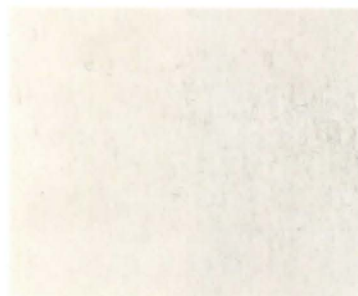
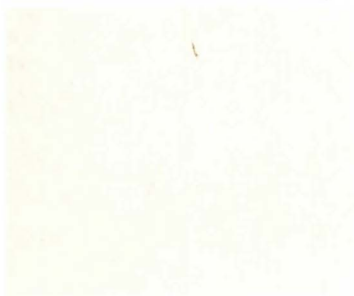
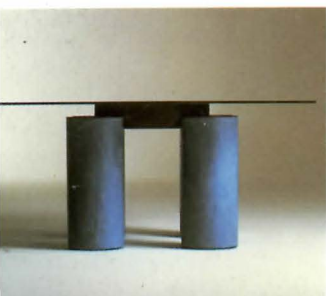
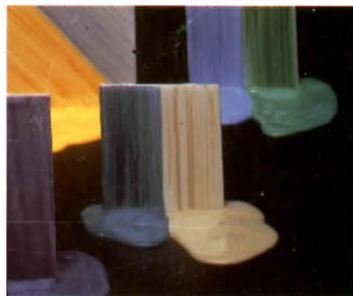
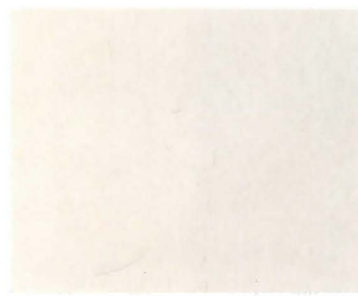
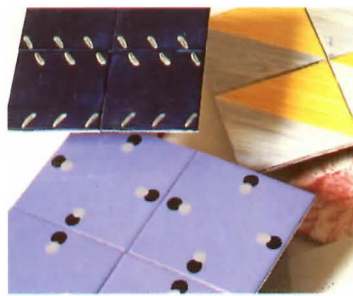
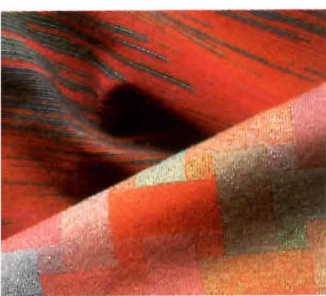


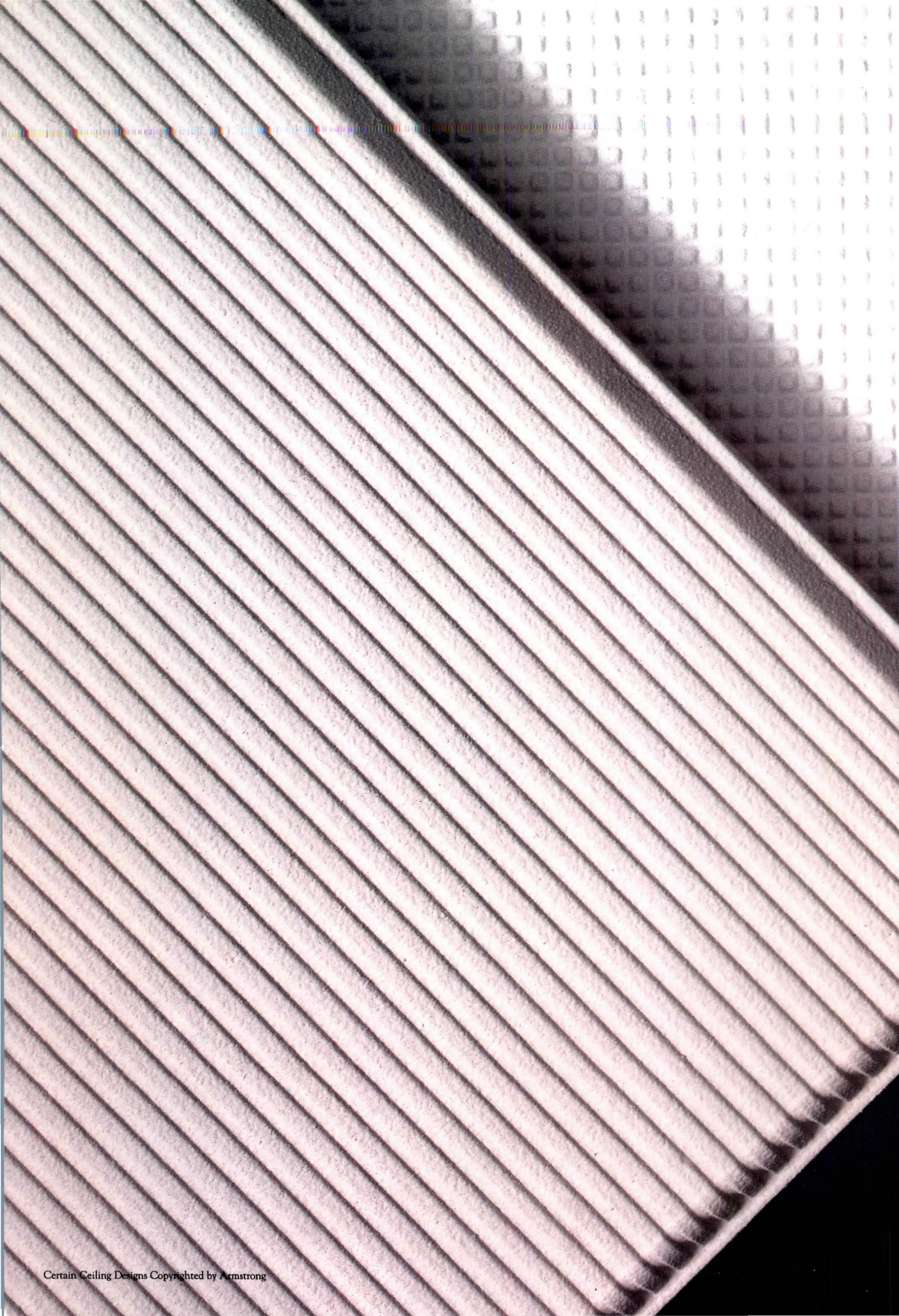
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Business Design Engineering
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December 1986



Product Reports
1987







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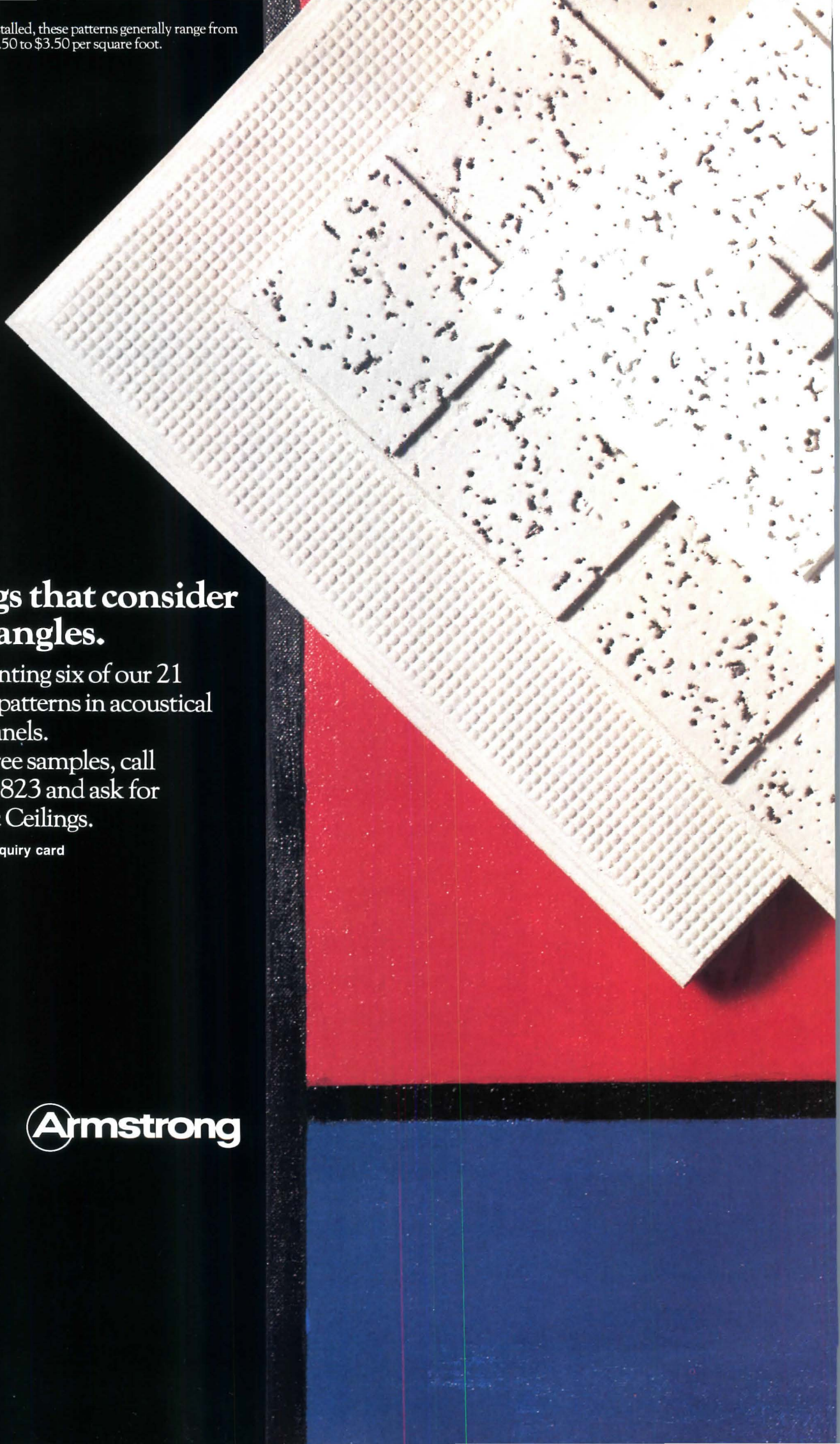
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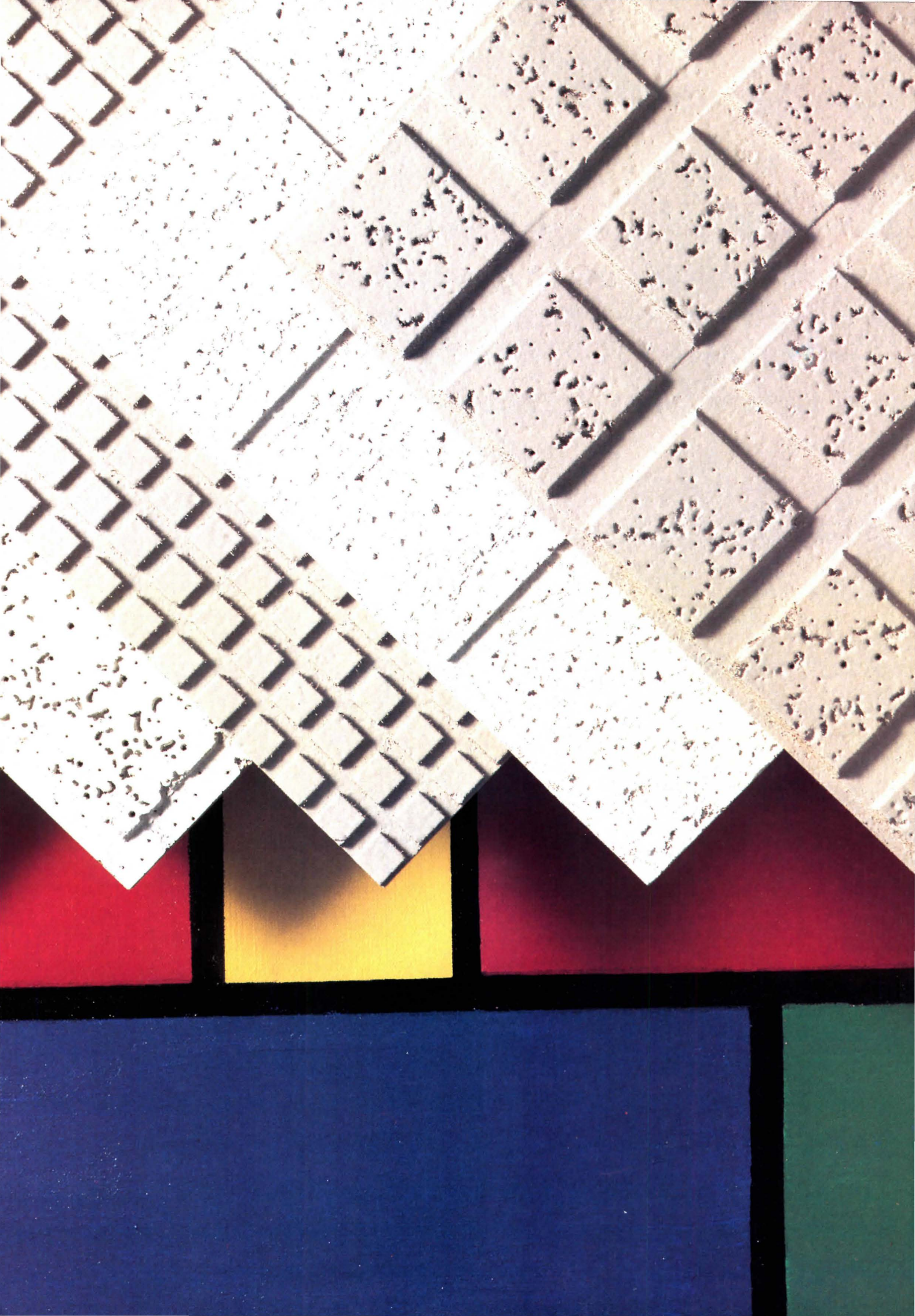
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 **Armstrong**





Your thoughtful editorial on architectural criticism [ARCHITECTURAL RECORD, September 1986, page 9] should have been fair warning that the other shoe was about to drop: on Philip Johnson [RECORD, same issue, pages 78-85].

Michael Sorkin seems to have designed a program for personal aggrandizement not unlike the fat jokes Joan Rivers aimed at Elizabeth Taylor. On good days, Mr. Johnson and Miss Taylor can be content with the knowledge that such wanton critical outbursts say more about the critic than the victim, but what of the rest of us, readers and viewers, caught up in this media tug of war? What does it say of us?

Philip and Elizabeth can take care of themselves. The rest of us, however, have paid good money so that the *Village Voice* can pride itself on offending someone every week, or that Joan Rivers can be obscene on her own show.

Perhaps the editors of ARCHITECTURAL RECORD have noticed this phenomenon and are tempted to provide their readers with "dish" to leaven more serious reporting and possibly increase circulation. Certainly there must be writers with a more considered form of wit and a more polished prose style who can meet these needs without patronizing and degrading your professional audience with cheap shots dressed in syntactic pyrotechnics. *Edward T. Groder, AIA
New York City*

Your September 1986 editorial on architectural criticism begs me to say, "Good for you." It's well written, and it is another part of what really needs to be said and done. The folks who read ARCHITECTURAL RECORD no doubt appreciate your effort, but unfortunately it does little in addressing what we are and what we do.

All of us know that architecture is perhaps the only public art in the entire world. Architecture is also a business, and we are far behind the legal, medical, and accounting worlds in trumpeting that fact. Yes, as an art, there is the right to criticism, and that's good. But, please, let's address the real issue, which we all know is the work we do so that we can earn a living. *F. L. Bernheim, FARA
Bernheim-Kahm Ltd. Architects
Chicago*

During my recent visit to the United States, I visited the Guggenheim Museum in New York. During the visit I came across a display showing the proposed addition and alterations to the existing museum

building. It was a sad experience.

The names of the Guggenheim Museum and Mr. Frank Lloyd Wright cannot be separated. All over the world, the museum is a place to pay respect to F. L. W. Adding anything to it disturbs the image in the minds of architects all over the world. As a building like the Parthenon belongs to world architecture, so does the Guggenheim belong to modern architecture. I do not desire to go into the esthetic details of the building after it is modified. It may be good or bad, but it shall no more remain pure F. L. W.

As it is, the United States does not have much historic architecture, although it has given the world many trends in modern architecture. The museum, which is a landmark in today's world, I think, should be preserved. I am aware that the cost of land in New York is very high, but that should not be the criterion for disturbing the image of F. L. W.

As an architect, I hereby request your esteemed magazine to persuade the authorities to give a second thought to the proposed extension.

*Anand D. Godse, Architect
Nagpur, India*

In reference to the caption on page 93 of ARCHITECTURAL RECORD's issue of mid-September 1986, down in Arkansas we are very interested in the wenching system that Jonathan Brenner has rigged up. Here we mostly lean out of the windows and whistle, but if there is a more advanced and sophisticated system available in New York, we would like to locate the distributor for this area. Our spec writers have looked in vain in Sweet's and other sources for this product. Please advise as soon as possible! *Noland Blass, Jr., FAIA
Blass Chilcote Carter & Wilcox
Little Rock, Arkansas*

RECORD hopes that its readers—if not, embarrassingly, its editors—know the difference between a wench and a winch.—Ed.

Correction

Thomas S. Galvin resigned as Chief Executive Officer of the Jacob K. Javits Convention Center (RECORD, September 1986, pages 106-117) in mid-April of this year to become president of the Xerox Realty Corporation.

Through December 19

The Architecture of Charles Moore: Buildings and Projects, 1949-1986, a retrospective exhibit; at the Williams College Museum of Art, Williamstown, Mass.

Through December 28

The Architecture of Richard Morris Hunt, an exhibition of drawings, watercolors, and photographs; at the Octagon Museum, Washington, D. C.

Through January 3

Arata Isozaki: Architectural Drawings, an exhibition of sketches, drawings, and prints; at the Max Protetch Gallery, New York City.

Through January 4

Drawing Toward Building: Philadelphia Architectural Graphics 1732-1986, an exhibition sponsored by the Pennsylvania Academy of the Fine Arts, the Philadelphia Chapter of the AIA, and the Foundation for Architecture; at the Philadelphia Academy of the Fine Arts, Philadelphia.

January 7-31

Lloyd Wright: Architect, sketches and drawings from the work of Frank Lloyd Wright's architect son; at the Max Protetch Gallery, New York City.

January 19-22

The International Air-Conditioning, Heating, Refrigerating Exposition, co-sponsored by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Air-Conditioning and Refrigeration Institute (ARI), in conjunction with ASHRAE's semi-annual meeting; at the Jacob K. Javits Convention Center, New York City. For information: International Exposition Company, 200 Park Ave., New York, N. Y. 10166 (212/986-4232).

January 25 through May 17

The Age of Sultan Suleyman the Magnificent, a major exhibition of art from the Ottoman Empire; at the East Building, National Gallery of Art, Washington, D. C. The exhibit will be seen later at the Art Institute of Chicago, the Metropolitan Museum in New York City, and the British Museum in London.

February 17 through June 9

Gaudi in Context: Building in Barcelona, 1873-1926, an exhibit of the work of Antonio Gaudi and his contemporaries and colleagues in Barcelona; at the Cooper-Hewitt Museum, New York City.

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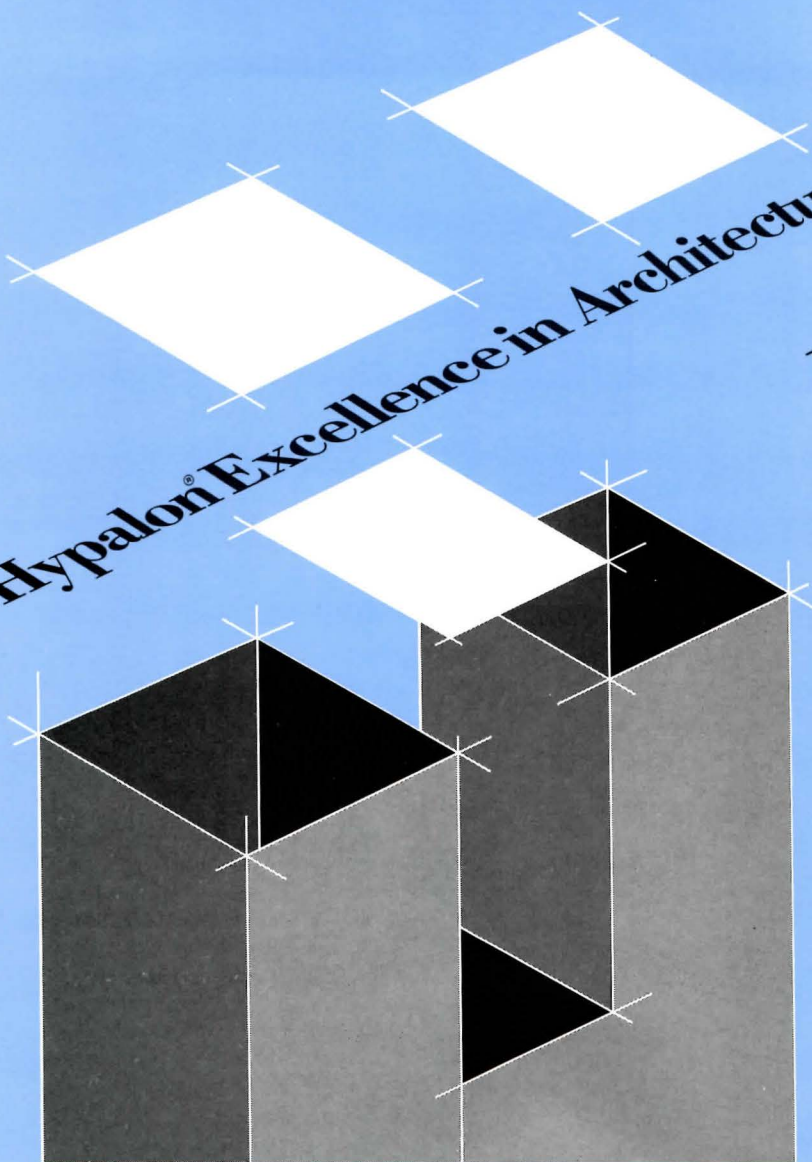
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Publication Office: 1221 Avenue of the Americas, New York, NY, 10020. ARCHITECTURAL RECORD (ISSN0003-858X) published monthly with additional issues in April and September by McGraw-Hill, Inc. Second-class postage paid at New York, NY and additional mailing offices. Postage paid at Windsor, Ontario, Canada. Registration Number 9617.

Postmaster: Please send address changes to: Fulfillment Manager, ARCHITECTURAL RECORD, P.O. Box 2025, Mahopac, NY 10541. THIS ISSUE is published in national and separate editions. Additional pages or separate editions numbered or allowed for as follows: Eastern Section 18Ea through 18Eh. Central Section 18Ca through 18Cd. Western Section 18Wa through 18Wb. Sunbelt Section 18Sa through 18Sf. Northern Section 18Na through 18Nb.

Announcing
 the Du Pont Hypalon® Excellence in Architecture Awards
 1987



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Entries may include any type of structure, and should be submitted in one of two categories—new construction or reconstruction/restoration. Projects must have been completed in the U.S. or Canada within five years of the date of judging (between May 1982 and May 1987). Entries must be submitted by a registered U.S. or Canadian architect. The project must incorporate a single-ply roofing membrane system based on Hypalon® synthetic rubber.

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Project authorship will be concealed.

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Chicago, Illinois
- Robert A.M. Stern, FAIA
New York, New York
- Richard Guy Wilson, Hon. AIA
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in the preparation of this issue were:
Eileen Gabriele, editor-in-charge
Laura Marchisio, production*

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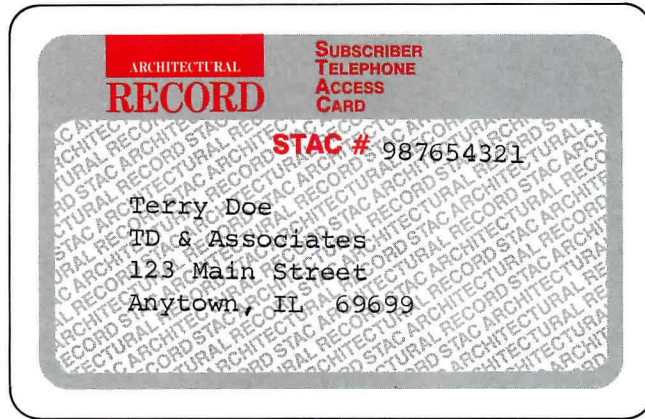
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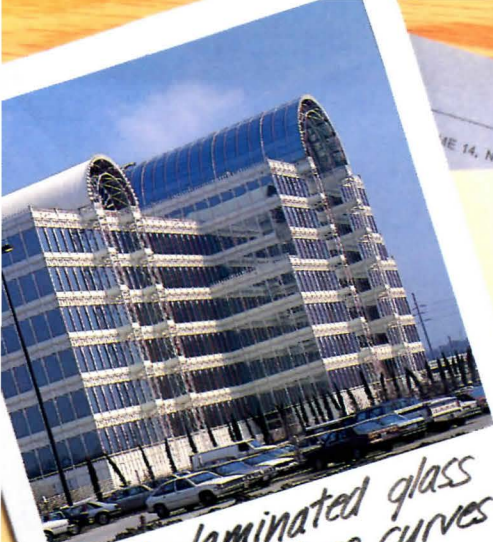
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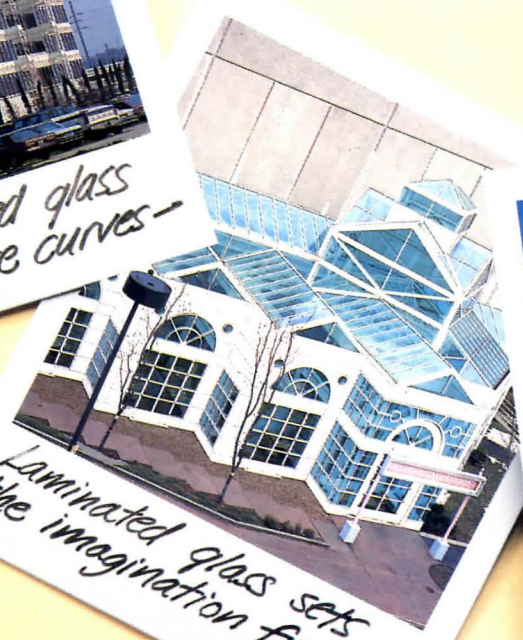
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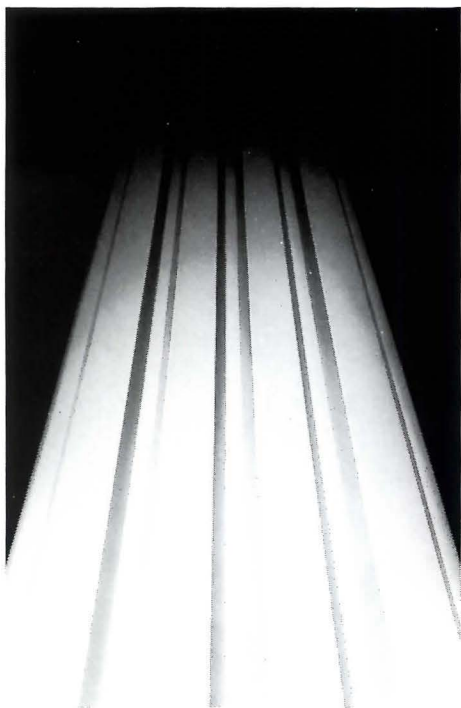
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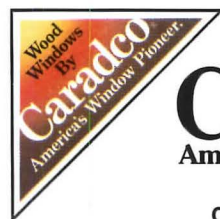
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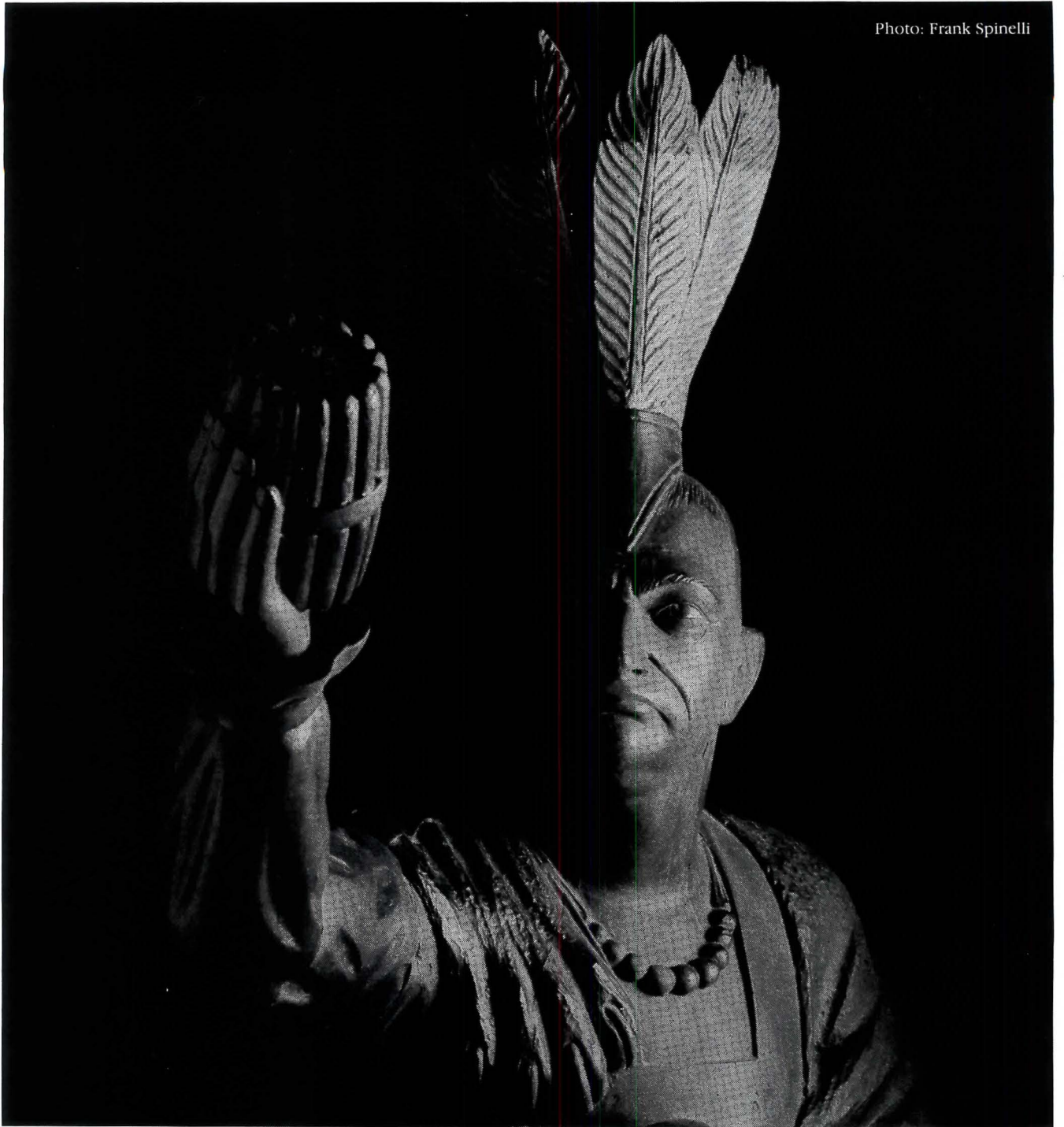
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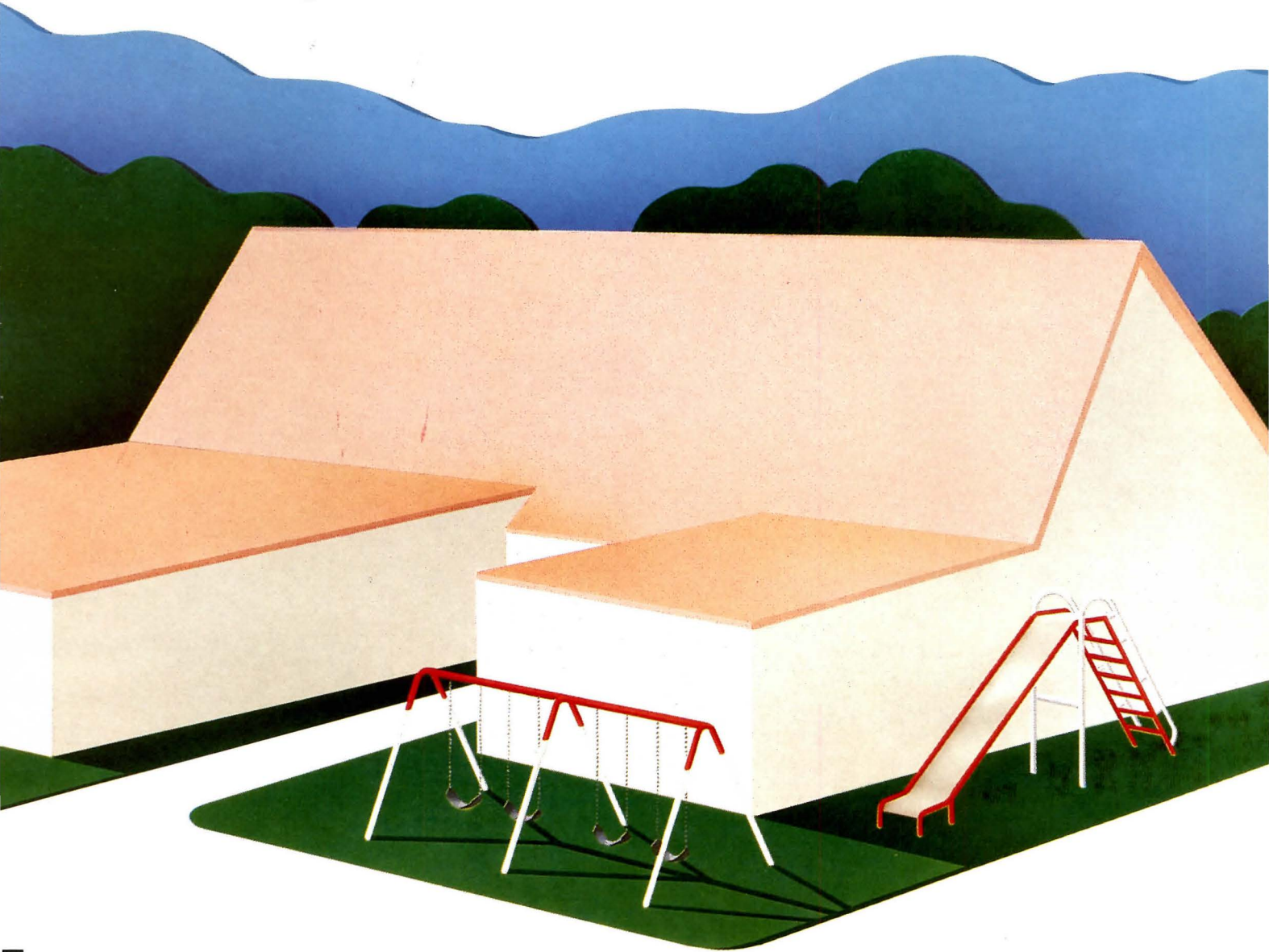
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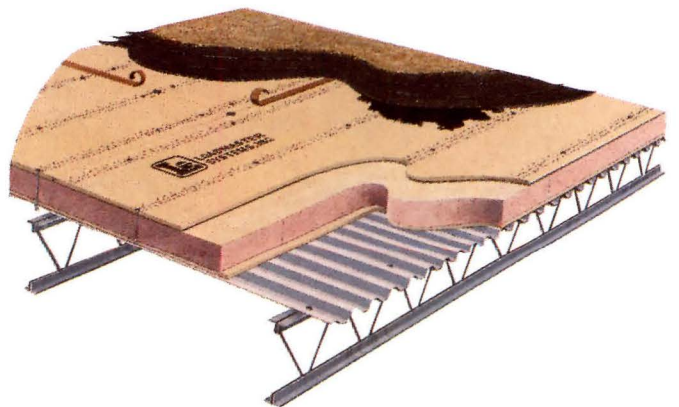


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Practice : Dealing with dealers ... new role for the architect?

By Ann Nydele

Architects who maintain their practice on a strict fee basis have long looked down on those architects and designers who take advantage of the discount system to buy wholesale and sell to clients at a 40 percent or better markup—with or without the client's knowledge.

Even worse, they think, are those who give away design services, relying on the spread for their profit. There is also the ethical question posed by the American Institute of Architects in the "Code of Ethics and Professional Conduct" as it relates to conflict of interest (E.S. 3.2), which requires members to disclose to clients or owners "significant circumstances that could be construed as conflicts of interest and should ensure that such conflicts do not compromise those interests."

And West Coast architect and attorney Gerald Weisbach, who specializes in architecture-related liability cases, points out that there is the possibility of a lawsuit where the dealer/supplier can be liable for damage caused by furniture if "reasonable standards of care" (as established by expert testimony) are not exercised, or for fraud, if a client should be told he is buying at cost but is in reality paying a markup.

Competitive practices developed

In 1983, as a result of the recession, several things happened: Dealers became more aggressive in their attempts to sell direct to the user, offering services, such as space planning and design, that are directly competitive with architects and interior designers, and even professing to offer facilities management. Inasmuch as some have access to over 200 sources, they began to be seen as formidable competitors, especially where high budget jobs are involved.

At the same time, some designers looking for new business began to market themselves as dealers, often without being able to offer the service that a dealer should provide in meeting schedules, guaranteeing quality and condition, and overseeing installation. Some began to buy and sell, and established a purchasing arm as a separate division within their company, telling the client they could provide a "turnkey" operation, and that the integrity of the job would be maintained because the divisions were separate. In dealing with manufacturers, these firms could

demand a large initial discount, with an additional discount for high-volume purchases, cutting the dealer out. Then these architects might hook up with the manufacturers who provided the best profit.

According to one high-level manufacturing executive, this creates a serious problem for both client and manufacturers: i.e., there is an implied service to the user that is not given: installation and follow-up. If there are problems with damage, they are bucked back to the manufacturer. In some cases, the cost to a manufacturer of, for example, repairing drawers after installation on the user's premises, can be enormous. The manufacturer is caught in the middle, both financially and in terms of his reputation for quality. The manufacturer who feels that he has an obligation to the end user, and would really prefer to work through a dealer, would be forced to provide dealer service or hire an installation company on a contractual basis. He would also sometimes be placed in the position of a referee between the designer and the client locked in an adversary relationship. And the project would suffer.

There are workable arrangements

There is, says my manufacturing executive informant, a better way; one that is beneficial to both the architectural/design firm and to the client—and that fulfills the ethical requirements of the architectural profession. He cites two firms that have established a proper relationship both among the divisions within the company that provide planning, design and purchasing services, and between the firm and the client in marketing these services.

One of the examples is the Detroit architectural and interior design firm of Ford & Earl, headed by Tom Ernst. They can provide architectural and interior design, specifications, purchasing, delivery and installation in a complete turnkey operation.

Approximately 12 years ago, the firm, involved in large projects, was getting complaints from some of their older customers. Following the design and specification of a project, the client would find a problem in getting the dealers to fulfill the specifications as written. Most contract dealers in the area then were small, and did not have the resources to take on a 24-story building. In the process, clients found delays in delivery, substitutions of fabric and sometimes of products, and inefficient installation, among other things. Eventually, some of these clients requested that F&E take on the delivery and supervision of

installation and produce, in effect, a turnkey operation. The firm responded by establishing Contract Purchasing Services, Inc., a wholly-owned subsidiary of Ford & Earl, under the direction of Vernon F. Barker, president.

"Fifteen years ago," Barker remembers, "the ethics of our profession dictated that we do not sell products. Ford and Earl were very ethical, but they understood that there was a problem."

So they began to ask, "how could we do what the client is asking and not violate the ethics of our profession?" The solution the firm found was not to sell furnishings, but to provide a service, through a separate contract with the owner, to act as their agent on a fee basis.

They would purchase for his account all of the furnishings at net wholesale or lower negotiated prices based on large quantities, direct from the manufacturer, supplier or distributor. Part of the process is to do all of the paperwork and the logistics, but the client pays all invoices directly to the manufacturer or supplier and takes all discounts. The firm is thus able to handle the entire process, from design through specification, to purchasing of the furnishings, and management of the installation—with all the paperwork involved. Because Contract Purchasing Services, Inc. is not making a profit on the furnishings, it can concentrate all efforts on assuring proper quality and coordination of delivery between the manufacturer, the designers, and the superintendent of the building. This service is especially valuable when negotiating with dealers who are not used to handling large projects. Some will, according to Barker, look at the drawings and specs when asked to bid on them, and never ask if they are correct. "In effect," Barker says, "we provide project management, similar to construction management, for purchasing, procuring, and installing—and give a total turnkey operation, with a single source of responsibility for the owner, who can make one phone call for a correction."

Barker believes the advantage of his approach is twofold: because CPS project managers are constantly monitoring the manufacturers for delivery and getting assurances from them, they are more likely to get shipments on time. And, because of the high dollar volume, (as much as \$6 million to one manufacturer), the manufacturers pay attention to the order.

In addition to working on F&E projects, Barker's group is free to work with other architects and designers. And they also function as

an independent local dealer in their market area, selling retail in competition with other dealers.

"In our area," Barker relates, "we have some relatively new interior design firms who now, instead of selling a professional service for an adequate fee, sell for extremely low fees and convince the client to let them supply the product, which they sell at top prices—making up their income difference on the price spread. They are not experienced enough to provide full dealer services and as a result there are a lot of complaints that we hear." Some of these are that dealers may not be service oriented, or have problem-solving capability, and that they do substitutions (the biggest complaint heard from clients), cut corners, and give a minimum of service. Furthermore, the client may find himself locked into a line so that the dealer can get the biggest dollars for the product.

Procurement opens a new market

Interspace Inc., a Philadelphia-based organization with over 50 percent of its staff architecturally trained, is another good example of how the internal relationship of separate, autonomous organizations can interact. Procurement as a service for corporate clients was established at Interspace in 1975, an act that Robert J. LeFort, head of the firm's Procurement Management Group (PMG), defines as being both "defensive and offensive." Defensive, in that, as a design firm, they were increasingly being held responsible, after specs were prepared, for problems caused by dealers, "and we weren't being compensated to do that." Offensive, because the firm saw a new market for services and moved into it.

Starting with Interspace clients, PMG is now expanding to include other clients. They find a marketing potential in the increasing number of facilities managers who are beginning to discover that their architects or designers are profiting from the sale of furniture, in addition to the fees for services. Thus, Interspace clearly states that the sole source of compensation for PMG is the fee. Like Ford & Earl's Contract Purchasing Service, all discounts are passed on to the client.

They also serve as contract administrators and project managers through the move-in, on a fee basis.

In contrast to the professional service approach, LeFort sees a lot of designer/dealer activity in California and elsewhere. But he does not consider this, or the dealer with the in-house design department, as much competition. "No one will hire them to do a major job," he says, "because they have

Ann Nydele is an author, and a freelance writer contributing to architectural design and facilities management publications. She is based in New York City.

lines they are pushing and a major client will not hire a dealer to do a major job when he's married to a manufacturer."

LeFort is sympathetic to dealers, whom he sees as caught in a squeeze—between their desire to serve the client, and the major manufacturers' increasing attempts to control distribution by dictating allowable markups and who dealers can sell to—thus virtually transforming the independent dealer into a factory-controlled outlet that will handle only their lines. The dealer is thus required to provide total services without obtaining his profits in the conventional way. He often winds up in an adversarial relationship with clients because there is not enough money in the markup to cover the services required. At the same time, LeFort points out, the dealers don't realize that they can obtain fees for service, because they are oriented to be merchants. Dealers used to be able to trade off among the lines. The manufacturers now want to have more impact with the end user, and . . . "that's going to be the trend," he predicts, "the manufacturers will control the end user and the dealer." At the same time, the profit the dealer can make by buying a desk and reselling it is going down on a rapidly declining curve. Clients now want more discounts, and the large national accounts are going directly to the manufacturers.

How they interact

Under the Interspace Inc. corporate umbrella are three separate businesses: the consulting division which does strategic facilities planning, called the Facility Decision Group (FDG), the Interspace Design Groups in Philadelphia, Washington and Tampa, and the Procurement Management Group headquartered in Philadelphia. As all are autonomous profit centers, the client has access to three different types of services, depending on need.

In marketing, the three services are treated by Interspace as separate entities. Thus, planning by FDG includes the early pre-design analysis, such as a space audit and an organization overview in terms of staffing and image. In one case, for example, where two banks had merged, the client had to decide which of the two buildings would serve the new company better—or whether they should move to a third building and bring everybody together in a new environment. After an analysis that addressed all these issues, the planners recommended that the client stay in the newer of the two buildings. Following, the design group

replanned the organization of the facility and did a redesign of all the interior space. In another situation, the procurement group might then move in and do the purchasing, based on the design group's specifications, and handle the move-in. "Regardless of which division is first approached," reports William G. Krebs, senior vice president of the Interspace Design Group, "we acquaint the client with the total scope of our services, then they focus on what they need."

In the case where two or more services are involved with a single client, the head of the group driving the job will contact the other heads and establish a team that can draw on the expertise of all.

Krebs also notes that the resources of the procurement division may be used during the early schematic design phase for budgeting purposes, even when the client has not indicated a need for the service. The client is not charged a separate fee for this; it is part of the design process. As the project approaches the purchasing phase, the client may say "we have our own purchasing department," and at that point—if the project is large—PMG may point out that the client will have to overtax his staff or bring in extra people, and suggest that PMG submit a proposal. PMG will negotiate with the manufacturers or dealers, put out to bid, make recommendations to the client and award the bid, coordinate the purchase orders and the delivery schedule, do the site coordination for the move-in, and take care of the follow-through. While PMG makes sure that the product is in place, Interspace Design Group will then do the punch list to check on the condition of the product. PMG handles all claims for broken furniture, for example, and follows through in obtaining repairs or replacement.

The emphasis on the three specializations at Interspace benefits more than the client, it also benefits the staff, Krebs believes, allowing the professionals to gravitate to that aspect of the process that they do best. Some enjoy the field work, and like to work in the procurement group, and others prefer design. Sometimes these preferences shift, so an organization that provides multiple services can allow for that and permit people to follow their muse. The PMG group is staffed mainly by design-trained people who have seen the need to provide follow-through services, since these are the things that historically fall through the cracks in any job.

In a giant expansion for a professional firm, Interspace merged this summer with the PHH Group, Inc., a corporate services

organization in Maryland, which has also acquired Avenue Group, Inc., a Chicago-based interior/architectural design firm. PHH provides corporate location consulting, employee relocation, vehicle and aviation services to major corporations in the U. S., Canada and the UK. The new organization will also add automation and office productivity consultation, as well as financing and leasing programs, to the services now provided.

The philosophy behind it

In comparing Ford & Earl's CPS and Interspace's PMG, despite some idiosyncratic differences, we find that both present their procurement services in similar ways:

1. They are separate, autonomous services, operating on a fee basis, apart from the other architectural or design services.

2. They work on a separate contract with the client, with all discounts passed on to the client.

3. They monitor all parts of the process, through move-in.

4. They offer a single source responsibility.

5. They often work with architects and clients other than those of the parent company.

In considering the appropriateness to one's own practice of offering this kind of client service, the architect should reflect on whether or not he or she can, or wants to, provide the kind of expertise necessary to do it on a professional level. Tom Ernst, president of Ford & Earl, states the position his firm takes. "We view it," he says, "as a logical extension of our services to our clients, especially where we face competition from the designer/dealer. At the same time, we want to be very careful that we do it in a manner that does not compromise our professional responsibility—e.g., the specification of the best solution to the client. If a line is seen as the best solution, it will be specified, even if we do not have access to it in the market. No client shall question our choices."

The case for specialization

As exciting as these new configurations are, there are those architects who feel that the services offered the client should be separated in the traditional way. "We really think there are excellent dealers in the cities in which we work," says Ed Friedrichs, vice president and managing principal of the Los Angeles office of Gensler and Associates. He notes that his firm does not have an engineering or construction management division, preferring to concentrate on architecture and interior design.

He believes that an architectural firm has to decide what business it wants to be in, or else "you find yourself trying to feed your ancillary enterprise out of your primary business, so that the motivation you have for encouraging selection of these ancillary capabilities may often be to keep that enterprise going—as opposed to offering the best service that can be had in that area."

The architects at Gensler's various offices work with a variety of dealers; and if clients have a strong in-house facility management, they usually manage the purchasing themselves. Gensler will then supervise the installation and do the punch list as they do for construction.

Room for everybody

Indications are that there will continue to be room for both of these approaches as long as a successful result is achieved. As facilities managers continue to display varied levels of sophistication, they will want to choose the service that best meets their needs, and the growing diversity in the architectural and design professions is now providing them with a veritable banquet of options.

A recent study by *Facilities Design & Management* magazine, reports that 76 percent of dealer business now comes directly from corporations, with 14 percent generated by architects and interior designers. More and more, corporations want to control the actual purchase—in the light of abuses that have occurred in the past, and in order to obtain maximum discounts in a tight economy.

All of this is offering the opportunity for a new definition of "architectural services." The professionals who can give facilities managers the services that will help them to maximize their control of this process—by assuring that design is of the best quality, that furniture selected meets the specifications of the designers, that deliveries are on time, and that installation is proper and painless—are firms that may no longer be considered classically "architectural" or "design" firms, but are a new kind of interface between the corporation and its need for office facilities.

ACT: a new trade association for the fabric industry

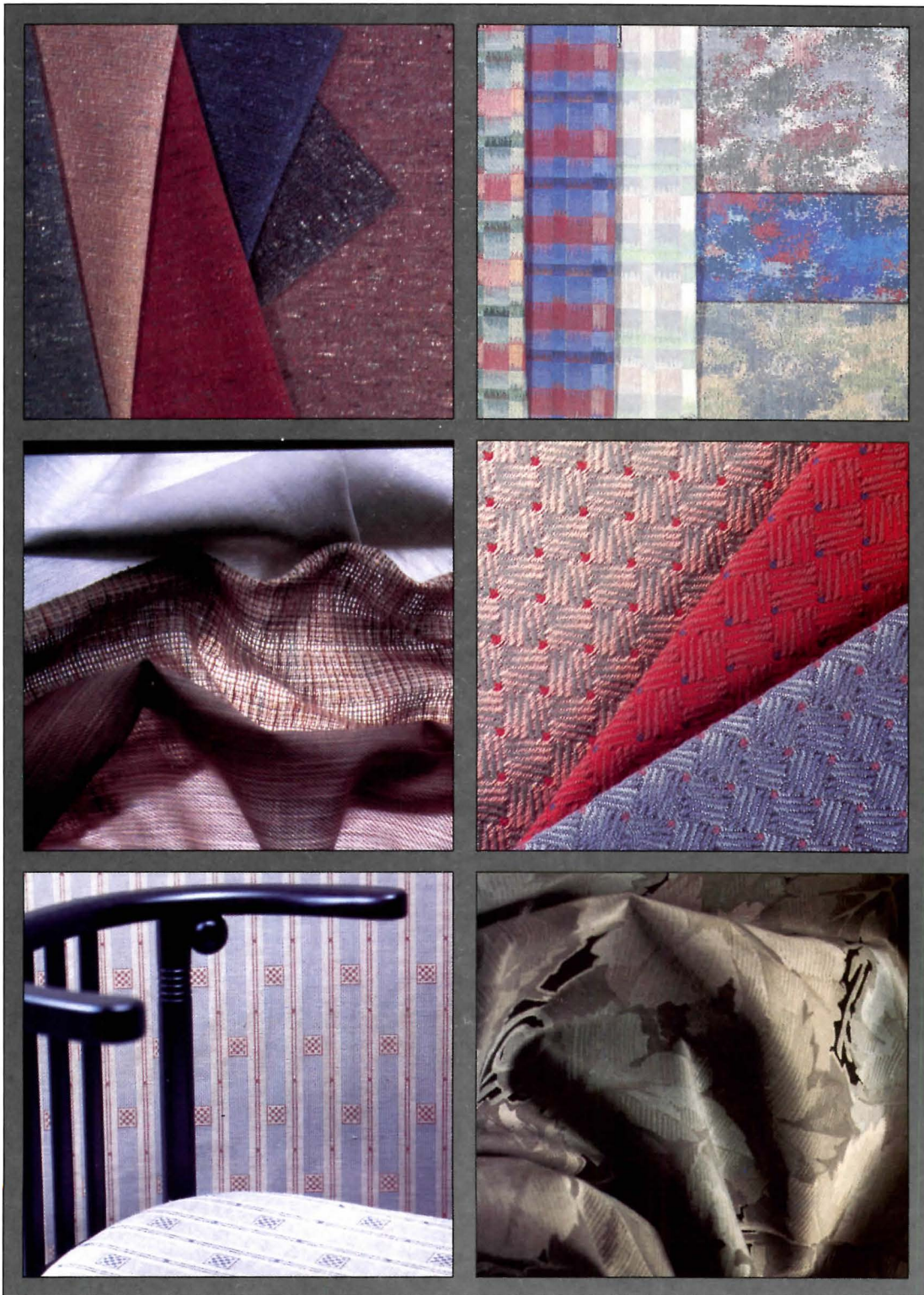
The formation of the Association of Contract Textiles (ACT) in February 1985 was not, as its founders will readily admit, a revolutionary event. Over the past several years the fabric divisions of contract furnishing manufacturers have accounted for an increasingly disproportionate share of company profit—to the tune, in some cases, of 30 percent. And all-fabric companies, whose products were once largely bought by non-professionals of all kinds, have witnessed more interest from architects and interior designers themselves. (In fact, as readers of RECORD's annual Product Reports may note, the number of fabrics featured in this issue has increased fivefold since the first such publication in October 1972.)

The formation of an association to consolidate the fabric industry's new-found influence was, therefore, almost inevitable. Although the 29 current ACT members represent only a small fraction of the over 300 manufacturers of contract textiles and wallcoverings whose product lines are available in this country, the group hopes to communicate a single, more powerful voice that projects beyond the promotional claims of specific product lines.

The fabrics unveiled by both ACT and non-ACT members at the most recent NEOCON, Westweek, and Designer Saturday trade shows have certainly been impressive, not only for their range—from Unika Vaev's *Archives Collection*, which features licensed re-editions of turn-of-the-century Weiner Werkstätte designs, to Gretchen Bellinger's ultra high-tech *Architectural Screen*, made of finely woven stainless steel—but also for their sheer numbers.

In addition to introducing new collections that represent current (or anticipate forecasted) color and design trends, fabric manufacturers have been forced to pay more and more attention to the wear-and-tear of their products. ACT's long-term goals—setting performance standards in such areas as abrasion-resistance, tensile strength, and light fastness—attempt to deal with the types of problems faced by all fabric companies.

Although each firm has its own approach to product development—be it working with in-house designers, scouring crafts fairs for new talent, or looking at the work of old masters as sources of inspiration or for future re-editions—a set of approved guidelines on fabric-performance standards and industry practices should provide some much needed technical assistance to architects and designers faced with the overwhelming selection of fabrics now available.



Left column, top to bottom:
Arc Com Fabrics, Inc.;
 Wool Galaxy
Knoll International; Jhane
 Barnes Collection
Unika Vaev, Division of ICF;
 Schachbrett, the Archives Collection

Right column, top to bottom:
DesignTex Fabrics, Inc.;
 Stratus and Cumulus
Brickel Associates, Inc.;
 Brigadoon
SunarHauserman;
 Grapa

New glass technology: the Miesian vision surpassed

Mies van der Rohe's clairvoyant proposals of 1919 and 1921 are among the most haunting architectural icons of our era. Sheathed in uninterrupted, transparent veils, these towers gave form to radical notions about glass as a building material, notions that were prevalent in Germany during the beginning of this century. Quite simply, glass was regarded as *the* building material of the age, and was the focus of technical speculation as well as philosophic musing. It is difficult, in 1986, to appreciate the startling vision that the 20-story Friedrichstrasse Office Building (right) and the 30-story Glass Skyscraper (far right) presented to their contemporary audience. Standing aloof among buildings with heavy masonry walls, the crystalline towers, convey a sense of otherworldliness.

The proposals, of course, were never built. When, after World War II, Mies resumed his investigations into high-rise structures, he abandoned two prominent features of the glass tower proposals by avoiding expressionistic plan form, and lavishing attention on the organization of mullions, transoms, and spandrels into clearly articulated grids. Building technology in the '50s had not yet developed a means to realize smooth-skinned glass walls. It was not until the early '60s, more than 40 years after the seminal proposals, that structural glazing, incorporating silicone sealants, first emerged on the scene. In a very real sense, the young Mies was a generation ahead of his time, anticipating technological advances with a far-reaching design theory. Today, ironically, the position of technology and design theory is apparently reversed: burgeoning developments in the science of glass outstrip any creative impulse on the part of architects to fully exploit the possibilities. One is tempted to speculate what a 35-year-old Mies would have done architecturally had he been presented with the possibilities of contemporary glass.

In order to survey the "state-of-the-technology," RECORD held a meeting last March attended by representatives of the U. S. glass industry. Present were spokesmen for the research and development divisions of LOF Glass, Ford Glass Division, and PPG Industries; a representative for the curtain wall manufacturer, Kawneer Company; and the technical director of the American Architectural Manufacturers Association. Subsequent conversations with additional manufacturers, industrial designers, and glass consultants augmented the findings of the meeting. An intriguing picture emerges that suggests a threshold to design innovations no less radical than the one envisioned by the German intellectuals who helped seed the Modern Movement.

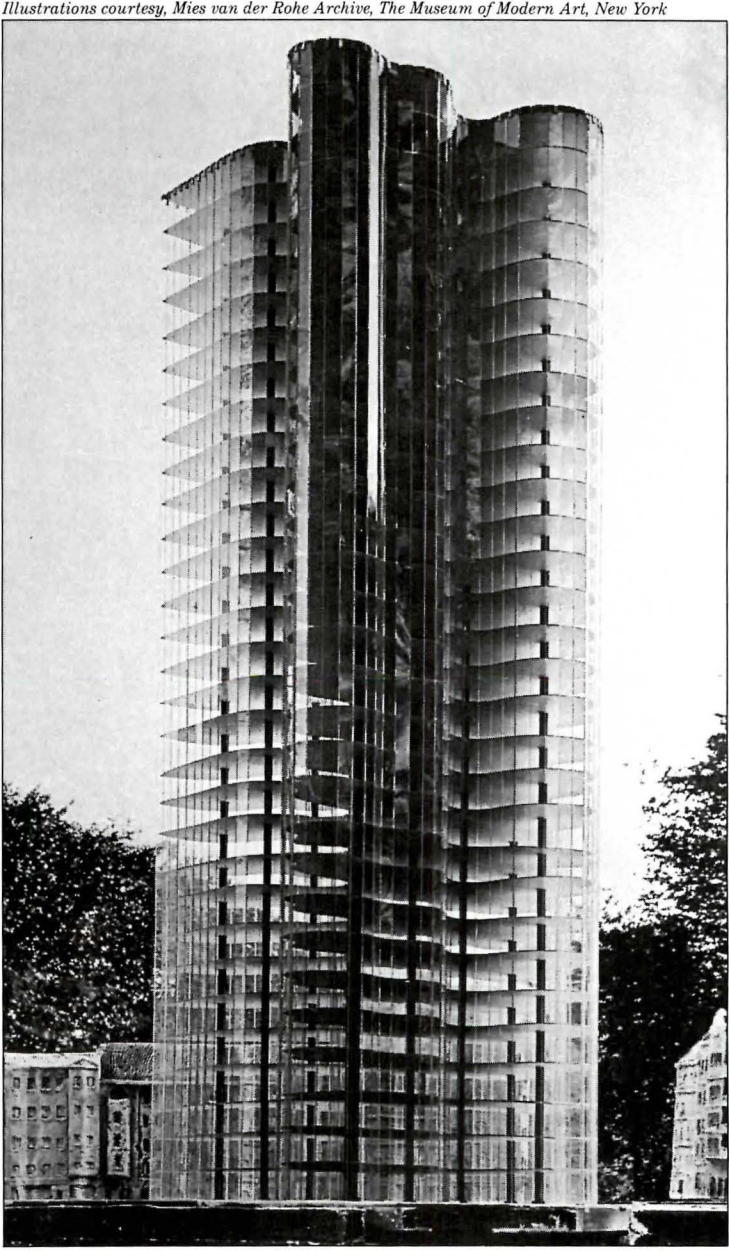
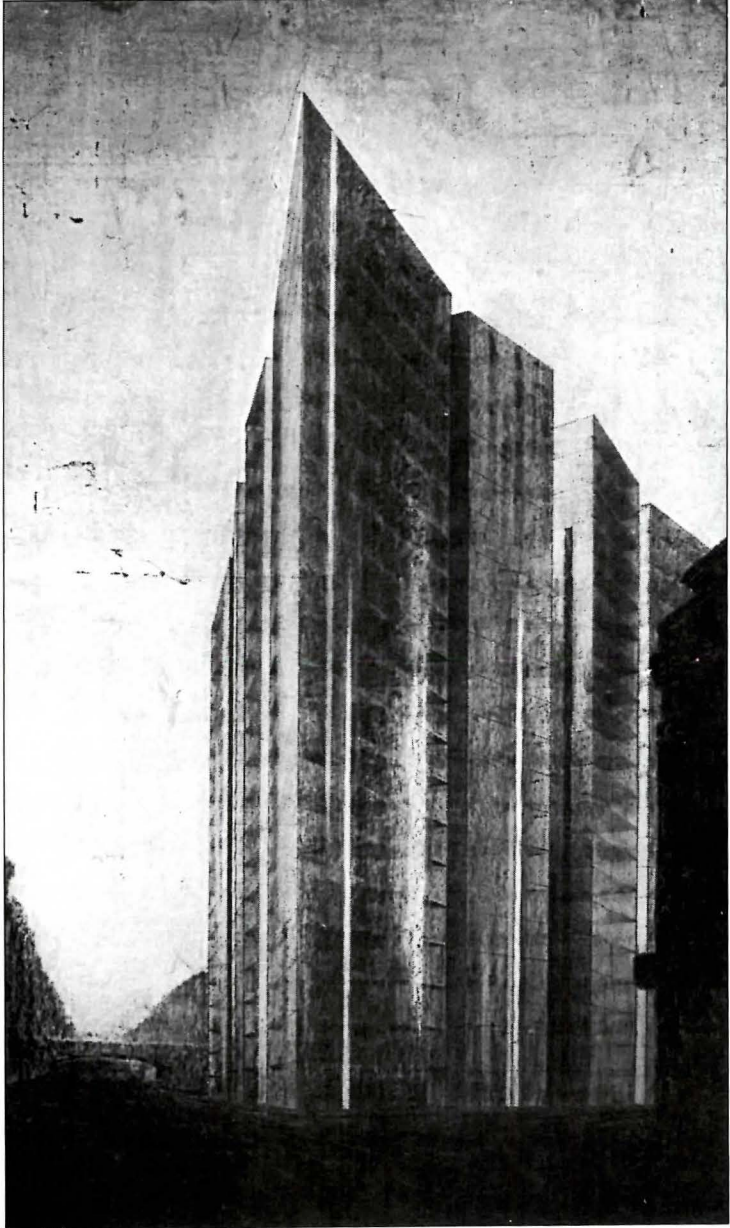
Within the next five years, the glass industry will be in a position to fulfill the architect's customized color needs. Already, a sizeable palette

is available through single or multiple applications of coatings, ceramic frit surfaces, and films used in combination with clear or colored glass. The colors, tones, and textures can play an integral role in window performance. With these treatments, the range of insulating properties, light reflection and transmission, and heat gain reduction are about as wide as the physics of the material permit. Some concern over the opacity of coatings and films has been expressed by designers who have settled for as little as 15 percent light transmission in favor of reduced solar heat gain and increased insulation properties. In a back-to-the-future move, industry is reviving plate glass with high concentrations of iron impurities (the agent that throws color, commonly green, along the edge of a sheet) because such glass permits full transmission of visual light while the metal impurities deflect thermal energy. Structurally, the glass industry has overcome wind- and thermal-stress breakage problems. With techniques for laminating and tempering enabling glass to withstand extraordinary stress, and with individual sheets of up to 25 square feet available, glass buildings can be fortress-like. These and other developments, already or nearly perfected for commercial building, remind us that glass is not generic.

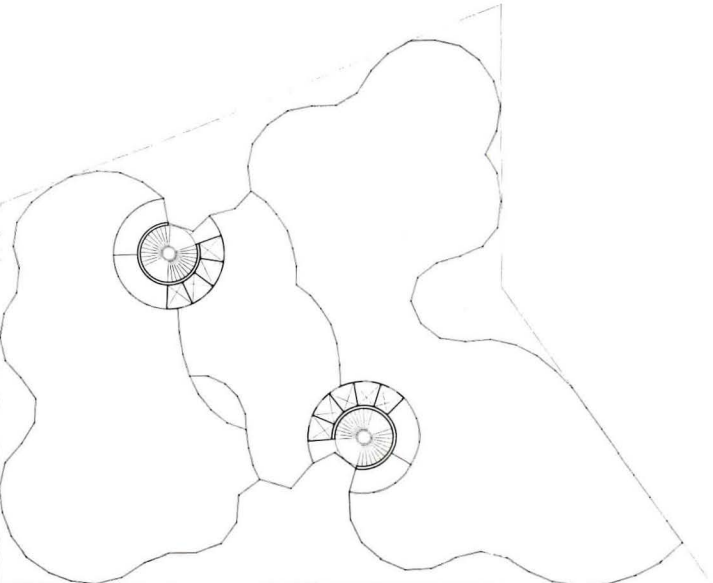
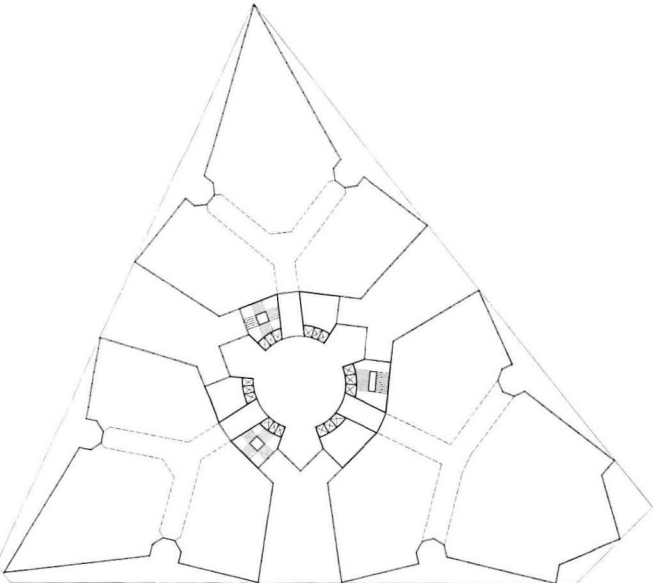
The most speculative possibilities for architectural glass were expressed by James Carpenter, a glass consultant to architects and industry. In the area of decorative glass, Carpenter has himself been developing coatings whereby full spectral light falling on the coating is separated in such a way that only one color is reflected, say an intense blue, and its complement (yellow) is transmitted, i.e., blue on the outside, yellow on the inside. Work on iridescent surfaces is also being explored. In the area of controlled light transmission, under study is visual glass striated with opaque bands for louvering that run through the material's cross-section. A version of this glass was developed, though not used, for Norman Foster's Hongkong Bank. Far-reaching implications for architecture are spinning out of research by defense contractors working in laser technology, and by high-tech electronics industries dedicated to integrated circuitry. From them come photo-sensitive and electro-sensitive glass that is capable of variable transmission triggered by sun absorption (in the case of the first) or an imposed electric current (in the latter). There are also photo-concentrators with implications for photovoltaics. This glass selects and directs to the edge of the glass the optimum wave lengths for generating electricity in power cells placed in the frame. If curtain walls grow to embrace the kinetic character suggested by these developments, there will be a truly organic connotation to the term, building skin. *Darl Rastorfer*

Said Mies van der Rohe of the Friedrichstrasse Office Tower of 1919 (left) and the Glass Skyscraper of 1921 (right): "We can see the new structural principles most clearly when we use glass in place of the outer wall . . . at the Friedrichstrasse I placed the glass walls at slight angles to each other to avoid the monotony of over-large glass surfaces. I discovered . . . that the important thing is the play of

reflections and not the effect of light and shadows as in ordinary buildings. The results . . . can be seen in the 1921 scheme. At first glance the curved outline of the plan seems most clearly arbitrary. These curves, however, were determined by three factors: sufficient illumination of the interiors, the massing of the building viewed from the street, and lastly the play of light."



Illustrations courtesy, Mies van der Rohe Archive, The Museum of Modern Art, New York



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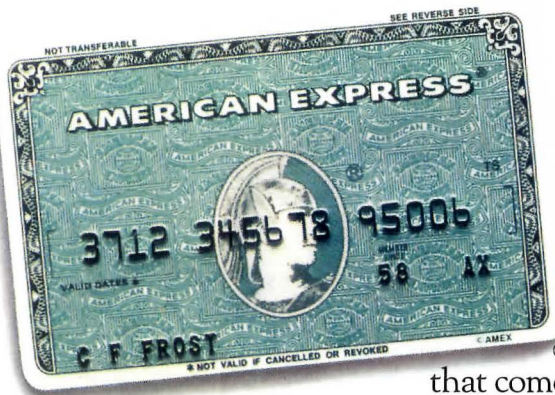


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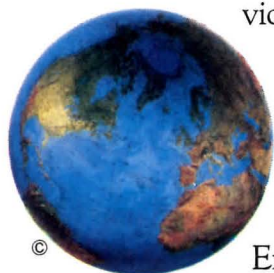
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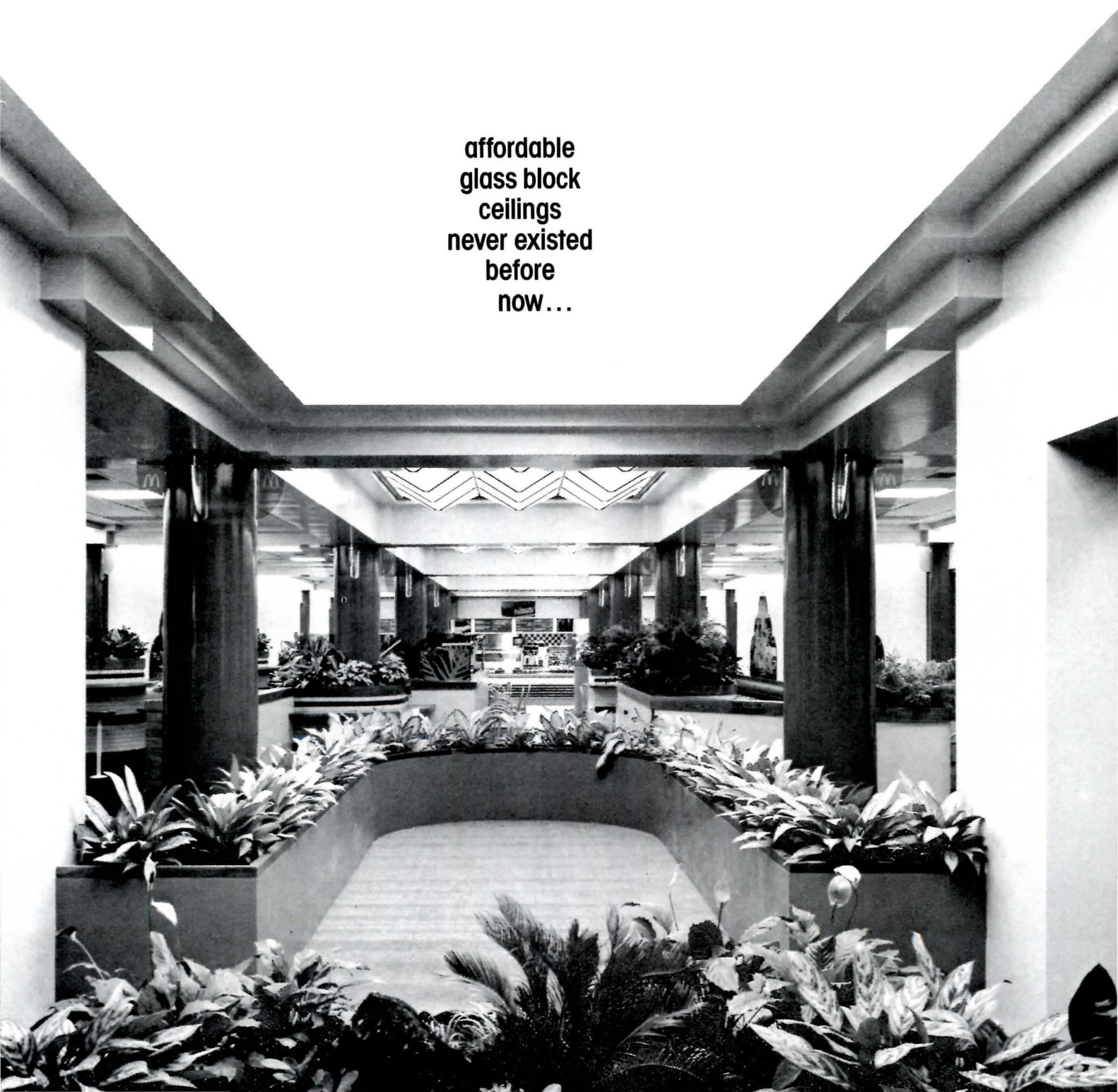
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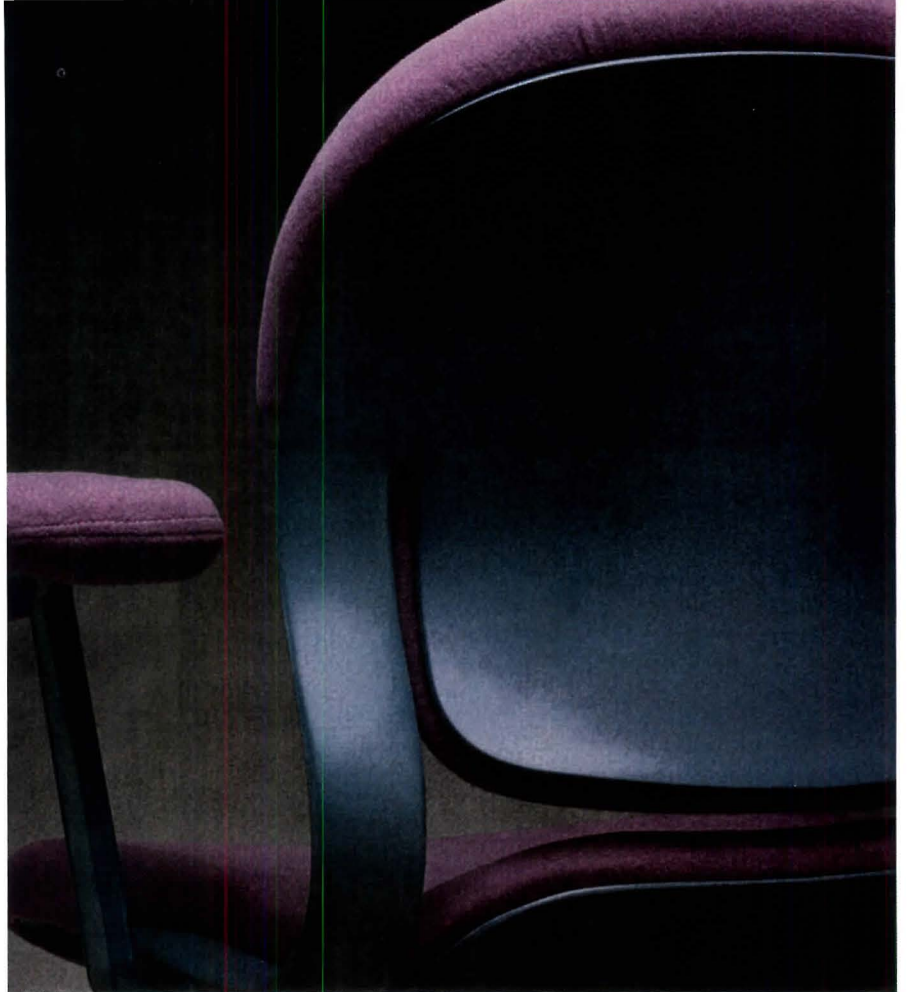
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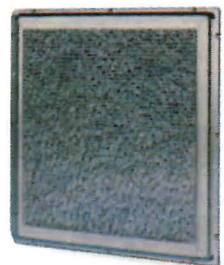
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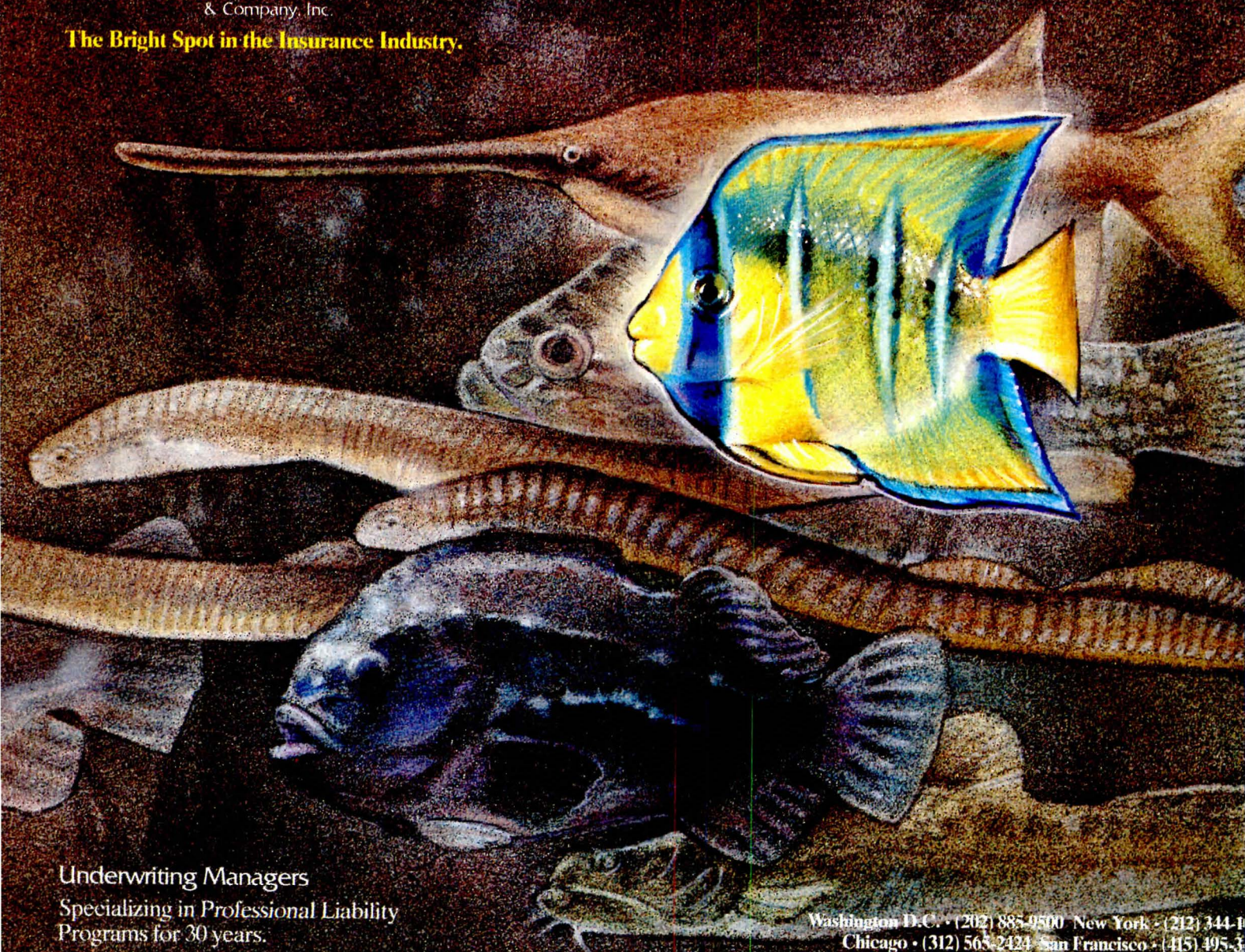
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Product Reports 1987

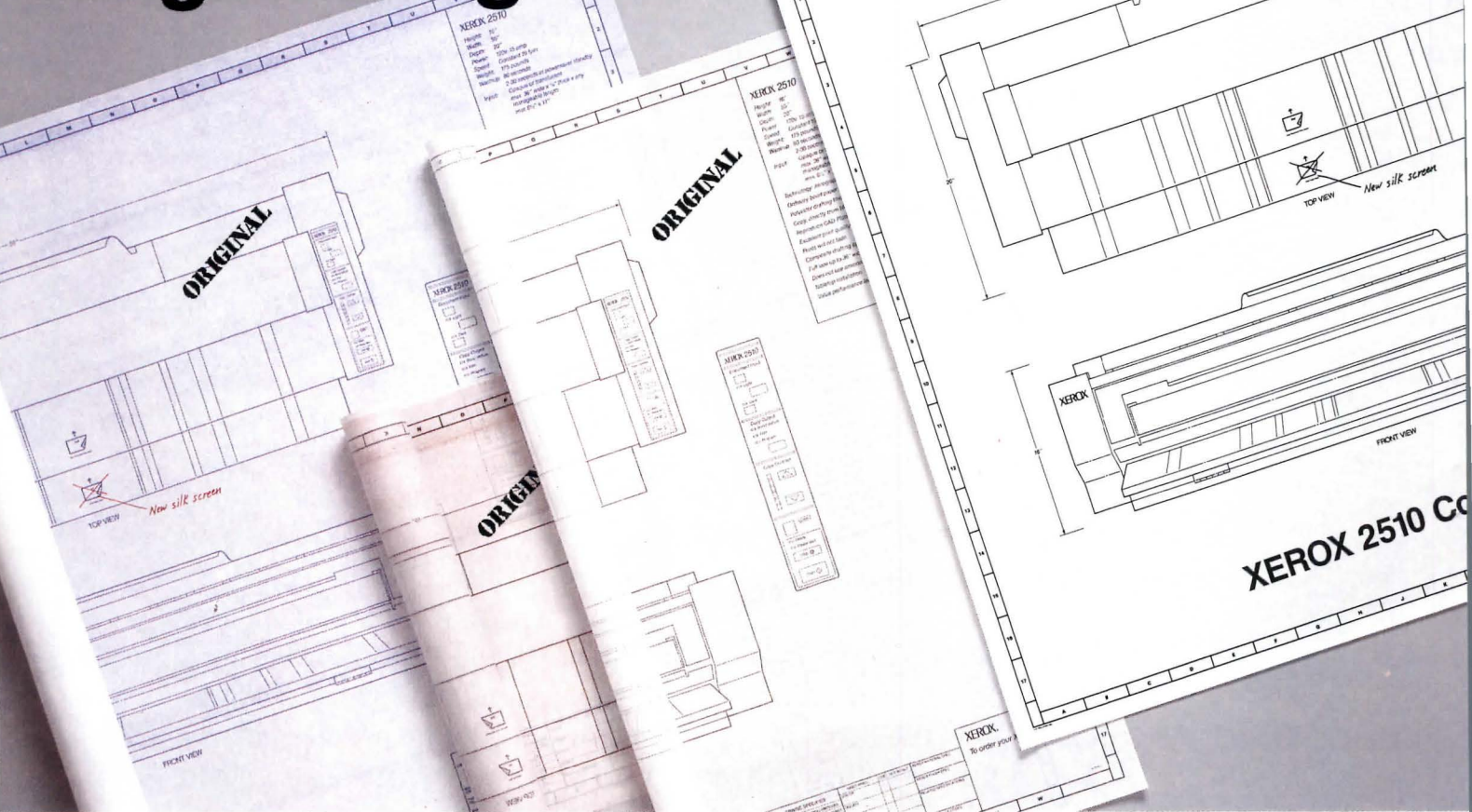
Some of you have asked how we put *Product Reports* together and I think it is about time that we told you, particularly since this is its 15th year and we have it down to a system by now. First, we mail out approximately 5,000 submission forms to manufacturers and advertisers. This year approximately 800 manufacturers returned the forms by our deadline. The total number of entries for this issue, including multiple submissions, was almost 3,000. Of these, products editor Eileen Gabriele selected 720 items. Submissions were first sorted into one of the 16 divisions of the Uniform Construction Index (UCI). The number of pages allocated to a particular division is related to the range of product types within it and the number and quality of the entries it attracts. Gabriele chose as large a variety of products as possible within each division, and in most divisions, one entry per manufacturer. In evaluating the products and the manufacturers, she looked for quality of product and service, significant improvements and features, and practicality in application.

We found this year that design qualities and options are being stressed more than ever, more so than cost, for example. While this emphasis is expected in the furnishings division, when door hinges are described in terms of their esthetic appeal, that's progress. We have also noted that this year's issue includes more CAD/CAM software systems, with increasingly sophisticated technical functions, which yet maintain a "user friendly" reputation.

You will note for the products you want to learn more about, including, perhaps, ready-made cupolas (item 158), completely pre-fabbed space frames (item 119), or onyx rail fittings quarried in the foothills of the Himalayas (item 113), more information awaits your use of the reader's service or STAC card. And you *do* make inquiries. Last year's *Product Reports* issue generated 237,525 out of a total of 903,977 for the year.

Not everything in *Product Reports 1987*, of course, is there to be inquired about and ordered. In his article "New glass technology: the Miesian vision surpassed" (pages 22-23), RECORD editor Darl Rastorfer describes products that the U. S. glass industry expects to market in the near future. Rastorfer asserts that developments in the science of glass already outstrip the creative impulse of today's architects. Whether or not you agree, you may be sure of one thing: Within the next five years you will find in UCI 8 some extraordinary new glass. *Mildred F. Schmertz*

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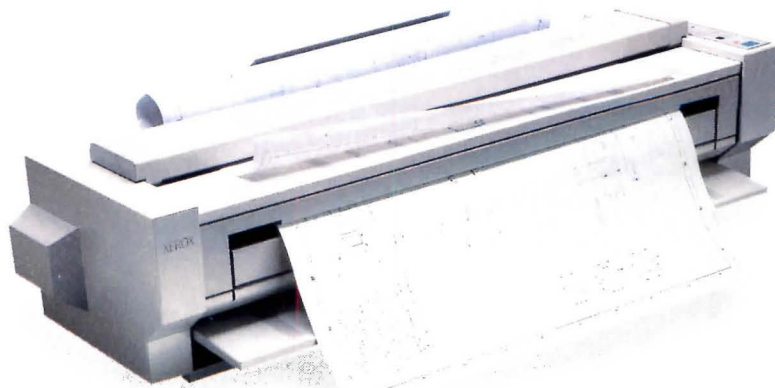
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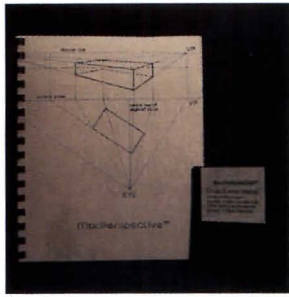
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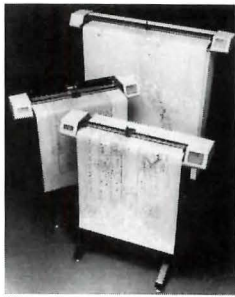
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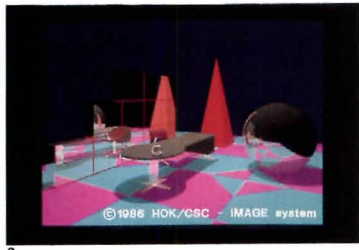
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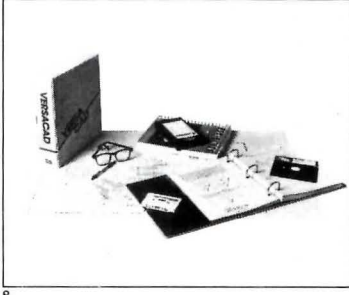
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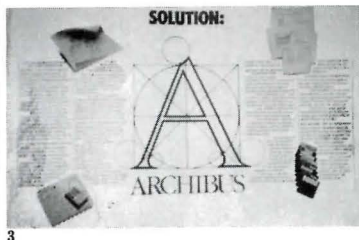
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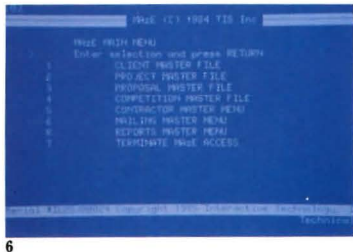
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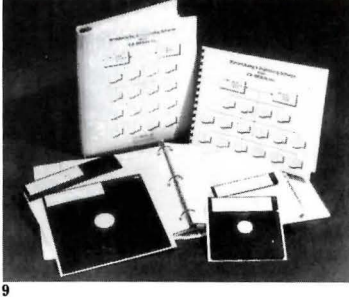
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12

1 Lettering system
The manufacturer's lettering system features a detachable keyboard, programmable sequencing and repeat functions, and a printer capable of producing 35 type styles. A small battery-power supply maintains the memory for up to three years, allowing the unit to be moved without loss of text. Kroy, Inc., Scottsdale, Ariz.

2 Graphics software
The *Image* software system supports 3-dimensional graphics, hidden-line and hidden-surface removal, shading, and rendering. The system generates shading from multiple light sources and allows modeling of reflective and transparent surfaces. HOK/CSC, St. Louis.

3 Integrated software
Archibus, an integrated software program, is a modifiable, drop-in framework for both architectural and administrative-support activities. *Archibus* was designed by a team of architects and software specialists. Jung/Brannen Research & Development Corp., Boston.

4 Computer program
MacPerspective is said to provide accurate wire-frame perspective layouts from dimensioned plans and elevation drawings. The computer program is intended for use with the *Apple Macintosh* computer. B-Knick Drafting, Melbourne Beach, Fla.

5 Mail-delivery system
The *Mailmobile* delivery system is a self-propelled vehicle that follows a predetermined guidepath through an office, stopping at designated areas for pick-ups and deliveries. The system moves at 1 mph, is UL listed, and meets FCC requirements. Bell & Howell Co., Phillipsburg Div., Zeeland, Mich.

6 Software
MAZE is a fully integrated software package designed specifically to manage the business-development functions of architectural and engineering firms. *MAZE* uses databases containing historical data on the firm, its clients, prospective clients, past projects, and proposals. Technical Information Systems, Inc., Norfolk, Va.

7 Videotelephone
The manufacturer's videotelephone, called *Photophone*, is designed to be an alternative to live-action video conferencing when both pictures and voice are necessary. The unit is self-contained, weighs less than 30 lb, and uses standard telephone lines. Image Data Corp., San Antonio, Tex.

8 Software
The *VersaCAD Advanced* design software system has the capability to group objects for future editing, record a drawing and play it back later with a single macro command, and turn any drawing into a permanent library symbol. T & W Systems, Inc., Huntington Beach, Calif.

9 Software packages
The manufacturer has made available a series of microcomputer software packages, including *BMP: Bill of Materials Plus*, an engineering and documentation control system; *E-Z MRP: Material Requirements Planning*; *E-Z CRP: Capacity Requirements Planning*; and *A2B: Auto CAD to BMP Interface System*. C. R. Smolin, Inc., La Jolla, Calif.

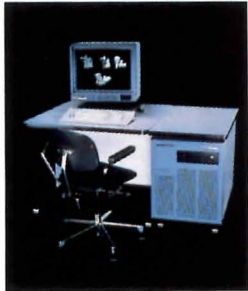
10 Plotter
The *DMP-56* A-to-E-size plotter features a resolution of .001 in. and can accommodate 18 different media sizes ranging from 8 1/2- by 11-in. to 36- by 48-in. The plotter has a Class A FCC rating and is UL listed. Houston Instrument, Div. of Ametek, Austin, Tex.

11 CAD software
An integrated graphics/data software package features a "graphics spreadsheet," a non-hierarchical command structure, an *Interrupt* command structure that allows the user to pause, and a query system to search for data. SKOK Systems, Inc., Cambridge, Mass.

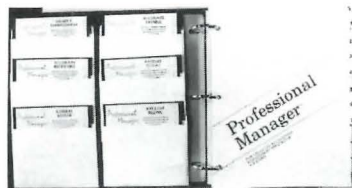
12 Construction software
The *Sherwall* computer software module is one of a series of building-design and review programs. It calculates the weight and seismic shear on each floor of a building carrying loads to the base. It also determines unit shear for a selection of materials included in the Uniform Building Code. J. J. Jordan, Architect-Engineer, Sacramento, Calif.



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13 Printer

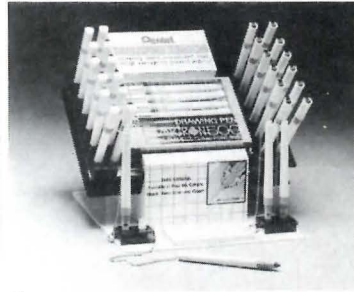
The *Model 250 Scavenger Plus* printer features the patented Vapor Eliminator System, which is said to minimize residual ammonia left on materials exiting the developer. The unit is capable of printing up to 25 ft per minute. Optional accessories are also available. Blu-Ray, Inc., Essex, Conn.

14 Display software

The *CX Series* of display software packages is designed for use in the following applications: CAD/CAM/CAE, mapping, simulation, animation, solids modeling, business graphics, and PC layout and design. The various models within the series are adaptable to one another. Chromatics, Inc., Tucker, Ga.

15 Software

The *Professional Manager* is a project control and financial accounting system intended for small- and medium-size design firms. The system consists of *Job Cost, Billing, Project Control, Payroll, Accounts Receivable, Accounts Payable, and General Ledger* programs. Automate Computer Software, San Antonio, Tex.



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16 Drawing pens

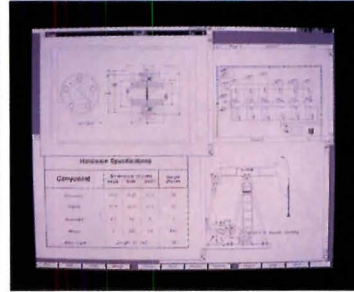
The *Ceramicron 500* refillable ceramic-tip drawing pens are available in four different micro-point sizes, including 0.1, 0.2, 0.3, and 0.4. The pens feature an airtight cap seal and water-based ink in black, blue, red, and green. Pentel of America, Ltd., Torrance, Calif.

17 Lettering machine

An automatic lettering machine operates with a typewriter-style keyboard and features a scrolling, 16-character display with a cursor that allows editing and correction of information before it is penned onto the drawing. The unit is also capable of centering, grid spacing, and auto-kerning. Keuffel & Esser Co., Parsippany, N. J.

18 CADD system

The manufacturer's CADD system features "macro commands" that allow for application menus to be custom-designed and updated. The program also permits mainframe linking and has local-area-networking capabilities. Available options include a 2-D package, 3-D animation, and color modeling. Point Line Co., San Francisco.



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19 Publishing software

The *Omnipage* electronic publishing software package integrates text with graphics and provides full composition and pagination capabilities. Standard page layouts can be used or custom designs may be created. The software accepts a range of file formats and technical illustration packages. Omnicad Corp., Pittsford, N. Y.

20 PC software

The manufacturer's *Version 2.0* project scheduling and costing program for personal computers is designed to plan, track, and analyze projects, as well as collect information on project timing, resource use, and cost. Microsoft Corp., Redmond, Wash.

21 Slide-production system

The *Zetavue* color graphics slide-production system changes computer-graphic data into 35mm slides in a relatively short amount of time. *Zetavue* weighs less than 40 lb, fits on a desk top, and is compatible with a variety of computer systems. Bruning Computer Graphics, Martinez, Calif.



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22 Management software

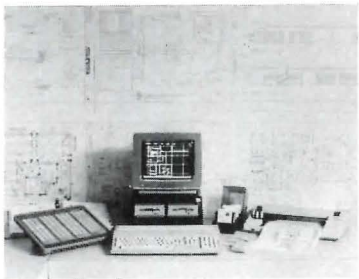
The manufacturer's line of construction-management software products is designed for the construction industry, and has an emphasis on job control. The software deals with jobs that need to be estimated, bid, scheduled, costed, and tracked. Small System Design, Inc., Boulder, Colo.

23 Wiring system

A newly introduced line of communications wiring systems is a modular solution for voice and data wiring using twisted-pair media. The system is said to be compatible with a range of communication equipment. A design guide is also available explaining wiring for computers, phone systems, multiplexers, and data switches. MOD-TAP System, Harvard, Mass.

24 Lettering system

Merlin, a lightweight electronic lettering system with a detachable, typewriter-style keyboard produces type on adhesive-backed tape. The unit features a memory and visual display panel that permits users to enter data, revise, and/or delete words before printing. Varitronic Systems, Inc., Minneapolis.



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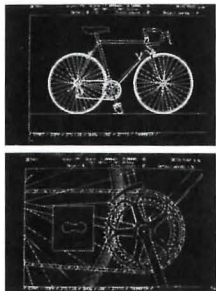
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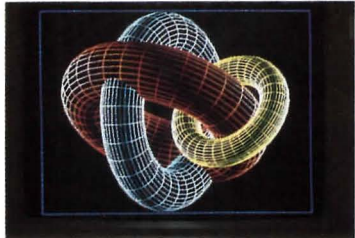
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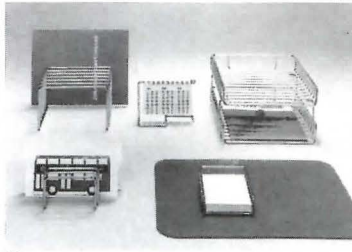
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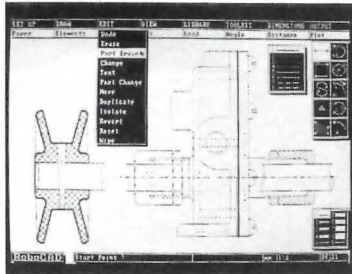
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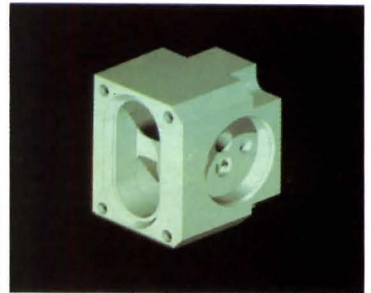
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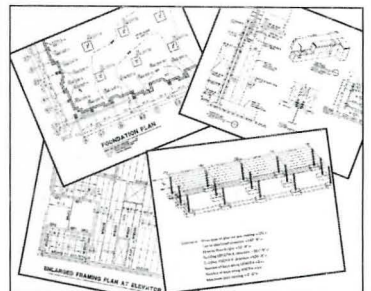
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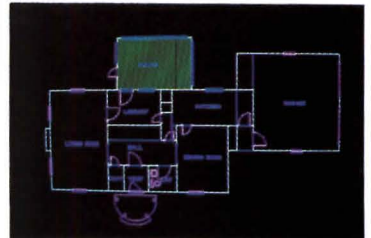
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25 CADD system
The manufacturer's *Touch 'N Draw* PC-based CADD system was created for architects, engineers, designers, and draftsmen. The turn-key system includes a drafting workstation with a *Motorola 68000*-based personal computer, a color monitor, a mouse, floppy drives, and a *Desktop Menu-Board*. Arrigoni Technology, Inc., Sunnyvale, Calif.

26 Energy-simulation software
Cerenet is a high-speed, energy-simulation tool that is intended for use with IBM PCs and other IBM compatibles. The software is structured to provide graphic or tabular displays, and can be used to generate daily, seasonal, and/or annual profiles of the energy dynamics of a building. CERES/Ball State University, Muncie, Ind.

27 Software
The *CADDStation* series features a number of software packages designed for architectural, engineering, and construction applications. Available packages include electrical, structural, and site engineering, and plant, marine, and building design. ComputerVision Corp., Bedford, Mass.

28 Software program
ADOSS—Analysis and Design of Concrete Slab System—is a PC-based software program said to simplify the design and analysis of structural floor systems, including flat plates, flat slabs, waffle slabs, plates with beams, and continuous beams. Portland Cement Association, Skokie, Ill.

29 CADD system
Micro Cadam, an entry-level addition to the manufacturer's line of CADD systems, runs on a microcomputer and fits on most desktops. The system features automatic isometrics, construction planes, automatic dimensioning, and the ability to add colors and mix line types. Cadam, Inc., Burbank, Calif.

30 Computer system
The *Personal Architect* CADD system can be used to design projects, produce contract documentation, schedule tasks, track completion dates and budgets, and bill clients. ComputerVision Corp., Bedford, Mass.

31 Desk accessories
The manufacturer's *8000 Series* of wire desk accessories feature a compact, space-saving design to allow for the organization of papers and reference materials. The series is available in a polished-chrome finish or any of 25 enameled colors. Peter Pepper Products, Inc., Compton, Calif.

32 Planning system
CAP, a computer-aided planning system, was created for interior designers and corporate managers to plot and track a project from conception to installation, and then aid ongoing facility management. The system uses an integrated package of software that can be used individually or in combination. Corry Jamestown Corp., Irving, Tex.

33 CAD software
The manufacturer's PC-based CAD software package features a picture-based user interface consisting of pull-down menus, movable palettes, automatic dimensioning, and conversion capabilities between U. S. standard and metric systems. Robo Systems Corp., Newtown, Pa.

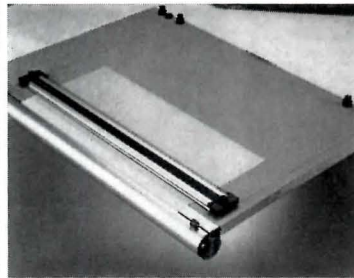
34 Software system
The *CADG+FM* stand-alone facility-management software system is designed to be used by organizations with facilities of at least 500,000 sq ft, including manufacturing plants, service and financial corporations, institutions, and lease-management organizations. Cadam, Inc., Burbank, Calif.

35 Engineering software
Developed by structural engineers, the manufacturer's microcomputer-aided design system is capable of generating wire-frame structures from specifications. The system controls layer management, scaling, dimensioning, notation, detail cataloging, and menu access. Micad Systems, Inc., New York City.

36 Programming language
User Programming Language is a macroprogramming utility designed for use with micro-CADD software programs. The system is said to automate established procedures, simplify the design of parts that belong to the same family, and make available the same functions as Fortran, Pascal, and Ada. ComputerVision Corp., Bedford, Mass.



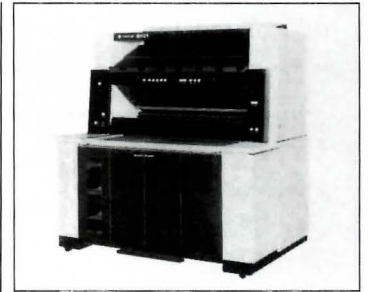
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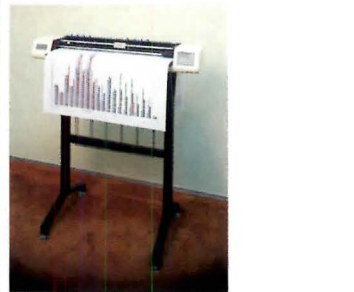
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37 Workstation
The manufacturer's *Domain Series 3000* personal graphics workstation combines a central processor with a floating point co-processor. The 32-bit workstation provides 2-D and 3-D graphics for technical applications. Options include a 15-in. color display or a 19-in. monochrome display. Apollo Computer, Inc., Chelmsford, Mass.

38 Management software
The *Wind-2 Plus One* financial management software for architects and engineers uses time-record and project-expense data to project invoicing, management and budget control, profit analysis, and accounts receivable. Wind-2 Research, Inc., Ft. Collins, Colo.

39 Plotter
The *Plot-II* plotter generates color-keyed and time-scaled project diagrams, bar charts, earned value and cost control histograms, and line graphs for projects managed with *PMS-II* critical path software. Other features include a choice of character sizes, partial plots, and baseline display. North America MICA, Inc., San Diego.

40 Straightedge
The manufacturer's parallel ruling/cutting straightedge is made of anodized aluminum with a removable acrylic ruling edge. The elevated straightedge blade glides over the drawing and is said to eliminate smudging. Spirol International Corp., Pittsfield, Mass.

41 Software
The *Plantrac* project management software programs include several modules designed to handle the integration of scheduling, resources, and graphics. The software is said to be a critical-path scheduling tool because of its processing and report production techniques. Computerline, Inc., Pembroke, Mass.

42 Marketing software
The manufacturer's *A/E Marketing Manager* software package is designed for architects and engineers as a tool for the marketing of professional services to potential clients. The software handles the production of resumes, reports, and project descriptions. Infomax Corp., Tualatin, Ore.

43 Microcomputers
The *MCX* line of super-microcomputers is designed for engineering, scientific, and technical applications where a high-speed system is a critical concern. For applications requiring extensive arithmetic calculations, an optional custom-designed floating point accelerator can be added. Harris Corp., Computer Systems Div., Ft. Lauderdale, Fla.

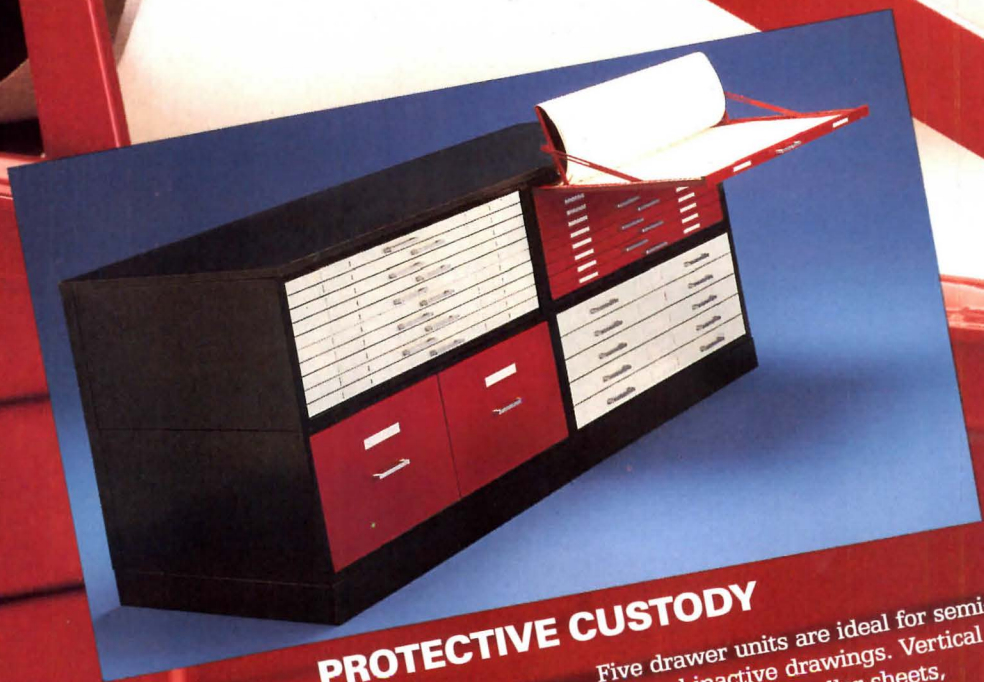
44 Specification software
The manufacturer's construction specification software system is designed to assist in most architectural areas, with the exception of mechanical and electrical detailing. The system is made up of over 500 narrowscope sections which are said to reduce the need to edit. Standardspec, Inc., Chicago.

45 Project software
Version 7 of the manufacturer's *PMS-II* project management software system features lead/lag scheduling, baseline comparison, project cloning, and an abbreviated network diagram. North America MICA, Inc., San Diego.

46 Copier
The *2020* automated high-volume mercury-vapor engineering copier produces prints at speeds up to 80 fpm with a manual feed and up to 60 fpm with an automatic feed. Modular components such as manual feedboards and sheet dispensers can be added at any time. Ozalid Corp., Binghamton, N. Y.

47 Software program
The *Drawbase* integrated computer-aided design, drawing, and data-management software program implements the concept of "space accounting." Space accounting is the ability to track and report on the area, perimeter, length, and width of objects. SKOK Systems, Inc., Cambridge, Mass.

48 Copier
The manufacturer's model *2510* compact engineering copier can make copies up to 36 in. wide and any manageable length on paper, vellum, or polyester film. Engineering drawings, diazo prints, blueprints, sepias, and mounted originals up to 1/8 in. thick can be reproduced on the unit. Xerox Corp., East Rochester, N. Y.



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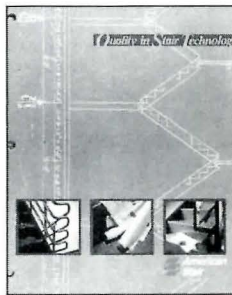
49 CAD software

A 6-page color brochure describes the manufacturer's *DGS-2000* CAD software. The software is activated by a hand-held stylus, and an on-screen cursor can be used to select menu functions, digitize existing drawings, or create new ones. Data Automation, Escondido, Calif.



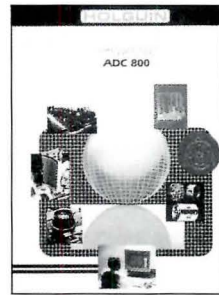
55 Drafting and plotter supplies

A 64-page catalog reviews the manufacturer's line of drafting, print, and plotter supplies, including technical pens, drafting leads, vellum, templates, diazo products, plotter pens, and drafting tables and stools. Ordering information is included in the literature. Dataprint Corp., San Mateo, Calif.



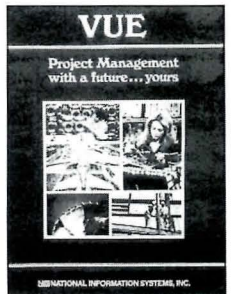
50 Stair specifications

A new 8-page color catalog illustrates several stair configurations and reviews recommended material specifications. Custom-sized stair systems are also described in the literature. American Stair Corp., Willow Springs, Ill.



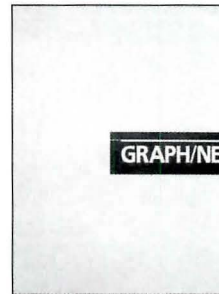
56 CAD software

The features of the manufacturer's new *ADC 800* CAD software system, including instant zoom and pan capabilities, instant storage and recall of template shapes and fixture sizes, and the ability to produce free-form curves and label drawings, are reviewed in a 6-page color brochure. HOLGUIN Corp., El Paso, Tex.



51 Project management

VUE, a computerized project management system, is reviewed in a 14-page brochure. The system's *Critical Path Method*, which spotlights activities whose scheduled completion is critical to project completion, is described. A variety of additional system features are discussed. National Information Systems, Inc., Cupertino, Calif.



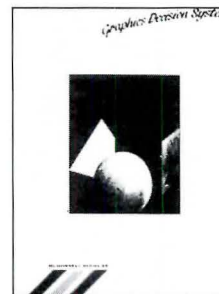
57 Computer-integrated design

A 4-page color brochure describes the *GRAPH/NET* computer-integrated design system, now available on both a high-resolution *T-2* minicomputer workstation and the new multiuser *Sun Microsystems Series 3*. Programs for space planning, layered drafting, and project data management are reviewed. Graphic Horizons, Inc., Cambridge, Mass.



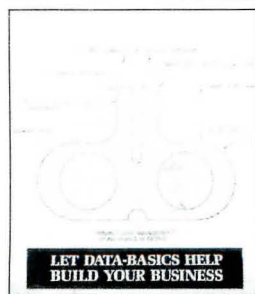
52 Graphic design and lettering

The *GSP SPRINT* and *GSP SPRINT/750* computerized graphic design and lettering systems are featured in a new brochure. Both the text and graphic modes of each system are reviewed in the literature. Gerber Scientific Products, Inc., Manchester, Conn.



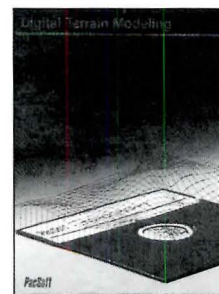
58 Facility management system

The various components of the manufacturer's *Facility Management Decision System*, including a programmable data base and data-driven graphics, are reviewed in a 4-page color brochure. CADD and CAE capabilities are also discussed. McDonnell Douglas Architectural, Engineering & Construction Systems Co., St. Louis.



53 Data-management software

The manufacturer's *Architectural/Engineering Master Accounting System* is described in a 4-page brochure. Intended as a tool to evaluate job information and profits, *AEMAS* programs run on general-purpose computers. Hvac, drafting, and pipe-network-design applications are reviewed in the literature. Data Basics, Inc., Cleveland.



59 Engineering software

The *ESP-200* menu-driven engineering software series is featured in a 12-page color brochure. The manufacturer's training and tutorial program, intended to familiarize users with the system, is reviewed in the literature. PacSoft, Inc., Kirkland, Wash.



54 Drafting software

A 4-page brochure reviews a line of general drafting software programs intended for architects and engineers. Software features and capabilities, including display and drawing controls and drawing, editing, and dimensioning, are described in the literature. HOLGUIN Corp., El Paso, Tex.



60 Heating and cooling loads

A two-page information sheet details the manufacturer's residential heating- and cooling-loads software program. Information on program input is included. Demonstration disks are available. Elite Software Development, Inc., Bryan, Tex.

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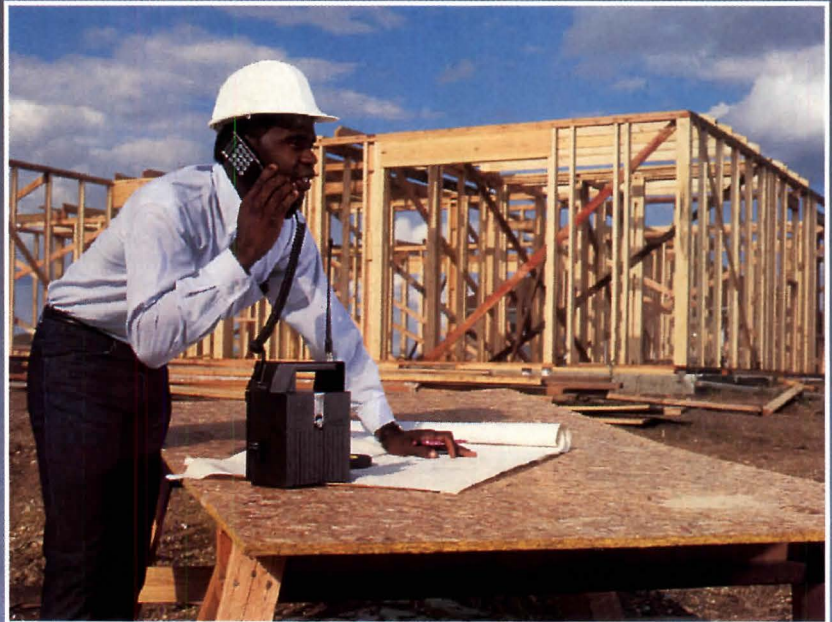
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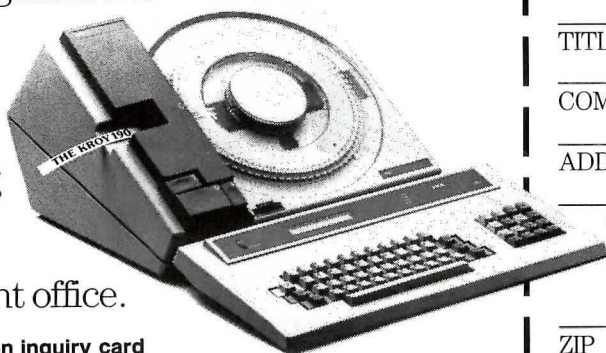
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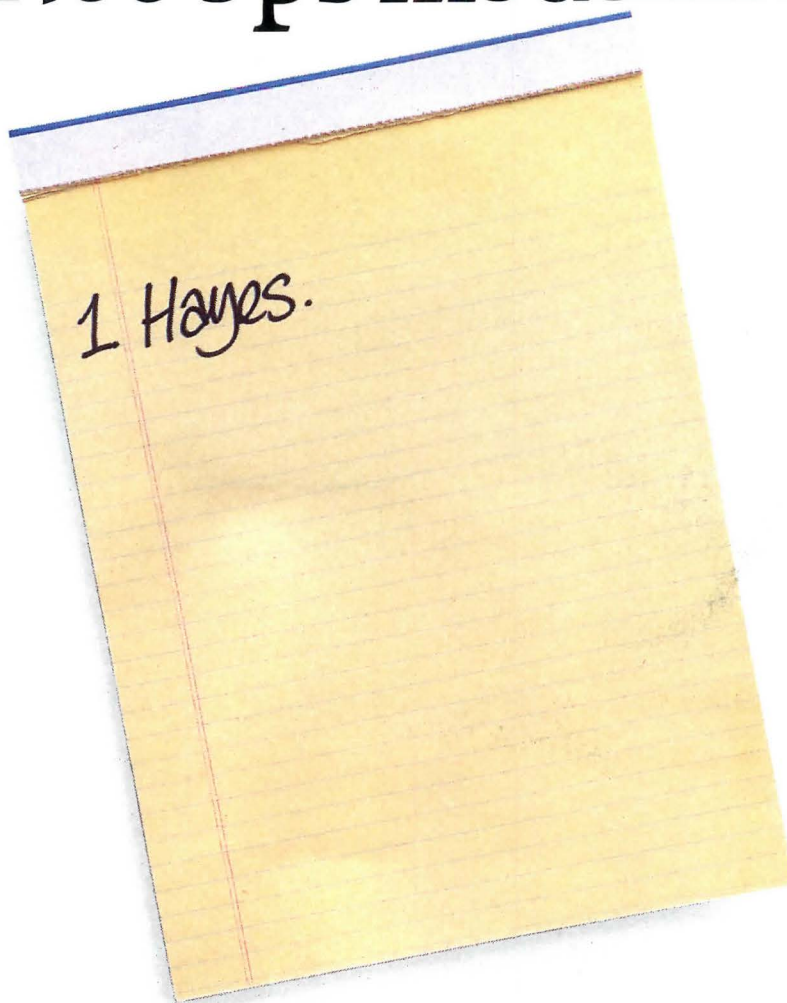
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Users of these AT&T systems can do more, and do it faster than users of other PCs.

The difference: a bit of technological lightning called Simul-Task. Armed with Simul-Task, the solo PC user becomes a one-man gang, and the small department becomes an army — more productive as well as more efficient.

The secret: Simul-Task technology allows today's AT&T computers to apply their power to several tasks at the same time.

Whether you work alone or as part of a group, you can now perform a database sort and print from a spreadsheet *at the same time* you edit a letter. You can send or receive electronic mail, or pull figures from a faraway mainframe *at the same time* you outline a report.

In a Simul-Task world, you need never interrupt one job to handle another. Quick as you can fire up

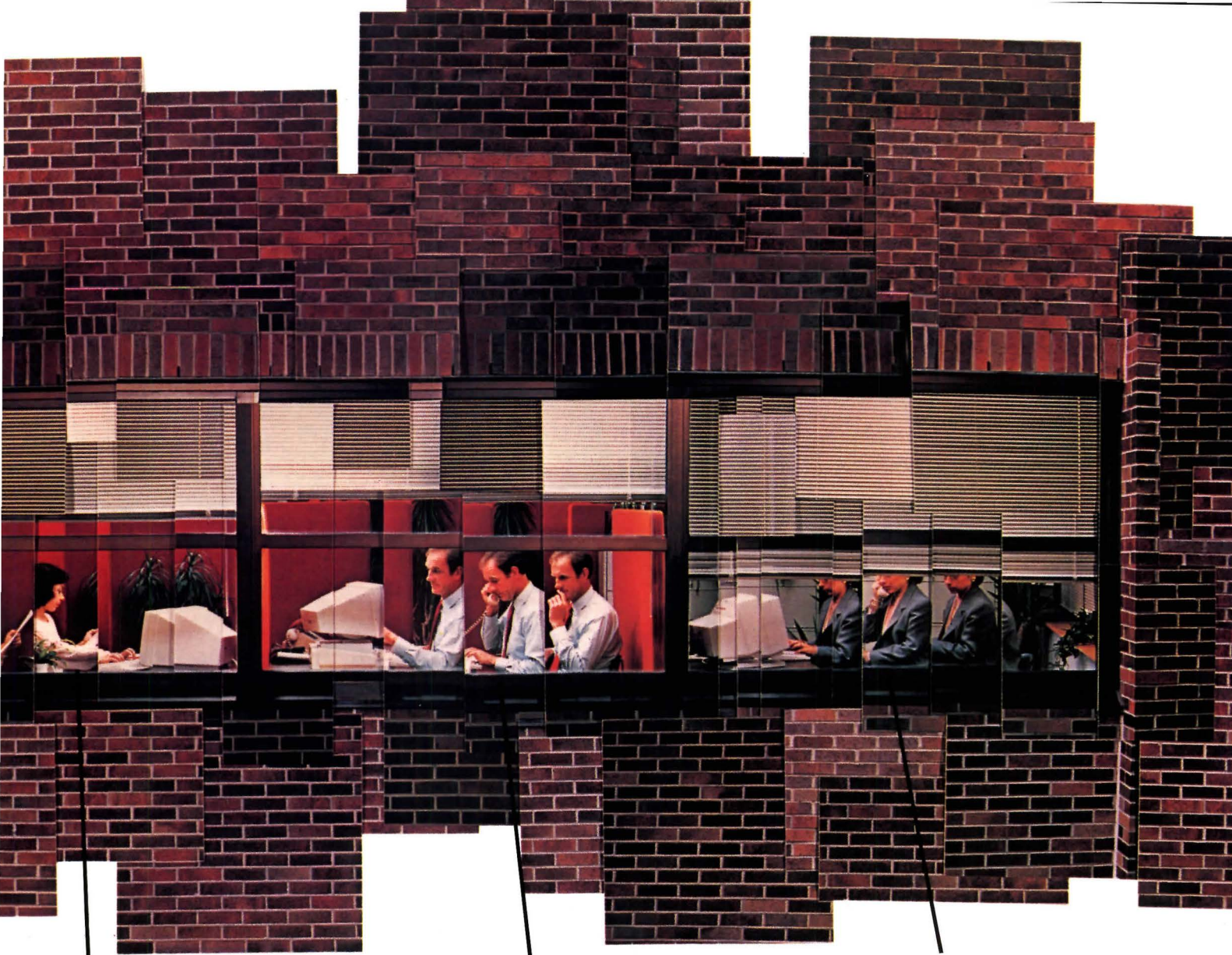
new work in the foreground, Simul-Task gets on with other work in the background. (Which, incidentally, is rarely more than a keystroke away.)

Nor need you wait, ever again, for the computer to slog through time-consuming backups and so on. Simul-Task frees you from such dreary chores, so you can apply your brains to more creative work.

TRUE MULTI-TASKING FOR THE ONE, THE FEW, AND THE MANY.

Like adding a turbocharger to a high-performance car, Simul-Task applies a powerful productivity boost to the AT&T computers experts already regard as industry thoroughbreds in their own right.

AT&T's PC 6300 PLUS is ranked among today's premier single-user machines. The speed is intoxicating, the graphics razor-sharp. However, it is AT&T's Simul-Task that catapults this IBM*-compatible class of its own.



AT&T's 3B1 Computer supports up to 5 users, each doing several jobs at once. Analysts compare this system to refrigerator-size minicomputers costing ten times as much.

A unique one-two punch: AT&T's Simul-Task feature delivers advanced communications functions and the ability to run multiple programs at the same time.

With Simul-Task, this user can copy information from one application directly into another application, doing in minutes what used to take hours.

HELP THE LEADER...AND THE PACK.

Simul-Task unleashes the full potential of the 80386 processor chip, running virtually any of today's PC programs — while doing several other jobs at the same time. Result: You have all the advantages of today's PC software, without the limitations of today's one-thing-at-a-time PCs.

AT&T's 3B1 Computer has power and memory to support work groups of up to 5 users, each doing multiple tasks at once. Larger members of AT&T's 3B family of multi-user computers can extend the advantages of Simul-Task to larger groups and to larger companies.

For system planners, please note: All AT&T PCs in the entire 3B computer family were designed to share information with other systems, AT&T's own and those of other vendors. When the time comes for an integrated, office-wide network, you'll be ready. We make the pieces fit.

WOULD YOU LIKE A DEMONSTRATION?

Seeing is believing. AT&T would like to show you how today's most productive PCs can help any individual or any group in your company get more done with Simul-Task.

To learn more, and to arrange for a personal demonstration, please contact your AT&T Account Executive. You may also stop by any authorized AT&T supplier, or telephone 1 800 247-1212.

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The HICAD GM-1000 software package brings full-function CAD system capability to your desk top, turning your IBM PC®, XT®, AT® or compatible into a CAD workstation.

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Walls, windows, doors, floors, details, and site plans can be drawn free hand or automatically constructed, then combined, moved, copied, rotated, or scaled to create complex layouts. All entities are stored in a mathematical database that allows high-speed dynamic pan and zoom without interrupting another function.

User definable features include menus, keyboards, mouse, line styles, batches, and advanced macros. Dimensioning, leader lines, balloons, and fail-safe ten-command storage are automatic. Drawings may be separated into as

many as 255 layers and displayed independently or grouped.

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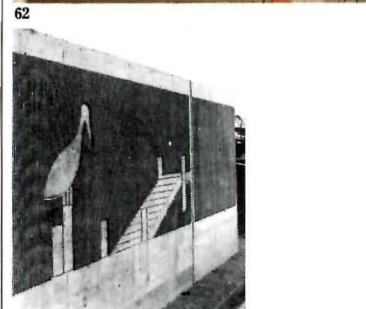
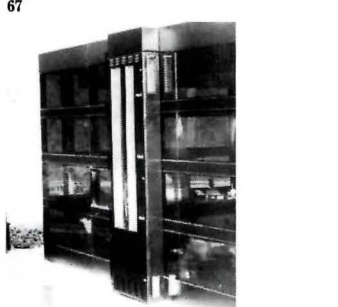
 **HITACH**



Image courtesy of Ragan Design Group

2 Site Work

UCI2, Site work
 Earthwork
 Fences & gates
 Fountains & pools
 Irrigation systems
 Landscaping
 Paving & surfacing
 Recreational facilities
 Site drainage
 Site furnishings
 Site utilities
 Soil treatment



61 Bicycle racks

64 Drainage system

67 Table

70 Planters

The manufacturer's high-security bicycle racks feature a patented three-point locking system and padlock protector. The racks are constructed of heavy-gauge, reinforced steel that is coated with a fused-on polyester finish. Rack III, Oakland, Calif.

Stripdrain, a polyester filter fabric surrounding a cusped high-strength core, is designed for ground water collection and drainage. Applications for the system include building foundation drains, roadway and parking-lot periphery drains, and retaining walls. Contech Construction Products, Inc., Middletown, Ohio.

The *Galleria* tabletop and seating combination was designed for interior use as public-space furniture. The table features tubular-steel support structures with a flat black powder-resin finish. Landscape Forms, Inc., Kalamazoo, Mich.

The *Corona* and *Gradino* planters are made of lightweight fiberglass and are designed to look like clay or concrete. The planters are available in a terra cotta finish, or a range of standard gloss colors with matte and textured finishes. Krueger, Inc., Green Bay, Wis.

The *TimberForm Series 2700* is a collection of matching seats, contour benches, litter receptacles, and planters. The units are constructed of tubular-steel frames available in a selection of colors. Surface or burial mounting is possible for street, park, or mall use. Columbia Cascade Timber Co., Portland, Ore.

The *Sofscape* collection features handcrafted fiberglass planters with a chip-resistant gel-coat finish. Both the square/round and round models are available in 12-, 14-, 16-, and 18-in. heights, and may be specified in any of 14 colors. Smokador, Edison, N. J.

The manufacturer's vehicle-control unit *TGVCF253* is an outdoor audio-video system intended to be located at a vehicle-entry point. The system permits security personnel at a remote console to communicate with and identify drivers. Visual Methods, Inc., Westwood, N. J.

The manufacturer's *Grate* benches are designed for heavy-duty outdoor applications. The benches are made of embossed, perforated steel with a color coating and acid-washed concrete end supports. The galvanized steel is available in a variety of colors. Forms + Surfaces, Santa Barbara, Calif.

The manufacturer's *Flex-Liner* textured-concrete retaining walls are available in more than 50 finishes, as well as custom designs for the elastomeric form liners. Standard size for the units is 4 by 10 ft, although sizes of up to 12 by 40 ft are available. Scott System, Inc., Denver.

Orville's Bench, a Victorian-styled bench, is available in red oak, kapur, and teak. The bench features 1-in.-thick boards secured with solid cast-iron supports. Custom stains, lengths, and colors may be specified. Landscape Forms, Inc., Kalamazoo, Mich.

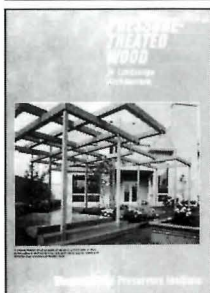
The manufacturer's *PipeLeaner Pedestrian Perches* are designed for short-term resting by bus riders or passing pedestrians. The units are available with or without wood surrounds and in a variety of powder-coated colors. The benches act as a barrier between sidewalk travelers and those waiting for public transportation. Columbia Cascade Timber Co., Portland, Ore.

The *RR-100* model bicycle rack is constructed of a one-piece 3/8-in. formed steel plate that is coated with *Nylabond*. This finish is said to prevent chipping, peeling, or rusting. The racks can be joined in a variety of patterns. Rally Enterprises, Inc., Sonoma, Calif.

2 Site Work

Product literature

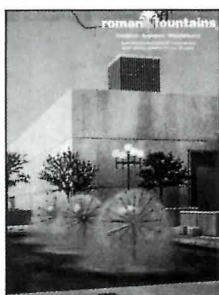
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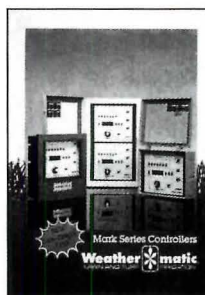
73 Pressure-treated wood
A new brochure reviews the characteristics of pressure-treated wood. Durable and said to age well, the wood can be used for decks, walkways, retaining walls, planter beds, fences, and a variety of outdoor structures. Western Wood Preservers Institute, San Diego, Calif.



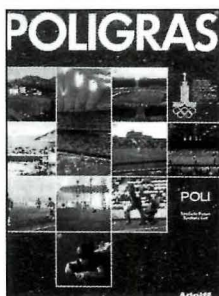
79 Site furniture
A 56-page color catalog reviews a manufacturer's line of site furniture, including bicycle racks and wood benches, planters and trash receptacles. Dimensions for each available item are included in the literature. Columbia Cascade, Portland, Ore.



74 Fountains
A binder contains detailed information on the manufacturer's line of fountains. Sections reviewing display pumps and nozzles, fountain kits, submersible lighting, filter systems and accessories, and fountain pool accessories are included in the binder. Roman Fountains Corp., Div. of Volcano Industries, Inc., Albuquerque, N. M.



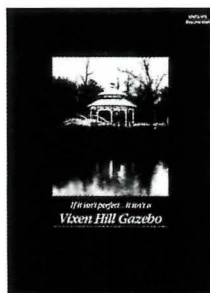
80 Irrigation controllers
A new 12-station micro-computer irrigation controller is featured in a 4-page color brochure. The *Day-Bright* high intensity LED display system, said to provide improved daytime visibility, is described in the literature. Programming options are reviewed. Weather-matic, Div. of Telsco Industries, Dallas.



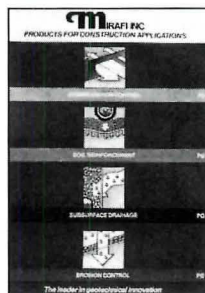
75 Synthetic turf
A 2-page color information sheet includes illustrations of a variety of synthetic turf applications, including football and baseball fields, and indoor and outdoor golf facilities. Product specifications are included. Poligras USA, Inc., Div. of J. F. Adolf AG, Clearwater, Fla.



81 Drains
The manufacturer's three-part drain unit, intended for use on paved parking surfaces, is described in a 4-page brochure. Dimensional and installation data is included. Suggested specifications are provided. W. A. N. E. Tree System Inc., Tampa, Fla.



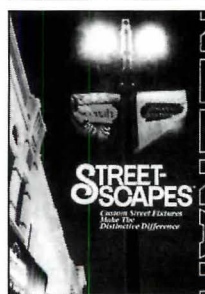
76 Gazebos
A 20-page color catalog illustrates a variety of gazebo styles intended for residential applications. Diagrams show how the gazebos are constructed. Specification information and installation and assembly directions are included in the brochure. Vixen Hill Manufacturing Co., Inc., Elverson, Pa.



82 Site work
Sedimentation control, soil reinforcement, subsurface drainage, and erosion control are discussed in a 10-page color brochure. Product recommendations for each area are included in the literature. Mirafi, Inc., Charlotte, N. C.



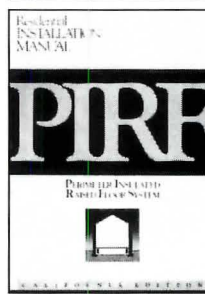
77 Benches
TrimSet benches, constructed of Ipe kiln-dried wood, are featured on a two-page color information sheet. Intended for both indoor and outdoor use, the benches are shown in two different styles and with matching tables. Other woods can be specified. Sitecraft, Inc., Long Island City, N. Y.



83 Site furniture
The manufacturer's *StreetScapes* site furniture, including wood benches and trash receptacles, extruded aluminum and cast-iron lighting poles, and tree grates, is featured in a 4-page color brochure. Several installation photographs are included. Neenah Foundry Co., Neenah, Wis.



78 Slide gate
A 4-page color brochure features the *Fortressgate* modular cantilever slide gate system. Diagrams show the post-tension steel pipe and aluminum track construction. Sizing and specification information is included in the literature. Page-Wilson Corp., Monessen, Pa.



84 Raised floor system
The *Perimeter-Insulated Raised Floor* system is said to offer new design advantages in crawlspace foundation floor systems. Featured in an 8-page brochure, PIRF can be used in conjunction with any type foundation stem-wall construction. Western Wood Products Association, Portland, Ore.

MIRAFI PRESENTS

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2-sided drainage



NEW
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As the innovative leader in geotextile technology, Mirafi Inc has revolutionized the design, construction, and cost effectiveness of subsurface drainage systems with Miradrain.

Miradrain prefabricated drainage structures consist of a waffle-like plastic drainage core covered on one or both sides with Mirafi filter fabric. The fabric allows water to pass freely to the drain core while preventing soil particles from entering and clogging the drain system. The 3-dimensional fabric-covered core provides effective flow channels for the water in all directions.

MIRADRAIN 4000 The original Miradrain 4000 offers a plastic drain core with two-sided flow channels and a filter fabric cover. This lightweight prefabricated drainage structure is ideally suited for 2-sided drainage applications such as bench cut or trench cut drains and pavement edge drains.

MIRADRAIN 6000 As a result of continuing research and development, and careful attention to the waterproofing requirements of engineers and architects, Mirafi has developed Miradrain 6000. This prefabricated drainage structure is

easy to handle, easy to install, and especially designed for applications where drainage is needed on only one side. In addition, Miradrain 6000 offers higher compressive strength and a higher flow rate than competitive systems. Plus, its single-sided configuration provides maximum compatibility with waterproofing systems.

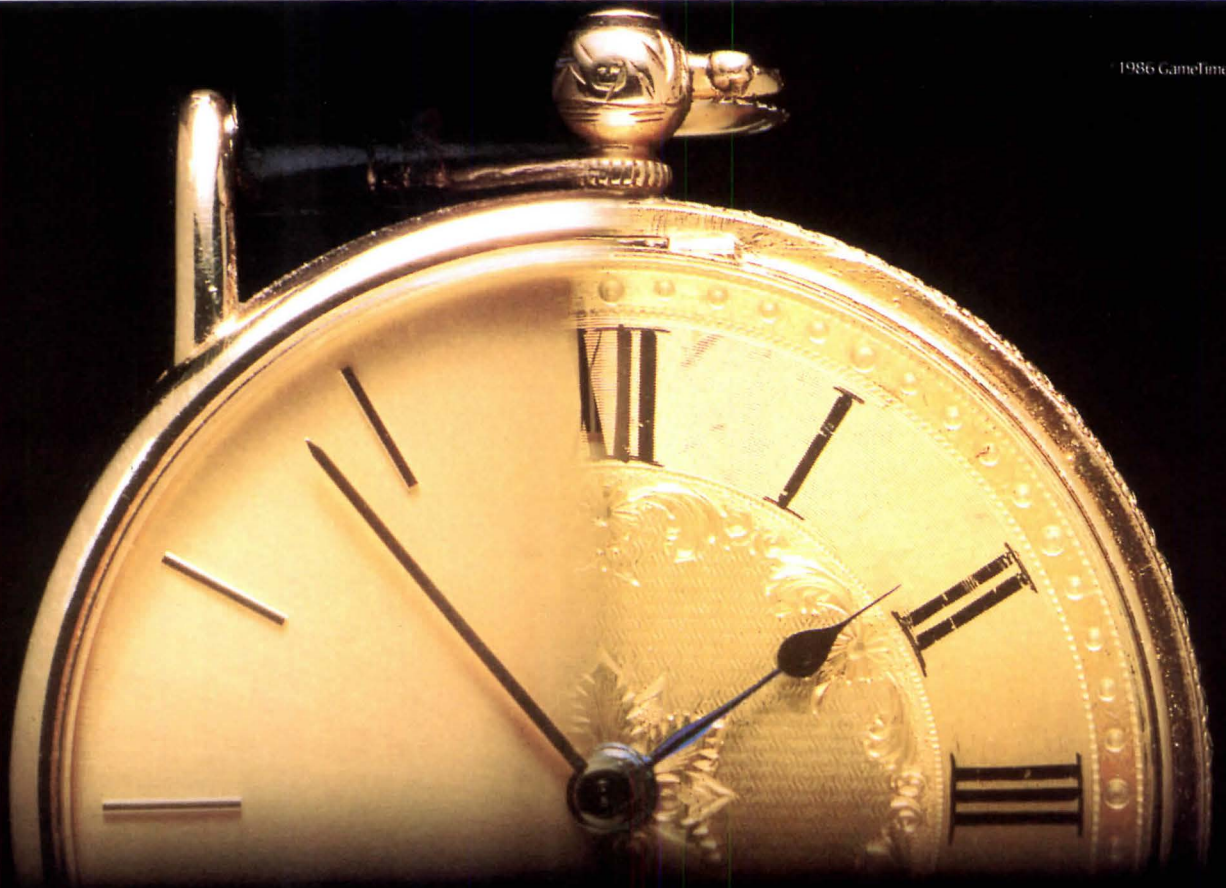
Both Miradrain systems offer substantial time, labor, and, in many cases, material savings over conventional aggregate drains. For more information, write or call your Mirafi representative. Or, contact: Mirafi Inc, P.O. Box 240967, Charlotte, NC 28224. Phone-toll free: (800) 438-1855. Or, (704) 523-7477. **Circle 1040 on inquiry card**

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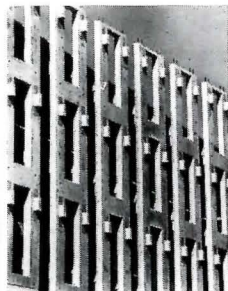
3 Concrete

4 Masonry

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85 Concrete cleaning system
The *Thermal-Blast* concrete preparation and cleaning system can be used to remove laitance, sealers, coatings, curing compounds, and other contaminants from concrete. The system can also remove paints and coatings from steel surfaces. Thermal-Chem, Inc., Elk Grove, Ill.

86 Form liner
The manufacturer's elastomeric form liner is said to provide a full surface treatment with minimal leakage at both horizontal and vertical joints. The liner is made in two grades depending on re-use plans. Special shapes and liner sizes are available to fit any texture requirement. Scott System, Inc., Denver.

87 Anchorage system
The *Linkstrip* nonmechanical rebar anchorage, splicing, and keyway form system is said to eliminate projecting rebars at intersecting concrete wall-to-wall and wall-to-slab pours. With this system the dowels are pre-positioned and bent flat within a shell at the factory. Systems Intersect, Div. of Kelly Technologies, Inc., Fremont, Neb.

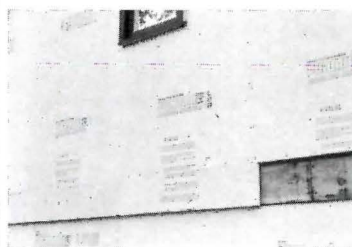
88 Parking-deck construction
The manufacturer's *litewall* parking-deck construction is said to eliminate the need for conventional columns and beams. In addition, the system's "windowed" walls provide natural light for increased interior visibility. Tindall Concrete Products, Inc., Spartanburg, S. C.

89 Shims
Tilt-Up Shims are designed to provide quick leveling adjustment for uneven footings and panels when precast concrete panels are being tilted up and placed. The shims are serrated to eliminate elastomeric drift and panel slippage. Greenstreak, Inc., St. Louis.

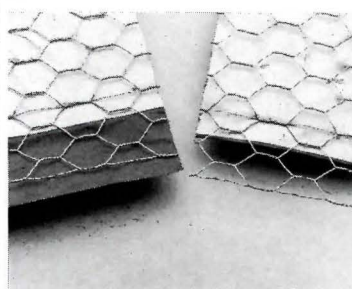
90 Vaults
Modular-panel vaults are constructed of a concrete composition which is produced in a controlled environment said to assure the uniformity of the material. The vaults are available with a UL Class I or II rating against tool or torch damage. LeFebure Corp., Cedar Rapids, Iowa.



91



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91 Masonry panels
The manufacturer's *Gasket Liner* prefabricated masonry panels are designed to accommodate any brick or tile unit. The elastomeric liner holds the masonry unit in place while the concrete is poured over the surface. Scott System, Inc., Denver.

92 Insulating sheathing
Foamular extruded polystyrene insulation was developed for use in sheathing applications and works with a variety of exterior finishes, including masonry veneer, wood, aluminum, steel and vinyl sidings, wood and mineral shingles, and reinforced stucco. UC Industries, Inc., Parsippany, N. J.

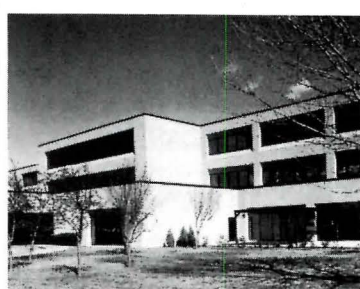
93 Reinforcing mesh
Keymesh galvanized stucco reinforcing mesh is approved for use with building paper, as well as reinforcement around shower and tub enclosures, as backing for veneer and masonry, and as support for terrazzo flooring. The hex-shaped mesh is woven from galvanized, cold-drawn steel and is said to be resistant to rust. Keystone Steel & Wire Co., Peoria, Ill.



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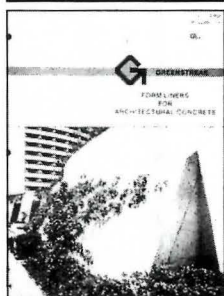
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94 Aggregate panels
The manufacturer's *Stonecast Exposed Aggregate Panels* are said to combine the low maintenance of stone with the durability of epoxy permanently bonded to asbestos-free cement board or APA exterior-grade structural plywood. The panels are available in a variety of colors and may be factory cut-to-size or cut on-site. Sanspray Corp., Santa Clara, Calif.

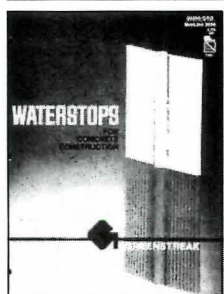
95 Mortar blend
The manufacturer's color mortar blend is made from *Portland Cement* and *Type S Hydrated Lime* with metallic oxide pigments. The mortar blend is available in 26 standard colors and may be specified in custom colors. Glen-Gery Corp., Reading, Pa.

96 Exterior panels
Exposed aggregate panels that can be applied directly over existing exteriors have passed the E-136 incombustibility test, E-84 surface burning test, and the E-108 flame spread evaluation. The panels are also available with a selection of fasteners and moldings. Sanspray Corp., Santa Clara, Calif.

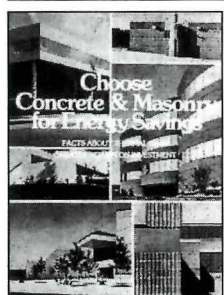
3 Concrete Product literature



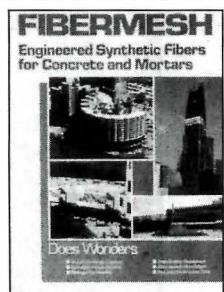
97 Form liners
Form liners for concrete are featured in an 8-page color catalog. Illustrations show a variety of ribbed and wood designs. Dimensions for each form-line type are included in the literature. Greenstreak, Inc., St. Louis.



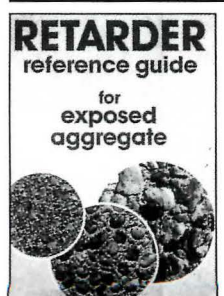
98 Waterstops
Waterstops for concrete construction are featured in an 8-page catalog. The catalog includes data on criteria for waterstop selection and installation. Guarantee and warranty information is also included in the literature. Greenstreak, Inc., St. Louis.



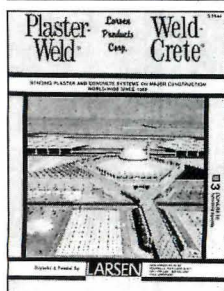
99 Concrete and masonry
Energy conservation and thermal mass benefits from using concrete and masonry in building construction are reviewed in a 4-page brochure. The way in which concrete and masonry delay the effects of outside temperatures on inside heating and cooling requirements is also discussed. Portland Cement Association, Skokie, Ill.



100 Synthetic fiber
An 8-page color brochure describes how *Fibermesh*, when added to concrete at the rate of 1 1/2 lb per cubic yard, disperses noncorrosive fibers throughout the concrete to improve its performance. Application photos and suggested guidelines for use are included in the literature. Fibermesh, Inc., Chattanooga, Tenn.



101 Aggregate retarder
A 4-page brochure contains a guide that aids in the selection of the correct retarder for precast, tilt-up, or cast-in-place exposed aggregate concrete surfaces, regardless of texture choice and temperature conditions. Preco Industries, Ltd., Plainview, N. Y.

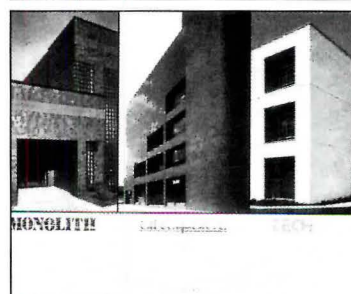


102 Concrete bonding agents
Weld-Crete chemical concrete bonding agents and *Plaster-Weld* plaster bonding agents are featured in a 4-page brochure. The literature includes technical data on the agents' composition and uses, and reviews industry standards and approvals. Larsen Products Corp., Rockville, Md.

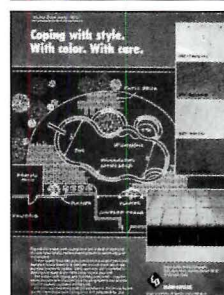
4 Masonry Product literature



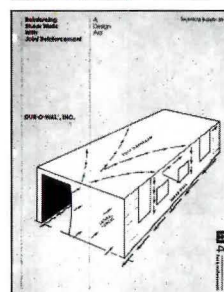
103 Synthetic fiber
The new *Harbourite* line of synthetic fiber for mortar, stucco mixes, and grouts is detailed on a two-page fact sheet. The fibers are said to disperse uniformly throughout the mix and control shrinkage cracking. Fibermesh, Inc., Chattanooga, Tenn.



104 Masonry cladding
Made from a clay and shale compound, the manufacturer's *Millennium Collection* of exterior cladding is said to offer several advantages over granite, marble, limestone, metal panels, glass, and precast concrete. A 4-page brochure describes cost benefits. Starck Ceramics, Inc., Canton, Ohio.



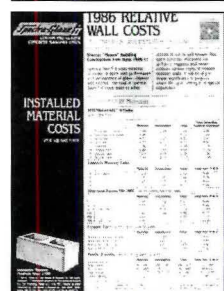
105 Brick
A line of nonuniform-size brick, said to have a hand-made appearance, is featured on a 2-page color data sheet. The *1873 Craftwork Collection* is shown in a variety of standard colors. Custom-specified brick colors are also available. Elgin-Butler Brick Co., Austin, Tex.



106 Reinforcing shear walls
The factors that determine allowable shear stress are reviewed in a 4-page brochure on concrete and masonry wall reinforcement products. Formulas and diagrams intended to aid in shear reinforcement design in a variety of construction situations are included in the literature. DUR-O-WAL, Inc., Arlington Heights, Ill.



107 Concrete masonry units
A 12-page color brochure reviews the manufacturer's line of preglazed concrete masonry units. A variety of colored and patterned units are illustrated in both interior and exterior applications. Cove base units and jamb and cap units are also shown. The Burns & Russell Co., Baltimore, Md.



108 Concrete masonry units
A 6-page brochure reviews the relative wall costs for the manufacturer's *Spectra-Glaze* preglazed concrete masonry units. The literature contains tables and construction details that are intended to provide options for renovation and new construction applications. The Burns & Russell Co., Baltimore, Md.



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 Metal decking
 Metal joints
 Metal stairs
 Ornamental metal columns
 Perforated metal
 Structural metal framing



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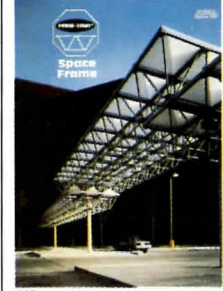
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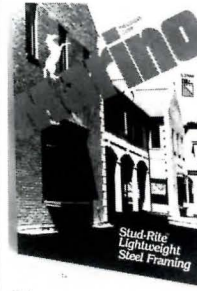
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109 Stair treads and railings
 The *Endura Landing* steel-backed, reinforced-cement landing material is designed to be used with the manufacturer's slip-resistant stair-tread material and *MultiLine* railings. The railing system is said to meet a variety of strength and code requirements. American Stair Corp., Willow Springs, Ill.

110 Moldings
 The manufacturer's metal-with-wood-core moldings are designed to be used along walls, across seams, and around corners and windows. The moldings can be installed with standard woodworking tools and are available in 12 finishes, including brass, copper, and chrome. CMF/Moulding, Paterson, N. J.

111 Pedestals
 The *Geo Prismatic* series of pedestals and table bases are available in four dimensions. Finishes include polished or satin stainless steel, or an "alternate facet" option, which consists of the top surface and lower facets in satin stainless-steel finish and the balance in a mirror polish. Brueton Industries, Inc., Springfield Gardens, N. Y.

112 Staircases
 The *Kensington* Victorian-styled cast-iron straight staircase is designed for front entrances, porch steps, patio exits, and other exterior uses. Each complete rise consists of four castings bolted together for on-site assembly. Up to three steps are self-supporting while longer rises are mounted on steel channels. Steptoe and Wife Antiques Ltd., Toronto, Canada.

113 Onyx fittings
 The manufacturer's onyx fittings are quarried in the foothills of the Himalayas and are hand-turned and polished. The fittings are available with 2-in. plain or hand-tooled brass tubing collars. Ship 'N Out Co., Pawling, N. Y.

114 Steel framing
 The *Stud-Rite* lightweight galvanized-steel framing system is prefabricated, said to be rot-, vermin-, and warpage-proof, and can be used with wood siding, brick or stone veneer, ceramic tile, and metal panels. The system's lightweight members are also said to reduce foundation requirements. Marino Industries Corp., Westbury, N. Y.

115 Attic ladder
 An all-aluminum attic ladder features a sliding mechanism similar to that of an extension ladder, two steel spring-loaded tension arms, a metal handrail, and a center support. The plywood frame with birch veneer, door, and upper ladder section comes pre-assembled. Roto Frank of America, Inc., Chester, Conn.

116 Power stapler
 The *SKS Powerplus* stapler can be used in on-site construction for aluminum and vinyl siding, underlayment, and attachment of roof sheathing and decking materials. The tool is offered in a series of models that drive staples with two different gauges and three crown widths. Senco Products, Inc., Cincinnati.

117 Stair tread
 The *56-Wood* model, in the *Alternating Tread Stair* series, is made of oak and fir and is said to save 48 percent of floor space compared to conventional stairs having the same riser-tread relationship. This model was designed for use in lofts, balconies, and basement and attic renovations. Lapeyre Stair, Inc., New Orleans.

118 Steel stairways
 A line of prefabricated steel stairways features 36- and 48-in. tread widths, and heights from 7 to 10 1/2 ft. The stairways have been designed to meet standards set by the Uniform Building Code, Building Officials and Code Administrators, and the Standard or Southern Building Code. Equipto, Aurora, Ill.

119 Space frames
 The *Power-Strut* space frame system is made of square or rectangular structural-steel tubing with a galvanized finish said to eliminate the need for field painting. The frame's 3-dimensional concept allows cantilever designs in two directions, multiple-level stacking, and random spacing of supports. Space Frame Div. of Elcen, Franklin Park, Ill.

120 Metal laminate
 The manufacturer's collection of decorative metal laminates is available in a range of metal tones, finishes, and raised-surface patterns. Both flat and raised-surface treatments are available in all five metal tones for a total of 35 options. Formica Corp., Wayne, N. J.

To Measure Building Quality, Take the Back Stairs.

When you enter any building, go to the interior stairs. That's where you'll see and feel the building's quality up close. The stairs' design, strength, accuracy of fit, and overall appearance say more about the building than all the brochures, models, and renderings ever will. The stairs are seen and used every day by the people who count the most — the occupants. How will they perceive your building?

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VULCRAFT SUPER LONG



185' 4" and 166' 8" super long span joists, both 120" deep, reach across the Lund Center sports complex.

PANS GO THE DISTANCE.



To build a sports complex as large and expansive as the Lund Center at Gustavus Adolphus College in St. Peter, Minnesota required a structural system that could go the distance. Vulcraft super long span joists were clearly the front runner.

As a result of careful analysis, Vulcraft super long span joists were selected over the other two alternatives: conventional trusses and rigid frame construction. The open configuration of Vulcraft super long spans provided a number of advantages. While long enough to span a basketball court, indoor tennis courts, and a running track as well as spectator seating, Vulcraft super long spans provided a strong, light-weight, and easy to install system. The open configuration of the Vulcraft joists also permitted the heating and ventilation ducts and electrical systems to be run through the spans. This created an uninterrupted ceiling line for the automated divider screens which separated the different sections of this vast sports complex.

Since the college is dependent on private funding, the savings afforded by using Vulcraft joists helped make it possible for the college to initiate the project. Also, by using Vulcraft's economical 3" N 20 gage deck, joists could be spaced farther apart. So, fewer joists were needed and construction costs were further reduced.

When your job has to go the distance, let Vulcraft put you out front. For more information concerning Vulcraft steel joists, joist girders and steel deck; or, for copies of our joist and steel deck catalogs, contact the nearest Vulcraft plant listed below. Or, see Sweet's 5.2/Vu and 5.5/Vu.

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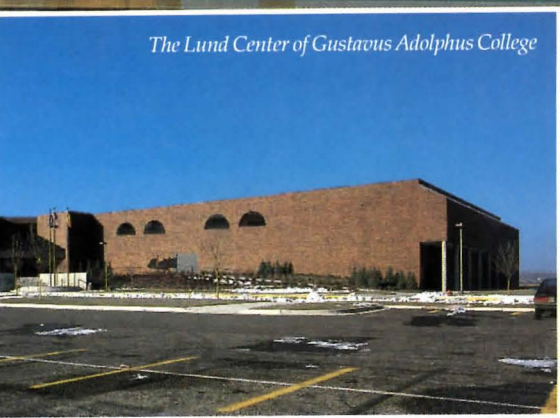
VULCRAFT

A Division of Nucor Corporation

Architects/Structural Engineers: Toltz, King, Duvall, Anderson & Associates, in association with Hastings & Chivetta Architects. Steel Fabricator: Ted Mannstedt and Son, Inc. General Contractor: Kraus-Anderson Construction Company, Minneapolis Division. Steel Erector: Vickerman Construction Company.

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The Lund Center of Gustavus Adolphus College



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Venetian Blind Windows. Outward elegance. Built-in performance.

12 distinctive window configurations in our expanded line.

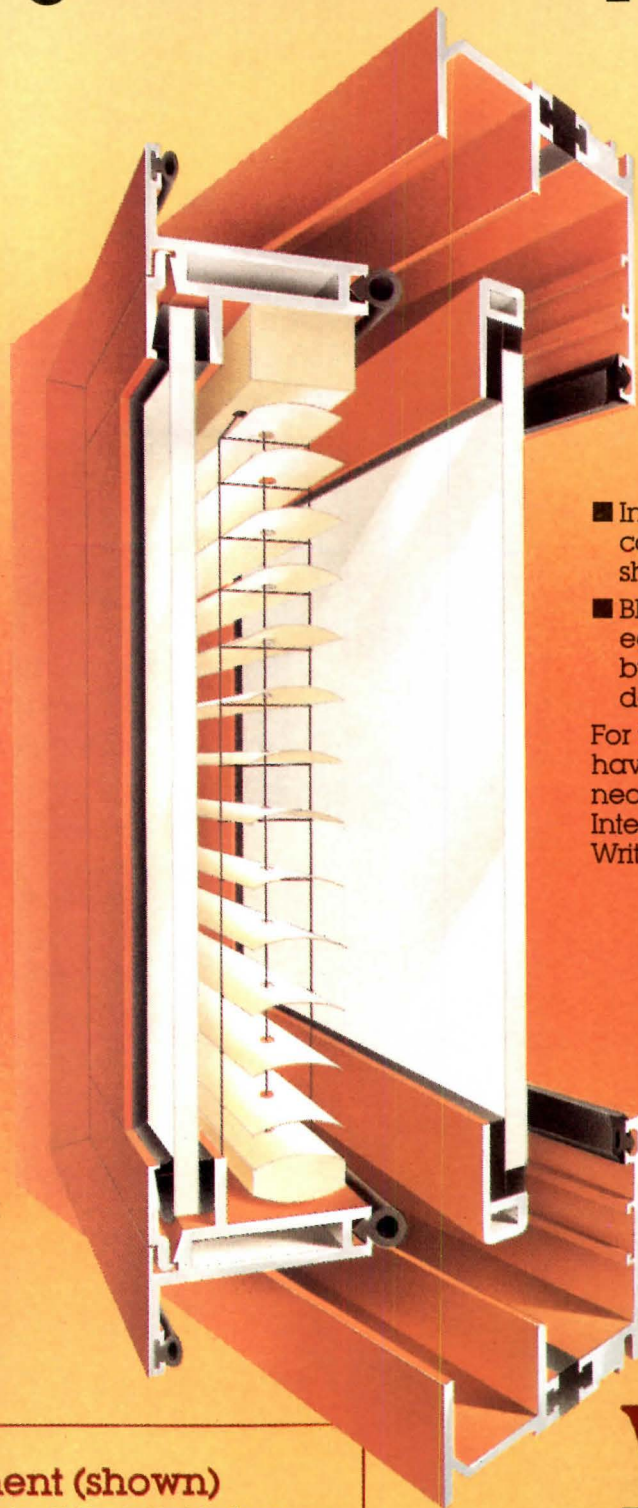
Now you can satisfy all your prestigious design requirements with venetian blind windows from Wausau Metals. Choose from low-profile systems with minimum sitemlines to heavy duty systems designed for large openings. Wausau's venetian blind windows are also available in fixed, pivoted and inswing casement designs. Or you can specify a wide variety of glazing and glass types to accommodate special acoustical and security requirements.

In addition, our venetian blind windows, like all Wausau Metals products, resist condensation and are certified at a water test pressure of 10 p.s.f. And every venetian blind is manufactured by a division of Wausau Metals assuring you of single-source responsibility.

Our standard 10-year guarantee applies.

In addition to a 10-year guarantee, your clients will benefit from these exceptional features:

- Every window is engineered to meet specific project requirements.



- Factory glazing includes cap with silicone to eliminate air or water infiltration.

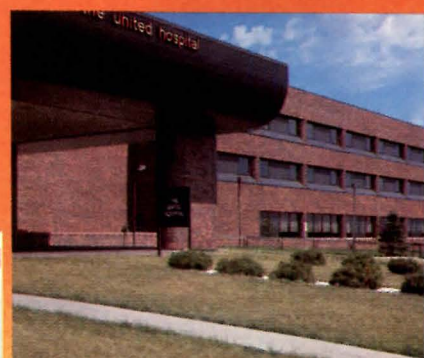
- Prefinished Thermolok thermal cavity prevents oxidation, providing maximum thermal isolation without sacrificing structural integrity.

- Dual glazing with integral venetian blinds for maximum thermal and acoustical performance, as well as low maintenance.

- Integral venetian blinds offer occupant control of daylight and glare, with shading coefficients as low as 0.28.

- Blinds and all glass surfaces can be easily cleaned from the inside of the building on inswing and vertical pivot designs.

For the inside story on the windows they have put the blinds inside, ask your nearest Wausau representative for our Integral Venetian Blind Brochure. Write us today or call 715 / 845-2161.



United Hospital, Grand Forks, North Dakota
Henningson Durham & Richardson, Architects

Inswing Casement (shown)


This design features an operating window hidden behind the frame to reduce sitemlines and protect joints from exposure to air and water.

Depth	Siteline	"U" Value	CRF
3-1/4"	2-7/8"	0.44	54

WAUSAU

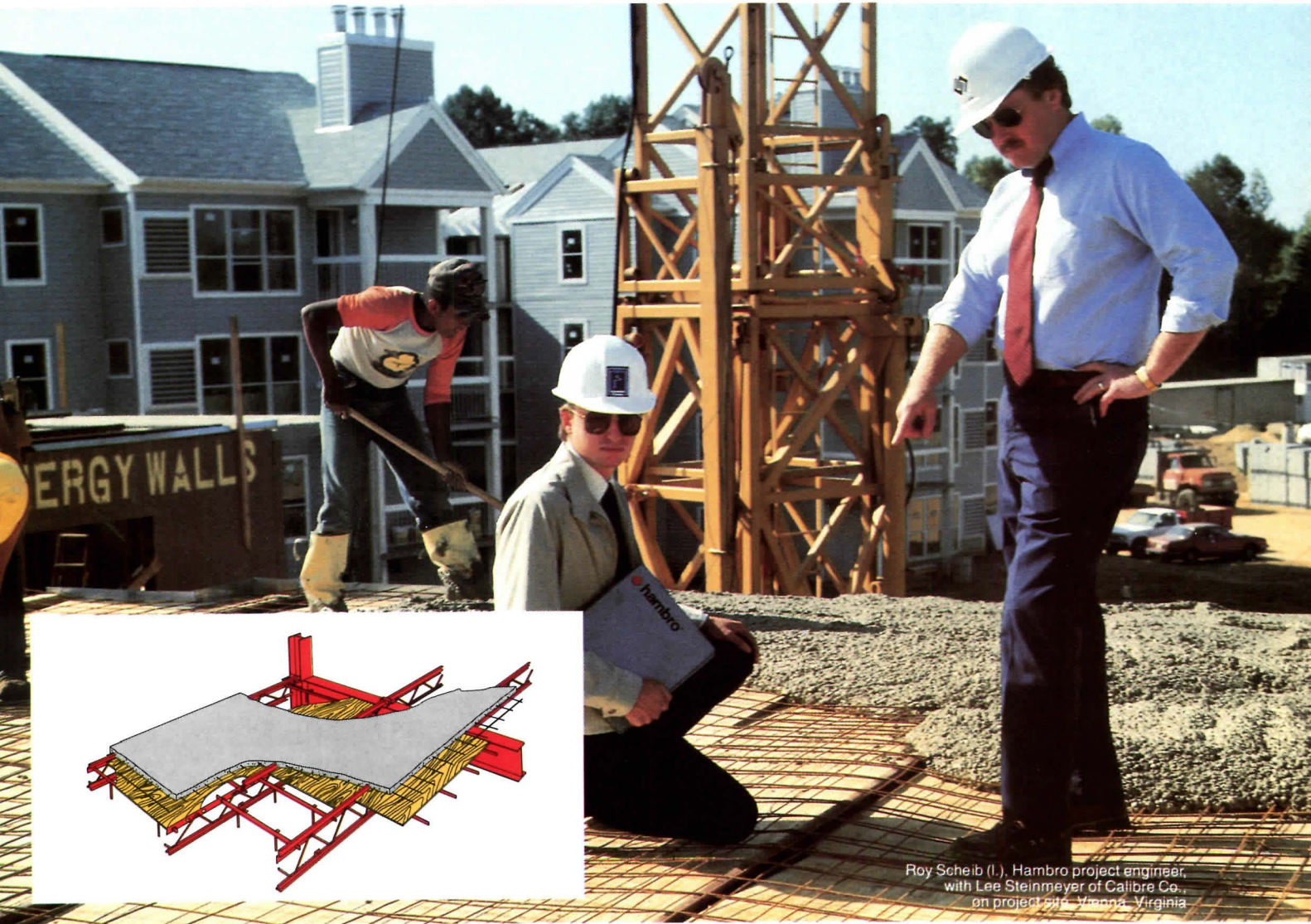
METALS CORPORATION

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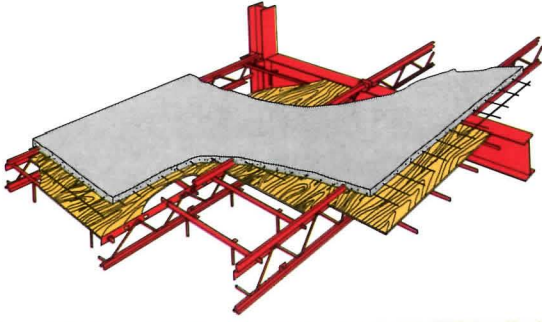
Window Fabricating Division  Apogee Enterprises

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Hambro®...the most cost efficient floor system you can use.



Roy Scheib (l.), Hambro project engineer, with Lee Steinmeyer of Calibre Co., on project site, Vienna, Virginia



“The Hambro team helped save us money when it counted... before construction.”

Lee Steinmeyer, Project Manager
The Calibre Companies

“We talked to the engineers at Hambro about their composite floor system when we started thinking about the Summit Square project,” says Steinmeyer. “They worked closely with our architect, structural engineers, and HVAC engineers, and helped us develop the most economical fire-rated construction package. They showed us how the Hambro system would achieve dramatic savings in our HVAC, plumbing and electrical assemblies, before we even went to bids.

“In addition, the latest UL fire test on the Hambro system allowed us to eliminate fire dampers. And by specifying Hambro, we could substitute 1/2” for 5/8” gypsum board at the ceilings.”

Hambro’s UL fire ratings are achieved without applying the 22/30 factor for reduction of capacity required for conventional “H” series joists. This, together with Hambro’s superior sound rating of STC 57, make it the ideal floor construction system for high or low rise commercial and residential buildings. Call or write for brochure.



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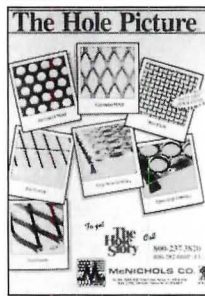
5 Metals Product literature

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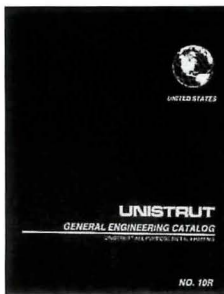
121 Railings

A new 4-page catalog reviews the manufacturer's line of stainless-steel railings. Pipe dimensions and specifications are included in the literature. Photographs of a variety of applications are shown. KDI Paragon, Inc., Pleasantville, N. Y.



127 Metal products

Perforated metal, expanded metal, wire cloth, grip strut, open grip, bar grating, and tread grip products are reviewed in an updated 50-page catalog. Technical information, product specifications, load tables, and application recommendations are included in the literature. McNichols Co., Tampa, Fla.



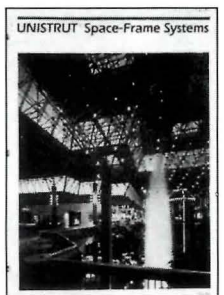
122 Metal framing

General specifications for the manufacturer's metal framing system are contained in a 126-page catalog. The catalog reviews several channel widths, general fittings, nuts, bolts, and mechanical and electrical accessories. Unistrut Corp., Wayne, Mich.



128 Metal cladding

A variety of metal building panel profiles, coated in the manufacturer's *Corrstan* protective coating, are shown in a 24-page color catalog. The catalog reviews roofing and siding applications and includes panel and coating specifications. Steelite, Inc., Pittsburgh.



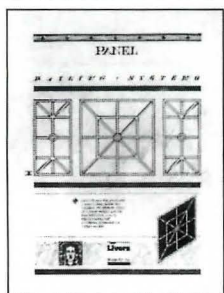
123 Space-frame system

Three space-frame systems are described and illustrated in a 14-page color brochure. Diagrams and photos show different nodes and connectors, and round and steel tubings in various thicknesses. Unistrut Corp., Wayne, Mich.



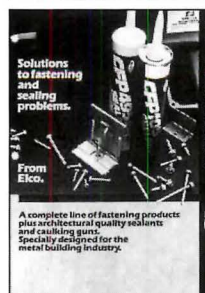
129 Handrails

The *Vanrail* system of handrail components, which requires no welding, is featured in a 4-page brochure. Diagrams show standard post assemblies. Curved rails and wall connectors are also illustrated in the literature. J. G. Braun Co., Skokie, Ill.



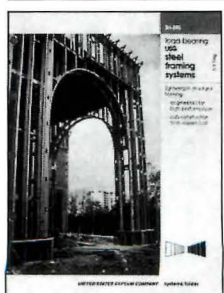
124 Panel railing system

A railing system composed of panels made with standard bars and extrusions is described in a 4-page brochure. Diagrams show how internal members can be combined in different configurations to create different designs. Dimensions and finish options are listed in the literature. Livers Bronze Co., Inc., Kansas City, Mo.



130 Fasteners and sealers

Construction fasteners and a new line of sealants and caulking guns for metal buildings are featured in a 4-page brochure. The *Flo-Seal* fastener system, which features a compression seal, is included in the literature. Elco Industries, Inc., Rockford, Ill.



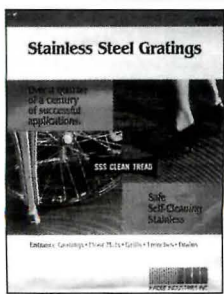
125 Steel framing

A 60-page guide includes technical information on the manufacturer's steel-framing system. The system consists of wall and floor/ceiling components that are said to be lightweight, noncombustible, and corrosion-resistant and are intended to be a cost-efficient alternative to wood framing and concrete block. United States Gypsum Co., Div. of USG Corp., Chicago.



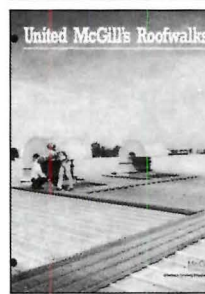
131 Steel joists

A 76-page booklet reviews the manufacturer's line of open-web steel joists, longspans, deep longspans, and joist girders. Weight and load tables are included in the literature. Diagrams show joist details and accessories. Steel Joist of Indiana, Inc., Lafayette, Ind.



126 Grating

Specifications for the manufacturer's line of stainless-steel gratings are reviewed on a 2-page data sheet. Diagrams show two different tread sizes. Hidden locking devices are also illustrated. Kadee Industries, Inc., Solon, Ohio.



132 Rooftop grating

Interlock Grating Roofwalks are designed to replace perpendicular or diagonal rooftop walkways across standing-seam metal roofs. Described in a 4-page color brochure, the galvanized steel or aluminum interlocking planks come in four standard widths. United McGill Corp., Columbus, Ohio.

6 Wood & Plastics

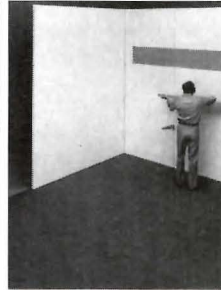
UCI 6, Wood & plastic
 Architectural woodwork
 Connectors & supports
 Laminated & processed sheets
 Lumber
 Plastic fabrications
 Plastic laminates
 Prefabricated structural plastics
 Prefabricated structural wood
 Simulated wood
 Stock millwork
 Wood treatment



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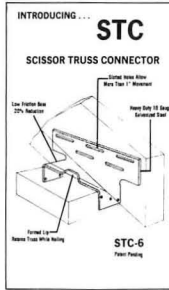
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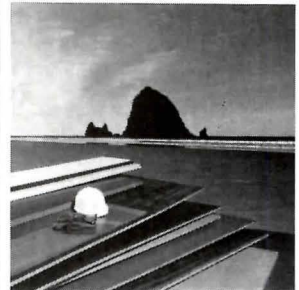
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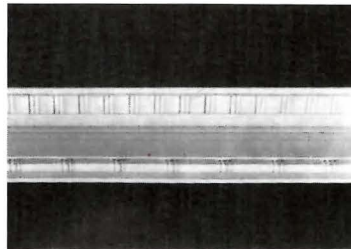
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133 Walking surface
 The *Tuf-Tred SkidGuard* slip-resistant, exterior-grade plywood panel with a textured overlaid surface is designed for walkways, wheelchair ramps, platforms, catwalks, steps, inclines, decks, and other slippery areas. Simpson Timber Co., Shelton, Wash.

134 Laminated timbers
 Structural glued-laminated timbers are said to offer design freedom because of the opportunity to use long spans while preserving the texture of natural wood. Timber structures are said to successfully absorb sudden impacts and overloads. American Institute of Timber Construction, Englewood, Colo.

135 Treated lumber
 The manufacturer's treated wood is enclosed in steel cylinders where, under intense pressure, a chromated copper-arsenate preservative is forced deep into the wood. The preservative combines with the wood sugars to form a permanent deposit that will not leak out. The Weyerhaeuser Co., Klamath Falls, Ore.

136 Building products
 The *2000X* line of building products is said to resist high temperatures, boiling water, staining, chemicals, and cigarette burns without significant structural or surface damage. The homogenous material can be cast as sheet goods or molded into many shapes and sizes for a variety of applications. Formica Corp., Wayne, N. J.

137 Truss connector
 The *STC* scissor truss connector provides truss hold-down, as well as scissor truss movement under loads, and is said to eliminate wall buckling problems. The *STC* is also said to reduce friction by 20 percent and permit a scissor truss to return to normal position. Cleveland Steel Specialty Co., Cleveland.

138 Siding and paneling
 Redwood siding and paneling is finger-jointed and electronically end-glued to produce durable, long-length pieces. The wood is available in two grades—*Clear All Heart* vertical grain and mixed grain—both of which are said to provide good paint and stain retention. The Pacific Lumber Co., San Francisco.

139 Wall system
 The *Environmental E-Wall* freestanding modular wall system, designed for retail-space division and merchandise display, features a patented connector system that interlocks the panels and allows for installation over finished floors and carpets. Amstore Corp., New York City.

140 Paneling
 The manufacturer's oak and cane paneling is designed for residential and light commercial applications. The upper two-thirds of the 4- by 8-ft panels feature three narrow, simulated cane sections framed by 2-in.-wide strips of woodgrain paneling. The lower portion of the prefinished hardboard paneling features a narrow groove design. Masonite Corp., Chicago.

141 Molding
 The *Dura-Cornice* line of interior decorative cornices has a Class A fire rating. The moldings can be antiqued, stained, or painted with oil, latex, or lacquer-based coatings, and are shipped in 12-ft lengths with a satin finish in standard off-white. Advanced Architectural Cornices, Inc., Arlington, Tex.

142 Laminates
 The *Design Group I* line of decorative laminates is available in 160 colors and a variety of textures. Included in the *Design Group* are *Color Quest*, *Woodgrains Plus*, and *Tannery, Quarry, and Pattern* groups. The laminates are said to be resistant to abrasion, impact, and chemical stains. Ralph Wilson Plastics Co., Temple, Tex.

143 Particleboard
Duraflake FR is a grain-free, Class 1 fire-rated particleboard designed to be used as a substrate for wood veneers, high- and low-pressure laminates, and vinyls in wall systems. The material can be drilled, routed, bullnosed, and beveled without delamination. Willamette Industries, Inc., Albany, Ore.

144 Veneer prints
 The *Premium Veneer Print Collection* features veneer patterns of rare woods in plastic laminate. The patterns include *Birdseye* in three colorways, *Macassar Ebony*, *Swirly Figured Mahogany*, and *Figured Maple*. The prints are available in 4- by 10-ft sheets in either high-gloss or textured finishes. Laminart, Inc., Elk Grove Village, Ill.

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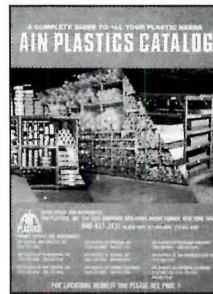
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145 Wood veneers

A packet of data sheets contains information on the manufacturer's *Luxcell* printable face veneers. The man-made, resin-saturated veneer is intended for applications that require a smooth, uniform print or paint finish. Uniwood, Div. of International Paper Co., Statesville, N. C.



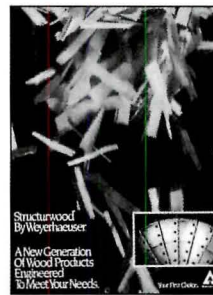
151 Plastic products

A 128-page catalog features rod, sheet, and tube stock of a variety of plastics, including acetal, acrylic, nylon, polycarbonates, and polyurethanes. Available thicknesses and sizes are listed, and several adhesives, casting materials, and putties are described. AIN Plastics, Inc., Mount Vernon, N. Y.



146 Fiberglass ornament

A 4-page brochure contains photographs that show how the manufacturer's fiberglass can be used to make cornices for restoration and new construction applications. Said to be maintenance-free, the fiberglass is available in a variety of finishes and colors. Fibertech Corp., Clemson, S. C.



152 Wood products

Structurwood, available in a range of standard thicknesses and sizes, is featured in a 10-page color brochure. Said to have a higher stiffness-to-weight-ratio than steel or aluminum, the product is intended for both flooring and roofing applications. Weyerhaeuser, Minneapolis, Minn.



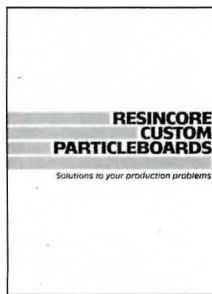
147 Wood floor framing

The manufacturer's *Quiet Floor* structural wood floor framing system is featured in an 8-page color brochure. Span tables that list loading conditions and comparative life-cycle costs are included in the literature. Standard Structures, Inc., Windsor, Calif.



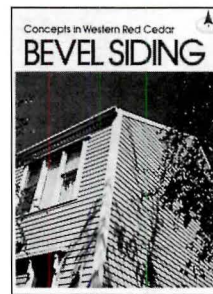
153 Wood staircases

A new product information sheet reviews the manufacturer's line of wood spiral staircases. Available in a variety of styles, the staircases can be used in both indoor and outdoor applications. The units can be specified in a selection of woods. Pak Products Co., Inc., Somerville, N. J.



148 Particleboard

A packet of information reviews the general characteristics and recommended uses for the manufacturer's selection of particleboard. The water-resistance of the products, which are made primarily from phenolic resins, are reviewed in the literature. Rodman Industries, Div. of Fibertech, Inc., Marinette, Wis.



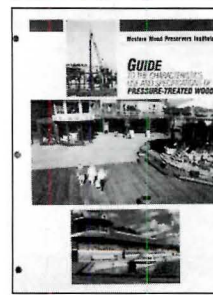
154 Wood siding

A 4-page color brochure illustrates *Western Red Cedar* bevel siding. Said to be lightweight and easy to paint or stain, the siding can be used for both interior and exterior residential applications. Western Red Cedar Lumber Association, Portland, Ore.



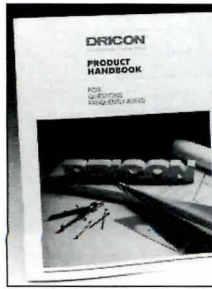
149 Wood decks

A data sheet reviews design and installation considerations for do-it-yourself wood deck kits. Free standing and attached models are available. Both models can be specified with a variety of options, including stairs, benches, planters, and railings. Western Wood Products Association, Portland, Ore.



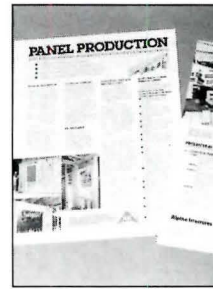
155 Pressure-treated wood

An updated brochure, intended for architects, engineers, and builders, reviews pressure-treated wood's characteristics, uses, and specifications. Technical information is included in the literature. Western Wood Preservers Institute, San Diego, Calif.



150 Treated wood

A new guide reviews typical applications for *Dricon* fire-retardant treated wood. Environmental considerations, including resistance to moisture, rot, and termites, are described in the literature. Koppers Co., Inc., Pittsburgh.



156 Wood headers and beams

A 6-page brochure reviews the physical properties, suggested uses, and available sizes of the manufacturer's wood headers and beams. Span and maximum load tables are included in the literature. Alpine Structures, Inc., Oxford, N. C.

MOVEABLE FEAST.

The assignment: Redesign a decades-old Pullman sleeper into a rolling hotel for business travel.

The media: WILSONART Color Quest™ decorative laminates and Decorative Metals.

The designer: Thomas J. Bolin, ASID, Planning & Design, Inc., Minneapolis.

Bolin comments: "WILSONART surfacing products offered me both the color and surfacing finish choices and the easy-care, hard-wearing characteristics I had to have to pull off this assignment.

"I needed a comfortable, luxuriously appointed interior that wouldn't feel confining despite the space limitations (of an 85' x 10' car), while meeting the unusual functional requirements of outfitting a moving, smoke-spewing train. WILSONART gave me the solution."



Thomas J. Bolin, ASID
Planning & Design, Inc., Minneapolis

The dining/conference area (photo below) set the Art Deco design referent used throughout the car. The visual expansion is created with a color progression of Mauve Mist to Wildrose to Amethyst gloss decorative laminates on the inset ceiling.

The same palette forms table tops and decorative inlays on Northsea-clad cabinets, with gloss Black accents.

WILSONART Satin Brushed Natural Aluminum clads pocket dividers which open to pass-through service from the kitchen.

The results: A delighted client, whose goals have been fully realized through fine design partnered with WILSONART materials.

WILSONART Color Quest... color that keeps pace with your ideas.

HOTLINE:

If you have a project you think belongs in this space, please call on us.

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WILSONART
BRAND DECORATIVE LAMINATE

Bringing new solutions to the surface™

Photo: Craig Anderson
©1986, Ralph Wilson Plastics Co., Temple, TX



Corian.[®] The solid solution

Tough, non-porous CORIAN* resists wear in high-usage areas of virtually every shape and size.

Designing for problem areas such as those found in laboratories, banks or hotels requires a surface material that offers maximum design flexibility, durability and minimal maintenance. DuPont CORIAN gives you all three, beautifully.

Unlike laminates or gel-coated products, CORIAN is solid. Its color and pattern go all the way through. CORIAN is tough and non-porous, so it can shrug off the daily grind of high usage. Ordinary stains wipe right off. Stubborn stains (even cigarette burns) rub off easily with cleanser. And fine sandpaper will remove accidental cuts without marring the beauty of CORIAN.

Like fine hardwood, CORIAN can be worked and shaped to fit most areas, even problem spaces. And you can combine CORIAN with many other materials for more individual designs (as shown below).

Send for more information on CORIAN.

See Sweet's General Building Market 6.15/Du, or phone DuPont at 800-527-2601. For our 16-page book, "Designing with CORIAN," write DuPont Co., Room X39925, Wilmington, DE 19898. Telex: 83-5420.

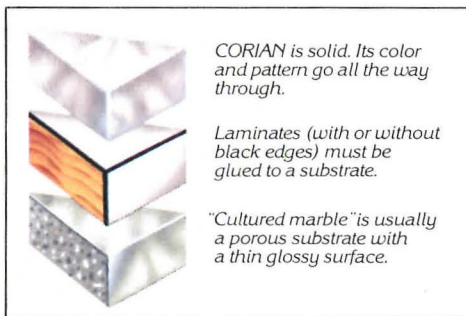
Outside the U.S.A.: Canada: DuPont Canada Inc., Box 660, Station "A," Montreal, Quebec, Canada, H3C 2V1; Europe: DuPont de Nemours Int'l. S.A., 50-52 Route des Acacias, Geneva 24, Switzerland, Phone: 41-22-37-86-18; Australia: DuPont (Australia) Ltd., 168 Walker St., North Sydney, N.S.W., 2060 Australia, Phone: 923-6111; Japan: DuPont Far East, Inc., Kowa No. 2, 11-39, Akasaka 1-Chome, Minato-Ku, Tokyo, Japan 107, Phone: 03-585-5511; Singapore: DuPont Far East, Inc., Suite 601, World Trade Ctr., 1 Maritime Sq., Singapore 0409, Phone: 273-2244.

*CORIAN is a registered DuPont trademark for its building products. Only DuPont makes CORIAN.

Circle 1048 on inquiry card



Fireman's Fund Employers Insurance Company, De Pere, WI, shows how CORIAN custom-fits a wide variety of creative designs. Champ Parish Raasch & Associates, architects.



CORIAN is solid. Its color and pattern go all the way through.

Laminates (with or without black edges) must be glued to a substrate.

"Cultured marble" is usually a porous substrate with a thin glossy surface.



CORIAN solidity and impermeable seams allow for maximum hygiene at Guy's Dental School, London. Derrick Graham, architect.

or problem areas.



Because of its beauty and toughness, CORIAN was used for these stylish counters in an El Paso, Texas, bank.



With CORIAN, stubborn stains and cigarette bums are removed with cleanser. Cuts and scratches can be sanded away.

Corian is solid all the way through. Combine it with other materials for unique edge treatments.



CORIAN

Solid Beauty That Lasts.



7 Thermal & Moisture Protection

UCI 7, Thermal & moisture protection:
 Cladding/siding
 Composite building panels
 Flashing
 Insulation
 Membrane roofing
 Metal roofing
 Roof accessories
 Sealants
 Shingles & roofing tiles
 Waterproofing & dampproofing



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157 Batten system

The manufacturer's *SL II Batten System* features 24-in. electronically seamed panels that are finished with a siliconized polyester paint system. The panels are secured to the roof by means of two-piece expansion clips that come in a variety of sizes to accommodate different insulation thicknesses. Metal Sales Manufacturing Corp., Louisville, Ky.

158 Cupolas

A line of cupolas is available in three styles and a variety of sizes. The cupola bodies are made of a redwood base and tower that are topped by an aluminum or copper roof. The base and tower can be painted, varnished, or stained. Webb Manufacturing, Conneaut, Ohio.

159 Siding system

The *VINYLline* exterior siding retrofit system is designed to be used in commercial and some residential applications. The system is comprised of three elements—facer panels, batten members, and finish members. The only additional material needed for installation is insulation board. The siding comes in a variety of colors. General Plastics Corp., Marion, Ind.

160 Adhesive

The manufacturer's construction adhesive is designed specifically to be used with polystyrene foam board insulation. The adhesive is rubber-based, solvent-dispersed, and recommended for both interior and exterior applications. The adhesive is blue in color, non-staining, and has a two-year shelf life. The Dow Chemical Co., Midland, Mich.

161 Roofing tile

Rapide is a galvanized-steel roofing tile used on roofs with a minimum pitch of 14 deg. The tiles are suitable for new construction or the renovation of old roofs and can be laid directly over felt or asbestos. The system comes as a complete package with tile sheets, accessories, and fixings. Scanroof Systems, St. Paul.

162 Cant strip

Firestop flame-retardant cant strip is made of high impact, lightweight, plastic. The strip's rigid profile is said to be resistant to water damage and easily fabricated for interior and exterior corners. Greenstreak, Inc., St. Louis, Mo.

163 Caulking tape

A self-adhering, expanding caulking tape has thermal and acoustical properties. The tape is available in rolls containing 13 linear feet of tape compressed to a thickness of 1/4 in. When unrestrained the adhesive will swell to 1 1/4 in. Sto Industries, Inc., Rutland, Vt.

164 Insulation

A foam insulation sheathing in board thicknesses of up to 2 in. is made of extruded polystyrene foam and is commonly used for exterior sheathing, siding underlayment, perimeter wall, and cavity wall insulation in both new construction and remodeling applications. Amoco Foam Products Co., Atlanta.

165 Roof windows

The *Sunrise* series roof windows open out of the room and come with inside screens attached. The windows come with three operating options—hand-crank, pole-crank, and motorized. The windows also feature a heavy-duty neoprene weatherstripping gasket that provides a double air space around the sash. Roto Frank of America, Inc., Chester, Conn.

166 Sealant

The *OmniPlus* acetic-cure silicone sealant can be used in a variety of applications, including sanitary seals in kitchens and baths, and on nonporous surfaces such as glass, aluminum, tile, fiberglass, and countertops. The sealant is available in translucent, white, gray, bronze, and black. Sonneborn Building Products, Minneapolis.

167 Roofing

The manufacturer's white *Versigard EPDM* rubber roofing was bombarded by intense ultraviolet light rays in an accelerated weathering test to determine the membrane's resistance to discoloration and deterioration by the sun and was found to be able to withstand 1000 hours without any significant damage. Roofing Systems Div., The Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

168 Roof cooling system

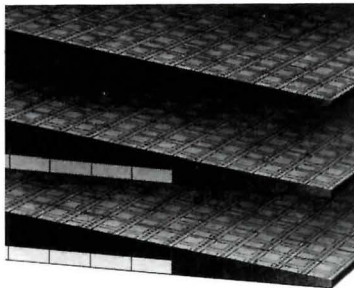
A direct evaporative roof cooling system is said to work by intermittently spraying the roof surface with water. According to the manufacturer, this system generally reduces summer electric costs by 25 percent. Sprinkool Systems, Inc., Killen, Ala.



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169 Roofing tile

Tegusol is a traditional-style, Mediterranean-clay roof tile that is manufactured in France. The double interlocking tile is available in southern and antique red or may be custom ordered in terra cotta, sand, or brown. Suprador Manufacturing Co., Rye, N. Y.

170 Fireproofing products

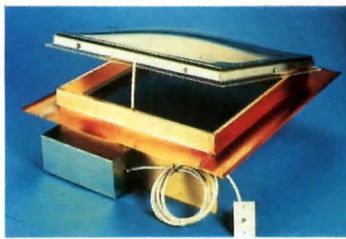
Cafco Blaze-Shield fireproofing material is intended to be used on floor-to-ceiling assemblies, structural beams and columns, concrete assemblies, and roof systems. The material is asbestos-free and adds a level of acoustical control and thermal insulation. United States Mineral Products Co., Stanhope, N. J.

171 Roof insulation

All-Foamglas PC Plusystem tapered roof insulation is recommended for use in high-humidity/high-temperature process areas since it allows humidity vapors to escape. *Plusystems 2 and 3* use phenolic or polyisocyanurate foam underlayment and are intended for use in areas with normal interior temperatures. Pittsburgh Corning Corp., Pittsburgh.



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172 Copper surfaces

The manufacturer's *Aging Copper* is composed of copper particles in a flexible membrane that can be field-applied to metal roofs and walls, among other surfaces. The material offers an accelerated aging effect. Thermo Materials, Inc., San Diego.

173 Skylight

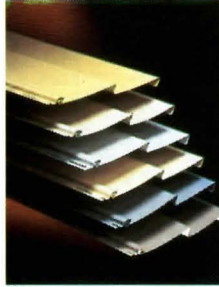
A motorized skylight features solid copper flashing, a low-profile insulated double dome, a molded dome edge that sheds water, and a built-in screen. The skylight runs on 110 VAC and is said to be unobtrusive. Ventarama Skylight Corp., Hicksville, N. Y.

174 Cap sheet

DynaKap FR is an elastomeric asphaltic-blend cap sheet made with synthetic rubber and fire-resistant additives to achieve a UL Class A rating. It is reinforced with fiberglass and polyester mats to resist roof movement and stress. Manville Roofing Systems Div., Denver.



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175 Building panels

Cellcrete panels are concrete building units that attach to either a steel or wood structural back-up. The pre-assembled wall units may be factory-fabricated and field-erected. Standard patterns include brick, shake shingle, fractured fin, exposed aggregate, and stone-ground marble. Scott System, Inc., Denver.

176 Vinyl siding

A line of vinyl siding products, manufactured through the *DynaForged* process, are said to feature deep wood-grain embossing, and more defined shadow lines and to eliminate flat spots. All of the siding colors are computer-analyzed for consistency. Gold Bond Building Products, Charlotte, N. C.

177 Insulation board

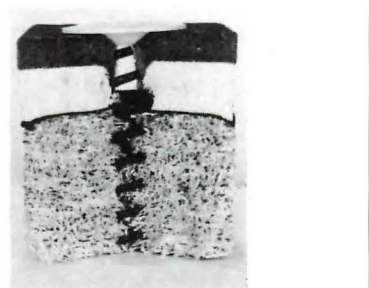
Fireshield, a rigid roof-insulation board, is made from particles of expanded perlite, selected cellulose binders, and a sizing agent. The insulation can be applied with an ordinary propane torch and is said to have been designed with fire-resistant and improved adhesion qualities. International Permalite, Inc., Ontario, Calif.



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178 Roofing panels

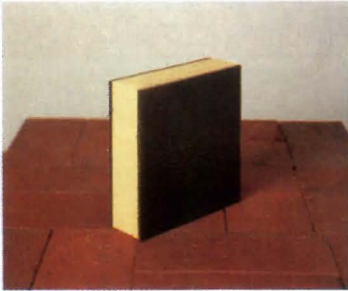
Stile is a line of metal roofing panels designed for residential applications. Formed out of 26-gauge steel, the panels simulate the pattern of clay tile while providing the flexibility of preformed metal. The panels have a Class A fire rating and weigh 1 lb per sq ft. Metal Sales Manufacturing Corp., Louisville, Ky.

179 Fabric skylights

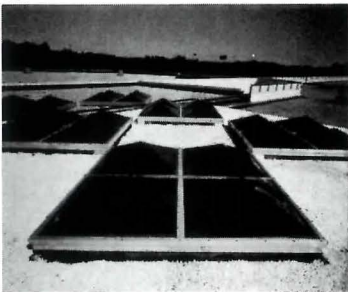
Pre-engineered skylights are available with single- and double-membrane fabrics. The fabric acts as an ultraviolet light screen and is solar reflective. The skylights have light transmission values between 3 and 18 percent. O.C. Birdair, Inc., Buffalo, N. Y.

180 Fastener

A coil-design fastener, for new and reroofing applications, features a helical anchor and stress plate to provide a backout-resistant grip in fiber and other lightweight deck materials. *Coil-Fixx* can be installed with a standard screw-gun or a hand-held speed wrench. Fabco Fastening Systems, Stanfield, N. C.



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181 Aluminum panels

The manufacturer's porcelain-on-aluminum insulated panels are intended for window walls, window replacement, or curtain walls and offer a vandal- and scratch-resistant surface. The panels feature insulating cores with R-values of 25 or greater. Mapes Industries, Inc., Lincoln, Neb.

182 Skylights

The *Skydome* line of heavily insulated venting skylights are designed for commercial applications and are available with either glass or acrylic glazing. Other options include screening, snap-engaged retainers, sealing, and dry gaskets. Wasco Products, Inc., Sanford, Me.

183 Wall panels

Composite metal wall panels are said to be easy to install and be flatter than comparable panels. The lightweight panels feature a honeycomb core, and are available in a variety of colors, textures, and finishes. AEP.SPAN, San Diego.



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184 Furring strip

Build-R-Strip metal furring strip, designed to attach rigid foam insulation to interior masonry and concrete walls, is said to form an insulating envelope. The strip also acts as an attachment medium for securing drywall and/or decorative finishing panels. UC Industries, Inc., Parsippany, N. J.

185 Wall system

The *AP-7* insulated wall system features a double tongue-and-groove side joint design that eliminates exposed fasteners. The system is intended for use on low- and mid-rise commercial and industrial buildings. The wall panels are 2 in. thick, 30 in. wide, and available in lengths up to 40 ft. Atlantic Building Systems, Cincinnati, Ohio.

186 Steel

Pac-Clad prefinished galvanized steel and aluminum for roofing, curtain-wall, and store-front applications is available as a roll-formed roofing, mansard, or fascia panel. It is also available in flat sheets or coils, in 12 colors on steel, and 5 colors on aluminum. Peterson Aluminum Corp., Elk Grove, Ill.



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187 Roofing system

The *A. A. T. 432* (Advanced Adhered Technology) *Sure-Seal* roofing system employs a talc-free manufacturing process that is said to ease installation. The lightweight system requires no ballasts and is intended for new construction and reroofing applications. Carlisle SynTec Systems, Div. of Carlisle Corp., Carlisle, Pa.

188 Skylight system

Softglass Natural Lighting Systems combine the flexibility, weathering, and ultraviolet protection of silicone with the strength, dimensional stability, and noncombustibility of a woven fiberglass membrane. The skylights feature a tubular-steel-frame support system. ODC, Inc., Div. of Dow Corning Corp., Norcross, Ga.

189 Fireproofing board

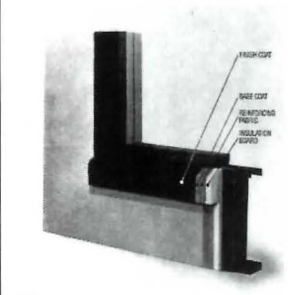
Super Firetemp is a structural-grade calcium-silicate fireproofing board designed for continuous service at 1700 deg F. It is recommended for fireproofing structural beams, columns, tanks, wall partitions, chimneys, ducts, and doors. PABCO, Div. Louisiana-Pacific Corp., Houston.



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190 Building panel

Glasweld is an asbestos-free exterior building panel that is intended to be used as a curtain wall spandrel facing and, for facade cladding, fascias, and soffits, as well as for some interior wall paneling. The panel has a mineral coating that creates an opaque colored surface. Eternit, Inc., Reading, Pa.

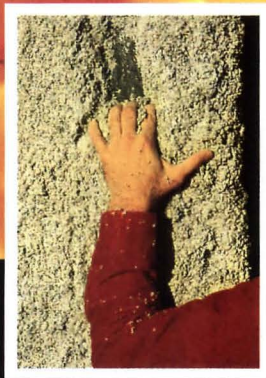
191 Adjustable skylight system

The self-supporting *RigidRidge* adjustable pitch skylight system may be adjusted to any desired roof slope. The skylights are constructed of solid vinyl and aluminum extrusions. The system features extruded aluminum curbs incorporating gutters and weep areas, as well as foam perimeter weatherstripping. Extech Exterior Technologies, Inc., Pittsburgh.

192 Exterior wall system

Senerflex is an exterior wall system composed of insulation board, reinforcing fabric, a base coat, and a finish coat. The core of the system is expanded polystyrene insulation board said to retain its original R value and will not sag or shift. Board thicknesses of up to 8 in. are available. Synergy Methods, Inc., Cranston, R. I.

WHEN THINGS GET HOT, YOU NEED A FIREPROOFING THAT HASN'T GONE TO PIECES. MONOKOTE.



Mineral Wool
Sprayed Fiber



Cementitious
Monokote

The building inspector has gone. The spray-applied fireproofing has been approved. Now the real testing begins. Electricians, plumbers and carpenters are on-site with wrenches, ladders and hammers. Normal job-site conditions can cause impact damage, abrasion and removal of soft, friable fireproofing materials. Just a small gap can be enough to jeopardize the specified fire-resistance rating.

In-place performance is critical! UL classified Monokote Fireproofing meets or exceeds all recommended levels of performance for in-place strength, durability and resistance to fire and abuse.

Judge for yourself. Compare cementitious Monokote to low density, friable materials. Compare bond to steel, surface hardness, durability, and air erosion.

Compare the ability to resist damage from air movement found in elevator shafts that can cause dusting that contaminates sensitive electronic equipment. Compare manufacturer's published minimum standards — you'll find Monokote's are higher across the board.

Finally, compare service. Our national network of Grace professionals provide preliminary design and specification assistance, plus on-site application support when you specify Monokote!

Monokote Fireproofing. Specify anything else, and you're playing with fire.

For more information call (617) 876-1400 ext. 3170 or write W. R. Grace & Co., 62 Whittemore Ave., Cambridge, MA 02140.

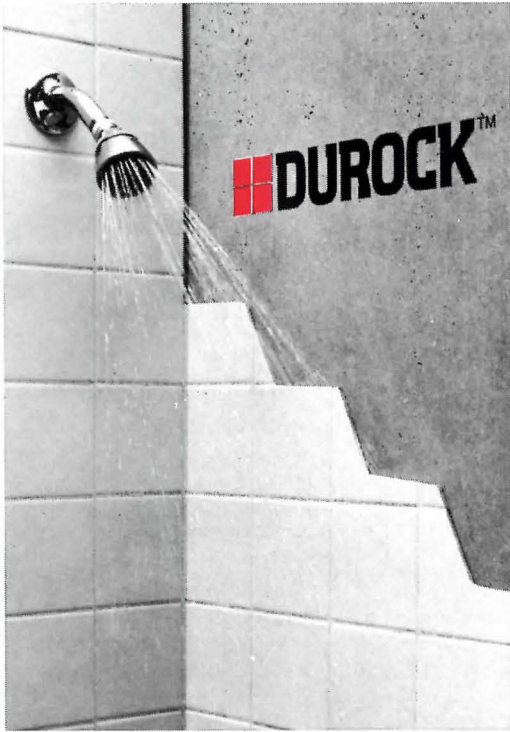
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GRACE
Construction Products



DUROCK™

tile backer board



Put up Durock!



Tile stays put!

**Specify the water-resistant base—
now backed by twelve new fire/sound ratings.**

DUROCK® Tile Backer Board is unique. It's not only a water-resistant panel, it's the only non-deteriorating backer board offering one and two hour UL-listed fire ratings plus sound ratings to gain full code approval. DUROCK board is also the only backer board supported by a complete system: glass fiber-reinforced cement board, Type P tape, Type I ceramic tile mastic or latex fortified mortar. Evaluate Durock board, the

versatile wall tile base that also serves as a superior underlayment for tiled floors or countertops—plus it makes an excellent wall shield and floor protector for UL-listed solid-fuel fireplaces and stoves. Get specifics from our nearest representative. See our folder in Sweet's General Building and Homebuilding Files, Sec. 9.18a/Dur. Or write to us for technical data at 101 S. Wacker Dr., Chicago, IL 60606-4385, Dept. AR1286.

Durabond Division

USG Industries, Inc.

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IF YOU HAVEN'T GOT MONEY TO BURN...



Zonolite® Presents

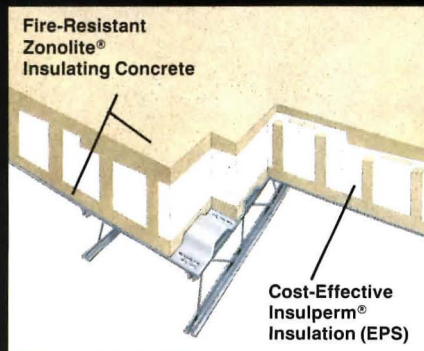
THE FIRE BARRIER ROOF.

If you're in the market for an economical, fire-rated roof assembly with high thermal performance, here's one that's right on the money.

No matter if it's for a new steel deck or concrete substrate construction, Zonolite Roof Insulation Systems deliver. Up to 37 R's. In a wide choice of roof assembly designs. Fire-rated up to 2 hours.

Equally important, they save you money by eliminating the need to add a separate fire-resistance barrier, or fireproof the underside of a steel deck.

With the Zonolite System, insulation boards are totally encapsulated in lightweight concrete for protection outside as well as in. Should a fire start on the exterior of the roof, perhaps



from blowing embers or a roofer's torch, there is virtually no cause for concern. It won't contribute to roofing spread of flame and has the UL and

FM Ratings to prove it.

Zonolite Roof Insulation Systems are backed by Grace's nationwide force of roofing professionals who are ready to assist in every phase of design, installation, and inspection. Zonolite is part of a family of quality fireproofing and insulation products such as Monokote® Fireproofing, which have helped make Grace a leader in the field of fire-protective materials.

For more information, contact Grace, the Expert's Choice.

Call toll-free 1-800-242-4476 or write to Tony Garone, W. R. Grace & Co., 62 Whittemore Avenue, Cambridge, MA 02140.

GRACE
Construction Products

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satisfaction



by design

When you specify a Bilco horizontal door or fire vent, you specify a product that is designed to operate smoothly, easily, reliably. One that has earned its reputation for dependable performance.

Shown are three examples of how Bilco product design translates to client benefits. The Type S ladder access roof scuttle, with its floating cover and the safety and convenience of one hand operation. The Type DSH automatic fire vent with the exclusive Thermolatch™ mechanism for prompt release in an emergency, and security against inadvertent opening. The Type JD walk-over access door with built-in compression spring mechanisms for easy operation of the heavy plate doors.

Bilco. Roof scuttles, sidewalk doors, floor and pit doors, equipment hatches, ceiling access doors, basement doors and automatic fire vents. Products that give satisfaction. By design.

For complete information, details and specifications see Sweets General Building, Industrial Construction and Engineering Files, or send for a copy.



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New Haven, CT 06505

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Crissman & Solomon Architect Inc

ICE & WATER SHIELD PRESENTS THE FINE ART OF PRESERVING A MASTERPIECE.

When you create something innovative, dramatic, substantial, you ought to give it the best protection possible from costly water damage.

Ice & Water Shield—developed by the makers of Bithuthene® Waterproofing Systems—offers the most cost effective, long-term protection against ice dam and wind blown rain damage on the market today.

This tough, flexible self-adhering membrane installs easily under shingles, slate, shakes, tile, metal and around all building details where additional waterproofing is needed.

What's more, Ice & Water Shield never interferes with the integrity of your design because it's completely invisible after installation. For more information, contact E.R. Davis, W.R. Grace Construction Products Division, 62 Whittemore Ave., Cambridge, MA 02140. And protect your landmark from watermarks.

Ice & Water Shield™ GRACE

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Listed below are the producers of
sprayed fire protection material that complies with
all three model building codes,
provides over 60 ULI design listings
and is certified free of asbestos
and asbestos-contaminated vermiculite.

For complete information and specifications...
including code compliances, ULI listings and
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**The TCS roof.
elegant
simplistic
adaptive**

There is, in the remarkably simple lines of a TCS standing seam roof, an expression of architectural character unmatched by other types of roof forms. As it serves its essential function of providing shelter, TCS, terne-coated stainless steel, gives the Hult Center for the Performing Arts a bearing of elegance. And TCS will weather to a predictable, warm gray. TCS is readily adaptable to all types of structures and allows maximum creative latitude to the designer at relatively modest cost.

Aesthetics aside, however, TCS has outstanding functional characteristics—great tensile strength combined with light weight and a low coefficient of expansion; exceptional resistance to corrosive attack and a durability measured in generations rather than years.

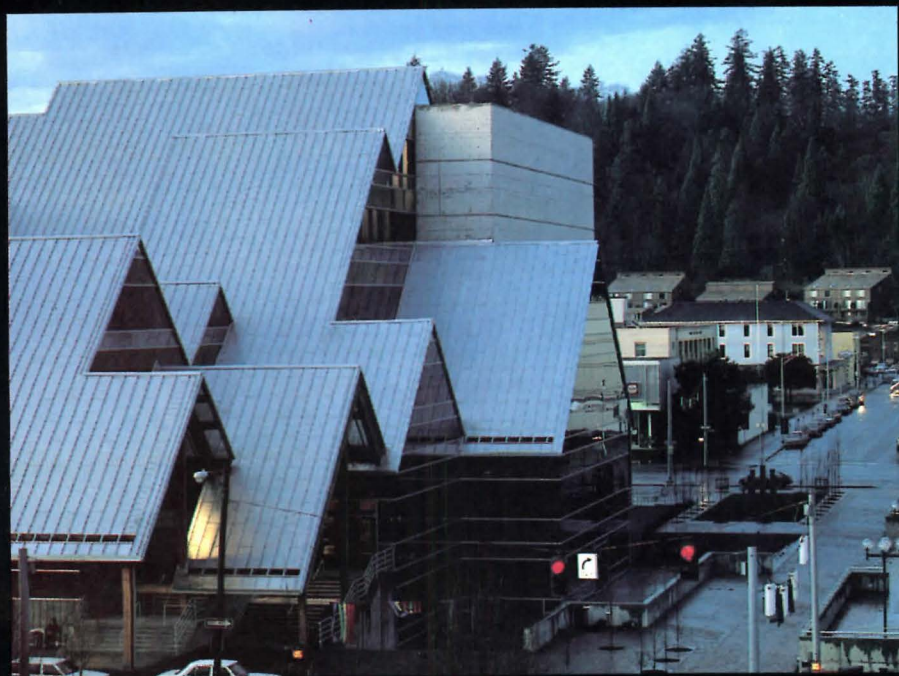
We will be happy to send you substantiating evidence. Call us at 800/624-6906.

Hult Center for the Performing Arts, Eugene, Oregon.

Architects: Hardy, Holzman, Pfeiffer Associates, New York, NY.

Roofer: Acme Roofing, Eugene, Oregon.

Photograph by Timothy Hursley.



FOLLANSBEE

FOLLANSBEE STEEL CORPORATION
FOLLANSBEE, WEST VIRGINIA 26037

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Before.

Recently, as you are probably aware, another company made an offer to acquire the Owens-Corning Fiberglas Corporation.

The offer caused a lot of commotion. But now the dust has started to settle, and we are proceeding with an internal reorganization

of Owens-Corning Fiberglas.

The changes will result in a simpler, more efficient selling operation. We'll actually be better able to concentrate on our core businesses which include commercial and residential roofing and insulation.

DERBIGUM® • FIBERGLAS® BATT AND ROOF INSULATION



After.

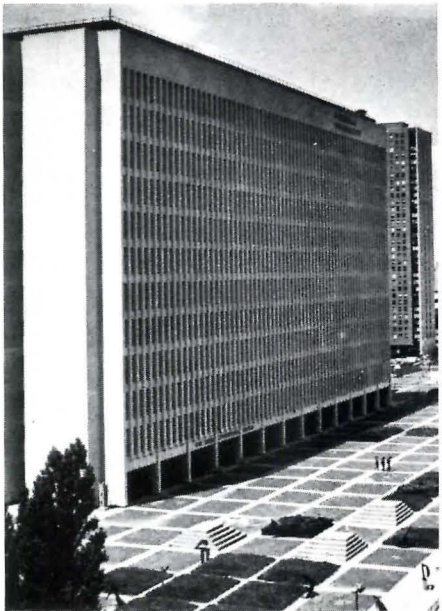
This means you can expect continued strong support from your industry's leading supplier. Top-quality membranes and insulation. Well-tested new products. Unexcelled research. And the industry's best guarantees, including our programs for Certified Independence Insulation Contractors, Certified Roofing Contractors and Approved Derbigum Contractors. You can expect a continuation of everything, in fact, that reflects our deep belief that our own prosperity depends directly on yours.

PERMA PLY® B.U.R. • TRUMBULL ASPHALT • THERMACUBE®



What Do These Prestigious Buildings Have In Common?

FORDHAM UNIVERSITY



SEALED WITH POLYSULFIDE 1965

*Lincoln Square of Fordham University
New York, NY
Architect: The Perkins & Will Partnership*

CARPENTER CENTER, HARVARD UNIV.



SEALED WITH POLYSULFIDE 1963

*Carpenter Center For The Visual Arts
Harvard University
Cambridge, Massachusetts
Architect: Le Corbusier*


UNITED AIRLINES HEADQUARTERS



SEALED WITH POLYSULFIDE 1966

*United Airlines Headquarters
Libertyville, Illinois*

It all started here...

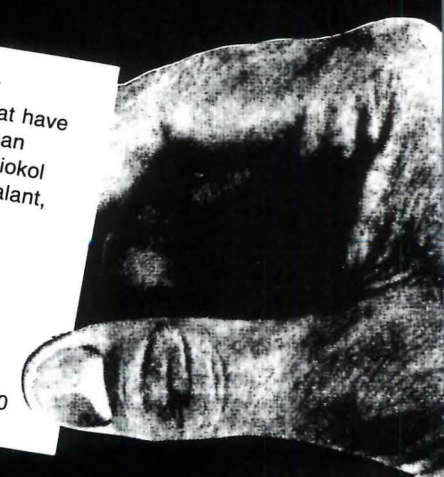


For more than 30 years, LP polysulfide base sealants have been effectively sealing curtain walls, concrete and masonry buildings against the elements.

Morton Thiokol, Inc.
Princeton, New Jersey 08540

To find out about other prestigious buildings that have been sealed for more than 15 years with Morton Thiokol LP® polysulfide base sealant, send for your copy of, "It All Started Here".

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Morton Chemical Division
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Nothing tops a Hi-Tuff™ roof.



Building owner: Critikon, Inc., a Johnson & Johnson company; Architect: The Kling Partnership, General contractor: The Henderson Corporation; Roofing contractor: Roth Brothers of Florida, Inc.

This Stevens Hi-Tuff single-ply roofing system will provide Critikon, Inc., a Johnson & Johnson company in Tampa, Florida, with attractive, weather-resistant protection for years to come.

Hi-Tuff, based on Du Pont Hypalon* synthetic rubber, is extremely UV resistant. It's hot-air welded on the roof to create watertight seams. Because Hi-Tuff is mechanically fastened, no ballast is needed, yet Hi-Tuff roofs exceed by 50% the Factory Mutual I-90 rating for wind resistance. Hi-Tuff is rated UL Class A for fire resistance. Its white, highly reflective surface is aesthetically pleasing and can provide measurable energy savings as well.

Single-ply technology is state of the art in roofing systems today, and among single-ply systems, nothing tops a Hi-Tuff roof. Each Hi-Tuff roofing system is backed in writing by Stevens, one of America's largest corporations.

For more information and a welded sample, write to J.P. Stevens & Co., Inc., Roofing Systems, Northampton, MA 01061-0658, or call 413/586-8750.

*registered trademark of Du Pont

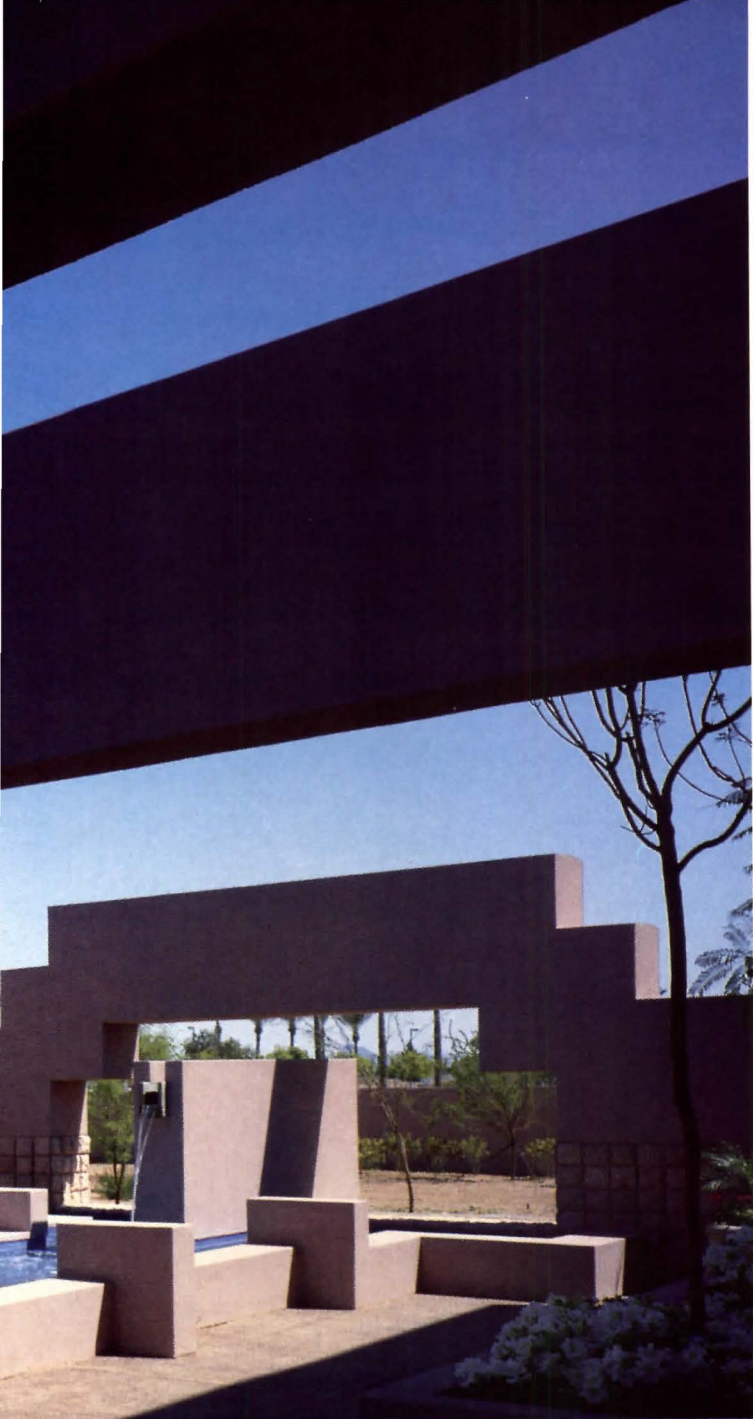
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STEVENS
Roofing Systems



Gainey Ranch Financial Center, Scottsdale, AZ
Architect: Comoyer-Hedrick Architects & Planners, Inc.

Even when the
Dryvit[®] lets you



An early completion date can constrict a designer's viewpoint. But when you work with Dryvit® Outsulation®, you're freed from worries about tight schedules. Case in point: the prestigious Gainey Ranch Financial Center (left), in Scottsdale. It's a beautiful example of the Sante Fe/Arizona style with flying beams and wing walls springing from two main buildings.

Planned originally for stucco, it was changed to a Dryvit Outsulation project because of time constraints. And the 100,000 square feet — and almost joint-free — application was completed well within deadline.

Outsulation is not only fast going up, it offers special aesthetic dividends.

This building is a soft subtle mauve, a color custom mixed by Dryvit; something the company is equipped to do over and above the 21 standard colors offered. And like all Dryvit finishes, it's based on a 100% acrylic polymer to resist staining, fading and cracking.

While the main buildings employ the full four component Dryvit Outsulation System, the flying beams and wing walls of Portland cement/metal lathe are coated in Dryvit's Finisher® for a perfect color match.

There's more. With Dryvit you get the proven wall system.

Over a period of 17 years, 55,000 buildings coast-to-coast stand as witness to Dryvit's leadership and success. It's the system backed by corporate research and testing and a broad network of professionals ready to offer technical help in the field.

With results as stunning as this, no wonder building #2 is underway.

An exact duplicate of the Gainey Ranch Financial Center is under construction as of Summer 1986. One difference, however: the Dryvit System application time has been cut by a month. Once you've worked with Outsulation, you find you can do a lot more in a lot less time!

Whether for new construction or retrofit, call or write for more information.

CALL TOLL FREE 1-800-556-7752



DRYVIT SYSTEM, INC.

One Energy Way, P.O. Box 1014, West Warwick, RI 02893

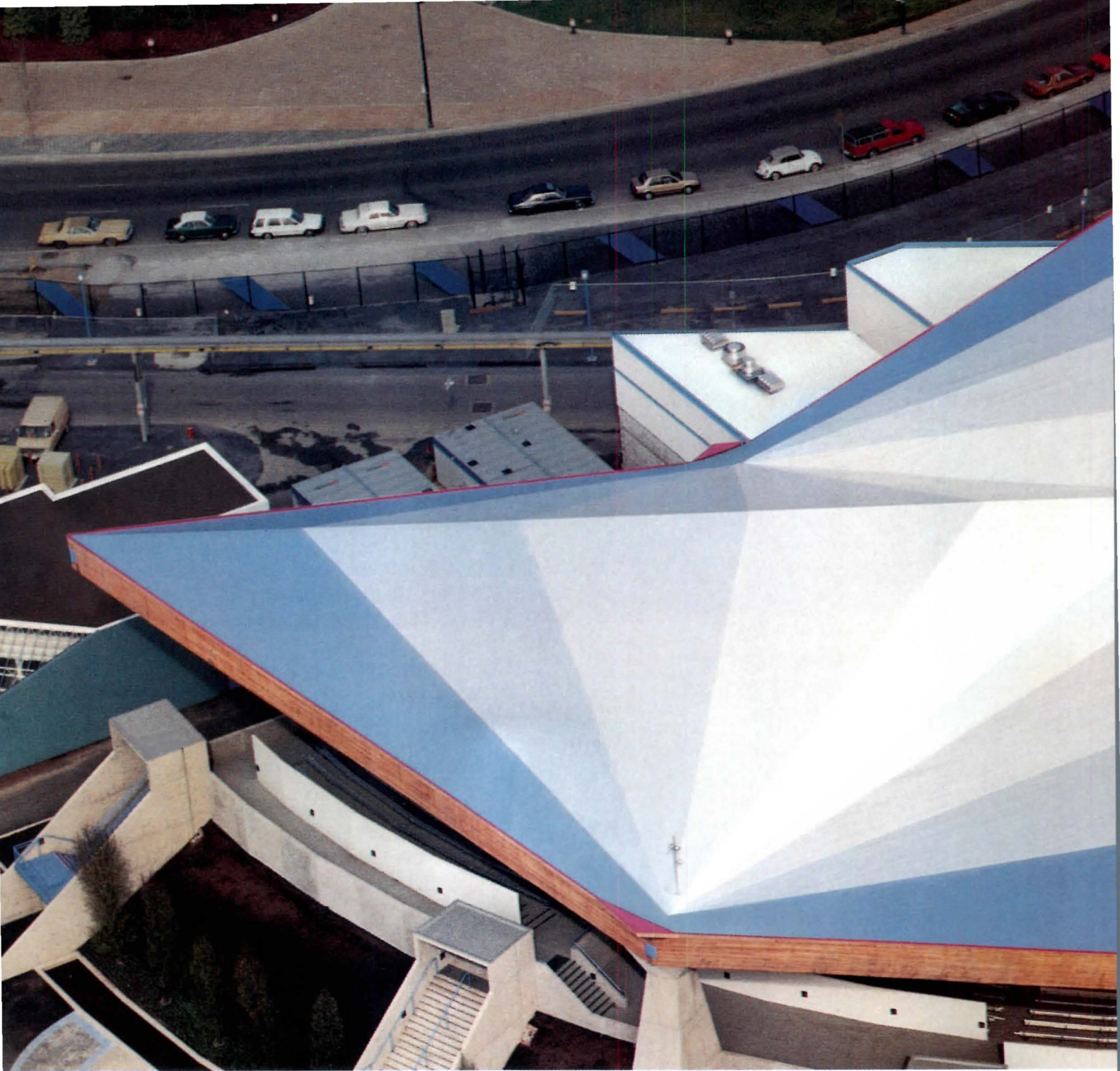
Plant Locations:

West Warwick, RI; Tulsa, OK; Woodlake, CA; Columbus, GA; Vancouver, B.C., Canada (Dryvit Outsulation System Ltd.)

Look for us in Sweets: 7.13Dr and 7.13Dry

Circle 1059 on inquiry card

**chedule's tough,
pread your wings.**



Building: Expo '86 Theater, Vancouver, Canada Architects: Aitken Smith Carter Partners; The Wade Williams Partnership Roofing Contractor: HYPALON

Feel secure in your cre

Your imagination shouldn't be limited by the type of roofing materials available to you. Because there's one single-ply roofing membrane that finally gives form and function equal billing—a membrane based on Du Pont HYPALON synthetic rubber.

A tailored fit.

HYPALON's unique chemical and physical properties allow for design flexibility and performance not found in other single-ply membranes. Membranes based on HYPALON are easily fitted—providing a tight seal over the various shapes and hard-to-fit areas of any roof. Whether in new construction or building restora-

tion, if you can conceive of it, a membrane based on HYPALON can be tailored to cover it.

Looks good, acts tough.

Membranes based on HYPALON can be made in a variety of brilliant colors. Unlike most single-ply materials, membranes based on HYPALON are unique in that different colors can be achieved without loss of physical properties or weatherability. The most popular choice, however, is still reflective white—noted for its remarkable energy-saving capabilities.

But you get more than just a pretty roof with HYPALON. Because no

other single-ply membrane can match the combination of properties and the proven performance of HYPALON. For example, a roof made with HYPALON actually becomes stronger with time as it cures. Unlike other synthetic rubber or thermoplastic-based membranes, HYPALON cures in place to create a more durable membrane that your client can count on for years. In fact, roofing systems based on HYPALON are among the most economical on the market today.

HYPALON takes the heat.

And the cold. And the rain. And the snow. Indeed, membranes based on



Single-Ply Roofing Roofing Manufacturer: Dunlop Construction Products, Inc., Mississauga, Ontario, Canada; Dunseal Hypalon™ H301 System

Activity with HYPALON.®

HYPALON synthetic rubber remain functional through some of the harshest conditions Mother Nature has to offer.

Roof membranes made with HYPALON are available in formulations that remain flexible at temperatures as low as -40°F (-40°C). They also offer an exceptional combination of properties—resistance to flame propagation, corrosive chemicals, ozone, oils, pollutants, acid rain and foot traffic—setting quality standards throughout the industry and measuring up to even the strictest building codes.

A membrane based on HYPALON can be seamed with heat, solvents

or adhesives depending upon the system's supplier recommendation. In addition, because they're among the easiest to install, roofing systems based on HYPALON are much less likely to cause problems in the long run. And any necessary repairs can be done quickly and easily.

The sky's the limit.

Let your imagination run wild, not your costs. Most roofing systems based on HYPALON are as cost-effective as they are versatile. So when you're specifying a single-ply roofing system, make sure it's based on a product that's as attractive to

your client as it is to you—Du Pont HYPALON.

For more information about Du Pont HYPALON and the companies who manufacture roofing systems based on HYPALON, call **1-800-441-7111**.

Only Du Pont makes HYPALON. Specify it by name.

Du Pont manufactures HYPALON, not single-ply roofing membranes or systems.



UNDERLYING GENIUS.

Uncover the ingenious reasons why environmentally safe 440 Carpetboard is your smartest choice in carpeting underlayment.

At first glance, the reasons why smart architects choose 440 Carpetboard are obvious.

It combines environmentally safe insulation, sound deadening and cushioning qualities in one carpeting underlayment for use over concrete or wood.

But they also prefer it for an underlying reason. What it does not provide.

440 Carpetboard contains no asbestos or urea formaldehyde additives. It's environmentally safe.

It also adds a number of selling points with no additional installation time. For example, it

has twice the R-value of wood underlayment, deadens noise and adds resilience to any carpet installation. All good selling points for any home or office buyer.

Most ingenious of all, you get all these advantages in a quick, cost-saving *one-step application*.

That's not just smart. It's genius.

Join the smart architects who choose 440 Carpetboard.

And add underlying genius to your next job.

For full details, and a free sample, call (609) 883-3300. Or write:



Environmentally safe carpet underlayment, insulation, resilience and acoustic control in a one-step installation? That's genius! That's 440 Carpetboard.

SIZES		
Thick.	Sizes	Wt. lbs./sq. ft.
1/2"	4'x4', 4'x8'	1.2
5/8"		1.5

ACOUSTICAL TEST DATA*:

STC 49 IIC 70 (INR+19) STC 48 IIC 65 (INR+14)

*Kodaras Acoustical Lab. Test Report L-188-I-64; 790-6-69.

homasote
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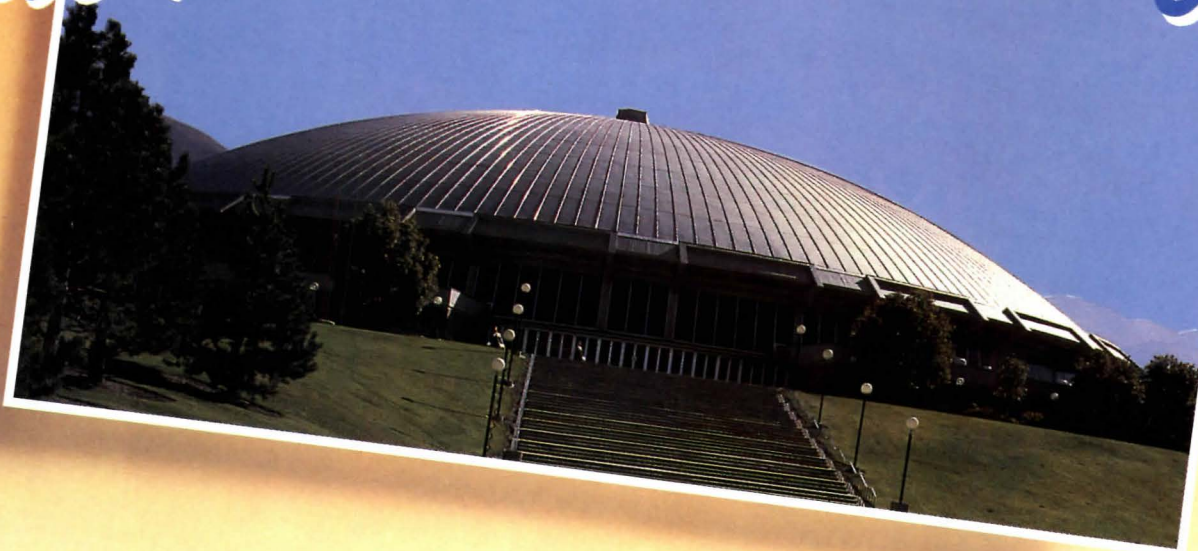
SMART ARCHITECTS CHOOSE HOMASOTE.

Call Sweet's BUYLINE 1-800-447-1982 for details today!

5664

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When Other Roofs Fail It's Time For Overly



The original roof began leaking right after its installation on the Special Events Center at the University of Utah, Salt Lake City.

Fiberglass insulation, a membrane and a top coating were applied over the asphalt shingles, trapping moisture in the wood deck. Dry rot began working.

Seven years later the combination of intense winter sunlight melting heavy snow on just parts of the roof had torn apart the coating, both vertically and horizontally.

The Overly metal batten roofing system is custom designed and engineered to withstand such rigors. It flexes with the building. We know the system works (we put the roof on the Mormon Tabernacle in 1949) and that's why we routinely offer a 30-year, leak-free limited warranty.

"The new Overly roof looks magnificent and I think we've solved our watertight integrity problem for good," according to project architect Walter Scott, AIA, of Scott-Louie and Browning, Salt Lake City.

Overly makes the system in aluminum, copper or stainless steel for almost any roof design, retrofit or new.

Write for a copy of our new catalog, monograph and guide specification. They'll tell you the rest of the story.

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Only
one other face
can be linked
to a team as
good as ours.

Vince Lombardi was more than a football coach. He was a living legend. An inspiration to all those who played for him. And against him.

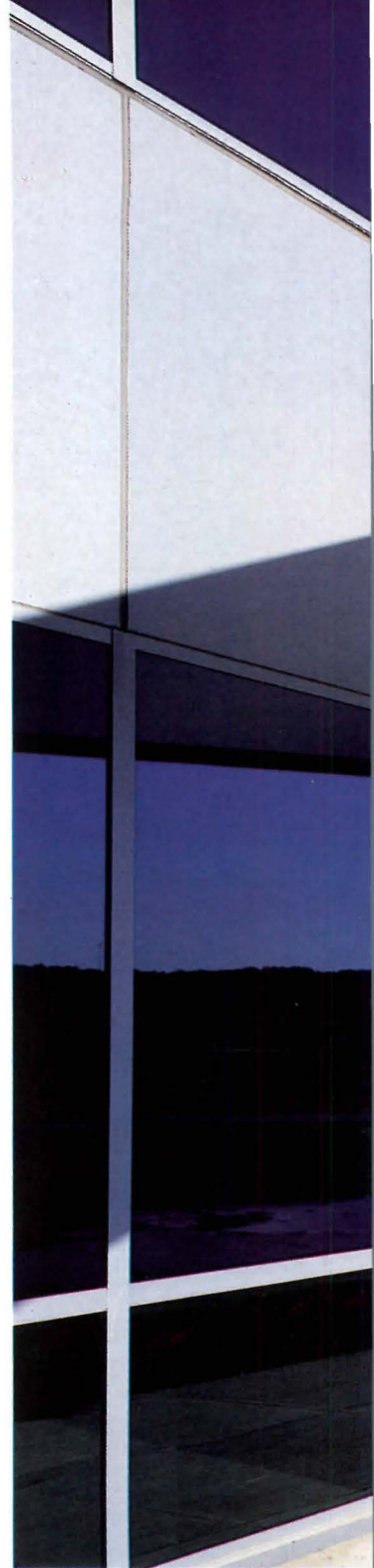
We have the same drive that made Lombardi the very best.

It can be felt through Team Alucobond, a nationwide group of distributors and employees. Dedicated professionals who know their product and know how to get your materials on site. On time.

What's more, you can be sure our distributors will keep the installation of your materials on schedule. And at a price that's less than you'd expect to pay.

Our same drive for excellence can be seen in the products we create. Such as Alucobond® material, the innovative building face that's changing the face of modern commercial architecture.

Made with two tough sheets of aluminum with a thermoplastic core, Alucobond material is





*Valley Stream Corporate Center
Malvern, Pennsylvania
Architect: F. Daniel
Malvern, Pennsylvania
Distributor: Fred Boschan Co.
Philadelphia, Pennsylvania*

ually flat and doesn't oil-can. Yet it's flexible
ough to be formed or molded to the most
acting specifications. It's also versatile and
actical enough to be used in exterior or interior
lications as well as retrofit projects or
mmercial signage.
62 colors including four anodized finishes, lengths
to 28 feet, plus three standard thicknesses and
o widths add to the diversity.

For more information about Alucobond
material and for the name of your nearest Team
Alucobond distributor, call (314) 851-2346.
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Put our quality material and spirited team
to work for you.

TEAM ALUCOBOND[®]

MATERIAL

More than just a pretty face.



**FIRESTONE QUALITY AND
LANDSCAPING CREATIVITY ARE GIVING
THE NEW SHOWBOAT HOTEL AND CASINO
A SHOWCASE ROOF.**

Building and landscape architects joined forces to give the new Showboat Hotel and Casino a roof that will stand out—even in the flamboyant world of Atlantic City casinos.

Landscape and site design specialists Cairone Mackin & Kaupp, of Philadelphia, worked closely with casino architects Martin Stern Associates, of Beverly Hills. They produced a nautical design that combines multicolored crushed stone graphics (such as the compass rose above) with live plantings, trellises and other traditional garden landscaping elements.

Underneath it all went a 45 mil Firestone RubberGard® EPDM roof and Firestone-supplied Foamular® insulation, the value-engineered recommendations of Thomas Roofing & Sheet Metal Co., the Atlantic City contractor for the job. "It would have been prohibitive to put down a built-up roof—more labor, more materials," said Mike Thomas, of Thomas Roofing, explaining why he chose Firestone EPDM.

Dave Rudzenski, the Martin Stern field rep on the job, agreed. "I personally feel it's a better product. Much easier to work with. And the life is long."

Architects across America are finding that Firestone RubberGard® EPDM provides the strength, durability, economy and ease of installation they need to feel true confidence in a roof. And that confidence is increased by Firestone's unsurpassed field support, from architectural consultation to installation to final warranty inspection.

Firestone's good name insures your good name, even on the most distinctive projects. Call 1-800-428-4442.

Firestone
ROOFING SYSTEMS

NOBODY COVERS YOU BETTER.

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HOW A FEW CUTS CAN MAKE YOUR HOMES MORE PROFITABLE.



The idea that Fancy Cuts only go on Victorian buildings is quite old-fashioned.

There are far too many builders who think the way to make more is to give the buyer less.

They scrimp on siding here. They cut back on fixtures there. And what they usually end up with is an unusually ordinary home.

There is another point of view, however, that says the way for builders to prosper isn't by *making* cuts. It's by *using* them.

Shakertown Fancy Cuts.

These sculptured cedar shingles don't take the place of your regular siding. They accent it.

So, the thought is to use just a few Fancy Cuts to make a low cost exterior look like anything but low cost.



An entry treatment like this can open the door to a sale.

Your buyers will get the idea. Instead of seeing a plain home they'll see a fancy one. And instead of grousing over the price, they'll be grateful over the bargain.

Now is this

really possible simply by adding a few boxes of Fancy Cuts shingles? See for yourself.

The gable end in the center picture was going to be monotonous lap siding. But look at what \$150 worth of Fancy Cuts did.



Cure boredom with \$150 worth of Fancy Cuts.

Or, see how a few dollars in Fancy Cuts next to the front door made an entryway look like a million.

And, if you haven't noticed by now, Fancy Cuts look right at home on any home: Contemporaries. Traditionals. And, of course, Victorians.

To find out how this small change in siding can make you more than small change, send for our free Fancy Cuts architect's kit.

Then, if you want your homes to sell for more, we'll cut all the corners you need.



This is one of the 3,486,784,401 ways you can combine our 9 patterns.

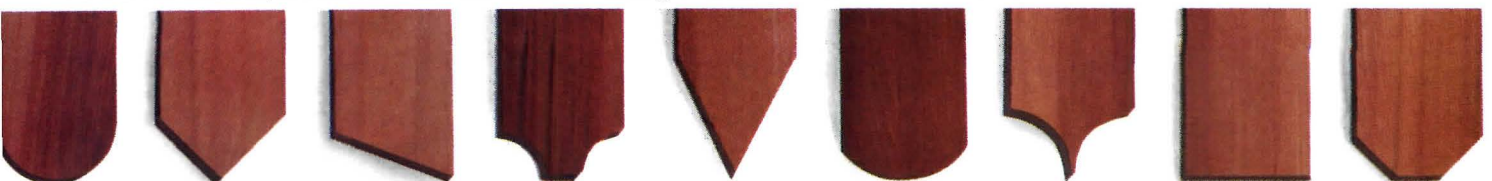


Fancy Cuts let you give sidewalls a new twist.

SHAKERTOWN FANCY CUTS®

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For free architect's kit, call toll-free 1-800-426-8970. In Washington state, 206-785-3501, or write P.O. Box 400-ARFC12, Winlock, WA 98596.



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MANVILLE
ARCHITECTURAL
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WILL
STILL
LOOK
LIKE
THIS.**

They last and last.

Years from now, Manville Architectural Panels won't have faded, because their color is integral throughout.

Years from now, they'll still be impact- and weather-resistant. And very, very durable.

And years from now, they won't have been harmed by fire—they're non-asbestos and fire-resistant.

Yes, these architectural panels are definitely tough. But they also offer other advantages:

They're machinable and easy to work with.

They're available in a variety of textures and popular earth-tone colors.

They're aesthetically pleasing with glazing and encourage creative architectural expression.

And they're made right here, in America.

So if you want architectural panels that will last, talk to your local distributor. Or contact the Manville Product Information Center, P.O. Box 5108, Denver, CO 80217. Phone: 303-978-4900. (See our catalog in Sweet's.)

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Manville. 21,000 people with one goal: To be your very best supplier.

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Manville



Koppers Rx[®] Insulation

RETAINS ITS "R" VALUE INTO THE 21ST CENTURY

For the first time ever, a foam plastic insulation is guaranteed to retain its "R" value for 20 years. Our 8.3 "aged" "R" value per inch is the best in the industry.

Koppers Rx Insulation will not lose "R" value over time. Koppers Rx is a rigid, thermally efficient closed cell phenolic foam board insulation, providing superior long-lasting energy efficiency.

Rx Insulation is the best value in roofing, wall and ceiling insulation today...tomorrow...and into the 21st century. Koppers guarantees it!

The Koppers Guarantee

If the "R" value of Koppers Rx phenolic Insulation fails to meet our published specifications—anytime within 20 years of installation—Koppers will pay the resulting difference in heating and cooling costs! See warranty for conditions and details.

Are you getting the long-term "R" value you specified?

The standards of the Roof Insulation Committee of the Thermal Insulation Manufacturers Association (RIC/TIMA) require an evaluation period of 6-months for determination of "aged" "R" values of foam plastic insulations. The Midwest Roofing Contractors Association has sponsored recent studies which conclude that "the RIC/TIMA 6-month room temperature 'aged' 'R' values claims ...are not realistic to use as the basis for the design

of 10 to 20-year roof life." (See RSI Magazine article, July 1986, p. 38).

Koppers Rx goes much further than the standard 6-month "aged" "R" value rating, guaranteeing its high in-service "R" value into the 21st century.

Other Rx Advantages

Specifying Koppers Rx phenolic foam will provide you with much more than superior, long-lasting energy efficiency. For instance:

- Rx Insulation is the only plastic foam insulation product on the market which passed one, one-and-a-half, and two-hour UL fire resistive tests when the insulation was directly applied over a protected metal deck. Also, Rx has low smoke-developed and flame-spread ratings.
- Rx Insulation is non-corrosive.
- Rx Insulation is dimensionally stable and exceeds the industry standards.

To learn more about Koppers unprecedented 20-year guarantee, call 800-558-2706 or write:

Koppers Company, Inc.
Dept. #53H-8
Pittsburgh, PA 15219

KOPPERS



The 21st Century Insulation

WE GUARANTEE IT!

PAC-CLAD Custom Colors

Project: Sheraton Inn and Conference Center
Owner: S.R.S. Properties
Chevy Chase, MD
Architect: L B C & W Architects, Engineers & Planners
Falls Church, VA
General Contractor: Eugene Simpson and Brother Inc.
Alexandria, VA
Roofing Contractor: James Myers Co.
Beltsville, MD
Product Finish: 24 ga. Galvanized PAC-CLAD
Rikyu Grey

See our catalogs in Sweet's: file numbers
07610/PET, 07715/PET and 10440/CHC.



The new Sheraton Hotel in Tyson's Corner, Virginia, is a striking example of our work in custom colors. The architect, L B C & W of Falls Church, Virginia, designed the project to incorporate extensive metalwork, including more than 50,000 square feet of metal roofing.

The color, Rikyu Grey, was selected to be an exact match to the spray-coated extrusions of the curtainwall system. The result: uniformity of color throughout the project.

PAC-CLAD is a full Kynar 500® product available in twelve standard colors on 24 ga. G-90 galvanized steel and six standard colors on aluminum .032 ga. to .080 ga. Non-standard colors are available on projects of 15,000 square feet or larger.

Our staff is prepared to discuss job costing, feasibility and information regarding finish and color selection. For more information regarding the Petersen product line, please call us toll free (1-800-PAC-CLAD) or contact our local representative.



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**SOMETHING AMAZING HAPPENS WHEN NEW
DENS-GLASS™ IS EXPOSED TO FIRE OR MOISTURE:
ABSOLUTELY NOTHING.**

Fiberglass is the key. Georgia-Pacific's new Dens-Glass™ is the revolutionary gypsum sheathing with "built-in" fiberglass matte facings that shrug off weather, moisture and job-site hazards.

In fact, only Dens-Glass has a six-month limited warranty against deterioration due to weather exposure. That's important when you consider the time, labor and dollars involved in replacing damaged, paper-faced panels.

Plus, in independent tests, Dens-Glass protected framing from fire damage far longer than paper-faced panels of comparable thicknesses, with zero smoke development.*

New Dens-Glass is now available nationwide from over 140 Georgia-Pacific Distribution Centers and Sales Offices. And that makes the G-P commercial building products line stronger than ever.

For Dens-Glass exposure test results, product information and the Distribution Center nearest you, call 800-225-6119, or write: Georgia-Pacific, 133 Peachtree St., N.E., Atlanta, GA 30303.

**YOU CAN BUILD ON
OUR NAME.™**

ors, Roofing, Lumber, Particleboard, Roofing, Insulation, Gypsum Board,

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*ASTM E119 Fire Test of Building Construction and Materials; ASTM E84 Surface Burning Characteristics of Building Materials. Dens-Glass and You Can Build On Our Name are Trademarks of Georgia-Pacific Corporation. © 1986 Georgia-Pacific Corporation. All rights reserved.

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The Very Best of Today's Tapered Roof Insulation Technology

Pittsburgh Corning has developed new Tapered FOAMGLAS® Roof Insulation Systems which satisfy today's Performance Criteria and are Priced Competitively!

FOAMGLAS® R+
ROOF INSULATION
PC PLUSYSTEMS™

The FOAMGLAS® PC PLUSYSTEMS™ take advantage of the best physical characteristics of Pittsburgh Corning's cellular glass insulation and foamed plastic insulations.

The nucleus of PC PLUSYSTEMS™ is FOAMGLAS® cellular glass insulation, the most moisture resistant insulation on the market. Its stability, strength, and impermeability help eliminate many causes of roof failure. Indeed, the All-FOAMGLAS® PC PLUSYSTEM is the wisest choice for long-term performance and reliability.

The other PC PLUSYSTEMS™ contain underlayments of phenolic foam (PF) or polyisocyanurate foam (PI) insulations. These underlayments result in competitively priced systems with high "R" values. The top layer of Tapered FOAMGLAS® insulation overcomes the stability problems of many foamed plastic systems.

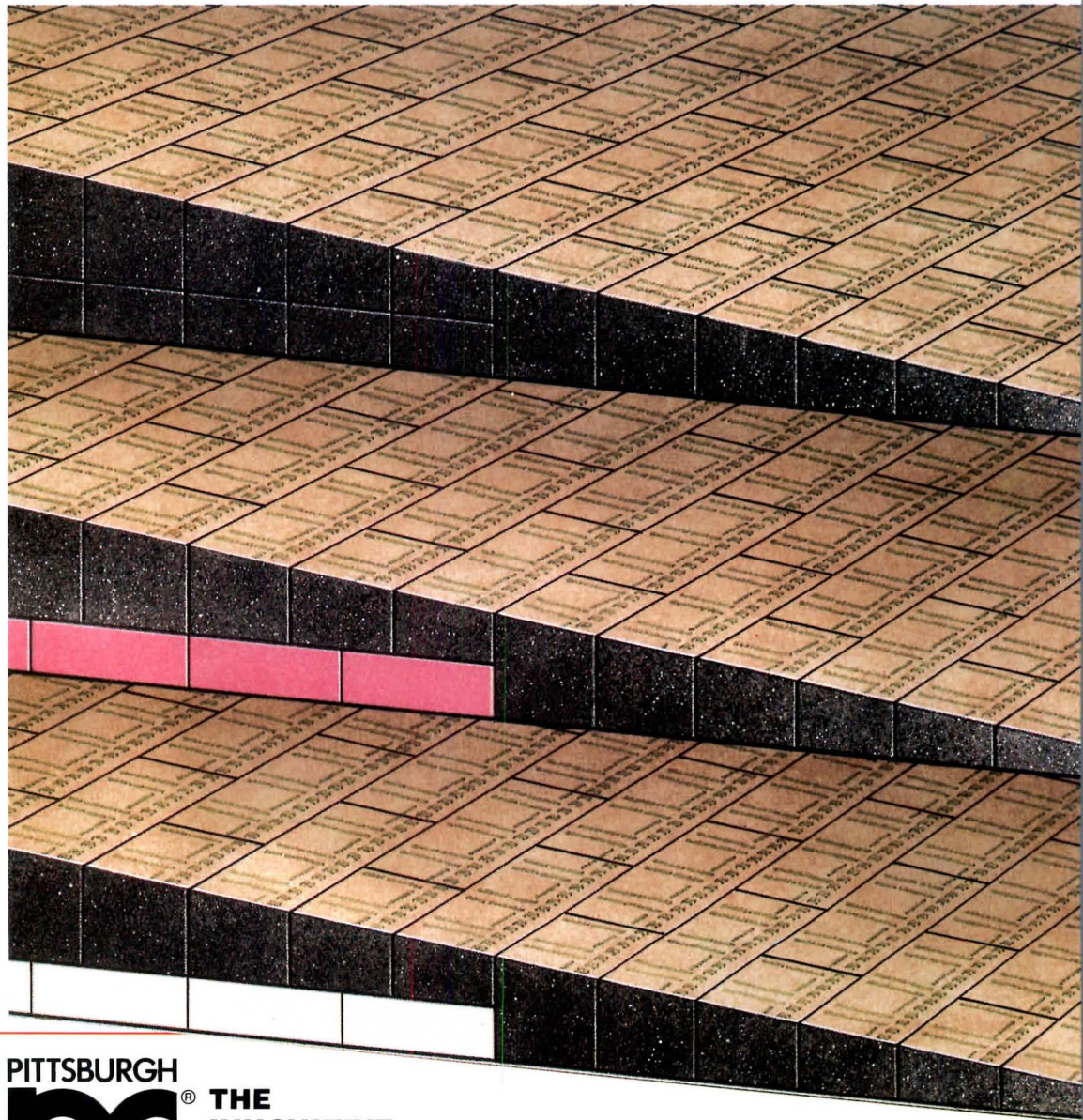
Satisfies Performance Criteria and Priced Competitively!

■ The All-FOAMGLAS® PC PLUSYSTEM with FOAMGLAS® insulation underlayment offers the highest resistance to moisture, ensuring constant thermal efficiency and maximum compressive strength. The Tapered FOAMGLAS® insulation provides slope to drain water and is compatible with built-up-roof or adhered single ply membranes.

■ The FOAMGLAS® PC PLUSYSTEM with PF (phenolic foam) Underlayment provides the highest, R-value available in these systems. The Tapered FOAMGLAS® insulation shields the PF Underlayment from temperature extremes and distributes loads evenly.

■ The FOAMGLAS® PC PLUSYSTEM with PI (polyisocyanurate foam) Underlayment is a high R-value system. The Tapered FOAMGLAS® insulation reduces thermal loads on the PI Underlayment which results in a stable substrate for the roof membrane.

Your Pittsburgh Corning representative will recommend the PC PLUSYSTEM that best meets your performance criteria and cost restrictions.



Contact Pittsburgh Corning Corporation, Marketing Department FB-6, 800 Presque Isle Drive, Pittsburgh, PA 15239, Tel.: (412) 327-6100. In Canada, 106-6 Lansing Square, Willowdale, Ontario M2J 1T5, Tel.: (416) 222-8084.

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THE INNOVATIVE INSULATION PEOPLE

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Exterior Insulation: Good looks aren't enough.



Broward Trade Center
Fort Lauderdale, FL.
Certified Applicator:
RAMCO, Inc.
General Contractor:
Knight Enterprises

One look at the new Broward Trade Center in Fort Lauderdale and you can see the contribution that the SUREWALL® SBC Insulation System made to the overall attractive appearance of this 36,000 square foot six-story building. But, the real advantages of the SUREWALL SBC Insulation System are more than skin deep!

Impact Resistant. Unlike most "soft" exterior insulation systems, our system uses SUREWALL® Surface Bonding Cement to form a hard overcoating that readily resists damage and reduces maintenance costs. In short, good-looking buildings stay good looking longer.

Mechanical Fasteners. While many competitive systems use adhesives to fasten the insulation board to exterior sheathing, the SUREWALL SBC Insulation System employs patented 20-gauge galvanized metal fasteners. By using mechanical fasteners, this system is anchored to the actual framing members. In addition, there is the assurance of knowing that this system will not delaminate due to the stress of climate and temperature fluctuations.

Design Flexibility. In using the SUREWALL SBC

Insulation System, the only limitation is your imagination. This system is versatile enough to be used on virtually any type or shape of wall. It can be panelized, as in this case. It can be employed in new construction, and it is especially suited for retrofit and renovation jobs. The SUREWALL SBC Insulation System can be ordered in 10 pre-mixed colors with special colors available on request. And, of course, it can be finished in virtually any manner that will enhance the good looks of the building.

So, as you consider the attractive advantages of exterior insulation, look for more than just a pretty facing. Get the facts about SUREWALL SBC Insulation System. For a detailed brochure, write the SUREWALL® Producers Council, P.O. Box 241148, Charlotte, NC 28224. Or, call 704/525-1621 and talk with John Lamb. Circle 1072 on inquiry card

SUREWALL®
SBC Insulation System

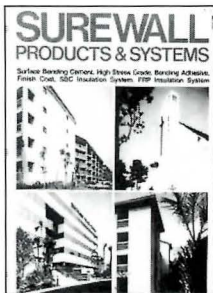
SUREWALL® is a registered trademark of the W.R. Bonsal Company, Charlotte, NC and Best Concrete Products Company, Atlanta, GA.

Member, Exterior Insulation Manufacturers Association (EIMA).

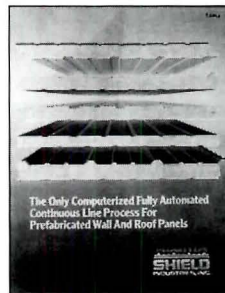


7 Thermal & Moisture Protection Product literature

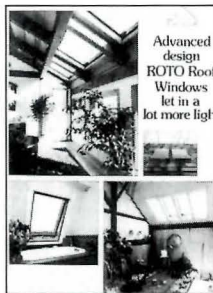
For more information, write item numbers on Reader Service Card



193 Bonding cement
Surewall surface-bonding cement, designed to be used in place of mortar in the construction of drystacked concrete block walls, is featured in a 12-page color brochure. The literature contains descriptions of renovating, retrofitting, and insulation systems, and technical performance data. W. R. Bonsal Co., Charlotte, N. C.



199 Wall and roof panels
 A 4-page brochure describes the manufacturer's computerized and fully automated continuous-line process for prefabricated wall and roof panels. The brochure contains product descriptions, material specifications, and load tables with insulation values. Aluma Shield Industries, Inc., Daytona Beach, Fla.



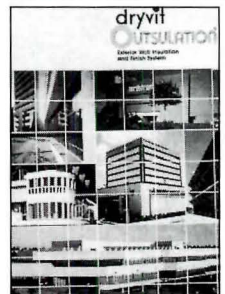
194 Roof windows
 A 6-page color foldout brochure highlights the *Sunrise* and *Galaxy* series of roof windows. The brochure describes the windows' hand-cranked, pole-cranked, and motorized modular operating hardware, low E insulated glass, and several other product features and options. Ordering information is also included. Roto Frank of America, Inc., Chester, Conn.



200 Window insulation
 A 12-page color booklet features a line of window insulation products, including the *Window Quilt* insulating window shade, *Window Showcase* fabrics, *Skylight Quilt* moveable insulation for skylights, and *Window Manager* insulating shades. Product descriptions and test data results are also included. Appropriate Technologies Corp., Brattleboro, Vt.



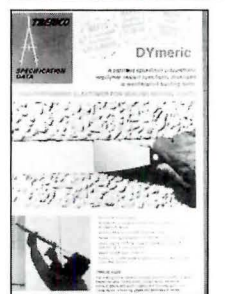
195 Mechanical insulation
 A 4-page brochure describes the properties and suggested uses of each of six *Thermafiber* mechanical insulation products, including industrial felts, maritime insulation, boiler insulation, metal mesh blankets, and bulk-wool and high-temperature insulation board. USG Acoustical Products Co., Chicago.



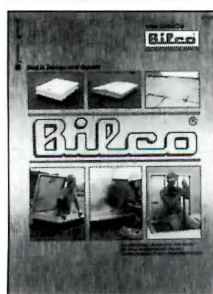
201 Exterior wall insulation
 A 28-page color catalog features the *Outsulation* exterior wall insulation and finish system intended for new-construction and retrofit commercial, institutional, and residential applications. The brochure includes advantages, insulation values, physical structure properties, and short-form specifications. Dryvit Systems, Inc., West Warwick, R. I.



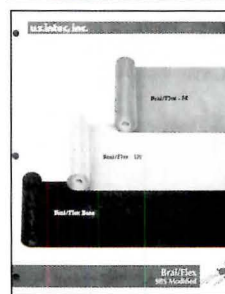
196 Roofing membrane
 A 4-page color brochure features *Lite-Top* elastomeric membrane roofing. The literature includes a review of performance features such as heat-sealability, weatherability, product strength, flexibility, and traffic-resistance. Close-up photographs and product specifications are also included. American Hydrotech, Inc., Chicago.



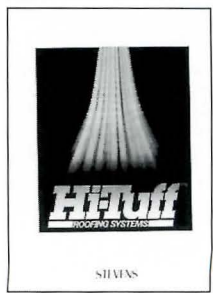
202 Sealant
 A 4-page fact sheet reviews *DYmeric* epoxidized polyurethane terpolymer sealant specifically developed to weatherproof building joints. The fact sheet includes photographs, descriptions of possible uses, joint design considerations, and typical performance characteristics. Tremco, Cleveland.



197 Access doors
 The manufacturer's 24-page 1987 catalog includes details and specifications for a line of roof scuttles, automatic fire vents, floor and pit doors, ceiling-access doors, and basement doors. Also included is information on the *LadderUp* safety post for use on fixed ladders leading to access hatches. The Bilco Co., New Haven, Conn.



203 Roofing products
 The manufacturer's brochure features two modified bitumen roofing products—*Brai/Flex M* and *Brai/Flex 170*. Both are mop-down products intended for hot asphalt application. The surface material is available in white, tan, slate, black, chocolate brown, terra cotta, and other custom colors. U. S. Intec, Inc., Port Arthur, Tex.

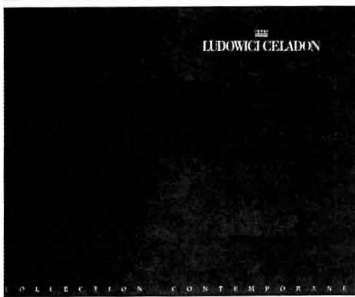


198 Roofing system
 The *Hi-Tuff* single-ply membrane roofing system is a heat-sealable, scrim-reinforced, white rubber membrane roofing system and is featured in an 8-page color brochure. The literature contains a product presentation, installation information, technical data, and application suggestions. J. P. Stevens Co., Inc., Northampton, Mass.



204 Roofing insulation
 The *NVS* reroofing system combines insulation with fire-resistance and positive slope-to-drain contour and is described in a 6-page foldout brochure. The brochure provides a detailed description of the reroofing system, along with a cross-sectional diagram and a table of insulation values. W. R. Grace & Co., Cambridge, Mass.

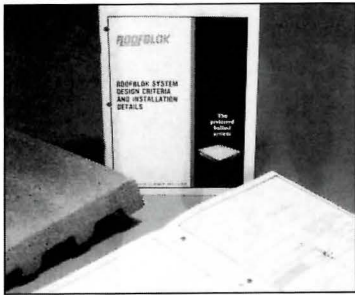
For more information,
write item numbers on
Reader Service Card



205 Terra cotta tile
Six terra cotta tiles, each an award-winning entry in the 1985 National Building Museum Contemporary Terra Cotta competition, are illustrated in an 8-page color catalog. Photographs of the tiles, information on colors and dimensions, and application suggestions are included. Ludowici Celadon, New Lexington, Ohio.



211 Cedar roofing
A 4-page red cedar roofing color brochure outlines nine flame and weather tests achieving UL-790 standards for Class C, B, and A cedar shake or shingle roofs. Residential and commercial examples are included, along with lists of manufacturer's of pressure-treated products. Red Cedar Shingle & Handsplit Shake Bureau, Bellevue, Wash.



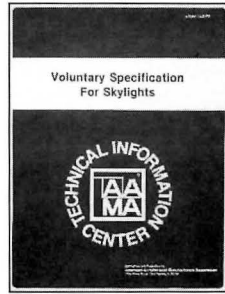
206 Ballast system
A 52-page report offers detailed information on ballast design criteria for single-ply roofing systems. A process for accurate determination of conditions is also suggested. Installation specifications, general information, and details on raw materials and physical properties are featured. Roofblok Ltd., Fitchburg, Mass.



212 Insulation
The manufacturer's line of industrial and commercial insulation products is reviewed in a 12-page color brochure. Specifications, application guidelines, product descriptions, and miscellaneous notes are included for pipe insulation, insulation board, duct wrap, and wall and tank insulation. Knauf Fiber Glass, Shelbyville, Ind.



207 Coatings
An information kit contains data on the manufacturer's line of water-repellent coatings and sealers. Detailed product descriptions, chemical breakdowns of the coatings, performance test data, and information on product warranties are included. Hydrozo Coatings Co., Lincoln, Neb.



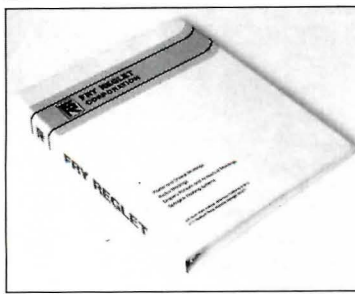
213 Skylights
A 6-page brochure outlines a list of voluntary specifications for skylights. Specifications are discussed for glass and plastic skylights, including fixed and vented units and flush and curb-mounted styles. Material and glazing criteria are provided with testing requirements. American Architectural Manufacturers Association, Des Plaines, Ill.



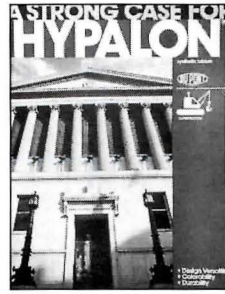
208 Window wall system
The *Rigid R* insulating window wall system is featured in a 4-page brochure. The literature describes the system's insulating performance, immediate benefits, construction details, and product specifications. Donn Corp., Westlake, Ohio.



214 Insulation system
Prefabricated panels with the manufacturer's exterior insulation system are described in an 8-page color booklet. The literature includes a discussion of exterior cladding, the system's features and benefits, and the design freedom gained by using the system. STI Industries, Inc., Rutland, Vt.



209 Moldings
A binder of information highlights the manufacturer's line of plaster and drywall moldings, radius moldings, drapery pockets and acoustical moldings, and *Springlok* flashing systems. The literature includes product and application information, along with diagrams. Fry Reglet Corp., Alhambra, Calif.



215 Rubber roofing
A 4-page booklet contains a detailed review of *Hypalon* synthetic rubber roofing material. Product features described, include design versatility, colorability, and durability. Photographs of the single-ply roofing material in place are also included in the literature. Du Pont Co., Wilmington, Del.



210 Asbestos encapsulation
An 8-page color brochure entitled *Cost Effective solutions through Asbestos Encapsulation* describes a variety of available control methods. Among these methods are a penetrating approach, bridging approach, and a hybrid approach. The information in the brochure is technical and comprehensive. H. B. Fuller Co., Houston.



216 Roofing membrane
The manufacturer's line of *White Versigard* roofing membrane is highlighted in a 4-page brochure. The heat-reflective roofing with *Insta-Seam* adhesive is said to be as much as 70 percent cooler than a smooth black surface and to withstand thermal shock and freeze-thaw cycles without rupturing. The Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

8 Doors & Windows

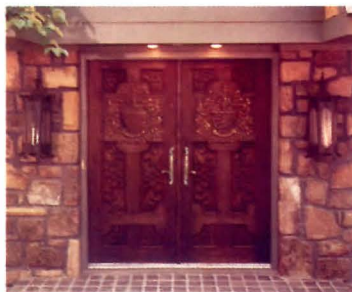
UCI 8, Doors & Windows:
Entrances & storefronts
Glazing
Hardware & specialties
Metal doors & frames
Metal windows
Skylights
Special doors
Special windows
Window/curtain walls
Wood & plastic doors
Wood & plastic windows



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217 Door levers

The *Lippa* line of door levers is constructed of nylon with epoxy-coated, solid zinc alloy rosette. The levers are protected with powder-coated lacquer in red, white, or black. Forges Div. of Valli & Colombo (USA), Inc., Duarte, Calif.

218 Door

An interior French door is available in single- or double-folding panels. The door is constructed of ready-to-finish Ponderosa pine and features clear, tempered glass that is divided by solid brass casing. Wing Industries, Inc., Dallas.

219 Hand-carved doors

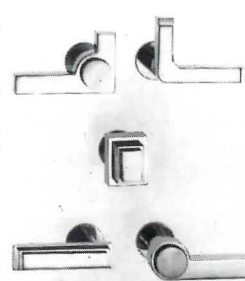
The manufacturer's hand-carved doors are made of kiln-dried mahogany, although oak and other custom-specified woods are available. The doors measure 3 ft by 6 ft 8 in., and are 1 3/4 in. thick. Custom sizes and widths may be specified. Doors can be ordered with carvings on one side or two. Pinecrest, Minneapolis.



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220 Pivot hinge

A pocket pivot hinge for single- and cross-corridor fire doors has a 20-minute UL listing for wood doors and a 3-hour listing for metal doors. The pivot is available with a steel prime coat and a range of plated finishes. Dor-O-Matic, Chicago.

221 Window

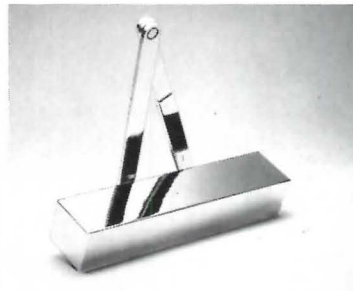
The *RK* double-hung window is available with clear-grade Western pine, and is either exterior primed or clad in white or bronze aluminum. The window's tilt take-out balance system provides for easy removal of the window panels. Reuten-Klein Corp., a Div. of Paeco Industries, Inc., Schenectady, N. Y.

222 Door knobs and levers

The *560 Series* door knobs and levers are made of solid brass and come in a variety of finishes. Several brass and chrome combinations may be specified. Optional door locks and latches are also available. Paul Associates, Long Island City, N. Y.



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223 Clad patio door

The *JX-7* clad swinging patio door features an extruded aluminum frame on the exterior and Ponderosa pine on the interior. The door also includes high-performance glass, a *Lexan* sill, and compression-foam weatherstripping. Wenco, Mount Vernon, Ohio.

224 Surface closers

The *Heritage* mid-range line of surface closers features independent valves for latch and speed control, backcheck and spring adjustments, and a fully adjustable aluminum body. The closers measure 11 7/8 in. long and have UL approval. Rixson-Firemark, Franklin Park, Ill.

225 Doors and windows

The *Glassprotex* 60- and 90-minute fire-rated glass door, window, and wall assemblies feature *Contraflam* glass. *Contraflam* consists of two layers of glass with a gel interlayer that absorbs heat and radiation. O'Keeffe's, Inc., San Francisco.



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226 Patio door

The *Hallmark* hinged patio door is available with a choice of either a natural wood or aluminum-clad exterior. Exterior wood surfaces are made of kiln-dried Western pine that has been treated with water repellent, preservatives, and insect toxicant. The doors are available with either a right- or left-hand operating door. Caradco, Champaign, Ill.

227 Casement windows

A line of casement windows features a one-piece, reusable, polyvinyl glazing boot said to enable glass replacement without scraping or recaulking. The windows come with 5/8-in.-thick double insulating glass and the *Q-Lon* weatherstripping system. Windsor Wood Window Co., West Des Moines, Iowa.

228 Lockset

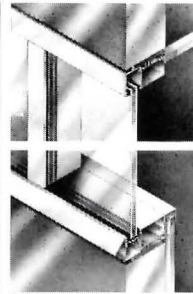
The *Lockwood 970 Key 'N Lever* locksets are available in several keyways, including *V7* high-security cylinders. The locksets are intended for a variety of functions and come in a selection of finishes. A version for barrier-free applications may be specified. Lloyd Matheson, Inc., Charlestown, N. H.



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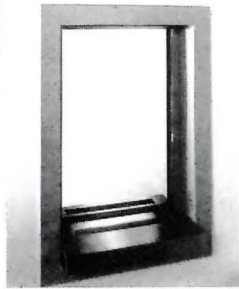
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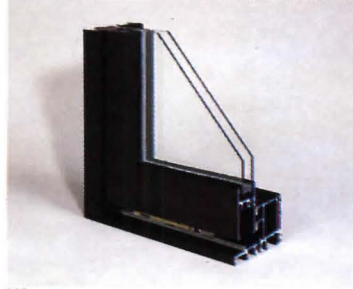
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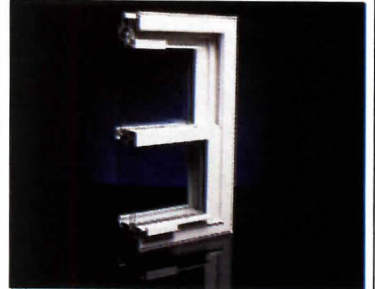
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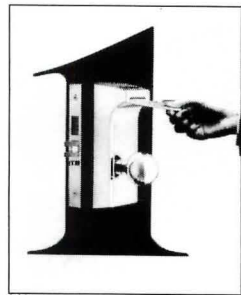
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229 Windows

The *True Divided Lite* line of window designs is available in the manufacturer's wood casement, double-hung, and *Slide-by* windows. The choice of styles includes traditional rectangular colonial, vertical Victorian, and contemporary horizontals. All windows are available with single- and double-pane glass. Norco Windows, Inc., Hawkins, Wis.

230 Walk-up window

Model PT-7105 pass-through walk-up window is a light-security window designed for use in weather-protected areas such as lobbies, vestibules, and halls. The exterior frame is fabricated from 14-gauge cold, rolled-steel and spot-welded at the corners. The frame is available in a stainless-steel finish or enameled colors. LeFebure Corp., Cedar Rapids, Iowa.

231 Curtain walls

The *Cellerete* preassembled spandrel panels weigh less than 35 lb psf, come with insulation, and need only drywall to complete the installation. Custom surface treatments are available. Scott System, Inc., Denver.

232 Laminated glass

Bentlite laminated glass consists of two matched pieces of bent glass bonded together with a high-impact polyvinyl butyral interlayer that is available in clear, bronze, and gray. Typical applications include interior partitions, skylights, greenhouses, railings, and elevator and revolving door enclosures. Laminated Glass Corp., Telford, Pa.

233 Rolling door

The *Series D-35T* heavy commercial rolling door is designed to meet the requirements of high-rise construction. The door's special sill design is said to provide water resistance up to 15 psf while also allowing for minimal air infiltration. The doors are available with a variety of hardware types, tandem rollers, and an optional interior screen package. Milco Div. Wausau Metals Corp., Wausau, Wis.

234 Double-hung window

The *Pella Clad Double-hung LD* window is designed for renovation use. The window can be produced to the exact dimensions specified by the architect or contractor and will fill openings up to 5 ft 6 in. wide by 10 ft high. Rolscreen Co., Pella, Iowa.

235 Curtain wall

The *Horizon* line includes pre-engineered curtain walls and strip windows. The windows are thermal-approved, pressure-equalized, and available with single- or double-glazing. The curtain walls are available with glass, aluminum, stainless-steel, or stone wall panels. Cupples Products Div. of H. H. Robertson Co., St. Louis.

236 Door

The *402EG* door and sidelight feature hand-carved oak panels surrounding an etched, oval glass insert. Matching doors and sidelights are also available with leaded and beveled glass, finished or unfinished in oak or mahogany. International Wood Products, San Diego.

237 Revolving door

The manufacturer's revolving door is available in stainless steel or bronze metal and is said to provide additional energy efficiency to building entrances. Aluminum and paint finishes are also available. B. W. N. Industries, Duarte, Calif.

238 Key cabinet

The *Telcore* line of cabinets for storing removable and interchangeable lock cores can hold between 24 and 168 cores. The system is designed to be compatible with locks manufactured by *Best, Falcon, Corbin, Yale, Medeco, and Schlage*. Telkee, Inc., Glen Riddle, Pa.

239 Window

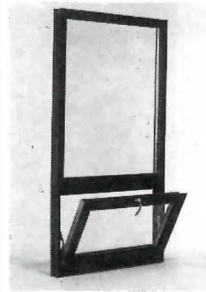
The *Series 400* heavy-duty, vinyl-framed window is engineered to meet commercial specifications and is available in double-hung and horizontal slider styles. The windows feature welded construction throughout, and a frame that is said to be 30 percent thicker than conventional window frames. Vinylite/Vinyl Building Products, Inc., Oakland, N. J.

240 Keycard system

The *Saflok IV* electronic keycard system features circuitry encapsulated in plastic to improve resistance to moisture and humidity. Each key carries individual employee identification and will react to a variety of read speeds. Computerized Security Systems, Inc., Troy, Mich.



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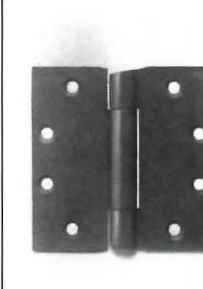
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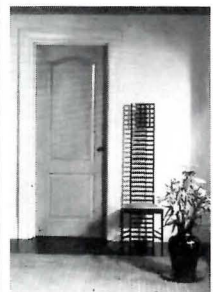
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241 Exterior door

The *Diamond Madison* four-panel exterior wood door is available in pine or fir and features raised moldings surrounding all panels and glass. The door has beveled leaded-glass inserts laced with diamond designs, and may be specified with single-glazing or insulated glass. Morgan Products Ltd., Oshkosh, Wis.

242 Revolving door

The *Round Revolver* revolving door is designed with a segmented drum and canopy and is available in aluminum, stainless steel, or bronze. The door can be operated manually, with a power-assist mechanism, or completely automatically. A security version is also available. Horton Automatics, Corpus Christi, Tex.

243 Door openers

The *Tormax* line of high-speed electromechanical and electrohydraulic door and gate operators uses brushless rotating field motors. The units are available in sliding, swinging, and in-ground swinging models for commercial door applications. F. L. Saino Manufacturing Co., Inc., Memphis, Tenn.

244 Projected window

A 3 1/8-in. aluminum projected window is available with optional wood-like *Celuka* interior cladding and internally housed blinds. The windows may be custom-engineered to match historical preservation designs. The windows can be dual-glazed with a nominal 1-in. air space, or triple-glazed. Graham Architectural Products Corp., York, Pa.

245 Stained glass

A line of decorative glass products includes etched, sandblasted, and carved panels; stained, leaded, zinc, and copper foil windows; etched, sandblasted, beveled, painted, and kiln-fired screens and room dividers; and copper foil and zinc lampshades and domes. Elysian Art Glass Co., Denver.

246 Door

The *Classique* die-formed door facing features a swept-archway look atop the larger upper panel and a defined oak-grain texturing embossed over the entire surface. The cross rail on the door is positioned lower than usually found on standard American doors. Masonite Corp., Chicago.

247 Entrance systems

Arm-R-Clad entrance systems are available in 3/8- and 1/2-in. clear, gray, and bronze glass with flat-polished exposed edges. Entrance styles may be specified with square, tapered, and radius rails. Standard push pulls, locks, and cylinders are also available. Hordis Brothers, Inc., Pennsauken, N. J.

248 Flush doors

Tectonix VX flush doors are made from axially laminated veneers. Specifiers may choose from five patterns in 18 veneers, including several wood species, grains, and colors. The doors are said to be suitable for commercial, residential, and institutional use. Forms + Surfaces, Santa Barbara, Calif.

249 Patio door

The *Fiber-Classic* French patio door features an insulated entry with a compression-molded surface said to resemble red oak grain. The fiberglass-reinforced door skins and dual thermopane glass panes are assembled in a single process. Therma-Tru Corp., Toledo, Ohio.

250 Terrace door

The manufacturer's clad terrace door features a precision-formed aluminum exterior with a polyester finish in white or brown. Other features include insulating or Low E glass, foam-filled weatherstripping along the header and jambs, and a factory-applied sealer at the top and bottom of each sash. Marvin Windows, Minneapolis.

251 Institutional hinge

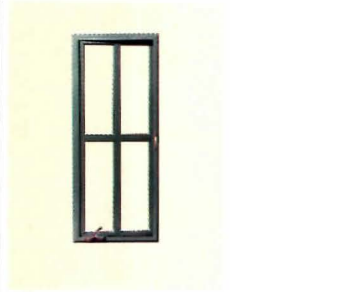
The *IHTCB1901* institutional hinge is made of heavy wrought steel and incorporates two *Stanite* bearings to handle both vertical and lateral loads. The hinge is available in several painted finishes, uses a standard template hole pattern, and fits a 5/16-in. frame backset. Stanley Hardware, Div. of The Stanley Works, New Britain, Conn.

252 Custom doors

A line of custom doors is available in Western pine and mahogany for interior and exterior use and walnut, birch, ash, and red and white oak for interior doors only. The doors feature raised and beaded panels and may be specified in a number of design variations. Sun-Dor-Co., Wichita, Kan.



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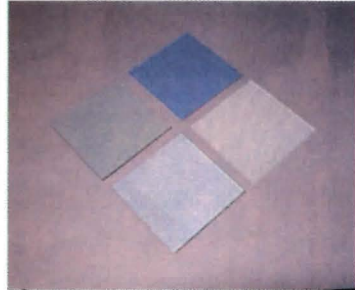
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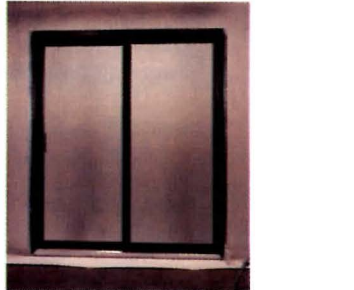
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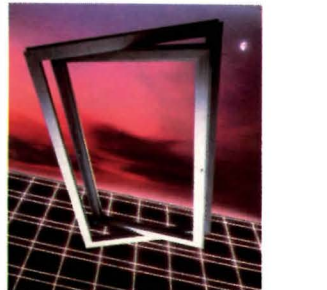
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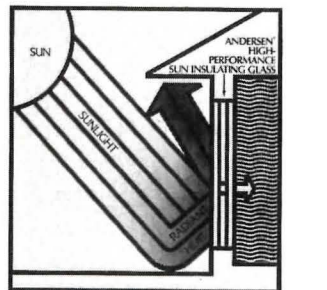
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253 Doors

The manufacturer's *Eyebrow French* doors are suitable for remodeling, room additions, and new-construction applications. The door panels, frame members, and divided lites are made of natural wood both on the exterior and interior. Glazing options include 5/8- or 1-in. insulation, and Low E glazing. Weather Shield Manufacturing, Inc., Medford, Wis.

254 Aluminum windows

The *W-25T* series of double-hung aluminum windows features an upper and lower 90-deg-tilting sash, insulated glass, and thermal barriers in the frame and sash. The series is designed for retrofit and new construction. Milco Div./Wausau Metals Corp., Wausau, Wis.

255 Windows

The manufacturer's line of half-, quarter-, and full-circle windows features prefinished extruded aluminum exteriors and clear, natural-wood interiors. The windows are glazed with 1-in. double-sealed insulated glass. Sizes range from 2 ft to 10 ft in modular increments. Eagle Manufacturing, Dubuque, Iowa.

256 Steel windows

The *Landmark Series* of steel windows features narrow, hot-rolled sections designed to accept insulation up to 5/8 in. thick. Fully weatherstripped, the windows are available in fixed frame, casement, and other operable vent configurations. Hope's Architectural Products, Inc., Jamestown, N. Y.

257 Glass panels

Patternlite glass panels are said to control light and heat transmission in atriums, skylights, and other sloped-glass installations. The panels are laminates of 1/8-, or 1/4-in. clear or tinted heat-strengthened glass and a vinyl interlayer of either monolithic or double-glazed construction. PPG Industries, Inc., Pittsburgh.

258 Half-round window

A 6-ft half-round window is designed to transfer weight and wind load directly to the frame of a building by means of an aluminum beam that is an integral part of the window's sill. The window features a pine interior and, seamless polyurethane exterior, and is available in two grille patterns. Webb Manufacturing, Conneaut, Ohio.

259 Electric window opener

An electric window opener will open and close awning and roof windows from a remote command center. The kit comes with a power operator, a command center, a power supply, electric cords, and a rain sensor that will automatically close windows when rain is detected. Andersen Corp., Bayport, Minn.

260 Clad windows

Rated Class A by the National Wood Window and Door Association, the manufacturer's windows feature a 1 1/2-in. Ponderosa pine frame that is waterproofed, primed, and then clad with dent-resistant extruded aluminum. Windsor Wood Window Co., Div. of Win-Mark Manufacturing Corp., West Des Moines, Iowa.

261 Specialty windows

The *680 ProComm* series of projected and casement specialty windows is available with "double-wide" true muntins, separating four insulated fixed lites. The windows are glazed with a polycarbonate material and have 1/8-in.-thick extruded aluminum frames. Seasonal Industries, Inc., Indiana, Pa.

262 Stick system

A stainless-steel stick system intended for store fronts, entrances, office buildings, and other interior applications is pre-engineered and can be cut to length to meet custom specifications. The doors and frames are available with either a satin or mirror finish. Dawson Metal Co., Inc., Jamestown, N. Y.

263 Window system

The *Sealair* window system has a redesigned thermal-break feature with an indented thermal cavity. The system includes vertically and horizontally pivotable windows; outswinging and inswinging casements; and projected, top-hinged, and fixed windows. A selection of hardware is also available. Kawneer Co., Inc., Norcross, Ga.

264 Insulating glass

High Performance insulating glass features an outer pane with bronzed-tinted glass to reduce solar gain and a transparent coating on the inner surface to reduce radiated heat. The glass is said to be more energy-efficient than triple-pane units. Andersen Corp., Bayport, Minn.

Hurd is the innovative leader of the window industry.

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R-4



Consider the Hurd clad casement. A standard product for us, by any other criteria, this is a very exceptional window. The .050 inch thick aluminum cladding on the frame and sash is electrostatically coated so it won't chip, fade or peel. The full one-inch insulating glass is also available with two different Heat Mirror™ glazings. Top performance is further guaranteed by triple weather stripping and a thick wood frame.

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Clad Casement w/1" insulating	.43	2.31	186
Clad Casement w/1" Heat Mirror 88	.25	4.05	149
Clad Casement w/1" Sunbelter 66	.24	4.20	103
Clad Casement w/Bronze Sunbelter 66	.24	4.20	86

¹ Standard ASHRAE (1981) winter conditions.
² Standard ASHRAE (1981) summer conditions.

for cold climates and Sunbelter™ 66 for hot climates. Each is intended to minimize energy usage and maximize interior comfort. Yet neither restricts or limits the view. Although you can include this custom feature as a premium, it's a standard offering from Hurd.



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Building
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Architect:
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Capture the delicate, light-transmitting qualities of glass, while relying on the durability of a masonry structure of superior insulating capability.

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Re-define space by overcoming the traditional limitations of an opaque wall. Control natural or man-made light. You're in charge! Permeate a room with bright light and reflected colors. Or design a warm intimate interior providing maximum privacy.

American-made PC GlassBlock® products inspire your imagination — let it run away with you.

For more information, contact Pittsburgh Corning Corporation, Marketing Department, AGB-6, 800 Presque Isle Drive, Pittsburgh, PA 15239, Tel.: (412) 327-6100. In Canada, 106-6 Lansing Square, Willowdale, Ontario M2J 1T5, Tel.: (416) 222-8084.
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This Chicago crossroads address means prestige. But it also means dirt, noise and energy expense.

Window replacement by Pella brings it all under control.

Marking the corner where the Chicago Loop meets the Magnificent Mile is an important triad of contemporaries: the Beaux Arts Chicago Tribune and Wrigley buildings and this art deco landmark. This tower, Holabird and Root's prototype for their Chicago Board of Trade building, has been a prestigious address since the roaring twenties. But by the eighties, the roaring and the grime inside came from traffic on Michigan Avenue. And energy costs had climbed through the roof.

The problem was 1287 ill-fitting original steel windows. To replace them, the building owners sought a supplier with a reputation for quality custom windows, energy efficient design and the ability to handle all aspects of the project. So they contracted with Pella.

A feat of planning

Replacing over 1200 windows in a single summer without disrupting the fully-occupied building was a major feat of planning and supervision. Pella custom-built the windows to fit over existing frames and installed them from indoors on all 33 floors, precisely as scheduled. The owners chose Pella Traditional Double-Hung (TD) and imposingly scaled Large Double-Hung (LD) Windows as much for easy maintenance as for structural performance and historical accuracy. Windows pivot for easy washing from inside, eliminating the necessity for exterior windows hooks which were considered a safety hazard.

Improves interior environment

In addition to significantly reducing heating and air conditioning costs, the Pella TD and LD windows seal tightly (maximum air infiltration 0.15 cfm at 25 mph) to keep the interior

environment cleaner.

What's more, the owners were pleased at the considerable reduction of traffic din. One contributing factor is nearly an inch of insulating air space between the fixed glass pane and the removable double glazing panel. And, tucked safely in that air space, optional Pella Slimshade® blinds replace window treatments that forever needed repair and cleaning. One of seven glazing and shading options, Type E Slimshades offer impressive U and R values (U .23, R 4.35).

Custom clad colors, custom windows

Pella's low-maintenance, aluminum clad exterior can be finished in any color needed for historical accuracy or renovation. The baked enamel finish resists fading, chalking, chipping, peeling and other signs of age.

Pella provides custom or standard windows which meet requirements for historical accuracy and code demands. Your Pella distributor can tell you more. Look for Pella in the Yellow Pages under "Windows". Call Sweet's BUYLINE or see Sweet's General Building File. Or send the coupon below.

Please send me the latest literature on Pella for replacement and new construction.

Name _____

Firm _____

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This coupon answered in 24 hours.

Mail to: Pella Windows and Doors, Commercial Division, Dept. T31L6, 100 Main Street, Pella, IA 50219. Also available throughout Canada.

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Pella. The significant difference in windows and doors.

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Owner: The Wirtz Realty Corporation

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Sheer Elegance



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For styled interiors
that demand a touch of elegance.



Write for complete catalog
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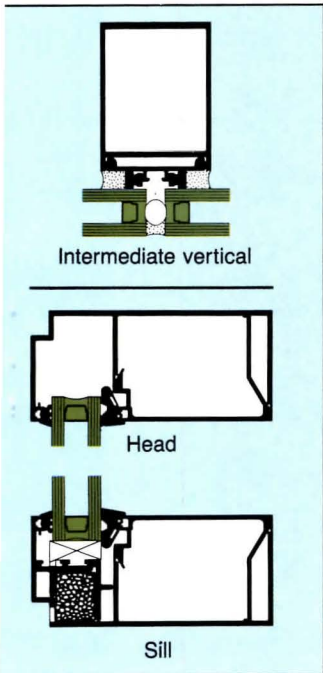
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Structural Silicone Glazing System from United States Aluminum Corporation



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Design Features

- Two-sided structural silicone support
- Inside or outside glazing
- Provision for 1/4" and/or 1" glazing
- Reusable injection molded nylon twist-in and twist-out temporary glass retainers
- Optional thermally broken profiles
- Simple stacking erection and glazing
- Low profile 90° and 135° inside and outside corners
- Intermediate horizontals (outside glazed only)
- Continuous sill gutters with baffled weeps for optimum water performance
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United States Aluminum gives you over 25 years of proven quality.

For complete information, call 1 (800) 527-6440 or write:

United States Aluminum Corporation

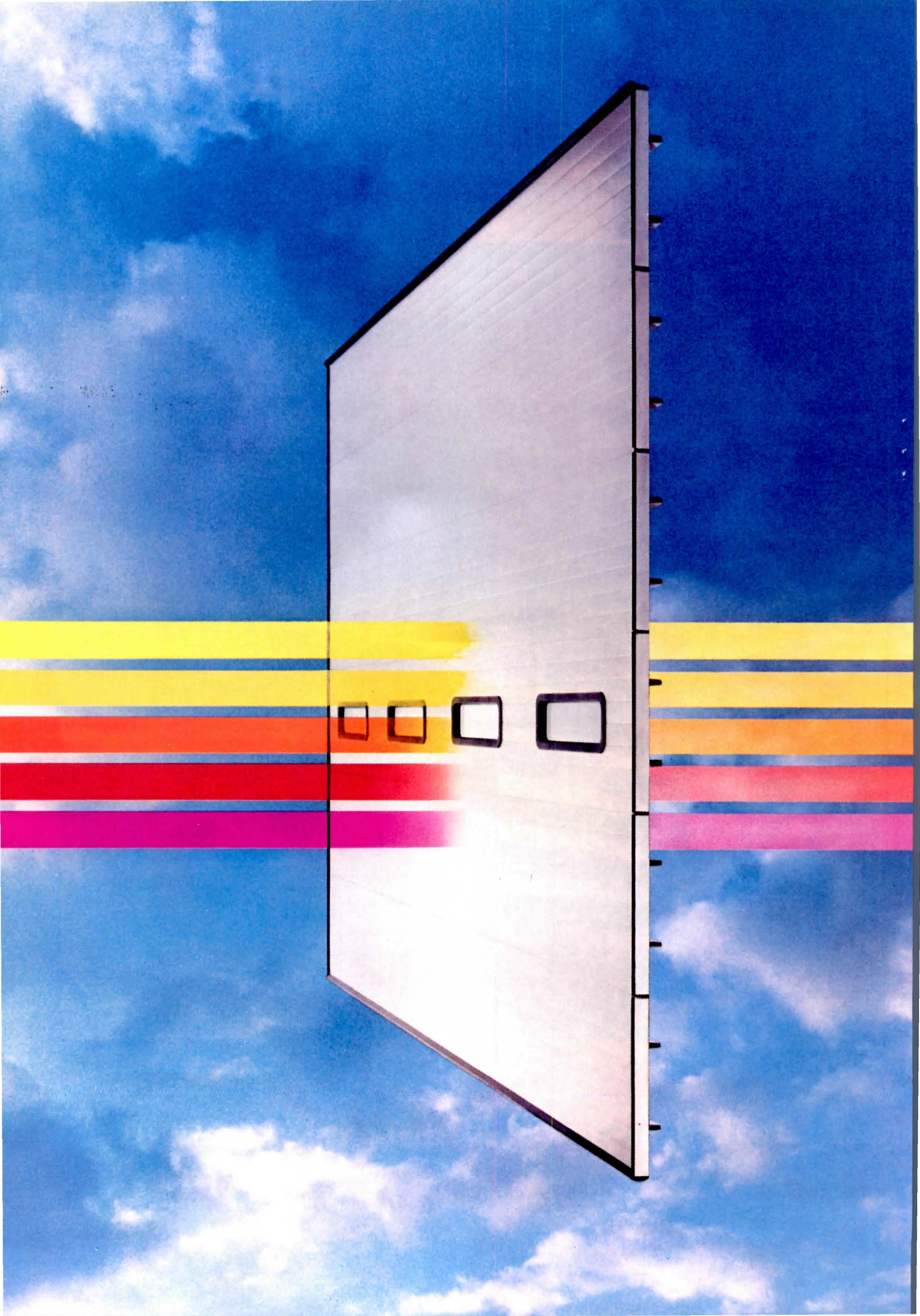
Manufacturing Facilities

3663 Bandini Blvd.
Vernon, California 90023
Telephone (213) 268-4230

200 Singleton Drive
Waxahachie, Texas 75165
Telephone (214) 937-9651
or (214) 299-5397 metro

6969 West 73rd Street
Chicago, Illinois 60638
Telephone (312) 458-9070

720 Cel-River Road
Rock Hill, South Carolina 29730
Telephone (803) 366-8326



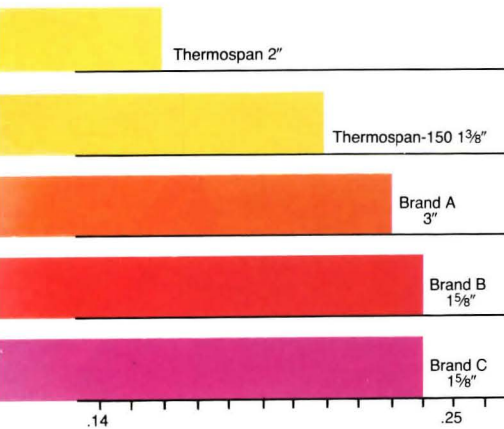
It's what your door stops that counts.

Lots of traffic through your doors is generally a good sign in the world of business. But when heat and cold come to call, your doors – especially your insulated overhead sectional doors – shouldn't let them in.

When your building specs call for minimum heat transfer through overhead sectional doors, you should specify Thermospan™ insulated doors.

In a series of head-to-head installed-door tests conducted by Architectural Testing, Inc., the Thermospan 2" door proved to be significantly more energy efficient than other leading insulated doors.

Thermal (U_c) Test Results



All doors tested were 10'-2" x 10'-0" no-glass doors installed to manufacturer's specifications.

The independent testing service and the test procedure were recommended by the National Association of Garage Door Manufacturers.

The Wayne-Dalton Thermospan-150 1 3/8" door also allowed less heat transfer than the competitive doors, including one 3" door.

It's the total door that determines heat transfer, not just the section. That's why we pay special attention to every aspect of the door.

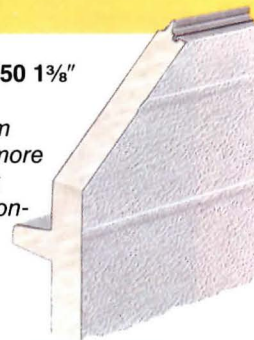
Thermospan sections have high-tensile steel skins with roll-formed integral struts. Sections are bound together by foamed-in-place polyurethane insulation. A complete thermal break along joints and end caps reduces heat transfer between skins.

Rubber bulb joint seals minimize air infiltration. Integral vinyl jamb seals raise with the door to retard seal damage when the door is open. U-shaped bottom seal won't ice up, seals against uneven floors. The factory-installed top seal reduces infiltration between header and door.

Thermospan 2"
Top of the line. At least 43% more energy efficient than other non-Wayne-Dalton doors tested.



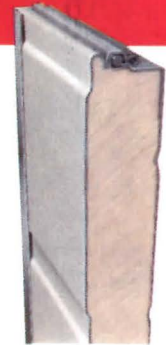
Thermospan-150 1 3/8"
Competitively priced, premium door features, more energy efficient than the best non-Wayne-Dalton door tested.



Brand A 3"
Polystyrene glued-in block insulation. Various moldings and end caps bridge thermal break.



Brand B 1 5/8"
Bare galvanized interior steel skin. Extra struts required on panels over 16' long.



Brand C 1 5/8"
Foreign-made building panel converted for door manufacture.



When heat and cold are regular visitors, specify Thermospan. Call or write for our new test results and complete Thermospan specifications. Wayne-Dalton Corp., P.O. Box 67, Mt. Hope, OH 44660, Phone: (216) 674-7015.

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Phone 216-674-7015

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963-001-1

WHAT THIS PERMA-SHIELD WON'T DO IS AS IMPRESSIVE

The Perma-Shield vinyl won't chip, flake, peel, leak, warp, rust, pit, blister, or corrode.

It would take a window just short of miraculous to make a claim like that without flinching. But because of its unique Perma-Shield system, our casement window can do just that.

By sheathing the wood core with a nearly indestructible vinyl, an Andersen® Perma-Shield® casement window has the ultimate protection against weathering and wear. In fact, the exterior never needs painting. Ever.

But this window does more than just stay good-looking—it stands up to just about anything that comes its way.

It'll take the heat and cold: An Andersen casement window far exceeds the industry standards for weathertightness. We use a wood core because it's one of nature's best insulators, double-pane insulating glass, and specially designed weatherstripping to seal out drafts and dust.



Thick, rigid Perma-Shield vinyl surrounds a treated wood core. Superior insulation, virtually maintenance-free.



WINDOW FROM ANDERSEN SAYS WHAT IT WILL DO.



For even more energy efficiency, it's available with High-Performance and new High-Performance Sun insulating glass.

It'll take the wind and rain: An Andersen casement window's welded corners add strength and further protect the wood core against weathering.

Best of all, what this window will do is provide you with an energy efficient, low-maintenance window that lasts, and lasts. Beautifully.

The Andersen Perma-Shield casement window. Miraculous? Almost. When it installs itself, we'll call it a miracle.

For more information call your Andersen distributor or see Sweet's File 8.16 An. Or write Andersen Corp., Box 12, Bayport, MN 55003.



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home to
quality.



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Heat Mirror™ takes windows out of the Dark Ages.

In days of old, controlling solar heat gain through windows meant limiting natural light as well. Today, however, there's Heat Mirror insulating glass — liberating windows and views from the gloom of dark and reflective glazings.

Compared to dark tinted or reflective glass, Heat Mirror gives you the same level of solar control, yet lets in up to four times *more* natural light. Available in any standard glass color, including clear, Heat Mirror insulating glass is ideal for both renovation and new construction.

Because windows (and skylights) with Heat Mirror let in more daylight, less artificial lighting is required. This means lower lighting bills and reduced air conditioning costs. And, you can often downsize HVAC equipment for significant, "up-front" cost savings.

What it all adds up to is fewer compromises. With Heat Mirror, you can maximize aesthetic opportunities without sacrificing energy efficiency.

Heat Mirror has been the state-of-the-art in insulating glass since 1981. Only Heat Mirror offers

Total Performance: controlling summer heat gain, winter heat loss, sound transmission, ultraviolet radiation, and condensation better than any other insulating glass.

So, make the enlightened choice and join the window renaissance: specify Heat Mirror insulating glass. For details and technical information, call or write Southwall Technologies, 1029 Corporation Way, Palo Alto, CA 94303. 415-962-9111. Or see us in Sweet's: 08810/SOU.



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No matter what your curtainwall needs are, you can look up to Kawneer. For design. For performance. For timely response.

Kawneer has a wide variety of engineered systems to meet a full range of building and design requirements. Low rise and high rise systems. Stickwall and unitized. Custom designed. And, energy saving, performance-boosting thermal systems.

Extend the reach of your curtainwall specs, without going far. Call on Kawneer. We can meet your goals. From top to bottom. From idea to reality.

For complete information about Kawneer Curtainwalls contact: Kawneer Company, Inc., Department C, Technology Park/Atlanta, 555 Guthridge Court, Norcross, GA 30092
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Pacific Trade Center
Architects—Chapman Desai Sakata
Contractor—Pacific Construction
Installing Kawneer dealer—
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The Designer's Element

Kawneer

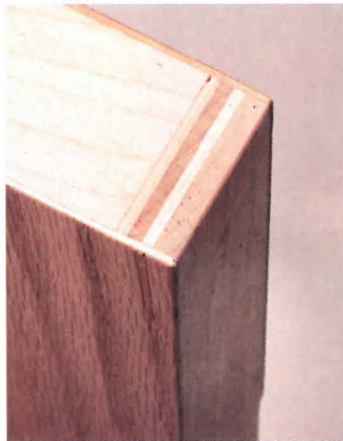
Safety Can Be Beautiful With Fire Doors By Algoma Hardwoods.

If you thought the beauty of wood doors had to be compromised with metal fire accessories, look again. Wood fire doors from Algoma Hardwoods offer

warranted performance in a variety of veneers and finishes without the use of excessive metal.

Half-surface hinges are obsolete.

Algoma's multi-ply Superstiles are standard on all $\frac{3}{4}$, 1 and 1½ hour fire doors. This stile edge is fully warranted with the use of mortised butts thus eliminating half-surface hinges and their throughbolts.



Throughbolts are eliminated

for attaching surface mounted closers and vertical rod exit devices. When proper reinforcement is specified, these devices can be installed with screws.



Metal vision panels are gone. Veneer wrapped materials install like wood beading and are available in all ratings.



PATENTED

Metal edge guards virtually disappear

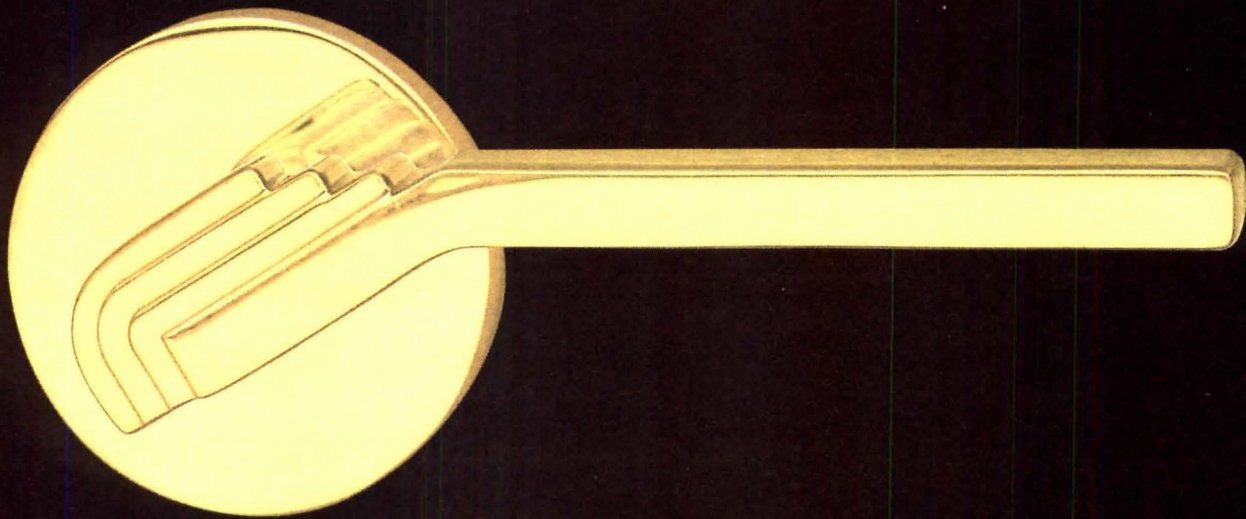
on pairs when they are wrapped with matching veneer. The overlapping astragal is eliminated in many installations, so coordinators are not needed. Available up to 8'0" x 8'0".




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 **Valli&Colombo**

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IN A TEST CHAMBER, SOME WINDOWS ARE EQUAL TO OURS.

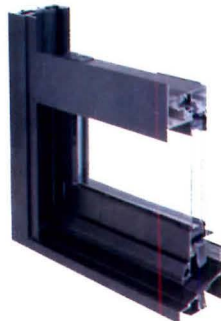


BUT... WHO LIVES AND WORKS IN A TEST CHAMBER?

At Milco, we design and construct windows to be utterly weather-tight. And then hyperbolic use tests that we put our production windows through in our factory "torture" chamber prove that they rate, as much as two times better than industry standards. But so do some others.

The real test is the real world.

We'll install a Milco window on a test basis at one of your current project sites to prove its quality under actual climatic conditions.



The quality of our windows is the reason we can afford to cover them with our liberal ten-year limited warranties. We couldn't have warranties as good as ours unless we had windows as good as ours.

For more information on Milco windows, including our on-site test installations, call our Quality Design Hotline 800-262-8039, or write to Milco, 7555 Stewart Avenue, Wausau, WI 54401. You'll see that Milco windows are built to be pleasantly uneventful.

Check the Sweets General Building File Section 8.15/Mdw.

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*When your reputation is on the line,
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Many skylight systems look good on paper. But the difference between "meeting specs" and performing in the real world over time, can be dramatic.

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Your single source for skylights since 1945.

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Photo: Capitol Marble Company, Marble Falls, TX • Architects: Shepherd & Boyd, Dallas.

STOP SETTling FOR AND BEAUTY OF ALL

What windows should you specify for a commercial project?

For years the standard answer to that standard question was standard aluminum. Aluminum windows offered the best combination of performance characteristics. Never mind that they left something to be desired in terms of insulation and beauty.

Now you have a beautiful and efficient alternative. Marvin Magnums. Wood windows that shatter commercial standards.

ENGINEERED TO OPEN
THE MIND.

Where could you use a

commercial wood window? Practically anywhere you might use an aluminum window. High rise, low rise, hospitals, schools, renovation projects or new construction. The only limitation is your imagination.

Because these commercial wood windows perform. Beautifully. Tests on a 48" x 64" Marvin Magnum Tilt-Turn yielded these numbers:

Air infiltration: .01 cfm @ 25 mph. .02 cfm @ 50 mph.

Wind loads: 200 mph positive pressure. 256 mph negative pressure.

Water infiltration: 0 @ 66 mph.

R values: as high as 4.55.

U values: as low as .22.

MARVIN MAGNUMS
PERFORM BECAUSE
MARVIN PEOPLE PERFORM.

Those test results didn't happen by accident. They came about because Marvin people put all their pride and skill into every Marvin Magnum we make.

We don't warehouse an inventory of standard sizes. We make every window to order. Only the most precise hardware will do. And we specialize



THE WARMTH MINUM.

extras such as weather-ripping that's welded at all our corners for the tightest possible seal.

Marvin people are with you every step of the way. From our design service up front to our field representatives, each of us is dedicated to making these windows the best choice you could possibly make.

**EVERYTHING IS OPTIONAL.
QUALITY IS STANDARD.**

Marvin Magnums come in a variety of styles.

Our Tilt-Turns swing into the room for cleaning or tilt in for ventilation. Choose the simple, elegant lines of our basic Tilt-Turn or consider a Round Top or simulated double hung. For maintenance, there's a stationary unit with a system



of keyed locks. You can also specify the tilt-only hopper or an authentic double hung with sash that tilts into the room for washing.

Glazing options include 7/8" insulating, 1" insulating, solar bronze, solar gray, solar cool, Low-E or Low-E with Argon. For easy maintenance, most Magnums are available in medium bronze aluminum cladding or Polycron finishes.

Even if you should want

to investigate your options, we'll gladly work with you.

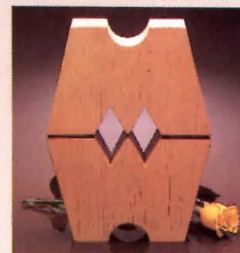
**YOUR TELEPHONE CALL
WILL BE WARMLY RECEIVED.**

We want to tell you much more about the Marvin Magnum series. Please call toll-free at **1-800-328-0268** (in Minnesota 1-612-854-1464). Or write Marvin Magnum Windows, 8043 24th Avenue South, Minneapolis, Minnesota 55420.

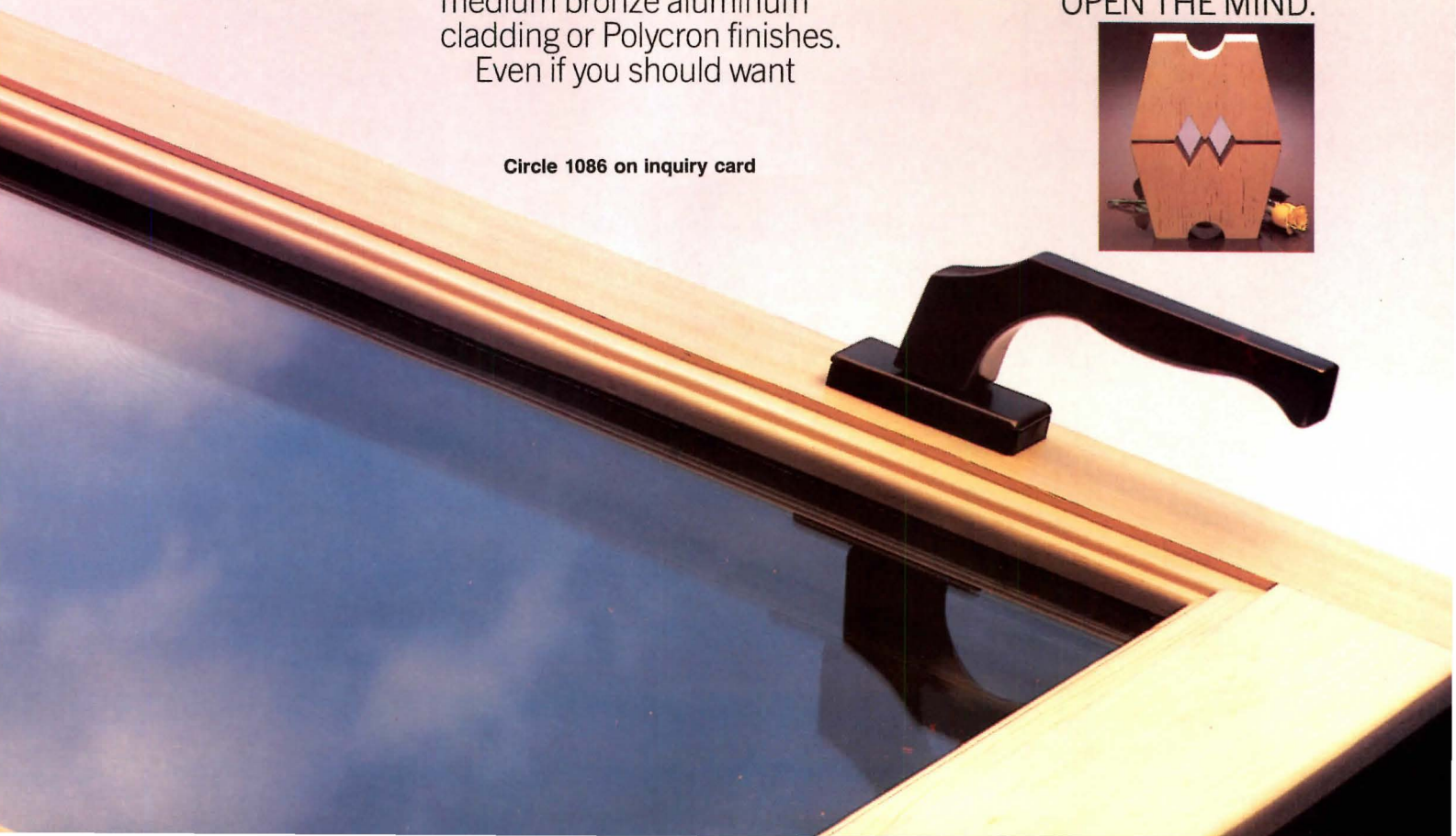
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MERCEDES-BENZ, in Hollywood, CA (upper left) by The Nadel Partnership, Inc., of Santa Monica, CA. REDKEN RESEARCH LABORATORY in Canoga Park, CA (above) by Rochlin & Baron of Los Angeles. INTERIOR PARTITION / RESIDENCE (left) by Baldwin Associates Architects in Denver.

California Glass Bending...Enhancing the World's Appearance

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This dedication to detail assures the finest and most durable final product available . . . only through the craftsmen at California Glass Bending.

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VELUX® roof windows make history attractive



Crestwood developed by Renaissance Investment Corporation

As an investment, the preservation of historic buildings is particularly attractive. But, to attract today's discriminating buyers, it is essential to add exceptional value and convenience that requires innovation and craftsmanship. The answer is clearly VELUX roof windows.

The Crestwood in Atlanta is an excellent example. The idea was to add an upper story to these townhouse condominiums without affecting the historic site line of this classic 1929 example of English Renaissance architecture. The proven quality of VELUX Model GGL roof windows made them virtually the only choice. The premium wood construction provided excellent thermal characteristics with a decidedly residential character. And, unlike skylights, the GGL's center pivoting features allow both surfaces of the window to be cleaned easily from inside. As fully

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For rehabilitation projects, VELUX can open up your imagination to many historic possibilities. We'd like to give you some ideas. Send for our free 24-page, full-color booklet: "The Complete Guide to Roof Windows and Skylights." Or see Sweet's 7.8/Vel or 8.16 Ve.



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Project: Private Residence, Rancho La Costa, Calif. Architect: John Mosele, AIA, San Diego, Calif.

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All Weather Protection - Always!



Q U A L I T Y



Architect: Lance Muebes & Associates, Seattle WA

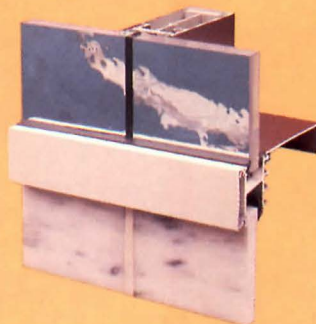
We're behind the country's most interesting rock formations.

From traditional punched windows in granite, to glass and marble ribbon systems, Vistawall's stone curtain wall is behind the nation's most breathtaking stone exteriors.

Our stone curtain wall allows you the flexibility to combine all-glass walls with stone infilled areas to create a variety of architectural looks. All at a cost well within the range of a typical curtain wall system.

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Of course stone curtain wall is only one of our many quality architectural glazing systems. Our line includes innovative high

performance entrances, store fronts, wedge systems, window walls, slope walls and ribbon window systems — all backed by more than 40 years of manufacturing experience.

If you want the expertise of the company that pioneered stone curtain wall, put Vistawall behind you. For more information, write Vistawall, P.O. Box 629, Terrell, Texas 75160, or call (214) 563-2624. (Sweets 8.1 and 8.14/VIS or 08400 VIS and 08900 VIS)

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A Division of Butler Manufacturing Company



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in wood windows
and doors.*

Each Norco window is an American masterpiece, finely crafted in the ages-old traditions of window-making.

We complement the natural warmth of wood with the modern arts of energy efficiency. Norco windows are tightly built and offer a choice of glazing options: double glazed, triple glazed or Low-E.

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They're all built with pride in one of the industry's newest, most modern plants. Yet, each one is built in our tradition of excellence to fit your needs and specifications. Exactly.

That's how we've earned a nation-wide reputation for reliability and flexibility that has become a classic in its own right.

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NEW LOOK FOR NEW JERSEY BELL



ALPANA ALUMINUM PRODUCTS provided new custom aluminum windows, spandrel panels, and louvers which now enhance the walls of the New Jersey Bell Headquarters Building in Newark, New Jersey. The quality and design of the new facade complement the Art Deco style of this historical structure built in 1929.

The Architect (Hyun & Siri Architects, P.C.) and New Jersey Bell now enjoy the highly-improved thermal energy savings as well as the inherent maintenance and cleaning advantages. This building containing over 1,200 window units is a prime example in Newark as well as other cities where custom renovation of a monumental building has definite cost advantages over new construction.



CONSERVING ENERGY COMPLEMENTING DESIGN



ALPANA ALUMINUM PRODUCTS, INC. has been designing and fabricating custom aluminum windows and curtain wall since 1958. A continuing research and development program, utilizing an indoor performance test facility, helps keep AlpAna the leader in new advancements. Our staff of talented architects, engineers and designers are always available to service your needs on new or replacement projects.



ALPANA ALUMINUM PRODUCTS INC.

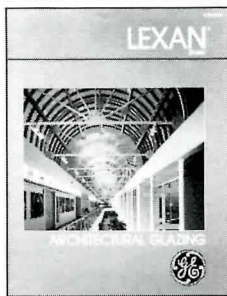
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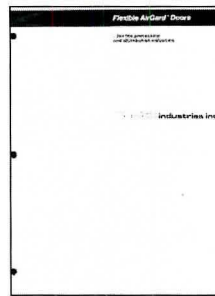
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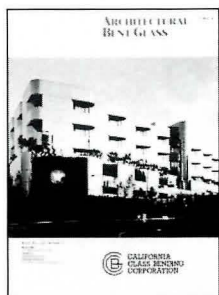
265 Glazing

A 20-page brochure features the manufacturer's *Lexan* polycarbonate sheet and laminates for glazing applications. The brochure outlines performance comparisons, code compliances, general technical and product data, installation guidelines, product specifications, and several warranties. General Electric Co., Plastics Group, Pittsfield, Mass.



271 Doors

A 6-page foldout brochure features the manufacturer's line of *AirGuard* doors designed for processing, warehouse, institutional, commercial, and industrial applications. The brochure includes detailed product descriptions and specifications. Chase/Durus Industries, Cincinnati, Ohio.



266 Glass bending

A 4-page color brochure describes the basic precepts of bending glass for architectural applications. Technical design, current capabilities, and speciality applications of a variety of types and thicknesses of bent glass are reviewed. A profile of the manufacturer is also included. California Glass Bending Co., Wilmington, Calif.



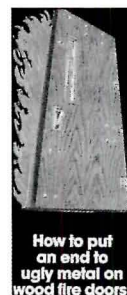
272 Windows

The *Heat Mirror* line of residential windows is featured in the manufacturer's brochure. *Heat Mirror 88* is designed for use in cold climates and *Heat Mirror 66* is intended for use in warm climates. Both versions have an insulation rating equivalent to that of fiberglass wall insulation of an equal thickness. Southwall Technologies, Palo Alto, Calif.



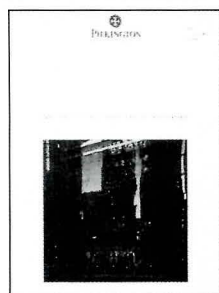
267 Insulated doors

The *Castlegate* insulated steel entry and patio door system is featured in a 27-page color brochure. The literature contains photographs and detailed illustrations of the more than 50 designs of doors. The doors incorporate a solid polyurethane foam core, thermal break edge, perimeter weatherstripping, and a fixed or adjustable threshold. USG Industries, Inc., Chicago.



273 Fire doors

An 8-page color foldout brochure features a line of wood fire doors. The brochure describes how the elimination of metal through bolts and half-surface hinges does not compromise safety. Performance test data and a specification statement are also included. Algoma Hardwoods, Inc., Algoma, Wis.



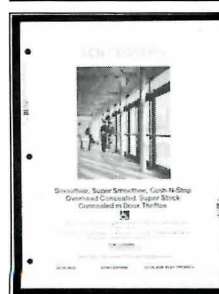
268 Structural glazing

An 18-page color brochure provides illustrations of projects throughout the world that have used the manufacturer's structural glazing system. The brochure also contains information on patch-plate assemblies and a new planar assembly that incorporates reflective and insulating glass. Pilkington Glass Ltd., St. Helens, England.



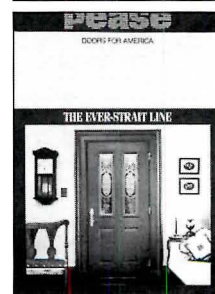
274 Folding doors

A 4-page color brochure describes the *Everfold* and *Durafold* line of folding doors. *Everfold* doors are made of extruded, expanded polystyrene construction and are recommended for use in large-scale storage and laundry areas. The *Durafold* doors are made of extruded vinyl with 3 1/2-in. panels. Elkhart Door, Inc., Elkhart, Ind.



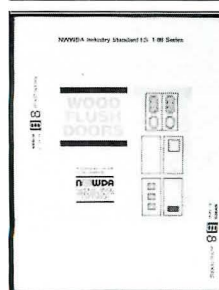
269 Door closers

A complete line of door closers is highlighted in an 8-page catalog. Products featured in the catalog include the *Auto-Equalizer* automatic door operator, *Equalizer* door assister, swing-free *Sentronic*, and *Super Smoothee* closer with reduced spring power and delayed-action. Product features, drawings, and a table of sizes is also included. LCN Closers, Princeton, Ill.



275 Steel doors

The *Ever-Straight* line of steel insulating door systems is featured in a 24-page color brochure. The literature contains product descriptions of *Crystal-Etch* decorative glass, an adjustable frame with *Jamb-Jack* screw-in fasteners, locksets, and a removable astragal for patio and double doors. Pease Industries, Inc., Fairfield, Ohio.



270 Wood doors and windows

A series of brochures are available that are described to be educational in terms of industry standards and practices. Topics include water-repellent preservative treatment for millwork, using windows and patio doors to cut fuel bills, and installation instructions and details for fire-rated flush wood doors. National Wood Window & Door Association, Park Ridge, Ill.



276 Doors

A 10-page color brochure features the *Decade Series* of doors. Included in the literature are product descriptions of raised-panel rough-sawn doors, steel raised-panel doors, flush steel rough-sawn doors, and all-steel doors. Ordering information and available options are also included. Raynor Manufacturing Co., Dixon, Ill.



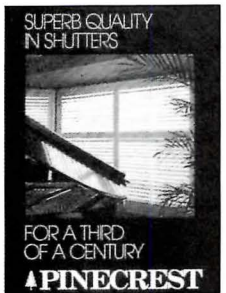
277 Hardware

A 6-page color brochure features the *Architects' Classic* line of hardware designed for use on single doors, paired doors, and single- and double-acting doors. The literature reviews stock and custom sizes, and a variety of colors and finishes. Kawneer Co., Inc., Norcross, Ga.



283 Doors

The manufacturer's line of doors, including French, terrace, and leaded glass doors, is featured in a 10-page color foldout brochure. The brochure contains descriptions of frames, stiles, rails, and muntins, as well as tempered glass options. Transoms and sidelights are also reviewed. Ordering information and specifications are included. Marvin Windows, Warroad, Minn.



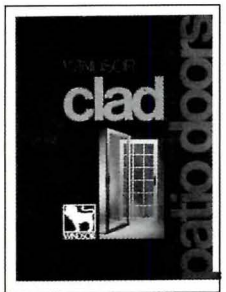
278 Doors

A series of brochures is available describing the manufacturer's *El Dorado Collection* of decorative metal doors designed for both interior and exterior applications, *Gildage 1860's* classic tin ceilings and lighting fixtures, and metal gold-leafed wood cornices, moldings, and mirrors. Pinecrest, Inc., Minneapolis.



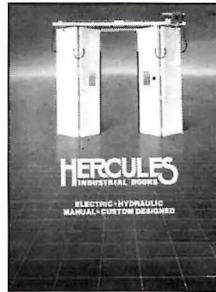
284 Hollow-metal doors

A booklet of information on the manufacturer's line of hollow-metal firedoors and frames contains a selected project listing with photographs and project specifications, a detailed description of the firedoor system, a fact sheet containing industry standards, and a 12-page brochure with product specifications. Firedoor Corporation of Florida, Miami.



279 Patio door

A 4-page color booklet highlights a line of clad patio doors. The literature contains detailed descriptions of the doors' panels, sills, weatherstripping, hardware, screens, and grilles. Cross-sectional diagrams of typical jamb and sill sections are also included. Windsor Wood Window Co., West Des Moines, Iowa.



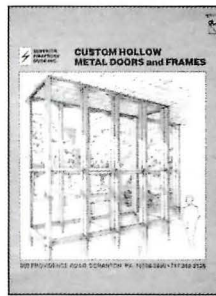
285 Industrial doors

An 8-page color brochure highlights a line of electric, hydraulic, manual, and custom-designed industrial doors. The brochure contains descriptions of standard features and options for sliding, folding, vertical-lift, manual sectional overhead, and other doors. Aluma Shield Industries, Inc., Daytona Beach, Fla.



280 Door frames and sills

The *Dura* door frame and sill series is featured in the manufacturer's color brochure. The literature contains information on available sizes, product descriptions, and construction details. The frames and sills are built with pre-finished aluminum exteriors and wood interiors. Eagle Manufacturing, Dubuque, Iowa.



286 Firedoors

A line of seamless hollow-metal doors designed for a variety of building applications is featured in a 20-page brochure. Included in the literature are diagrams of typical door construction and elevations, hardware, vision lites, and louvers. Trim profiles, corner construction, and butt stops are also included. Superior Fireproof Door, Inc., Scranton, Pa.



281 Weatherstripping

A 4-page brochure reviews *Santoprene* thermoplastic rubber designed for weatherstripping, gaskets, and static and dynamic seals. Included is a test-data chart for *Santoprene*, neoprene, EPDM rubber, and silicone, comparing flame retardance, compression set, temperature flexibility, and UV-resistance. Monsanto Chemical Co., St. Louis.



287 Revolving doors

A 4-page color booklet highlights the manufacturer's 1000 standard size, 2000 semicustom, and 3000 custom series of revolving doors. Additional detail sheets are also available. The brochure includes photographs of the three series, product descriptions, and diagrams and descriptions of hardware features and options. Crane Fulview Door Co., Lake Bluff, Ill.



282 Replacement windows

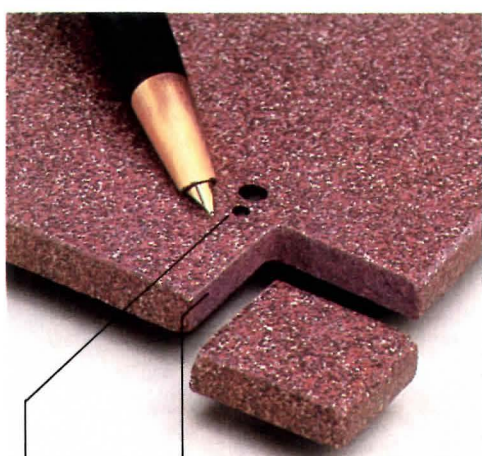
A 4-page color brochure highlights the manufacturer's replacement window system. The literature includes diagrams of various panning and trims, ordering information, and descriptions of construction details, testing procedures, historical renovations, and applications. Louisiana-Pacific Architectural Div., Barberton, Ohio.



288 Doors and windows

Wood windows, wood and aluminum doors, sliding doors, and a security shutter system are featured in an 8-page color brochure. The literature contains detailed product descriptions, cross sections of wood and PVC window frames, and close-up product photographs. Eurotech, Roslyn, N. Y.

Our Beauty Is More Than Skin Deep.



• Virtually impervious to absorption for long life and low maintenance.

• More than skin deep, the beauty goes all the way through.

Porcelain tile with through-body color is beauty that won't grow old.

Genesis™ porcelain tile is available in beautiful monochromatic and granite-like colors. Genesis is offered in unpolished, polished and textured surfaces in a wide array of sizes. Genesis can be used in interior and exterior floor and walls.

Now manufactured for the first time in the United States, Genesis is the "ultimate surface." Technology and premium raw materials combined to create a product that has through-body color that won't wear out. A surface hardness greater than granite and water absorption under .01% make for easy maintenance.

Genesis™, the "ultimate surface" combines form and function to offer the discriminating specifier the best of both.



Out-front in Porcelain Tile Technology

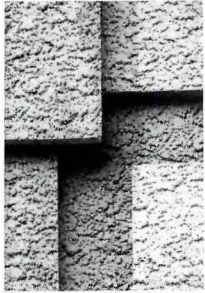
Crossville Ceramics, P.O. Box 1168, Crossville, TN 38555, (615) 484-2110, Telex 53-3097

Circle 1092 on inquiry card

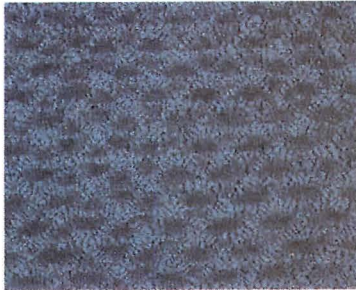
Top Photo: Farm Credit Bank Austin, Texas
Architect: H.K.S. Architects

9 Finishes

UCI 9, Finishes:
Acoustical treatment
Carpeting
Ceiling suspension systems
Painting materials
Prefinished panels
Resilient flooring
Special flooring
Terrazzo
Tile
Wallcoverings
Wood flooring



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289 Ceiling panels

The manufacturer's *Up With Color* program is designed to bring attention to ceilings through the use of colored tiles and panels. *Acoustone* ceilings feature a mineral fiber base-mat with solid-core color. *Auratone* water-felted tiles feature surface-coated color. Both lines are available in 24 colors. USG Acoustical Products Co., Chicago.

290 Wool carpet

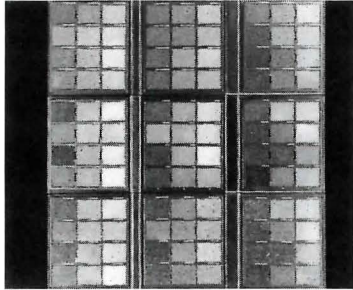
The *Town & Country* custom carpet collection allows architects and interior designers to create special textures in any color, up to 34-ft-wide seamless sizes. The 100 percent wool carpet is intended for heavy commercial traffic. Scott Mills, a Div. of The Scott Group, Cleveland.

291 Wallcovering

The *Koroseal* line of wallcoverings features the manufacturer's *Early Warning Effect* fire-detection system. *EWE* emits an odorless, harmless, and colorless vapor that will trigger smoke detectors when the surface temperature of walls reaches approximately 300 deg. The wallcoverings are available in more than 2,000 colors and patterns. BFGoodrich Co., Akron, Ohio.



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292 Woven wallcoverings

The *Cocoon Cloth* collection of wallcoverings and upholsteries consists of plain and Bedford cord weaves. Each weave is made of 60 percent wool, 20 percent silk, and 20 percent nylon and each is Class A flame rated. The collection is available in 15 colors. J. M. Lynne Co., Inc., Smithtown, N. Y.

293 Carpet tiles

Palette Plus is a line of carpet tiles that features 108 thermally pigmented colors in three face constructions—*Solids 2000*, *Flecks 3000*, and *Tweeds 4000*. The line also features the manufacturer's *GlasBac* construction, said to eliminate the need for glue or other adhesives. Interface Flooring Systems, Inc., LaGrange, Ga.

294 Glass panels

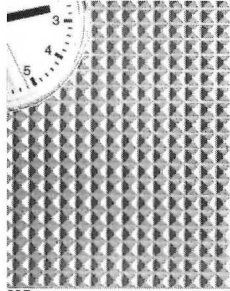
Neoparium 8 is a crystallized glass surface designed for interior and exterior walls. The panels are 5/16 in. thick and are offered in dimensions up to 36 by 48 in. Curved panels and preformed corners are also available. Standard colors include white and beige with a high-gloss finish. Forms + Surfaces, Santa Barbara, Calif.



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295 Wood flooring

Pattern-Plus hardwood flooring is made of oak with acrylic forced throughout the pores. This impregnation of acrylic is said to make the wood resistant to spills, spotting, and scarring. The flooring is available in four lengths and three colors. Hartco, Inc., Oneida, Tenn.

296 Carpet

Colorpoint carpet is produced on the manufacturer's *Chromatec* commercial dyeing system and weighs 30 oz per sq yd. The carpet can be specified for heavy-traffic areas and is available in 54 colorways. Stratton Industries, Inc., Cartersville, Ga.

297 Wall panels

The *ColorCast* series of bas-relief color surfaces for walls and doors is based on geometric patterns and can be installed with conventional adhesive systems. The units are available as castings or panels, with a Class 1 fire rating, and in sizes up to 36 by 120 in. Forms + Surfaces, Santa Barbara, Calif.



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298 Contract carpet

Floortech contract carpet is made from a combination of conductive fiber filaments and solution-dyed *Zeftron 500ZX* nylon yarns. The carpet is designed to prevent carpet-caused static-induced discharges. The line is available in five standard and four custom colors. Porter Carpet Mills, Inc., Cartersville, Ga.

299 Flooring adhesive

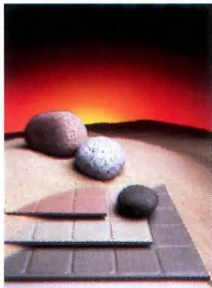
The manufacturer's #629 acrylic spray-grade flooring adhesive is formulated for installing broadloom carpet and carpet tiles. The adhesive can be used for both spray and roller applications. Non-flammable and solvent-free, #629 is said to be resistant to plasticizer migration. The W. W. Henry Co., Huntington Park, Calif.

300 Ceiling system

The *Rendition III* ceiling system is based on a narrow profile suspension system available in 4- and 5-ft modules. The series offers a variety of options, including *lensed* and *parabolic* luminaires and a choice of linear air-delivery systems. Owens-Corning Fiberglas Corp., Toledo.



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301 Grid ceiling system

The *Centricitee* grid ceiling system features a 9/16-in. grid and carries a 2-hr UL fire rating. The system is designed with a self-centering device that automatically centers a panel within the opening and prevents board edge reveals. Donn Corp., Westlake, Ohio.

302 Rubber flooring

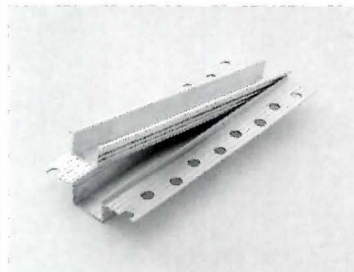
Beachstone rubber flooring is offered in five natural tones and two profiles—low-vibration square and smooth. The former measures 18 by 18 in., while the latter is available in 36- by 36-in. and 18- by 18-in. sizes. Endura, Flooring Div. of Biltrite Corp., Waltham, Mass.

303 Flooring

The manufacturer's 100 percent synthetic rubber flooring features a miniature pastille pattern. The flooring is said to be well-suited for hospitals since the low-profile pastilles allow wheelchairs, gurneys, and hospital carts to roll smoothly over the surface. Nora Flooring, Madison, Ind.



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304 Safety flooring

Tractionfloer-Studded antislip sheet vinyl flooring features fine abrasive aluminum oxide chips that are evenly dispersed throughout the wear layer surface. When foot-pressure depresses the vinyl, the chips increase friction. Raised radial discs also permit water and grease run-off in high-moisture areas. Forbo North America, Inc., Lancaster, Pa.

305 Reveal molding

A two-piece snap-in reveal molding features a base channel that is applied over the drywall, allowing the installer to tape and spackle before snapping the channel into place. Nailing flanges are prepunched with 1/4-in. holes staggered at 1/2-in. intervals. Fry Reglet Corp., Alhambra, Calif.

306 Contract carpet

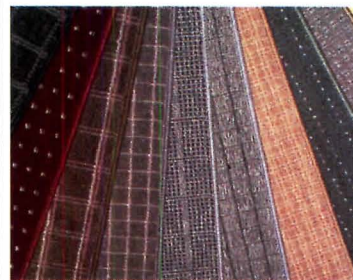
Three contract-carpet styles made from solution-dyed nylon yarns are available in 12 colors. *Lincoln Center* (top) is a 24-oz level loop, *Central Plaza* (middle) is a 37-oz cut pile, and *Twin Towers* (bottom) is a 28-oz textured loop. Cumberland Mills, Chatsworth, Ga.



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307 Fabric ceiling system

The *Celebration* ceiling system consists of 2- by 2-ft panels that are installed on a standard *Fineline* suspension system. The fabric panels are available in 57 colors, with the fabric applied directly to the metal panels. Donn Corp., Westlake, Ohio.

308 Mirror finish

The lightweight, flexible, unbreakable *A-Look* mirror-like finish is made from a composite material that contains no foam plastic. It can be used as an interior finish for walls and ceilings in accordance with a number of safety codes, including the Uniform Building Code. Mitsubishi Chemical Industries America, Inc., White Plains, N. Y.

309 Carpet

The *Custom Velvet Series II* consists of 14 different styles and textures in velvet woven carpets. Seven cut/loop and cut-pile carpets are made from stock-dyed nylon and seven cut/loop and level-loop styles are made from solution-dyed nylon. A range of custom colors is available. Mohawk Commercial Carpets, Atlanta, Ga.



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310 Molding

Marlite FRP (Fiberglass Reinforced Polyester) base molding is manufactured from a PVC compound in one-piece 10-ft lengths. The molding is said to seal the floor and wall from moisture in high-traffic commercial environments where sanitation control is a concern. Commercial Div. Masonite Corp., Dover, Ohio.

311 Window treatments

The manufacturer's *Galaxy* motorized sun controllers are custom-made for skylights and are said to protect interior fabrics from fading, as well as allow winter heat to enter a room. Matching blinds are also available. Levelor Lorentzen, Inc., Lyndhurst, N. J.

312 Ceiling system

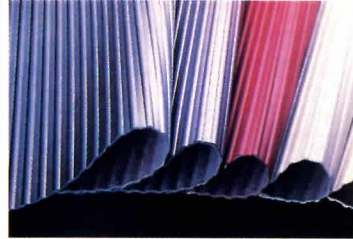
Kemlite Sanigard is a ceiling grid system that is made of fiberglass-reinforced polyester and is said to be ideal for use in food and chemical processing plants. The grid sections snap together with double-duty clips at installation. The system is said to be unaffected by moisture and humidity. Dytotech Industries, Inc., Joliet, Ill.



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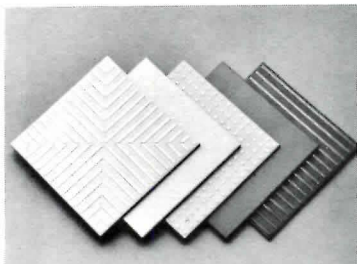
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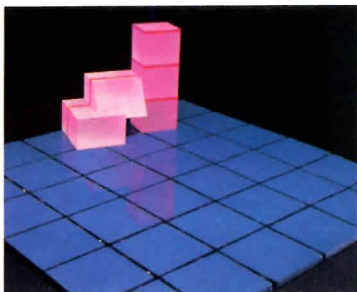
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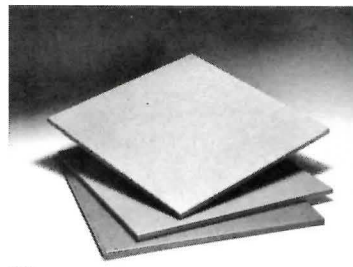
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313 Floor tile

The *RST600 Series* of safety floor tile is made of marble chips inlaid in a thermoset, fiberglass-reinforced matrix. The tile features a raised radial disc pattern and is said to be nonporous, waterproof, colorfast, and resistant to most solvents. Fritz Chemical Co., Mesquite, Tex.

314 Porcelain tile

Designer Line Ceramic Granite porcelain tile is available in lined, square, and cross motifs in gray and black. Single pieces of tile can have polished- and matte-surface combinations. The tiles are designed for interior and exterior installations, including offices, restaurants, hotels, industrial facilities, and hospitals. Trans Ceramica Ltd., Elk Grove Village, Ill.

315 Ceramic tile

Vector porcelain ceramic tile with *Dymalon* finish is recommended for use in residential and light- or moderate-duty commercial applications. The tile is available in 34 colors and is said to be stain-, scratch-, and acid-resistant. American Olean Tile Co., Lansdale, Pa.

316 Quarry tile

Bravo, an 8- by 8-in. quarry tile is 3/8-in.-thick and is available in four colors—colony red, gray, buff, and umber. The quarry tile may also be specified in 6- by 6-in. and 4- by 8-in. dimensions. Mid-State Tile Co., Lexington, N. C.

317 Ceiling system

The *Axtent Display System* consists of two basic components—an end threaded tube and a tapped spherical node. The system can be used to create ceiling grids and interior space frames. The system is available in chrome and 12 plastic, painted steel colors. Unistrut Corp., Wayne, Mich.

318 Wallcovering

The *Trelliage Espalier* wallcovering pattern in the manufacturer's *Volume XXVI Collection* is said to form a trellis framework design with the boughs of fruit trees. *Trelliage Espalier Companion* (lower right corner) features the trellis framework only. This pattern group is available in six colorways. Louis W. Bowen, New York City.

319 Vinyl wallcovering

Geo-Rib vinyl wallcovering features a 3-dimensional vertical ribbed pattern, and was designed for high-traffic areas in health-care facilities and commercial office buildings. The wallcoverings have a Class A UL rating, and are available in 30 colors, including 6 metallics. BFGoodrich Co., Akron, Ohio.

320 Nylon carpet

Tempera, a 29-oz level-loop nylon carpet, features *Halofresh* anti-microbial protection and resistance to static and staining. The carpet is available in 18 different colors and carries a 10-year warranty. J & J Industries, Inc., Dalton, Ga.

321 Tile

Flandre Ceramic Granite tile is available in matte and polished finishes and is said to be resistant to moisture, frost, shock, fire, abrasion, and harsh chemicals. Skid-resistant and step-tread special surfaces are also available. Trans Ceramica Ltd., Elk Grove Village, Ill.

322 Wallcovering

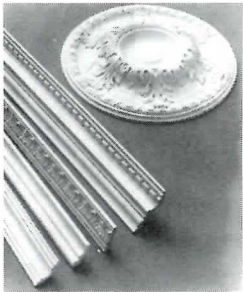
Rhythm, a wallcovering from the manufacturer's *Contemporary Volume Two* collection, was inspired by a Matisse painting. In addition to the gold and silver metallic bars on a deep blue background shown above, the pattern may be specified in neutral colorways. Albert Van Luit & Co., Los Angeles.

323 Poster wallcoverings

Vintage posters from Italy, England, France, Switzerland, and Hawaii are arranged in a montage in *Bon Voyage*, a wallcovering in the *Men's Classic Collection*. Katzenbach & Warren, Inc., New York City.

324 Carpet

The *Corporate Standards* collection includes four color-coordinated commercial-carpet products designed for office applications. The group includes a solid color, commercial textured loop; two solid color, commercial plushes in different weights; and an overall small-scale pattern. The collection also features *Scotchguard* carpet protector treatment. Stratton Industries, Inc., Cartersville, Ga.



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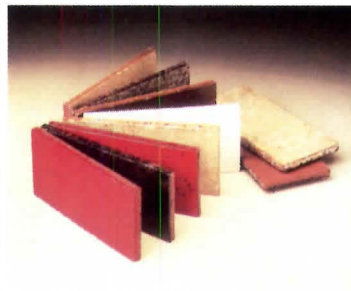
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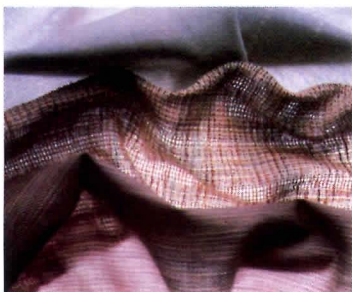
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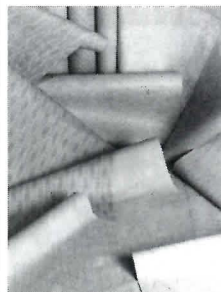
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326 Moldings

The manufacturer's line of decorative ceiling moldings and medallions are made of extruded polyurethane and polystyrene. The line includes ceiling moldings, framing borders, and ceiling centers. The *Arstyl* and *Nomastyl* patterns can be finished with latex paint. Nomaco, Inc., Ansonia, Conn.

327 Marble

The *Secar Marmi Geometric* marble series is imported from Italy and consists of 6- by 12-in. marble strips. It is available in *Bardiglio*, *Nero Marquino*, *Perlato*, *Rosso*, *Travertine*, and *Onyx*. Custom orders are also available. Secar Marmi, Italy.

328 Fabrics

A textile collection designed by Jhane Barnes has seven 54-in. fabrics intended for vertical applications such as wallcoverings and draperies. The collection features unusual textures, open weaves, and patterns created by multicolored yarns. Knoll Textiles, Div. of Knoll International, New York City.

329 Flooring

Country Estate hardwood flooring is made of 1/2-in.-thick laminated planks available in 3-, 5-, and 7-in. widths and random lengths. The flooring may be specified in a smooth or wire-brushed finish with optional walnut pegs. The collection features tongue-and-groove construction and glue-down installation. Sykes Hardwood Flooring Co., Warren, Ariz.

330 Wall panels

The manufacturer's *Fabric Durasan* prefinished gypsum wall panels are UL rated and have fabric-wrapped square edges for butting and panel-to-panel alignment during installation. The panels are available in 20 "heather-look" colors. Gold Bond Building Products, Charlotte, N. C.

331 Wallcoverings

Nucleus wallcoverings, in the *Summit Designs* collection, are intended for contract and residential applications. Predominant colors in the series are mauve, gray, blue, seafoam, peach, and beige. The wallcoverings are available in 12- and 15-oz fabric vinyls. Seabrook Wallcoverings, Inc., Memphis, Tenn.

332 Wood flooring

The manufacturer's *Designer Series* line of acrylic-impregnated wood flooring is available in plum ash, pistachio ash, gray ash, bleached ash, gray cherry, and black cherry. The line is also available by special order in 12- by 12-in. parquet and one-directional patterns. Permagrain Products, Inc., Media, Pa.

334 Ceramic brick

Mini-Brick is a glazed red-bodied 7/16 in. thin brick made from high specification Alberhill clays. The bricks are available in cinnamon, winter white, mink, pecan, persimmon, café au lait, nutmeg, and antique brown. The units are 3 5/8 by 7 5/8-in. or may be custom sized. Huntington/Pacific Ceramics, Inc., Corona, Calif.

335 Stone tiles

Armstone cast-stone floor tiles and wall panels are intended for commercial and residential interior use. The tiles are made of 90 percent marble and are available in 12 colors with matte or polished finishes. Tile edges are slightly beveled to recess grout joints and to minimize lipping effect between tiles. ArmStar, Lenoir City, Tenn.

336 Ceramic tile

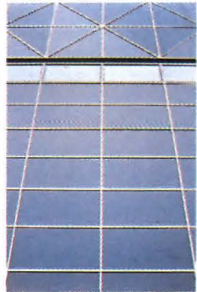
The manufacturer's hand-painted ceramic tile is composed of a talc-base body clay and is intended for vertical surfaces only. Recommended applications include bathroom shower and sink areas, kitchen backsplashes, stair risers, tabletops, walls, and furniture. The tile surface is glossy. Dish Is It, San Francisco.

337 Carpet

Three cut-and-loop carpets called *Broadstripe*, *Grid*, and *Pinstripe* are made of *Anso IV HP* nylon. The carpets are said to have soil, stain, and static protection with *Allied Fibers'* heavy-denier nylon. Intended for residential and contract applications, the carpet is available in 12 grayed, soft-tone colors. Rodeo Mills, Inc., Montebello, Calif.

338 Hardwood flooring

The *Custom Classics* series of hardwood flooring is made from oak, ash, walnut, and cherry. Special designs can be created by combining the various species of woods and can be produced from a sketch, photograph, or written description. Kentucky Wood Floors, Inc., Louisville, Ky.



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339 Coatings

Kynar surface coatings are designed for spray or coil applications in such areas as aluminum curtainwall systems, window-wall systems, and aluminum extrusions. The coatings are available in 30 standard colors or custom shades may be specified. DeSoto, Inc., Des Plaines, Ill.

340 Tile adhesive

Latamastic adhesive is made of a nonflammable latex resin and is designed for interior installations of ceramic tile on walls. The adhesive is recommended for use over gypsum wallboard, plywood, cement and gypsum plasters, concrete, masonry, and cement backerboard. Laticrete International, Inc., Bethany, Conn.

341 Floor tile

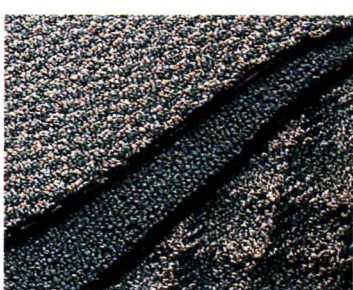
Stonetex is a 1/8-in.-thick vinyl floor tile. The 12- by 12-in. tile is available in 12 colors and was designed for use in lobbies, schools, and other areas where carpet or quarry tile might be specified. Armstrong World Industries, Inc., Lancaster, Pa.



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342 Ceiling panels

Ventwood C-Squares are 2-ft-sq lay-in ceiling panels intended to conceal mechanical equipment while providing accessibility for maintenance. The panels are designed to be installed with a T-bar grid and are available in Western hemlock, Western cedar, and red oak. Howard Manufacturing Co., Inc., Kent, Wash.

343 Color tiles

The *National Parks* tile series features a lightly abrasive surface and is designed for medium-commercial and residential applications. The tiles are 8- by 8-in. and come with single bullnose and corner trims. The series is available in a variety of monochromatic colors, including white, gray, almond, salmon, rose, beige, and forest green. American Marazzi Tile, Inc., Sunnysvale, Tex.

344 Nylon carpet

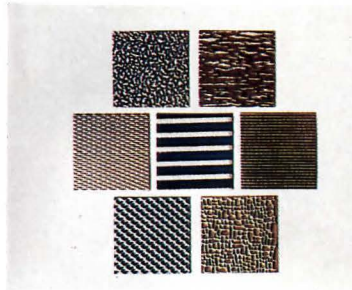
The *Gibraltar Collection* consists of three level-loop contract carpets made of solution-dyed *Zeftron 500 ZX* nylon yarns. All carpets are 1/8-in. gauge, weigh 24 oz, and are available in six colorways. Georgia Commercial Carpet, Inc., Dalton, Ga.



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345 Carpet

The *Artline* carpet collection is a coordinated grouping of two solid-colored and four tufted graphic designs. The carpet is intended for installations in the hospitality industry and high-end retail and office spaces. The collection is available in 86 standard colors. Armstrong World Industries, Inc., Lancaster, Pa.

346 Floor tile

A line of ceramic floor tile suitable for residential and commercial applications is available in 10 tone-on-tone colors with a choice of high-gloss or slip-resistant finishes. The tile may be specified in custom sizes, colors, and glazes. KPT, Inc., Bloomfield, Ind.

347 Stainless finish

Prismatics colored stainless is an oxidized finish created by applying a thin film of chrome oxide to the metal. Thickness of the film is regulated by a computer to assure color uniformity. The finish is available in green, gold, bronze, black, and champagne and 65 textures. Prismatic Stainless, Div. of B&M Finishers, Inc., Kenilworth, N. J.



348



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348 Floor tile

The *Brute Series* of glazed floor tile is designed for commercial and residential applications, particularly where there is heavy traffic. The tile can also be used in exterior installations since it is frost-proof. The series is available in four colors, and features a semigloss finish with a subtle textured surface. Monarch Tile Manufacturing, Inc., San Angelo, Tex.

349 Modular carpet

Dimensions modular carpet features intricate designs made possible by the manufacturer's *MicroTex* dye-injection machine. *MicroTex* is said to offer precisely registered, color-intense designs that help to hide soil and stains. Milliken and Co., LaGrange, Ga.

350 Tile

The *Pro Architectura* color system for vitreous tiles consists of five color lines with a total of 19 individual shades. The tiles measure 4 by 4 in. and are designed for interior and exterior, residential and commercial installations. Villeroy & Boch U. S. A., Pinebrook, N. J.

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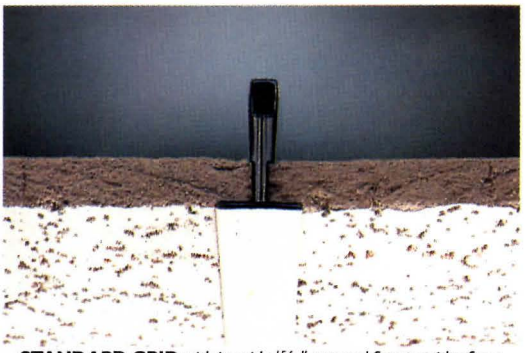
Spectra 3700 Designer Ceiling System is based on simple arithmetic. Start with its exposed 9/16" narrow face dimension, and subtract 3/16" due to the center regress. That gives Spectra a 60% reduction in the amount of visible metal at the ceiling plane as compared to conventional grid with a wider 15/16" face.

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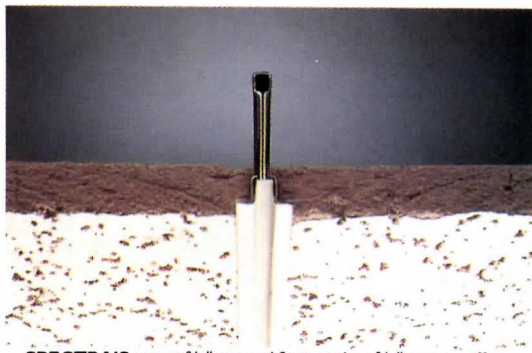
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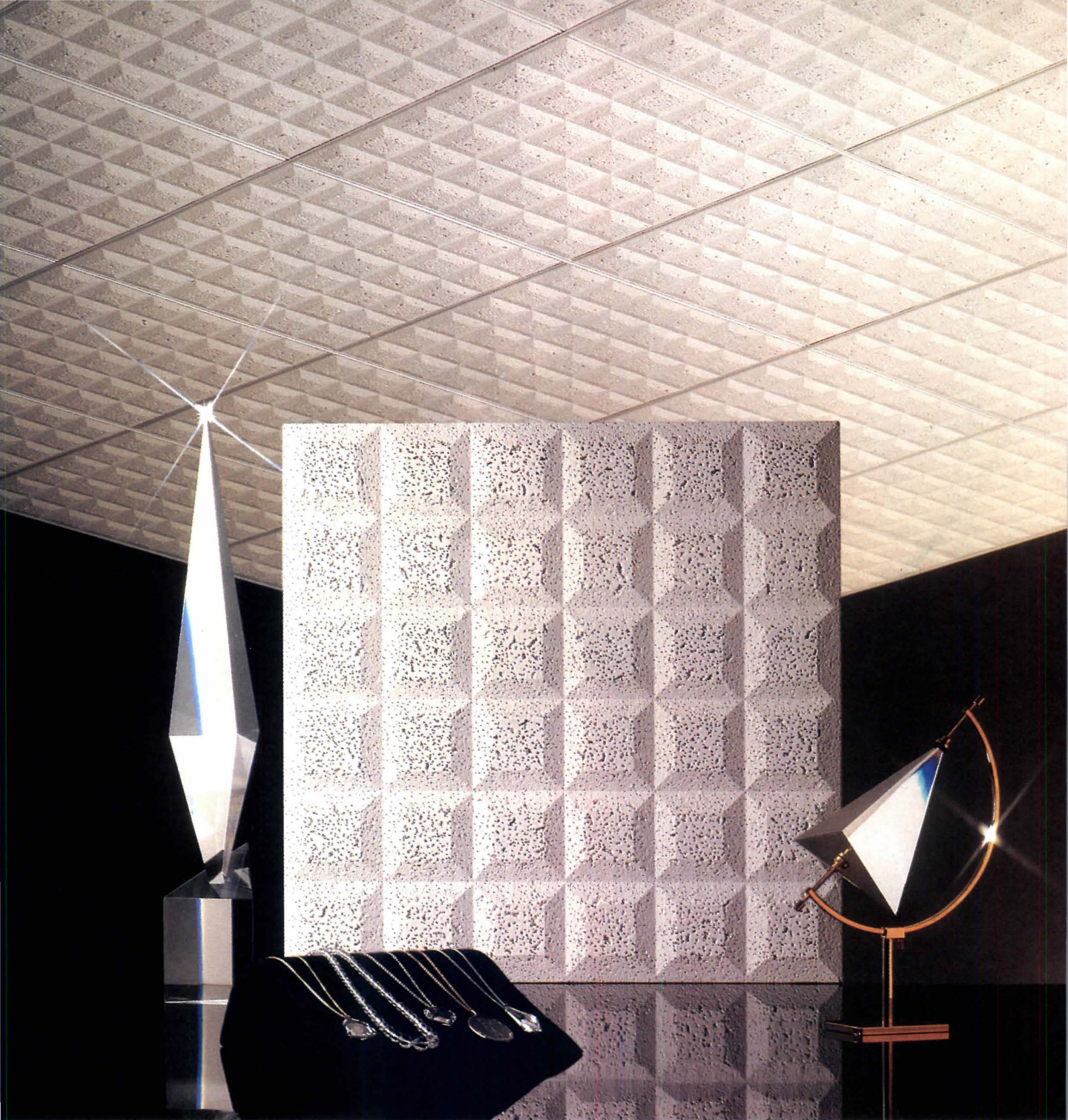


Shown: *Montclair Plaza; Montclair, CA*
Architect: *The Jerde Partnership*
Developer: *The Homart Corp.*

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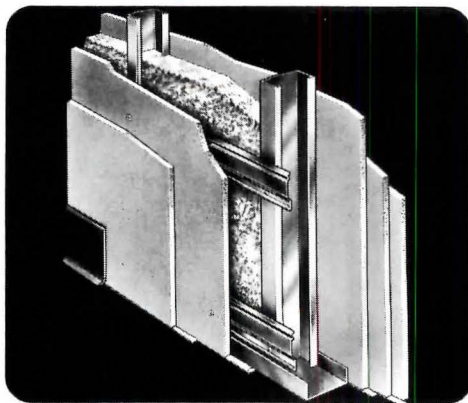
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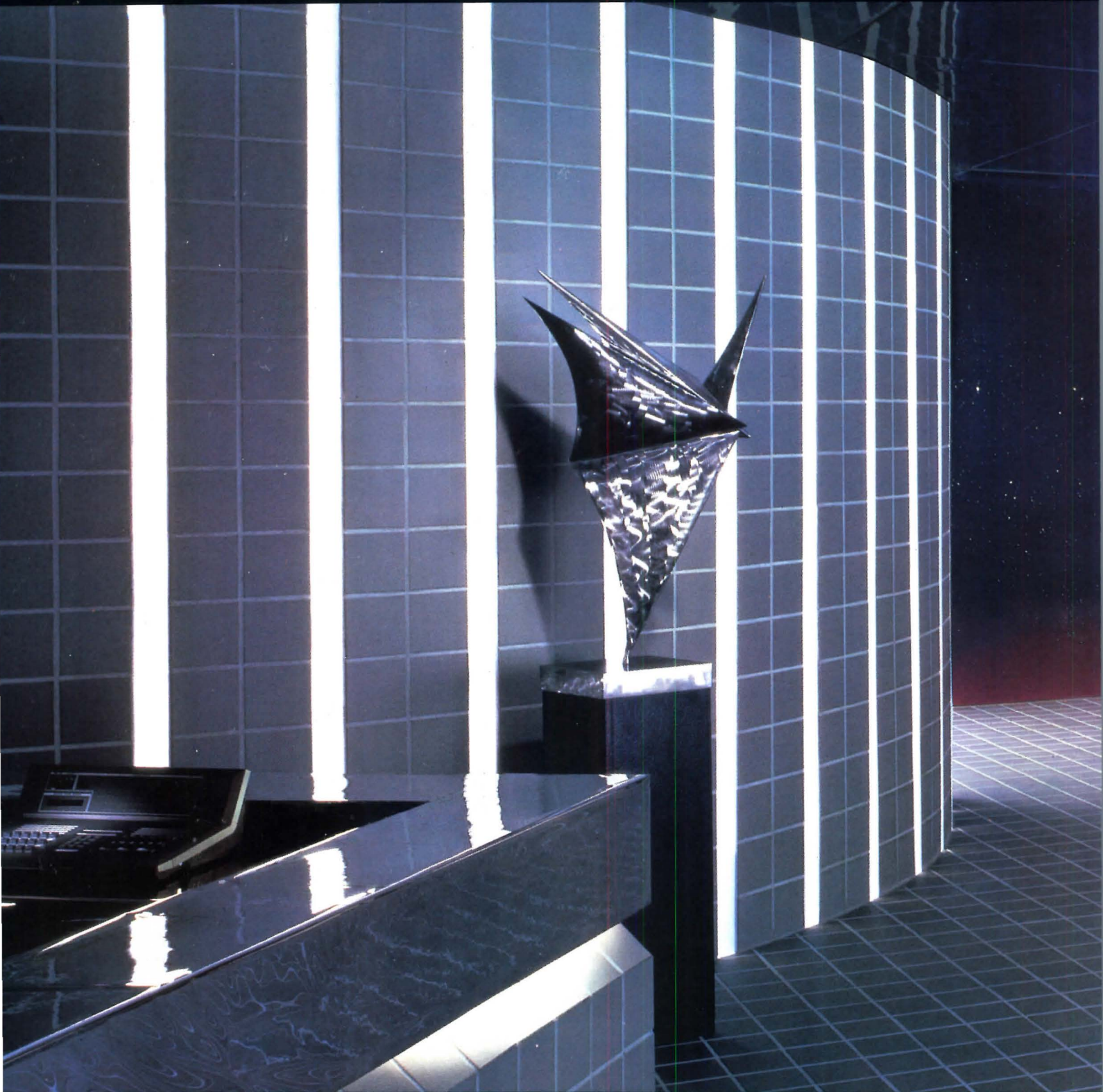
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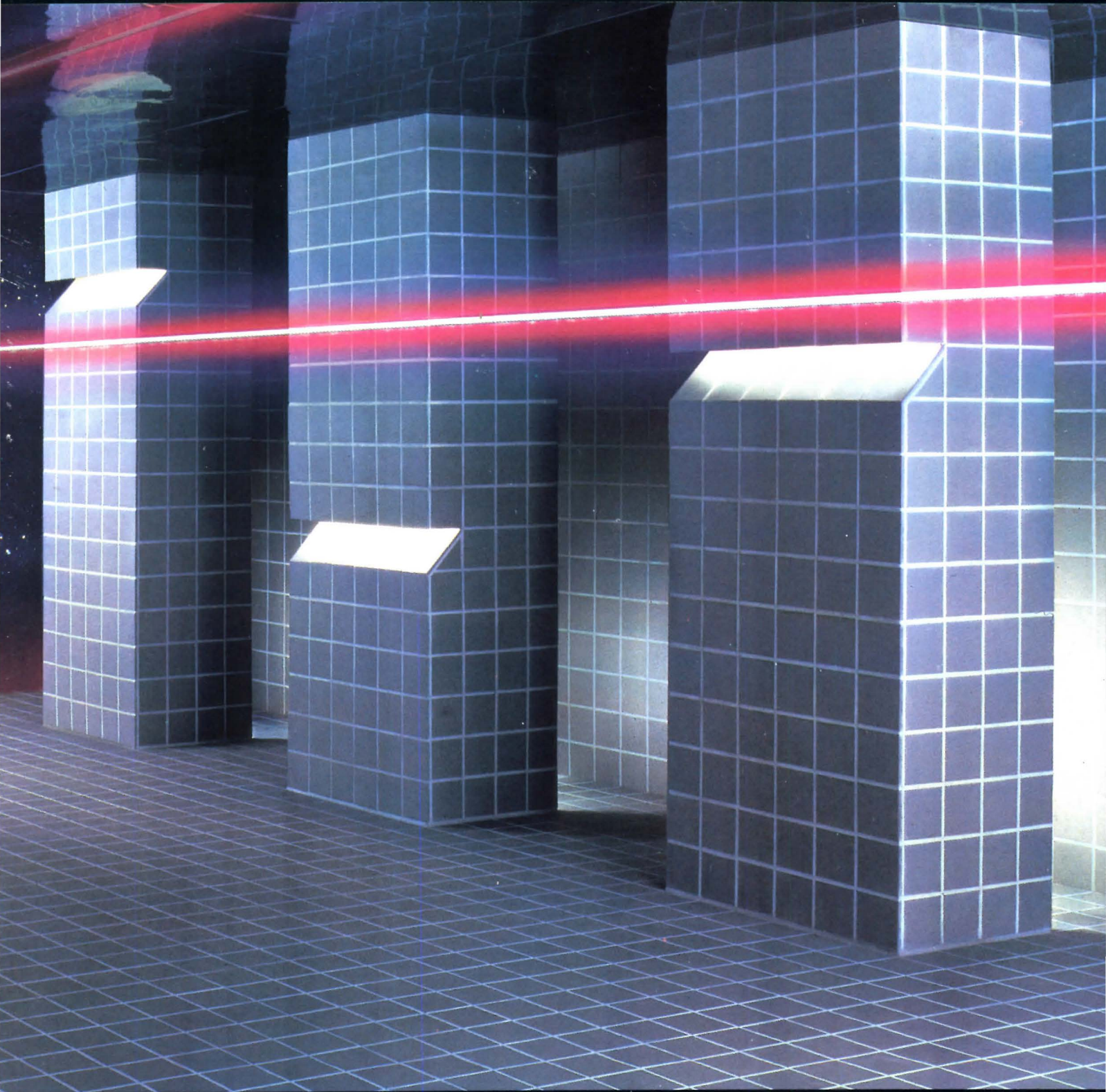
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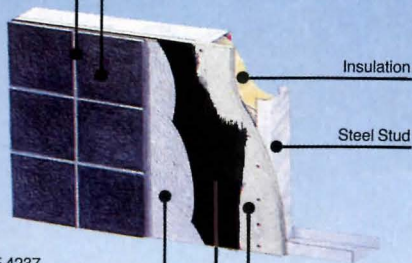
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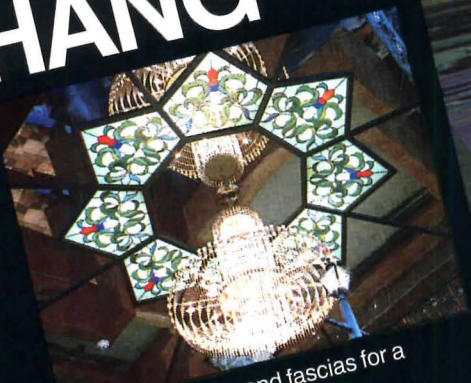
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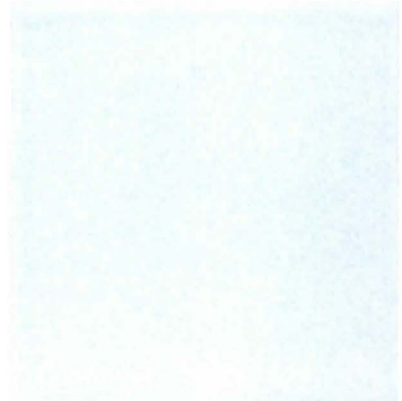
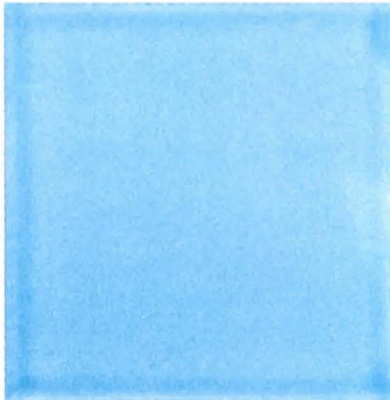
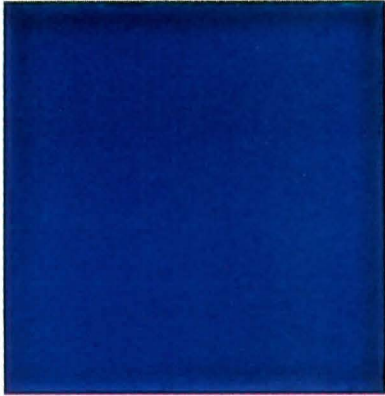
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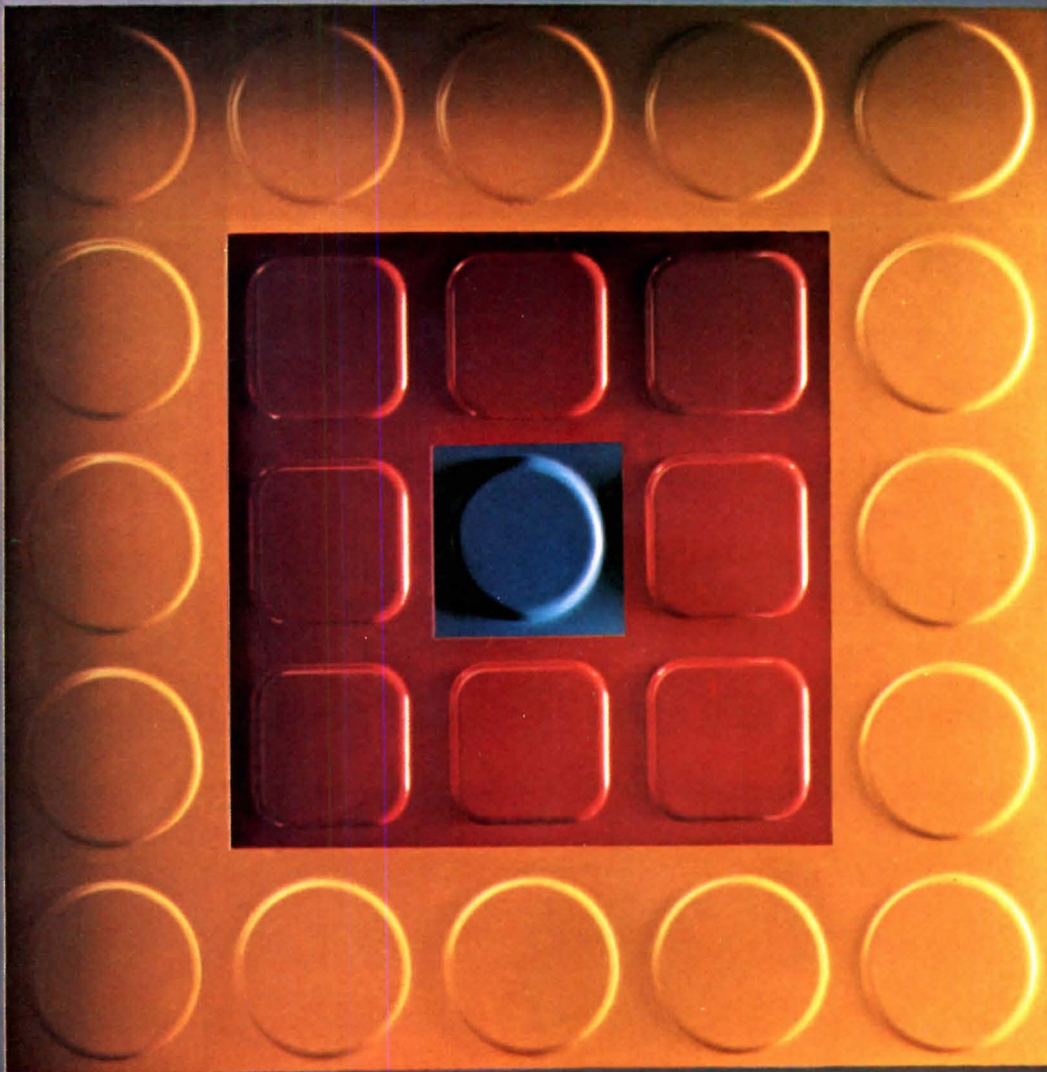
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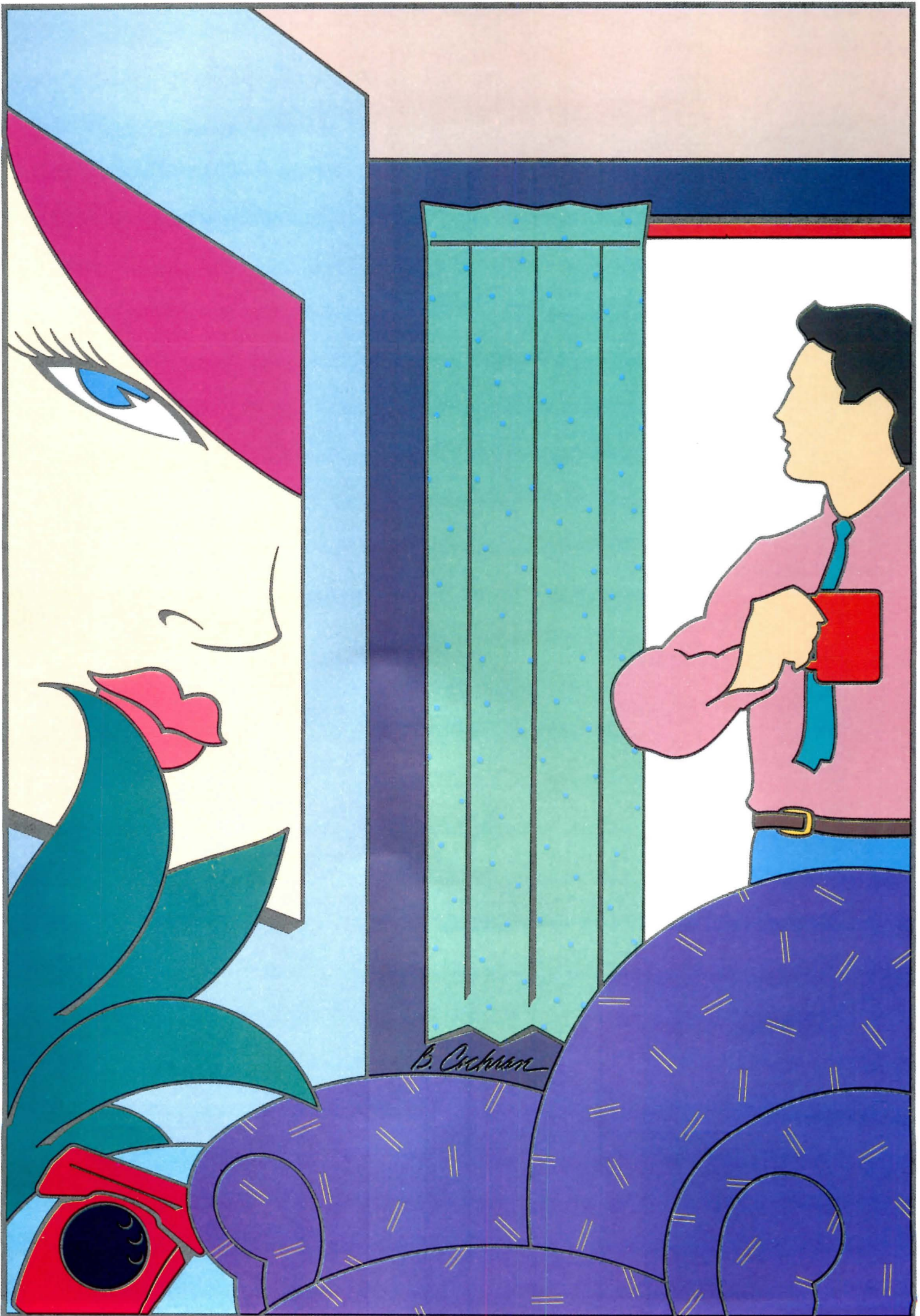




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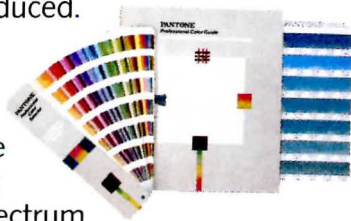
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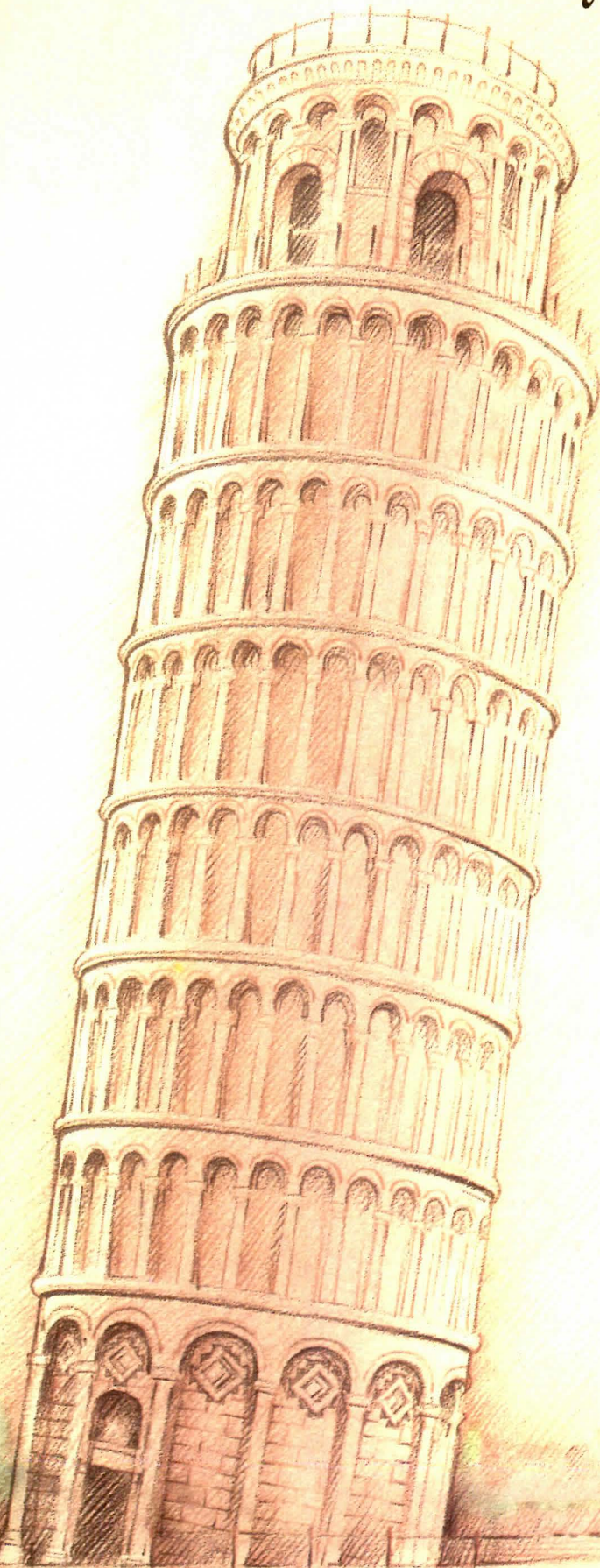
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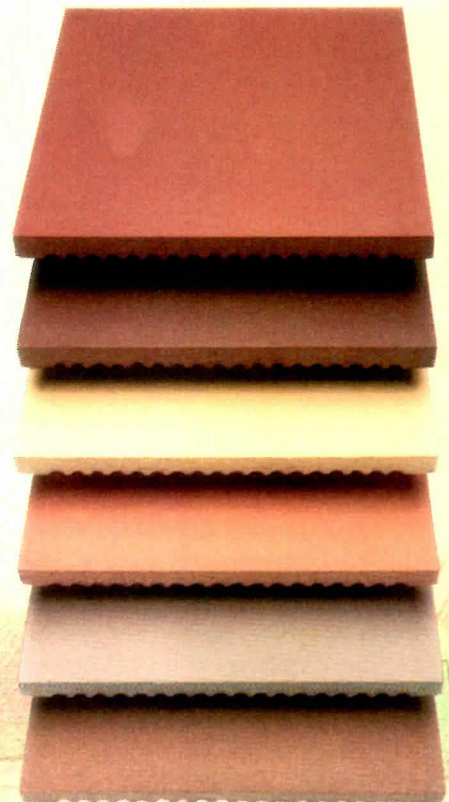
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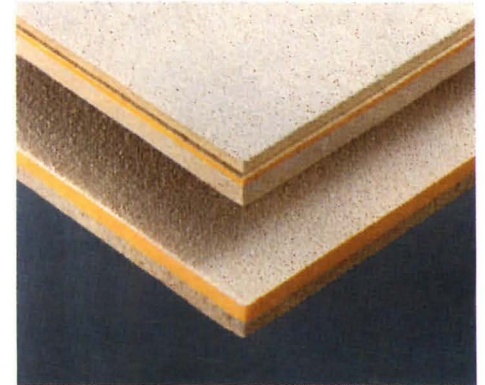
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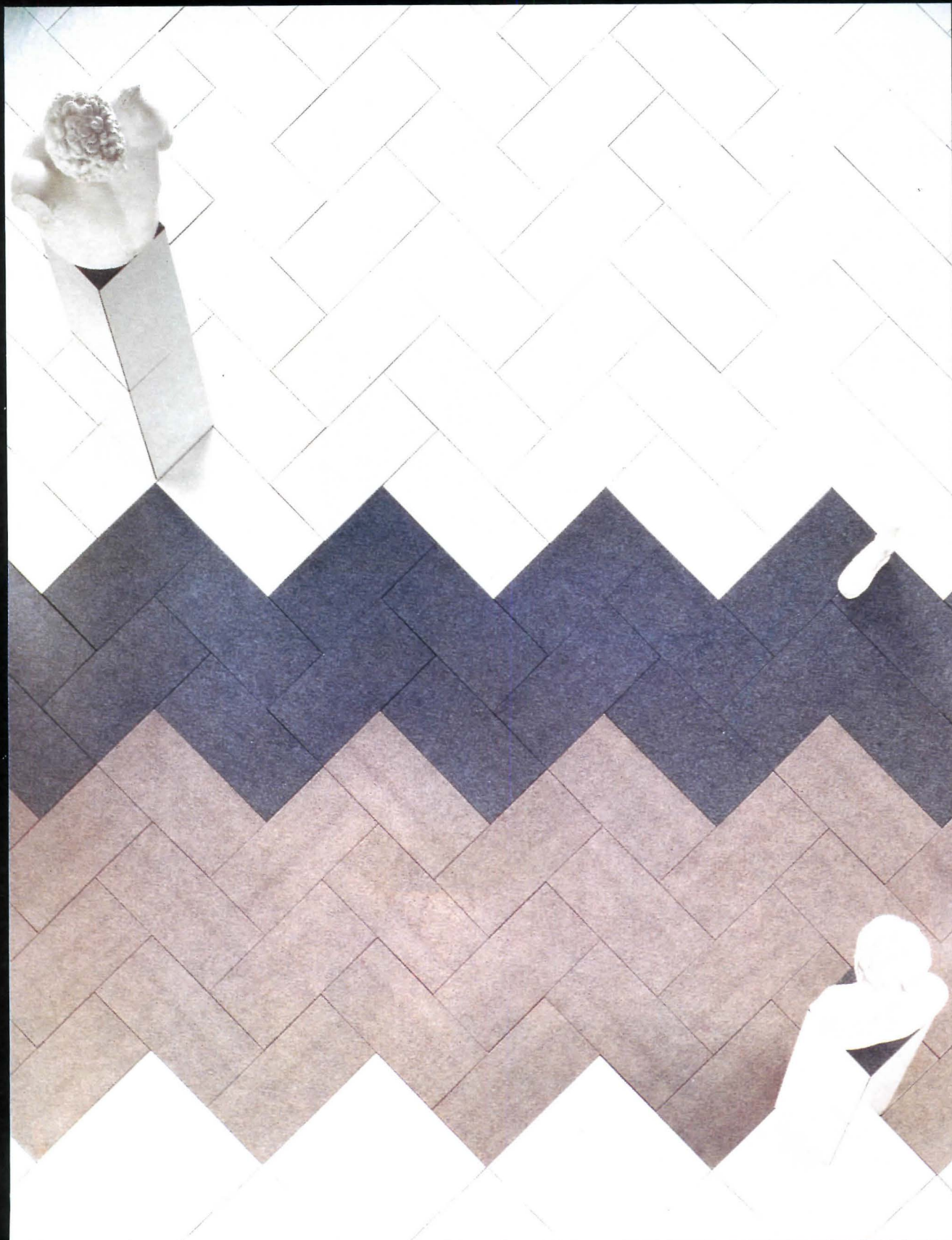


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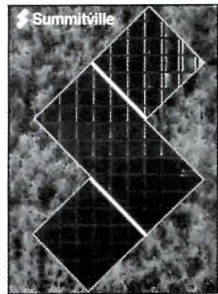
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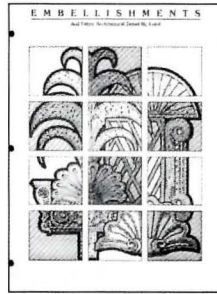
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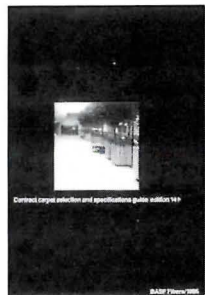
351 Ceramic tile

A 26-page color brochure reviews the manufacturer's line of ceramic tile, including the newly introduced *Summitmates* collection—a straight-edge glazed natural clay tile. The available shapes and colors for each type of tile are shown. Sizes are listed. Summitville Tiles, Inc., Summitville, Ohio.



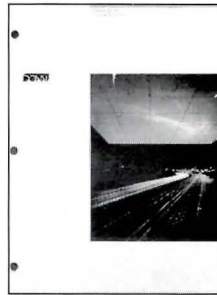
357 Ornament

A 12-page *Embellishments Brochure* illustrates the manufacturer's line of architectural ornament, including carved panels, moldings, rosettes, medallions, brackets, and signage. Dimensions are given in the literature. Entol Industries, Inc., Miami, Fla.



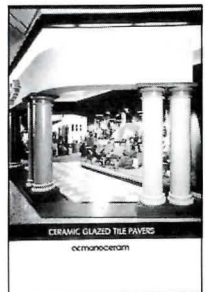
352 Carpet

A selection of 114 contract broadloom and carpet tile lines from 49 manufacturers are described and illustrated in a new color guide. Each of the five *Zeftron* and *Zeftron 500* nylon yarn systems are reviewed in the literature. BASF Fibers, Williamsburg, Va.



358 Ceiling system

The manufacturer's new *Celebration* ceiling system is featured in a 12-page color brochure. The removal and reconfiguration of panels, available panel finishes, panel accessories, and the acoustical properties of the system are reviewed in the literature. Donn Corp., Westlake, Ohio.



353 Ceramic tile pavers

Ceramic tile designed and produced in Italy is featured in a 12-page color brochure. Said to be skid-resistant, the tile is intended for heavy-traffic commercial applications. Twenty-eight different colors and textures are shown in the literature. CMC Monoceram, Faenza, Italy.



359 Rubber flooring

A line of flooring, made from 100 percent synthetic rubber, vulcanizers, mineral fillers, a self-waxing agent, and color pigments, is described in an 8-page color brochure. Ridged and rounded square patterns are shown. Jason Industrial, Inc., Fairfield, N. J.



354 Yarn

The *Marquesa Lana* continuous filament yarn system is designed for both commercial and residential carpet applications. Featured in a 14-page color brochure, the yarn system is shown in a variety of different textures and colors. The yarn's colorfastness and abrasion-resistance are reviewed in the literature. Amoco Fabrics and Fibers Co., Atlanta.



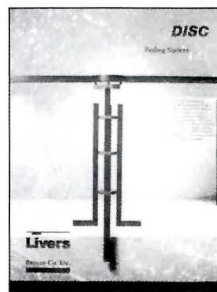
360 Ceiling system

A new brochure reviews the manufacturer's complete line of standard and custom-designed ceiling systems. A selection of wall systems and sun louvers are also described and illustrated in the literature. Hunter Douglas Architectural Products, Inc., Smyrna, Ga.



355 Metal stud system

A packet of information sheets describes the manufacturer's *Stud-Rite* metal stud system for gypsum wallboard and plaster. Structural properties, framing details, furring accessories, and assembly and installation procedures are reviewed. Marino Industries Corp., Westbury, N. Y.



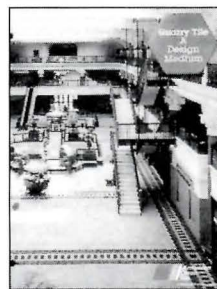
361 Railing system

The *Disc* stanchion-supported railing system is featured in a 4-page color brochure. Three different stanchion types are described and illustrated. The exposed aluminum components are shown in several finishes. Livers Bronze Co., Inc., Kansas City, Mo.



356 Ceramic tile

The manufacturer's ceramic tile designs, colors, and shapes are featured in a 16-page color catalog. The new *Aura* series, available in a selection of 28 colors, is also shown. Dimensions for each product are listed in the literature. Impo Glaztile, Inc., Markham, Ill.



362 Tile

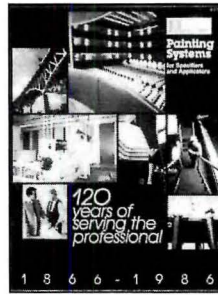
A 14-page catalog illustrates different color, shape, and size combinations of the manufacturer's line of quarry tile. Photographs show a variety of installations. Detail drawings are included in the literature. American Olean Tile Co., Lansdale, Pa.

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363 Wood flooring

A 14-page color brochure describes and illustrates the manufacturer's line of laminated and solid oak plank and parquet floors. Installation and maintenance information is reviewed, and specifications are included. Sykes Hardwood Flooring Co., Div. of Robbins, Inc., Warren, Ariz.



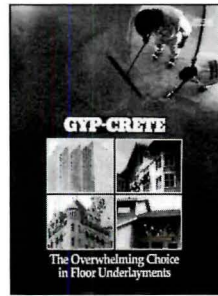
369 Paint

A 64-page catalog describes and illustrates the manufacturer's range of paints and coating systems. Charts listing paint recommendations for interior and exterior substrates are included in the literature. Sherwin-Williams Stores Div., Cleveland.



364 Carpet

A 16-page color brochure reviews the manufacturer's line of commercial carpets. Photographs show a variety of textures, patterns, and colors. Specifications and installation information are included in the literature. J. P. Stevens & Co., Inc., Aberdeen, N. C.



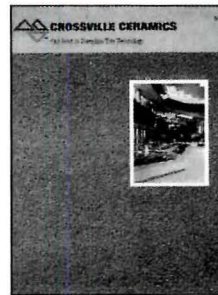
370 Floor underlayments

Sound rating test results and technical data on the manufacturer's floor underlayment systems are reviewed in an 8-page color brochure. Diagrams of construction details are included in the literature. Gyp-Crete Corp., Hamel, Minn.



365 Marble

Twelve different types of Vermont marble are illustrated in a 6-page color brochure. Available in three standard sizes, the tile is intended for wall and floor applications in both restoration and new construction work. Vermont Marble Co., Proctor, Vt.



371 Ceramic tile

The *Genesis* line of porcelain ceramic tile, said to have a low water-absorption rate and to be acid resistant, is featured in an 8-page color brochure. Photographs show available polished and unpolished colors. Sizes are listed in the literature. Crossville Ceramics Co., Crossville, Tenn.



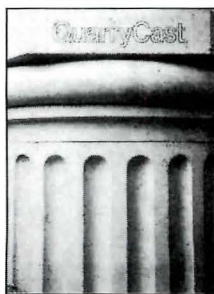
366 Acoustical panels

The manufacturer's line of *Soundsoak* acoustical wall panels is described in a 16-page color brochure. A specification guide is included in the literature. A variety of styles and textures are shown. Armstrong World Industries, Inc., Lancaster, Pa.



372 Carpets

The manufacturer's *Unibond* commercial carpets in cut-pile and all-loop textures are featured in a 6-page color brochure. Intended for heavy-traffic areas, the carpets are performance guaranteed for ten years. Test data and specifications are included in the literature. Lees Commercial Carpet Co., Div. of Burlington Industries, Inc., King of Prussia, Pa.



367 Molded stone

QuarryCast, a molded stone made with integral pigmented ceramic colors and reinforced with glass fibers, is featured in a 6-page color brochure. The stone can be used to make pre-finished veneer castings that are 1/4-in. to 3/8-in. thick. Quarrycast, Div. of Formglas, Inc., Toronto, Ontario.



373 Acoustical ceilings

A new 6-page color brochure reviews the manufacturer's *Acoustone* and *Auratone* ceiling panels. The panels are made from fire-resistant mineral fiber and are shown in 24 different colors. USG Acoustical Products Co., Div. of USG Corp., Chicago.



368 Ceiling panel system

A 4-page brochure reviews the features of the *Panorama* ceiling panel system. The panels can be installed into standard ceiling grid systems, and are intended for new construction and renovation applications. Alcan Building Products, Warren, Ohio.



374 Porcelain tiles

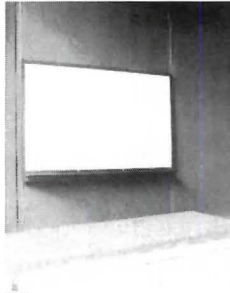
West German-made unglazed, fully vitrified porcelain paver tiles are featured in a color brochure. The *Keradur* series is said to have a water-absorption rate of less than 0.3 per cent. Several different size tiles can be specified. Klingenberg Dekoramik GMBH, Klingenberg/Main, West Germany.

10 Specialties

UCI 10, Specialties:
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 Flagpoles
 Identifying devices
 Lockers
 Partitions
 Pest control
 Storage shelving
 Sun control devices
 Toilet & bath accessories
 Wardrobe specialties



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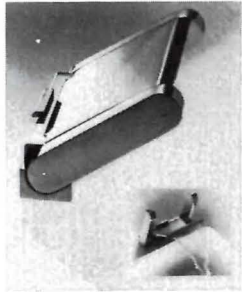
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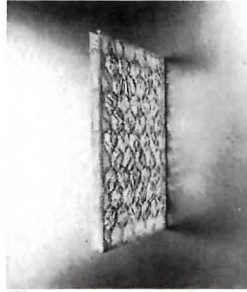
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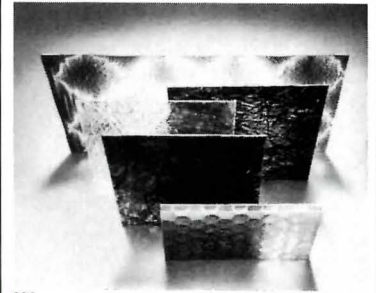
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375 Single-lever faucet
 The *Neodomo* single-lever faucet features a retractable spray wand. The unit adjusts from a solid water flow to a wide needle spray and pulls out 4 ft. The faucet is available in white, black, red, almond, satin, and chrome with a white wand. KWC/Western States Manufacturing Corp., Santa Ana, Calif.

376 Lavatory fitting
 The one-piece *Hydra Lavatory Fitting* features 4-in. diameter levers that rest alongside the spout. Made of solid brass, the fitting comes in a variety of finishes. Paul Associates, Long Island City, N. Y.

377 Office wall system
 A movable, full-height office wall system was developed to provide acoustical privacy and design. The system consists of an extruded aluminum frame and fiberglass core covered by soft, richly colored fabric. Clerestory glazing is optional. Tibbet, Inc., Toledo, Ohio.

378 Custom writing boards
 The manufacturer's line of custom-specified chalkboards and tackboards are available in a selection of eight colors. The boards come with plain aluminum, anodized or painted aluminum, and oak or walnut trim. Thomas' International Products, Inc., Los Angeles.

379 Wall and door protection
 The manufacturer's line of wall protection products is intended for use in commercial buildings, hotels, restaurants, banks, transportation centers, and additional public facilities. The *Decrovin* system includes a range of corner guards, rub rails, crash rails and door protection profiles. Construction Specialties, Inc., A C/S Group Co., Muncy, Pa.

380 Whirlpool spa
 The *Aero* spa measures 84 in. long by 76 in. wide by 30 in. high. The spa is equipped with full-foam insulation, a custom-fitted rigid thermal cover, a low-voltage underwater light, a built-in heater with temperature control, and a *Water Rainbow* spout. Jacuzzi Whirlpool Bath, Walnut Creek, Calif.

381 Coal stove
Focus, a cast-iron heating stove, is available in blue, brown, or black with a baked-on porcelain enamel finish. The stove is designed to burn either pea or nut coal as its primary fuel. A fully baffled firebox and thermostatically controlled primary air inlet produce consistent heat output with less fire tending. Dovre, Inc., Aurora, Ill.

382 Plastic panels
Krinklglas structural/decorative fiberglass-reinforced plastic panels can be used for exterior windows and walls, skylights, exterior paneling, railings, and interior partitions. The product is said to be less expensive than standard stained glass. Dimensional Plastics Corp., Hialeah, Fla.

383 Modular panel system
Silencer I is an acoustical partition system for offices that accommodates both conventional, freestanding furniture, and oak hang-on components. The system includes three panel lines—open-plan panels with standard or hardwood trim and private office-panels. Contemporary Products, Inc., Brentwood, N. Y.

384 Window Fabric
SheerWeave is a new window fabric made from a combination of two maintenance-free ultraviolet-resistant fabrics—vinyl-coated polyester and vinyl-coated fiberglass. The fabric is flame-resistant and available in 14 colors. Phifer Wire Products, Tuscaloosa, Ala.

385 Sink
 Designed by Philippe Starck for the *Washmobil Series*, this sink is made of an epoxy-coated tubular metal frame available in white, red, yellow, or matte black with matching enamel basin and faucet. The frame incorporates pivoting toothbrush and soap holders. Hastings Tile & Il Bango Collection, Freeport, N. Y.

386 Patterned panels
 A line of fiberglass-reinforced panels are available in standard sizes of 4 by 8 ft, 4 by 10 ft, 5 by 8 ft, 5 by 10 ft, and in thicknesses of 1/8, 3/16, and 1/4 in. The panels can be used to create the look of stained glass since a variety of colors and patterns may be specified. Dimensional Plastics Corp., Hialeah, Fla.



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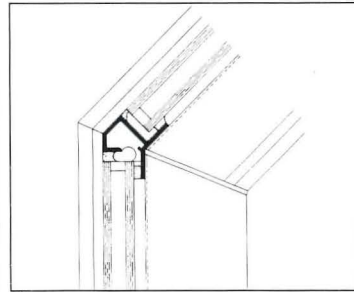
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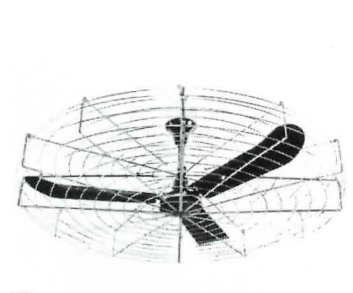
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387 Louvers

Motorized or automatic control *InsulLouvers*, pre-hung in a hardwood frame with a heavy-duty linkage mechanism, are ready for mounting in positions from full horizontal to full vertical. Interior facing surfaces can be painted, stained, or left natural. First Law Products, Inc./InsulShutter Div., Keene, N. H.

388 Widespread faucets

Faucets with 4- to 16-in. handle centers are available in chrome, polished brass, and antique brass finishes with separate spout and matching pop-up assembly. All widespread faucets feature a patented washerless quarter-turn cartridge, deep-luster 25-step finish, and a flow-control aerator. Options include crystal-clear acrylic or smoked acrylic decorative lever handles. Nibco Inc., Elkhart, Ind.

389 Ceiling fan guard

The *FG56*, a full-enclosure wire guard designed to fit most ceiling-suspended fans, is said to provide protection and safety for schools, factories, and athletic and farm buildings. The product will fit up to a 56-in. blade diameter. S. E. C., Plymouth, Mich.

390 Fiberglass structural shapes

The manufacturer's *EXTREN* fiberglass reinforced shapes are used to fabricate handrail systems, weirs, baffles, platforms, stairways, walkways, structural supports, and subfloor systems. Morrison Molded Fiber Glass Company, Bristol, Va.

391 Slopewall system

The manufacturer's new slopewall system, *Vuline HP-1175*, offers the sight line of bent glass with the flexibility of a straight line system for either 1/4- or 1-in. glass. Designed for most solariums, the system is said to offer outstanding appearance without time delays created by bent glass and framing. Four design options are available. Vistawall Architectural Products, Terrell, Tex.

392 Fireplace

The three-sided open fireplace has a 34-in. glass door width across the front and 22-in. glass widths on each side. The unit features fixed glass panels, an all-refractory bottom with a firebrick pattern, a screen with brass pulls, and a chimney damper. Superior Fireplace Co., Fullerton, Calif.

393 Whirlpool bath

Arista, a two-person whirlpool bath features a *Water Rainbow* fill-spout with a *Magic Touch* on/off switch. The hourglass-shaped tub, 60 in. long, 42 in. wide, and 21 in. high, has four whirlpool jets and two silent air controls. Made of high-gloss acrylic reinforced with fiberglass, the unit comes pre-plumbed ready for installation. Jacuzzi Whirlpool Bath, Walnut Creek, Calif.

394 Pedestal lavatory

The hand-carved pedestal lavatory, measuring 33 in. high by 30 in. wide by 26 in. deep, is available in a selection of three marbles. The *Nouveau* basin set duplicates the sculptured curves of the lavatory. The fittings can be obtained in 24-karat gold plate or polished chrome. Sherle Wagner International, New York City.

395 Lavatory

Lift is a system designed for adjusting the height of a lavatory to a comfortable and safe height. The lavatory is made especially for those who have small children and the handicapped and is available in 11 colors. Villeroy & Boch, Pine Brook, N. J.

396 Display enclosures

A manufacturer has designed a variety of enclosures to showcase articles and documents in freestanding, tabletop, or wall-hung display cases. The units are offered in 36 sizes and configurations and in two profiles of aluminum extrusions. The quarter-round and triangular models are coated in several anodized finishes. Peter Pepper Products, Compton, Calif.

397 Whirlpool tub

Spaciousness is the key feature of the *Oval* line of whirlpool baths, available in two sizes. *Oval V* is 60 in. by 42 in., and *Oval VI* measures 72 in. by 44 in. by 20 in. The manufacturer offers the models in 16 standard colors and any custom color, along with five different plated hardware finishes. Pearl Baths, Inc., Minneapolis.

398 Shower valve

Showermaster Classics shower valves are available in a range of shower/bath and shower/bath/hand combinations. The units come in a polished brass, satin chrome, or chrome base with porcelain, solid oak or polished brass fixtures. Leonard Valve Co. Cranston, R. I.

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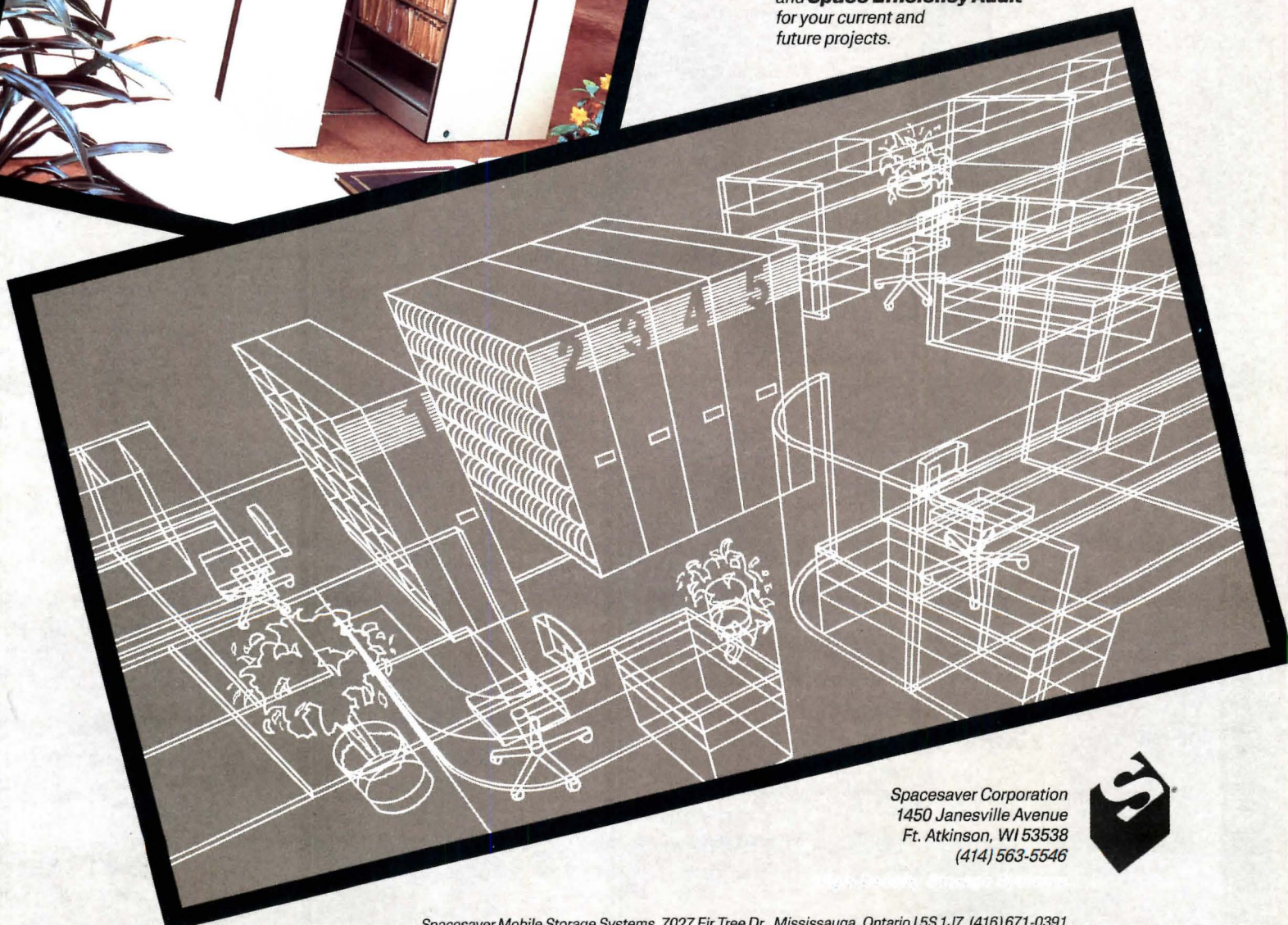
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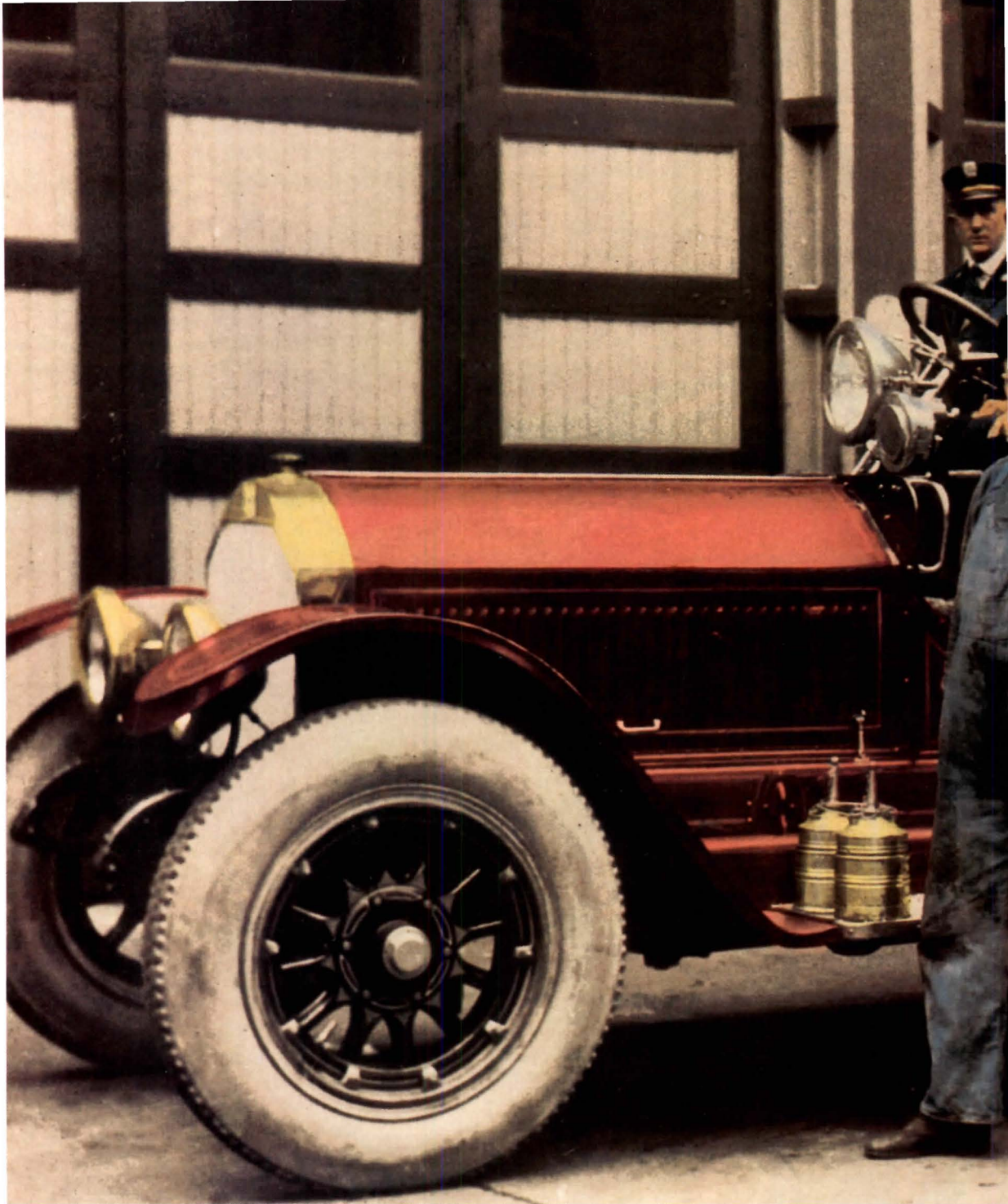


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Sunbrella Firesist isn't just another fabric sprayed or coated with flame-retardant chemicals. Instead, it's woven from fibers which are inherently flame-retardant. This means Sunbrella Firesist will never lose flame retardancy since that retardancy can't be washed out or dry-cleaned away.

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Conventional fabrics. Like traditional Sunbrella® fabrics, Sunbrella Firesist won't crack, peel, harden, or be affected by rot. Furthermore, it's highly soil resistant. Finally, its solution-dyed, locked-in colors won't fade. We're so sure Sunbrella Firesist will live up to these promises, it comes with a 5-year limited warranty.

Compared with coated or laminated vinyl, Sunbrella Firesist looks even better. That's because Sunbrella Firesist is highly breathable, so that moisture doesn't get trapped underneath, allowing mildew to form.

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areas by using FULLSPACE, and the money saved can be used for comfort, for aesthetics. Give the space and ambience to its rightful owners—the **people** who will use that space, not the files and books and tapes and supplies. Either way, FULLSPACE will help you do the job. And LUNDIA will help you do the job.

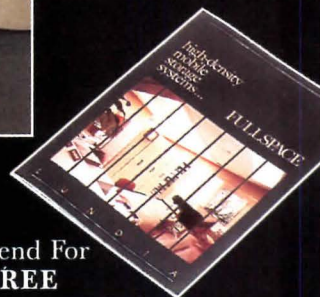
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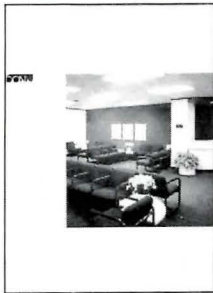
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Specialties Product literature

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399 Wall system

A floor-to-ceiling demountable wall system, which features framing that accepts steel or gypsum panels, is described and illustrated in a 16-page color brochure. Photographs show a variety of applications, including offices and health-care facilities. Donn Corp., Westlake, Ohio.



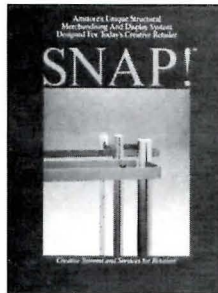
405 Partition systems

A 16-page color brochure describes the manufacturer's seamless and demountable wall partitions. Technical data on sound and fire ratings is reviewed. Diagrams show construction details. Unistrut Interior Building Systems, Div. of Unistrut Corp., North Kansas City, Mo.



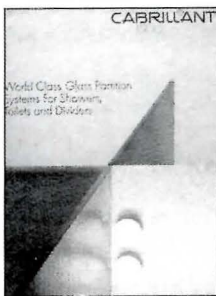
400 Access floor panel

Tec-Cor access floor panels, said to form a rigid floor with good sound and heat transmission characteristics, are featured in a 12-page color brochure. System accessories, including pedestals, panel-lifting devices, plenum dividers, grilles, and dampers, are reviewed in the literature. C-Tec, Inc., Grand Rapids, Mich.



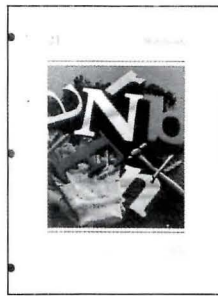
406 Display system

The *Snap* display system is available with groove and T-bar panels of various sizes. Featured in an 8-page color brochure, the system is intended for retail applications. A diagram shows the different components and how they are assembled. Amstore Corp., New York City.



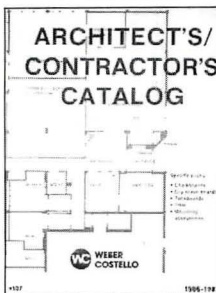
401 Partitions

Cabrillant 600 partitions are featured in a 6-page color brochure. Text covers panel materials, installation procedures, and the manufacturer's warranties. Photographs show several panel configurations. W & W Glass Products, Ltd., Spring Valley, N. Y.



407 Signage

Cast-metal plaques, etched-metal plaques, and other signage products are featured in a 26-page color catalog. A variety of letter styles and plaque materials are described and illustrated in the literature. Matthews International Corp., Pittsburgh.



402 Tackboards

Tackboards made from cork, linseed oil, and color pigment are shown in a variety of colors in a 12-page brochure. The tackboard frames are made of an extruded *Velo* satin finish aluminum. Weber Costello, Div. of Harcourt Brace Jovanovich, Inc., Troy, Mo.



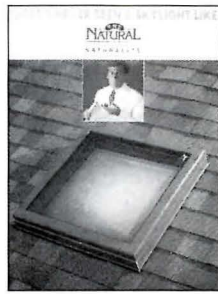
408 Hand dryers

An 8-page color brochure reviews the manufacturer's line of hot-air hand dryers. Recommended mounting heights are listed in the literature. A selection of standard colors is illustrated. Bobrick Washroom Equipment, Inc., Los Angeles.



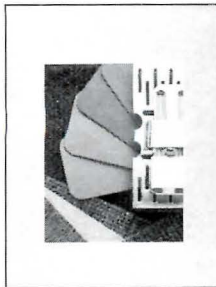
403 Awnings

A new color brochure describes and illustrates awnings in a variety of outdoor applications. Photographs show the awnings in a selection of colored and patterned fabrics. Industrial Fabrics Association International, St. Paul, Minn.



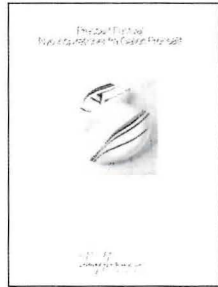
409 Skylights

The manufacturer's line of skylights with double-dome acrylic or insulating dual-pane glass is featured in an 8-page color brochure. Fixed and venting models with hand cranks or extension poles are shown in the literature. Naturalite, Inc., Garland, Tex.



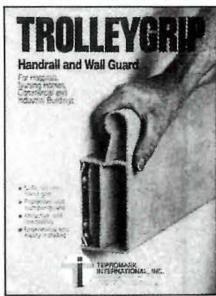
404 Movable wall system

A 16-page color brochure features the manufacturer's *GB-350* movable wall system. Attached by gravity wall-fasteners, the panels are said to be easy to install and reposition. Acoustical characteristics are reviewed in the literature. Gold Bond Building Products, Charlotte, N. C.



410 Toilet seat

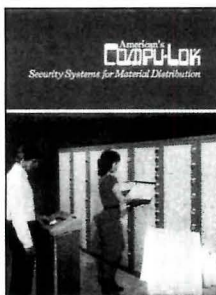
The newly introduced *Festival* toilet seat is produced from compression-molded melamine. Described and illustrated in a 4-page color brochure, *Festival* is one of a series of 75 Scandinavian-designed toilet seats. Pressalit, Inc., Aarhus, Denmark.



411 Handrail and wall guard
The *Trolleygrip* handrail and wall guard is featured in a 4-page color brochure. Diagrams show how the unit is mounted to steel brackets along the wall. The unit is available in standard and custom-specified colors. Tepromark International, Inc., Woodmere, N. Y.



417 Bird control
The manufacturer's stainless-steel bird control device is described and illustrated in a 4-page color brochure. Installation photographs and specification information are included in the literature. Nixalite of America, East Moline, Ill.



412 Key-lock system
The *Compu-Lok* compartmental key-lock system is described and illustrated in a 4-page color brochure. Users are assigned individual codes that can be entered on the console key pad to unlock assigned compartments. American Locker Security Systems, Inc., Jamestown, N. Y.



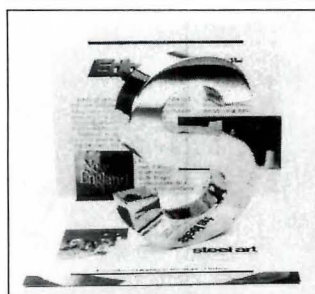
418 Roll-down shutter
The manufacturer's wood and extruded aluminum roll-down shutters are featured in a 4-page color brochure. Diagrams show shutter construction. Installation dimensions are included in the literature. Soleil Shutters, Inc., Miami.



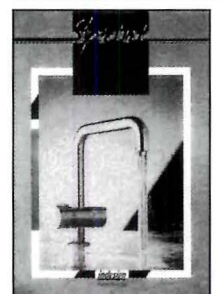
413 Window film
Madico window film is said to deflect 79 percent of summer sun and prevent 26 percent of winter heat from escaping from inside. Featured in a 4-page color brochure, the film is intended for a variety of climate-control applications. A comparative performance guide is included in the literature. Madico, Inc., Woburn, Mass.



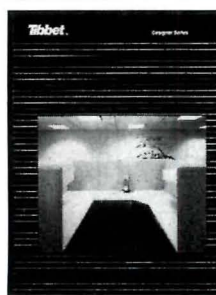
419 Wall and corner guards
Clear and colored plastic corner guards and wall guards are featured in a 4-page color brochure. *Drape-Guards*, designed to retain curtains, are also shown in the literature. Sizes for each product are listed. Tri-Guards, Inc., Wheeling, Ill.



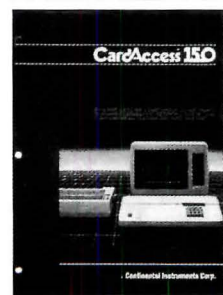
414 Metal letters
Edgeblend metal signage letters are featured in a 4-page mini-brochure. Aluminum and brass letters, in sizes ranging from 1 1/2-in. to 24-in. and in depths from 1/8-in. to 1-in., and stainless-steel letters, in sizes ranging from 2-in. to 24-in. and depths from 1/8-in. to 1/2-in., are available. Steel Art Co., Boston.



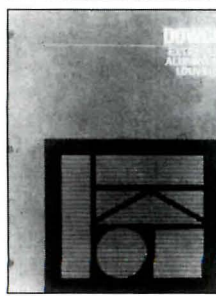
420 Bath and kitchen faucets
The *Sprint* line of bathroom and kitchen faucets is described and illustrated in a 6-page color brochure. A variety of different versions are shown; all models are constructed with a corrosion-resistant ceramic disc cartridge. Watercolors, Inc., Garrison, N. Y.



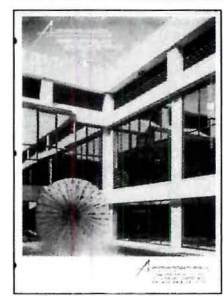
415 Partitions and work surfaces
The *Designer Series* of workstation components, including panel-hung work surfaces and shelves, is featured in a 6-page color brochure. Photographs show full-height and partial-height bookshelves, mobile pedestals, and keyboard drawers. Tibbet, Inc., Toledo, Ohio.



421 Access-control system
The *CardAccess 150* microcomputer-based access-control system is said to control up to 10,000 card holders and 64 doors, and monitor up to 512 alarm points. Detailed in a new brochure, the system features memory storage of all data. Continental Instruments Corp., Westbury, N. Y.



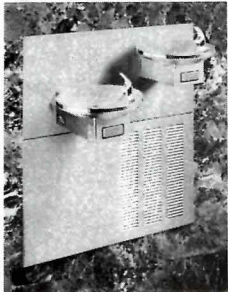
416 Louvers
Extruded aluminum louvers are described and illustrated in a 12-page brochure. Diagrams show fixed and adjustable blade louvers and mullion and jamb construction details. Charts review louver selection data. DOWCO Corp., Dallas.



422 Louvers
A 72-page catalog provides specifications for a variety of the manufacturer's louvers and dampers. Extruded aluminum and fabricated steel, stationary and operable, and horizontal and vertical louvers are described and illustrated in the literature. Penn Ventilator Co., Inc., Philadelphia.

11 Equipment

UCI 11, Equipment:
 Bank & vault equipment
 Darkroom equipment
 Food service equipment
 Laboratory equipment
 Laundry equipment
 Library equipment
 Loading dock equipment
 Medical equipment
 Parking equipment
 Residential equipment
 Waste handling equipment



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423 Water fountain

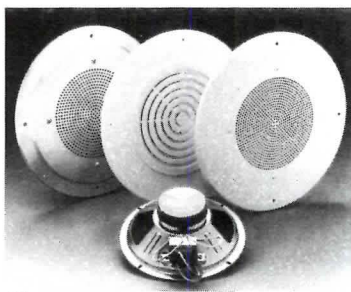
The *SwirlFlo* series of water coolers features a bi-level wheelchair model that has two fountains. The lower fountain is projected out for wheelchair use and the second is set at a conventional height. Both feature an antisquirt bubbler to prevent accidental mouth injuries. Elkay Manufacturing Co., Oak Brook, Ill.

424 Video projector

The *Talaria* video projector is capable of projecting an image through a single optical light valve onto a 25-ft screen. The projector accepts input signals from 1/2-, 3/4-, and 1-in. videotape, live camera feed, satellite feed, video laser disc, and closed circuit television. General Electric Co., Syracuse, N. Y.

425 Alarm system

A line of modular electronic alarm systems is adaptable for high-, medium-, and low-risk applications. The units are UL listed, key-locked, and have built-in tamper switches to detect unauthorized entry. LeFebure Corp., Cedar Rapids, Iowa.



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426 Speakers

A line of standard and coaxial 8-in. speakers designed for ceiling installations features 10-in. magnets for increased sound-system efficiency. The coaxial model has a solid-state ceramic tweeter that is center mounted without a structural bridge so as not to interfere with the low frequency sound from the woofer. Sound Products, Broadcasting and Related Products Div./3M, St. Paul.

427 Tile stove

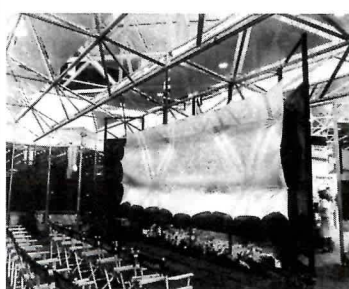
The *Renaissance* ceramic tile stove burns wood only and can be installed 6 in. from furniture with only 1-in. rear clearance. The stove is available in wedgewood, wineberry, winter wheat, and olde pewter and is said to burn for 20 hours on a load of split oak. Ceramic Radiant Heat, Lochmere, N. H.

428 Tube system

A single tube messenger system is available as either a 4-in. round or 4-by 7-in. oval system. Both systems can be designed as upsend or downsend units with single point-to-point or multiple station configurations. All components for the system are housed in the main power station. LeFebure Corp., Cedar Rapids, Iowa.



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429 Drinking fountain

A wheelchair-level electric water cooler is wall-mounted at 36 in. from the floor and features a self-closing, vandal-resistant, stainless-steel front and side push bars. *Model HCWC-8-S* has a one-piece cabinet with a removable front cover in a gray hammertone finish. Optional finishes are also available. Sunroc Corp., Glen Riddle, Pa.

430 Extrusions and connectors

The manufacturer's fully integrated system of aluminum extrusions and connectors are intended to be used in a variety of construction projects, including the making of theatres and exhibition booths. Shown above are 40-ft clearspan trusses spanning demountable 13-ft-high walls. Click Systems, Inc., New York City.

431 Oven

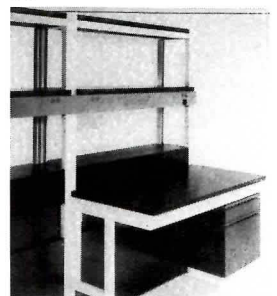
A microprocessor-controlled combination microwave/electric wall oven called the *Touch Tri-Mode* features the option of using 700 W of microwave power alone, conventional electric heat alone, or both microwave and thermal heat simultaneously. The oven features black glass doors, tempered glass oven windows, and a black glass touch-control panel. Modern Maid Co., Topton, Pa.



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432 Mini-vaults

PAC 1 and 2 mini-vaults feature lightweight construction that allows the units to be placed on an upper floor without affecting structural safety. Both vaults are UL listed Class 1 and Class 2 for torch- and tool-attack resistance. The units are available with a stainless-steel finish and with a variety of modular interiors. Mosler, Hamilton, Ohio.

433 Ranges

A line of professional-quality gas ranges designed for residential use includes double-oven 48-in.-wide models and single-oven 36-in.-wide models. All models feature infrared broiling, 15,000 BTU stainless-steel open-top burners, and a choice of stainless-steel or black enamel finishes. Viking Range Corp., Greenwood, Miss.

434 Laboratory equipment

A line of modular, movable laboratory furnishings is based on a central, self-supporting utility spine that carries plumbing, wiring, and other services. Any combination of adjustable benches or tables can be attached to the spine. Drawers can be suspended underneath and sinks can easily be added. Labmarc, Inc., Cambridge, Mass.

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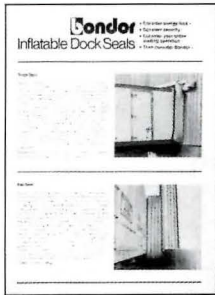
Springs

Circle 1112 on inquiry card

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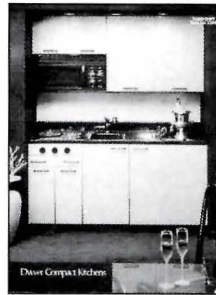
Equipment Product literature

For more information,
write item numbers on
Reader Service Card



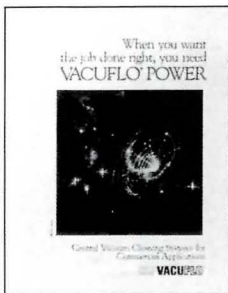
435 Dock seals

A new 4-page color brochure contains photographs and descriptions of the manufacturer's line of inflatable seals, including truck and rail seals. Energy loss and security features are discussed in the literature. Bondor Manufacturing, Div. of Gilmore-Kramer Co., Inc., Providence, R. I.



441 Compact kitchens

A 16-page color brochure describes and illustrates the manufacturer's complete line of compact kitchens. The dimensions for each unit are listed. A selection of colors and finishes is illustrated in the literature. Dwyer Products Corp., Michigan City, Ind.



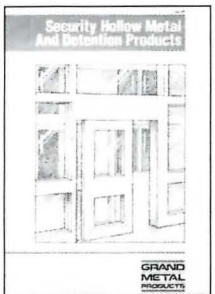
436 Vacuum cleaning systems

A central vacuum system for commercial applications is featured in a new color brochure. The system consists of a remote power unit and inlet valves connected to the power source by a tubing system. The system is automatically activated when an inlet valve is opened. H-P Products, Inc., Louisville, Ohio.



442 Dock leveler

A new 4-page brochure features the A series of mechanical dock levelers. Dock leveler options, including free-standing frames, pour-in-place units, and custom sizes and capacities, are reviewed in the literature. Blue Giant Equipment Corp., Pell City, Ala.



437 Security doors

A line of security doors with continuous welded seams is featured in an 8-page brochure. Security frames, windows, visitor booths, door cell fronts, furnishings, and fittings are also described and illustrated in the literature. Grand Metal Products Corp., Portland, Ore.



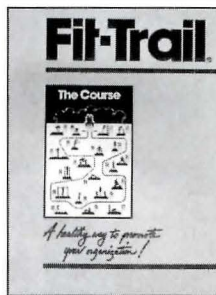
443 Laboratory fittings

A new brochure features the manufacturer's line of laboratory fittings, made of brass with a synthetic thermoplastic coating. Available in 11 colors, the fittings are said to have improved corrosion resistance. GAM Laboratory Fittings, Inc., Butler, Pa.



438 Storage system

A new 8-page brochure reviews the manufacturer's vertical storage and retrieval systems. Systems ranging in size from 140 lb to 4,440 lb per circulating shelf are said to accommodate a variety of materials, including food, electronic parts, containers, and computer tapes. Spacesaver Corp., Ft. Atkinson, Wis.



444 Exercise system

The *Fit-Trail* exercise system is described and illustrated in a 6-page color brochure. Both the *Jogging System* and *Seniors Walking System* are reviewed. The manufacturer's wooden signage is shown. SouthWood Corp., Charlotte, N. C.



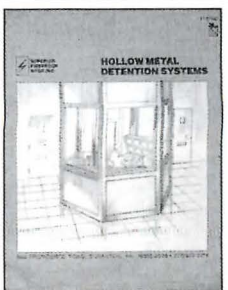
439 Traffic-control system

The *AutoGuide* microprocessor traffic-control system is intended for drive-in banks. Featured in a 4-page brochure, the system is shown in a variety of installation layouts. Desk panels and information printers are described in the literature. Actron, Inc., Elk Grove Village, Ill.



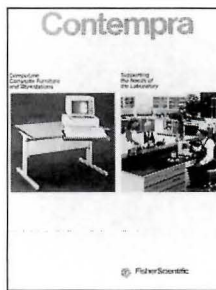
445 Elevator control system

The *DMC-I* microprocessor control system for hydraulic elevators is featured in a new brochure. The system is designed to take up less room than conventional electro-mechanical controls. Dover Elevator Systems, Inc., Memphis, Tenn.



440 Security doors and frames

A new brochure features the manufacturer's line of hollow metal doors and frames. Diagrams illustrate typical door construction details. Fire ratings and specifications are reviewed in the literature. Superior Fireproof Door, Inc., Scranton, Pa.



446 Computer-support furniture

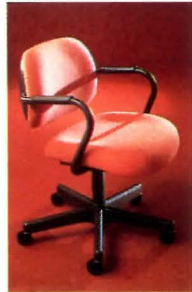
The *CompuLine* series of computer-support furniture and workstations, designed for laboratory applications, is featured in a 14-page color brochure. A variety of components, including printout pedestal files, is illustrated in the literature. Fisher Scientific, Pittsburgh.

12 Furnishings

UCI 12, Furnishings:
 Artwork
 Cabinets & storage
 Fabrics
 Furnishing accessories
 Furniture
 Rugs
 Seating



447



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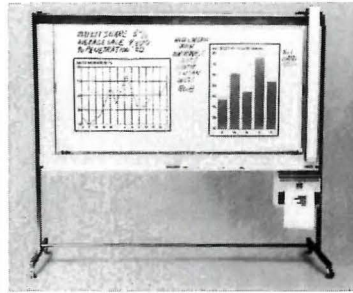
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447 Carpet

Syncopation is a carved, cut-pile carpet made of 100 percent wool with a cotton and jute backing. The ombre stripe pattern extends for 6 ft and then mirrors itself across the full width. The carpet is approximately 6 by 12 ft with the repeat every 36 in. Jack Lenor Larson, New York City.

448 Fabrics

Russian Hill and *Westside* woven upholstery and wallcovering fabrics are part of the manufacturer's *Coast-to-Coast* collection. *Russian Hill* features a diffused stripe in pink, orange, blue, lavender, and green. *Westside* is a mosaic-patterned reversible cloth made of 100 percent worsted wool. Joyce Vagasy Textiles, Div. of Amicale Fabrics, New York City.

449 Artwork

Ektacolor C prints and transparencies blown up to 72 in. wide by 20 ft long on single panels are available from the manufacturer. Multi-panel prints and transparencies intended for display and interior design purposes are also available. P. S. Decor, a Div. of Photographic Specialties, Inc., Minneapolis.

450 Chairs

The *Volante* line of office seating features a contoured seat, molded polymer armrests, and dual-wheel casters suitable for both hard and soft floor use. The chairs are available in four models with either a spinlift manual or pneumatic height adjustment. The line may be specified in a selection of colors and fabrics. Shaw-Walker, Muskegon, Mich.

451 Copyboard

The *Scan Copyboard* is capable of automatically copying the entire board or only a specified portion. Prepared materials can also be copied by attaching them to the board with magnets. The writing surface is made of white enamel that is guaranteed not to scratch. Weber Costello, Troy, Mo.

452 Chairs

The *Kelly Chair*, designed by William Raftery, is a fully upholstered chair intended for use in systems applications, conference rooms, or traditional offices. The chairs are available in eight models with pneumatic or mechanical height adjustment options. The chairs may be specified in fabric, leather, or other approved material. Vecta Contract, Grand Prairie, Tex.

453 Credenza

An oak credenza in the *Aurora Collection* measures 76 by 20 in. and features solid lumber core construction. All fronts are cut from one panel to ensure a perfect match. All cabinets are center locked to allow left and right arrangements. Dar/Ran Furniture Industries, High Point, N. C.

454 Table system

An elliptical conference table is one of several configurations possible with the *Alliance* table system. The system consists of interchangeable connecting table components in several shapes and sizes. Folding and flip-top models are also available. The tables come in four wood veneers and seven textured laminates. Howe Furniture Corp., Trumbull, Conn.

455 Seating

Subito tandem seating consists of two- and three-seat units and a 23 1/2 in. wide black laminate table. The units may be arranged in a variety of configurations and feature marble bases. The chairs may be specified in a selection of leathers. Cumberland Furniture Corp., Long Island City, N. Y.

456 Chair

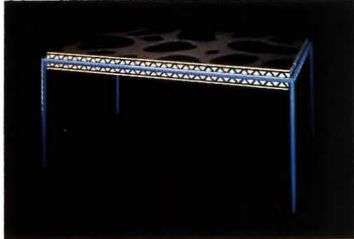
The *5TSW Work Chair*, designed by Brian Kimura, is said to be especially adaptable to a wood, open-office environment. The pneumatic seat height adjustment mechanism is concealed beneath the contoured shell that shapes the seat and back. The shell is fully upholstered with segmented cushions. Modern Mode, Inc., San Leandro, Calif.

457 Rugs

Lim Kuan is a chinoiserie design created by Raymond Jean Wing. The all-wool rug features a composite design of oriental motifs in colors ranging from soft pastels to deep crimson. The rugs are available in special sizes and colors. Patterson, Flynn & Martin, Inc., New York City.

458 Workstation

A conference worksurface that is part of the *NEO-7* office furniture collection provides a table-like setting suitable for use either as a conventional desk or as a conference arrangement with wire management to the worksurface. The stations are available in a variety of configurations and sizes. Domore Corp., Elkhart, Ind.



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459 Table

The *Burgundy* table designed by Michele De Lucchi measures 28 in. high by 41 in. wide by 60 in. long. The dining-height table is constructed of laminate with black and white edges and a blue metal frame. Memphis/Milano, Inc., Long Island City, N. Y.

460 Coat rack

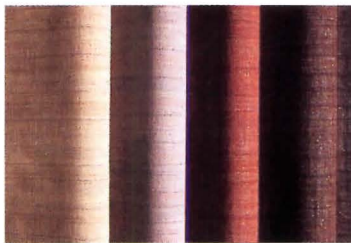
The *Customer 2094*, measuring 65 in. high and 24 in. wide, was designed by INOVA. The rack features a black enameled-steel column with a crowned, cast-iron base and chrome-plated hat and coat supports. Peter Pepper Products, Inc., Compton, Calif.

461 Office system

The manufacturer's *Progressions+* line of office systems integrates wood and laminate components to create either single material workstations or combination units. The system is available in nine laminate finishes, four oak finishes, and nine *Colorwood* finishes. RoseJohnson, Inc., Grand Rapids, Mich.



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462 Fabric

The *Grid* collection of fabrics and wallcoverings, available in 57 colorways, is *Permaglazed 100* percent cotton treated with *Zepel*. Intended for contract applications, the fabrics are said to be the alternative to "plain solid" fabrics. Woodson, New York City.

463 Fabrics

Country Cloth, a 100 percent wool repp weave, is custom woven in West Germany. The fabric is available in a warm beige, chocolate brown, rust brown, and warm gray. Backed with paper or acrylic latex, the fabric is suitable for direct and stretched wall applications, and high-traffic upholstery installations. Gretchen Bellinger Inc, New York City.

464 Chairs

A line of business chairs features an injection-molded, rectangular-shaped back support that is manufactured as a single, finished unit already textured and colored. The chairs feature separate mechanisms to adjust back height, back angle, vertical height, and plane of the seat. Kinetics, Rexdale, Ontario.



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465 Chairs

The *TEChair* seating line is designed with electrostatic discharge control options and several seat and back adjustments. The chairs are said to be easy to adjust and well-suited for multi-shift and shared-use workstations. All styles have cantilevered arms that can be removed. American Seating Co., Grand Rapids, Mich.

466 Foot mats and gratings

The manufacturer's line of foot mats and gratings features a system of self-cleaning, closely spaced recessed treads that allow dirt and sand to collect below. Designed for use in buildings with heavy foot traffic, the gratings and mats are available in a selection of eight carpet colors and seven vinyl colors. J. L. Industries, Bloomington, Minn.

467 Seating

The *Concourse Group* of seating features trapezoidal modules that can be arranged to create serpentine forms. The system integrates seating units, planters, and tables that are available in red oak and fiberglass with options of fabric, slate, marble, or plastic laminate. Landscape Forms, Kalamazoo, Mich.



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468 Kitchen cabinets

The manufacturer's *Series 2000* kitchen system features matte lacquer cabinet fronts with newly designed stainless-steel handles. The cabinets are available in pewter gray and blossom white. Other features in the series include stainless-steel vent hoods, cooktops, and a butcher block preparation table. Poggenpohl USA Corp., Allendale, N. J.

469 Credenza

The *Coronation 8 Series* of office furniture is made of solid walnut in structural parts and trim. Australian walnut on surface tops is said to complement the butt-walnut veneers applied on drawer and door fronts. The panels are incised, and a tapered molding is inserted and glued in place. Jasper Desk Co., Inc., Jasper, Ind.

470 Fabrics

The *Textile Museum Collection* of fabrics is said to be drawn from Eastern and Oceanic textiles found in the archives of the Textile Museum in Washington, D. C. Lee Jofa, Carlstadt, N. J.



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471 Lab system

MAX, a table-based lab system, consists of 12 basic components and a variety of adjusters. The task-specific workstations are designed from the work table out by adding appropriate attachments where needed. Hamilton Industries, Two Rivers, Wis.

472 Fabrics

The *Specifier I Collection* of casement fabrics is comprised of flame-proofed wools and flame-resistant polyesters that are said to have the look and feel of wool. The available colors are based on tones of gray, mauve, and a neutral beige. Frankel Associates, Inc., New York City.

473 Files

The *Optimedia II* system of mixed-media cabinets is based on a cabinet shell that comes in six heights, two widths, and eight colors. Components snap into 1/4-in. slotted posts and can be easily rearranged as filing needs change. Wright Line, Inc., Worcester, Mass.



474



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474 Auditorium seating

The *Futura* line of auditorium seating features a mechanism that allows the seats to fold to less than 9 1/2 in. The chairs come fully upholstered in a range of fabrics and may be specified with an optional black plastic seat or back. All chairs are mounted on a steel bar, painted black, and feature polyurethane armrests. JG Furniture Systems, Inc., Quakertown, Pa.

475 Chair

The *Fuso* armchair designed by Adam Tihany and Joey Mancini is available in beechwood, mahogany, pearwood, honey stain, and high-gloss and matte lacquers. The seat may be specified in a selection of fabrics, leathers, and wood. Innovative Products for Interiors, Long Island City, N. Y.

476 Bar stool

The *Liverpool* bar stool was designed by Ron Carter and may be specified with an upholstered or slatted seat. The stools are available in several different woods and finishes, including teak for outdoor use. In counter or bar height, the stool has both residential and commercial applications. Interna Designs, Ltd., Chicago.



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477 Chair

The manufacturer's *Maria chair model 4028* measures 23 1/2 in. wide, 26 in. deep, and 31 in. high. The chair is available in a variety of fabrics and finishes. Mueller Furniture Corp., Grand Rapids, Mich.

478 Workstations

A line of computer workstations can be designed in a variety of configurations. Features include a keyboard extension tray, enclosed paper and printer compartments, data carrier racks, mobile file baskets, paper organizers, and built-in planter. Adjoining tables are also available. Haller Systems, Inc., Irvine, Calif.

479 Chair

The *Nikko* visitor's chair is available with open arms or upholstered arm panels. The leg frames are constructed of solid hardwoods, including mahogany, walnut, and white oak. All wood parts are finished with several coats of *Technivar*. Black cushion glides are integrated into the design of the leg frame. Tuohy Furniture Corp., Minneapolis.



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480 Desks

The *Alpha Series* of desks comes in two styles—mahogany full pedestal with blade base, and walnut leg with mahogany three-quarter leg. Desk tops are standard in mahogany with leather or vinyl optional. Marble is available on credenzas. All exposed hardware may be specified as mirror chrome or burnished bronze. Myrtle Desk Co., High Point, N. C.

481 Office furniture

The *Lucera 2500 Series* of office furniture includes desks, credenzas, lateral files, hutches, conference and occasional tables, and overhead storage units. The pieces are available in mahogany with decorative veneer inlays or oak with diamond veneer inlays. Inwood Office Furniture, Jasper, Ind.

482 Chair

The *Versa Sled Base* chair features a padded, contoured seat and back and is available in 26 colors and chrome for the frame. The armrests are available in four colors and the upholstery may be specified in fabric, vinyl, or the customer's own material. The chair is said to be ideal for restaurants, cafeterias, and other similar environments. Krueger, Inc., Green Bay, Wis.



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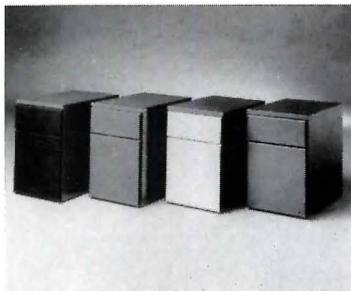
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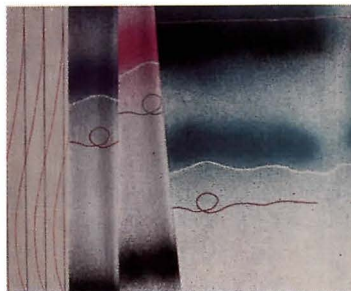
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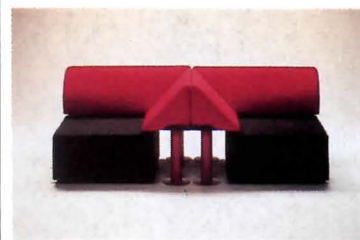
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483 Fabric
#4228 *Mandor* is a 100 percent rayon fabric intended for contract applications. The fabric measures 51 in. wide and is available in 64 colorways. The colors range from subtle beiges and taupes to deep blues to the bright Tangerine shown above. Manuel Canovas, Inc., New York City.

484 Desks
The *Chancellor* line of desks and credenzas can be used in both fixed-wall and open-office systems. The line's features include deep returns and bridges to accommodate word processing equipment, CPU storage areas, and articulated keyboards. *Chancellor* is available in cherry, walnut, and mahogany with matte demipore and hand-rubbed finishes. Stow & Davis, Grand Rapids, Mich.

485 Fabric
Brigadoon fabric features a broken-twill-and-dot construction and is available in 23 colors. The fabric is said to be fire-retardant and abrasion-resistant. Made from 75 percent *SEF Modacrylic* self-extinguishing fibers and 25 percent nylon with an acrylic backing, the fabric can be used as upholstery or wallcoverings. Brickel Associates, Inc., New York City.

486 Table
The *Botticelli Console* is an adaptation of a late 19th-century hand-carved gilded scallop shell console. The console is 32 in. high, 37 3/4 in. wide, and 14 1/4 in. deep. The piece is constructed of a resin and bonded wood combination and is available in custom finishes. Karl Mann Associates, New York City.

487 Files
The manufacturer's *Storage Centers* lateral files and *WorkStore* personal pedestals are available with new *Radius Fronts*. The front panels feature recessed black side pulls that project 7/8 in. to create a sculptured look. The fronts are available in 45 colors, plastic laminates, and wood veneers. Office Specialty, Chicago.

488 Table and chairs
Ice cream parlor chairs and coordinating tables are designed for quick cleaning and meet national fire-retardant standards. The chair frames can be ordered in gold, beige, black, brown, white, gray, bronze, and silver. The tabletops feature five oak-edge plastic laminate styles, plus self-edge and vinyl-edge styles. Plymold Booths, Kenyon, Minn.

489 Seating
The *Mobius Bench*, available in one- and two-seat models, is designed for both residential and commercial use. The frame of the bench is made of lacquered steel, the seats of hard-edge leather with the stitching in view, and the backs are formed by cylinders of black rubber. Cy Mann Designs, Inc., New York City.

490 Fabric
The *Stuttgarter* collection of fabrics combines dynamic patterns with metallic dyes to create prints inspired by the paintings of Barnett Newman and Mark Rothko. All of the prints are suitable for both residential and commercial installations. Design Tex Fabrics, Inc., Woodside, N. Y.

491 Fabrics
The manufacturer's textile collection, intended for use as soft window treatments and as wallcoverings, includes seven 54-in. fabrics. *Nuance Leno* is made of wool, silk, and cotton, and comes in six colors. *Toya* is a wool and cotton blend. *Fuji* is a 100 percent wool weave, and *Nikko* is a jacquard weave. Knoll Textiles, New York City.

492 Chair
Sensor, designed by Wolfgang Muller-Deisig, is available in three high-backed sizes intended to accommodate different body shapes. Arm options include T-arm, omega arm, and armless. Fully upholstered arm options are also available. The chair features a one-piece polypropylene shell. Steelcase, Inc., Grand Rapids, Mich.

493 Office system
The manufacturer's *Business Furniture System* provides a format for customizing office furniture. The system may be specified in 19 color finishes, seven panel fabrics in 94 colors, three wood veneers, four wood finishes, and a selection of laminates. The system also features a bullnose or softened edge treatment. Artec, Jasper, Ind.

494 Lounge seating
Quadrio, designed by Michael McCoy, is suited for both office and home use. The lounge seating consists of three units—an armless chair, a chair with one arm (left or right), and a chair corner. The unit has a wooden frame with horizontal springing and polyurethane foam cushioning. Krueger International, Bohemia, N. Y.



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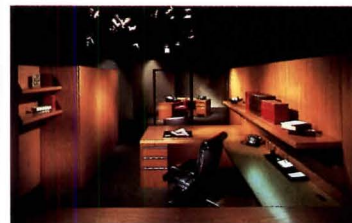
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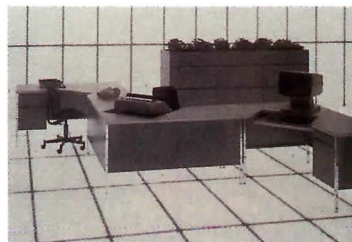
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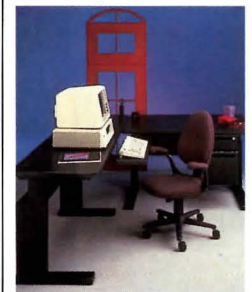
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495 Office system

The *Action Office* line of office system components features thicknesses of 1 1/4 in., wrapped edges, and peninsula surfaces offered in 48-, 60-, and 72-in. widths. A choice of two laminate and three veneer finishes is available, in addition to round and square ends. Herman Miller, Inc., Zeeland, Mich.

496 Office system

Maxx is the manufacturer's office system that features curved radius edges, rounded details, and uninterrupted work surfaces. The system also features advanced wire management and sound absorption qualities, along with a concealed tasktop wireway and articulating keyboard arm. Amstore Systems, Inc., Liberty, S. C.

497 Upholstery

Ballad and *Folkson* are contract upholstery lines that are part of the *Pastoral Collection*. The multicolored wool and silk upholsteries are made of yarn dyed by individual sections and woven with a light-reflective patina. Each is available in 15 colorways and is Class A fire resistant. Adam James Textiles, Inc., Hauppauge, N. Y.

498 Casegoods

The *Connoisseur* casegoods collection includes radius tables, credenzas, desks, bookcases, desks, returns, and sideboards. Options include leather insert writing areas, adjustable keyboard trays, center drawers, pencil trays, and stationery racks. The pieces are available in a variety of wood finishes. Brayton International Collection, High Point, N. C.

499 Chair

The *Lune D'Argent* chair is constructed of a welded-steel rod frame with a polyester-lacquered light textured pewter finish. The chair is available with a glossy epoxy finish as well. The chair measures 24 by 20 by 30 in. and is available with a matching table. Beylerian Ltd., New York City.

500 Office system

The *Electronic Support System* is comprised of the *Full Panel 5700* and *7700 Raised Series*. Components for each include a 120-deg desk with optional right- or left-hand returns, a corner desk available in three configurations, and the *Machine Work Desk* in keyboard or machine-drop styles. Meridian, Inc., Spring Lake, Mich.

501 Chair

Designed by Brian Kane, the *Bodega* chair and loveseat are intended for both commercial and residential applications. The rounded forms of the inside arm and back allow for the upholstery to wrinkle as it follows the curvatures. The chair is 31 in. wide, and the loveseats are 53 1/2 in. wide. Metropolitan Furniture Corp., South San Francisco.

502 Office system

The *Morrison System*, designed by Andrew Morrison, features a range of components based on a 6-in. module that can be used to create open office plans or freestanding furniture. Freestanding vertical panels made of hardboard septum, steel ribs, and fiberglass are available in four heights. Knoll International, New York City.

503 Office seating

Series One Seating is a complete line of office chairs that consists of 19 chairs in seven models. The chairs are available in a range of fabrics with optional features such as tilt mechanisms, leather, and custom upholstery. Panel Concepts, Inc., Santa Ana, Calif.

504 Armchair

The *Hank* armchair features solid bent beech wood construction with a "U" leg brace for additional support. The chair is intended for dining, conference, or reception use. Loewenstein/Oggo, Pompano Beach, Fla.

505 Rocking chair

The *Glouster Rocker* is a recipient of the Daphne Award for design excellence by the National Hardwood Institute. The chair is hand-crafted in solid cherry and ash. Thos. Moser Cabinetmakers, Inc., Portland, Maine.

506 Workstation

The *ES Table System* is a line of freestanding electronic support furniture. Standard features include an integrated wire management system, a clear-access leg with a low profile foot to provide ample knee and foot clearance, adjustable leveling glides, and a soft-edged design. Haworth, Inc., Holland, Mich.



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507 Office furniture

The *Bit-N-Byte Center Series* of computer furniture consists of freestanding modules, add-on corner units, and table modules. Each module is constructed of high-pressure melamine laminate and is available in royal oak or sandy oak finish. Decar Corp., Middleton, Wis.

508 Armchair

The *Volkschair* stacking armchair has a stacking capacity of 40 high. The seat/back is laminated beech with a cover veneer available in mahogany, cherry, oak, beech, or maple stained in 10 colors. The chair comes fully upholstered or with an exposed wood back. Rudd International, Washington, D. C.

509 Children's furniture

The *Playscape System* consists of bilevel play environments designed for multiple commercial uses, including hospitals, clinics, office waiting areas, day care centers, and health clubs. Architects and designers can customize the units in a number of ways. Safety features include an upper level with unbreakable windows and a self-limiting platform. Playscapes Children's Environments, Madison, Wis.



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510 Area rugs

The manufacturer's in-house art and design staff will assist in the formulation and execution of a concept for both floor and/or wall use. Hand-tufted and carved, the area rugs are available in custom designs, sizes, shapes, textures, and colors. The rug shown above is called *Nepal*. Scott Wieland, Div. of The Scott Group, Cleveland.

511 Furnishing accessories

A line of furnishing accessories includes stools, coat racks, glass-topped tables, and a clothes hanger, all in a circular design. The line is designed to be used in kitchens and in living and office spaces. The furniture features nylon coloration, a nonporous surface, and steel inserts in the legs for added support. Hewi, Inc., Allendale, N. J.

512 Fabrics

The *Select Pleats* line of fabrics is 48 in. wide, machine-washable, and available in six colorways. The fabrics shown above are *Austrian Pleat* (top center), a textural herringbone (left), *Maestro*, a heavy solid (right), and *Bow-Tie Sheer* (bottom). Albert Van Luit & Co., Los Angeles.



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513 Armchairs

Four upholstered armchairs were designed by Calvin Morgan and are intended for contract use in contemporary and transitional interiors. The chairs have a solid ash frame that is available in a selection of stains, all with a satin open-pore lacquer finish. Upholstery is available in leather or fabric. Stendig International, Inc., New York City.

514 Tables

The *Pier* conference and reception-area tables consist of an inverted pyramid supported by columns resembling waterfront piers. Tabletops come in a choice of polished and filled solid marbles and a range of wood veneers. The legs are mirror- or satin-polished stainless steel. Brueton Industries, Inc., Springfield Gardens, N. Y.

515 Chairs

The *Hill House Set* consists of a matching armchair and settee available with either stained walnut or ebonized ashwood frame. Each set is stamped with a number in order of production and is accompanied by an identity card giving details of construction, history, and design. Atelier International Ltd., New York City.



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516 Chair

The *Urbane* chair, formed by an arc of wood, measures 22 1/2 by 24 by 34 in. The solid birch frame is available in seven finishes: ebonized or bleached red or brown mahogany and three additional aniline dye finishes. Donghia Furniture, New York City.

517 Fabrics

The *Entity* line of flame-retardant fabrics is intended for contract use and contains seven designs ranging from damasks to tailored stripes and twills. Also included in the line are three drapery fabrics and five upholstery fabrics. Greeff Fabrics, Inc., Port Chester, N. Y.

518 Cabinets

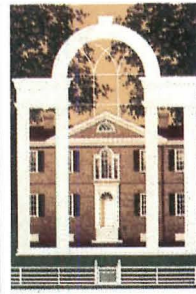
The *Program T 239 Verona* series of laminated kitchen cabinets features an elongated brushed metal grip. The cabinets are available in a gray/white tone with contrasting dark-gray line edging. The line has more than 300 sizes of cabinets and 130 different door fronts. Tilesa-Contemporary Systems, Inc., Woburn, Mass.



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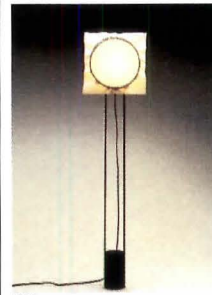
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519 Furniture

The *Roommate Collection* of solid oak furniture is designed especially for institutional environments. The collection consists of a three-drawer desk/chest, one-shelf bookcase, armchair, and bed with solid ends. Adden Furniture, Inc., Lowell, Mass.

520 Table

The *Vizella Pedestal table* has a bombe base that measures 21 3/4 in. high and a top that measures 30 1/4 by 30 1/4 in. The table is a resin-bonded wood and is available in custom finishes. Karl Mann Associates, New York City.

521 File cabinets

The *Spectra One* line of lateral files with integral pulls is offered in two-to-five drawer heights. The files are available with legal-letter-sized interiors, card trays, compressors with track, hanging frames, or sets of three dividers. Allsteel, Inc., Aurora, Ill.

522 Chair

Arriva, designed by Arthur Crockett, is a pull-up chair that is available in a choice of two cushion design details. The chair is available in wood finishes and *Endura-coat* lacquers over ash, maple, and walnut. The seats may be specified in leather or fabric. Mueller Furniture Corp., Grand Rapids, Mich.

523 Marble accessories

A collection of nine marble accessories includes lamps, candlesticks, bowls, and an ashtray. Three different marbles quarried in Turkey—Rhodos (deep red), Afyon (white), and Onyx (beige)—are the basis of the collection. All nine objects are hand-finished by Turkish artisans. Donghia Furniture, New York City.

524 Chairs

The *Bridghampton* chair series, designed by Davis Allen, includes a high stool and club chair. The chairs are made of beech and are available in a range of stains and opaque finishes. The seats are upholstered in fabric, vinyl, or leather, and the high stool may also be specified in a woven cane. Stendig International, Inc., New York City.

525 Artwork

The manufacturer's fine art prints are original pieces involving several forms of print manipulation, including silk-screen printing, blind embossing—single-level as well as three dimensional, and gold foil stamping. Each print is signed and numbered by the artist and available by commission only. Power Architectural Arts, Inc., Louisville, Ky.

526 Floor lamp

The *Corona* floor lamp is made of black enameled steel and aluminum, and the base is made of solid aluminum for added stability. The ceramic socket accepts a conventional 60W bulb, and the shade is handmade Japanese rice paper. A wall-mounted version is also available. Porcelli Associates, Inc., New York City.

527 Rubber chairs and tables

A children's furniture collection features rubber armless chairs in three heights and rubber tables with round or square tops. Chair seats come in beech or padded and upholstered. The frames are made of black powder-coated steel with polypropylene back straps. Metropolitan Furniture Corp., South San Francisco.

528 Table

The *Lune D'Argent* folding table measures 43 1/2 by 29 in., and is made of a welded-steel rod with a polyester-lacquered textured pewter finish. In the folded position, the table measures 43 1/2 by 4 by 29 in. Beylerian, New York City.

529 Fabrics

The *Crown Imperial* collection of 100 percent wool fabrics is based on the designs of William Morris. The fabrics measure 51 in. wide and are available in ten colorways. The repeat in the pattern is 8 3/4 in. wide by 1 1/8 in. high. Unika Vaev USA, New York City.

530 Side chair

Amalie side and armchairs, designed by Bernd Makulik, feature a contoured back with molded plywood panels and a solid wood seat frame with rubber webbing. The chair frame is solid beech with double dowel construction and finger-jointed corner blocks under the seat frame. Monel Contract Furniture, Inc., Oakland Gardens, N. Y.

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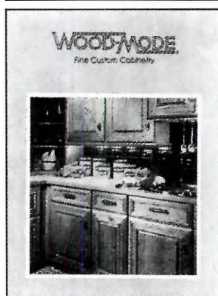
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531 Furniture

The manufacturer's new *Ergoform* series of wood office seating is featured in a color brochure. Intended for use in open office arrangements or in private offices, the seating is shown in a variety of applications. Accord Business Furniture, High Point, N. C.



537 Cabinetry

A new color brochure reviews the manufacturer's custom-made cabinetry for residential applications. A variety of styles are shown in a selection of woods. Dimensions are listed in the literature. Wood-Mode Cabinetry, Kreamer, Pa.



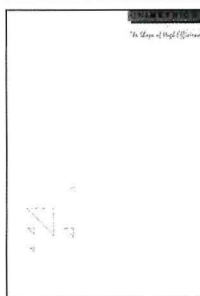
532 Office furniture

An 8-page color foldout brochure highlights the manufacturer's *Futura*, *Strata*, *Scanda*, *Ventura*, *Concept*, *Ambience*, and *Nova* collections of solid hardwood credenzas. Product features, including edging detailing, available finishes, and optional bases are described. Dar/Ran Furniture Industries, High Point, N. C.



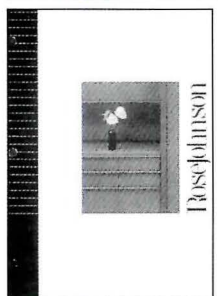
538 Cabinets

A line of kitchen cabinets and vanities is reviewed in a 4-page color brochure. Diagrams show available style options and dimensions, and photographs illustrate a selection of woods. Kitchen Kompact, Inc., Jeffersonville, Ind.



533 Office furniture

The *Unimetrics* office system consists of a variety of different size and shape worksurfaces, vertical storage units, task lights, tack boards, and modesty panels. Described and illustrated in a 6-page color brochure, the system is shown in several configurations. Borroughs, Div. of Lear Siegler, Inc., Kalamazoo, Mich.



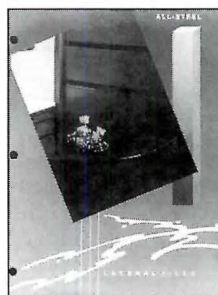
539 Office furniture

An 8-page color brochure reviews the *Progressions+* line of office furniture. A variety of components for computer-support are available, including corner CRT surfaces with articulating keyboard trays and printer cabinets. RoseJohnson, Grand Rapids, Mich.



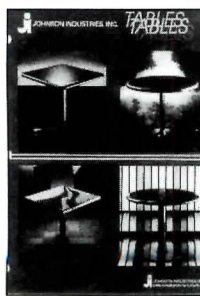
534 Tables

Tables for computer terminals, printers, word processors, and microcomputers are shown in an 8-page color brochure. A variety of accessories, including paper-feed slots, wire managers, cable sets, overselves, printout shelves, CRT arms, and modesty panels, are also reviewed in the literature. Howe Furniture Corp., Trumbull, Conn.



540 Files

The manufacturer's line of lateral files for paper and computer media storage is featured in a 14-page color brochure. Photographs show how the units can be integrated into workstations and used to form divider walls. Allsteel, Inc., Aurora, Ill.



535 Tables

A new 14-page color catalog reviews the manufacturer's line of *Colorcast* seamless polyester resin tops. The tables can be specified with a variety of edge details, including radius, square, bullnose, waterfall, and beveled corners. Johnson Industries, Inc., Elgin, Ill.



541 Carpet

A 28-page resource directory and specification guide lists the manufacturer, fiber content, manufacturing technique, method of construction, specifications, and colorations of several hundred wool carpets. The Wool Bureau, Inc., Atlanta.



536 Seating

A 16-page color brochure features the *Tecnics* seating line. A variety of ergonomic considerations are reviewed in the literature, including seat tilt, waterfall edges, backrest angles, pivot, and independent backrest and seat adjustment. Stacor Corp., Newark, N. J.



542 Seating

A line of seating, including, executive, manager, and operational chairs, is featured in a 6-page color brochure. Dimensions for each model are listed. Natural-oak, medium-oak, or dark-oak finishes can be specified. Kinetics Furniture, Toronto, Canada.

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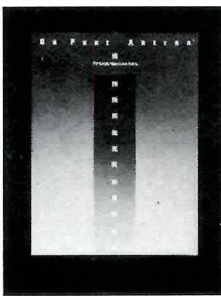


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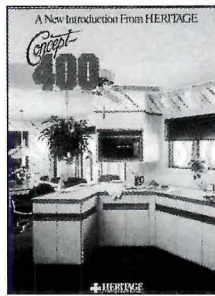
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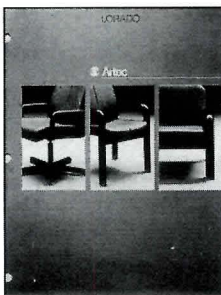
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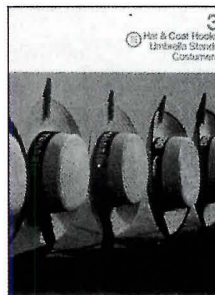
543 Carpet
The manufacturer's *Carpet Appearance Index* is featured in a 6-page foldout brochure. The step-by-step formula is designed to help specifiers gauge how carpet will perform after installation. According to the index, soil resisting capabilities can be evaluated by measuring color, design, density, texture, and fiber. DuPont Co., Wilmington, Del.



549 Kitchen cabinets
The manufacturer's *Concept 400* custom design kitchen cabinets are featured in a 4-page color brochure. The literature includes a general product description, and more detailed information regarding the cabinets' interiors. Cabinet construction, materials used, and design implications are all discussed. Heritage Custom Kitchens, Inc., New Holland, Pa.



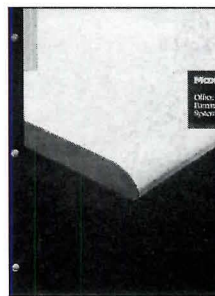
544 Office seating
The *Lorado* line of office seating, designed by Burkhard Vogtherr, is featured in a 12-page color brochure. The literature includes descriptions of several models, including the executive, management, task, guest, and conference chairs. Materials used and available options are reviewed. Artec, Jasper, Ind.



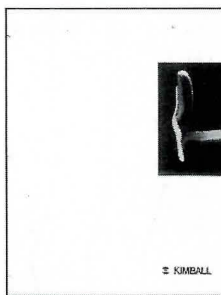
550 Umbrella stands
A 16-page color brochure describes a line of hat and coat hooks, umbrella stands, and customers. The brochure includes photographs of all available models with a selection of options. Product specifications and ordering information are also included. Peter Pepper Products, Inc., Compton, Calif.



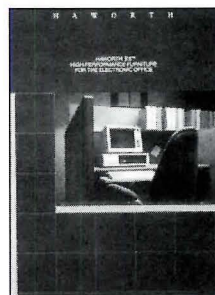
545 Computer furniture
The *DataGroup* system of modular workstations is designed especially for word processing environments. Featured in an 8-page brochure, the system is said to have display shelves with ergonomically correct viewing heights, turntables for shared access terminals, and a freestanding printer stand among other features. Office Speciality, Chicago.



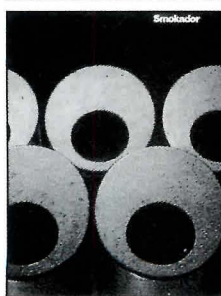
551 Office furniture
Maxx office furniture system is featured in a 12-page color booklet. A discussion of office furnishings included, along with product photographs and descriptions. A selection of options and features are reviewed in the literature. Amston Systems, Inc., Liberty, S. C.



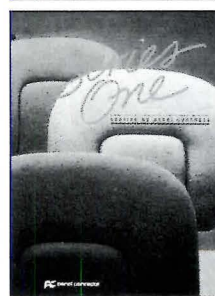
546 Office seating
An 8-page color booklet highlights the *Artura* line of office seating. The literature includes photographs of different available models, side-view diagrams, product descriptions, and lists of fabric and wood selections. Kimball Office Furniture Co., Jasper, Ind.



552 Office furniture
A 12-page color brochure features the manufacturer's *ES High-Performance Furniture for the Electronic Office*. The brochure reviews the features of the new line of electronic support components, including media storage hardware, corner work surfaces, and printer tables. Haworth, Inc., Holland, Mich.



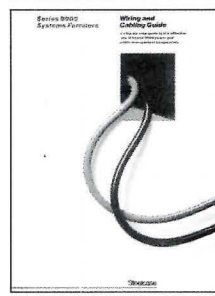
547 Building accessories
The *Modu Plus* building accessory collection includes a line of trash receptacles, umbrella containers, and combination units for ashes and trash. The 12-page color brochure describes the units' seamless aluminum tube bases and satin black high-impact phenolic plastic tops. Smokador, Div. of General Felt, Inc., Edison, N. J.



553 Office seating
Series One Seating is featured in a 24-page color brochure. The series consists of 19 chairs comprising seven models designed for a specific range of tasks. Each of the seven models is detailed on a two-page spread featuring close-up photos, descriptions of standard features and specification information. Par Concepts, Inc., Santa Ana, Calif.



548 Cabinets
A 4-page color brochure highlights the manufacturer's line of kitchen cabinets. The literature describes the cabinets' construction, fastening devices, plastic laminate interiors, end panels and toe-kicks, and handcrafted finish. Close-up photographs and general descriptions are included. Neff Kitchen Manufacturers Ltd., Ontario, Canada.



554 Furniture system
The power and cable management capabilities of the manufacturer's *Series 9000* furniture system are described in a 30-page color brochure. The literature explains how to use the series as a means linking electrical and data/telecommunications systems to a variety of locations within the office. Steelcase, Inc., Grand Rapids, Mich.

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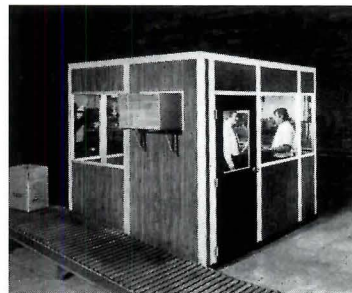
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555 Ceiling system

The *Vista Parallel* integrated beam ceiling system includes optional light fixtures, air diffusers, and acoustical blankets. Specially designed fluorescent light fixtures are offered in single 4-in. and double 8-in. beam widths. Chicago Metallic Corp., Chicago.

556 Tempered-glass sunrooms

A line of aluminum and wood sunrooms features insulated tempered glass throughout. On the straight and curved wood systems, an aluminum glazing system with a condensation trough and a 3-step marine-quality finish ensures protection from excessive moisture. The Sun Co., Woodinville, Wash.

557 Sunrooms

Solarium sunrooms have solid redwood frames around insulated glass, and can be used to create extensions for residential, restaurant, and retail applications. The system's features include a protective finish for interior and exterior wood, a bronze aluminum exterior glazing system, and adjustable roof pitches. Creative Structures, Inc., Quakertown, Pa.

558 Shielding window

An EMI (Electromagnetic Interference) shielding window features a highly conductive and transparent thin metal film incorporated into the insulating glass unit. The *dBar* window provides solar control, radio-frequency shielding, and R6 insulation. Southwall Technologies, Palo Alto, Calif.

559 Concrete panels

The manufacturer's concrete panels measure 1 by 2 by 1 1/2 ft thick and weigh 22 lb per sq ft. Intended for special-purpose rooms and buildings, the panels attach to either steel or wood studs by means of a clip that catches the tongue-and-groove panel edge. Scott System, Inc., Denver.

560 Ceiling system

The *Planar Macro* line of aluminum ceiling systems features a 9/10-in. depth and square edges in each of the available four panel widths. The system can accommodate a variety of lighting fixtures, air-handling components, and acoustical treatments. Alcan Building Products, Warren, Ohio.

561 Special-purpose room

A special-purpose room designed to resemble a train's caboose is intended for use as a guest cabin, club house, rail museum, shopping center, restaurant, and for public display. The standard caboose is 30 ft long by 14 1/2 ft high and approximately 10 ft wide. Fantasia Trains, Port Washington, N. Y.

562 Modular building

The *Porta-Panel II* adaptable modular building is designed to be used as an in-plant office, cafeteria, meeting room, lounge, or storage facility. The building features a two-piece stud system said to facilitate easy panel replacement. Porta-Fab Corp., St. Louis.

563 All-weather shelter

A modular all-weather shelter, made from a pre-engineered steel frame, is designed to withstand wind and snow loads. The shelter is available in four configurations, in square or hexagonal shapes, and in a variety of color combinations. Helios Industries, Inc., Hayward, Calif.

564 Greenhouses

The manufacturer's prefabricated solar greenhouses are designed with internal weep systems, awning vent windows, sliding doors, and tempered curved glass. The greenhouses are constructed of extruded aluminum, and the ridges and sills have poured thermal breaks. Sun System, Inc., Commack, N. Y.

565 Integrated ceilings

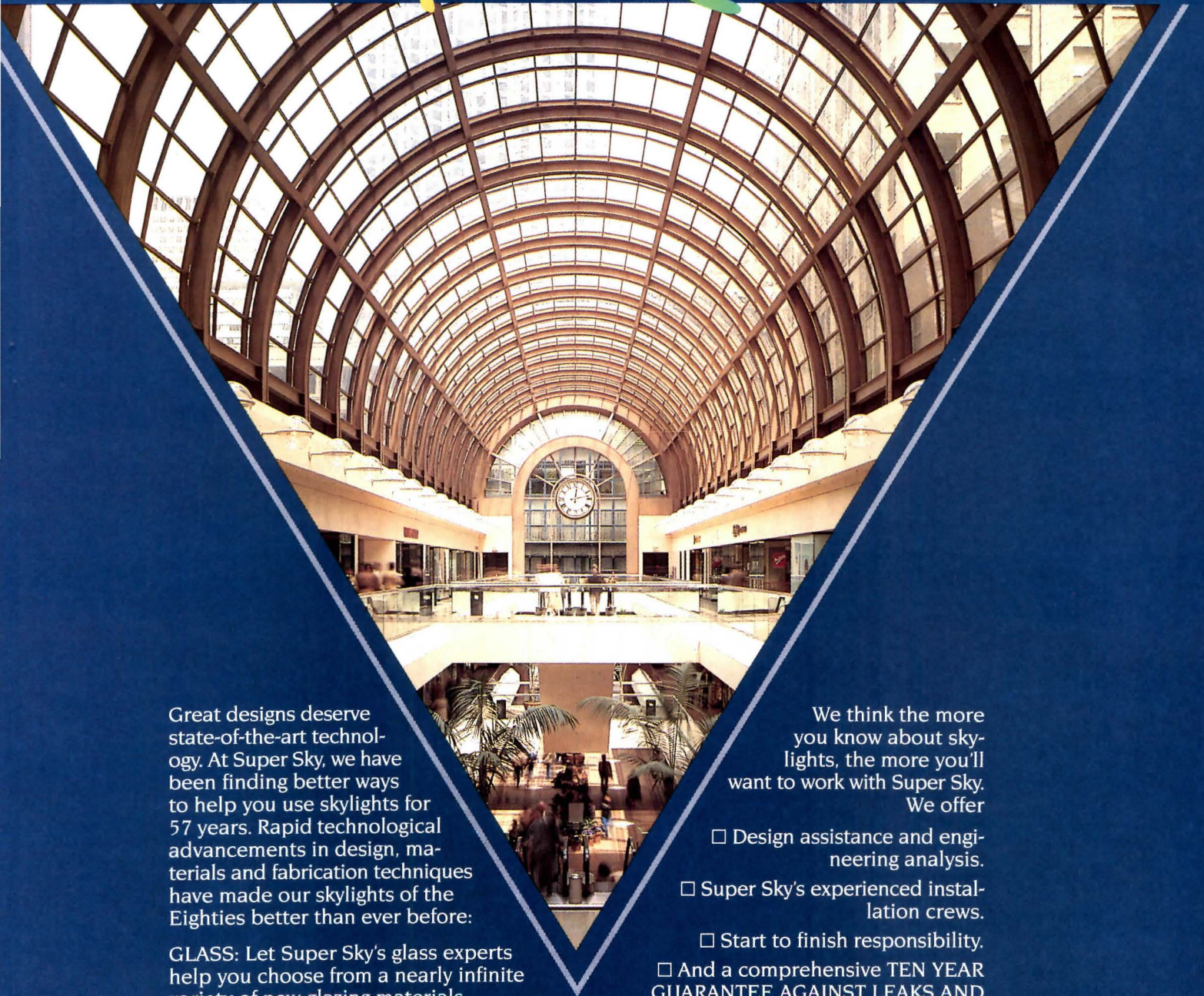
GlasBlok 2-by-2 ft acrylic panels give the translucent appearance of glass block. The panels are intended to be used with the manufacturer's *Invisigridd* T-bar ceiling system and feature two glass-block textures. The blocks are said to tip up easily for cleaning and access to the plenum. Integrated Ceilings, Inc., Los Angeles.

566 Pre-engineered homes

The manufacturer's custom-designed, antique-styled post-and-beam pre-engineered home packages have been expanded to include planed timbers, laminated beams, and a more "polished" beam finish—features that provide an option to the more traditional rustic look of other packages. Yankee Barn Homes, Grantham, N. H.

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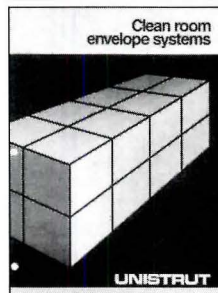
13 Special Construction Product literature

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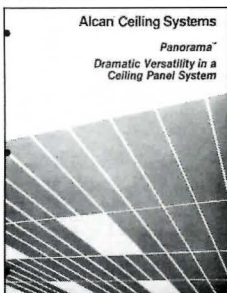
567 Saunas

A do-it-yourself sauna package starter kit is described in the manufacturer's brochure. The literature describes the "how-to" cassette tape and step-by-step plans and blueprints included in the kit. Sauna accessories, backrests, thermometers, and sand timers are also reviewed. Am-Finn Sauna Co., Valley Forge, Pa.



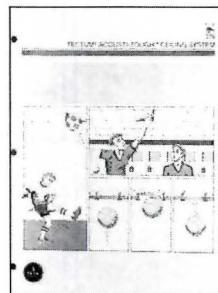
573 Clean rooms

A 6-page color foldout brochure reviews a series of clean-room envelope systems. The brochure describes the manufacturer's framing system, *Colorline* partition system, and general systems data. The system is further broken down into individual components that are discussed. Unistrut Corp., Wayne, Mich.



568 Ceiling grid system

A 6-page brochure details the features and benefits of an integrated commercial ceiling-grid system that is available in three styles. Designed for architects and ceiling-product specifiers, the brochure includes architectural drawings and technical support specifications, and illustrations of the three options. Alcan Building Products, Warren, Ohio.



574 Ceiling system

The *Acousti-Tough* suspended acoustical ceiling system, designed especially for multipurpose rooms and gymnasiums, is featured in a 4-page brochure. The literature includes detailed product descriptions, specifications, code acceptability, and warranty information. Tectum, Inc., Newark, Ohio.



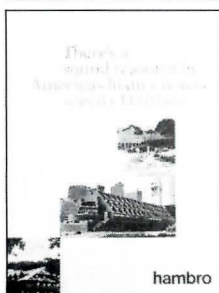
569 Solariums

A brochure outlining specifications for the manufacturer's redwood and glass solariums intended for commercial applications is available. The brochure describes the system's standard features, including a maintenance-free bronze aluminum exterior glazing system. Creative Structures, Inc., Quakertown, Pa.



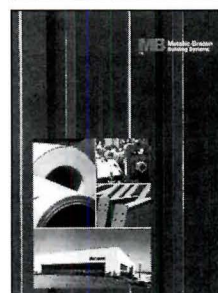
575 Frame system

An information kit includes a 6-page foldout brochure and six individual fact sheets on the *Uni-Frame* wood-frame building system. The literature includes descriptions of the system's features and benefits, along with information on particular applications. Bonanza Buildings, Inc., Charleston, Ill.



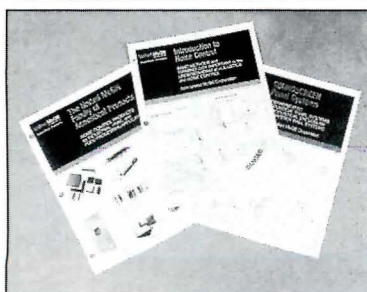
570 Floor system

A 4-page brochure includes photographs and charts to demonstrate the noise-control benefits of the manufacturer's composite floor system. The brochure details how the system also reduces vibration and improves room appearance. Laboratory and field-test data is also included. Canam Steel Corp., Needham, Mass.



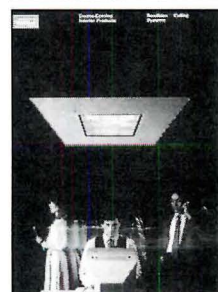
576 Building system

The manufacturer's line of metallic building-system products is highlighted in a 36-page color catalog. The brochure includes information on special-engineered buildings, clear-, hi-, and modular-span structures, and wall and roof panel profiles. Diagrams, specifications, and ordering information are included. Metallic-Braden Building Co., Houston.



571 Acoustical products

A series of three brochures describes the manufacturer's line of acoustical products. The first brochure explains basic acoustical methods and terminology. The second gives an overview of noise control products, and the third describes the construction, types, and benefits of prefabricated acoustical panels. United McGill Corp., Griffin, Ga.



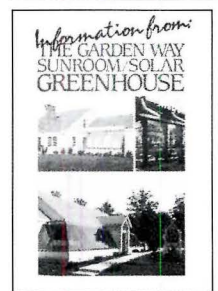
577 Ceiling system

An 18-page color brochure features the *Rendition* ceiling systems. Product descriptions, specifications, available options, and design details are included in the literature. Product photographs, diagrams, and selection charts are also highlighted. Owens-Corning Fiberglas Corp., Toledo, Ohio.



572 Sunrooms

An 8-page color brochure features a line of sunrooms constructed of high-strength thermalized tubular aluminum rafters and cross bars. The literature depicts residential, commercial, and restaurant applications. Cross-sectional diagrams with labels and dimensions are also included. Sunbilt Solar Products by Sussman, Inc., Jamaica, N. Y.



578 Sunrooms

The manufacturer's line of sunrooms and solar greenhouses is featured in a 12-page color booklet. Included in the literature are product photographs, technical drawings with dimensions, and a detailed discussion of solar components. Garden Way SunRoom/Solar Greenhouse Div. of Garden Way, Inc., Waterford, N. Y.

14 Conveying Systems

UCI 14, Conveying systems:
 Conveyors & chutes
 Dumbwaiters
 Elevators
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 Lifts
 Moving stairs & walks
 Pneumatic tube systems
 Powered scaffolding



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579 Wheelchair elevator

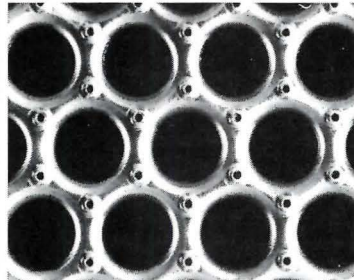
The *Accessibility Lift* is a closed-car vertically traveling wheelchair lift intended for use in schools, churches, lodges, and meeting halls. The unit is 36 in. deep by 48 in. wide and can accommodate one wheelchair patient and attendant. Inclinator Company of America, Harrisburg, Pa.

580 Safety ladder

A safety ladder is said to resemble a drainpipe when it is closed, since it measures just 4 1/4 by 4 in. Constructed of aluminum alloy, the ladder can be installed by a window, door, or other exit and opens with a one-quarter turn of a lever. The ladder has a UL safety listing. JOMY Safety Ladder, Colorado Springs, Colo.

581 Elevators

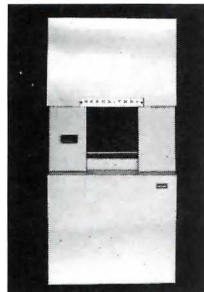
The *Spectrum Series* is a complete line of cab wall designs, ceiling and lighting packages, entrances and fixtures for hydraulic and traction elevators. For hospital/service applications, a variety of special fixtures is available. Westinghouse Elevator Co., Morristown, N. J.



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582 Safety grating

A line of safety grating and treads features *Open-Grip* grating. *Open-Grip* is a one-piece sheet metal grating designed for work platforms, mezzanines, catwalks, stair treads, and other flooring applications. The grating is made of heavy-gauge steel and is designed with debossed holes that are self-cleaning. Morton Manufacturing Co., Libertyville, Ill.

583 Guided vehicle system

The *Transcar* system features a passive guidance system whereby the self-propelled, battery-powered vehicle travels from station to station by following a thin metallic tape. Custom-designed trolleys are available. The system is capable of interfacing with elevators without employee assistance. TransLogic Corp., Denver.

584 Deposit system

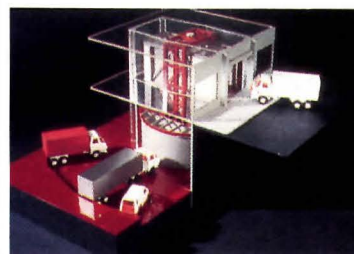
The *American C-100 Depository* system is a freestanding unit that incorporates the head, chute, and deposit safe into one piece. It can be installed in both new construction and replacement applications. Mosler, Hamilton, Ohio.



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585 Elevators

The *Epoch II* traction elevator system is designed for high-traffic, mid- to high-rise buildings. *Epoch II* features a microprocessor-based supervisory dispatching system that has an advanced traffic management strategy. By estimating how quickly each demand for service will be met, the system determines car assignments. Westinghouse Elevator Co., Morristown, N. J.

586 Stair lift

The *GSL-2* stair lift is designed specifically for straight stairways that pose an access problem. The lift's support rail consists of a C-channel that attaches to either side of a stairway. The wheelchair platform is moved along the rail by two independent rollers. Garaventa Ltd., Canada.

587 Truck elevator

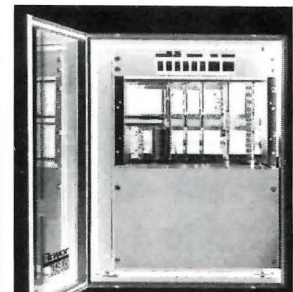
The *Rotolift* auto and truck elevator features a rotating dock that allows vehicles to be loaded into parking areas above street level. Since the turntable is below ground, the street-level entranceway only needs to be the width of one vehicle. Lake Shore, Inc., Iron Mountain, Mich.



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588 Vehicle turntables

The manufacturer's line of vehicle turntables is intended to be used in service basements and parking garages. The turntables are custom designed to building and site requirements and are available with unlimited diameter and capacity, steel or concrete decks, and a choice of operating controls. The Macton Corp., Danbury, Conn.

589 Elevator controls

The *Traffic Master 900* is software-based and designed for DC-gearless and gearless elevator applications. The system is intended to be used for medium- to high-rise elevator installations and is said to replace individual elevator motion controls. Armor Elevator Co., Inc., Louisville, Ky.

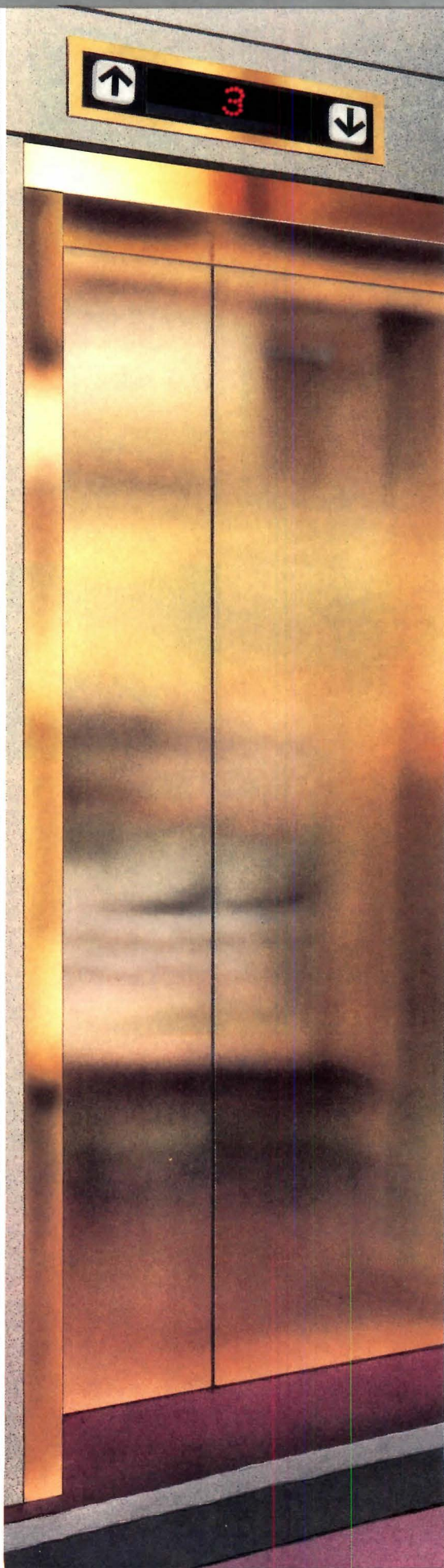
590 Control system

An elevator control system is designed especially for low- and mid-rise buildings with elevator speeds from 100 to 450 ft per min. The system features computerized diagnostic capabilities that allow reprogramming on site without disrupting passenger service. Armor Elevator Co., Inc., Louisville, Ky.

Close

Move

Open



Another Hardheaded Dover Breakthrough On The Three Basic Elevator Functions.

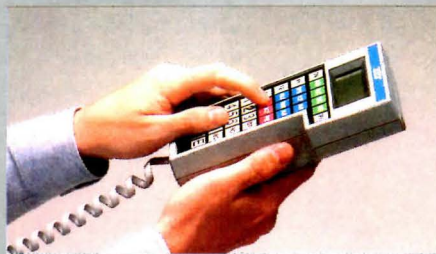
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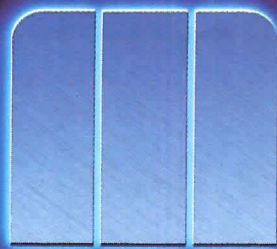
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14 Conveying Systems Product literature

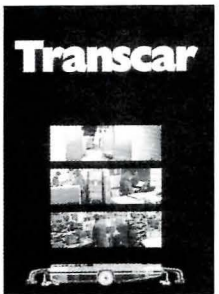
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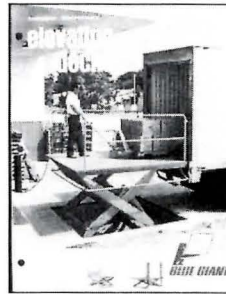
591 Conveying system
An 8-page brochure features the manufacturer's automated material-handling system intended for commercial applications. The literature reviews three different models of the system for transferring materials and supplies from between two to 200 locations. Floor plans and space requirements are also discussed. Lamson Corp., Syracuse, N. Y.



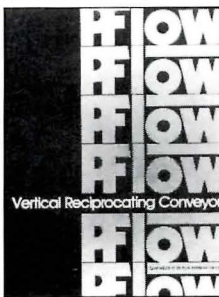
597 Dock levelers
Two-page specification sheets are available for five of the manufacturer's hydraulic leveler series. The color sheets include photographs and callouts for the products, along with descriptions of the automatic safety-stop system, high-stability inverted cylinder design, and an optional vehicle restraining system. Rite-Hite Corp., Milwaukee.



592 Conveying system
A 12-page color booklet highlights the *Transcar* electric-track-vehicle system. The literature describes product features, including interchangeable trolleys, a centralized computer control, automatic load and unload, and bi-directional functions. Industrial, commercial, and hospital applications are also reviewed. TransLogic Corp., Denver.



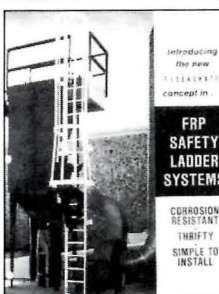
598 Elevating docks
An 8-page color booklet reviews several models of stationary and semiportable elevating docks. The literature includes product photographs, illustrations of the docks in use, product descriptions, selection charts, and lists of available options. Blue Giant Equipment Corp., Pell City, Ala.



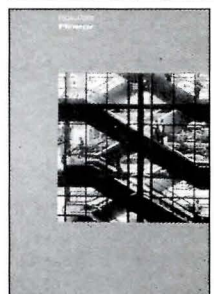
593 Vertical conveyors
The manufacturer's line of vertical reciprocating conveyors is featured in a 20-page color brochure. Included in the literature are descriptions of mezzanine, through-floor, cantilever, outside, and multiple-level applications. Product specifications and ordering information are also included. Pflow Industries, Inc., Milwaukee.



599 Conveying system
An information kit includes a 12-page brochure and eight individual fact sheets on the *Mailmobile* delivery system. Product features, including a proximity detection system, manual power steering, pressure-sensitive bumpers, integral battery charger, and full-strength strip switches are described. Bell + Howell, Zeeland, Mich.



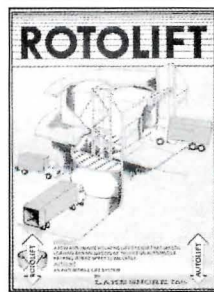
594 Safety ladders
Bulletin 294 is a 4-page bulletin outlining the manufacturer's caged safety-ladder system. The literature fully illustrates and describes the fiberglass-reinforced plastic system that is designed to meet or exceed OSHA requirements. Componentry tables and ordering information are also featured. Fibergate Corp., Dallas.



600 Escalator
A 12-page color brochure describes a line of escalators. The literature includes a series of photographs depicting the escalators in a variety of applications, variations in cladding, design options, customized treatments, quality control, and specialized installation capabilities. Armor Elevator Co., Inc., Louisville, Ky.



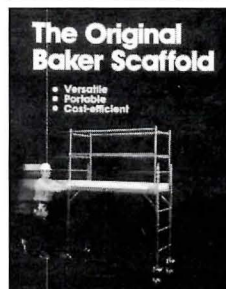
595 Handling systems
A 4-page color brochure highlights the manufacturer's line of bulk-material-handling equipment, including pneumatic conveying, bulk-storage silos, railcar unloaders, bagslitters, bulk-bag unloading and material-transfer systems, process controls, and turn-key systems. Todd Manufacturing Co., Cleveland.



601 Vehicle elevator
The *Rotolift* vehicle elevator is highlighted in a 4-page brochure. Information regarding cycle times, reliability, installation, custom designs, and available options is also included. Product specifications and diagrams are featured as well. Lake Shore, Inc., Iron Mountain, Mich.



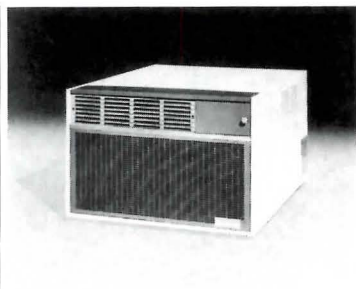
596 Stair lift
An 8-page color brochure reviews the manufacturer's line of stair lifts designed for straight and curved stairways. Product features, including a patented drive system, support tube attachment, drive cabinet, control panels, and landing equipment, are described. Product specifications are also included. Garaventa (Canada) Ltd., Blaine, Wash.



602 Scaffolds
The manufacturer's line of portable scaffolds is featured in an 8-page color brochure. The brochure describes the locking system, casters, base plate, leveling device, guard rails and toe boards, underslung trusses, and base extensions. Product specifications are also included. Hugh J. Baker & Co., Baker-Roos Div., Indianapolis.

15 Mechanical

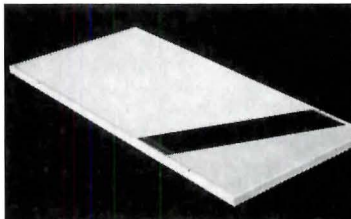
UCI 15, Mechanical:
 Air distribution equipment
 Fire protection equipment
 Heat generation
 Heat pumps
 Hvac equipment
 Mechanical devices
 Plumbing fixtures & trim
 Pumps & compressors
 Refrigeration equipment
 Water supply & treatment



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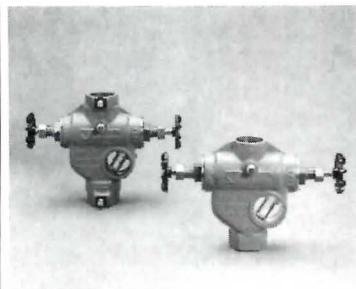
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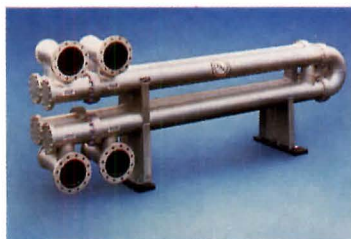
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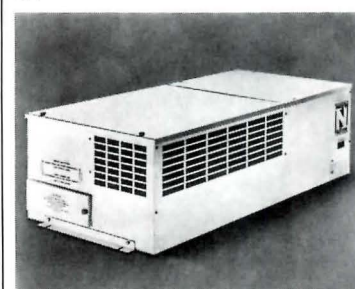
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603 Heating and cooling unit

The *Twinaire* heating and cooling unit features a sealed gas furnace that draws outside air for combustion. The unit may be mounted in windows or through walls and features a flush interior or exterior mounting. Suburban Manufacturing Co., Dayton, Tenn.

604 Test module

The *TestMaster* alarm test module is a single unit said to replace up to 24 field-assembled pieces. The module requires only two connections for visual verification of water flow. The unit is UL listed, weighs 8 1/2 lb, and has an iron body. The module is said to be an alternative to conventional loop assemblies. Victaulic Company of America, Easton, Pa.

605 Whirlpool

The *AC-400 Hydrolux* tub for two features lumbar support back rests, textured seat tops and floor, and integral arm rests. An adjustable 4- to 6-jet hydrotherapy system with variable air controls is available. Hytec, Inc., Yelm, Wash.

606 Shower system

A deckmount shower system with a concealed hose can be installed wherever a bathing area is located away from walls that would normally permit installation of a conventional shower. The system features a 5-port diverter valve and all metal parts are made of heavy brass. Ondine Div. of Interbath, Inc., City of Industry, Calif.

607 Washfountain

A line of stainless-steel and aluminum washfountains are designed to be used in public washrooms. The fountains are prepped and feature self-draining parabolic bowls. Six models are available in full circular, semi-circular, and corner units. Intersan Manufacturing Co., Tempe, Ariz.

608 Asbestos encapsulation kits

Asbestos encapsulation kits feature an amended water-base foaming spray intended to pretreat dry insulation and prevent dust particles from entering the atmosphere. A penetrating encapsulant is also included. *CoverUp* is a film-forming bridging encapsulant used to seal cut ends of insulation. Mateson Chemical Corp., Philadelphia.

609 Heating panels

Energy-Kote radiant heating panels operate on the premise of heating people and animals first and then objects, which in turn reradiate the warmed air. According to the manufacturer, this allows thermostats to have lower settings. The system is available in a variety of sizes and voltages. TVI Corp., Beltsville, Md.

610 Heat exchanger

The *HIGH-k* heat exchanger is a shell-and-tube unit designed for heavy industrial and process applications. Each tube is formed with a spiral surface to increase turbulence and enhance the convective heat transfer coefficients inside and out. The unit is constructed of carbon steel shells and connections with copper tubing, neoprene gaskets, and polypropylene baffles. Baltimore Aircoil Co., Baltimore.

611 Sink

The *Monaco* kitchen sink measures 33 by 22 in. and features a stretched-octagon design. The sink is available in a single- or four-hole punch, with the extra hole designed to accommodate a hot water, soap or lotion dispenser, or a handheld sprayer. Eljer, Pittsburgh.

612 Pedestal lavatory

A vitreous china pedestal lavatory measures 24 by 18 1/2 in. and features a deep bowl that acts as a back shield when used without a stopper. The *290* pedestal hides the trap of the wall-hung unit with a concealed front overflow. The lavatory is available for center-set or wide-spread fittings. Norris Plumbing Fixtures, City of Industry, Calif.

613 Residential heat exchanger

Model-200 air-to-air heat exchanger is said to be capable of effectively ventilating a 2200 sq ft. home. The unit is UL listed, weighs 25 lb, and can be installed in new construction or renovation projects. Ventilation is controlled with a single switch. NuTone, Inc., Cincinnati.

614 Sinks

The *Teka Premier 4000* kitchen sink and workcenter is available to fit standard specification cutouts. All drain openings are 3 1/2 in. and centered to accommodate different disposer locations and cable-operated pop-up drain controls. The sink is made of 18-gauge stainless steel. Luwa Corp., Charlotte, N. C.



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615 Radiators

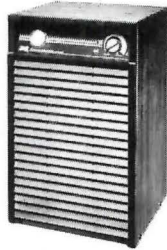
Low-temperature water perimeter radiators project 2 1/4 in. from a finished wall and use water reclaimed from chillers instead of going to a cooling tower. The units can be installed at the intersection point of exterior and interior walls. The radiators may be specified in a variety of sizes. Runtal North America, Inc., Ward Hill, Mass.

616 Valves

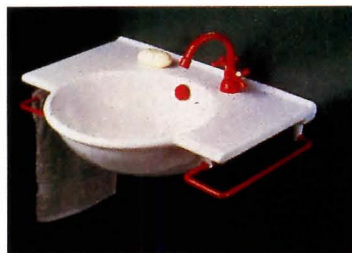
A line of bronze valves includes gate, globe, and check valves and conforms to specifications set by the U. S. government and the Manufacturers Standard Society. The valves are especially suited for air, water, steam, gas, and fuel-oil applications in residential and commercial installations. Crane Co., King of Prussia, Pa.

617 Washfountain

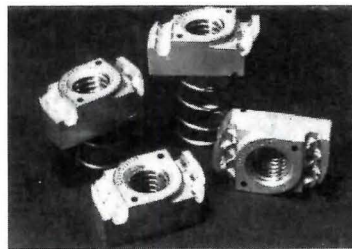
The *Quadra-Fount* washfountain features a barrier-free design and is intended for high-traffic light industry plant washrooms. The unit can serve from one to four people simultaneously from a single set of plumbing connections, and can be front-serviced. Bradley Corp., Menomonee Falls, Wis.



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618 Dehumidifiers

A line of four dehumidifiers includes an automatic humidity level control, automatic shutoff when the reservoir fills, a humidity meter, and a wood-grain cabinet. The units' humistats can be set to maintain any predetermined dryness level. Hunter Fan Co., Memphis.

619 Sink

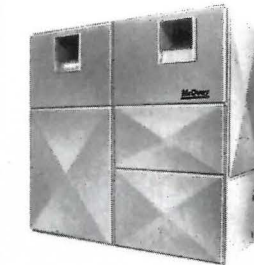
The *SAPHO* sink kit contains a wall-mounted, white porcelain sink with a swivel-cap pop-up system in red epoxy. Also included in matching red epoxy is a single-hole, off-center brass faucet and two single towel bars. The basin measures 15 3/4 in. diameter and is 7 1/2 in. deep. Porcher, Inc., Chicago.

620 Framing nuts

A line of metal framing nuts includes 1/2-, 3/8-, and 1/4-in. stainless-steel nuts. The nuts are manufactured from type 316 stainless steel using a sintered metal process. A special design of the cam is said to center the nut more accurately and provide greater thread depth. Unistrut Corp., Wayne, Mich.



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621 Sink kit

The *Prestige* sink measures 33 by 22 in. and is made of material composed of fine quartz particles that are chemically bonded in a matrix. The material is said to be resistant to chips, cracks, and abrasion. The sink is available in white or almond and may be accessorized with custom-fitted and color-coordinated attachments. Franke, Inc., Hatfield, Pa.

622 Air conditioner

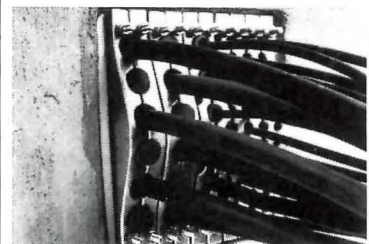
A vertical self-contained air conditioner is intended for use in commercial buildings. The units allow tenants to control their own zone and be metered individually. The air conditioners also feature modulating fans. McQuay Air Conditioning, Minneapolis.

623 Bath cabinets

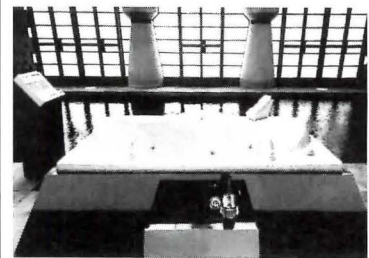
The *Spectrum* series of bath cabinets features a reversible swing door and adjustable shelves and is available in recessed or surface-mounted configurations. The overall size of the cabinet is 18 by 27 1/2. The cabinets feature plate glass mirrors and steel storage spaces with soft-tone baked enamel interiors. Broan Manufacturing Co., Inc., Hartford, Wis.



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624 Water filter

The *Ladylux* water filter head attaches to faucets by a patented interchangeable "click system." Options for the pullout kitchen hose deck include a spray head with two water patterns, a brush spray, and a scraper spray. Grohe America, Inc., Wood Dale, Ill.

625 Sealing device

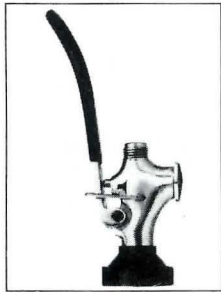
Thru-Wall Barrier is a cable/conduit sealing device that seals electrical penetrations in fire-rated and nonfire-rated walls, ceilings, and floors. The device is suited for high-rise office and apartment buildings, hospitals and health-care centers, and other environments that need to be sealed. Crouse-Hinds Electrical Construction Materials, Syracuse, N. Y.

626 Whirlpool bath

The *Sensorium* whirlpool bath features the *Ambiance* multifunction control unit. *Ambiance* is a microprocessor bath and environment control system that consists of a hand-held remote-control device. The device can close the drain, select a water temperature and depth, start the whirlpool, and control 5 appliances. American Standard, Inc., New Brunswick, N. J.



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627 Faucets

The *Amarilis* series features faucets with brass construction and washerless disc valving. The faucet system is available in a variety of spout styles, 5 finishes, and 4 handle styles. American Standard, Inc., New Brunswick, N. J.

628 Valve

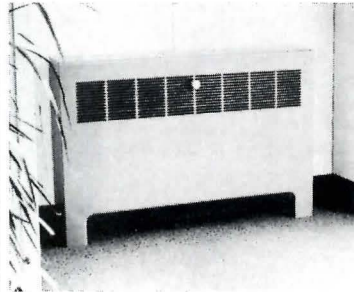
The #2990 pre-rinse spray valve features a one-piece valve construction and has a polished chrome-plated finish and a bronze-alloy, insulated squeeze handle. The unit features a snap-in cleaning brush that fits into a dish-guard bumper and a high-velocity jet spray action. Fisher Manufacturing, Vernon, Calif.

629 Residential faucets

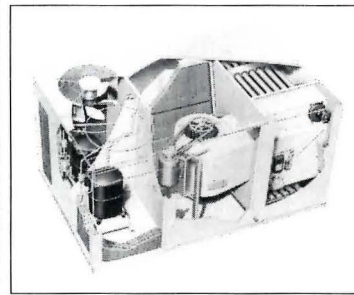
The *Legacy Collection* of residential faucets includes 37 models offered with or without a braided trim around the escutcheons, spout outlet, and drain pop-up knob. All models are available in chrome-plated and coated polished-brass finishes. The Chicago Faucet Co., Des Plaines, Ill.



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630 Bathroom fixtures

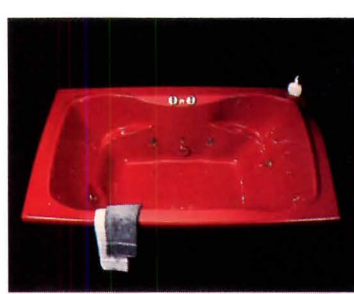
The *Kashmiri* line of bathroom fixtures includes tub, shower, and bidet fixtures in natural onyx and 24-karat gold. The white onyx may be combined with polished brass or polished chrome, in addition to the gold. Bathroom Jewelry, Inc., Los Angeles.

631 Heating convectors

A line of heating convectors includes 7 models available in 3 depths. The convectors are engineered for forced hot water and two-pipe steam installations with heating elements of lightweight nonferrous construction. The units are available in freestanding, semi-recessed, wall-hung, and fully recessed models. Sterling Commercial Finned-Tube Div., Westfield, Mass.

632 Heat pumps

A packaged air-conditioner and heat-pump product line is available in a variety of sizes designed to accommodate residential and light-commercial rooftop or slab installations. The *CHA15* air conditioner and *CHP15* heat pump each come in 6 models. Lennox Industries, Inc., Dallas.



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633 Tub

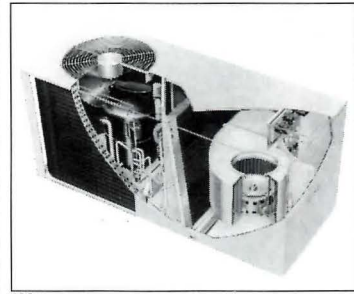
The *Hydrolux AC-900* contoured bath measures 72 by 48 by 22 in. deep and features a sloped lumbar support backrest. The tub is manufactured from cast acrylic sheet and is said to be chip- and mar-resistant. The tub is available in a variety of colors and trim finishes. Hytec, Inc., Yelm, Wash.

634 Push-bar drinking fountain

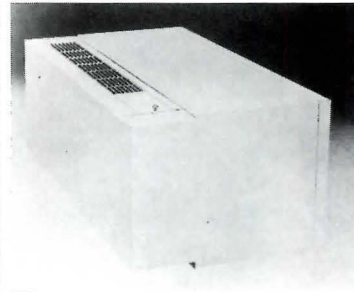
The manufacturer's *Model 771* drinking fountain features push bar styling on a rounded fountain base. The fountain is said to be suitable for hotels, theater lobbies, and executive offices. Pressure is regulated by a cartridge type, brass, self-closing valve. Western Drinking Fountains, San Leandro, Calif.

635 Drinking fountain

Model DMF-620 deck-mounted drinking fountain is designed to be installed in a selection of materials including marble, wood, quarried stone, or tile. The remote push-button control can be placed on the countertop or on the front of the custom enclosure. Other features include a chrome-plated bubbler, stainless-steel receptor, and steel mounting bracket. Stern-Williams Co., Inc., Shawnee-Mission, Kansas.



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636 Heating unit

The *GCS16* gas heating and electrical cooling unit is designed specifically for rooftop applications in either downflow or horizontal air-handling configurations. The aluminized-steel tubular heat exchanger is combined with steel inshot burners. All panels exposed to the conditioned air flow are lined with 1-in.-thick insulation. Lennox Industries, Inc., Dallas.

637 Control system

The *Dynaline* packaged terminal air conditioner is a combination heating and cooling system designed to serve an individual room or zone. The unit measures 42 by 16 in. and can be specified for new construction or as a replacement for electric resistance or heat-pump units. Suburban Manufacturing Co., Dayton, Tenn.

638 Faucets

The *Ceramic* line of faucets features a built-in sensor and solar-powered digital readout that measures the water temperature and gives a continuous readout on the handle. The faucets feature brass construction and washerless ceramic disc valving. American Standard, Inc., New Brunswick, N. J.



THE BOLD LOOK
OF **KOHLER**®

Explore the luxurious, rejuvenating power of the Mandalay™ Teakwood Suite. Crafted from nature's most durable wood. A 5' or 6' whirlpool bath, pedestal or countertop lavatory, and toilet seat. Water and wood for the soul. See it yourself at your nearest Kohler distributor, or write to Kohler Co., Department RAD, Kohler, WI 53044.

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Circle 1121 on inquiry card



Built in 1981 at a cost of \$330 million, the Tropicana Hotel & Casino is a special blend of elegance and excitement. With 515 guest rooms, 4 lounges, 7 restaurants, 8 shops, and a 50,873 sq. ft. casino, the Tropicana is an emporium of activity with all the conveniences of home.

“There’s no gambling on efficiency or comfort in the Tropicana Hotel and Casino with Sloan OPTIMA® No-Hands system.”

Atlantic City’s Tropicana Hotel and Casino never leaves the service and accommodations of its patrons to chance. Their concern for comfort and cleanliness amid the glitter of neon and mirrors was the main



reason for installing Sloan OPTIMA® No-Hands automated flushometers in the casino washrooms.

A Sloan OPTIMA system uses an electronic device to “sense” the user and automatically flushes the

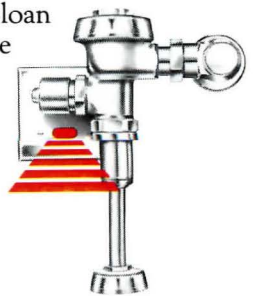
sanitary fixture—or turns the faucet or appliance on or off—only as needed. This insures that faucets and hand dryers are turned off after use and eliminates unflushed urinals and toilets.

The results: Improved comfort and convenience for patrons with more sanitary washrooms. Reduced costs for management with fewer repairs, reduced water usage and less daily maintenance.

The Sloan OPTIMA system meets all building code requirements and installs easily—and unobtrusively—in any new or retrofit situation. The

system also adapts to soap dispensers, hand dryers, shower heads, and more.

Ask your Sloan representative about Sloan No-Hands automated systems. Or write us.



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A Tradition of Quality and Pride

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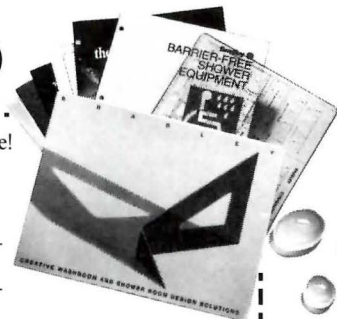
Get showered through the mail.

YES, shower me with 66 years of washroom and shower room design experience! Send me "Bradley's Washroom & Shower Room Design Kit"—free!

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Get Bradley's FREE Washroom & Shower Room Design Kit.

This handy kit is filled with over 90 pages of practical planning and design ideas, tips, and layouts. It's a must for anyone involved in high-usage washroom and shower room design.

You'll find problem-solving approaches on over 30 subjects,

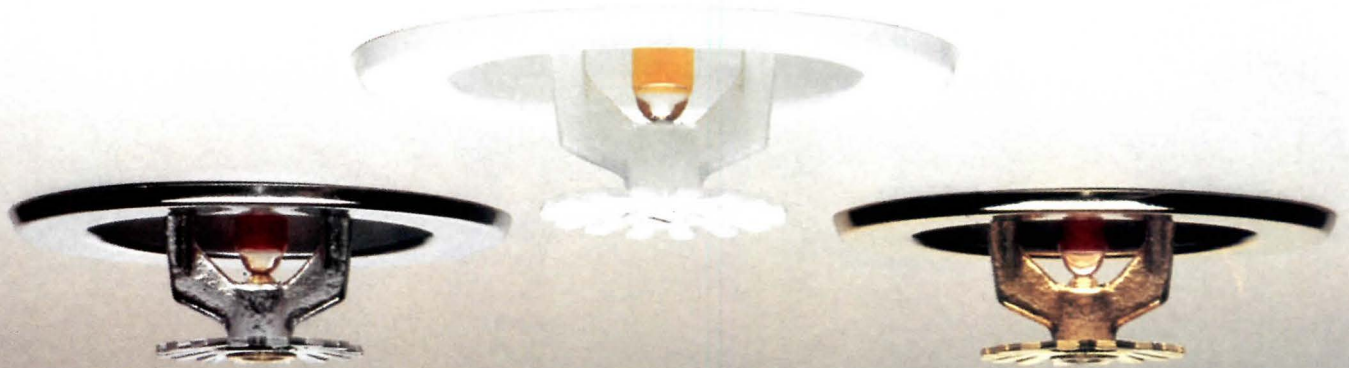
including: barrier-free code compliance, efficient traffic flow, water conservation, and privacy concerns. And it's all based on Bradley's 66 years of experience. The kit even includes a useful fixtures template (1/8" and 1/4" scales).

Clean up on Bradley's experience—send for your *free* kit today. Circle the reader service number. Or mail the coupon.

Bradley CORPORATION
We get the job done better.



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Decreased visibility.

Introducing the white- on-white recessed sprinkler.

Viking once again leads the way in providing visual subtlety for architects and designers with the introduction of a U.L. listed, White-on-White recessed sprinkler.

A unique white polyester-coated Micromatic sprinkler is matched with a white painted 2-piece adjustable recessed escutcheon to provide an extremely attractive appearance at an even more attractive cost. The special polyester application was developed by Viking to provide a white

sprinkler frame without standards violation. As a result, the new White-on-White sprinkler can be used in any appropriate commercial or industrial occupancy. Like the Viking chrome and brass recessed models, the White-on-White recessed sprinkler is available in 7 temperature ranges (with color coded glass bulbs) in both $\frac{1}{2}$ " and $\frac{3}{4}$ " orifice sizes.

The new 2-piece adjustable escutcheon greatly simplifies installation and allows the Micromatic sprinkler to be recessed up to one-half of its $1\frac{1}{2}$ " height for a clean appearance.

For more detailed information on the Viking Recessed Sprinkler line, including the unique White-on-White model, contact your nearest Viking Distributor, write, or call The Viking Corporation, Hastings, Michigan.

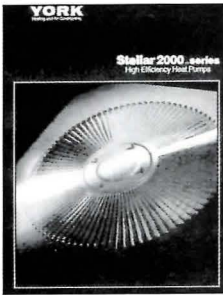
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15 Mechanical Product literature

For more information, write item numbers on Reader Service Card



639 Heat pumps

A 4-page color brochure features the *Stellar 2000* high-efficiency heat pump line. The literature describes how the system works both internally and externally and contains a chart listing indoor and outdoor product features. A labeled cross-sectional diagram is also included. Central Environmental Systems, Inc., York, Pa.



645 Baths

A collection of 16 brochures highlighting the manufacturer's line of baths is available. Included in the collection are a 16-page *Designer Choices* brochure, eight designer brochures, each detailing one new bath and featuring a range of floor plans, six product category brochures, and a *Color Choices* brochure. Eljer, Pittsburgh.



640 Washfountain

A series of barrier-free washfountains is reviewed in an 8-page color foldout brochure. Included in the literature are descriptions of layout flexibility, ergonomic features, barrier-free design, and energy conservation. Dimensional diagrams of several models are also included. International Sanitary Ware Manufacturing Co., Tempe, Ariz.



646 Faucets

A 32-page booklet describes the entire *Ceramix* line of faucets. Included in the literature are descriptions of the *Electronic* model in all bath and shower combinations, the *Amarilis* collection, the *Roma/Ellisse/Lexington/Heritage* collection, and several other models. American Standard, Inc., New Brunswick, N. J.



641 Heat exchangers

An 8-page color brochure highlights the manufacturer's line of air-to-air heat exchangers. Descriptions of how the system works overall is included, along with descriptions of individual components. Product specifications and ordering information are also contained in the literature. NuTone, Inc., Cincinnati.



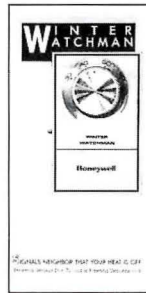
647 Security fixtures

A 44-page catalog features a line of tamper-resistant security fixtures designed to withstand impact, thermo shock, and corrosion. The fixtures are said to be intended for use in jails, penal institutions, detention facilities, mental health facilities, and public washrooms with a high incidence of vandalism. Bradley Corp., Menomonee Falls, Wis.



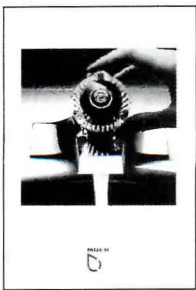
642 Shower

The *AC* series of showerbaths features clear glass tempered doors, a center drain that allows hardware to be mounted either on the right or left, shelving, grab bars, and slip-resistant surfaces. A 4-page color brochure also includes information on maintenance and available options. Hytec, Inc., Yelm, Wash.



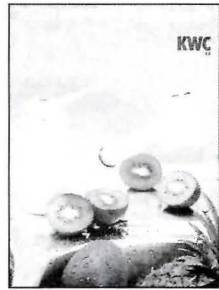
648 Thermostat

A 6-page foldout brochure highlights the manufacturer's *Winter Watchman* thermostat product line. The brochure explains how the system works, and how to set up and test the system. The literature contains simple graphics and short explanations. Honeywell, Inc., Minneapolis.



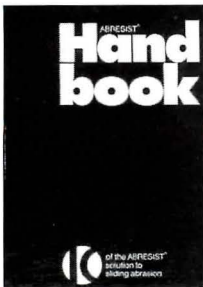
643 Faucets

A 22-page booklet contains product descriptions of the manufacturer's line of kitchen and bathroom faucets. Included in the brochure are the *Legend Single-Handle #7310*, an all-brass kitchen faucet, a riser three-hole sink installation, and the *Fountain-Flo #4535*, a faucet that converts into a fountain. Stanadyne/Moen Group, Elyria, Ohio.



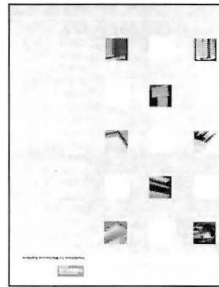
649 Faucets

The *Neostar* line of solid-brass faucets is featured in a 4-page color brochure. The literature describes several models in the line, including a single-hole faucet with swivel neck and pull-out spray jet, a single-hole version with an aerator, and a combination of the two. Individual components are also featured. Western States Manufacturing Corp., Santa Ana, Calif.



644 Pipe linings

The manufacturer's crystalline ceramic abrasion-resistant linings for pipes and bends are reviewed in a 90-page handbook. The handbook provides technical information, reviews methods of installation, and includes test data collected from field service applications. Abresist Corp., Urbana, Ind.

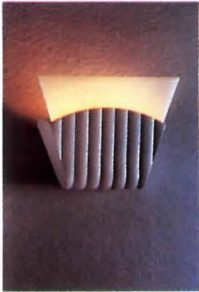


650 Mechanical insulation

A 24-page color brochure features the manufacturer's line of mechanical insulation products, including pipe-wrap insulation, asbestos-free v-grooved block insulation, and asbestos-free pipe insulation. The brochure describes features and related benefits, uses, availability, and sound absorption coefficients. Owens-Corning Fiberglas Corp., Toledo.

16 Electrical

UCI 16, Electrical:
 Communications
 Electrical heating-cooling
 Lighting
 Power generation
 Protective systems
 Raceways
 Wiring devices



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651 Lighting fixture

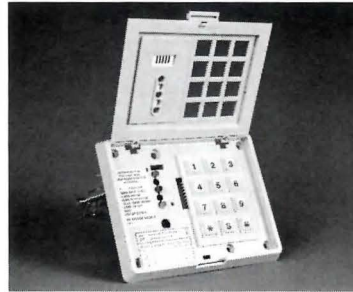
A shell-like wall fixture has a molded aluminum body with a finely textured finish. The fixture is UL approved and may be specified in white, black, or custom colors. The lamp measure 14 in. wide, 10 1/2 in. high, and 7 in. deep. and is available in incandescent or fluorescent versions. Lumanetics, Emeryville, Calif.

652 Area luminaire

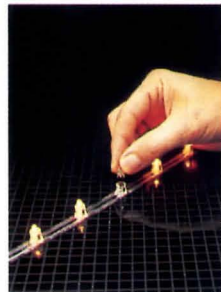
The *Parklane* area luminaire incorporates a rear-surface metallized prismatic glass reflector into its design. This allows for a choice of square or offset rectangular light patterns without the need for refractors. The optical system is enclosed in a one-piece, integrated prismatic cube/cone constructed of seamless acrylic. Holophane Div., Manville, Denver.

653 Telephone

An administrative telephone, *Model ADM-D*, registers calls in a memory in the order in which they were received. The phone also features an "emergency link" speaker system, "help" function for urgent calls, and "executive priority" which allows calls to be joined. *Bogen*, A Lear Siegler Co., Ramsey, N. J.



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654 Security system

The *Magnum Alert 725* is a five-zone-control panel with an integral digital keypad designed for use in pre-wired apartment installations. The unit fits into a standard double gang box. Additional features include four user codes, alarm history, and individual zone shunting. Napco Security Systems, Inc., Copiague, N. Y.

655 Lighting

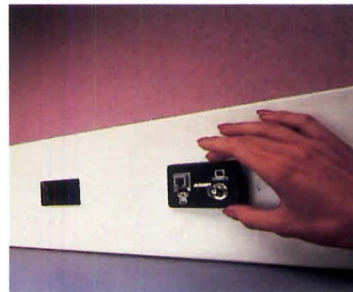
Tivolines are subminiature, 1W replaceable 25,000 hour lamps that are mounted on a clear plastic-coated conductor wire. The strips are available in any desired length and may be specified with 2-, 3-, 4-, 6-, or 12-in. spacing. Lens caps are available in clear, red, amber, green, and blue. The strips can be installed with double-stick tape or clamps. Tivoli Industries, Inc., Santa Ana, Calif.

656 Floodlight

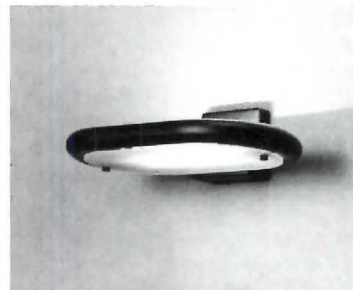
The *AFL Series* of floodlights are constructed for both exterior and interior use. The floodlights are available in three beam patterns, three colors, and nine mounting configurations. Six HID lamp modes are also available. Kim Lighting, City of Industry, Calif.



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657 Brass lamps

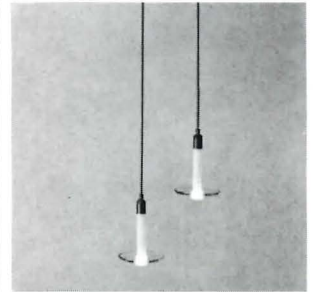
A line of pendant and wall-mounted solid brass lamps has been designed in Victorian, English, and nautical themes. The lamps are hand-polished and lacquered. Ship 'N Out, Pawling, N. Y.

658 Wiring devices

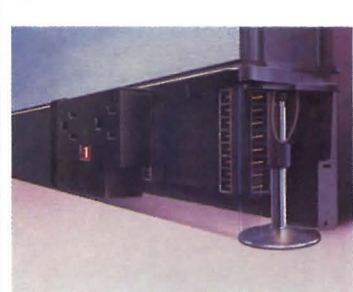
Flex-Mode phone and data interconnect modules are compact in size and are designed to snap into standard raceway knockouts. This is said to allow for quick modular connections after initial installation or furniture rearrangement. AMP Special Industries, Valley Forge, Pa.

659 Sconce

Designed by Marco Zotta, the *Kilowall* wall sconce provides upward light through a frosted-glass diffuser. The halogen sconce is available in a matte black finish. Floor lamp and ceiling versions are also available. Innovative Products for Interiors, Inc., New York City.



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660 Lighting

Vodka is a frosted-glass tube lighting fixture with a clear glass disk and black canopy and cord. The maximum wattage the fixture can accommodate is a 25W halogen bulb. The fixture has a 5-in. diameter at the top and a 6-in. diameter at the bottom. Koch & Lowy, Inc., Long Island City, N. Y.

661 Electrical system

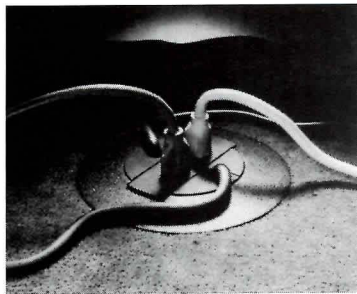
The *Power Base* electrical system has a 4-in.-high raceway cover that accommodates up to eight 25-pair communications cables. The raceway cover is capable of accepting up to four receptacles per panel. The system employs an eight-wire, three-circuit design that provides multiple dedicated and isolated circuits. Haworth, Inc., Holland, Mich.

662 Wall sconce

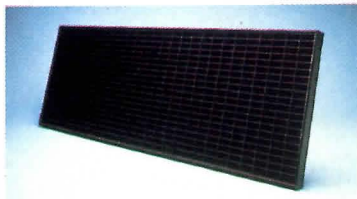
Beetle Sconce is a wall sconce made with a cased opalescent glass bowl and solid aluminum grillage with contrasting circular inserts. The standard finish is satin aluminum with gloss black or polished brass enamel inserts. The sconce may be special-ordered in fluorescent. The American Glass Light Co., New York City.



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663 Area lighting

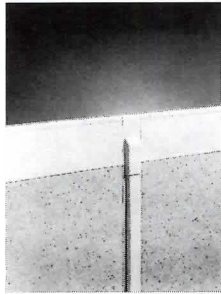
A line of luminaires intended for area lighting is available with a choice of reflectors, including disc, square, rectangular, and cube models. Wall-pole- and ceiling-mounted versions are also available in three sizes up to 1000W. mcPhilben Lighting Div., Emerson Electric Co., Melville, N. Y.

664 Wiring device

The *Poke-Thru* full-function electrical wiring device is installed flush with the carpet and services 15 or 20 amp, 125V duplex power. The unit has two openings for low-tension wiring. The unit is UL listed, comes pre-wired, and terminates in an integral junction box. Raceway Components, Inc., Nutley, N. J.

665 Solar module

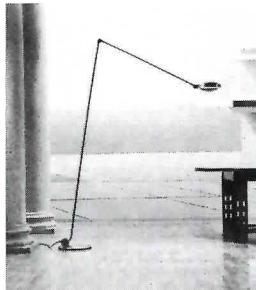
Solar G4000 is a 30W solar electric module that generates electricity from sunlight using *Genesis* thin-film silicone. The 16- by 48-in. module comprises a monolithic circuit of micro-thin silicon alloy layers deposited directly onto a glass superstrate. The module is designed to be used where direct sun orientation may not always be possible. Arco Solar, Inc., Chatsworth, Calif.



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666 Raceway system

The *Data-Trak* raceway system, intended to be located on top of the manufacturer's open-office panels, adds an additional five inches to the panels. The raceways are designed for offices with a heavy concentration of computers. The system separates electronic cables from power cables to increase security. Westinghouse Furniture Systems, Grand Rapids, Mich.

667 Power-line protector

The *Surge-Master Avalanche* series of AC power-line protectors is said to protect sensitive equipment by clamping AC line transients directly at the equipment input. The unit features a detailed front-panel status monitor, automatic reset function, and triple redundant protection. MCG Electronics, Inc., Deer Park, N. Y.

668 Floor lamp

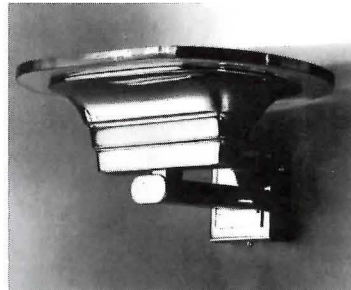
The *Elle 55* floor lamp, designed by Tommaso Cimini, is a flexible, swivel halogen lamp that offers direct and indirect lighting. The lamp is available in white or metallic gray and has a cast-iron base with a spherical steel cover and rubber buffer edge. Lighting Associates, Inc., New York City.



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669 Lighting system

The *Integralite* modular tube lighting system includes 4- and 6-in. extruded aluminum fixtures, a selection of support modules, and required connectors. The system is said to provide a variety of lighting design possibilities. J W Lighting, Inc., Houston.

670 Task lighting

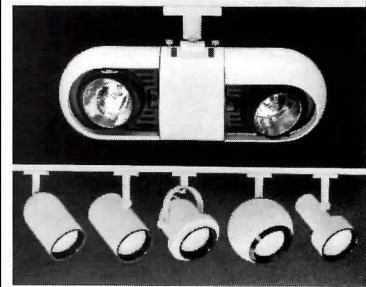
The *Varilux* three-level task light has a specially designed reflector and lens that direct light laterally from the sides and across the workstation to minimize glare. The sloped integral walls are said to assure even illumination of both vertical partitions and horizontal surfaces. The fixture can be mounted to the underside of metal shelves with a mounting bracket and adhesive tape. Alkco, Franklin Park, Ill.

671 Sconce

The manufacturer's #5055 wall sconce measures 12 in. wide and is available in a gold and chrome combination finish. The fixture accommodates halogen lamps, which are included. Paul Associates, Long Island City, N. Y.



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672 Intercom system

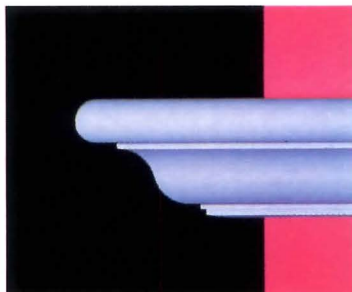
The *Chief* intercom system has a logic circuit that electronically determines when a station is busy, activates incoming calls, places the call the user has selected, and automatically returns to a stand-by position. The units are finished in brushed chrome and charcoal gray. Talk-A-Phone Co., Chicago.

673 Track lighting

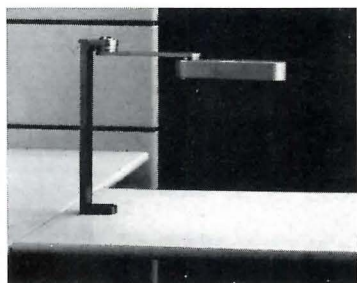
The *Lite Capsul* line of track lighting products features a twin beam model that incorporates two-MR-16 lamps in one housing. Each lamp is independent, which allows a single unit to precisely illuminate two different objects placed anywhere in a room. Prescolite, San Leandro, Calif.

674 Accent lights

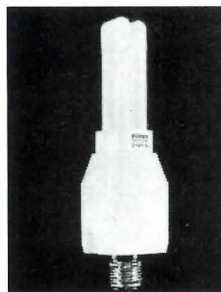
A series of low-voltage accent lights is designed to use ultra-compact quartz halogen mirrored reflector lamps. The directional lights are said to provide good color rendition and beam control and are intended to be used to highlight objects in confined spaces, including jewel cases, under shelves, and over counter tops. Capri Lighting, Los Angeles.



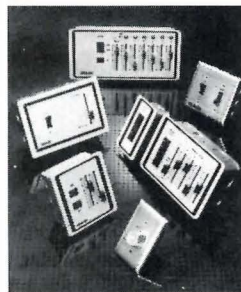
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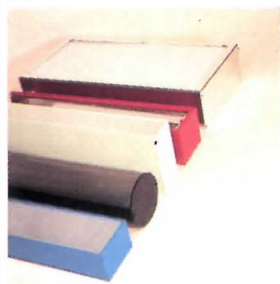
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675 Luminaire

Designed by Robert Sonneman, *Cove Luminaire*, is a wall-mounted indirect light that is part of a linear fluorescent system. The fixture is available in four styles in either one- or two-lamp configurations. The system may be specified in one of four standard lengths or customized to meet specifications. Architectural Lighting Systems, Inc., Taunton, Mass.

676 Lamp adaptor

An adaptor for 13W twin-tube and double twin-tube fluorescent lamps allows for their use in conventional incandescent sockets. The adaptor has been designed to fit most table lamps with harps and recessed downlights and has a slip base to eliminate interference with harps and bevelled shoulders. GTE Products Corp., Danvers, Mass.

677 Lighting

Sky-Beam is a unified task-ambient lighting system designed to act as a fluorescent building block for spatial illumination. The system is intended to be used in public spaces such as lecture halls, lobbies, libraries, and offices. The fixtures are made of solid extruded aluminum shapes. Voigt Lighting Industries, Inc., Leonia, N. J.

678 Lighting

The *K* light, designed by Brian Kimura, mounts to cabinets, panels, and work surfaces. All functional elements are concealed within the solid machined fixture. A PL13 bulb is concealed by an acrylic lens with a textured 1/8-in. diamond diffuser. The light is UL listed. Modern Mode, Inc., San Leandro, Calif.

679 Lighting-control system

The *ZoneMate HID* lighting-control system consists of dimming ballasts, a dimmer panel, and a choice of automatic, programmable, and manual controls. Photosensors automatically compensate for sunlight by reducing or increasing fixture output, depending on daylight contributions from windows, skylights, and doors. Wide-Lite, San Marcos, Tex.

680 Lighting

Onda, designed by Ezio Didone, is a fluorescent ceiling lamp also available in an incandescent model. The UL-listed lamp is characterized by a series of concentric circular grooves in a cone-shaped diffuser. The lamp comes in red, white, or black enameled-steel housing. Atelier International Lighting, New York City.



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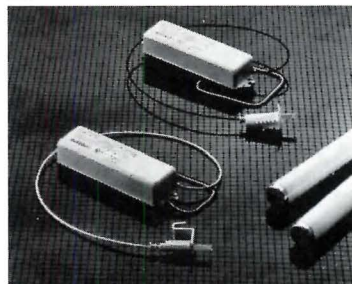
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681 Communication system

The *Responder III* hospital communication system is a microcomputer-based instrument designed to provide instant response to patient calls, as well as provide several staff-oriented services. The system also features a one-button staff search that will alert a nurse closest to the patient placing a call. Rauland-Borg Corp., Chicago.

682 Outdoor lighting

The *Bega Collection* of outdoor lighting includes compact fluorescent and high-intensity discharge lamps in a variety of sizes and light sources. Location and directional luminaires, bollards, wall and ceiling lamps, and pole-top lights are also available. Custom colors may be specified in addition to standard black and white. Forms + Surfaces, Santa Barbara, Calif.

683 Lighting-control system

The manufacturer's *Series IV* lighting-control system features a patented solid-state circuitry that automatically regulates fluorescent light levels through fiber optics and an adjustable optic sensor. Task lighting is individually adjustable on a fixture-by-fixture basis. Conservolite, Inc., Oakdale, Pa.

684 Lamp

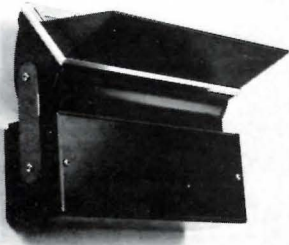
The *Shogun* wall lamp was designed by Mario Botta and is available in white painted metal. The lamp has adjustable diffusers in white perforated metal and uses 150W quartz halogen medium screw-base bulbs. Artemide, Inc., New York City.

685 Access-control system

Micro-Pac is an access-control system that provides access and perimeter security for one to four secured areas. The system uses either high- or low-energy magnetic stripe security cards, *Wiegand* cards, keypads, or a combination of cards and keypads. Synergistics, Inc., Natick, Mass.

686 Lighting post

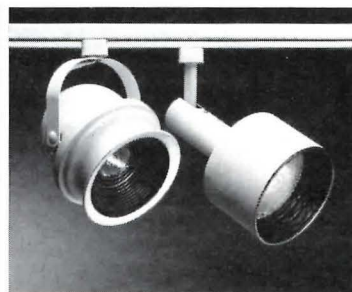
The *Grand Washington* lighting post is one of a series of cast-iron decorative lighting posts. The unit is adapted from an original 1910 design by the Commission of Fine Arts in Washington, D. C. The lighting post is a five-way luminaire that stands 8 ft tall. The base is octagonal and measures 25 ft across. Spring City Electrical Manufacturing Co., Spring City, Pa.



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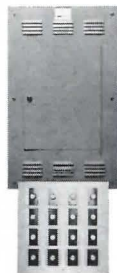
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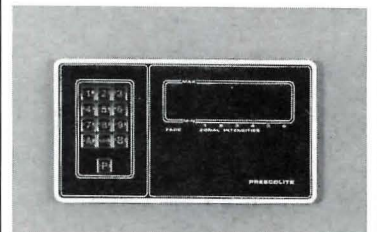
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687 Sconce
Esconce is a self-contained compact light with an asymmetric reflector mounted to an integral ballast housing. A collection of enclosures is offered or custom designs may be specified. The sconce uses double-ended metal halide lamps. The fixtures are designed to be used in hallways, reception areas, and lobbies. Elliptipar, Inc., West Haven, Conn.

688 Outdoor lighting
The *Infiniround* series of luminaires designed for outdoor use is available in three sizes with five optical systems. The units can be mounted either pole-side or pole-top and may be specified with single-, double-, triple-, or quad-arm configurations. Emco, Inc., Milan, Ill.

689 Wall sconce
The manufacturer's wall sconce has a 1 1/2-in. diameter stepped-opal glass diffuser attached to a polished brass trim ring, arms, and backplate. These features are also available in polished chrome or a painted finish. The fixture is also available with incandescent lamping. Visa Lighting, Milwaukee, Wis.

690 Security system
A security surveillance system features all-solid-state, charge-coupled devices, and black-and-white or color cameras placed in housings externally identical to conventional track lighting equipment. The camera/housing units are designed to combine with track lighting already in use. Vicon Industries, Inc., Melville, N. Y.

691 Dimmer panels
The *Simplicity Series* of dimmer panels are factory prewired surface-mounted or recessed enclosures available in sizes to accommodate 9, 16, 25, or 36 UL-listed dimmers. The panels have a maximum 50kW load for incandescent, fluorescent, low-voltage, neon, or non-dim control. Hunt Electronics, Addison, Tex.

692 Floor lamp
The *Antares III* floor lamp, designed by Utkan Salman, is constructed of an anodized all-aluminum body. The lamp uses two 12V halogen bulbs that fit into two hinge-action light heads. The lamp is equipped with a four position touch-operated dimmer switch. Antares, Inc., Chicago.

693 Track lighting
A line of track lighting products features a design that incorporates 1- and 2-circuit wiring in the same low-profile housing. Available fixtures include cylinders, squares, spheres, bellspots, and wallwashers in a choice of size, wattage, and finish. Lithonia Lighting, Vermilion, Ohio.

694 Lighting system
The *SuperTube 6* lighting system features cylindrical housing and snap-on cover plates made of aluminum extrusions. Straight connectors are fabricated of matching extrusions. Clip-on end caps are made of die-cast, heat-resistant nylon. The fixtures are available in 11 colors and have a UL listing. Columbia Lighting, Spokane, Wash.

695 Fluorescent lighting
The *DecoLume* series of indirect fluorescent luminaires features side vents and a bottom halo. Each fixture body is a series of locked-in-place internally secured aluminum extrusions. The fixture may be bracket-mounted on the wall or pendant-mounted from the ceiling. Columbia Lighting, Spokane, Wash.

696 Cable-support system
A surface-mounted data, communication, and power-cable-support and delivery system is designed to present cable connecting outlets on any surface in work areas such as offices, classrooms, laboratories and manufacturing facilities. The *Multi-A-Serv* system may be mounted under windows, near the floor baseboard, or on a workbench. Midland-Ross Corp., Pittsburgh.

697 Dimming system
Series 7 control panels are designed for use with the manufacturer's dimming systems. The panels offer up to 12 channels of control, 11 preset scenes, an LED bar graph display, immediate manual override, and a nonvolatile 10-year memory. Prescolite Controls, Carrollton, Tex.

698 Lighting
The *Luna* pendant, designed by Kevin von Kluck, is a kinetic suspension in space said to resemble Saturn with its outerring of sand-etched glass. The lamp's rotational mobility allows light to be redirected a full 360 deg. The unit is available in polished brass, chrome, gloss cranberry red, or gloss peacock blue. Boyd Lighting Co., San Francisco.

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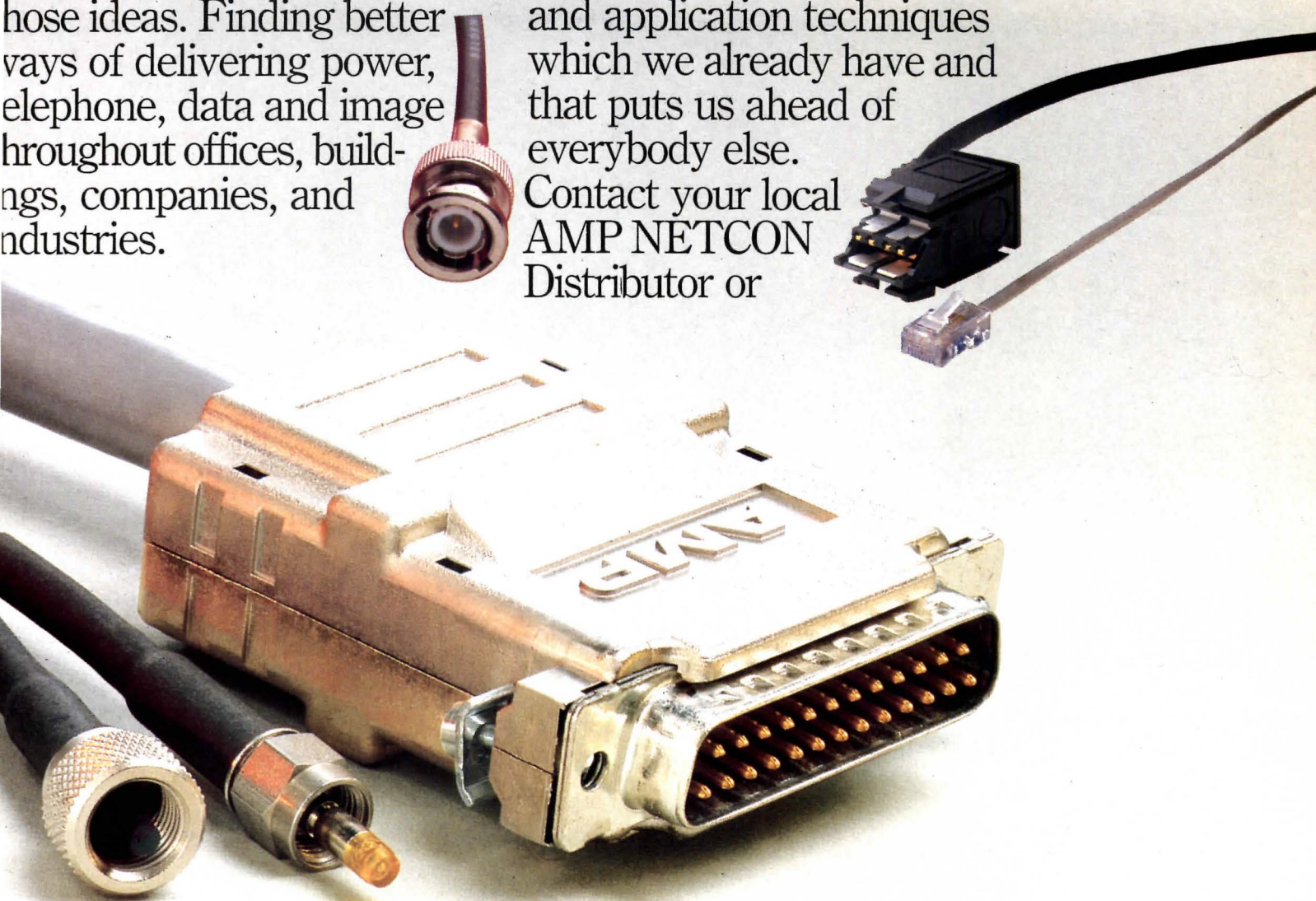
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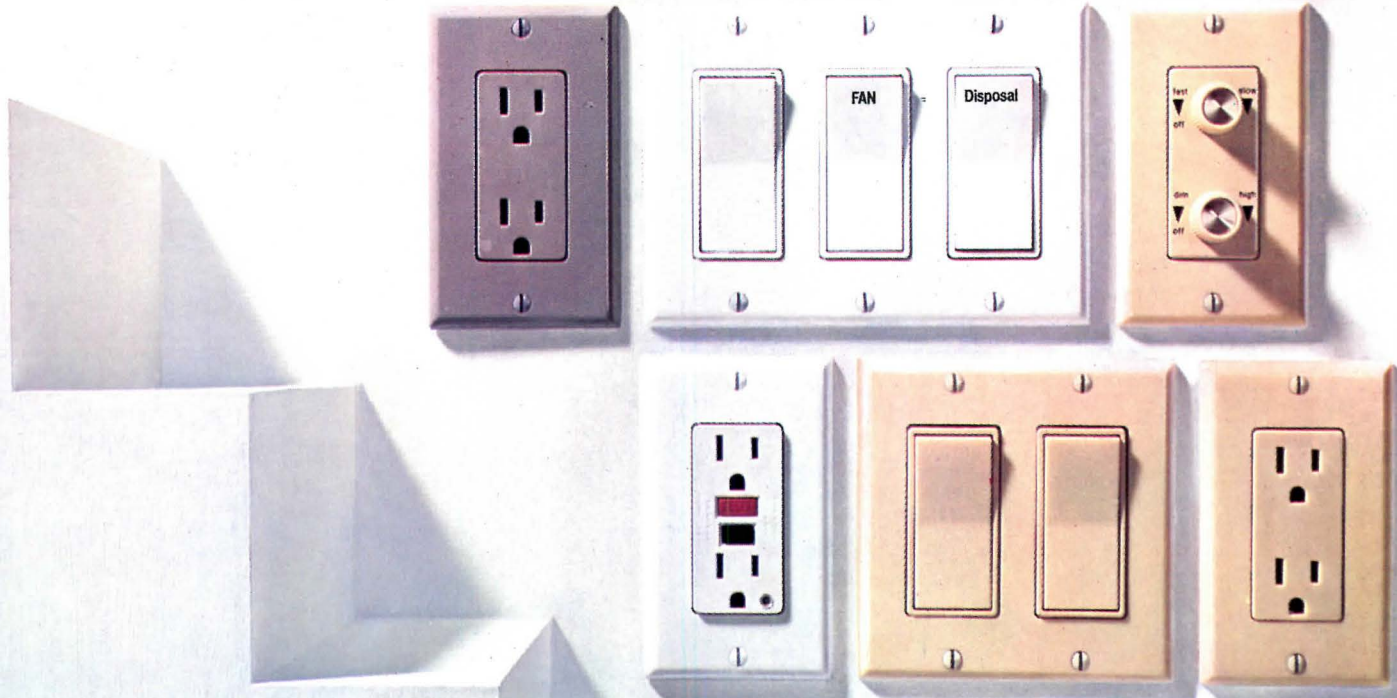
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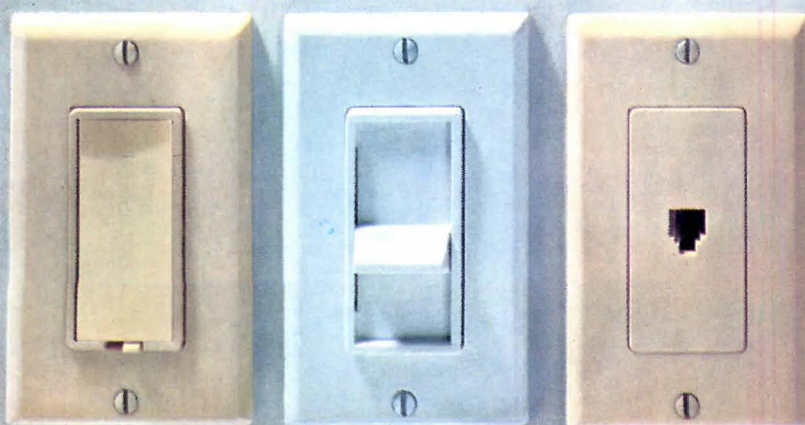
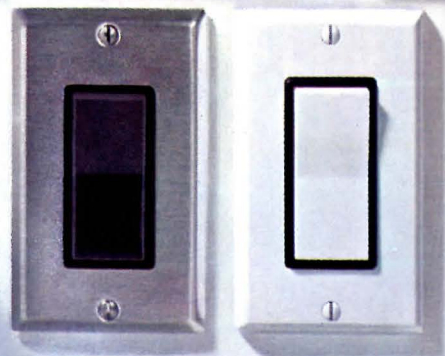
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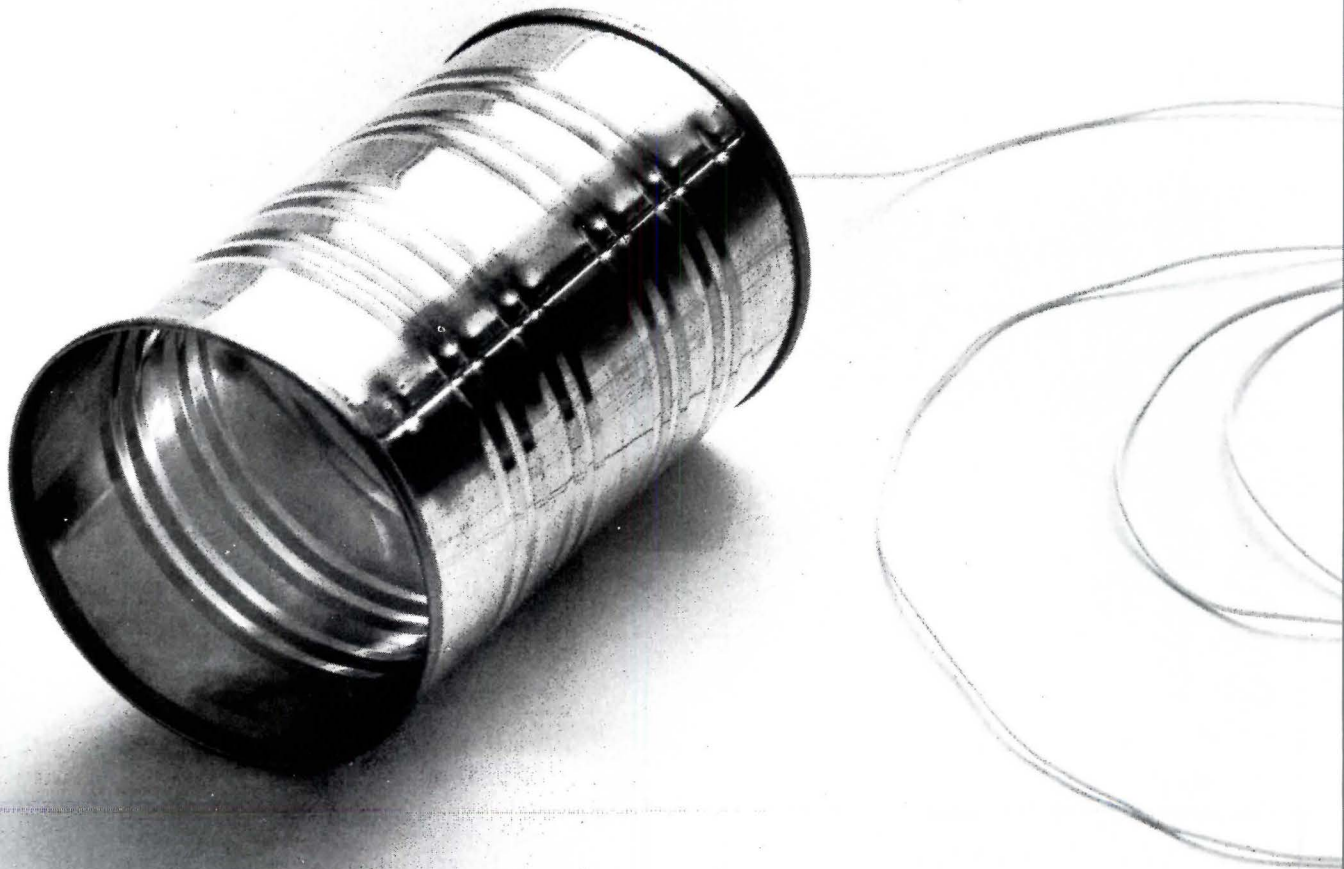
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When it comes to wiring a building for a modern telecommunications system, don't toy with anything less than the best: plenum cable insulated with TEFLON* fluorocarbon resin.

Telecommunications cable insulated with TEFLON gives you unequalled electronic advantages. At 2.1, the dielectric constant of TEFLON is the lowest of any conventional insulation. The result: low attenuation and low

capacitance that give you superior signal integrity, at higher speeds, over longer distances.

Plenum cable insulated with TEFLON is economical, too. It meets all National Electrical Code requirements for installation without conduit, so it can cost 50% less to install than cable in conduit. And it's easy to relocate, so you can save more money in the future, too.

**Dial DuPont first—
(302) 772-5800.**

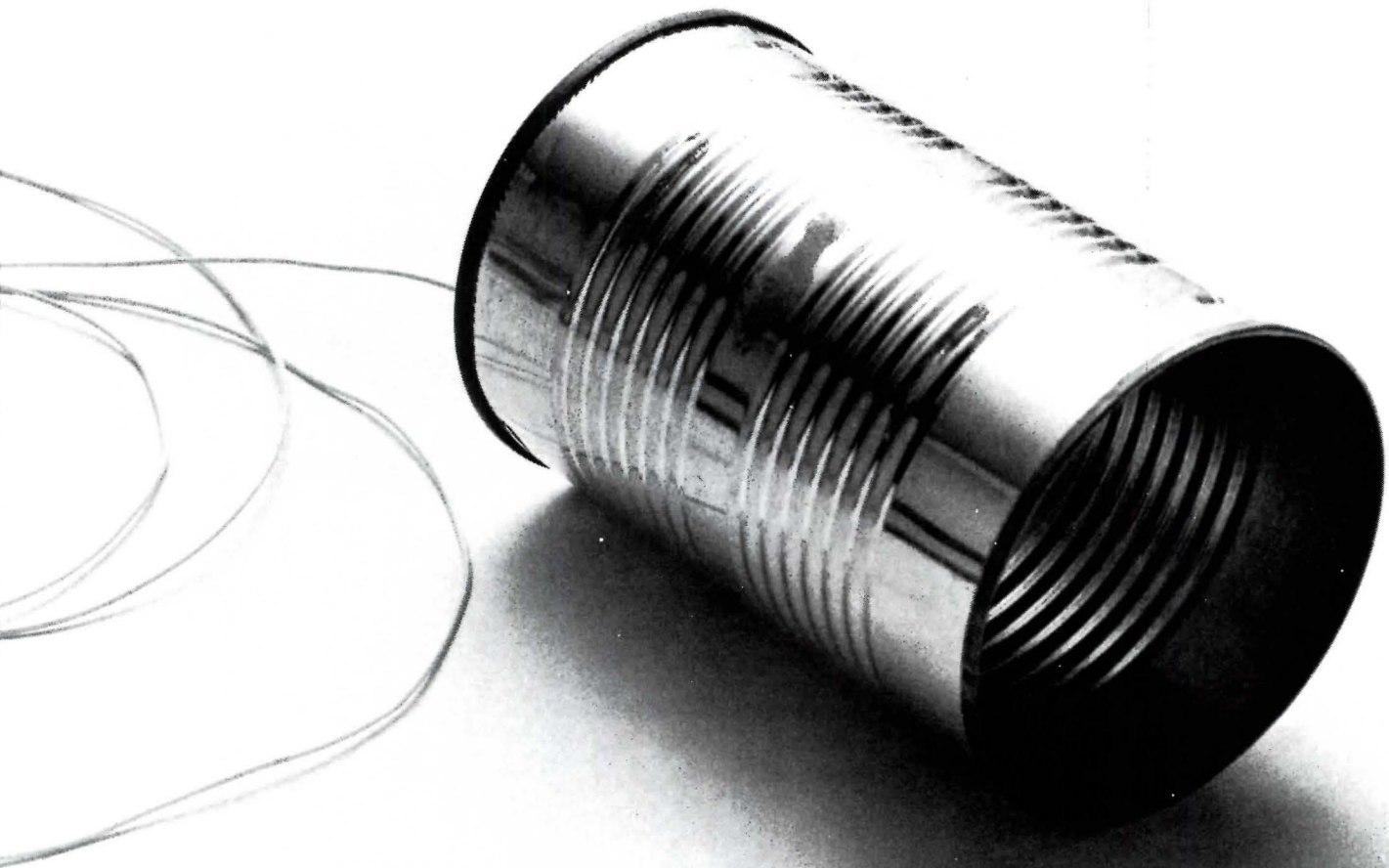
Learn how plenum cable insulated with TEFLON can help meet your requirements for years

to come. For free literature about plenum cable of TEFLON, call (302) 772-5800. Or write DuPont Company, TEFLON PC, Room X50073, Wilmington, DE 19898. Remember—only DuPont makes TEFLON.

*DuPont makes TEFLON fluorocarbon resin, not plenum cable.



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16 Electrical Product literature

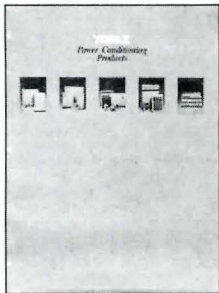
For more information,
write item numbers on
Reader Service Card



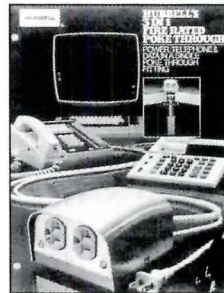
699 Wiring systems
Building communications wiring products are featured in the manufacturer's annual catalog. The catalog includes application information, dimensional product diagrams, and detailed ordering data. Products included in the catalog are adapters, wall plates, feeder splits, cross connect equipment, test gear, and cable. Mod-Tap System, Harvard, Mass.



705 Lighting specification
A lighting application bulletin entitled *Specifying Light and Color* describes chromaticity, color rendering index, and spectral power distribution curves. Also included in the bulletin are color specification tables for lamps, listing lumens per watt, a whiteness description, and colors enhanced and colors grayed. General Electric Lighting Business Group, Cleveland.



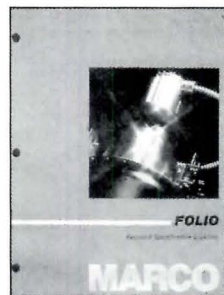
700 Power conditioning
A 32-page color selection guide highlights a line of power conditioning systems for sensitive-equipment applications. The brochure identifies major types of power disturbances, reviews causes and effects, and recommends products to protect against them. The guide lists all models and details system specifications. Topaz, Inc., San Diego.



706 Wiring device
A 4-page color brochure features the manufacturer's fire-rated poke-through wiring device that can accommodate power, telephone, and data requirements. The brochure includes photos of actual installations, cutaway diagrams with descriptions, a detailed selection guide, and a listing of accessories. Wiring Device Div., Hubbell, Inc., Bridgeport, Conn.



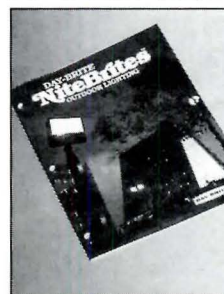
701 HID cylinders
A 6-page color brochure features a line of low-wattage metal halide cylinders. Included in the literature are product descriptions, photographs with accompanying dimensional diagrams, a cross-sectional analysis of the product, and product specifications. Prescolite, San Leandro, Calif.



707 Recessed downlights
A 48-page brochure describes a line of recessed downlights. Photographs show patented downlight designs, as well as a selection of available fixture styles. Specification and lamp requirements are included, along with photometric data and detailed product descriptions. Marco Lighting, Los Angeles.



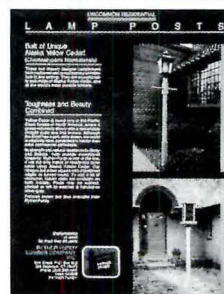
702 Lighting
A 6-page color foldout brochure features the manufacturer's line of accent lighting products. The brochure includes product descriptions of the sconces, along with dimensional data, ordering information, and voltage requirements. Indalux, Div. Spaulding Lighting, Inc., Cincinnati.



708 Outdoor lighting
The *NiteBrites* line of outdoor lighting products is featured in a 26-page color catalog. The literature contains information on micro-, intermediate, medium, and large floodlights, and quartz, canopy, and door lights. Typical applications and layouts are also described. Day-Brite Lighting Div. Emerson Electric Co., Tupelo, Miss.



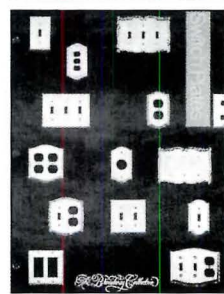
703 Communications system
A 6-page foldout brochure describes the *RCS-5* microprocessor patient communications system. The brochure overviews the system's video display monitor, console with built-in speaker and microphone, duty-station equipment, and staff locator transmitters. A complete system overview is also included. Bunting, Inc., Bridgeport, Conn.



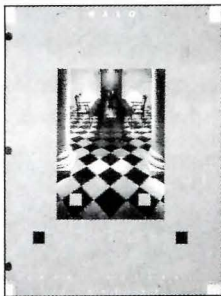
709 Lamp posts
A 2-page bulletin highlights the manufacturer's line of residential lamp posts made of Alaska yellow cedar. The bulletin includes information regarding product specifications and features, characteristics of yellow cedar, and ordering information. Ryther-Purdy Lumber Co., Inc., Old Saybrook, Conn.



704 Outdoor lighting
The manufacturer's *XL2000* line of outdoor luminaires is featured in a 10-page color brochure. A cross-sectional diagram includes descriptions of the mounting bracket, lamp socket, optical chamber, ballast and lens assemblies, housing, top cover, and finishes. Glare-control graphs are also included. TrimbleHouse Corp., Norcross, Ga.



710 Switch plates
A collection of electrical switch plates is featured in a 4-page brochure. The literature provides product descriptions, diagrams, and ordering information for a variety of plates, including one- and two-duplex outlets, one- and two-gang boxes with two, three, and four devices, and phone jacks. The *Broadway Collection*, Olathe, Kansas.



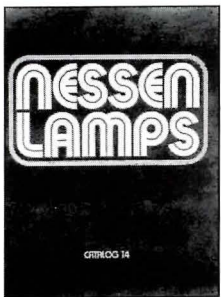
711 Incandescent lighting

An 80-page color brochure features the manufacturer's line of incandescent lighting products. The brochure includes photographs of fixtures in place, detailed product descriptions, available features and accessories, and product specifications. The literature also reviews wall washing, and task and accent lighting. Halo Lighting, Elk Grove Village, Ill.



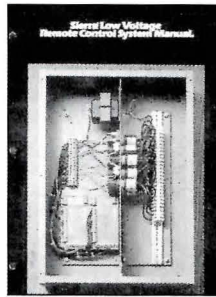
717 Lamps

A complete line of fluorescent lamps designed to fit incandescent sockets is described in the manufacturer's brochure. Specifications and design advantages of the *SL18/R40* lamps, intended for use with high-hat downlighting fixtures without dimmers, are also included. North American Philips Lighting Corp., Somerset, N. J.



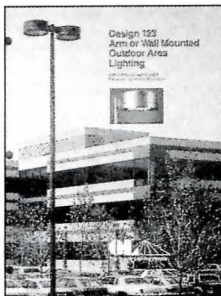
712 Lighting

Catalog 14 is a 50-page catalog featuring over 40 designs of portable residential and commercial lighting products. Detailed scaled diagrams and descriptive text are included for hanging lamps, wall swingers, sconces, floor lamps, torchieres, table lamps, and office system task lamps. Nessen Lamps, Inc., Bronx, N. Y.



718 Wiring control system

The *Sierra* line of low-voltage remote-control-system components is featured in a 22-page manual. The units listed in the brochure include an electronic programmable time switch, master controller, and an electronic interface switch. The manual contains a series of diagrams, product descriptions, and ordering information. Pass & Seymour, Inc., Syracuse, N. Y.



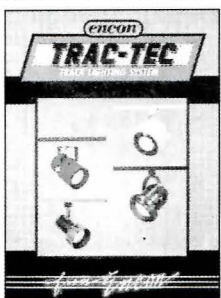
713 Outdoor lighting

Design 123 arm- or wall-mounted outdoor area lighting is featured in a 12-page color booklet. The literature includes information on the line's low-profile spun aluminum housing, reveals, computer-designed reflectors, and ballast and fixture mountings. Photometric data and product specifications are also included. Q. L., Inc., Northbrook, Ill.



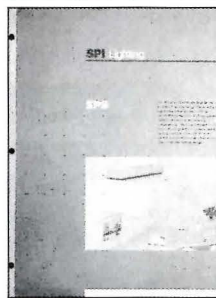
719 Display lighting

A 12-page color brochure describes a line of display-lighting products designed for use in malls, galleries, atriums, boutiques, and display windows. Product descriptions and photographs of actual display environments are also included in the brochure. Lighting Services, Inc., New York City.



714 Track lighting

An 8-page color brochure highlights the *Trac Packs* line of track lighting products. The literature includes information on available styles, materials, colors, finishes, and lamping. Construction details, track accessories, and ordering information are also reviewed. Encon Industries, Inc., Fort Worth, Tex.



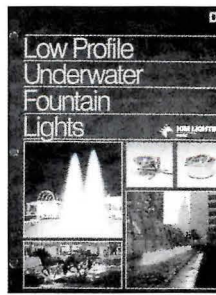
720 Indirect lighting

The *SPS* series of portable indirect lighting fixtures is featured in the manufacturer's brochure. The literature reviews single and twin units with horizontal-burning double-ended metal halide lamps. The fixtures can be freestanding or panel- or wall-mounted. McGraw-Edison, Racine, Wis.



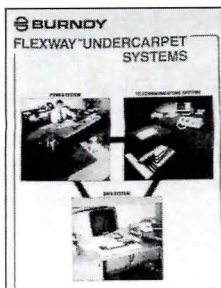
715 Circuit breakers

A line of circuit breakers is described in an 8-page color booklet. Standard features of the *FG-2* sulphur hexafluoride circuit breakers and *VAD-2* vacuum circuit breakers are reviewed. Cutaway diagrams of both models are included, along with detailed ratings data. Square D Co., Smyrna, Tenn.



721 Fountain lights

A 6-page color catalog highlights a line of low-profile underwater fountain lights scaled for a 5-in. minimum water depth. The catalog describes the freestanding and niche-mounted fixtures, including specifications, photometrics, installation, and safety features. Kim Lighting, City of Industry, Calif.



716 Wiring system

A 12-page color brochure features the *Flexway* undercarpet wiring systems for power, telecommunications, and data cables. The brochure includes detailed product descriptions and ordering information for flat power cable, transition boxes, service fittings, connectors, installation tools, and adapters. Burndy Corp., Norwalk, Conn.



722 Lighting

A 16-page color catalog features the manufacturer's line of ambient and task lighting fixtures. The brochure provides product descriptions, dimensional information, and application suggestions for the *Scroll* sconce, *Ovuli* table lamp, *Cymbal* sconce, and *Cygn*o task light. Ron Rezek Lighting & Furniture, Los Angeles.

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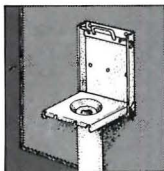
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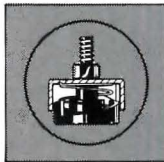
JOHNSON TABLE BASES AND TOPS



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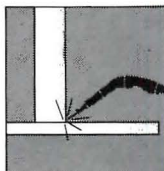
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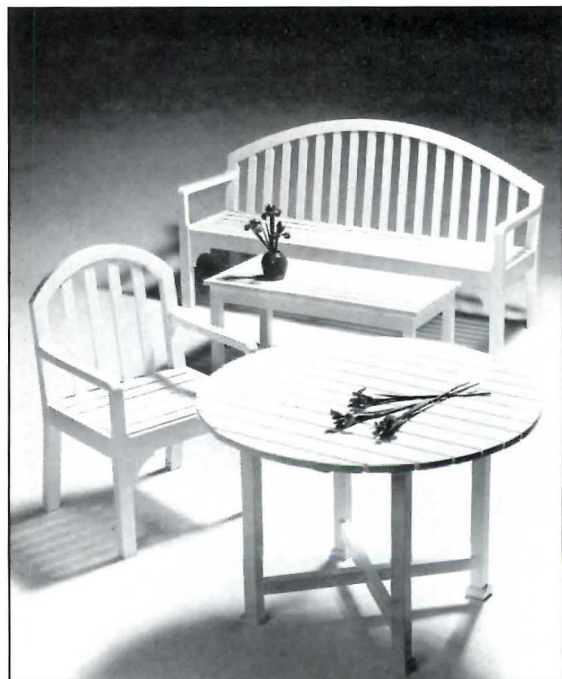
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And see how *Patternlite* and *Patternclad* can inspire you.



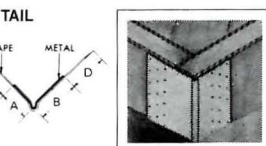
Circle 1133 on inquiry card

Beadex wants to keep you from cracking up. . .

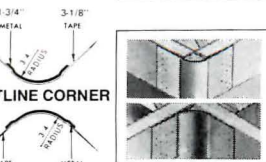
Now Beadex is offering their tape-on trim!

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B-1	15/32"	23/32"	5/8"	5/8"	BEADEX OUTER CORNER Concealed Metal. Galvanized metal corner bead laminated to exposed paper tape offers an excellent bond for joint cement and paint. For use on any thickness of wallboard.
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B-1XW	23/32"	31/32"	11/16"	11/16"	



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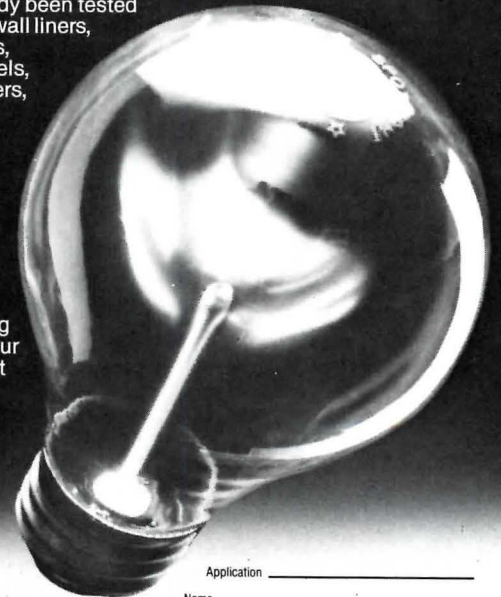
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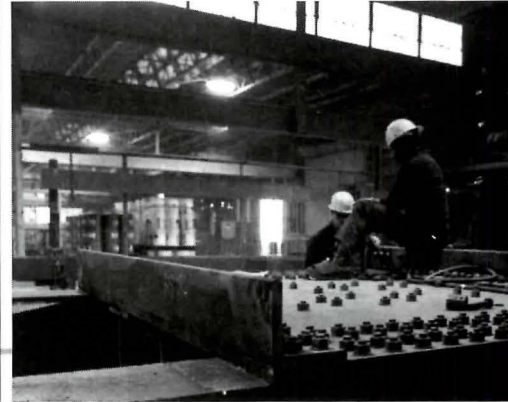
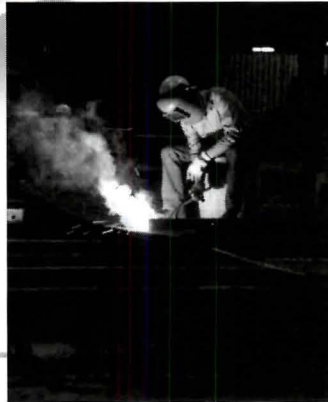
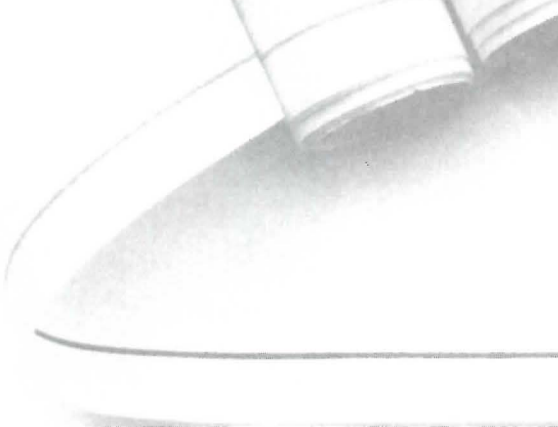


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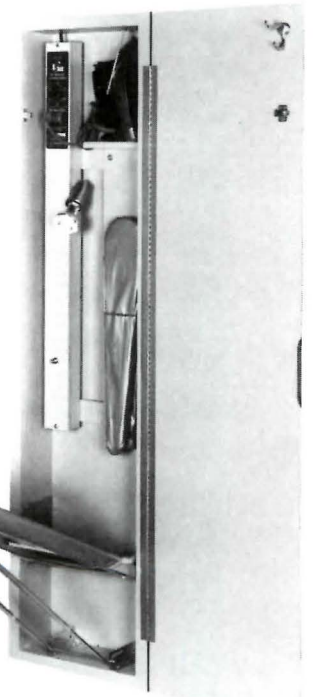
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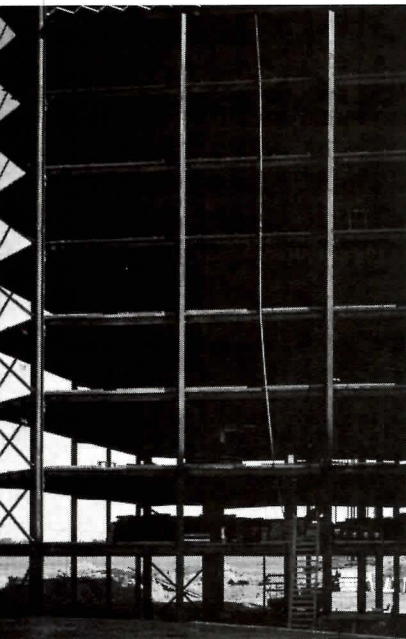
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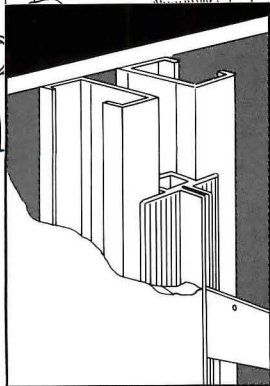
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anged aluminum housing with slotted heavy steel inserts which hold shelves, cornices, grails, etc. STUD EZE is designed to work with USG studs/dry wall application. Use in retail stores as well as commercial and institutional construction.



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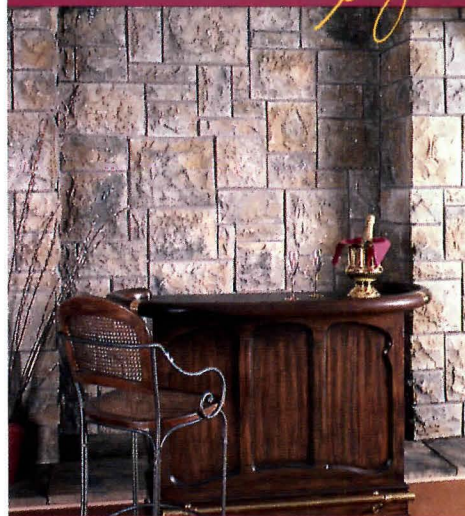
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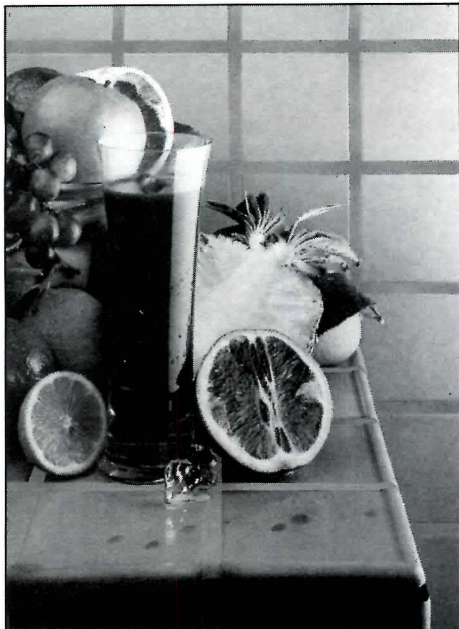
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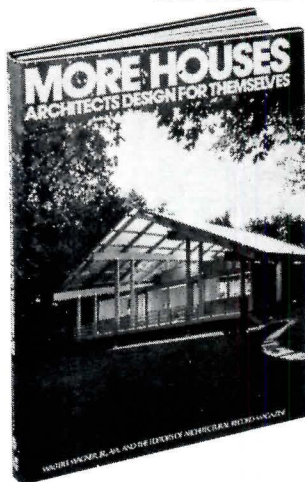
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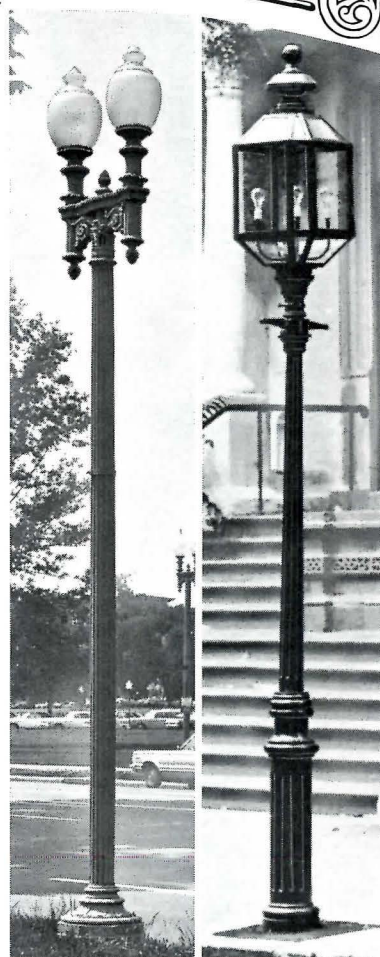
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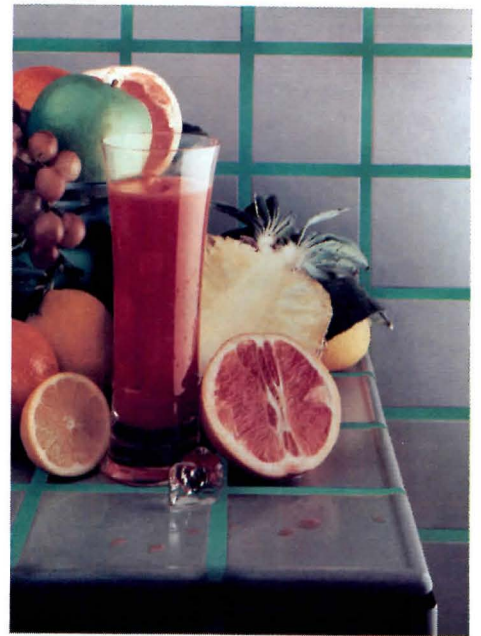
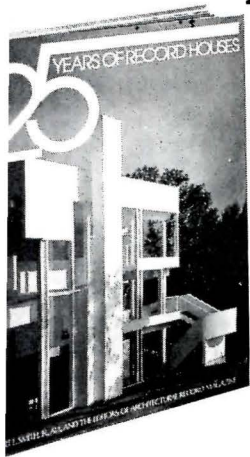
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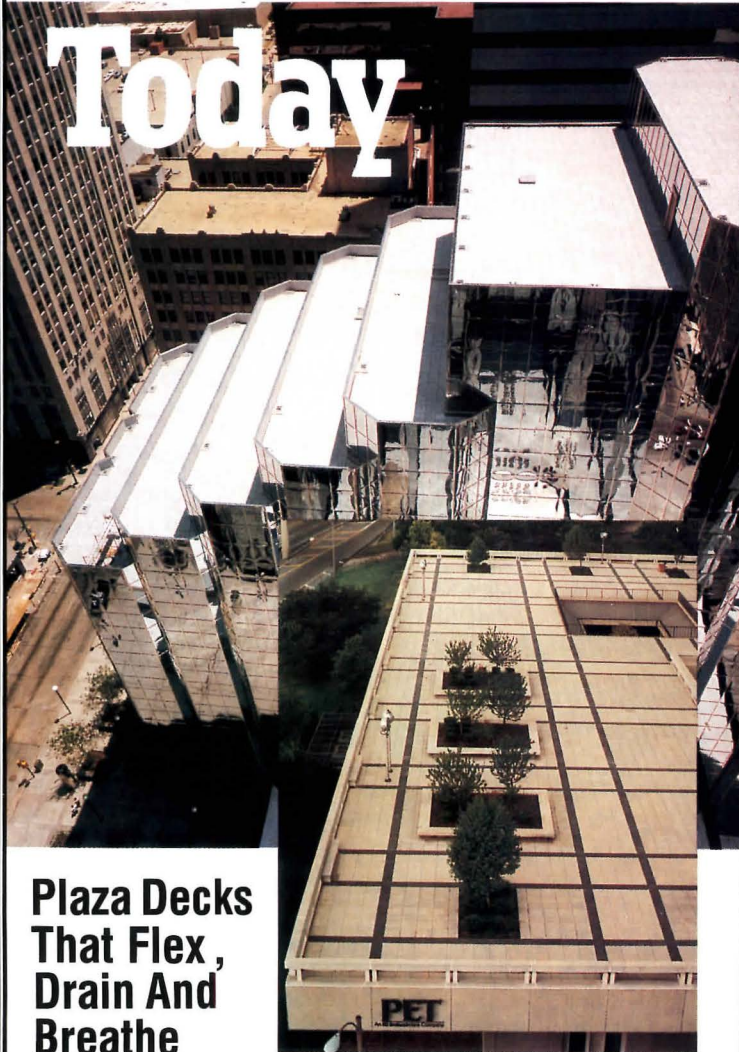
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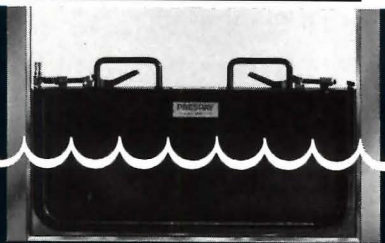
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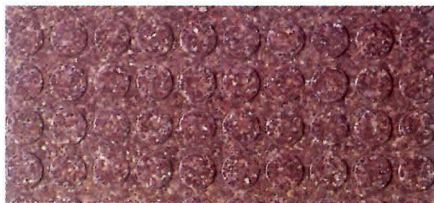
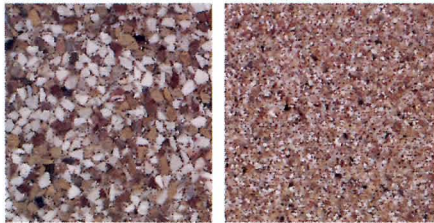
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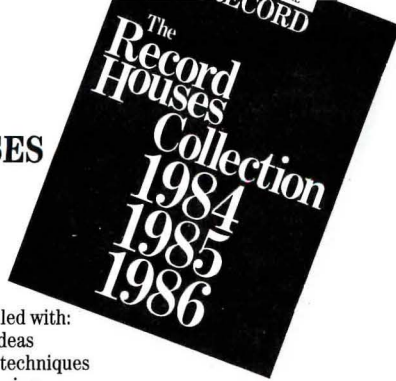
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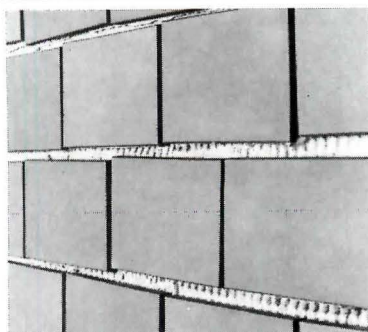
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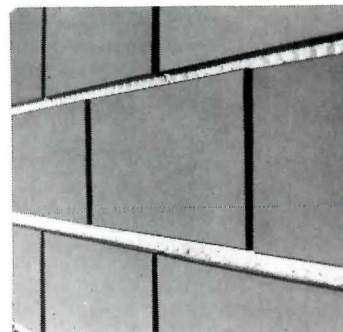
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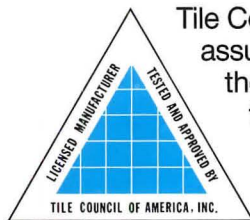


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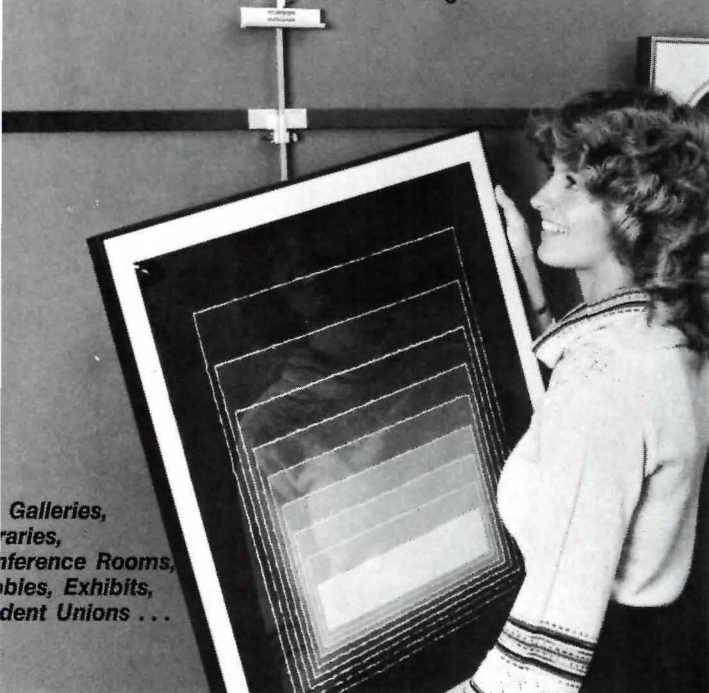
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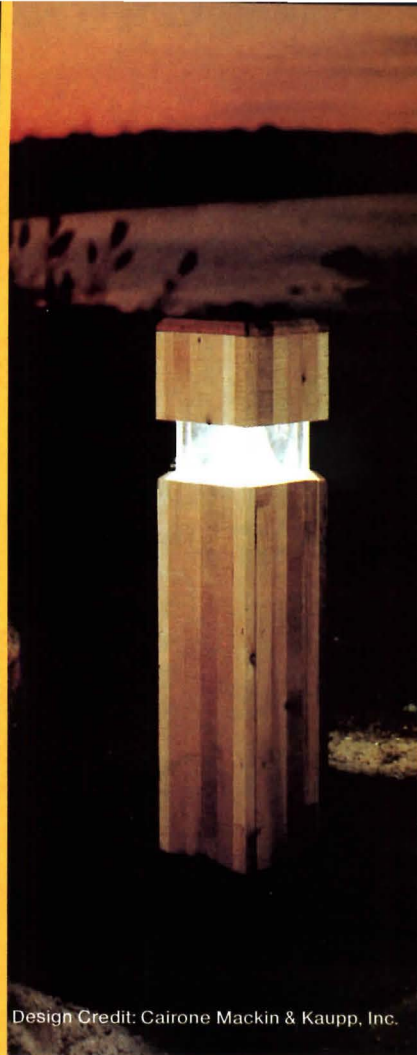
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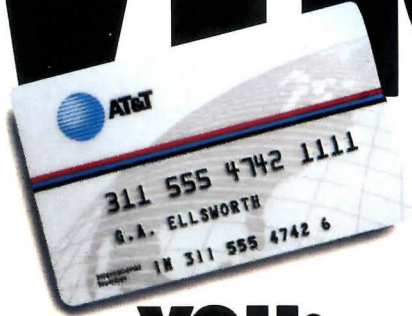
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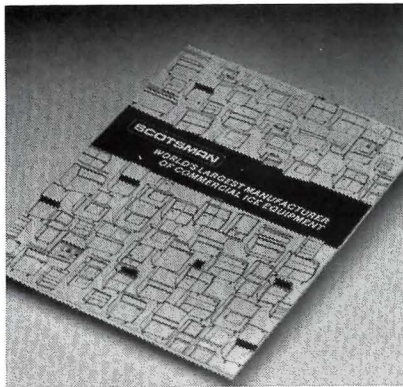
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