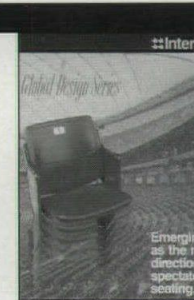
610. Safer pools

This pamphlet points out the many advantages of automatic SAFE-T COVER II pool-covering systems, not the least of which is their ability to prevent young children from accidentally drowning. They are said to pay for themselves by keeping out debris and stopping chlorine evaporation. Covers fit all shapes of pools. Cover Pools, Inc., Salt Lake City.



611. Explosion relief panels

A four-page brochure explains how the C/S Explovent line, which conforms to the National Fire Protection Association's guideline 68 "Venting of Deflagrations", can be tested and calibrated to provide the correct level of protection. Design options are explored, and a sample specification sheet is provided. The C/S Group, Muncy, Pa.



612. Spectator seating

Brochure explains how a line of stadium chairs can withstand physical and climatic punishment while retaining their handsome appearance. Also discusses various types of manual and automatic folding seats as well as telescoping platforms, under-structures, and motor systems. Interkal Inc., Kalamazoo, Mich.

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613. Heavy-traffic escalator

The EWE escalator, designed for high-rise and outdoor applications with large volumes of traffic, spans vertical rises from about 42 ft to 75 ft, at 30 deg inclines. Lateral bracing counteracts wind-loading when installed outdoors, and extra horizontal steps assure safe travel at maximum speed. Schindler Elevator Corp., Morristown, N. J.



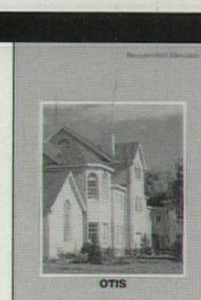
614. Custom elevators

Sedgwick is now making home elevators in configurations that permit architects a large degree of custom-design freedom. These units can include glass cabs, special shapes such as curved or octagonal, and finish options such as custom woods or steel. Drawing and layout services will be provided at no charge. Sedgwick Lifts, Inc., Monroe, N. C.



619. Stair lift

Designed to improve access in the multilevel home, the StairLift runs on a track only 7 1/2-in. wide, which can be mounted on either right- or left-hand side of the stair. For straight runs of up to 17 1/2 ft, the lift can be used on stairs of from 26- to 52-deg. Motor fits compactly under the seat. Inclinator Co. of America, Harrisburg, Pa.



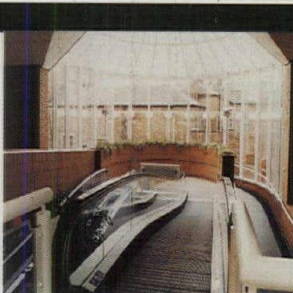
620. Residential elevator

Described as priced to fit the construction budgets of many home owners, Otis's new residential elevator needs only 20 sq ft of shaft space. Hydraulic operation is said to provide a smooth, quiet ride with even acceleration. Safety features include a see-through gate, handrails, and in-cab intercom. Otis Elevator Co., Farmington, Conn.



615. Low-maintenance lifts

A shield made of oil-resistant PVC protects the cylinder on Otis hydraulic elevators. Said to prevent costly elevator repairs by eliminating corrosion and electrolysis, the shield also guards against environmentally harmful underground oil leaks, as required by some local codes. Otis Elevator Co., Farmington, Conn.



616. Stepless escalator

Manufactured in a new U. S. plant, German-designed autowalks can handle large numbers of passengers as well as wheeled carts and strollers. Treads are surfaced with a non-slip ribbing; the walk is welded together from box sections and can be installed at a 12-deg incline. O & K Escalators, Inc., Newport News, Va.



621. Cab design

Updated catalog covers a range of elevator-cab components—door saddles, handrails, moldings, and brackets—made of aluminum, bronze, stainless steel, acrylic-impregnated woods, and extruded PVC with rails in 13 colors and ten profiles. Julius Blum & Co., Inc., Carlstadt, N. J.



622. Wheelchair lift

A 32-page design and planning guide shows how the Stair-Lift makes public buildings accessible without structural alterations or hoistways. Includes information on lift layouts, clearances, codes, finish options, outdoor installations, and a video offered as a planning tool. Garaventa (Canada) Ltd., Blaine, Wash.



617. Low-rise elevators

Microprocessor controls handle strategic car, corridor, and system-operation functions in hydraulic elevators for low-rise applications. An electronic dispatcher continuously scans calls to minimize waiting time, and automatically adjusts to peak-traffic schedules. Schindler Elevator Corp., Morristown, N. J.



618. Materials handling

Centerbrook Architects placed distinctive towers at either end of Lawrence University's Arts Center to house the mechanical equipment needed to move large paintings and heavy materials. A vertical reciprocating conveyor with a 6,000-lb capacity was selected instead of a more-expensive freight elevator. Pflow Industries, Inc., Milwaukee.



623. Accessibility products

A color flyer highlights the broad range of access equipment offered by a new corporate entity, which combines the product lines of American Stair-Glide, The Cheney Company, and British-based Project & Design Limited. Products include stair- and wheelchair-lifts, residential elevators, and tub lifts. Access Industries, Inc., Grandview, Mo.



624. Vertical transportation

The 1992 edition of this manufacturer's Architectural Planning Guide provides necessary dimensions and engineering illustrations helpful in the planning of passenger, freight, and service elevators; escalators; power walks; and power ramps. Ballustrade options are illustrated. Montgomery Elevator Co., Moline, Ill.

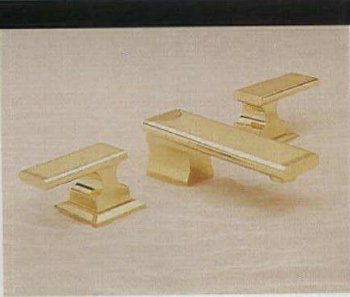
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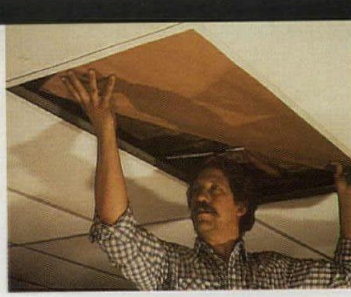
637. High-low sink

The Ballad line of stainless-steel sinks features a 33- by 22-in. model with an 8-in. deep, 19- by 15 3/4-in. work basin and a 6-in.-deep, 9- by 15 3/4-in. disposal basin, as well as a model with equal-sized double bowls. Both have recessed drop ledges, a sound-absorbing undercoat, and optional rinse baskets and cutting boards. Kohler Corp., Kohler, Wis.



638. Frost-finish fittings

The Linarea collection of bathroom hardware includes a widespread lavatory faucet and fittings for tub, shower, bidet, deck-mount tub, and tub/shower combinations. Fabricated of solid brass bar stock, the fittings come with chrome or brass "frosted" finishes. Bathroom Jewelry, Los Angeles.



639. Mid-watt radiant panel

A 2- by 4-ft radiant panel that drops into a standard T-bar ceiling grid produces 625W (2135 Btuh) of warmth with a mid-watt-density (156W per lineal foot) element said to keep the panel surface cooler and consume less energy than high-watt-density panels. Aztec International, Ltd., Albuquerque, N. M.



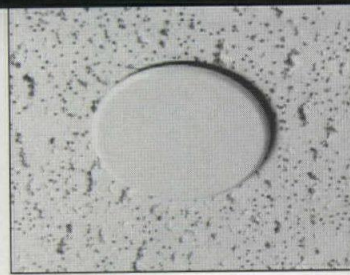
640. "Granite" cast-iron sinks

To coordinate with granite-finished counter surfacing, new colors have been introduced to American Standard's line of cast-iron kitchen and bar sinks: Glow, with black flecks on white, and Midnight Sky, with black flecks on silver. American Standard Inc., Piscataway, N. J.



641. Bathroom hardware

The Vogue series of faucets, bath accessories, and coordinating door and cabinet hardware combines sleek design with German craftsmanship. Available finishes include polished chrome with matte chrome (shown), polished chrome with gold, and white with polished chrome. Jado Bathroom and Hardware Mfg. Corp., Camarillo, Calif.



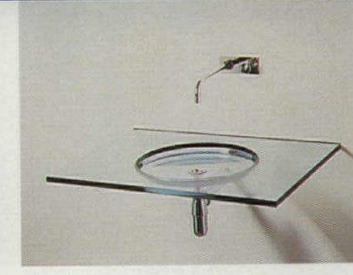
642. Concealed sprinkler

A bulb-type sprinkler, model F976, has a flat 3 5/16-in. cover plate that screws into the mounting-cap assembly and allows 1/2 in. for adjustment to the ceiling. Cover-plate finishes are chrome or white paint, with other colors to order. The sprinkler, with a 5-mm bulb, comes in temperature ratings of 155- and 200-deg F. Grinnell Corp., Exeter, N. H.



643. Compact whirlpool tub

The Kallithea is a 60- by 32-in. whirlpool bathtub designed to fit into standard-size bathrooms. Crafted of Armacrlyl, an acrylic/fiberglass combination said to provide a durable high-luster finish, the tub is available in custom colors. Kallista, Inc., San Leandro, Calif.



644. Glass suspended sink

A 16-in.-diameter basin suspended from a 32- by 24-in. counter of 3/4-in. tempered glass, the Nost assembly is supported by a full-length hidden wall bracket. The sink is shaped to prevent overflow; the wall-mounted, 8 3/4-in.-long, single-lever faucet minimizes splash with low-volume aerated flow. Hastings Tile & Il Bagno Collection, Freeport, N. Y.



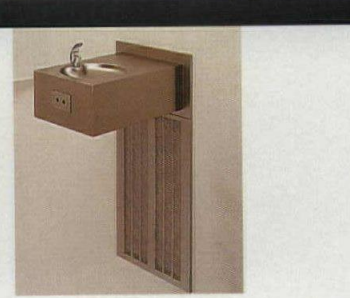
645. Low-temperature diffuser

A low-temperature air diffuser with a high induction ratio allows distribution of supply air at 40 deg or less without mixing boxes. The product is said to maintain supply parameters while reducing the size of air handling and distribution systems by about 50 percent, with concomitant savings in initial, maintenance, and utility costs. Titus, Richardson, Tex.



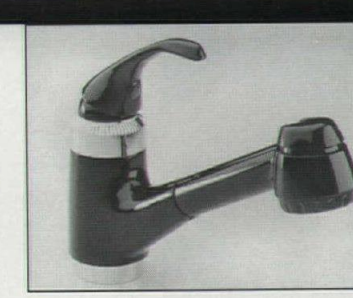
646. Networking package AC

The E-9000 packaged terminal heating-cooling unit combines individual control for multiroom applications with networking into central control systems for customized energy management. Central controls include automatic shifts from daytime cooling to nighttime heating and pre-programmed temperature ranges. Carrier Corp., Liverpool, N. Y.



647. Touch-free water cooler

Featuring Hands-Off operation, the model HWDFS8HO barrier-free stainless-steel water cooler uses an electronic sensor that activates the water stream when the user comes in range. A built-in delay and maximum 30- to 35-sec shutoff safeguard against tampering and accidental activation. Haws Drinking Faucet Co., Berkeley, Calif.



648. Pull-out spray faucet

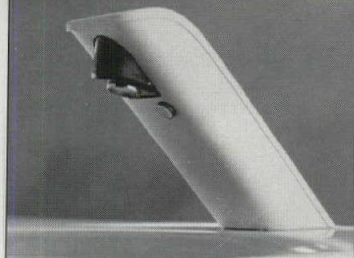
Part of the Regency line, a new single-lever faucet features a pull-out spray spout for quick extended reach. The faucet also includes an accessible dual-mode sprayer offering stream or spray. Eight solid colors or metal-accented combinations are available. Elkay Mfg. Co., Oak Brook, Ill.

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649. Deco-style pedestal sink
Recalling the '30s, the Deco pedestal lavatory features a crisp multi-faceted rectangular design. The handcrafted sink measures 22 by 32 in., with a 13- by 20-in., 5 5/8-in.-deep basin. In addition to the travertine model shown, it can be had in luna pearl, blue pearl, red, and black granites. Bates & Bates, Lakewood, Calif.



650. Touch-free electronic faucet
Operated by a 9V electronic battery, the Istronic No-Touch automatic faucet employs an infrared sensor that responds to heat from users' hands. Built-in operating components require no electrical connections. The faucet comes with thermostatic mixing valve or single supply line, in stainless steel or white epoxy. Intersan Mfg. Co., Phoenix.



651. Water-saving toilet
A low one-piece toilet, the San Raphael offers a 1.5-gal. flush while exceeding ANSI standards for toilets requiring 3.5 gal. or more. The vitreous-china unit uses incoming water-supply pressure to compress air in a tank reservoir. When the toilet is flushed, the compressed air propels water to the siphon-jet bowl. Kohler Co., Kohler, Wis.



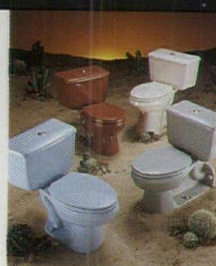
652. Commercial lavatory faucets
A new ANSI-approved line of lavatory faucets for commercial use incorporates such functions as volume and/or temperature controls, time-release mechanisms, preset flow, and long lever handles for barrier-free installations in the basic Kroin design. The faucets are available in brass, chrome, and 12 epoxy colors. Kroin Inc., Cambridge, Mass.



653. Barrier-free water cooler
In addition to wheelchair accessibility, the NWC series of wallmounted coolers provides "feather-touch" actuation by pushbars at center and sides. Timed water flow cuts off after 7 1/2 sec. Models supplying 4.8 to 8 gph have stainless-steel tops over baked-enamel cabinets available in several finish options. Sunroc Corp., Glen Riddle, Pa.



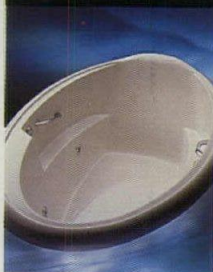
654. "Antique" faucets
The Georgian Range of "antique" faucets imported from Great Britain includes washbasin sets (shown), bidets, bath fillers with and without handshowers, thermostatic mixers, and kitchen faucets. Handcast of brass, the fittings come with polished chrome or brass finishes and white-porcelain lever handles. Watercolors Inc., Garrison, N. Y.



655. Low water-use toilet
Turboflush toilets flush with less than 1.5 gal of water by means of a tank operating system designed to withstand higher water-supply pressure than tank trappers. The line includes round-front and elongated-bowl models, an 18-in.-high toilet for wheelchair access, and a floor-mounted back-outlet model. Briggs Industries, Inc., Tampa, Fla.



656. Wall-panel radiators
Especially suitable for under-window installations, Runtal's slim 2-in.-deep wall-panel hot-water radiators provide radiant and convective heat with outputs up to 1880 Btuh/ft at 180F. Lengths to 15 ft and up may be field curved to a 20-ft maximum radius. More than 100 colors are available. Runtal North America, Ward Hill, Mass.



657. Oval-shaped whirlpool bath
A true oval without deck flange, the 60- by 42- by 23 3/16-in. Ariel acrylic whirlpool tub includes molded armrests, back support, and headrest. Four jets, including two adjustable air-control valves, and a 3/4-hp pump are standard; two more jets and a 1-hp pump are optional. Lasco Bathware, Div. Tomkins Industries Inc., Anaheim, Calif.



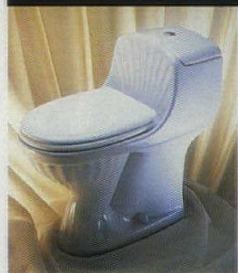
658. Euro-design air conditioner
The new slim (18 1/2 in. front to back) Zonair packaged terminal air conditioner features a curved top surface and recessed return air grill that help avoid accidental damage. Formed of a flame-retardant polycarbonate/ABS resin blend, the housing also contributes to quiet operation. Inter-City Products Corp., LaVergne, Tenn.



659. Whirlpool shower
The J-Dream shower packages 16 multilevel hydrotherapy jets, three adjustable shower heads, cascading waterfall, and steam bath with integral seat in a 60- by 36-in.-high unit that can be installed in place of a standard 5-ft bathtub. All functions are controlled from an interior panel. Jacuzzi Whirlpool Bath, Walnut Creek, Calif.



660. Electrostatic air cleaner
Tectronic air cleaners employ a three-filter system said to remove 96 percent of invisible airborne particles. Washable prefilter and collecting cell eliminate the cost of replacing filters. Flush-mounted models replace a standard 2- by 2-ft or 2- by 4-ft ceiling panel with no visible profile. Tectronic Products Co., Inc., East Syracuse, N. Y.



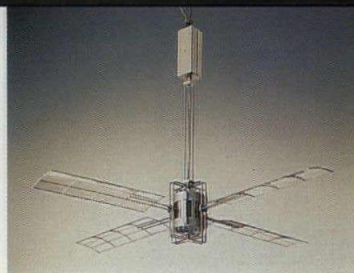
661. Efficient water closet

The manufacturer says that its Veneto toilet, which is made in France to American standards, has a silent flush valve and, using just 1.5 gal., offers ultra-low water consumption. Both the Veneto and the Veneto Coquille models—the latter has a sculptured shell motif on bowl and tank—are offered in white and pastels. Porcher, Inc., Chicago.



662. Metering faucets

The company's line of commercial faucets offers solid-brass slow-close metering types in a number of configurations, including basin taps, 4-in. center sets, and wide sets. The maker also offers new metering cartridges, which can be combined with most of its componentized commercial line. Grohe America, Inc., Wood Dale, Ill.



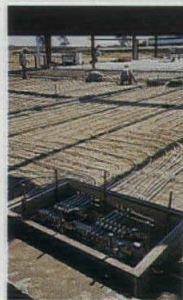
663. Ceiling fan

The Ventilator ceiling fan, designed by Manfred Wolf, is fashioned of stainless steel and cast aluminum. With four different speeds, the fan is 40-in. in diameter and is recommended for installation in rooms with a ceiling height of at least 8 1/2 ft. It is manufactured by Serien in Germany. Prologue 2000, Inc., New York City.



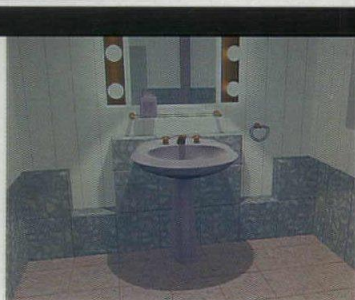
664. Brass faucets

The firm's Illusions Collection offers brass faucets with three different finishes: Eurobrass, of nonlacquered nickel coated with gold alloy; polished chrome; and a bright white epoxy-enamel coating. The collection comes in two styles: one has a high-profile spout, the other a quarter-moon-shaped spout. The Chicago Faucet Company, Des Plaines, Ill.



665. Radiant-floor heating

The maker has expanded the capabilities of its Infloor radiant-heating system to accommodate nonresidential applications, including hospitals, clean-room assembly areas, and high-rise residences. Components, using a variety of piping materials, are pre-assembled in three-, five-, and seven-loop configurations. Gyp-Crete Corporation, Hamel, Minn.



666. CAD for bathrooms

BathCAD software for computer-aided bathroom design, which allows users both to create bathroom plans and to change them rapidly, has been upgraded to create photo-realistic renderings. Images on the computer screen may be produced in both 2-D and 3-D to assist the client's understanding. American Standard Inc., Piscataway, N. J.



667. German-design faucet

Dieter Sieger was able to patent his design for Dornbracht's Edition Fino faucet, which has a downward-curved lever handle set above a straight, horizontal spout. The finish combines polished chrome and matte black. Fino style also comes in models for tub and shower. Santile International Corp., Houston.



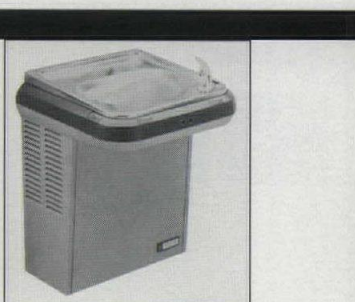
668. All-round heating

Radiant heating, using the manufacturer's pePEX cross-linked polyethylene tubing, can be installed on ceilings, walls, and floors. The system has heat-emission plates stapled directly to joists and furring. The firm also introduces Wirsbo Ready-Floor, an underlayment poured directly over tubing. Wirsbo Company, Apple Valley, Minn.



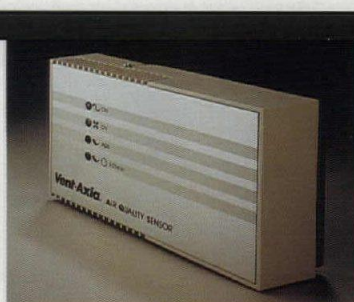
669. Faucet spouts

The manufacturer has added three new designs for spouts to its line of Traditional Handle Lavatory Faucets: the Mini High Arc Spout, the Tea Kettle Spout, and the Mini Tea Kettle Spout. The faucets, all of which have washerless cartridges, may be installed with a variety of cross or lever handles. Moen Inc., Elyria, Ohio.



670. Hands-off water cooler

A solenoid valve activates a hands-free on-off water cooler when a user steps in front of the fountain and interrupts an infrared light beam. A time limit of 30 seconds prevents water damage if the sensor is blocked, and a time-delay mechanism prevents activation by casual passers-by. Elkay Manufacturing Co., Oak Brook, Ill.



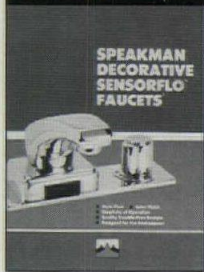
671. Automatic fan

The adjustable Air Quality Sensor automatically turns on a ventilating fan when it registers a decline in air quality caused by such contaminants as tobacco smoke, perspiration, or kitchen odors. When air quality returns to normal, the fan continues to operate for a preset period, also adjustable. APV Vent-Axia Inc., Wilmington, Mass.



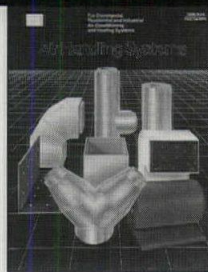
672. Ring handles

New lavatory handles, available in chrome, polished brass, satin brass, or antique brass, have ornamental rings that can be varied for accent. Possible variations for matching or contrasting ornament include the metals mentioned, as well as black Soft-Touch rings (pictured) and specially treated oak. Delta Faucet Co., Indianapolis.



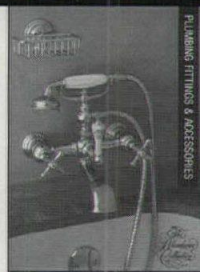
673. Commercial faucets

All models of Sensorflo and Easy-Push faucets are covered. Noncontact Sensorflo designs have electronic sensors to turn themselves on and off; they are germ-free and reduce water use by as much as 85 percent. Easy-Push metering faucets have tamper-resistant adjusting screws. Speakman Co., Wilmington, Del.



674. Air ducts

The air-handling duct systems in this 24-page catalog can be used to replace or modernize older systems as well as in new construction. Products include fiberglass duct, duct liners, and duct-wrap insulation for industrial, commercial, and residential cooling and heating. Manville Mechanical Insulations Division, Denver.



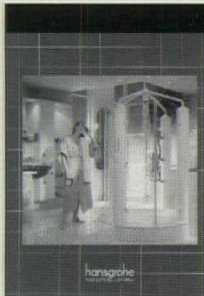
675. Classic bath hardware

The faucets, taps, shower heads, and other residential-bath fittings described in this 24-page full-color catalog have a classic, Victorian air. Coated finishes include pewter, French bronze, and polished brass; uncoated finishes are polished chrome, brushed chrome, and polished brass. The Broadway Collection, Olathe, Kan.



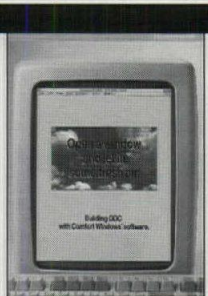
676. Radiator enclosures

The esthetic effect of a well-designed custom enclosure for finned-tube heating elements is illustrated in this glossy 12-page brochure. Some of the vendor's standard and rugged products are also shown. Vulcan Radiator Co./Mestek, Westfield, Mass.



677. Modern plumbing

The company's full line of Eurostyle plumbing fixtures and hardware for the kitchen and bath are presented in a full-color, 28-page catalog. In addition to chrome, brass, and color-coated faucets, taps, and shower heads, "surround" shower systems and lighted vanity mirrors provide complete environments. Hansgrohe, Inc., Soquel, Calif.



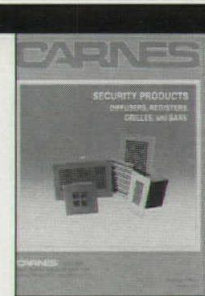
678. PC building management

Two one-page flyers and a six-page booklet introduce readers to a system for direct digital control (DDC) of heat, humidity, lighting, and more in office and residential buildings. Systems can be managed from off-site using a PC with Comfort Windows software and a modem. Residential/Building Controls, Honeywell Inc., Golden Valley, Minn.



679. Special shower

Aimed at spas, health clubs, and hotels, a system with multiple water jets and thermostatic mixing valves gives a Swiss Shower that massages bathers while an attendant rapidly varies water temperature between hot and cold. Details of two systems, one with a high-intensity manual spray, are in a one-page flyer. Leonard Valve Co., Cranston, R. I.



680. Guarded ducts

A line of diffusers, grilles, and bars offers minimum, medium, or maximum security for the internal and external air ducts in a facility. Some models, which range in size from 6-by-6-in. to 48-by-48-in., have integral, UL-classified fire dampers. All units meet or exceed applicable ASTM standards. Carnes Co., Verona, Wis.



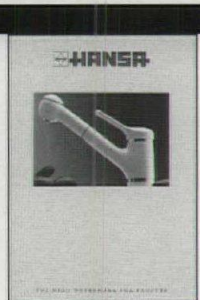
681. Designer enclosures

The Classic line of architecturally designed enclosures for building heating elements come in two styles: standard with internally telescoping accessories for shadow effects and "J" style with an interlocking, slip-jointed construction for layout adjustment. Detailed specs are in this 32-page booklet. Sterling Heating Equipment, Westfield, Mass.



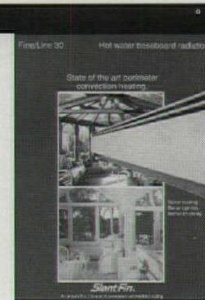
682. Smokey the Chef

This brochure introduces a system that, when installed in range hoods, automatically extinguishes stove-top fires before they can spread to other areas of the kitchen, the primary site of all home fires. When a fire is sensed, the system also shuts off the stove. Twenty First Century International Fire Equipment and Services Corp., Irving, Tex.



683. Sleek faucets

The European-styled faucets in this 38-page catalog use a patented ceramic-disk technology for durability. Retractable faucets have fine spray controls and one system's thermostatic controls automatically keep shower water at the temperature selected regardless of variations in water pressure and temperature. Hansa America, Inc., Chicago.



684. Baseboard heating

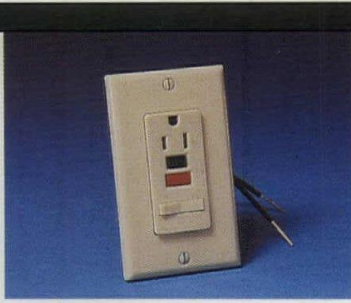
The consumer and contractor benefits of hydronic baseboard heating are compared to a variety of other heating techniques in this eight-page brochure. Characteristics and specifications of Fine/Line 30 baseboard radiators, cover assemblies, and other heating accessories are also delineated. Slant/Fin Corp., Greenvale, N. Y.

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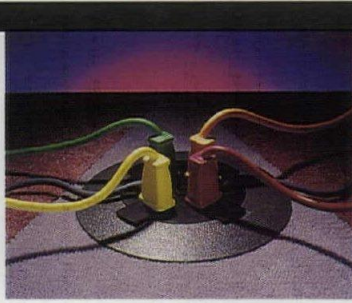
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685. High-intensity fluorescent
The High Lumen Biax line of rapid-start lamps now includes a 50W model that has an initial rating of 4,000 lumens, about 31 percent more than F40 cool-white fluorescents. Its SPX tri-phosphors give a CRI of 82 for a more-natural lighting appearance, and the lamps are said to be cost competitive with 250W metal-halide units. GE Lighting, Cleveland.



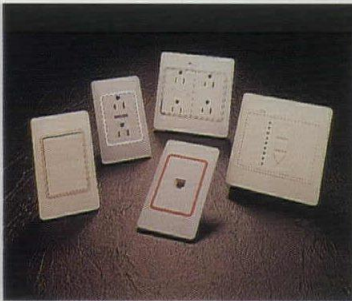
686. Switch/interrupter
A combination switch and ground-fault-circuit-interrupter (GFCI) outlet, this unit can provide protection in several different ways: through the outlet only; outlet and switch; and with feed-through outlets. Switch is rated 8.3A, 120V, 1/2 HP; outlet, 15A, 125V; feed-through 20A. Leviton Manufacturing Co., Inc., Little Neck, N. Y.



687. Four on the Floor
The Flush Poke-Thru electrical fitting doubles the power of previous models by providing four power outlets. Space requirements and size are the same as for two-outlet models. It has thermoset plastic receptacles with polycarbonate slide covers, and carpet flanges come in various colors. Raceway Components, Inc., Patterson, N. J.



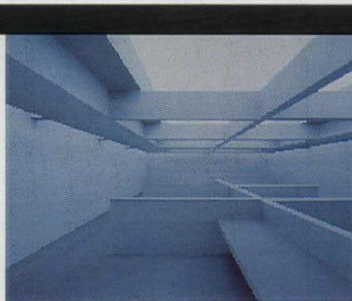
688. Easy-exit fixtures
Part of the Practica Bella series of lighting fixtures, these 22W fluorescent exit lights work with a patented, plug-in receptacle that makes them easy to install and maintain. The fixture body comes in black, burgundy, or gray, and customized lenses come in various colors and text styles. Beggelli Inc., Jacksonville, Fla.



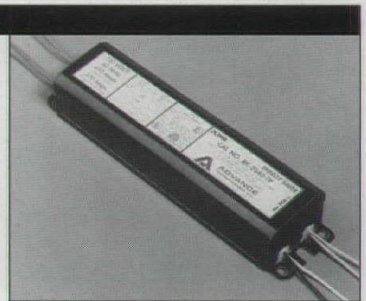
689. Designer outlets and more
Impressions is a line of designer wall plates and wiring devices (switches, receptacles, dimmers, interrupters, surge suppressors, and phone and data connectors) for commercial and residential use. They are available in a wide range of colors and trims and plates have a smooth screw-less surface. Pass & Seymour Legrand, Syracuse, N. Y.



690. Conductive-coating glass
Useful in commercial refrigerator and oven doors, LOF Transparent Electrically Conducting (TEC) Glass products have high light transmittance and heat reflectance. They provide an extremely uniform, scratch-resistant surface without the iridescent and mottled color often associated with such coatings. Libbey-Owens-Ford Co., Toledo, Ohio



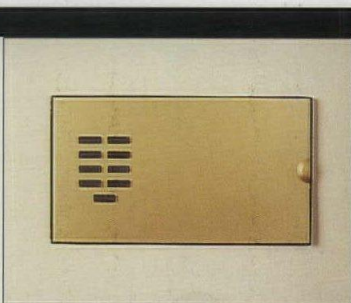
691. Lighting software
Lumen-Micro 5, a software package for 286-based PCs and up, lets designers see the effect of light-fixture and window placement on interiors and architectural elements. Light sources can be input manually or automatically and results can be used for renderings and with AutoCAD drawing files. Lighting Technologies, Inc., Boulder, Colo.



692. Electromagnetic ballast
For 4 ft fluorescent lamps, the PowrKut Mark V cuts energy use without reducing the light output of the lamps. Suited for spot replacement and energy conservation retrofits as well as new construction, their ballast efficiency factor (BEF) of 1.16 qualifies them for current utility rebates. Advance Transformer Co., Rosemont, Ill.



693. Dimmer ballast
The Hi-lume solid-state electronic ballast, designed for compact twin-tube 40W fluorescents, controls lamp output over a 5- to 100-percent range. It can be controlled by the company's Nova-type wallboxes, Pre-Pack panel, or by adding an interface to other wallboxes. Power factor is over 90 percent. Lutron Electronics Co., Inc., Coopersburg, Pa.



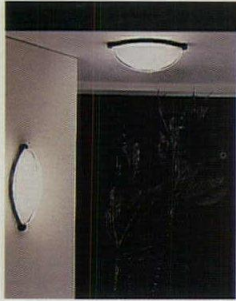
694. Programmed lighting
A stand-alone, wall-mounted dimmer unit, the LiteTouch Scenario can control up to four dimming or switching loads with a total capacity of 2,400 watts. In addition to master on/off, each controller has four load-control switches and four "scene" switches; up to 16 units can be interconnected. LiteTouch, Inc., Salt Lake City.



695. Lite light
This 4-oz. 18W fluorescent with ballast replaces a conventional 75W incandescent. The compact lamp produces a soft-white light, is rated at 10,000 hours, and saves the user \$45.60 over its life on utility bills at an 8-cents/kilowatt-hour rate. It is only 6.75-in. long by 2 in. in diameter. GTE Electrical Products, Danvers, Mass.

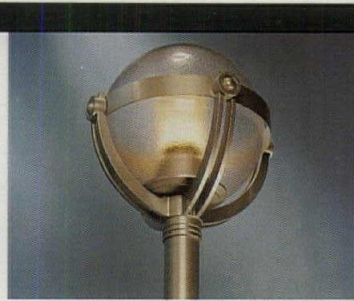


696. Smooth exits
The Pinnacle series of exit lights is made of die-cast aluminum with rounded contours and a thin profile to blend with a variety of architectural styles. Available in four finishes and mounting styles with a variety of faces and lamp sources, lights meet UL, NEC, and the latest NFPA requirements. Sure-Lites/Cooper Lighting, Elk Grove Village, Ill.



697. Outdoor fixture

Diffused light for the Mitasi line of outdoor wall and ceiling fixtures comes with incandescent or energy-saving compact fluorescent lamping. The diffuser is molded white sanded glass; the lamp frame is black-lacquered die-cast aluminum. Incandescent version comes with candelabra base. Artemide, Farmingdale, N Y.



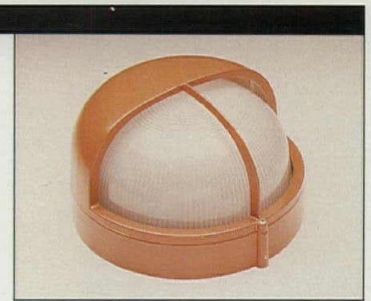
698. Luminaire

The NW New Westminster luminaire features an acrylic globe mechanically fastened to a rotomatic system with concealed stainless-steel hardware sealed by silicon gasket. Round band of flat aluminum is welded to cradle pole-top adaptor. Various pole and lamping configurations are available. Lumec Inc., Boisbriand, Que.



699. Indoor/outdoor fixture

Wet Scape moves outside to light facades, signage, and gardens and stays inside to illuminate most anything. Designed by Carlo Vietri, the fixture is die-cast aluminum with a continuous gasket and tempered glass lens, and swivels with 350-degree rotation and 112-degree angulation. White, black, green. Reggiani Light Gallery, New York City.



700. Decorative luminaire

Euroluxe indoor-outdoor luminaire is available in three light sources: HP sodium, fluorescent, and incandescent. Comes in round and oval shapes, and numerous colors and accessories, including hood, guards, and shields. Made of one-piece die-cast aluminum finished with polyester powder paint. Hubbell Lighting, Christiansburg, Va.



701. Credenza bollards

Nontraditional applications bring these colorful bollards into the world of high design. Using different heights in clusters creates intriguing outdoor sculpture or inviting landscape tableaux. Available in 28-, 32-, 36-, 40-, 44-, and 48-in. heights in 10 standard finishes from silver to glossy yellow. McGraw-Edison, Elk Grove Village, Ill.



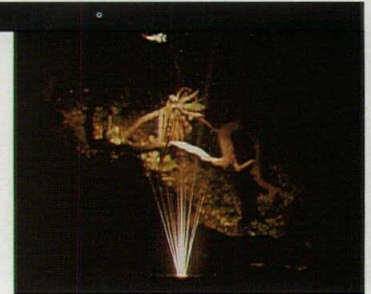
702. Custom reproductions

Recalling the creativity fostered by WPA programs during the Depression, wall-mounted luminaire is a bronze-finish-aluminum copy of the original bronze fixture at another entrance of this Alabama courthouse. The manufacturer still retains its custom capabilities in addition to its full line of lighting products. TrimbleHouse, Norcross, Ga.



703. Area luminaire

Low-pressure sodium lamp is housed in dark-brown cast-aluminum housing. Available in 35W and 55W 4800/8000 lumens, with high-gloss white-enamel reflector. Mega-Lite, Toledo.



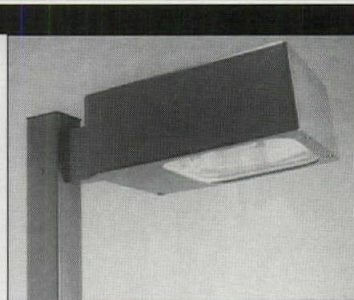
704. Water and light

Lotus #4 adds a new dimension to outdoor lighting when placed in conjunction with a sprinkler system. A pressure switch activates the light source when the water is released and can be set at several pressure levels. MR16 light source at 75W maximum; 12v fixture. Acrylic lenses provide visual effects. Lumiere, Westlake Village, Calif.



705. Asymmetric outdoor fixture

Elliptipar's patented asymmetric reflector is the cornerstone of the company's new line of outdoor lighting models. The line includes 16 models in different designs, sizes, light sources, and wattages to meet outdoor area lighting, floodlighting, and "wallwashing" needs, including "grand scale" lighting. Elliptipar, Inc., West Haven, Conn.



706. Luminaire

Decashield III features newly designed die-cast aluminum housing with stainless-steel latches and removable one-piece door assembly. UL listed as suitable for wet locations. Available in 70W to 400W lamping in HPS or MH sources. GE Lighting Systems, Hendersonville, N. C.



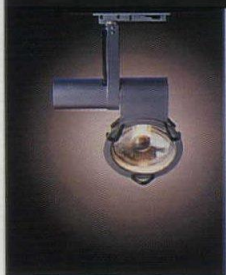
707. Ornamental luminaires

Athens and Bainbridge have been designed in updated historic styles. Available in a variety of polycarbonate globe styles and sizes, with several ornamental accessories and in 12 colors. HPS, MH, and MV light sources are offered. American Electric, Memphis.



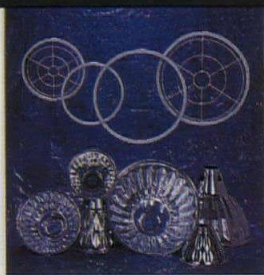
708. Floodlight

Specifically designed to use long-lasting HID light sources, BEGA floodlights are die-cast aluminum with anodized aluminum reflector and clear tempered glass. Fully adjustable yoke/swivel mounting and integral ballast/mounting box. BEGA, Carpinteria, Calif.



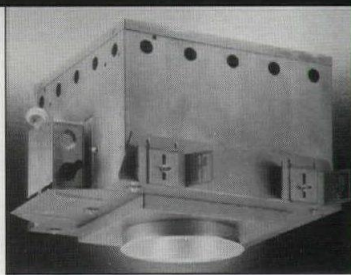
709. Architectonic lighting

Spacebird SB36 fixtures are powered by an internal transformer that handles low-voltage PAR 36 lamps from 25W to 75W in a range of beam spreads. Built-in retaining bars hold any two attachments: color filters, light-blocking screens, spread lenses, and louvers. Finishes are black, white, silver. Lighting Services, Inc., Stony Point, N. Y.



710. Less glare, more light

The Eye CAD-Star line of reflectors has a faceted interior that directs more of the source's output into an area than conventional smooth reflectors. At the same time, they reduce the amount of glare (60-to-90-deg light). Models can accept various mercury, metal-halide, and HPS lamp types. C. E. W. Lighting, Inc./Eye Lamps, Dallas.



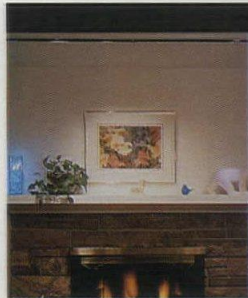
711. Long-lived white spots

Designed to accept T-10 lamps (energy-efficient white-sodium sources with a life of 10,000 hours), the Spot White series of fixtures can be tilted 40 deg. vertically, rotated 358 deg. horizontally, and adjusted for a beam spread from 10 to 30 deg. They come with 6- or 7-in. apertures. Edison Price Lighting, New York City.



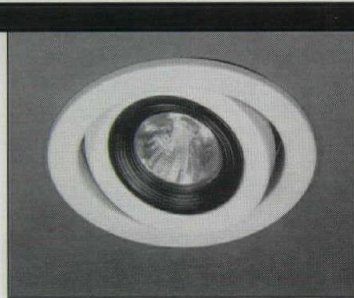
712. Mixed-shape fixtures

Orion is a family of tubular lighting fixtures that includes round, oval, and triangular components. A unique coupling system lets designers mix the different shapes, which accept fluorescent, incandescent, line/low-voltage halogen, and HQI sources. They come in white, black, and custom colors. Staff Lighting Corp., Highland, N. Y.



713. Lower-cost track

In lighting areas that do not need exacting beam control, the RT6000 concealed track-lighting system costs half as much as other lighting systems from the firm. Designers can mix line- and low-voltage modules in one track; it takes PAR 16 and 20 lamps. Light from the hidden track modules comes through a 2-in.-wide slit. Alcco, Franklin Park, Ill.



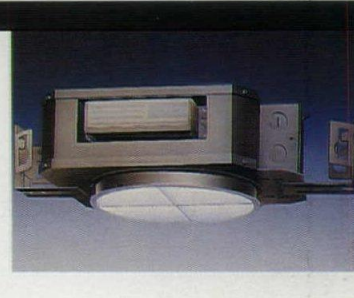
714. Low-voltage halogens

This line of compact, low-voltage, recessed halogen lighting features cool operation, excellent color, and easy installation and aiming. Adjustable trim functions are multiplier, eyeball, and baffled down light. Housings have transformer and thermal cut-off. Conservation Technology, Ltd., Deerfield, Ill.



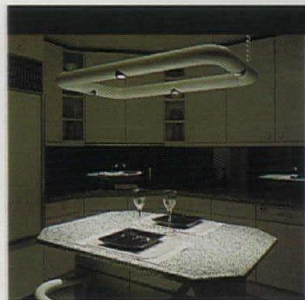
715. Style track

Part of the Halo Ambiente collection, three styles of track fixtures take low-voltage or halogen lamps. Filo I has a twin-plate mount, Filo II an all-wire design; they come in white, matte black, red, and patina. Gabbia's open-form frame comes in brass and chrome as well as white, matte black, and red. Halo/Cooper Lighting, Elk Grove Village, Ill.



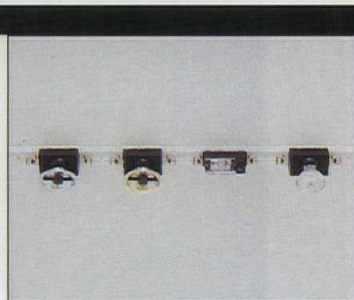
716. Down lighting

For use with twin or quad compact fluorescents, Twinlite and Quadlite CB's are shallow recessed fixtures with cross-baffle parabolic louvers that provide extra shielding at normal viewing angles while delivering light similar to open-cone fixtures. They come in two sizes: 7-1/4-in. and 8-3/8-in. diameters. Kurt Versen, Westwood, N. J.



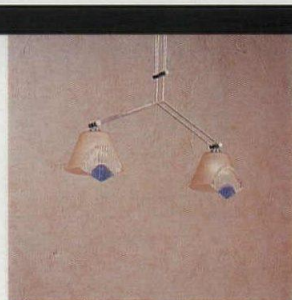
717. Tubular tracks

The Inner Spaces line of low-voltage track lighting uses fully rotational MR16 halogen lamps in a modular 3-in.-diameter tubing system. The suspendable tubing can be used in straight, oblong, or hexagon units, or in multiple tiers; it comes in black, white, brass, polished aluminum, or custom colors. U. S. Powerbeam, Inc., Little Ferry, N. J.



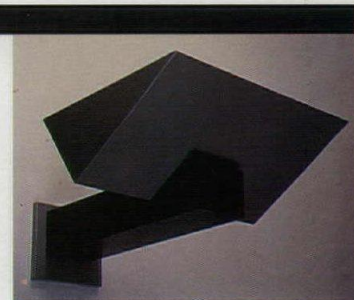
718. Halogen accents

For use with the Light Strip 2000 series, these horizontal and rotatable halogen sockets work with 12V or 24V systems to light bookshelves, cabinets and such. The horizontal unit takes G4-base bare quartz lamps, 20W max. The rotatable unit uses MR11 or AR48 G4 reflector lamps, 20W max. Lucifer Lighting Co., San Antonio, Texas.



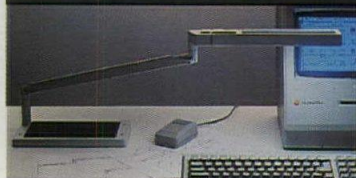
719. Quick-change artist

The Sorbè Collection of halogen sconces and ceiling pendants quickly take on a new look just by changing their Venetian-glass diffusers. The diffusers come in seven colors and patterns and seven mounting options. Five diffusers have hand-molded, cut-glass insets. CSL Lighting Mfg., Inc., Valencia, Calif.



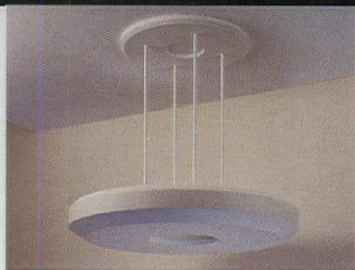
720. Wide-area sconces

The aluminum asymmetric reflectors of the Ensconce Series wall-mount fixtures let them illuminate a wide area. They aim the beam outward and across walls and ceilings to provide even, indirect lighting without "hot spots." Fixtures are available for tungsten halogen, metal halide, or HPS lamps of various wattage. Elliptipar, Inc., West Haven, Conn.



721. Workstation lamp

For desk lighting near video-display terminals, the BAP provides a fixture head with a recessed fluorescent lamp attached to a pantograph-type arm. The head, with blue, green, or amber filter, has a lamp-ejection button for easy bulb replacement. It comes in white or black and two arm lengths. Luce Plan/Artemide, Inc., Farmingdale, N. Y.



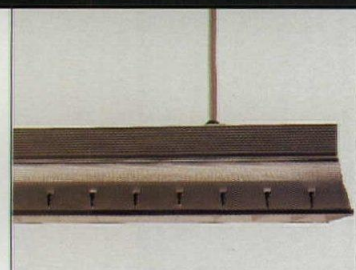
722. Efficient fixture

Circa is an indirect-lighting fixture with an efficiency over 70 percent for four 39W compact-fluorescent lamps. Its 4-in.- by 29-in.-diameter beveled housing, encircling a 9-in. reveal, softly reflects light from many surfaces, eliminating the need for a diffuser and providing illumination equivalent to an 8-ft luminaire. Litecontrol, Hanson, Mass.



723. Low-ceiling luminaires

Flatlite Series 67 are T8, T10, T12, and biaxial fixtures for indirectly lighting large industrial and commercial spaces. Computer-designed, the flat luminaire has its maximum beam output at 120-deg. Ideal for mounting on 8-ft centers only 15-in. from the ceiling, maximizing head room. Neo-Ray Lighting Products, Brooklyn, N. Y.



724. Art and light

Designed to complement abstract, contemporary interiors, the Technos luminaire's unique shape and construction provide precise light distribution. Available in 4- or 5-ft. units or continuous rows, it comes with one or two T8 Octron lamps and rapid-start, electronic, or dimming ballasts. Zumtobel Lighting, Inc., Garfield, N. J.



725. Minimalist lamp

The 17.6-in.-high Pierrat lamp has no wires between its halogen bulb and the 50W transformer in its swivel base; the current is "broadcast" through the composite metal arm. The lamp head can be snapped in to face up or down, to give either direct, diffused, or indirect light. Legs snap into position too. Flos Inc., Huntington Station, N. Y.



726. Affordable task light

Priced at \$190, the Ios desk- or benchtop lamp has three pivot points for positioning the head 8 to 30 in. from the base and 10 to 30 in. above the work surface. For mounting on its own cast-iron base or on a systems-furniture panel, it comes in three color schemes and is UL-listed and CSA-approved. Details, New York City.



727. Large-area lighting

The 1,000W SFU fixture line serves gymnasiums, swimming pools, manufacturing sites, and other large indoor spaces with high ceilings. Spun-aluminum reflector and high-output metal lamps give symmetric, glare-free lighting. Standard length is 84 in. and standard finish, white; other colors on order. SPI Lighting Inc., Mequon, Wis.



728. PC task lights

Illumination from PC-Lite's 18W, 10,000-hr compact fluorescent tube is directed downward through a specular parabolic louver to control glare, thus reducing eyestrain at computer workstations. Models with a 30- or 44-in. reach can be clamped to the work surface; there is also a 30-in. unit with a base. Dazor Manufacturing Corp., St. Louis.



729. Radial control

Using a white or silver radial parabolic louver, the Direkta series bathes an area in glare-free nondirectional light. Designed for 18W and 26W quad-tube lamps (TC-D), modular components assemble into two- or three-lamp asymmetrical or symmetrical recessed and surface-mount models. Poulsen Lighting, Inc., Miami.



730. Office ambient

Specifically designed to work with the Context Office from Steelcase, Inc., upright luminaires offer seven mounting options from desk-top to wall-hung. Illumination, from F50 Biax lamps, is said to be evenly diffused without glare or hot spots. Peerless Lighting Corp., Berkeley, Calif.



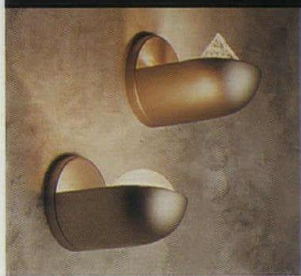
731. Light on the side

To prevent CRT glare and screen washout, these compact-fluorescent task lights have asymmetric reflectors so lamp-heads can light work from outside the screen area. The fixture comes in 13W, 18W, and 24W articulated-arm models and 18W and 24W "Nordic desk lamp" versions. Luxo Lamp Corp., Port Chester, N. Y.



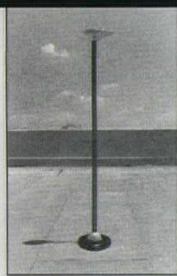
732. Nonlinear lighting

For the low glare and contrast ratios needed in electronic offices, the HPQ series offers rectilinear, low-angle indirect light from biaxial lamps. Options include a center enclosure or down light, four aluminum or two steel housing styles, and smooth or textured color finishes. Architectural Lighting Systems, Inc., Taunton, Mass.



733. Low-voltage light

This low-voltage sconce emits either a soft glow or dramatic accent light, depending on the glass used. Spanish borosilicate glass and dimmable 12V transformers are included as standard features. Fixtures are UL listed. Visa Lighting Corp., Milwaukee.



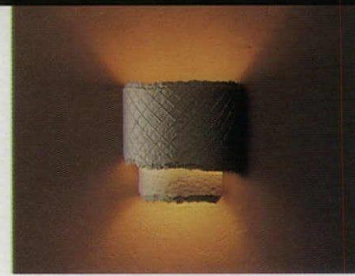
734. Cast-aluminum torchière

Designed by Ron Rezek, Oracle is a cast-aluminum halogen torchière with a biomorphically shaped shade. The unit stands 71-in. high, 11-in. more with its shade. The pole has a dark grey plastic powder coat, while the shade and base are polished aluminum. Ron Rezek, distributed by Artemide, Inc., Farmingdale, N. Y.



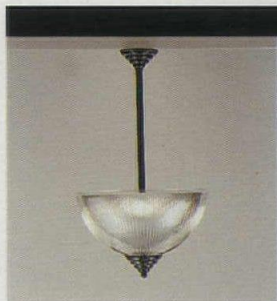
735. Freestanding luminaire

A 6-foot-high luminaire, the ID-S, designed by Milan-based Sottsass Associati, provides asymmetrically distributed light from an anodized aluminum reflector with specular side pieces. An adjustable direct-light reflector is available as an accessory, as is a wall-mounted version of the unit. Zumtobel Lighting, Inc., Garfield, N. J.



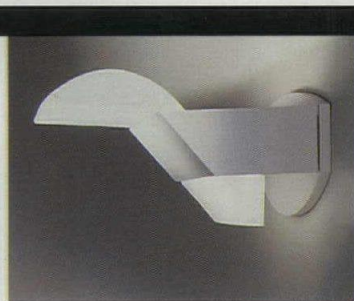
736. Porcelain sconce

Made of reinforced porcelain, the Torn Graph-Paper Light is hand-built in a variety of sizes, configurations, and patterns. The fixture is available with a fired-porcelain coating or a choice of painted finishes, and lamping can be either compact fluorescent or incandescent. Saxe-Patterson, Taos, N. M.



737. Stem fixture

Like all products from Classic Illumination, the 1989-I inverted stem fixture with 15CD shade is hand-crafted of solid brass. Fixtures are made to order with a choice of finish, height, and shade. Finishes available include polished brass, antique brass, verdigris, classic bronze, antique silver, and chrome. Classic Illumination, Inc., Berkeley, Calif.



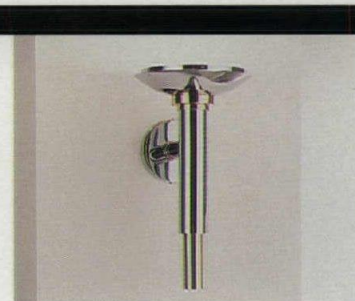
738. Halogen sconce

Designed for Leucos Lighting by Roberto Pamio, Mark is a sconce that provides upward light from a 100W tungsten halogen lamp and an etched, Murano-glass diffuser. The fixture comes with either a matte-white or metallic charcoal-grey finish and either white or blue glass. Leucos Lighting, Edison, N. J.



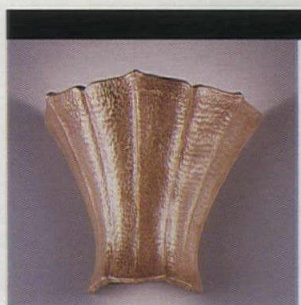
739. Table light

Part of the Paper Lights line, the Markee table light uses a calendared-aramid fiber for its diffuser. This man-made fiber claims to have excellent electrical insulating properties, is heat-resistant, durable, and can be cleaned with household chemicals. The Markee has a laser-cut steel base and stands 20.5-in.-high. Resolute, Seattle.



740. Wall fixture

The Torch is a brass wall fixture with a tungsten-halogen lamp, asymmetrical reflector, and curved Pyrex shield that directs light up toward the ceiling while reflecting it back into the room. The 15-in.-high unit comes with a variety of finishes including polished brass, chrome, and copper. Boyd Lighting Co., San Francisco.



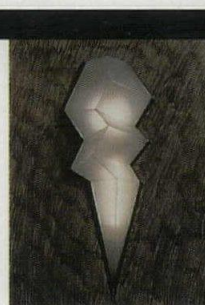
741. Sconce

Appropriate for residential and commercial settings, the Achilles fixture is a sconce that throws 70 percent of its light up and 30 percent down along the wall. Lighting can be incandescent, fluorescent, or halogen, and the hammer-tone surface comes in finishes such as gold leaf and verdigris. Derek Marshall Lamps & Accessories, Sandwich, N. H.



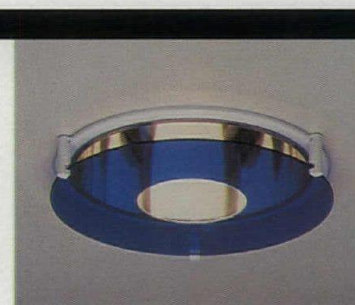
742. Glass wall fixture

Designed by G. Righetto and produced by VeArt, the Ducale Wall Double is a wall fixture with two hand-blown transparent glass arms, one sapphire blue and one green. The chromed metal-framed sconce has a clear candelabra base and can hold two 60W bulbs. VeArt, distributed by Artemide, Inc., Farmingdale, N. Y.



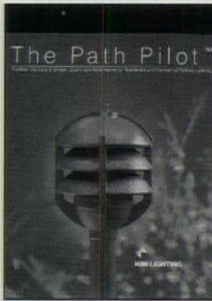
743. Wall fixture

Made of brushed-stainless-steel frames and cracked-glass panels, the Galactica light "sculpture" not only emits a somewhat mysterious light when lit, but also reflects bits of sunlight when off. The fixture is 36-in.-high, 14-in.-wide, and 9 in. deep. Joy Wulke Studio of Art and Design, Stony Creek, Conn.



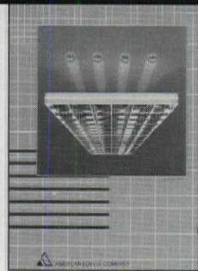
744. Lighting trim

Decorative CFL (compact-fluorescent luminaire) is a line of optical-plastic and glass trims used in retrofitting existing fixtures. The trims are designed for 7-in. and 9-in. fixtures and include discs of stippled-clear, frosted, or cobalt-blue glass, and either clear or frosted glass cylinders or truncated cones. Staff Lighting, Highland, N. Y.



745. Path lighting

A series of specification sheets describe the components of the Path Pilot outdoor-lighting system. Used with incandescent or fluorescent lamps, the cast-aluminum luminaire's light source is isolated in a gasketed glass enclosure to withstand climate conditions, yet the system is easy to maintain. Kim Lighting, City of Industry, Calif.



746. Louver choices for VDTs

This 26-page specification guide discusses lighting requirements for offices in which computers and video display terminals (VDTs) are common, and how louvers can control angular output to reduce screen reflections as well as contrast levels. It is well illustrated, with definitions of related lighting terminology. American Louver Co., Skokie, Ill.



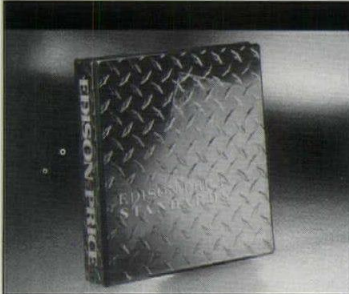
747. Dramatic lighting

This information sheet shows the Theatrical Design family of track fixtures for PAR and MR-16 lamps with ratings from 20W to 250W. A black-matte finish is standard but special colors are available. Accessories such as color filters, pipe clamps, louvers, and a canopy mount are also depicted. Indy Lighting, Inc., Indianapolis.



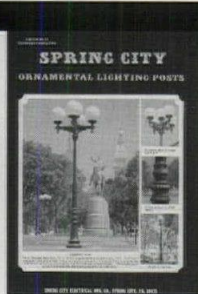
748. Custom fixtures

This 28-page black and white catalog shows specially created fixtures in various installations around the U. S. Both classic and modern fixtures—chandeliers, pendants, and matching sconces—are shown, along with line drawings to which names and model numbers are given for specifier reference. Louis Baldinger and Sons Inc., Astoria, N. Y.



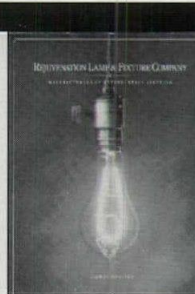
749. Architectural lighting

A technical binder contains product photography, detail drawings, lamping, and illumination-performance values for all of this maker's commercial lighting fixtures. Organized by lamp type, it covers compact-fluorescent, low-voltage, PAR, and HID units, indexed by name, lamp, and function. Edison Price Lighting, New York City.



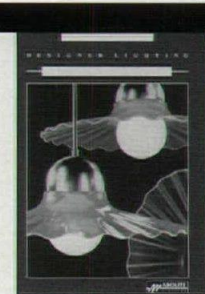
750. Lamp posts

Over 30 modern reproductions of classic lamp posts are shown in this six-page brochure as they have been installed in parks and public areas throughout the U. S. Size ranges for the cast-iron posts are given, and a variety of luminaire styles are shown, as are complementary bollards. Spring City Electrical Mfg. Co., Spring City, Pa.



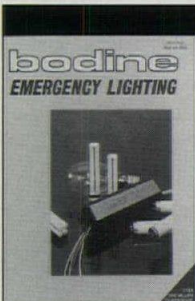
751. Bygone lighting

Over 240 chandeliers, wall sconces, ceiling pendants, and table lamps appear in this full-color, 40-page catalog of Victorian, Arts & Crafts, Art Deco, and gas-lighting reproductions. Featured are glassware made from original molds and authentic finishes such as antique brass and verde antique. Rejuvenation Lamp & Fixture Co., Portland, Ore.



752. In-store fixtures

The Neuveaux Wave series of fixtures shown feature transparent virgin-acrylic reflectors in seven vibrant colors. Light piped to the outer edge of the reflectors gives the lamp a neon-like appearance. Fixture domes come in five complementary colors and take 100W incandescents. Abolite Neuveaux, West Lafayette, Ohio.



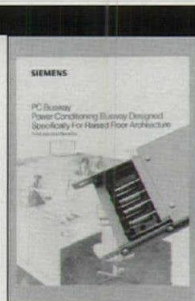
753. Dual-role ballast

A four-page circular describes a ballast system that lets fluorescent fixtures using any of a wide variety of lamps function as emergency lighting too. A rechargeable ni-cad battery can power the fixture at almost full light output for a minimum of 90 minutes, and recharges within 24 hours after power comes back. Bodine, Collierville, Tenn.



754. Bare-wire system

Some of the components of the low-voltage, uninsulated-conductor lighting system described in this 12-page catalog were designed in Europe, but all have UL listings. The American-designed 500W supplies instantaneously cut power if a short occurs and the 12-volt-carrying wires are safe to touch. Translite Systems, Redwood City, Calif.



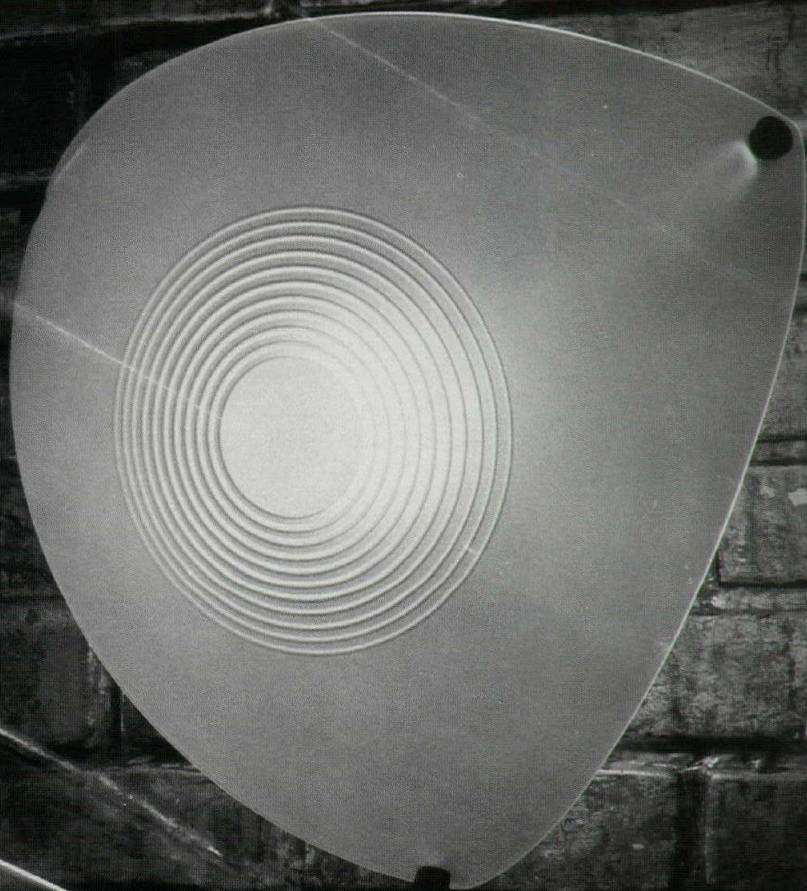
755. Flexible routing

The PC Busway system described in this pamphlet was designed for raised-floor offices that require more power for computers and workstations, as well as easy rewiring for office reconfiguration. The system has an uninterruptible power supply to prevent sudden power outage and data loss. Siemens Energy & Automation, Inc., Atlanta.



756. Video intercom

A four-page flier describes the components of the VY series, a video system to provide entry security. Up to 40 apartments can be covered by a single system, which does not require coaxial cabling or complicated installation. Electronic door releases and chime call extensions are system options. Aiphone Corp., Bellevue, Wash.



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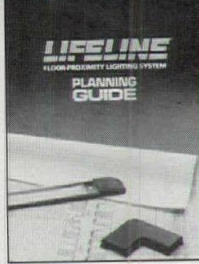
757. Downlighting

A wide selection of fixtures and accessories are described in this new Downlighting catalog. It includes a product matrix to aid in selection as well as pages on lighting techniques and choosing the correct lamps for a particular environment. A low-voltage guide covers color, beam spread, dimming, transformers, and more. Capri Lighting, Los Angeles.



758. Public safety

This 24-page product guide describes the Lumight line of fixtures and accessories for use in public areas where lighting may experience heavy abuse. It covers highly efficient incandescent, energy-conserving fluorescent, and high-intensity-discharge sources, and includes technical and ordering information. Kenall, Gurnee, Ill.



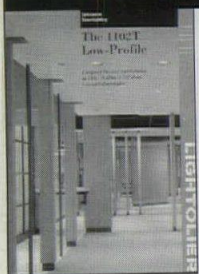
759. The way out

A six-page planning guide familiarizes readers with the requirements for designing a floor-proximity lighting system to guide people to a safe exit with the Lifeline series. Covered are how to choose a power supply, track-assembly elements, system testing, and more. Loctite Luminescent Systems, Inc., Lebanon, N. H.



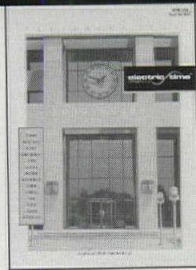
760. School lighting

This 42-page application guide focuses on finding solutions for lighting in classrooms, cafeterias, library stacks, science labs, hallways, and other school environments; exterior lighting is also covered. Charts for making comparative cost analyses are shown and cost-analysis terms defined. Holophane Co., Inc., Newark, Ohio.



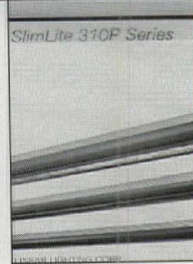
761. Shallow fixtures

The Lytecaster line of fixtures are introduced in a six-page glossy flier. Designed to accept compact fluorescent sources, the 3 7/8-in. deep recessed downlights simplify remodeling and renovation. They use twin 13W tubes that reduce energy consumption by 67 percent versus a 100W incandescent lamp. Lightolier, Secaucus, N. J.



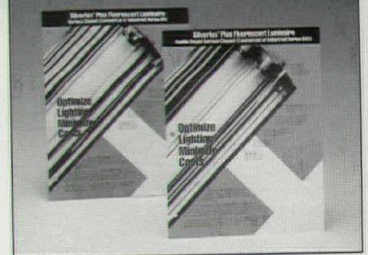
762. Architectural clocks

This 12-page black and white brochure gives several current examples of how classic and modern clock designs are used externally on buildings or as free-standing elements of public areas. Standard clocks, clock faces, and controls are shown, but custom design is fully supported. Electric Time Co., Inc., Medfield, Mass.



763. Lighting for the VDT

The SlimLite line of luminaires, which includes wall-mount, indirect, and direct/indirect fixtures, is described technically in this 14-page full-color brochure. It covers VDT and contrast requirements and gives performance charts for various lamp types, fixture spacings, and desired illuminations. Linear Lighting Corp., Long Island City, N. Y.



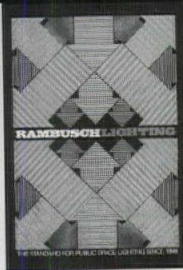
764. Film reflectors

These flyers explain the patented reflector system of the Silverlux Plus brand of channel fluorescent luminaires. UL-classified fixtures, they come in either standard or double output models that employ a reflective film. Performance and esthetic characteristics of the units are also discussed. 3M Construction Markets, St. Paul, Minn.



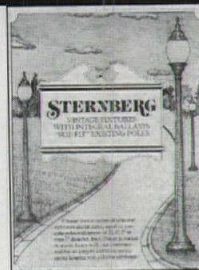
765. Economical fixtures

For the classroom, computer room, and office, the Plaza line of luminaires described in a four-page pamphlet are constructed of 22-gauge cold-rolled steel with structural embossing for rigidity. Optical control for the 2- by 2-ft recessed fixtures is an injection-molded acrylic lens that maintains high efficiency. Holophane Co., Inc., Newark, Ohio.



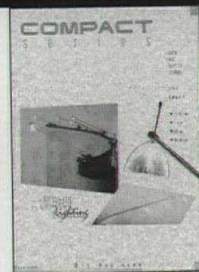
766. Design capabilities

A brochure showcases the firm's ability to design, engineer, and fabricate lighting for public spaces. Side-by-side photographs of a custom chandelier for the New York State Capitol and standard HID lighting products demonstrate the wide range of lighting expertise. Rambusch Decorating Co., New York City.



767. Lamp-post fixtures

Some 20 replicas of vintage fixtures for slip-fitting onto posts are illustrated. Globes can be fitted with various reflectors and five cast-aluminum fitters complement the style of the globes while providing the ballast necessary for energy-saving mercury vapor, HPS, or metal-halide sources. Sternberg Lanterns, Inc., Chicago.



768. High-tech lights

For home, office, trade show, and exhibits, the Compact series of lamps described in this six-page glossy pamphlet are easy to position. The halogen lamp, available in three beam spreads, rotates 350 deg, and the arm telescopes from 10 to 26 in. Clamp-on, five-fixture, and wall/ceiling-mount models make up the line. TECH Lighting, Chicago.

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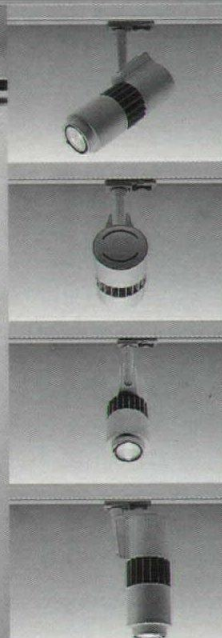
Designer: Fabio Reggiani

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New aluminum die cast spotlight series for use with MR 16 lamps.

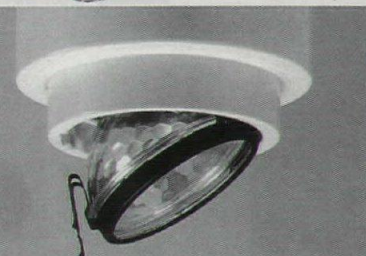
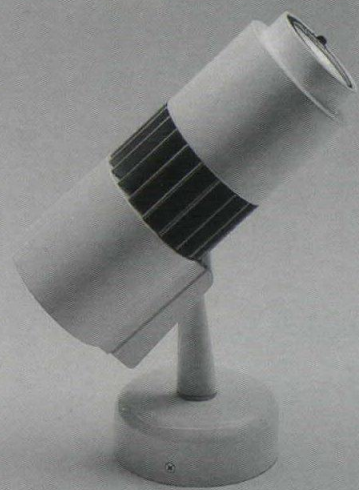
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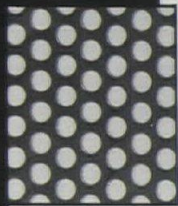
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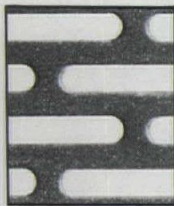
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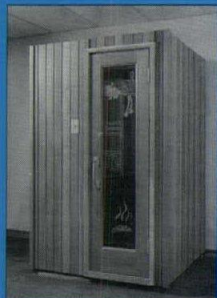
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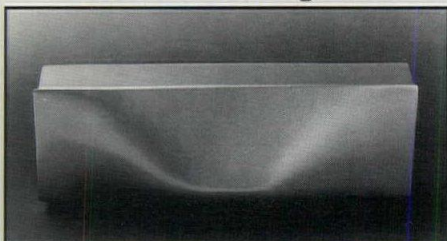
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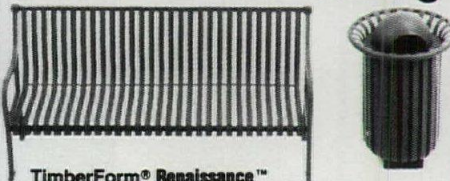
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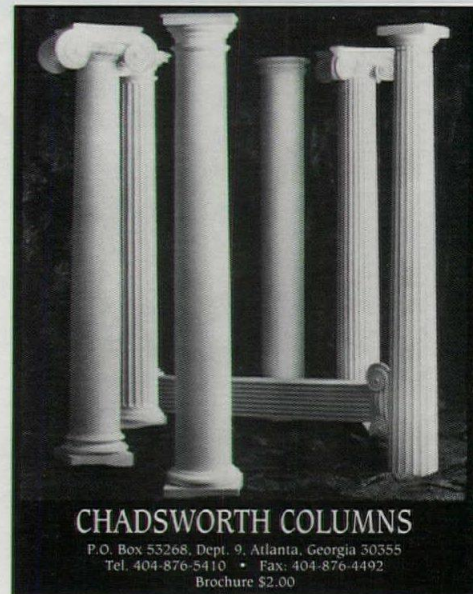
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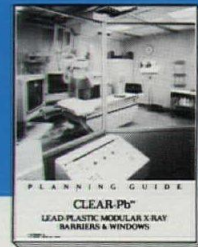


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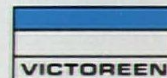
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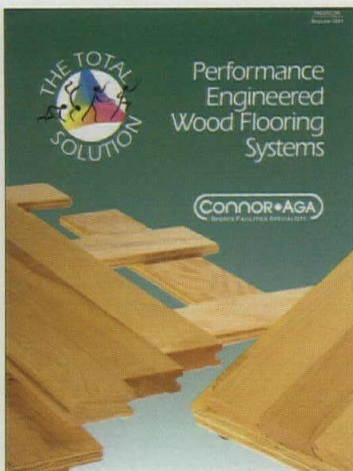
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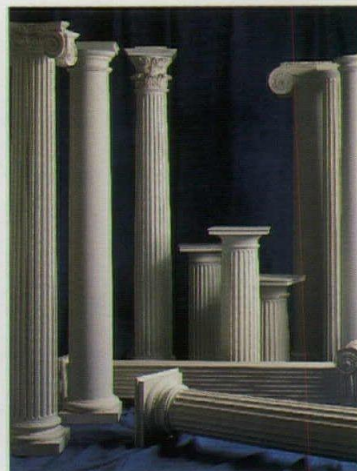


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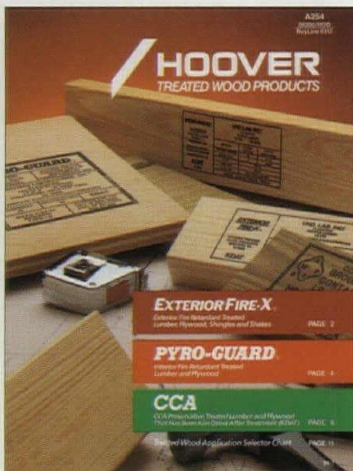


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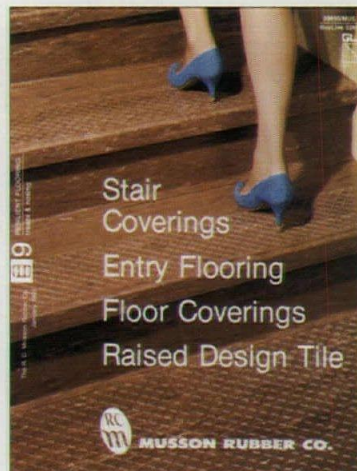


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Floor and Stair Coverings Brochure

Contains helpful illustrations and specifications on fire safety and other rubber floor stair tread systems featuring many different marbled or plain raised and surface designs in all decorator colors. Included are rubber landing and riser materials, vinyl treads and risers, fluff cord and traffic tiles along with recommended adhesives.



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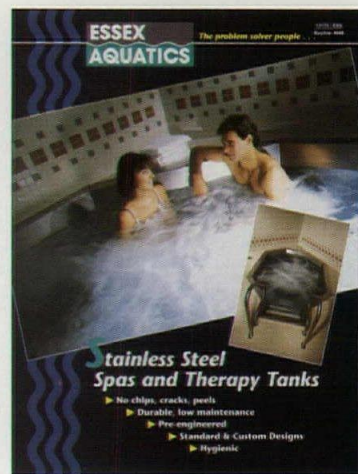
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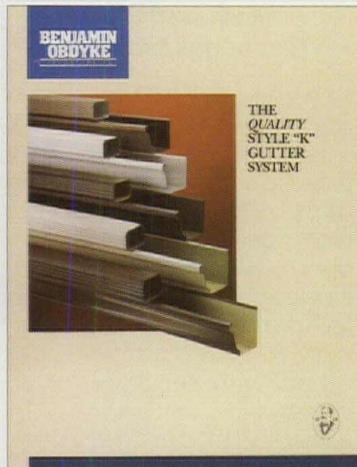


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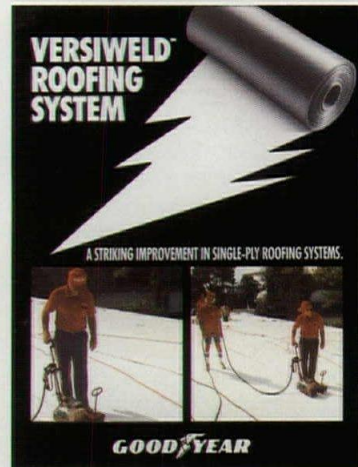


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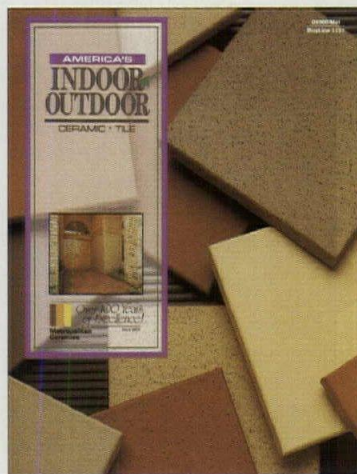


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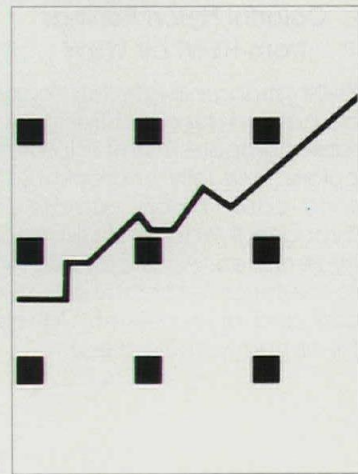
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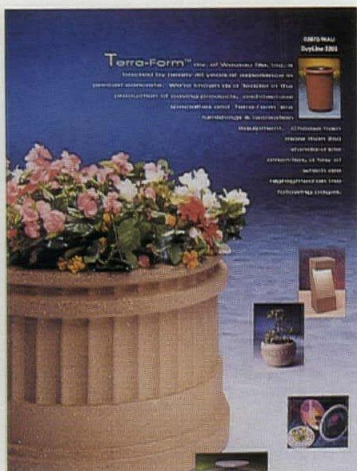
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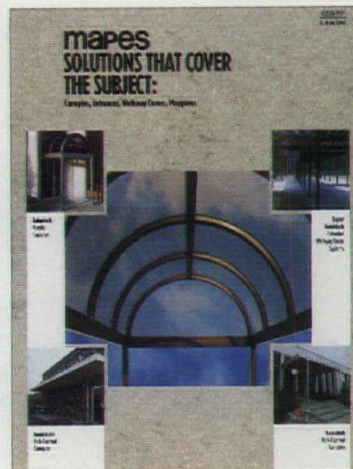


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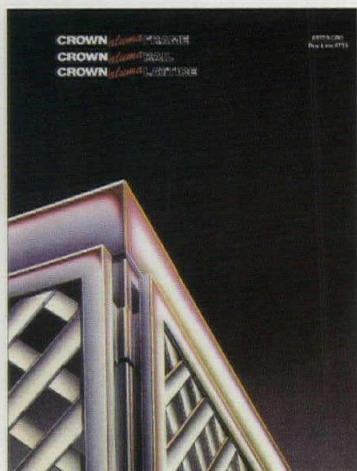


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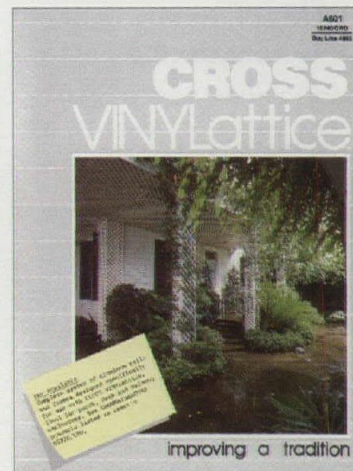
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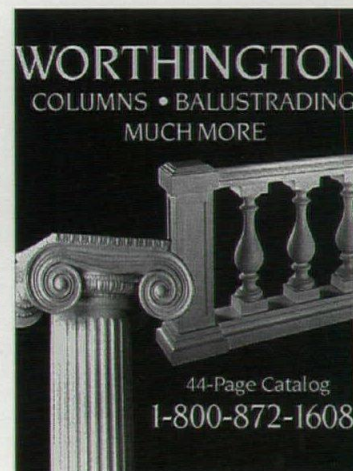


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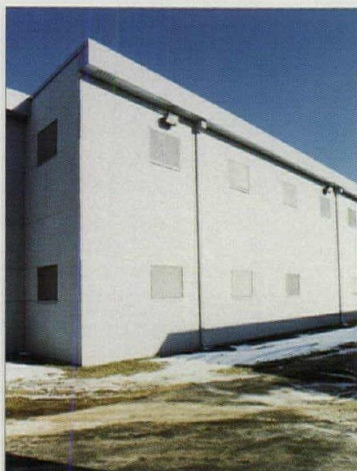


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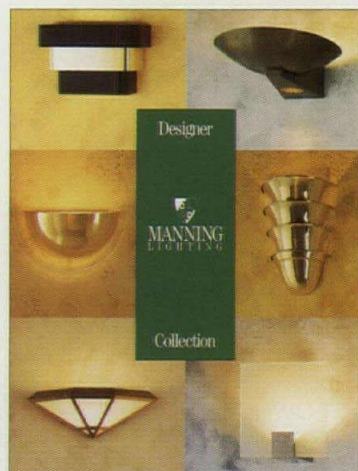


BESTEEL INDUSTRIES

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Manning Introduces New Lighting Fixtures

Manning Lighting, has introduced a new line of standard fixtures for commercial & institutional use. The "Designer Collection" includes a variety of designs in contemporary wall sconces and pendant fixtures. This new line offers designers, architects & specifiers a variety of sizes, materials, colors & lamping possibilities. Manning has been a leading mfr. of high quality custom lighting for churches, schools & public buildings. Contact: **R.A. Manning Co.**, Sheboygan, WI 53081, 414-458-2184, FAX 414-458-2491.

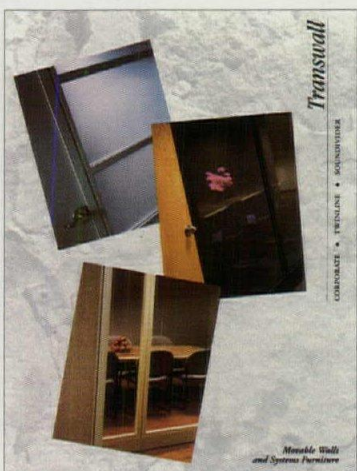


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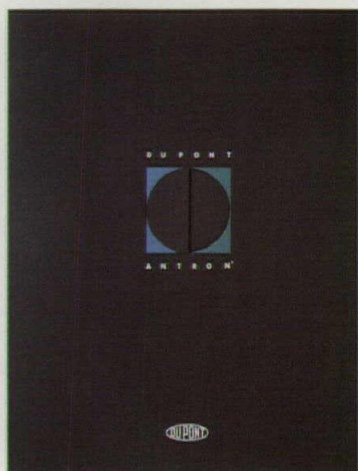


Transwall Corporation

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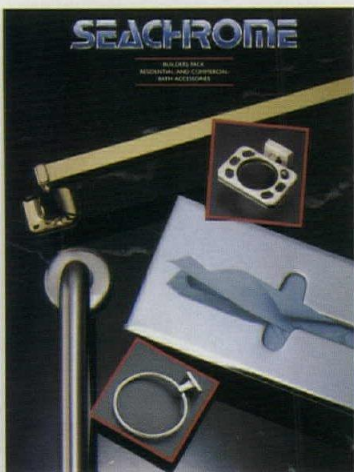
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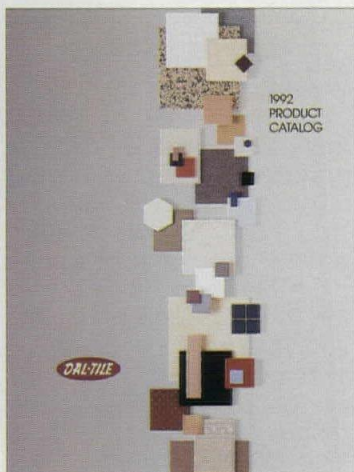


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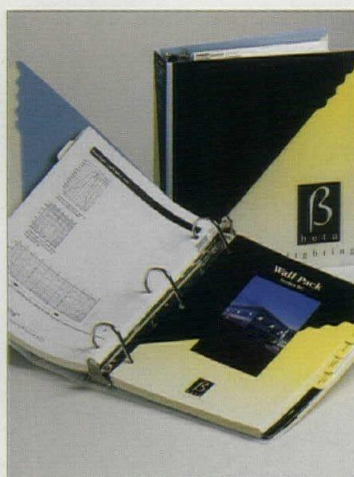


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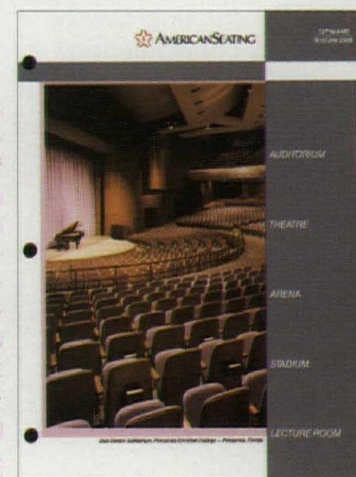


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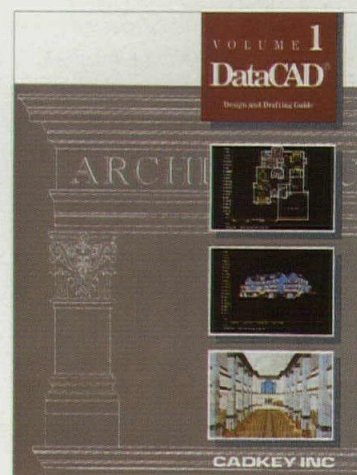


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Plymold Seating

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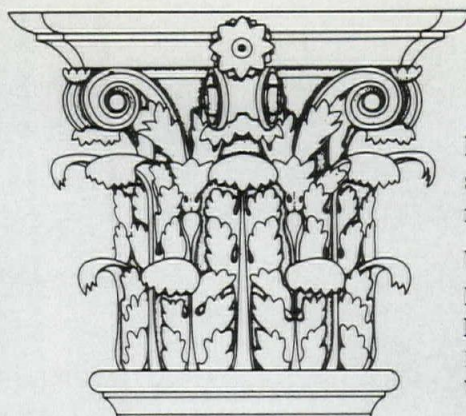
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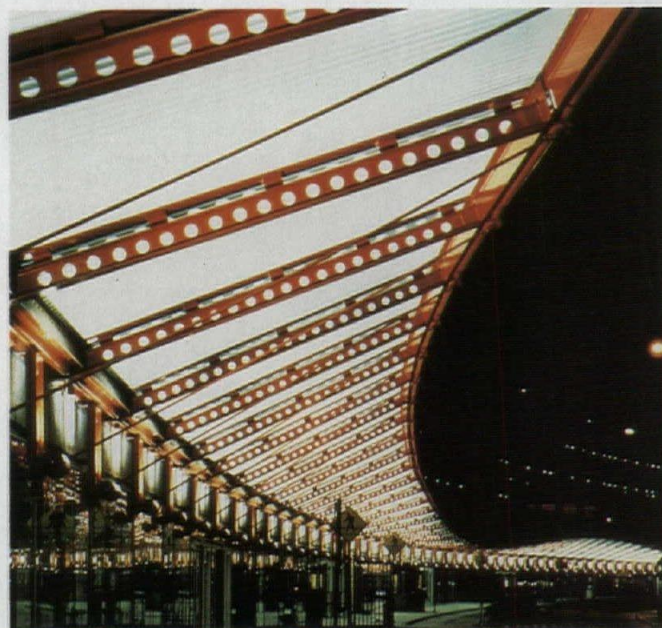
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FURNITURE Contract and residential furniture, furnishings, and lighting fixtures.

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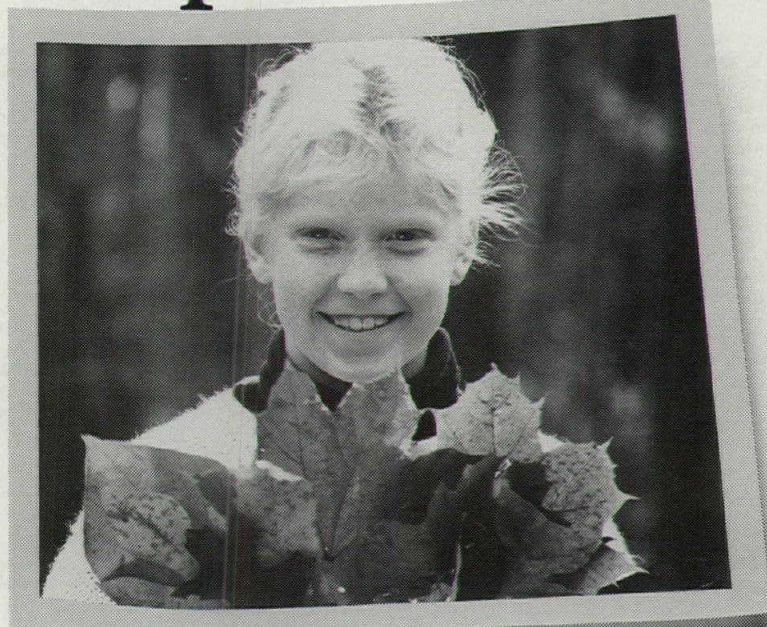
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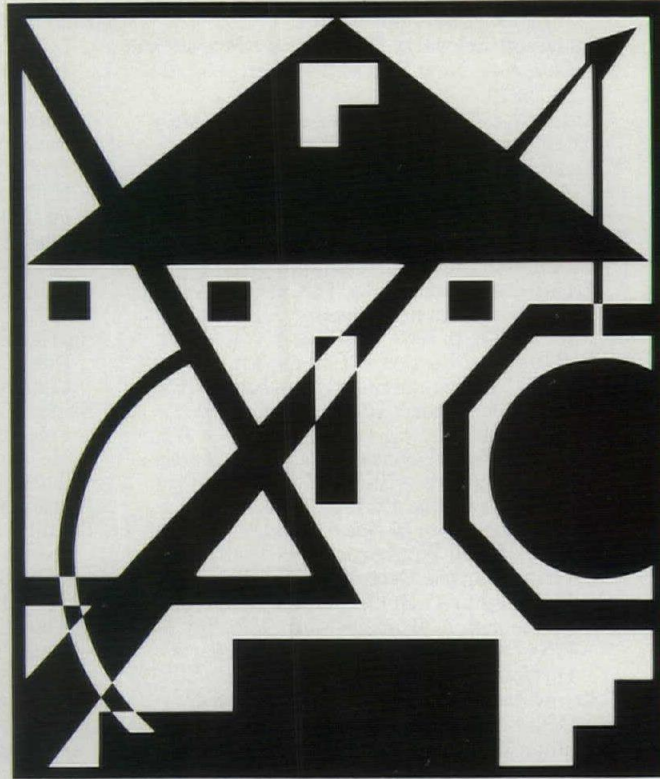


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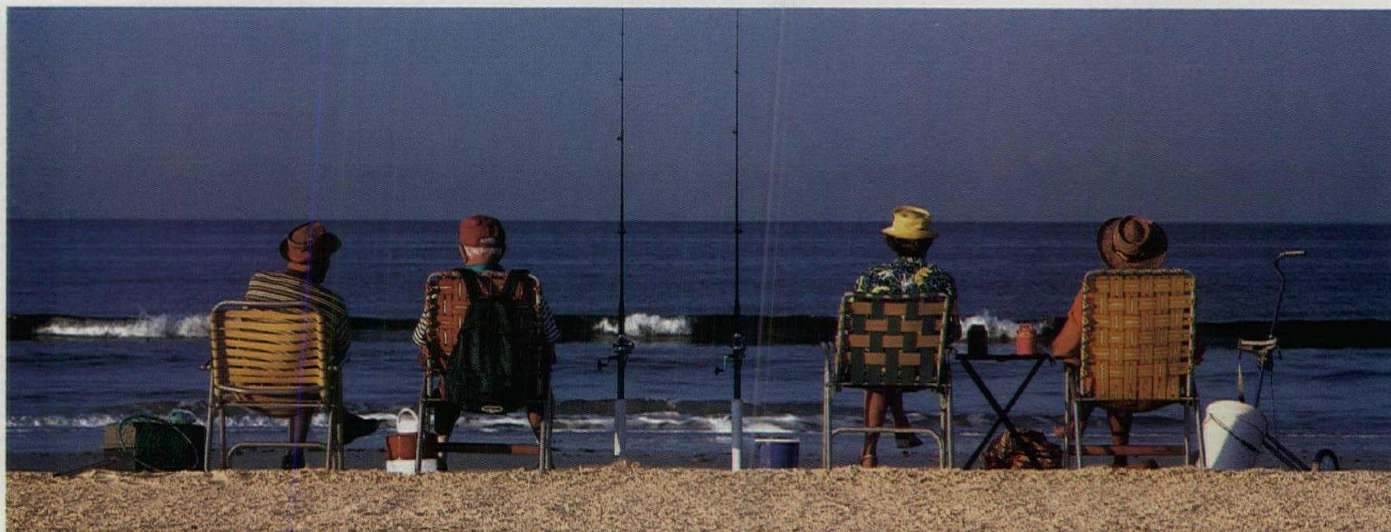
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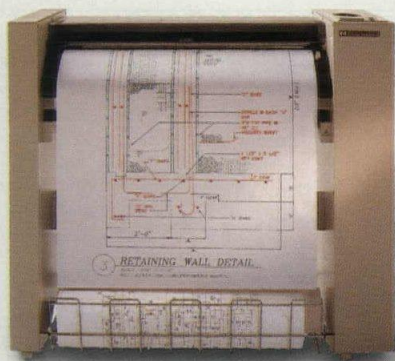
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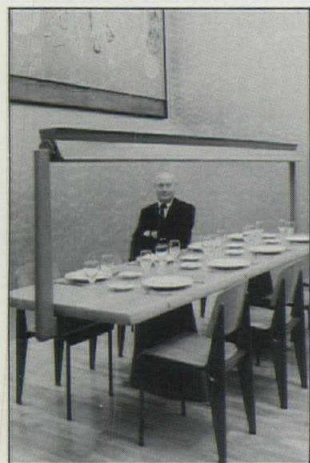
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What a bloody contrast between digging rock in Vermont and posing for pictures in New York.

"I've always admired the simplicity of Fifties design, so it was fun to get involved with architect Henry Myerberg's plans for New York's *West Broadway* restaurant. It's a SoHo bistro (at 349 West Broadway) and the brainchild of furniture and art dealer Tony DeLorenzo. One of Tony's enthusiasms is French Fifties furniture and, with Henry, he's created a great new showcase (see October 14 *New York Magazine*) for the style.

That's me sitting at a Jean Prouve library table.

"If you haven't seen *West Broadway* yet (the food is good), here's a photo of the interior. All the dining room chairs, the barstools and some of the tables were designed by Prouve, an engineer, architect, industrial designer and pioneer in curtain wall design. The black steel chandeliers, almost mobiles, are original fixtures designed by silversmith and sculptor Serge



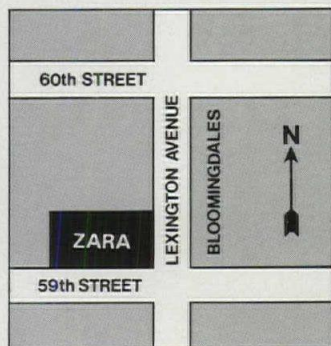
Mouille. The hewn walnut irregular bartop in the front room is an original by sculptor/wood craftsman George Nakashima. The wall panels behind me, with their images of musical instruments, are by Pierre Bobot, and originally hung in Roseland Ballroom.

"We covered the floors of the high-traffic bistro areas and the stairs to the dining balcony with Vermont Unfading mottled green and purple slate, hand-split of course, with a natural cleft surface. We used tiny modules for those small spaces, and the result, I think, is the perfect subtle ground for *West Broadway's* design dramatics.

Next time you're in Bloomingdales, take a walk across the street.

"There's a marvelous "fast fashion" (they change inventory every ten days) store called *Zara* at 59th and Lexington. We covered the window display areas and the countertop surface of the cash/wrap desk with Norwegian Black Lace Slate. I love to watch people rub their fingers over the slate and cock their heads to catch the changing reflections in the countertop. It's another job we're proud of, and we're looking for more, maybe your job. If you're considering slate for a quality custom project, don't worry about budget until you've talked to me, even if you're still just in the talking stage. Just call me at 1-800-343-1900."

Bill Markcrow



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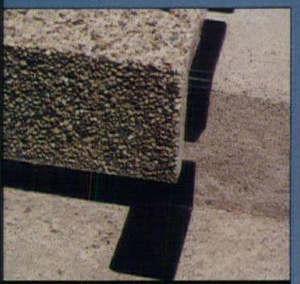
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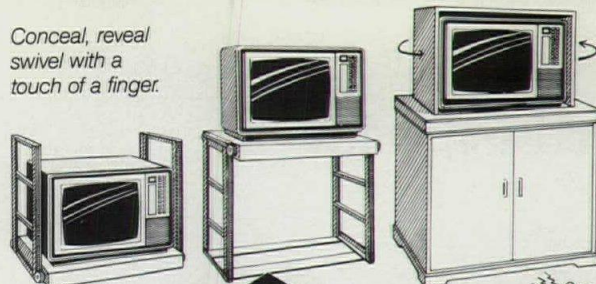


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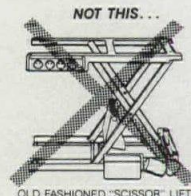
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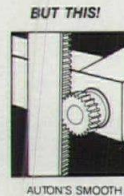


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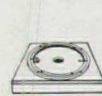
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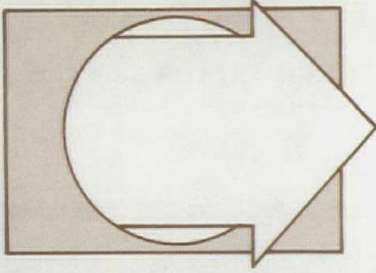
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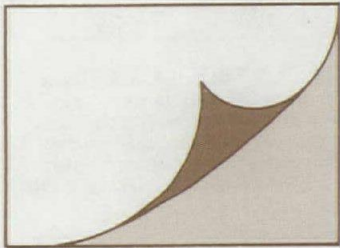
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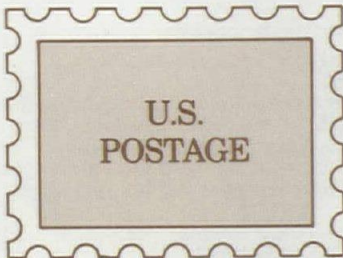
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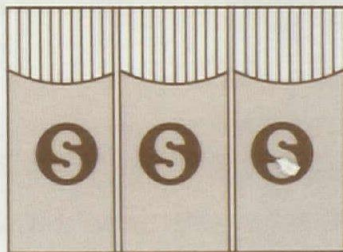
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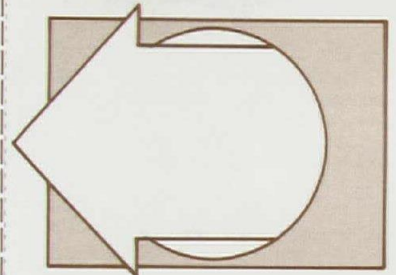
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1003	1011	1019	1027	1035	1043	1051	1059	1067	1075	1083	1091	1099	1107	1115	1123	1131	1139	1147	1155	1163	1171	1179	1187	1195
1004	1012	1020	1028	1036	1044	1052	1060	1068	1076	1084	1092	1100	1108	1116	1124	1132	1140	1148	1156	1164	1172	1180	1188	1196
1005	1013	1021	1029	1037	1045	1053	1061	1069	1077	1085	1093	1101	1109	1117	1125	1133	1141	1149	1157	1165	1173	1181	1189	1197
1006	1014	1022	1030	1038	1046	1054	1062	1070	1078	1086	1094	1102	1110	1118	1126	1134	1142	1150	1158	1166	1174	1182	1190	1198
1007	1015	1023	1031	1039	1047	1055	1063	1071	1079	1087	1095	1103	1111	1119	1127	1135	1143	1151	1159	1167	1175	1183	1191	1199
1008	1016	1024	1032	1040	1048	1056	1064	1072	1080	1088	1096	1104	1112	1120	1128	1136	1144	1152	1160	1168	1176	1184	1192	1200

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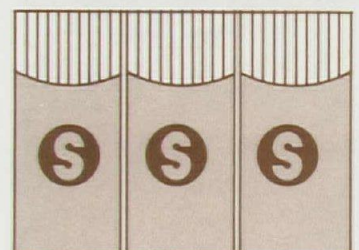
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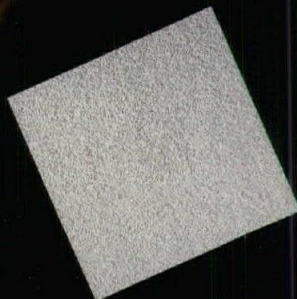
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