

PRODUCT REPORTS 78: PRODUCT IDEAS FOR ARCHITECTS AND ENGINEERS, ALL ILLUSTRATED

ARCHITECTURAL BUSINESS: USING NEW PRODUCTS NEED NOT INCREASE LIABILITY RISKS

MANUFACTURERS' CASEBOOK: DESIGN SOLUTIONS THROUGH PRODUCT APPLICATION

ARCHITECTURAL ENGINEERING: A LOOK AT VACUUM SEWAGE AND HALON FIRE-CONTROL SYSTEMS
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ARCHITECTURAL RECORD





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MANUFACTURERS' CASEBOOK: DESIGN SOLUTIONS THROUGH PRODUCT APPLICATION

A simple stenciling technique turned an exterior finish into a signage system

A commercial building that hopes to attract the public may carry a sizeable investment in signage, but not so this jai alai center in Milford, Connecticut. It attracts attention with a minimal investment (\$7,000) in supergraphics worked into its exterior finish, a composite, field-applied system of rigid insulation and plaster-like surfacing.

An interesting and little-seen capability of the Dryvit exterior wall system is its potential for graphics which, like the exterior itself, are relatively maintenance-free. The system consists of expanded polystyrene panels, fiberglass fabric embedded in a plaster material mixed with portland cement, and a cover coat of synthetic plaster with integral color.

Working with the general contractor and the Dryvit applicator, architect Herbert Newman obtained the integral graphics shown at right by specifying a second finish coat sprayed in a contrasting color over the first, trowelledon coat. In his uncomplicated scheme, the architect had 1/4-inch thick foamboard stencils of the playing figures made in a local art studio. The 4- by 8-foot stencils — relatively lightweight — were held up against the walls with ape, serving as guides for the applicator to use n spraying the three required coats of material. Because of the light weight of the stencils, all the spraying had to be done in one day to avoid the risk of wind damage. As soon as the pray application was done, the stencils were tripped—a technique possible because of the ast setting time of the material. The tone variations were achieved simply by varying the

The large figures shown here near the enrance are only a part of the installation, which also includes 8-foot-high letters spelling "Milord Jai alai" on the side of the building facing a major expressway; a 36-foot diameter jai alai playing ball on another wall; and a 4- by 30-oot sign. The portions of the figures on the offit (photo right) were painted since the offits are not of the *Dryvit* material.





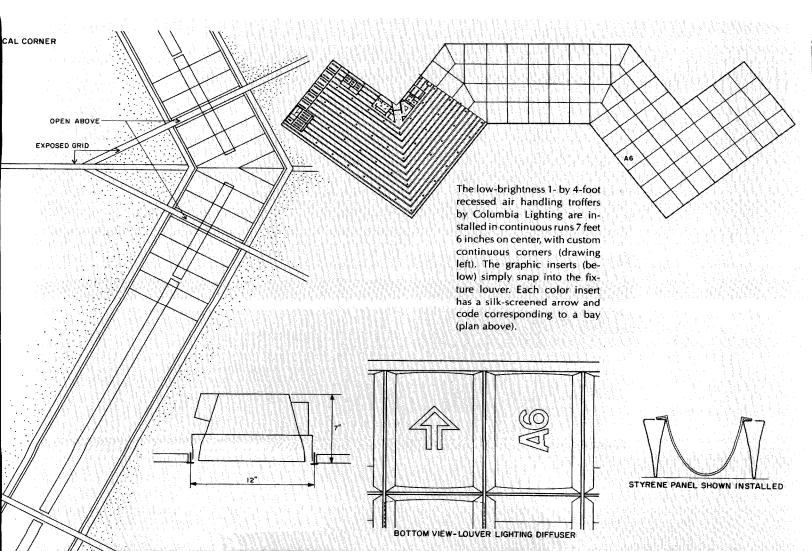
Open-office orientation simplified with luminaire graphics

Dealing with the problem of orientation in a large, open-plan office, architect Edward Larrabee Barnes chose to exploit one of the few constants in a rearrangeable interior: the ceiling, or more specifically, the ceiling lighting. The IBM World Trade Americas/Far East Corporation Headquarters in Mt. Pleasant, New York (RECORD, January 1977, pages 141-146) contains 383,000 square feet of space on three floors—a large challenge for anyone entering the building for the first time and hoping to quickly find the work station of one of 1000 IBM employees there.

Working with the design firm of Chermayeff & Geismar Associates, the architect developed the simple idea of color coding the various work bays of the building, and providing a color trail to them in the form of plastic inserts that snap into the louvers of the standard luminaires used throughout.

As the visitor walks out into the office areas from the entry (the main reference point identified by use of incandescent lighting), the directional system develops in a graded color panel arrangement applied to fixtures in the perimeter corridors. The corresponding functional bays on each floor are defined by color coding specific light fixtures in the areas, one color-coded fixture to a 30-foot bay. The legend panel is inserted into the center pair of louvers of the fixture nearest each column corner, aligning with the nearest ceiling panel "T" (photo, upper left).

As each department color is reached, the arrow legend insert points into the work area. One row of louver openings is left blank to separate the change-of-direction arrow from those pointing straight ahead, down the aisle. As each color is used up, it is dropped from the directional scheme.



Original supplier helps renovate a landmark

The re-use, preservation and renovation of older buildings have focused new attention on craft as well as the need for authentic replacement parts. A case in point is the Hotel Utah, in Salt Lake City, built in 1910 in the classic revival manner of European grand hotels by the Los Angeles firm of John Parkinson and Edwin Bergstrom.

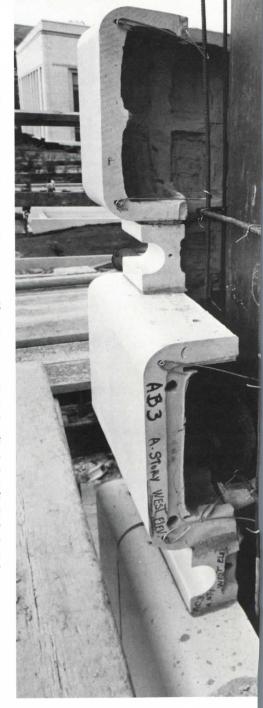
Faced with the evidence that the original architects planned the building for expansion, when that time came, in 1975, Robert A. Fowler and Edward Joe Ruben of Robert A. Fowler Associated Architects chose not only to restore the terra-cotta exterior, but to duplicate it in the new ten-story addition (left portion of building below). The decision was made easier by their discovery of the 1910 drawings (one shown below); by the fact that the original terra-cotta supplier (Gladding, McBean & Company) was still in business and had the original shop drawings; and by the cost, which was competitive with more usual construction.

Twelve thousand terra-cotta units in 400 shapes were commissioned, a job which the supplier is quick to point out needed 18 months to plan, produce and ship. Also, it takes at least six weeks to replace a unit such as a lion head or festoon. Some of the units weigh 400-500 pounds. The producer was required to make 13 dyes for the project. Portions of the terra-cotta to

be duplicated were taken from the building and sent to the factory where a draftsman-modeler made new molds. An average of six pieces were pressed by hand each day, and such details as the teeth in the lions' heads (lower right) were pressed separately and attached. (The producer's architectural product operation has been expanded to include the storing of molds and records, in response to the perceived demand for repair and replacement of building components.)

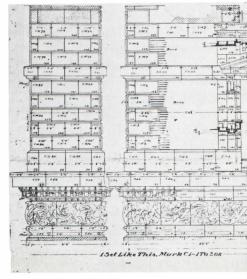
The Hotel Utah is a reminder that construction techniques change, even if some manufacturing processes do not, and working with historic materials can present some problems. In the old section of the hotel, the terra-cotta was laid first, and then backed up and tied in with brick. There were no concrete masonry units then, and interior walls were clay tile.

On the new addition, a back-up wall of concrete masonry units was laid first. Then the terra-cotta facing units were tied in with the reinforced masonry wall. The cavity was filled with grout, 4 inches at a time to avoid shifting of the terra-cotta units. (Pumping grout into the cavity wall created too much pressure on the units.) The contractor noted that if the terra-cotta was not in line, the mason had to stay with it until it set, making his own decision as to when the unit was set well enough to leave.





The old method of terra-cotta construction, and the new were completely opposite. In the old, the terra-cotta was laid first, and then backed up and tied in with brick. On the new job, a back-up wall of concrete masonry units (not available in 1910) was laid first. Then the terra-cotta facing units were tied in with the reinforced, concrete masonry wall laced with rebars (right). The cavity wall was filled with grout 4 inches at a time to avoid shifting of the terra-cotta units.













Delano Photographs, In

Panelized granite spandrels cut enclosure time by one-third

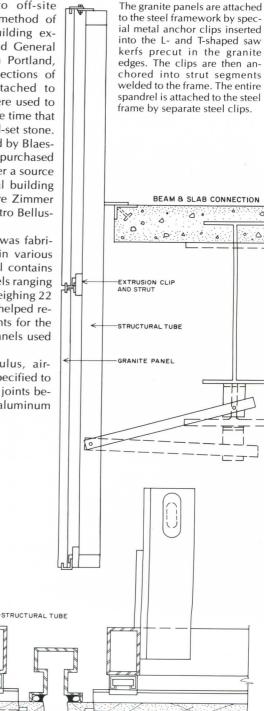


More producers are looking to off-site panelization as a cost-effective method of stone installation on high-rise building exteriors. In the case of the Portland General Electric Company headquarters in Portland, Oregon, preassembled spandrel sections of one-inch-thick Italian granite attached to lightweight tubular steel frames were used to enclose the building in one-third the time that would have been required for hand-set stone.

The wall system was developed by Blaesing Granite Company, and was pre-purchased including glazing, offering the owner a source of single responsibility for the total building skin. Architects for the project were Zimmer Gunsul Frasca Partnership, with Pietro Belluschi as design consultant.

The steel spandrel framework was fabricated from metal tube extrusions in various required shapes, and each spandrel contains from 12 to 48 individual granite panels ranging from 20 by 6 feet to 40 by 10 feet. Weighing 22 pounds per square foot, the panels helped reduce the structural steel requirements for the building. There are 558 spandrel panels used on the 548,000-square-foot project.

A one-component, low modulus, aircuring silicone rubber sealant was specified to seal all stone-to-stone joints and all joints between granite panels and anodized aluminum window frames and wash tracks.



ATTACHMENT BRACKET

A vacuum sewage system helped take this project off the shelf

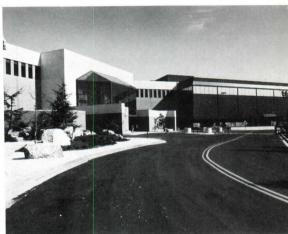
Building slowdown and even shutdown has occured in some parts of the country where environmental concerns override incentives for development. Such was nearly the case in Montgomery County, Maryland, outside Washington, D.C., where a sewer moratorium almost blocked the construction of a 650,000-square-foot shopping mall, White Flint (right).

What ultimately moved the project into construction was a product that could reduce the building's demands on local waste treatment plants: the *Envirovac* vacuum sewage collection system marketed by the Water and Waste Management Operation of Colt Industries. Developed in Sweden, *Envirovac* uses 3 pints of water per flush, primarily for cleaning. The transport medium is really air. The dis-

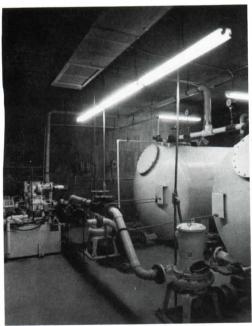
charge pipe is held under a constant vacuum (7½ psi) produced by a small vacuum pump. When the toilet is flushed, atmospheric air enters the system, forcing waste through the pipe to a collection tank. When the tank reaches a certain level, it discharges into the sewer.

For the mall's developer, the Lerner Companies, the system has the added advantage of permitting toilet location after tenant requirements are known. The vacuum system replaces gravity flow, permitting waste lines to be placed and rearranged above the suspended ceiling.

The mall was designed by RTKL Associates, Incorporated, and the mechanical engineers were Johnson, McCordic & Thompson, PA



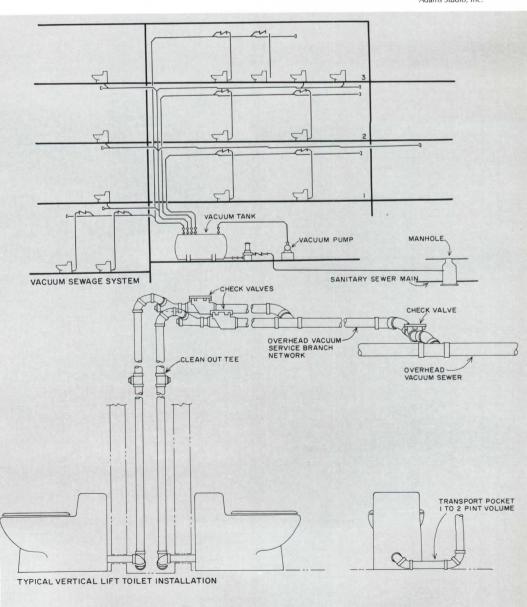
Adams Studio, Inc.



Mel Chamowitz

Small diameter PVC piping can be located in the ceiling, replacing the conventional infloor waste lines. This permits toilet relocation to tenant requirements. A small vacuum pump (above, shown next to holding tanks) permits a 14-foot





Zoned Halon extinguishing system overcomes first-cost hurdle

The partially-underground Nathan Marsh Pusey Library in Harvard Yard (RECORD, September 1976, pages 97-102) has been properly commended for splendidly solving the complicated design problem of building in a congested area in a way that preserves open space and historic fabric. What should also be noted, however, is the collaboration of the architect, mechanical and electrical engineers, and a consultant that helped this unusual building attain necessary code approval.

Because the two lower stack levels of the three-level library are underground, the Cambridge, Massachusetts, building code would have required a sprinkler system in these areas—an impossibility for a library housing three highly valued collections. Instead, the architects, Hugh Stubbins and Associates, proposed a non-aqueous fire suppression system using Dupont's Halon 1301, a liquid that under pressure forms a gas capable of quickly

extinguishing fire, without harming life or property. This alternative was acceptable to code officials, but represented \$200,000 of the 87,000-square-foot building's cost.

The system's design helped ameliorate the cost situation. Working with mechanical and electrical engineers, van Zelm, Heywood and Shadford, and Fire Equipment Incorporated, the architects developed a system combining individually located, self-contained 25-pound Halon systems, with a piped central system containing 2,483 pounds of Halon in 14 cylinders. Halon components were manufactured by Walter Kidde & Company. The complete system achieves a number of cost-effective advantages.

First, the system gets maximum potential from the least amount of Halon, which is expensive to stockpile. The Pusey library is divided into eight fire-control zones, meaning that fire doors and smoke dampers will auto-

matically close and contain a fire. A smaller volume requires a smaller amount of Halon to suppress the fire. (The amount of Halon kept on supply is enough to accommodate the largest zone.)

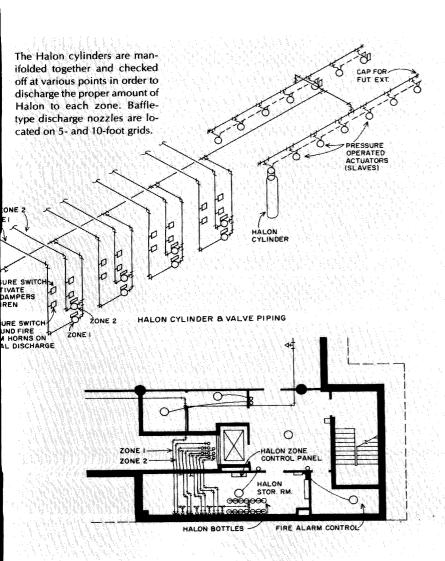
Second, the system's piping can be extended to three adjacent libraries. This further extends the capability of the central Halon supply to additional zones. (A further advantage of the central storage room is ease of maintenance and inspection. Halon is stored in liquid form, and every six months, the cylinders are weighed to check adequacy.)

The Halon system is triggered by a sophisticated network of ionization and rate-of-heat-rise detectors that know the difference between a waste-basket fire and a more serious one. Once the system is fired (in the largest zone), it expends \$20,000 worth of chemicals. NFPA code (#12A) stipulates the amount of time that may elapse between the system's

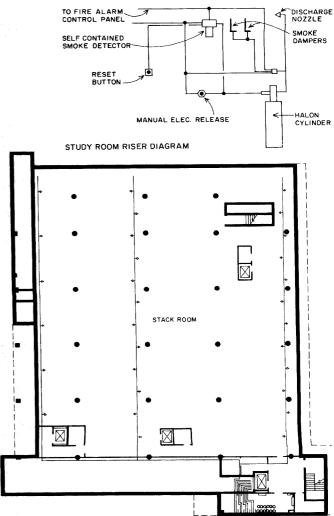


firing and the conversion of Halon liquid to gas at the nozzle: 20 seconds or less. (Determining this reaction time requires the working through of an elaborate formula accounting for length of pipe runs, pressure, etc.) The code also specifies the amount of time to fill a given volume with a proper concentration of Halon. A 3 per cent concentration will ususually supress a fire in this facility.

Modular systems are provided for each of 32 study rooms (one shown upper right), consisting of 25-pound cylinders located below the counter. Halon is piped to a discharge nozzle located at the ceiling (see drawing, below). Each system is activated by a self-contained detector or from a remote manual switch. Individual units are also supplied in exhibition cases, since they have their own hyac systems to maintain proper atmospheres for rare documents.







Responsibility for product innovation: how to be progressive, yet reduce your risk

by Harold J. Rosen, PE, FCSI

By what process does an architect choose or select a new product for use in his design? On the basis of the manufacturer's stature as a major fabricator of building materials? Because the manufacturer's sales representative has been calling on him for a long time? On the basis of a sales pitch, rather than on technical literature which should contain vital information? How can the architect be innovative and yet be secure in the knowledge that he is not going out on a limb when he selects a new product or uses an old product in an innovative way?

Part of the solution is to spread the risk: involve the manufacturer, owner and contractor (although, it is still primarily the responsibility of the architect to assure product suitability). Whenever an architect plans to use a new product—or use an existing product in a novel way - he should call in the manufacturer, his representative - or better yet, the manufacturer's technical department - and show them how he plans to use the product. By reviewing the plans and specifications, the manufacturer will be in a better position to state whether his product is being utilized correctly, especially in conjunction with other materials and in the specific configuration. Once that assessment has been made by the manufacturer, the architect should require a letter from the manufacturer stating that his product will perform as shown and specified. In this procedure, the responsibilities are clearly established and the architect's liability is probably reduced.

In most instances it would be prudent to inform the owner about the use of a new product or a new design and get his concurrence, since the risk of innovation is really the owner's. Again, informing the owner does not relieve the architect of his responsibilities, but this precaution does preclude the subsequent claim by the owner that the architect assumed an owner's risk without authority.

To ensure that the contractor and especially the subcontractor assume a greater responsibility, the architect should include in those sections of his specifications where it is warranted, a Statement of Application as follows: "Submit a Statement of Application, in an approved form, signed by the contractor and the sub-contractor stating that the products selected and used comply with these specifications; are the proper selections for the application and that the installation methods will comply with the manufacturer's printed instructions; and are proper and adequate for the condition of installation and use."

All products can be evaluated for key performance characteristics

While the foregoing suggest certain guidelines with respect to involving the owner, manufacturer and contractor, it is still incumbent on the architect to investigate products on a rational basis. I have developed a simple system for evaluation and selection of materials, products and systems that involves the performance concept and consists of two basic elements: 1) a check list of several broad qualitative headings, or performance requirements which is then expanded to a series of subordinate characteristics; and 2) a method of assessing and measuring the performance characteristics or criteria.

The qualitative headings or performance requirements are:

- 1. Structural serviceability: includes resistance to natural forces such as wind and earthquake; structural adequacy and physical properties such as compression, tension, shear etc; behavior against indentation, impact, etc.
- 2. Fire safety: includes resistance to the effects of fire such as flame propagation, burnthrough, smoke and toxic gases, etc.
- 3. Habitability: includes liveability relative to thermal properties, acoustic properties, water permeability, optical properties, hygiene, comfort, etc.
- 4. Durability: includes ability to withstand wear, weathering, exhibit dimensional stabil-
- 5. Practicability: ability to surmount field conditions such as transportation, storage, handling, tolerances, connections, site hazards, etc.
- 6. Compatability: ability to withstand reaction with adjacent materials in terms of chemical interaction, galvanic action, ability to be coated, etc.
- 7. Maintainability: ease of cleaning; repairability of punctures, gouges, tears, recoating, etc.

- 8. Code acceptability: ascertain compliance.
- 9. Economics: installed costs, maintenance costs, budget limitations.

The architect should require adequate product testing

Measuring the performance characteristics requires certain physical test methods, simulation and/or the judgment of experts. For example, if a new acoustical material is being considered, the architect might be concerned about its fire safety criteria. Some of these performance characteristics might be assessed in

Performance	Test	
Characteristic	Method	Result
Flame Spread	ASTM-E-84	?
Smoke Developed	ASTM-E-84	?

If the manufacturer did not supply this information in his literature, the architect would, if these characteristics are important, request laboratory results based on the test methods outlined above. Similarly, for any other performance requirements which the architect deems appropriate, but which are not included in the manufacturer's data sheet, the architect would select the test method, and require the manufacturer to test the specific attribute, and furnish the test result.

This evaluation system can also be used to establish requirements for selection of products, or systems for a new project. In this instance, the architect, in addition to setting forth the performance requirements and the test methods, establishes what he considers to be some of the necessary test results.

Performance	Test	
Characteristic	Method	Result
Flame Spread	ASTM-E-84	25 or less
Fire Resistance	ASTM-E-119	1 hour

With these guidelines for involving all members of the construction team as partners in responsibility, and with a rational method to evaluate building products, the architect may be progressive and innovative, yet minimize his liability.

Harold J. Rosen, PE, FCSI, is a former chief of Specifications and Materials Research at Skidmore, Owings & Merrill, in New York City. Currently he is a Construction Specifications Consultant with an office in Merrick, New York.

These days there is a sense of vibrancy in the air—the statistics on building are up; more and more architects and engineers are back hard at work on projects of every building type.

And around this office—from the beginning of August until the last week in September — we've felt a sense of vibrancy and activity and "new developments" as we've sifted and sorted and selected the product submissions for this annual issue of Product Reports. There is a clear sense — in both the number and the content of the submissions from over 1000 manufacturers and producers — that things are happening; that manufacturers are responding to all the pressures that are felt by designers—in the areas of energy conservation, of simpler and faster erection of buildings, of greater flexibility in spaces and, of holding down costs.

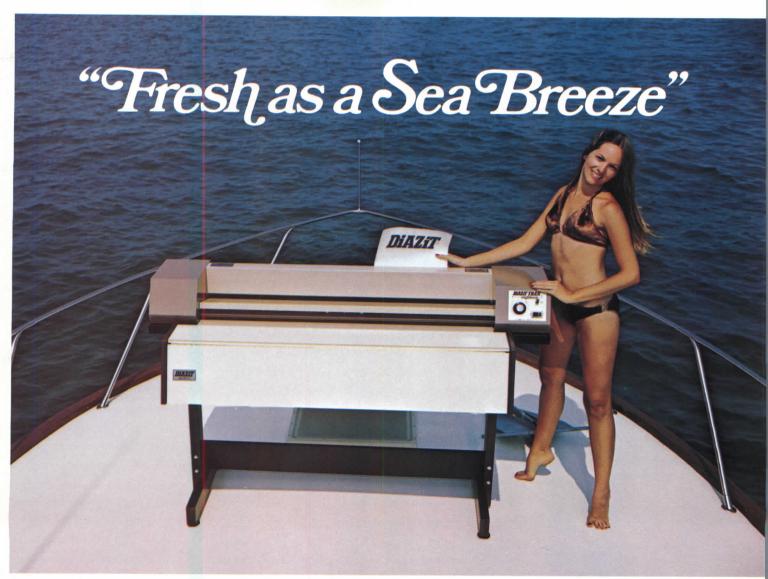
Thus, at a time when architects and engineers are facing very difficult restraints in trying to create energy conserving, faster-built, flexible, lower cost buildings, there is real help — in the form of the products that are displayed and described on the pages that follow. We think this issue comes at a time when there is a special need for (as we said in our first Product Reports issue six years ago) for an organized, easy-to-use reference to the most important new products introduced this year or to be introduced early next year.

This year, editor-in-charge Chuck Hamlin has introduced two new features to the product descriptions: Where applicable and supplied, the product descriptions include information on the code approvals which have been granted the product or material; and where we were able to get the information, you will also find price or unit cost information. We hope this added information adds to the usefulness of the issue to you.

How to use this issue

This year Product Reports is organized, as usual, on the 16-division UCI format. The page number for each division can be found on the Contents page, page 3, and more information on any product or service in this issue can be easily obtained by using the Reader Service section that begins on page 192. Inquiry cards are provided for reader convenience on pages 193 and 194. An index to manufacturers whose products appear editorially may be found on page 189, while advertisers in this issue are indexed on page 188.

A special feature of this issue should be noted. Again this year, readers will be able to circle one number on the Reader Service Card to receive manufacturers' literature on entire product sections within any of the 16 divisions. Of course, information on individual products may still be requested by circling the product's number in the case of advertisers, or by writing the number in the space provided, in the case of products featured editorially.



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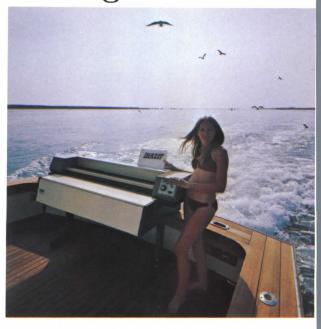
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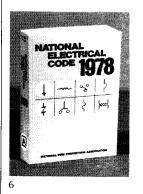




- 1 **DRAFTING/DESIGN** / Providing multidisciplinary automated design and drafting functions, the *AD/380/System* simultaneously produces engineering documentation in true three dimensions. Complete systems, including many OPTEC digitizer input stations, are priced from \$175,000. / Auto-trol Corp. E*
- 2 EDITING STATION / Consisting of a CRT video screen and simplified keyboard, and a storage section using a high-capacity, rapid-access dual diskette, this off-line editing station permits field offices to input information to a central office, and text editing. The cost of the station is \$9,800. / Wang Laboratories, Inc.
- 3 DESKTOP COMPUTER / A self-contained BASIC-language system for small- to medium-sized firms, the "9896A" consists of cartridge driven desktop computer; integral keyboard and display; dual disks; typewriter-quality printouts; and specially-designed work station. Standard system is priced at \$18,700. / Hewlett-Packard.







- 4 ELECTROSTATIC PLOTTERS / Unaffected by plot complexity, the "8136" computer plotter produces 36-in. wide E-size drawings in less than half a minute. With a resolution of 100 dots per linear inch, the "8136" can shade, tone or draw variable line widths with a single command. Priced at \$25,000. / Versatec.
- 5 COMPUTER GRAPHICS / Apdraft I is intended for mechanical detailing uses such as piping and instrumentation, electrical and logical schematics, architectural and floor plans, and hvac. Designers can create a major portion of the drawing with a minimum of alphanumeric keyboard entries or electronic pen strokes. / Applicon Inc.

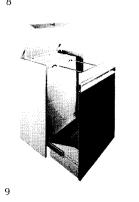
INFORMATION SYSTEMS

6 ELECTRICAL CODE / This latest edition of the National Electrical Code contains over 900 additions, including a revised section on Health Care Facilities. The book has new OSHA provisions on ground-fault personnel protection as well as five new Code articles. Price: \$6.25 a copy. / National Fire Protection Assn.



7





INSTRUCTION MANUALS

7 **STEEL SHEET PILING** / A fourpiece kit is said to provide all the tools needed to plan, design, estimate and place steel sheet piling jobs. Included are: pile drafting template; pile slide calculator; hammer and extractor selector; and specifying and engineering guide. Kit is \$15.00. / Mississippi Valley Equipment Co.

OPERATIONAL EQUIPMENT

- 8 DRAFTING TABLE / The "Model 12/80" table has a 12-inch board height adjustment and a 0-80 degree tilt, adjustable drawing surface. Sliding reference surface and drawer may be arranged to suit user; optional drawer unit provides additional storage. / Hamilton Industries, Div., American Hospital Supply Corp.
- **9 DRAWING STORAGE** / Masterfile cabinets are said to cut filing and retrieval time, and reduce floor space requirements, for storage of vellum, film and linen original drawings. Plan Hold Corp. GB, E*

COMPUTERS
INFORMATION SYSTEMS
INSTRUCTION MANUALS
OPERATIONAL EQUIPMENT
OFFICE MACHINES
REPRODUCTION EQUIPMENT
CONSULTANTS

*In 1978 Sweet's Catalog File(s): General Building (GB); Light Residential Construction (LR); Engineering (E); Interiors (I); Industrial Construction & Renovation (ICR).



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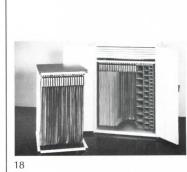


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Corp.





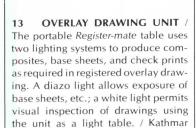
DRAFTING TABLE / A switch mounted at fingertip level permits wheelchair users of the VR 20 series tables to automatically adjust table height, balance, tilt, and orientation to individual specifications. Switch is said to be easily added to the centerpost power control of the VR 20 tables. / Hamilton Industries, Div., American Hospital Supply Corp.

PERSPECTIVE DRAWINGS /

The 20-in.-long Perspective-Aid simplifies executing accurate perspective drawings to scale. Layouts, projection lines and measurements are not needed: pivoting vanishing points and a choice of diminishing scales are said to permit an almost infinite variety of perspectives. The tool costs \$18.75. Edlund Enterprises.

REPROGRAPHIC FILM 12

Powergraph Moist Erasable reprographic film is said to offer good resolution of fine line drawings and special effect images without veiling of details. Matte surface accepts pen or pencil revisions. / Chemco Photoproducts Co., Div., Powers Chemco,



DRAWING HANGERS / Made of self-adhesive paper stock with polyester film lamination, these roll carrier strips may be cut to fit 24-, 30-, and 48-in. original drawing sheets for hanging in a Masterfile cabinet. Carriers will go through all reproduction equipment without gum-ups; adhesive is heat-resistant and will not bleed. / Plan Hold Corp. GB, E*

LEAD-SAVING PENCIL / Mechanical pencil has a spring mechanism which retracts the lead for a second when writing pressure is strong enough to break it, even when the lead is extended 2mm. Pencil sleeve permits use with T-squares, drafting machines, triangles, etc. Stainless steel interior holds 24 leads; the pencil costs \$4.00. / Universal Supply Co.

CURVE DRAWING AID / The "Calibrated Adjustable Curve" consists of 14 interlocking plastic channels with a steel measuring tape in the outermost side. Friction holds the curve securely while the line is drawn; tape shows the exact distances along the perimeter of the curve. A curve 22-in. long is \$10.50; other sizes are available. / Hoyle Engineering Co.

ROLLED GRAPHICS STORAGE

/ This vertical square tube file unit tilts out from its cabinet housing for easy removal and replacement of rolled graphics or print sets. Sheets from 30to 66- in. wide may be stored; honeycomb-type compartments minimize surface contact of graphics. / Plan Hold Corp. GB, F*

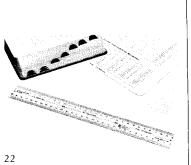
GRAPHICS STORAGE / System 18 features pistol-grip binders, each with a 100-sheet capacity. The binders, with plan identification on the handle, have nylon glides on top which slip onto an aluminum track. Each 47-in.deep by 39-in.-wide cabinet can store 6000 24- by 36-in. drawings; extra sections may be added. / Plan Hold Corp. GB, E*

ELECTRIC ERASERS / Cord, cordless, and combination erasers are offered with high-torque DC motors. Clutch, gears, and roller bearings are designed for low-heat, highrpm operation; spring-loaded eraserstick chucks facilitate adjustment and replacement. Housings are lightweight ABS plastic. / Vemco Corp.

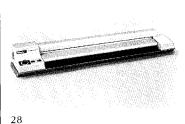
DRAFTING AID / Typiton vellum is a self-adhesive transparent sheet used for placing text, repetitive details, etc. on original drawings. Material may be transferred to Typiton sheets by typewriter or reprographic copier. / Ameropean Corp.

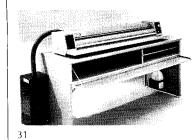
BARRIER-FREE DRAFTING Drafting table is free of under-table

obstructions, permitting comfortable use by handicapped persons. All lifting, lowering and tilting controls for the fully adjustable work surface are combined into one convenientlyplaced hand lever. / The Huey Co.

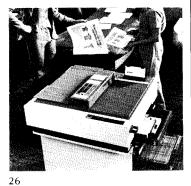


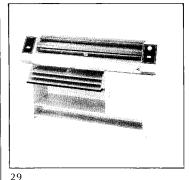


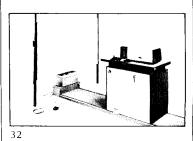






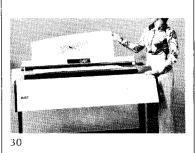








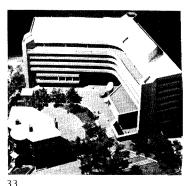




BLUEPRINTER / Both blue and

white prints up to 42 in. wide can be

produced by the "Econo Jet" printer at



PRINTER STAND / Designed to

accommodate all of this manufactur-

er's compact whiteprinters, this ma-

chine stand has light-proof storage

space for cut-sheets of sensitized pa-

pers. The Scavenger vapor eliminator

can be fastened onto the stand, which

provides out of the way mounting for

MICROFILM ENLARGER

ammonia bottles. / Blu-Ray, Inc.

METRIC RULER / Two new metric rulers fabricated of plastic with laminated printing of both numbers and calibration have been introduced by the company. One ruler is opaque, 20 cm long and is calibrated in millimeters as well as centimeters. The other is transparent, 30 cm long and calibrated in millimeters, centimeters and decimeters. Price is \$.35 each. / The C-Thru Ruler Co.

REAL ESTATE COMPUTER / Consisting of a T158 programmable calculator and a pre-programmed plug-in solid state software module, this personal computer calculates cash flow, return on investment, depreciation, tax audit, and other real estate financial data. Calculator is priced at \$124.95; software module is \$35.00. / Texas Instruments, Inc.

speeds up to 9 ft a minute. The compact unit may be wall-mounted or used on a tabletop. "Econo Jet" conforms to OSHA standards. / Teledyne Rotolite.

DIAZOPRINTER / A highspeed, non-vent fluorescent diazoprinter, the Print Vac 190 features ammonia vapor removal by a light, steady vacuuming pressure applied across the machine's 471/2 in. processing width. Receiving tray accommodates print sizes A to D, and a variety of diazo materials. / GAF Corp.

High-resolution full-size blow-backs of drawings can be produced by one

operator with the Micro-Master horizontal enlarger. Interchangeable enlarger heads permit reproduction from both 105mm cut negatives and 35mm negatives mounted in aperture cards. / Keuffel & Esser Co.

OFFICE MACHINES

- TYPE FONTS Two type styles have been added to this manufacturer's Varafont 3000 composing system: Helvetica Medium and Bold. Thermoplastic type is push-button set, and dispensed on adhesive-backed polyester tape ready for keylining. / Kroy Industries, Inc.
- **ELECTRIC ERASER** / Weighing 6¼ oz., the "Power Cord" eraser provides 4300 rpm operation speed and 5 in./oz. for strong erasures on all kinds of surfaces. Cord is 8-ft. long; a hanger mounts the eraser on edge of work board. / Kroy Industries, Inc.

REPRODUCTION **EQUIPMENT**

- **REDUCTION COPIER** / The 26 "3107" is a portable, plain paper copier that can produce 81/2- by 11-in. copies from originals as large as 14 by 18 in. Its size-for-size copies range up to 14 by 25 in. Flat, edge-mounted platen permits copying from books. Purchase price is \$10,500; copier may be leased. / Xerox Co.
- WHITEPRINTER / Low costper-copy is claimed for the "Diazo Jet" whiteprinter, which operates at speeds of 16-ft-per-minute and widths up to 48 in. Machine is said to be easy to operate; the "Diazo Jet" meets all OSHA requirements. / Teledyne Rotolite.

- 30 WHITEPRINTER / Instant on-off operation and a print size capacity of 130 cm (51 in.) are features of the Dart 130 diazo whiteprinter. Automatic pump controls developer vapor. ULlisted unit is priced at \$899. / Diazit

CONSULTANTS

SCALE MODELS / Architectural and engineering project models can be constructed for a variety of applications, including client presentation, displays, visitor information centers, etc. Scale models, from process piping to site development and highway construction, are made to order. / Architectural Model Associates.

Charrette Flat **Files**

in white, black or gray

Stackable up to four high and less expensive than stacking modular files, Charrette Flat Files weigh almost twenty percent more than other integral units. These heavy-duty files come with smooth-gliding drawers which are fully suspended on

ball bearing rollers and are equipped with rear hood and front piano-hinged lift compressors. Handles are satinfinished rounded pulls. Available in white, black or gray for local delivery from our Boston, Cambridge or New York stores.



Branches

Boston, Massachusetts Cambridge, Massachusetts New York, New York



Or contact Charrette. 31 Olympia Avenue, Woburn, Massachusetts 01801, (617) 935-6000, for crated overland or international shipment.



For more data circle A05 on inquiry card

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OFFICE EQUIPMENT

D01 MASTERMAKERS / An information folder describes three high-speed electrostatic mastermakers for use with any offset duplicator, reproducing volume linework, solids, and prescreened halftones. The single compact cabinets, needing no overhead cameras, stand no higher than 3-ft, 8-in. / A. B. Dick Co.

OFFICE LITERATURE Divisions 1, 2, 3, 4

SITEWORK

D02 SITE DRAINAGE / Product flyer presents a 20-ft length of 10-in. extruded tubing, as well as new snap-on fittings. Weighing less than 2-lbs per ft, tubing is unaffected by acids or alkalis and meets proposed ASTM specifications. / Advanced Drainage Systems, Inc. GB, LR*

D03 DRAIN PIPE / Poroswall rapid-drain pipe is specifically designed for under-drainage and leaching; it is not an adaptation of an existing all-purpose pipe. An illustrated brochure explains how the pipe drains only water through minute channels throughout the entire length. / Walker Poroswall Pipe Co. GB, ICR, E*



D04 FENCING / Features of Page aluminized chain link fence fabric. said to combine the best qualities of aluminum and steel, are explained in a full-color brochure. Manufacture, installation and ASTM test results are covered; photographs show various fences in use. / Acco.

D05 SITE FURNISHINGS / Fourcolor folder gives an overview of this complete line of redwood benches, planters and site accessories. Individual product data sheets provide full specifications and dimensions for each item. / Sitecraft by Rosenwach, Inc. GB*



D06 TURF IRRIGATION / A combination textbook and reference work, the "Turf Irrigation Manual" discusses all aspects of landscape sprinkler system design and installation. Sixty pages of tables provide data on pressures, flow velocities, etc. / Telsco Industries. GB, E*

D07 SLOTTED TUBING / Product flyer explains the redesigned features of "Precision Slotting" of ADS drainage tubing: each slot is centered in the valleys between corrugations; flexible drainage tubing meets many code requirements. / Advanced Drainage Systems, Inc. GB, LR*

CONCRETE

D08 FORMWORK / Six-page brochure supplies detailed drawings, load tables and in-use photographs on the "Aluminum Beam System" for joist or stringer applications. The lightweight beam's cost advantages and safety factors in concrete deck forming are discussed. / Symons Corp.

MASONRY

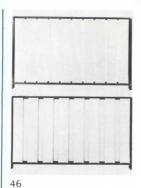
D09 MORTAR / Four-page brochure supplies sample chips of all 25 "Extra Strong Mortar" colors; mixing instructions and proportions are included. Literature is available in both French and English. / Northern Pigment Ltd. CC*

D10 RADIATION SHIELDING "Structural Glazed Facing Tile," made of pulverized and fired clay, provides radiation protection equivalent to standard thicknesses of lead in radiology shielding applications. A data sheet contains technical information test results, per-sq-ft costs, etc. / Stark Ceramics, Inc. GB, ICR*

D11 INSULATION / An illustrated brochure describes asbestos-free hightemperature mineral wool insulation and insulating cements for utility, heat processing and other industrial applications. Information is given on stress corrosion cracking and test methods and FS specifications. / Building Products Div., Keene Corp.



uci 2 © WOLK







49











48

FENCES & GATES

46 **RESIDENTIAL FENCING / Con**structed with a minimum of parts, the "Leisure Time" steel fencing has a 30-cm gap between panels, or is double-faced for complete privacy. Panel sections snap into place without fasteners. / Westeel-Rosco Ltd.

FOUNTAINS & POOLS

TWO-LEVEL POOL / Constructed of 2- by 6-in, redwood planks around a waterproof fiberglass liner, these fountains have water bubbling from the upper level. Models come complete with 110v submersible pumps; priced from \$395.00. / Roman Fountains, Inc.

IRRIGATION SYSTEMS

SPRINKLER HEADS / Designed to reduce water usage and installation and maintenance costs, the Rain Pro sprinkler delivers water slowly and uniformly. Pop-up and shrub models permit spacing of up to 53 ft. / The Toro

49 BUBBLER NOZZLE / Said to be easily installed on existing 1/2-in. irrigation systems, "Model 1300" bubbler shrub nozzle is constructed of lowmaintenance molded plastic. Set screw regulates water flow from closed to 2.7 gpm. / Rain Bird. GB*

MARINE WORK

FLOATING DOCK / Durable, chemically-inert float units or Marlex CL-100 make these docks virtually unsinkable. Many site variables are considered in the design of docks, rafts and boat slips for lake, ocean, or river locations. Cost is \$10/sq ft of deck area. / Thompson Floatation Co. GB*

PAVING & SURFACING

CONCRETE PAVING / Resistance to tremendous point loads without cracking is claimed for these sand-set interlocking paving stones. Three patterns — hexagonal, I-beam shaped, and a four-sided curved form - are available in earth shades of brown, red, charcoal, and natural. Price per sq ft, installed, ranges from \$1.50 to \$2.00. / Muller Supply Co.

PARKING CURBS / Each 6-ft 10-in. Dura-Curb section, made from recycled polyfin resins, weighs 35 lbs; three 16-in. pins driven into the asphalt anchor each curb securely. Curbs are said to be unaffected by salt. chemicals, freeze-thaw cycles; they will compress under heavy loading, then recover without cracking. / Kurbers, Inc.,

ASPHALT SEALER / "Sure Seal" is a cold-applied tar emulsion said to extend the useful life of blacktop paving. Resistant to oil, gasoline, moisture and sunlight, "Sure Seal" will not crack, soften or track in hot weather. / Republic Powdered Metals.

PAVING INSTALLATION Drainage, sound transmission, and slab wear problems associated with structural decks, balconies, arcades, etc., are said to be eliminated with the Terring paving system. Non-aging weatherproof vulcanized rubber setting rings and pads support and level paving slabs, tiles, etc. in an openjoint pattern over a waterproof membrane. / WEGU Canada, inc.

FENCES & GATES **FOUNTAINS & POOLS IRRIGATION SYSTEMS** MARINE WORK PAVING & SURFACING SITE DRAINAGE SITE FURNISHINGS

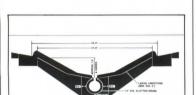
























PAVING BLOCKS / A number of ground finish (terrazzo-type) blocks have been added to the London Walk line of pavers. Colors include redbrown stone with red aggregate; tan; bluestone gray; and limestone. Meeting all heavy-duty specifications for paving traffic areas, 21/2-in.-thick blocks come in 12- and 24-in, squares. / Hastings Pavement Co., Inc. GB*

SITE DRAINAGE

SITE FURNISHINGS

BICYCLE PARKING / Operated with key, tokens or coins like a locker, "Model RR-400" provides secure bicycle parking. User rolls in bicycle, inserts coin, places locking bar over the frame member, and removes the key. Tamper-proof key/coin mechanism is steel; special keys cannot be duplicated through regular sources. / Rally Racks Div., Rally Enterprises,

STADIUM BENCH / Silver or gold anodize is the standard finish available for the "Ibis" bench's aluminum contoured seat and back; duranodic brown may be ordered. Pedestal legs can be embedded in concrete or bolted flat. The "Ibis" bench meets ASTM A-123 and is priced at \$94.00 each. / Stadiums Unlimited, Inc. GB*

FIBERGLASS PLANTERS/ Rugged construction is said to make these fiberglass tub planters ideal for exterior, as well as interior, use. Planters are available in 12 colors and finishes. / Landscape Forms, Inc. GB, I* 65 SCULPTURED BENCH / Internal

SLOTTED DRAIN PIPE / Drawing suggests an installation of corrugated steel drain pipe in parking lot "islands." Runoff water flows through notches in surrounding curb into crushed stone-lined trench acting as a catch basin, and drains into the pipe's continuous, built-in slotted-grate opening. / Armco Steel Corp.

BENCHES/TABLES / Cleanedged design in redwood or oak is featured in the "Palisade" series of site furnishings. Benches and tables come TRASH RECEPTACLE / Three in several dimensions of squares and rectangles. / Landscape Forms, Inc.

steel rods secure 21/4-in.-sq redwood in a curved bench; rod ends are concealed with redwood plugs. The steel pedestal is painted to blend with bench finish. Bench is 231/2-in. high over-all, and 60-, 72-, or 84-in. long. / Sitecraft by Rosenwach Inc. GB*

YARD DRAIN / "Little Guzzler" cast iron drains are said to allow smoother ground contour without the large depressions of large catch basins when used on landscaped areas near buildings and drives. The 6- by 134-in. top opening has a removable debris trap; drains use a crushed stone base. / Polyphase Corp.

removable top options - all 18-gauge steel with a coppertone enamel finish - are available for these round trash receptacles. Staves are 2-in.-thick clear redwood; hoops are galvanized steel. The redwood plywood bottom has drain holes. / Sitecraft by Rosenwach Inc. GB*

PLANTER/BENCH / This circu-

lar planter is surrounded by bench

seating. Unit is constructed of clear

all-heart redwood with galvanized

steel rods, brackets, and hoops. Out-

side height is 30-in.; planters come in

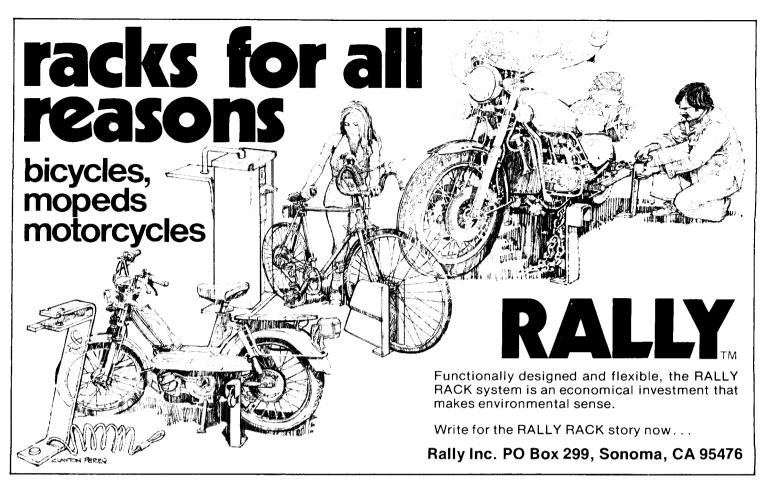
4-, 5-, 6-, and 8-ft diameters. / Sitecraft

by Rosenwach Inc. GB*

SITE FURNISHINGS / The scape Forms, Inc. GB, I*

"Promenade Series" consists of planters, tables, modular seating units and trash receptacles for either indoor or outdoor use. Furnishings, available in both redwood and oak, come in a range of square dimensions. / Land-

HALF-ROUND PLANTER / Two-in.-thick redwood staves form back and curved front of this halfround planter; many standard height and diameter configurations may be selected. Options include custom sizes and finishes, and a watertight PVC planter liner. / Sitecraft by Rosenwach Inc. GB*



For more data circle A07 on inquiry card



put Auto-Tennis profits into your building plans.

Put six alleys and 6 to 12 players in the space of a standard tennis court and see Chevron Auto-Tennis make money for you. It's the perfect practice partner for every player, and always in action.

Chevron Auto-Tennis is a complete package: throwing equipment, retrieval system, grade plates, specially designed fiberglass backdrop curtain. It's totally engineered for heavy duty and works for you problem-free ... hour after hour after hour.

For more information on this tireless money-maker, give us a call.



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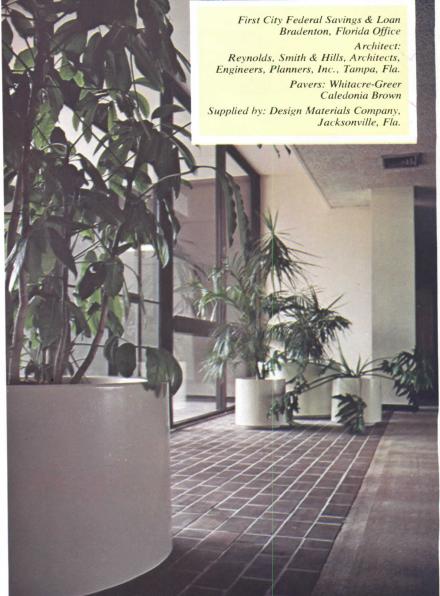
Call Toll Free/24 hours

800.648.5322 ext.200

(Good in 48 states except Nevada)







Bring The Outside Inside . . . With Whitacre-Greer Pavers In Distinctive Earth Tones

Whitacre-Greer Pavers don't have to stop at the door. They move right through and inside to provide earth tone brick floors to your lobbies and other interiors. Whitacre-Greer Architectural Pavers are products of one of the country's richest clay areas — east central Ohio. The character and wide appeal of this attractive, unique range of earth tones is due to these rich Ohio deposits, processed with a variety of additives under rigidly controlled firing conditions. Finishes shown here are available in a variety of shapes and sizes. All are designed for severe weather use.

For name of your nearest Whitacre-Greer representative, call SWEETS BUYLINE. Or, write or call collect to Whitacre-Greer, Waynesburg, Ohio 44688 Phone (216) 866-9331

Most of the pavers shown are available as squares, hexagons and rectangles. Compressive strength 10,500 psi. Maximum average absorption Rate 4%. Minimum average freeze-thaw cycles 100 minimum. Size and distortion tolerance and color variations on pavers will meet ASTM Designation C-216, Type FBS.



ANDLELIGHT CALEDONIA E IRON SP

ALEDONIA BROWN IRON SPOT

RUSTIC



ANTIQUE RANGE

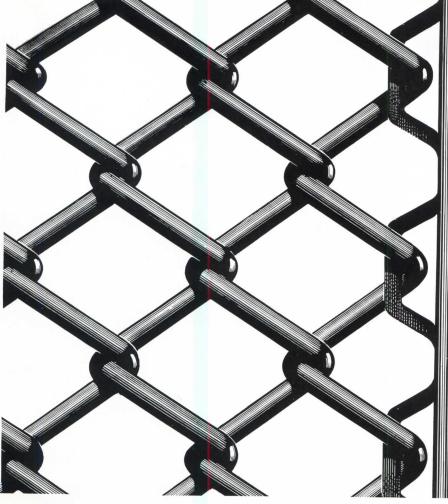
FULL RAN

MULBERRY FLASHED RANGE



WHITACRE-GREER
WAYNESBURG, OHIO 44688

For more data circle A08 on inquiry card



IY A "CHEAP" FENCE N PROVE EXPENSIVE

Look at the posts on most chain link fence. They're pipe-which can collect water and rust. USS Cyclone Fence uses roll-formed posts which are self draining and can't corrode from within.

Check how the fabric is connected to the terminal posts. Cyclone fabric, when used with roll-formed posts, is woven right into special lock loops. And our color fence is galvanized under the color coating, for extra protection. Thanks to details like these, we think our fence will look better, last longer, and take less maintenance than any other chain link fence.

Cyclone Fence comes aluminum-coated, galvanized, or in 2 colors: green and black. Ask for sample specifications, free. Look for Cyclone Fence in the Yellow Pages. Or write Dan Hoover, U.S. Steel Supply, 13535 S. Torrence Ave., Chicago, Illinois 60633.



USS and Cyclone are registered trademarks

For more data circle A09 on inquiry card

OFFICE LITERATURE / Divisions 4, 5, 6

continued from page 20

D12 UNIT MASONRY / Fullyillustrated brochure presents structural glazed facing tile, textured and acoustical tile, and high and utility brick. Actual colors are reproduced, and dimensions, acoustical properties and coursing tables are included. / Stark Ceramics, Inc. GB, ICR*

METALS

D13 METAL DECKING / Brochure on "Security Plus" all-steel floor-ceiling system shows the decking in on-site photos. Literature explains how lighting, sound control, air distribution and electrical wiring can be incorporated into the system, which is anchored to the building's structural frame. / H. H. Robertson Co.

D14 ALUMINUM GRATING

Swaged construction is said to let these industrial and commercial grating products withstand heavy use and vibration, according to an eight-page brochure. Aluminum grating is nonsparking, lightweight, and corrosionresistant; safe load tables are included./ Keene Corp., Building Products Div.

D15 EXPANDED METAL / A facilities brochure briefly describes a line of standard and flattened expanded metal products for heavy and light construction, including structural framing systems and expansion joints. / Keene Corp., Building Products Div.

D16 SAFETY GRATING / Technical data sheet introduces a type of Grip Strut aluminum safety grating, with increased load-carrying capacity over greater spans. / United States Gypsum Co. F*

D17 METAL FRAMING / Fully detailed 28-page brochure explains this steel framing system for low-rise, light occupancy buildings, including studs, track, bridging and joists. Lathing and drywall accessories and custom roll forming are also discussed. / Casings,

D18 SCULPTURED FORGINGS / Hand-wrought iron, brass and stainless steel railings are shown in a 10-page catalog; color photos show various handrail and gate applications. / J. G. Braun Co. GB*

WOOD & PLASTICS

D19 TRUSS NAILING / A technical brochure points out the difference between Gross Area and Net Area nail values in connecting steel plate to wood roof or floor trusses. / Automated Building Components, Inc. GB, ICR, LR*

D20 DECORATIVE LAMINATES /

The 96 solid colors, woodgrains, leathers, marbles and patterns in the standard line of decorative Micarta laminate are shown in an eight-page selector guide. Information is also included about construction standards, fabrication guidelines and fire-retardant specifications. / Westinghouse Electric Corp., Micarta Div.

D21 WOOD FOUNDATIONS

Newly-revised edition of "The All-Weather Wood Foundation: Why, What, and How" clarifies how crawl space and full basement wood foundations differ. Book also shows how crawl space foundation can be combined with the underfloor plenum heating and cooling system. / American Plywood Assn.

D22 PLYWOOD FLOOR SYSTEMS /

A glued floor, cantilevered in-line joists and fire-resistant floors are among the construction systems covered in a 28page book. General information on plywood grades, types and identification indexes is also provided. / American Plywood Assn.

D23 EXTERIOR PLYWOOD / "Stains and Paints on Plywood" covers plywood storage, edge sealing, which stains and paints are recommended, weathering, maintenance and refinishing of exterior plywood. Application methods are also discussed. / American Plywood Assn.

D24 MOLDINGS / Fact sheets describe various scribe and inset moldings of wood surfaces with DuraBeauty high-pressure laminate; instructions for fabricating doors and drawer fronts with the moldings are also available. / Consoweld Corp.

D25 DECORATIVE LAMINATES /

The full line of DuraBeauty decorative laminates is shown in an eight-page catalog, which includes product specifications and finish details. / Consoweld

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CONCRETE FORMWORK

78 COLUMN FORMS / One-piece fiberglass column forms for poured concrete construction are available for rental in sizes ranging from 12- to 36-in. in diameter, and in any desired length. Forms are said to be quick and easy to place and strip. / Molded Fiber Glass Concrete Forms Co. GB*

79 SLAB FORMING / The "Flying Aluminum Truss" is 50 per cent lighter than steel concrete deck forms; each section has no lefts or rights, tops or bottoms; truss can be assembled quickly; braces adjust truss centers to job conditions. / Symons Corp. GB*

CONCRETE MATERIALS

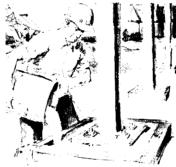
80 ANCHORING CEMENT / *Instarok* mixes with water to produce a pourable expansion cement that sets in 30 minutes, and is said to have nearly three times the strength of concrete. *Instarok* is erosionproof, even under running water. / The Metalcrete Mfg. Co.



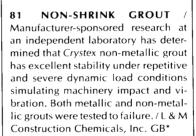
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82 NON-METALLIC GROUT / "Dense Grout" is a non-corrosive expansion-producing Portland cement-based grout which may be used with aluminum or magnesium construction products. Product is intended for high-strength grouting in both confined and unconfined areas; grout is plasticized for easy placing or pumping. / W. R. Bonsal Co. GB*

83 NON-SHRINK GROUT / Halce construction grout has been specially formulated to provide high-strength (as measured by pullout tests) as well as a batter-like flow consistency. Grout/water mixing proportions have been designed to prevent over-dilution to obtain better pouring. / Hallemite. GB ICR, E*



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84 ANCHORING CEMENT / Suitable for use as an anchoring cement, grout or concrete patch, *Super Por-Rok* grout sets in 20 minutes, and reaches compression strength of over 5500 psi in one day. The non-metallic cement has a non-shrink controlled expansion of 1 per cent +, and resists water erosion and freeze-thaw damage. / Hallemite. GB, ICR, E*

85 CONCRETE TOPPING / A special bonding agent and additive system are said to allow *Thinset* floor treatments to resist even the most severe freeze-thaw cycles when used on top of new or existing concrete slabs, outside and inside. Using a proprietary process for coloring and imprinting concrete, ½-in.-thick *Thinset* floors can look like red brick or gray cobblestone, etc. / Bomanite Corp.

86 EPOXY FLOOR PATCH / A general-purpose floor patch for repairing and resurfacing damaged concrete, metal, brick and wood block floors, this epoxy-based compound, with hardeners and granite-type powders, is said to withstand a variety of heavy industrial traffic. "Epoxy Floor Patch" is acid- and caustic-resistant. / Republic Powdered Metals.

CONCRETE FORMWORK CONCRETE MATERIALS

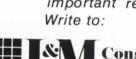
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102

SIMULATED MASONRY

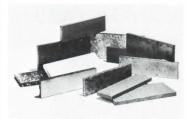
100 SIMULATED BRICK / Available in five colors, the product is made of crushed stone and fiberglass; the "bricks" are available in panels. / Marlite Div., Masonite Corp.

STONE

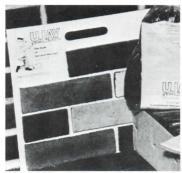
101 MARBLE FLOORS / Individual tiles made of Italian marble, come in a variety of colors, textures and patterns. / Hastings Tile. GB, I*

UNIT MASONRY

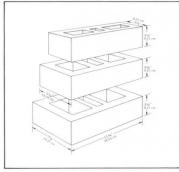
102 GLAZED MASONRY / Vari-Tone glazed block series provides a variegated texture of 24 earth-tone and natural colors. "Thru-wall," load-bearing construction, faced one or both sides, provides insulation, fire ratings, and meets Federal OSHA and USDA specifications. / The Burns & Russell Co.



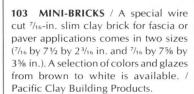
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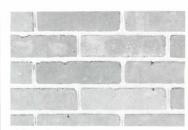


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104 FACE BRICK / *U-LAY* colonial facing bricks are authentic fired ceramic brick material that can be applied to almost any interior surface in a number of bond patterns. The ¼-in. thick bricks come in several colors. / Binghamton Brick Co.

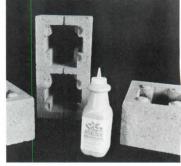
105 HOLLOW CLAY UNITS / This through-the-wall load bearing face brick measures 4 by 12 in. (face) by 4, 6 or 8 in. in thickness. These bricks are made of hard burned shale or clay, in one grade: severe weathering. / CanTex Industries.



106



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108

106 SAND MOLD BRICK / The company claims it can blend any possible combination of sand mold brick the specifier wishes. Shown is "Belcrest 560," a range of reds, tans, cross sets and earth tones. / The Beldon Brick Co.

107 THIN BRICK / There are 12 blends of *Brickettes*, ½-in. thick kilnfired real brick that is said to be fireproof. / Modern Methods, Inc.

108 INTERLOCKING BLOCK / Eight precisely positioned pins on top and eight corresponding cavities on the bottom create a firm, interlocking and self-aligning block. "Superblock" can be assembled without mortar, or can be bonded together with epoxy adhesives. / Cascade Specialty Products Corp.

SIMULATED MASONRY STONE UNIT MASONRY

continued from page 26

D26 LAMINATED TIMBER / A color catalog contains product description, technical sign aids and typical connection details for structural glued laminated timber. Photographs illustrate possible applications of glulam in construction. / American Institute of Timber Construction.

THERMAL/MOISTURE **PROTECTION**

D27 METAL CURTAIN WALL / The Forma2wallNariable module is an exterior metal curtain wall panel available in many size components up to 60-in.-wide by 16 ft long. The panel's perfectly flat surface is available in a variety of metal skins, colors, and finishes, including stainless steel. An illustrated product brochure gives performance characteristics and test data./ H. H. Robertson Co.

D28 SHEATHING/INSULATION Developed to provide high insulation value with nominal thickness (1-in. = R)6.15), SuperSheath residential sheathing board has a foil-laminated exterior surface for weather protection during construction. A fact sheet gives performance test data and code approvals. / The Monticello Corp.

D29 SKYLIGHT/SHADE SYSTEM / Product brochure explains how the Skycontrol unit, an outer skylight dome with an inside roller-mounted acrylic shade, can regulate up to 60 per cent of heat gain and light transmission entering enclosed areas. Eyebrow canopies provide similar light control for vertical windows. / Skyview Control Systems, Inc.

D30 SEALANTS / Fourteen specialized construction caulks and sealants and three types of glazing systems are described in an illustrated selection chart. Information is given on performance characteristics, ratings, joint application sizes, surface types, life expectancies and colors; a fireresistive joint sealing system is described. / Tremco.

D31 WATERPROOFING / Illustrated brochure describes TREMproof waterproofing systems for a variety of below-, on-, and above-grade construction applications. A selection chart gives data on seven waterproofing polymers and masonry preservatives; the KingPin pedestal method of installing pavers is discussed. / Tremco.

D32 SEALANTS / Products data sheets and application guides provide detailed information on 3-5000 construction coating, 790 building sealant, and silicone rubber bathtub caulk. Typical properties, limitations, and test results are shown for all products. / Dow Corning Corp. ICR*

D33 SOFFIT VENT / Said to provide free breathing of the soffit area, a perforated aluminum panel is described in an illustrated flyer. / Cheney Flashing Co. GB*

D34 URETHANE FOAM / A detailed product catalog provides physical property and application information for four urethane foam insulation products: spray-on; pre-expanded froth; two-part pour system; and rigid foamboard. Code approvals and test results are given in the literature. / Chemetics Systems, Inc. GB*

D35 METAL WALL PANEL / Both interior and exterior surfaces of the KOR/MET I insulated wall panel are 26-gauge Zincgrip steel, embossed and enamel-coated. A color brochure explains the energy-saving and fireresistive properties of the sandwichtype panel with a rigid polyurethane core; drawings show how special clips secure top, bottom, and weathersealed vertical joint without exposed through-wall fasteners. / Armco Steel

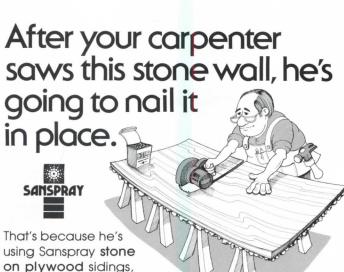
D36 SKYLIGHTS / An illustrated color brochure presents recent installations of architectural skylights in a variety of glazing materials. Detail drawings show different framing applications; ventilating skylights, smoke-, fire-, and explosion vents are also discussed. / Fisher Skylights, Inc. GB*

D37 ROCK WOOL INSULATION / Color booklet explains the advantages of Premium rock wool as insulation for thermal and sound control in residential and commercial buildings. Sound-control and fire-resistant systems are described; code approvals, fire-, thermal-, and acoustic ratings are listed. / Rockwool Industries, Inc. GB*

DOORS & WINDOWS

D38 DOOR FRAME / Fact sheet introduces Firebreak, a 30-minute-rated wood door frame for use with all rated swing doors. The fully-weatherstripped frame meets the requirements of UBC Section 3304. / Contact Lumber Co.

D39 DOORS AND PANELS / Doors said to meet the most rigid standards of fire and acoustical control are described in a folder of data sheets on architectural doors and plywood. / Algoma Hardwoods, Inc. GB*



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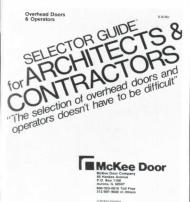
Winner of 38 out of 38 independently sponsored readership studies conducted among architects and engineers over the last 5 years.

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D40 WINDOW VENTILATORS / Color brochure describes the Unitas window vent, said to provide insectand burglarproof year-round ventilation in large operable or fixed commercial and residential windows. / Unitas of America, Inc.

D41 NYLON HARDWARE / New additions to this line of imported doorpulls, handrails, etc. include 11/4and 11/2-in. diameter rails in lengths to 81-in., and bathroom accessories available in 10 colors. Illustrated data sheets give full dimensional information and mounting instructions for each item. / The Ironmonger.

D42 GARAGE DOOR OPENERS / An eight-page brochure outlines the personal convenience features of electric garage door openers. Four models of openers and two radio control transmitters are shown in installation photos. / Overhead Door Corp.

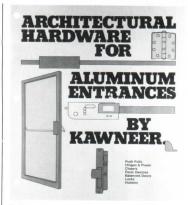


D43 OVERHEAD DOORS / A folder offers energy-saving suggestions for automatic overhead door installations, including full perimeter weatherstripping and the use of insulated door sections. / McKee Door Co. GB*

D44 DOORS / A 20-page selector guide provides information on a full line of steel, aluminum, wood and fiberglass doors, rolling steel service doors and labeled fire doors. Sections cover all hardware and accessories. door operators and controls. / McKee Door Co. GB*

D45 STEEL DOORS/FRAMES / Engineered and labeled frames and doors in a range of standard sizes are presented in a 10-page brochure. Included are polyurethane core, honeycomb core, and steel ribbed doors. / Jim Walter Doors. GB*

D46 DOORS/WINDOWS / Wood frame windows and sliding glass doors with an exterior aluminum skin are shown in a number of commercial applications in a 20-page product brochure. Section drawings show installation details; the Slimshade suncontrol option, which fits between glazing panels, is explained. / Pella Rolscreen Co. GB*



D47 ENTRANCE HARDWARE / A 24-page brochure provides drawings,

handles, hinges, panic exit devices, locking hardware, door closers and other types of hardware for aluminum entrances. / Kawneer Architectural Products, GB*



D48 SPECIAL DOORS / Built around text and photographs of push-pull | a 12-gauge steel channel frame, the

KayonDor is offered in a choice of trim and face sheets with various resistance qualities for pharmaceutical plants, food processing areas, sewage and water treatment plants, pool areas, etc. A brochure describes the urethane-foam core door. / Mesker Industries, Inc. GB, ICR*

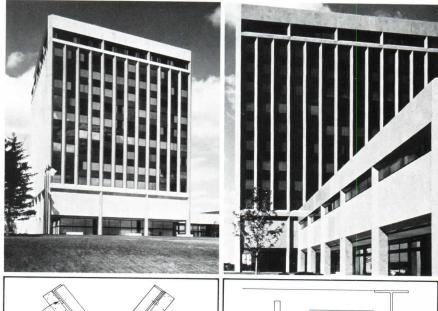
D49 SECURITY/INSECT SCREENS /

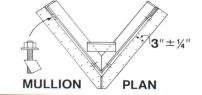
Twenty-eight page catalog describes a line of security screens for public housing, commercial buildings, hospitals, schools, and prisons; information on insect screening for general use is included. The Push-Quick life safety emergency release is shown. / Kane Mfg. Corp. GB*

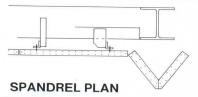
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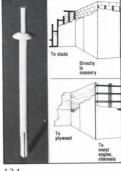
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EXPANSION CONTROL

121 PLASTER EXPANSION JOINT / The wide flange of the "XJ15-3" joint provides secure embedment and solid contact with lath, plus a return lip for binding along the joint edge. Available in zinc or galvanized steel. / Building Products Div., Keene Corp.

FASTENERS & SUPPORTS

122 TENSION CONTROL BOLT This high-strength bolt for steel erection and fabrication can be set and tightened by one man alone, and a constant-speed electric tightening tool. Bolt has a splined tip below a notch at the thread end; tool has a two-part sleeve. The inner sleeve engages the bolt tip; the outer sleeve tightens the nut. / T.C. Bolt Corp.

123 INSULATION FASTENER / The Dekfast plate and fastener system meets FM Class I standards for securing roofing insulation board to steel decking. Only one fastener per 4-sq-ft of board is needed; no extra perimeter holder or adhesive layer is required. / Construction Fasteners, Inc.

124 THERMOPLASTIC RIVET /

Longer 4-in. length drive rivet secures insulated sanitary paneling to studs, furring strips, metal angles, etc. The non-corrosive fastener fits flush against wall panels; the head has no slots or depressions to collect dirt. / Southco. Inc.

125 JOIST HANGER / Hanger is easily adjusted to accept 2 x 4 through 2 x 12 joist members or stay-in-place steel decking spaced on 2- to 4-ft centers, and meets high haunch requirements of over 5-in. Joist hanger fits precast concrete girders or steel I-beams; has a 3000-lb safe working load with a 2:1 safety factor. / Richmond Screw Anchor Co., Inc. GB*

LIGHTGAUGE METAL FRAMING

126 SPACE FRAME / New roof framing construction system uses lightgauge structural tubing members which bolt into 4- and 5-ft modules. The three standardized components can be field erected to form a threedimensional frame of various sizes and spans. / Power-Strut / Van Huffel Tube Corp.

127 STEEL MEZZANINE / Factory mezzanine has structural steel floor supports, stairs, handrails and walkways. Easily-erected "instant office" is constructed of prefabricated Porta-Panels, with safety glass windows, interior lighting, circuitry and outlets. Many standard and custom sizes and finishes are available. / Keene Corp., Porta-Fab Div.

METAL DECKING

128 STEEL ROOF DECK / UL-fire rated deck "Type E200" is 2-in.-deep for greater structural strength and stiffness, permitting economical longer spans. Sections are 30-in.-wide for increased coverage. Flat top flange has no stiffening rib, providing surface for adhesion of insulating materials. / Epic Metals Corp. GB*

129 COMPOSITE FLOOR DECK Dovetail ribs in the "EC266" fire rated floor deck accept 100-lb-capacity hangers for suspending ductwork, piping and electrical conduit. Hangers can be inserted into the ribs by hand, without tools, anytime after the slab is

completed. / Epic Metals Corp. GB*

EXPANSION CONTROL FASTENERS & SUPPORTS LIGHTGAUGE METAL FRAMING METAL DECKING METAL FABRICATIONS METAL JOISTS METAL STAIRS RAILINGS & HANDRAILS STRUCTURAL METAL FRAMING





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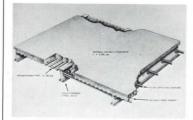


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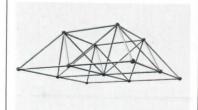




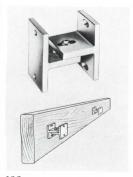
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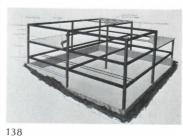


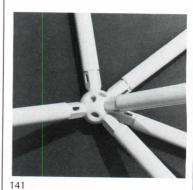
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132







METAL FABRICATIONS

130 TREE GRATES / Cast iron sectional grates provide a neat, decorative surround for trees in paved areas. Over 50 different sizes and designs in rectangular, square, round, oval or hexagonal styles are available. / Neenah Foundry Co. GB*

131 SOLAR PANEL RACK / Mounting rack kit for solar collectors is said to simplify panel installation. The metal frame is adjustable for up to 12 different angles between 12 and 52 degrees, and has been designed to withstand wind loads up to 100 mph. / Raypak,

132 HANDRAIL BRACKETS

Wood-rail mounting brackets are adjustable to accommodate rail-to-wall clearances from 11/2- to 3-in. Serrations interlock to compensate for irregularities in wall; halves are joined by stainless steel fastenings. / Ives Div., Leigh Products.

133 WROUGHT IRON GATE / Pictured is the "Newport," one of a line of hand-forged decorative security doors, gates and fences in both standard and custom designs. The "Newport" is 36- by 80-in.; gate is priced at \$306.00. / The Forge.

METAL JOISTS

134 COMPOSITE FLOOR SYSTEM / Comjoist floor is adaptable to most framing systems. Spans provide up to 33-ft clear space; light-gauge coldformed steel components need minimal fastening and welding. Poured concrete slab completely envelops the upper flange and web of the joist. / Roll Form Products, Inc.

METAL STAIRS

135 SPIRAL STAIRWAYS / Spacesaving stair is manufactured in a variety of tread, riser, baluster and level railing configurations to fit most industrial requirements. Both interior and exterior stairs have optional applications to meet the latest OSHA codes. / Woodbridge Ornamental Iron Co. GB, ICR, LR*

136 EGRESS STAIRS / Five- and 6-ft diameter spiral stair models qualify as the primary means of egress for dwellings, lodging houses, and agricultural buildings under the 1976 UBC, and they are ICBO-approved. / Logan Co. LR*

RAILINGS & HANDRAILS

137 RAILING SYSTEM / With acrylic/wood facings bonded to aluminum spine, this Carlstadt railing offers the natural look of wood and the structural capabilities of metal. Railing components are interchangeable with other fittings in the Carlstadt line. / Julius Blum & Co., Inc. GB, ICR, E*

STRUCTURAL METAL **FRAMING**

138 LOW-RISE FRAMING / Many different site and interior layout requirements can be accommodated by this structural framing system for twoand three-story buildings. Maximum building width is 160 ft, with a total floor area of 15,000 sq ft. / Armco Building Systems.

139 STRUCTURAL STEEL TUBING / Earth Tube square, rectangular and round tubing has a no-maintenance weathering surface. Tubing is available in many perimeters and wall thicknesses; physical properties and dimensional tolerances meet ASTM

specification A-500. / Regal Tube Co.

140 ALUMINUM TRUSS / Constructed of lightweight tubular aluminum and totally concealed fasteners, this space truss freespans areas of up to 100 ft. Computer programming is available for engineering and structural calculations on this modular system; applications include interior and exterior skylight support systems, canopies, roof decking, etc. / Roper IBG. GB*

141 SPACE GRIDS / The Meroform accent grid system consists of 50mm steel nodes with 18 tapped holes that link 22-mm diameter tubular steel members at 45-, 60-, and 90-degree angles. Said to be easy to assemble and disassemble, Meroform's structural strength allows the support of lighting, panels, shelving, etc. / Unistrut Corp.

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CLADDING/SIDING
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FLASHING
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ROOF ACCESSORIES
ROOFING SPECIALTIES
SEALANTS
SHINGLES & ROOFING TILES

WATERPROOFING



175



176



177

CLADDING/SIDING

175 RATED PANEL SIDING / Reproducing the color, graining and characteristic markings of pecky cypress, *CypresSide* hardboard exterior siding is available in grooved 4 x 8 and 4 x 9 panels, ⁷/₁₆-in.-thick. UL-fire rated panels are unaffected by temperature extremes. Price range: \$15-\$20. / Masonite Corp. GB, LR, I*

176 STONE/PLYWOOD DECKING A Battens for joint coverage and textured

Battens for joint coverage and textured decking in two thicknesses are now offered to augment this firm's line of exterior plywood siding coated with aggregate or sand in an epoxy matrix. Panels and decking may be ordered on fire-resistant substrate for UL-Class 1 rating. / Sanspray Corp. GB, LR*

177 STUCCO-FINISH PANEL

"Stucco 316" embossed siding is manufactured by bonding a resin-impregnated overlay to exterior plywood. Panels can be nailed directly to studs, and meet code requirements for racking strength without sheathing. "Stucco 316" is available in a ready-to-finish cream color, or prefinished. / Simpson Timber Co. GB, LR, CC*



178



On STATE PRODUCT APPROX. CTC.

179



180

178 COMPOSITE PANELS / Significant savings in structural and labor costs are claimed for Flexboard mineral fiber/cement panels installed over steel studding in high-rise concrete construction. In-place panels (shown) will be caulked and finished with a cementitious coating. / Johns-Manville. GB*

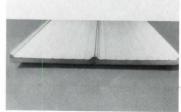
179 RIB WALL PANEL / Manufactured in .032- and .040-in. gauge aluminum, the *Perma Rib I* concealed fastener panel for commercial and industrial buildings comes with a stucco-embossed natural finish, or in any of 10 colors. An interlocking joint keeps panels tightly together. / Alcoa. GB*

COMPOSITE BUILDING PANELS

180 INSULATED WALL SYSTEM/ The prefabricated walls of this high-rise apartment building consist of panels with a reinforced expanded polystyrene/cement insulating core, surfaced with a synthetic plaster providing a waterproof, jointless exterior. Panels were installed over steel studs and gypsum sheathing for a U-value of 0.145. Insulated panels conform to all major codes. / Dryvit System, Inc.



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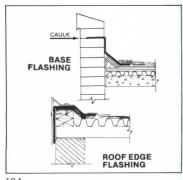
181 OVERLAP JOINT / Specially-engineered weatherproof overlap wall joint greatly increases the design flexibility of the manufacturer's insulated light transmitting building system, allowing for its use in the round and all kinds of curved buildings. / Kalwall Corp. ICR*

182 INSULATED ROOF PANEL /

Coreroof provides structural decking, insulation and weather-tight membrane in one composite panel. Forty-in.-wide panels have a standing-seam aluminum-coated steel exterior face, 2½-in. of polyurethane insulation, and a painted steel interior face, and weigh 2.5 psf. Coreroof has a U-factor of .058, is UL-listed and FM-approved. / Granco Div., National Steel Products Co. GB*

FLASHING

183 FORMABLE FLASHING / Permaflash compound protects areas of intense stress and strain due to building movement, thermal shock and wind pressure. Flashing will withstand temperatures of -40 to +220F; after curing, Permaflash will conform to roof configurations. / Republic Powdered Metals.



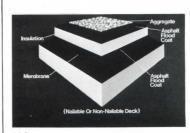


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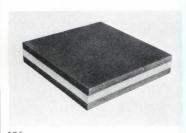


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184 ELASTIC FLASHING / A weather-resistant PVC/polymer resin resilient sheet, Nervastral 600 shapes to any roof contour, even around vents and columns, to form a tight-fitting flashing said to be totally watertight. It can also be installed as field-fabricated expansion joints. / Rubbers & Plastics Compound Co., Inc. GB*

185 VINYL SOFFIT / Available in both solid and ventilated panels, T-lok solid vinyl soffits are a low-maintenance system for residential soffit and gable areas. / Mastic Corp.

INSULATION

186 RATED INSULATION

Permalite-Pk-Plus has two perlite layers shielding a urethane insulation core: the top layer protects it from excessive temperature changes and thermal shock from hot asphalt; the bottom perlite layer provides fire resistance. Four nominal thicknesses are offered; the bonded insulation sandwich meets ASTM, UL, and FM standards for Class 1 insulated steel decks. / Grefco, Inc. GB*



189

187 TAPERED INSULATION / A lightweight product providing both deck drainage and insulation, Koroslope is a modular tapered roof system of expanded polystyrene. Installation layouts can be adapted to any shape of roof. / Mansonville Plastics Ltd. CC*

188 INSULATING SHEATHING

Consisting of a glass-reinforced polyisocyanurate foam core between two reflective aluminum foil facings, High-R sheathing insulation is recommended for conventional 2 x 4 residential framing construction. A variety of nominal thicknesses, from 3/8- to 2-in., are available. High-R sheathing has a flame spread rating of 75 or less. / Owens-Corning Fiberglas Corp.

MEMBRANE ROOFING

189 SHEET ROOFING / KMM membrane is a five-layer modified bitumen prefabricated sheet rolled on the roof surface, with each row overlapped 4 in. This joint is heated to fuse and seal the bitumen. Standard KMM membrane is for flat roofs, and for waterproofing; Aluminum KMM, topped with foil, is for steep roof and flashing. / Koppers Co., Inc. GB, ICR*

190 INSULATED ROOFING / The "Inverted Roof Assembly" places the built-up roofing membrane on top of the primed roof deck, then uses Tempchek urethane core insulation board over the waterproofing layer to protect it against rapid temperature changes, abrasion, blistering, and accidental puncture. Tempchek is dimensionally stable, and will not absorb water. / Celotex Corp. GB*

191 SPRAY-ON ROOFING / Damaged or worn roofing can be renewed by the owner's own maintenance crew, using heavy-duty specialized spray equipment lent by the manufacturers of this roofing repair product. / Randustrial Corp.

192 ROOF COATING / A re-formulated cement-base two-part roof coating, Thorotherm insulates and seals roofs and adds fire resistance, deadens sound, resists mildew and fungus. A spray-on white coating, Thorotherm responds elastically to thermal and other movement. / Standard Dry Wall Products. GB*

METAL ROOFING

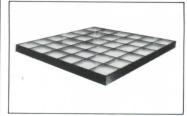
193 ZINC ROOFS / Designed for use with the Microzinc 70 batten seam and standing-seam roofing systems, these pre-formed, pre-notched pans are available in flat stock for on-site shaping. / Ball Metal and Chemical. GB, ICR*

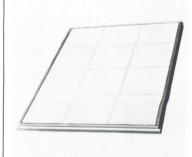
194 ENERGY-SAVING ROOF / Blanket insulation is not compressed at the purlins in the Steelox CF roof: a concealed fastening method and nonconducting thermal spacer permit a uniform thickness of insulation between the structural support purlins and the standing-seam roof panels. Lower, older roof in photo demonstrates loss of insulation efficiency. / Armco Steel

195 METAL ROOFING / The MecoLok standing seam roof, said to be both economical and weathertight, features metal roof panels with die-cut tabs in the sides. These interlock, maintaining proper panel alignment; a handoperated seaming tool joins the panels, which are then covered with a rollformed sealing cap. / The Ceco Corp., Mitchell Engineering Div.



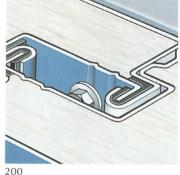






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PREFORMED WALL



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207

& ROOF PANELS

196 COMPOSITE DECKING / Petri-Cal board consists of a structural cement-fiber deck integrally bonded to urethane foam, with a top layer of asphalt-saturated felt. The roof panels have a U-factor as low as 0.066, and provide good sound absorption characteristics. / Cornell Corp. GB, ICR, LR*

197 COOLER ROOF PANELS / Construction of walk-in coolers and freezers is simplified by the on-top location of the roof panel's locking mechanisms. For coolers over 7 ft 6 in. high, fasteners permit workers to kneel on already assembled roof, or top, as they join following panels in place. / Bally Case & Cooler, Inc. GB*

198 GYPSUM ROOF DECKS / Significant reductions in structural costs are claimed for Span-Rock laminated gypsum board roof planks. Applicable for flat, pitched or curved steel-framed roofs, roof planks use either bulb or truss-tee sub-purlins. A 11/2-hr. rating is available in UL design P228. / United States Gypsum Co. GB*

199 INSULATED WALL PANEL / The

Thermal Monopanl factory-insulated wall panel offers a certified U-value of .10, and effectively reduces heat loss through vertical joints; a fiberglassreinforced zee member eliminates metal-to-metal heat transfer. Panels are 12-in. wide with a nominal thickness of 4 in. / Butler Mfg. Co., Bldgs. Div. GB, ICR*

200 WALL PANELS / Available in a range of color finishes and three exterior panel designs, these factoryassembled insulated wall panels are 3-in.-thick, incombustible, and install with concealed fasteners. Gasketed side joints align panels even where long sections extend from ground to roof. / Steelite, Inc. GB, ICR*

201 METAL ROOFING PANEL / This preformed ribbed roof comes in panel lengths up to 20 ft 9 in. No end laps or joints are needed; side laps are achieved by a snap lock incorporating a sealant, or a hold-down clip with a snap-on batten. Eight finishes and four profiles are available. / Childers Mfg. Co., Div. OHD Corp. GB*

ROOF ACCESSORIES

202 INSULATING SKYLIGHTS / The Solartron skylight is a joint-free, allplastic sandwich, with a 1%-in. deadair insulating space divided by a 6- by 6-in. interlocking grid. Skylight is ASTM-classified "very slow burning," and transmits diffused daylight with low heat loss. Priced from \$73.00 for a 24- by 24-in. unit. / Solartron Corp.

203 ACOUSTICAL FIRE VENT / Designed for installation on roofs of theaters, concert halls, auditoriums, etc., this FM-approved vent provides both smoke venting and sound attenuation properties. Vent is available in many standard, as well as custom, sizes. / The Bilco Co. GB, ICR, E*

204 EXPLOSION RELIEF VENT / Activated by outward pressures that can be specified as low as 10 psf, the Dayliter vent releases from its retaining frame in milliseconds, venting explosion pressures before building supports can be damaged. The Dayliter also meets UL- and FM-requirements for heat-shrink fire vents. / APC Corp.

205 INSULATED SKYLIGHT / These translucent skylights come in 19 standard sizes; each unit consists of two fiberglass-reinforced impact-resistant faces sealed onto a heli-arc welded structural aluminum frame. Skylights weigh 11/2-lbs per sq ft, and offer a choice of two different load/ insulation values. / Kalwall Corp. ICR*

ROOFING SPECIALTIES

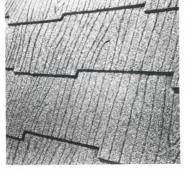
206 OPERABLE ROOFS / UL-listed operating controls for the Rollamatic skylight are located within the box beam frame. Opening skylight systems can be designed for virtually any size or shape, including domes, pyramids, and rectangles. Roofs may be cracked open during rain to prevent condensation without letting water in. / Rollamatic Roofs, Inc. GB*

207 EXPANSION JOINT / Factory fabricated, the Wascoflange roof expansion joint consists of two 4in.-wide 28-gauge galvanized iron nailing flanges locked to an insulated flexible chlorinated polyethylene bellows. Over-all width of the joint is 13in.; it is manufactured in 50-ft lengths. / Wasco Products, Inc. GB*





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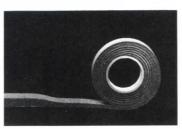
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SEALANTS

208 CLADDING SEALANT / The *Rainscreen* precast concrete panel sealant system consists of an interior airtight seal, an air chamber or vented air space, and an exterior rain barrier. It is capable of sealing joints up to 2-in.-wide in one application. / Tremco. GB*

209 URETHANE FOAM CAULK / A single-component urethane foam dispensing kit, *Insta-Seal* is available in factory-pressurized containers ranging in size from 16-oz to 50 lbs. Foam is fully expanded, and adheres to most surfaces, even wet ones, without pretreatment. / Insta-Foam Products, Inc.

210 JOINT TREATMENT/TOPPING / Every product in this drywall finishing line is said to have almost identical performance characteristics as asbestoscontaining compounds — without any asbestos. Joint treatment and topping compounds in ready mixed and powder form allow contractors to comply with OSHA standards without additional cost. / Gold Bond Building Products, Div. of National Gypsum Co.

211 FIRE STOP FOAM / Expanding two- to three-times its liquid volume after being injected into a dammed floor or wall penetration, this UL-Classified sealant maintains pressure, forming a fire-, smoke-, gas-, and water-resistant seal. Foam sets in under three minutes, and remains soft and pliable. / Chase Technology Corp.

212 CONCRETE SEALANT / Combining complete non-combustibility with certified sealing properties, Brattiseal is a cement-base non-metallic waterproof coating for concrete brattice walls, pack sides and air-crossings. Available as a water-mix powder, Brattiseal may be sprayed or troweled in layers up to 3-in. / Standard Dry Wall Products. GB*

213 SEALANT TAPE / Will-Seal construction joint sealant is a high-density polyurethane sponge impregnated with a chemical sealant which lets it expand back to its original shape. Will-Seal is flame-resistant, and self-extinguishing; it will not degrade in the most severe environments according to the maker. / Illbruck/USA.

SHINGLES & ROOFING TILES

214 ASPHALT STRIP SHINGLE / "Skyline" 250-lb self-sealing shingles carry UL's Class C Fire and Wind Resistant labels. Random-depth tabs and deep embossing provide a woodgrain texture. "Skyline" is made in four colors; availability is limited to the Midwest. / Flintkote Co.

215 CLAY ROOFING TILE / Both "Lincoln" interlocking shingle tile and "Cordova" straight barrel tile, each available in red and a red/brown/buff tone, are said to be highly adaptable to a variety of architectural styles. / Gladding, McBean & Co.

216 CONCRETE ROOF TILE / The muted, "wood tone" colors of Monray roof tile are created by the flashing of three colors over a fourth. The texture is said to simulate the look of wood. / Monier Co. GB, LR*

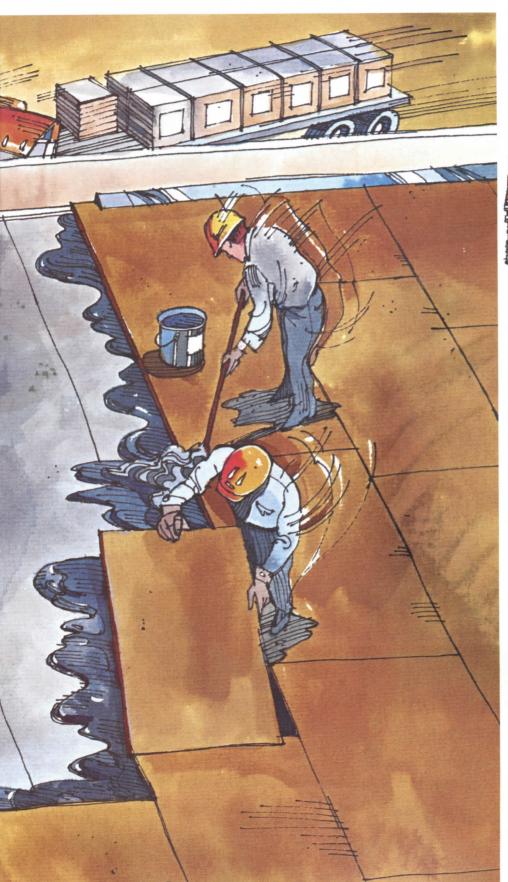
217 RED CEDAR SHINGLES / Nine different shingle patterns provide dozens of texture possibilities for interior and exterior siding. The "Fancy Butt" shingle line includes round, diamond octagonal, half-cove, arrow, square diagonal, hexagonal and fish scale cuts / Shakertown Corp. GB, LR*

WATERPROOFING

218 WATERPROOFING / TREMproof 150 is a one-part, hot-applied rubberized asphalt specifically developed for interior and exterior waterproofing applications such as sandwich slab construction, as well as foundation walls, non-insulated and insulated decks or plazas, etc. / Tremco. GB*

219 MOISTURE PROOFING / Blockoter waterproofing sealer for abovegrade masonry surfaces is made with a high percentage of pure white cement for hardness and resistance to staining, mildew and efflorescence. Blockoter is available ready-mixed for brush application. / Republic Powdered Metals.

The man who owns this building is going to save \$165,000 over the next 20 years.



He's constructing a 200,000 sq. ft., single story office building in Denver, Colorado.

And he's upgrading the roof insulation to J-M C-10 Fesco-Foam.™

His added one-time cost is \$88,000. But right away he's going to save

\$103,500 because he won't need as much heating and air-conditioning equipment.

And during the first year alone, he'll save \$5,100 in fuel costs. That's just the beginning. Over the 20-year life of

the roof —and using F.E.A. April, 1977, Energy Audit Procedures figures—his fuel savings will amount to \$169,000.

That means his net savings in 20 years will add up to \$165,000, with a present worth value of \$78,000 based on a 10% interest rate (and using optimum design criteria).

Here's a perfect example of how spending a little more on the front end can lower building costs a lot in the long run.

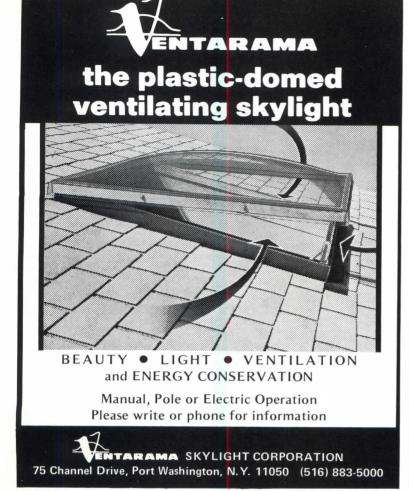
It's an investment that pays off in both savings and comfort in the years that follow.

If you're planning a building and would like to know how much you can save by upgrading to Fesco-Foam, call your nearby J-M District Office, or contact Grant Edmonds, Johns-Manville, Ken-Caryl Ranch, Denver, Colorado 80217, ARM-10 303-979-1000.

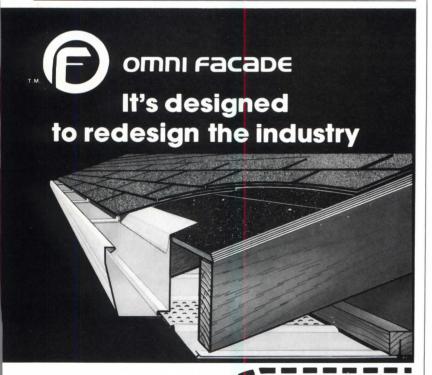
For single-source built-up roofing systems.

JM Johns-Manville

For more data circle A32 on inquiry card



For more data circle A33 on inquiry card



It's a completely new concept in rain carrying systems. Omni Facade provides both gutter and fascia in a single piece of aluminum that's channeled to hold either pan or continuous roll soffit. It mounts directly to the rafter tails reducing time and material costs. It provides architects with a clean-line ook in roof design. It's Omni Facade.

For more data circle A34 on inquiry card



OFFICE LITERATURE / Divisions 8, 9

continued from page 31

D50 REPLACEMENT WINDOWS / A "Specifications Writer's Kit" for custom-fit aluminum windows contains product literature, cross-

tains product literature, crosssectioned drawings and test reports for the complete line of commercial, institutional and industrial *NuPrime* replacement windows. / Season-all Industries, Inc. GB*

D51 STORM/SCREEN DOORS / A six-page folder illustrates 16 combination storm-screen door styles for residential entrances. / Season-all Industries, Inc. GB*

D52 SPECIAL DOORS / This full-line brochure describes specialized doors for engineered environments involving extreme temperature, pressure, blast load, high-intensity noise, atmosphere, and chemical reaction. / Jamison Door Co. GB*

D53 SOLAR GLASS / Glass panels designed especially for use in solar energy collectors are described in a four-page folder. *Sunadex, Lo-Iron* and *Starlux* tempered glass have various transmittance and other physical factors; full technical information on each is included in the literature. / ASG Industries, Inc. GB, ICR, E*

FINISHES

D54 CEILINGS / A 56-page color catalog features architectural ceilings, including sound absorption and attenuation ratings, light reflectance, flame spread, and other physical properties. Also included are acoustical tiles, sound control batts, access ceilings and panels for environmentally controlled areas. / Johns-Manville Sales Corp., Holophane Div. GB*

D55 CEILING PANELS / A product brochure describes *Quadrette* revealedge lay-in ceiling panels. All pertinent data for the felted mineral panels is covered, including finishes, sizes and edge details, light reflectance, flame spread and maintenance requirements. / Johns-Manville Sales Corp., Holophane Div. GB*

D56 CARPET BACKINGS / Memobook format is used to list the advantages of jute primary and secondary carpet backings; glue-down installation of double jute-backed carpet is detailed. / Jute Carpet Backing Council, Inc.

D57 ACRYLIC CARPETING / "Why Acrylics?" is a 20-page color brochure presenting the characteristics of the fiber in such areas as carpet esthetics, performance, economics, soil hiding and cleanability, and wearability. / Dow Badische Co.



D58 HOSPITAL CARPET / The special considerations involved in selecting carpet for medical facilities are discussed in a four-page brochure. Topics covered include permanent static control, bacterial growth in carpet, flammability, and the use of wall carpet. / Dow Badische Co.



D59 CONTRACT CARPET / More than 100 "Performance Certified" carpets made of *Zefran* and *Zeflon* fibers are included in a contract carpet selection guide; manufacturer's addresses are given. / Dow Badische Co.



D60 SCHOOL CARPETING / Special floor problems of schools, from high-traffic corridors to cafeterias, are discussed, along with the insulation value and flammability characteristics of *Zefran* fiber carpeting. / Dow Badische Co.

uci8

doors and windows

ENTRANCES & STOREFRONTS
GLAZING
HARDWARE & SPECIALTIES
METAL DOORS & FRAMES
METAL WINDOWS
SPECIAL DOORS
SPECIAL WINDOWS
WINDOW/CURTAINWALLS
WOOD & PLASTIC DOORS
WOOD & PLASTIC WINDOWS



232



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234

ENTRANCES & STOREFRONTS

232 PACKAGED ENTRANCE

Slidematic and Swingmatic UL-listed entrances are available as self-contained units, complete with Stanley automatic operators and controls. Operators include electric, pneumatic, and hydraulic models. / Kawneer Architectural Products. GB*

233 ENTRANCE FRAMING / This glazing system accepts operating vents and entrances and permits flush installation of insulated glass. *Tri-Fab* 450 for 1-in. glazing framing meets ASTM standards for air and water infiltration. / Kawneer Architectural Products. GB*

GLAZING

234 POLYCARBONATE SHEET / *Tuffak CM* polycarbonate sheet for glazing and safety shield applications has a clear, resilient, "self-healing" coating: minor scratches tend to disappear within several hours at room temperature. *Tuffak CM* conforms to ANSI Z97.1. / Rohm and Haas Co.



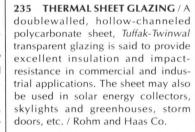
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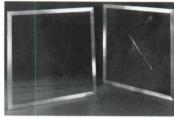


236 DOUBLE-SKINNED SHEET / Acrylite SDP is a double-layer, ribbed acrylic sheet glazing material offering high stiffness, impact resistance, and a heat transfer value of .55. Acrylite SDP is supplied as clear sheets; solar bronze and two translucent whites are tint options. / CY/RO Industries. GB, ICR, CC*

237 SUN CONTROL FILM / The energy-saving sun-control qualities of *Scotchtint* films permit complete visibility from the inside, while creating a mirror-like appearance on the outside. *Scotchtint P-70* film combines heatand glare-reduction with shatter-resistance. Priced at \$1.25-\$2.50 per sq ft depending on size, it meets ANSI-Z 97.1 (1976). / 3M Co.



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238 INSULATING GLASS / A transparent metallic coating on gold-toned *Solarban 490 Twindow* double-glazed glass reflects 57 per cent of outdoor visible light; transmitted light is a soft bluish-gray. / PPG Industries. GB*

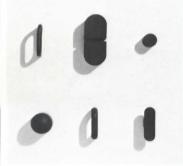
239 HIGH-IMPACT GLAZING / Extruded sheets of *Lucite T1000* modified acrylic resin (shown in left of photo) offer many times the impact strength of other acrylics. Supplied in clear pellets priced at \$0.82/lb, *Lucite T 1000* can be injection molded or extruded and thermoformed into large structural panels and shapes. / E. I. du Pont de Nemours & Co., Inc. GB*

240 GLASS BLOCK / Complete control of image perception, from full vision to total obscurity, but with full light transmission, is provided by the three *Thinline* series glass block patterns. Blocks are 3½-in.-thick, in sizes up to 12- by 12-in.; glass is heattreated to resist breakage. / Pittsburgh Corning Corp. ICR*





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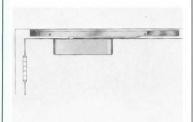
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241 WINDOW WALL PANELS / Light-diffusing double-glazed window wall systems of Protect-A-Glaze Lexan sheet are guaranteed against breakage. Suitable for schools, factories, and other rough-use applications, units conform to Model Building Codes, meet OSHA requirements, and are UL-listed "Burglar Resistant." / General Electric Co. GB, ICR*

HARDWARE & SPECIALITIES

242 EXIT DEVICE / Designed for paired or single narrow stile doors, the "Series 8500 Concealed Vertical Rod" exit device uses a rotating top bolt and post-type header strike to provide quick life safety egress. This top bolt promotes security because it deadlatches itself around the strike post. UL-listed units are priced from \$116. / Adams Rite Mfg. Co. GB*

243 NEOPRENE HARDWARE / Designed by Masayuki Kurokawa, these "Soft Hardware" cabinet knobs, pulls and coat hooks are made of resilient black neoprene. Prices range from \$1.55 to \$2.95. / Forms & Surfaces.



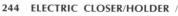
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All four SED door closer/holders conform with major building and life safety codes for use in schools, hospitals, etc., and they are UL-listed. Units combine the full rack and pinion Smoothee closer with a built-in ionization detector. Closer/holder lists at \$390.00. / LCN Closers. GB, E*

245 HINGES / Doors hung on Swing Clear hinges give up to 2-in. more clear opening than conventional hinges, providing the extra space margin often needed for easy access by wheelchair users. This 95-degree swing may allow existing openings to conform to barrier-free regulations. / Stanley Hardware. GB*

246 PIVOT HINGE / Said to eliminate door sagging from excessive wear, even in high-traffic areas such as schools and offices, this reinforcing pivot hinge transfers excessive opening force from the door into the jamb. Hinges are available in a zinc finish in sizes for full- and half-surface applications. / Hager Hinge Co.



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247 PNEUMATIC DEADBOLT / The Airbolt security system consists of a chrome-plated brass deadbolt with a sawproof steel insert, supported by a steel spring. This is operated by 80 psi air pressure. The Airbolt can be controlled to meet PL or PUL requirements without alteration. / Hager Control Systems, Div. Hager Hinge Co.

248 DOOR OPERATOR / The Silent-Swing automatic door operator is an electro-mechanical unit designed for light interior swinging doors in hospitals, nursing homes, etc. A slow-speed rotary field motor may be activated by a variety of controls, including radio, push plate and push button. / Stanley Door Operating Equipment, Div. Stanley Works. GB*

249 DOOR PULLS / Offered in clear transparent and bright solid colors, these solid acrylic doorpulls are durable enough for commercial use. A back-to-back mounting method offers secure installation. Priced from \$41.50 to \$55.00. / Forms & Surfaces.



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250 MORTISE SLIDE-BOLT / For use with standard padlocks, this all-steel slide bolt has a concealed mechanism with a %-in. throw. The bolt is nonhanded for swing-out or swing-in doors, and is available with operating handles on one or both sides. / The Ceco Corp. GB*

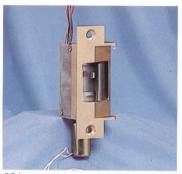
251 REPLACEMENT CYLINDERS /

This high security lock line provides cylinders physically interchangeable with those supplied by most major lock manufacturers. The six-pin drillresistant cylinder offers 23 million non-interchangeable combinations: they exceed UL Standard 437. / Medeco Security Locks, Inc. GB*

252 GEOMETRIC DOORPULLS /

"Minimal Look" pulls are formed of %-in. diameter solid stainless steel, available in polished or satin finish or with a bronze plated or bronze coated surface. Doorpulls are priced from \$19.50 to \$32.00. / Forms & Surfaces.







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253 DOOR OPENER / The Easy Access is a low powered, slow operating power-assisted swing door opener, activated by light pressure on a doormounted push bar. It provides an economical method of automating existing entrances to conform to public access regulations, and complies with ANSI 117. Priced at \$850.00 installed. / Horton Automatics, A Div. of Overhead Door Corp. GB*

254 ELECTRIC STRIKE / Each strike in the "700 Series" fits standard ANSI cutouts; the architectural security latches are CSA- and UL-listed as a burglary protection device; some models qualify as fire door accessories. Strikes are tamper-resistant, with a built-in strain relief to keep wires from pulling loose. / Folger Adam Co. GB*

255 ELECTRIC HINGE / Designed for use on hollow metal doors equipped with an electric lock, model "41/2EH" is said to be ideal for high security applications on highfrequency entrances. The wired hinge is fully detailed to resemble other hinges on the door. Device is ULlisted. / Folger Adam Co. GB*



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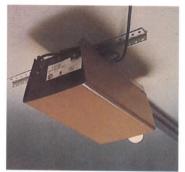
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256 DOOR HOLDER/RELEASE / The Smok-Chek V combination smoke detector, electromagnetic door holder/ release and automatic door closer has been designed to fit a number of varying fire/life safety code requirements. The UL-listed unit has a variable hold-open, adjustable up to 180 degrees; equipment is non-handed. / Rixon-Firemark, Inc. GB*

257 SOUND STOP Compress-o-matic 770 soundstop is designed so that the neoprene insert compresses against the door to ensure a complete perimeter seal. The entire unit, however, can be adjusted every 11-in. to compensate for warped, unevenly-hung doors. / Zero Weatherstripping, Co. Inc. GB*

258 GRIP HANDLE / The "Murchison" 8-in. grip handle entry lock is manufactured in cast brass or bronze, with over-all dimensions of 2%- by 14%-in.; handle projects 2½-in. Inside knobs are offered in a choice of six different designs with matching or complementary finishes. / Schlage Lock Co. GB, LR*

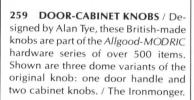




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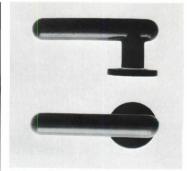


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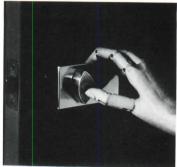


260 GARAGE OPENER / Intended for residential garage doors, both ULlisted "Deluxe" and "Standard" versions of these chain and cable electric openers are capable of handling doors up to 18- by 8-ft. Each model may be operated using the extra-secure Time-Loc control. / Overhead Door Corp.

261 DOORPULLS / Designed specifically for forearm operation, the British-made Limbar series of doorpulls and operating lever handles is finished in satin anodized aluminum. Hardware is also offered in Spectra coated colors. / The Ironmonger.



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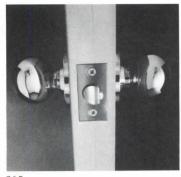


262 LEVER HANDLES / The Boma series of lever handles is made of lightweight Durethen resin. Italianmade hardware is available in red, black, gray, and white. / The Ironmonger.

263 LOCKSET / Lock mechanism has only two moving parts in a die-cast case. Lockset is said to be easyoperating, requiring minimal maintenance. Price: \$18.00 net. / The Ironmonger.

METAL DOORS & FRAMES

264 DOOR FRAME / This full line of narrow face door frames is UL-approved; frames are finished knockeddown or welded, and are offered with either a 1-, 11/4, 11/2, or 13/4-in. face dimension, in jam depths from 31/2- to 12-in. / Curries Mfg., Inc. GB*



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265 HOLLOW-METAL DOORS

This line of standard hollow-metal UL-listed steel doors features a lock edge with a completely seamless appearance: all signs of welding are inside the door. Doors have improved sound deadening and insulating characteristics: a 1-in, honeycomb core permits easier modification for glass lites or louvers. / Republic Builders Products Corp. GB, ICR*

266 STAINLESS STEEL DOOR /

"Bright Polished Finish No. 7" is a standard finish offered for these narrow stile stainless steel doors and entrances, available with a range of panel inserts and hardware options. Installation shown above is priced about \$3080.00 / The Alumiline Corp.

267 STEEL DOOR FRAME / The Uni-Seal door frame uses an integral compressible seal which fits within a continuous groove extending completely around the frame. The seal's bullnose shape is said to assure maximum surface contact between door edge and seal. The Uni-Seal frame has been approved for application in a fire wall. / Pioneer Industries, Div. SOS Consolidated. GB*



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268 INSULATED STEEL DOOR / The "LD-24" insulated door is constructed of 24-gauge galvanized and primed steel. Core is treated kraft honeycomb and urethane foam; a thermal break system isolates the door faces. Door is fully weatherstripped; surfaces include plastic or drawn steel panels. "LD-24" doors carry the UL B Label. / Steelcraft, An American Standard Co. GB. IR*

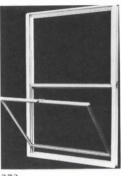
269 NON-HANDED DOOR / The Omega metal door can be installed to open in any one of four directions. Cut-through hinge mortise and a square lock edge should facilitate installation. The Omega door comes in all standard sizes; it meets UL and FM label requirements as well as proposed ANSI performance test standards./ The Ceco Corp. GB*

270 DRYWALL FRAME / The "Easy Set" steel frame comes in standard sizes to fit both wood and commercial-type steel doors. The factoryfinished white or bronze-tone frame has a simplified base anchoring system for faster installation in non-label openings. / Steelcraft, An American Standard Co. GB*



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METAL WINDOWS

271 LIMIT STOP / Available as a factory-installed option for this manufacturer's vertically pivoted commercial windows, this limit stop hardware permits opening the window for emergency ventilation, but stops the vent about 4- to 6-in. away from the frame. This minimizes the hazards in multi-story buildings. / Kawneer Architectural Products. GB*

272 EXPANDABLE STORM DOOR /

All four sides of these residential storm doors are fitted with U-channel extrusions which can be extended as little or as much as necessary to effect a good close-fitting installation regardless of the out-of-square condition of the door opening. / Season-all Industries, Inc. GB*

273 REPLACEMENT WINDOW / A heavy-duty aluminum replacement window for commercial applications, the NuPrime "Model 587" has a fully insulated master frame, sash frames, insulated glass and double weatherstripping with high-density wool pile and fin seal. / Season-all Industries, Inc. GB*





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274 PRE-ASSEMBLED WINDOW / Over 23 different aluminum replace-

ment windows can be installed without any alteration of the wall, inside or out. Almost any type of glazing may be specified, including insulating glass or vandal-resistant Lexan. / Season-all Industries, Inc. GB*

SPECIAL DOORS

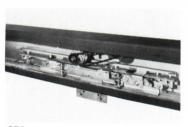
275 STRIP DOOR / Said to provide an effective temperature, sound and dirt barrier for a virtually unlimited range of door closure applications, the soft overlapping Vitran PVC or USDA-approved non-toxic material strips of this door part easily to permit passage of equipment or personnel. / Overhead Door Corp. GB*

276 ROLLING FIRE DOOR / The "776" steel rolling fire door doubles as a service door with chain and sprocket drive. A single spring begins automatic closure of the door; a centrifugal governor slows the closing. The ULand FM-approved door offers several options, including operation by smoke and heat detectors. / Overhead Door Corp. ICR*





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277 SCISSOR GRILLES / These "North American" scissor grilles are top-hung, using pendant rollers in an extruded aluminum track; manuallyoperated curtain stacks on the side of the opening. Grilles can move through 45- or 90-degree turns with a minimum radius of 18-in; single slide or biparting units are available in widths up to 40-ft. / Jim Walter Doors. GB, ICR*

278 FLUSH GARAGE DOOR / An addition to the "Crawford" line of residential garage doors, this sectional flush door is formed of process exterior hardboard molded in a rough-sawnlumber pattern. This surface may be finished with paint or heavy-bodied stains. / Jim Walter Doors. GB*

279 SLIDING DOOR / The "Normative" system is an all-steel locking device self-contained above the door; ¾-in. pins secure the door in full-open or full-closed position. All types of doors - wood, plate steel, hollow metal, etc. - may be mounted on the carriage. Keyless system is normally operated electrically from remote facilities. / Southern Steel Co. GB*







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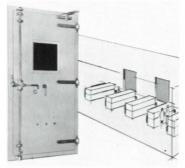
280 ROLLING STEEL DOOR / The "Futura" rolling steel door is said to offer security and economy in both light commercial and warehouse applications. The door's open-drum design permits easy alignment; there are no tracks into the room. / Clopay Corp.

281 RADIATION-PROOF DOOR Research into safety factors necessary in future nuclear power plant con-

struction required the installation of this 8-ft-thick radiation-proof door. The door weighs 50 tons; each hinge weighs 1600 lbs. / Keene Corp., Ray Proof Div.

282 WATERTIGHT DOORS / Doors that can withstand a 50-ft head of water, at 3100 lbs/sq/ft, provide maximum protection for nuclear power plants and other hazardous installations. Features include manual or electromechanical latching devices and permanently lubricated radial and thrust bearing hinges. / Keene Corp., Ray Proof Div.

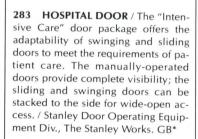




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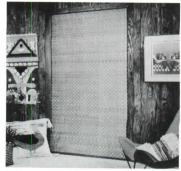


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284 PRESSURE DOORS / Part of the secondary protective envelope that maintains sensitive atmospheric pressures in engineered environments. these all-steel doors are leaktight, airtight, hermetically-sealed single leaf swinging types, with inside/outside locking, and safety opening provision from both sides. / Jamison Door Co. GR*

285 CLEAN ROOM DOORS / The door panel, casings and operator cover of the "Designer Series" of Prest-O-Matic sliding doors are finished in high-pressure laminated plastic in a variety of colors. These doors control temperature, dust, humidity and noise while assuring normal traffic flow. Doors meet NEMA LD1-1964. / Clark Door Co., Inc.





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286 WOOD ROLLUP DOOR / The Magi door, constructed of vinylcoated mahogany in three colors, is mounted flush to the door frame and rolles up out of sight. The decorative residential door can be manually or electrically operated. / Joanna Western Mills Co.

287 TRAFFIC DOOR / The Tuf-Dor bump-opening traffic door has shatterproof vision panels for safe passage by personnel, push carts, hand trucks, motor equipment, etc. Door panels are 1/2-in.-thick HDP mounted full height; tubular enclosure conceals the cam-lift, spring-assisted hardware. / W. B. McGuire Co. GB, ICR*

288 CEILING ACCESS DOOR / The Milcor steel door is designed to help maintain the integrity of fire-resistive suspended drywall ceilings. The door panel is recessed to accept a double layer of wallboard and tile, finishing flush with ceiling. Custom sizes fit into individual grid systems. / INRYCO, Inc. GB*







289 FIRE-RESISTANT DOOR Thirty designs in a full range of sizes are available in this line of 134-in.thick 1/3-hr fire-rated doors. Door faces are made of flame-retardant, onepiece reinforced polyester laminate. Solid core doors meet applicable ASTM, NFPA, and UBC requirements, and are ULB-rated. Prices start at \$145.00, all prefinished. / Kaylien Inc. GB, LR*

290 SLIDING FIRE DOOR / Easy Roller doors come with heavy-duty hardware for use in high-traffic locations; doors may be manually or automatically operated. UL-listed center-parting fire doors do not require either a center latch or center floor stop. A 3-hr Class A door is available for openings up to 120 sq ft. / F. L. Saino Mfg. Co. GB, ICR*

SPECIAL WINDOWS

291 SECURITY SCREENS / Screens allow functional use of windows, permitting air passage and normal maintenance while offering protection against forced entry and damage. / Kane Mfg. Corp. GB*



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WINDOW/CURTAIN WALLS

292 CONTINUOUS GLAZING 7-ft by 10-ft panels of 3/8-in. Solargray glass are installed in continuousappearing strips up to 320-ft long with the EFG glazing system. Framing components provide four-sided support of glass lights; panels are structurally bonded with silicone to a "hidden" vertical mullion. / PPG Industries. GB*

293 SLOPE GLAZING / A system of overlapping gutters promotes complete drainage and fastening in the "1600 SG" glazing; purlins are joined to rafters without shear blocks and screws. Thermal curtain wall is ASTM-certified for resistance to air and water infiltration. / Kawneer Architectural Products. GB*

294 THERMAL CURTAIN WALL / Said to exceed ASTM high performance requirements, the "SW-9000" curtain wall has a shallow flush grid exterior appearance. Installation is facilitated and joints reduced by the use of continuous horizontals, which span several vertical mullions and provide a running gutter. / Kawneer Architectural Products. GB*



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WOOD & PLASTIC DOORS

295 TREATED WOOD DOOR / Facings of the WeatherBeater exterior door are made of phenolic resin fused to hardwood plywood under heat and pressure. Door framing is warp-resistant; solid core meets code requirements for thermal insulation. The WeatherBeater door is offered in several embossed woodgrain patterns. Simpson Timber Co. LR, CC*

296 EXTERIOR DOOR / Two-ply laminated residential door is said to be rigid and weatherproof. The pine knots on one surface alternate with knots on the reverse side. Available in both standard and custom sizes, door prices start at \$258.00. / Pinecrest Inc.

297 PATIO DOOR / The movable panel is on the inside of the Thermaslide wood patio door, allowing full closure of the door against the weather. With all-edge interlocking weatherstripping and tempered insulating glass, the Thermaslide door conforms to current NWMA performance standards. / Malta Div., Philips Industries, Inc. GB, LR*



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298 WOOD DOORS / The "Bonded Hardwood" door is made of solid wood strips of oak, teak or mahogany bonded to a solid lumber core door. Available with neoprene or wood glazing stops, doors are offered in a selection of preglazed openings. Prices range from \$360 to \$650. / Forms & Surfaces.

299 PINE/REDWOOD DOORS / Stile and rail construction in 134-in.thick ponderosa pine or redwood is used for these residential entry doors. A "wood etching" process highlights the natural wood grain and texture in a design inspired by Navajo rug patterns. / Customwood Mfg. Co.

WOOD & PLASTIC WINDOWS

300 WOOD PIVOT WINDOW / Windows with a pivoting sash permitting inside washing of exterior glass are available in single units or a twolight version, both with aluminum cladding over a wood frame. Double-glazing and between-glass solar blinds are offered as options. / Pella Rolscreen Co. GB, CC*

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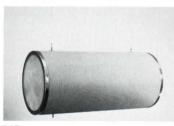
finishes



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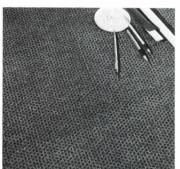
ACOUSTICAL TREATMENT

313 ACOUSTICAL PANELS / Modular panels are recommended for auditoriums, libraries, transportation terminals, and recording studios. Wood panels are offered in oak, mahogany and redwood; metal systems in stainless steel, bronze and aluminum. ASTM ratings are available for each system. / Forms & Surfaces.

314 CEILING PANELS / Available in black and gold, as well as a standard silver finish, the panels are designed for standard exposed grid systems. VISTA SONIC mirrored ceiling panels consist of a reflective film stretched over an acoustical board recessed in a perimeter frame. / United States Gypsum Co. GB*

315 SOUND ABSORBERS / Twelvein. diameter by 24-in. long molded cylindrical fiberglass units enclose two tuned metal resonators to enhance low frequency acoustical response. Units are recommended for noise control applications in commercial and industrial buildings. They are completely incombustible. / The Proudfoot Co., Inc. GB, ICR*





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CARPETING

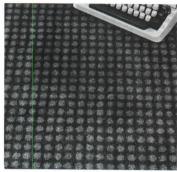
316 CARPET / Antron 111 Berber style carpeting is available in three different weights and textures ranging from a tight gauge level loop to a ribbed texture of oversized, nubby loops. It is manufactured by West Point Pepperell. / Carson Pirie Scott & Co.

317 CARPET / "Boardroom," a linear patterned texture carpet, is highlighted by 11 colorations in Zefran blend of homespun acrylic and nylon with static control. It passes DOC-FF-1-70 (Pill Test) and ASTM-E-84-76A (Tunnel Test), and is suggested for heavy-duty use. / Carson Pirie Scott & Co.

318 TUFTED CARPETING / Designed in "the Wilton tradition" with over 6 lbs. per yard, with pile yarns of 100 per cent stock dyed *Cresian* acrylic, the carpet is stocked at the mill in 10 colorations in the 12-ft width. Approved ASTM-E-84 Tunnel Test Class B rating. / Patcraft Mills, Inc.



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319 CARPETING / An etched Berber plush comes in six natural tones in stock in the 12-ft width. "Prediction" is tufted of 100 per cent acrylic, performance certified and treated with DuPont Zepel for both soil and static control. Approved ASTM-E-83 Tunnel Test, Class B is claimed. / Patcraft Mills, Inc.

320 CARPETING / "Grand Showcase" and "Showcase designs" collections of printed cut-pile contract styles are in *Enkaloft BCF* nylon. Shown is "Forum," a geometric design of small circles and one of the six patterns in each collection. All styles are colorset-printed heatset nylon treated with soil-repelling and shock control finishes. / The Barwick Corp.

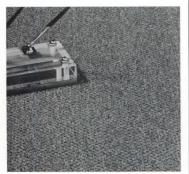
321 TEXTURED CARPET / "Conestoga" patterned, textured carpet for contract applications is a multilevel loop *Antron* nylon pile with bulky multi-color yarns that have a strong Berber texture. In ten colorations, including a variety of earth or "natural" tones, it is *Zepel* treated to resist dirt and stains. / Downs Carpet Co.

ACOUSTICAL TREATMENT
CARPETING
CEILING SUSPENSION SYSTEMS
PAINTING MATERIALS
PREFINISHED PANELS
RESILIENT FLOORING
SPECIAL COATINGS & SURFACINGS
SPECIAL FLOORING
TILE
WALL COVERING

WOOD FLOORING









323 CARPETING / Shown is "Geo-Point," one of the "Artique Collection" carpets. Its construction is in one-level cut pile of 100 per cent nylon. Total weight is 65.7 oz. and the width is 12 ft. Seven designs in 26 colors are offered in the collection. / Milliken Carpets. GB, I*

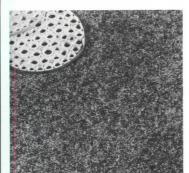
324 CARPETING / "Intermission P/1543" is a heavy-duty commercial grade carpet in a dense, two-level loop construction with a textured appearance. Co-mingled yarns provide a natural heather look. It features thirdgeneration Antron 111 nylon. Action-Bac secondary back and a five-year wear lifetime antistatic guarantee are offered. / Milliken Carpets. GB, I*

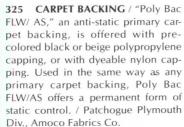


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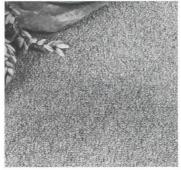
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326 LEVEL LOOP CARPETING / This 1/8-in. gauge tufted carpet ("Dorset") is offered in 100 per cent Fortrel, with a total weight of 75.0 oz. The primary backing is woven polypropylene and the secondary backing is jute. Stocked in ten colors, the 12-ft wide fabric has an ASTM-E-84-75/76a flame spread rate of 75 or less. Bigelow-Sanford, Inc. I*

327 TUFTED CARPET / This 3/16-in. gauge cut pile, tufted carpet ("Tuft Twist") in 100 per cent Antron III nylon, comes in eight colors, and has a total weight of 70.0 oz. It features two-ply Autoclave heat set yarns, with tight yarn construction. A super dense twist frieze is also featured. / Bigelow-Sanford, Inc. 1*

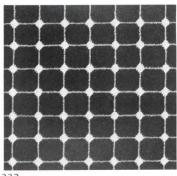


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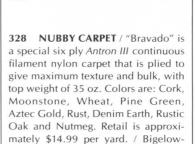






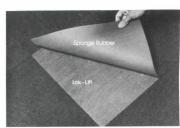
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Sanford, Inc. I*



329 HEAVY-DUTY CARPET INTERWEVE is of eight-ply DuPont Antron III nylon fiber. Geared for use in offices, banks, stores, and school - or wherever heavy duty carpets are needed - INTERWEVE is treated for static protection and is slow to soil. Offered in 12 colorations, its suggested retail price is: \$13.50. / Bigelow-Sanford, Inc. I*

330 CARPETING / "Stonehenge" is made of Antron III continuous filament nylon and has top weight of 26 oz. Colorations are: Canyon Tan, Bark, Walnut, Cafe Brown, Antique Amber, Char Blue, Moss, Charcoal, Bittersweet, Shadow Beige, Autumn Gold and Driftwood Tan. Approximate retail price is \$10.95 per yard. / Bigelow-Sanford, Inc. I*



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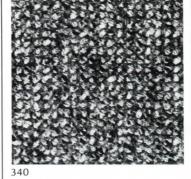
331 NUBBY CARPET / "Paramount" is a woven loop carpet that has a bulky, handmade surface appearance. Made of heavy, nubby eight-ply Antron III continuous filament nylon, it comes in six natural colorations. Approximate retail price is \$16.95 per yard. / Bigelow-Sanford, Inc. I*

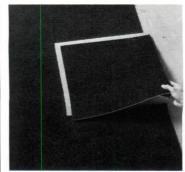
332 AXMINSTERS / These 12-ft woven axminsters comprise the "Royalax" collection. Power-loomed of 80 per cent wool, and 20 per cent nylon, the collection features patterns and colorations for both commercial or residential use. Shown is the Quadrille design in six colorways. / Couristan, Inc. I*

333 CARPET TILES / In the "Lok-Lift" process, a pressure-sensitive mesh is put down first and the Densylon 18in.-sq carpet tiles are installed on top of it. The technique prevents horizontal movement of the modules but makes them easy to pick up, according to the company. / Commercial Carpet Corp.









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334 DENSE PILE CARPET / The carpet yarn warp is sandwiched between jute backing sheets and fused. The sandwich is then split to produce two finished pieces of cut pile carpet. The low very dense pile achieved with fusion bonding is recommended for heavy traffic. This velvet pile of delustered nylon is said to achieve the "uneven" look of suede. / Kemos, Inc.

335 NYLON CARPET / Constructed of Antron III stock dyed nylon each pattern in this series is a dense sculptured relief design, available in four natural tones. / Sweetwater Carpet Corp.

336 COMMERCIAL CARPET / An eighth-gauge commercial carpet to separate or define specific areas, the "Artistron Collection" has four flexible designs that range from small patterns to large configurations. New Match, Pentangle (shown), Geometron, and Sentron total sixteen colorations. The yarn system comprises a 24-oz. loop fabric with a slightly textured surface. Price: \$11-13 installed. / Armstrong Cork Co.

337 HEAVY-TRAFFIC CARPET / The "Executive Center Series" features geometric patterns, and the look of traditional wool textures. Made of Zefran yarns, these multi-loop carpets are patterned in natural heather tones, and are available in eight colors. They carry the Zefstat five-year anti-shock carpet warranty. / Walter Carpet Mills.

338 BERBER CARPETS / "Corsica" offers a hand-crafted look in natural colors using 100 per cent Zefran acrylic Berber yarns. This nubby textured level loop carpet is available in five stock colorations, and has been Performance Certified for Class II, heavy commercial traffic. / Gulistan Carpets.

339 CUSTOM CARPET / The company is offering "V-7579" as a custom program using the 75 colors in the Zefran Blend CR-4 yarn system (70 per cent acrylic/30 per cent nylon). "V-7579" is a velvet cut-uncut pattern woven through the back, and is recommended for use when flammability ratings are critical. This fabric has earned a Class A Tunnel Test (ASTM-E-84) rating. / Mohawk Carpet.

340 TEXTURED CARPET / Commercialon 4600 featuring eight earth-tone colors in a cut/uncut construction, is a textured carpet made from Zefran Blend CR-4 Homespun yarn, a combination of 56 per cent nylon and 44 per cent acrylic. / J & J Industries, Inc.

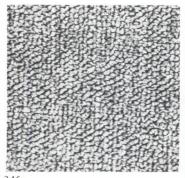
341 GOLF CLUB / "Par 66" has been engineered to withstand the spikes of golf shoes and has earned the Zeftee five-year warranty. "Par 66" is a multi-colored plush offered in seven stock colors and made from Zefran Blend CR-4 (acrylic/nylon); it is rated Class III. / Patcraft Mills, Inc.

342 GEOMETRIC CARPETS / "Business Square," a tip-sheared geometric carpet, is made from Zefran acrylic and acrylic/modacrylic blend fibers. It is offered in 13 Berber and earth tones, and carries the Zefstat antishock warranty. / Customweave Carpets, Inc.

343 CARPETING / "Interface 400" series is manufactured by a patented fusion-bonding process and will be marketed in modular form utilizing a patented backing construction enabling the modules to be loose laid. Two plys of four separately-colored yarn ends give the carpet a nubby finish, in 100 per cent nylon with static control. / Interface Flooring Systems.

344 CARPET TILES / Carpet tiles for access flooring have a permanent magnetic backing. "MagnaTile" provides the advantages of carpet tiles plus resistance to shifting and edge curling without the use of adhesives. Liskey Architectural Mfg., Inc. GB*

345 NYLON YARNS / Nylon yarns engineered specifically for the contract commercial area carry the new Zeflon trademark and include a 4,000 denier BCF producer colored heather yarn, and a new delustered stock-dved spun nylon that is available in heathers and solids. / Dow Badische Co. I*





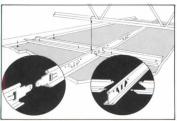


346 NYLON CARPET / Commercialon 2600Z is made from 100 per cent continuous filament Zeflon nylon, and is suitable for airports, hospitals and other heavy duty wear areas. This level loop carpet is available in 12 solution dyed heather colors. / J & J Industries Inc.

CEILING SUSPENSION SYSTEMS

347 MIRRORED CEILING / "Mirage" is a suspended ceiling capable of achieving an NRC of .70. A special ClearShield transparent coating protects the film against scratching. The polished chrome supporting grid can be designed in a flat or faceted ceiling plane. Priced at \$2.50-\$4. / Integrated Ceilings, Inc.

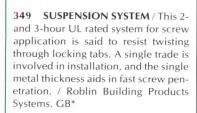
348 SUSPENSION SYSTEM / A direct-hung steel ceiling grid for screw application of gypsum panels and veneer finish systems in commercial and industrial buildings has 1-, 2- and 3-hour UL fire ratings. The system provides a rigid, stable base for secure attachment; there is no section twisting or racking. / United States Gypsum Co.





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350 MIRROR CEILING / aluminized Mylar mirror panel for commercial ceilings and display areas, called "Image," is available in 2- by 2-ft and 2- by 4-ft sizes. It meets UL (Class-25) and Federal SS-S-118A. / The Celotex Corp. GB, ICR*

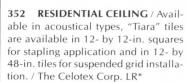
351 ACOUSTICAL CEILING / A thin, high density, fissured, acoustical ceiling lay-in panel 1/4-in. thick is said to be higher in density than 1-in. panels, but provides the same sound absorption as standard high density or wet felted panels. Called "Grande," it has a noise reduction coefficient range of .60-.70 and a light reflection of .79. / The Celotex Corp. GB, ICR*







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353 CEILING PANELS / "Vinylrock" interior/exterior lay-in panels for exposed ceiling grid application feature flame spread of 5. Textured .002-in. scrubbable vinyl covers the gypsum substrate. Sound transmission class (STC) range is .40-.44. Options include: any length to 96 in. and custom color match. / Acoustiflex Corp. GB, ICR*

354 INSULATING CEILINGS Energy-saving ceiling panels with up to 3 in. of built-in insulation provide an R-12 insulating value and an acoustical value of .80 NRC. Flame spread classification is 25. / Owens-Corning Fiberglas Corp. GB*





356



355 ABUSE-RESISTANT PANELS / The deeply embossed, specially treated panel surface helps hide visual signs of damage. Made in standard 24by 24-in. and 48- by 48-in. sizes, the panels are suggested for classrooms, school cafeterias, gymnasiums, etc. / Johns-Manville Sales Corp., Holophane Div. GB*

356 WOOD STAINS / "Heart of America" exterior wood stains feature ten ready-mixed, opaque colors available in latex or oil-base formulations. Stains can be applied to most new, weathered and previously painted surfaces, including siding, shingles, fences, gables. They are also recommended for masonry asbestos and hard brand materials. / DAP Inc. GB*

LATEX STAINS / "All Acrylic" solid color latex stains are mildewresistant, and recommended for rough-sawn siding, shingles, clapboards, and vertical siding. Latex stains may be applied to new wood or previously painted or stained wood surfaces. Seventeen colors range from Golden Nugget to deep Ebony. / Samuel Cabot Inc. LR*





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358 FLOOR SEAL / "Gold Medalist," a urathane finish, has a smooth durable finish that resists rubber burns, dust and dirt. It provides a glare-free surface. / Hillyard Chemical Co.

359 PRIMER / A fast drying, interior latex primer/sealer, "Supreme" blocks out marks from new construction soiling, pencil, crayon, lipstick, smoke and fire damage, and many graffiti defacements. "Supreme" is suitable for use under most of the company's wall coatings, on new or painted surfaces. / Pratt & Lambert, Inc.

PREFINISHED PANELS

360 KITCHEN PANELS / A floral design group has been added to the line of *WALLITE* bath and kitchen panels. Available in three colors, panels are made of ½-in. hardboard, and are available in three sizes: 4- by 8-ft, 5-ft sq, and 5- by 6-ft. / United States Gypsum Co. LR*



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paneling, one of six patterns in the Flame Test series, is approximately \$30 per 4x8 sheet. In addition to its Flame Spread Rating of 25, the prefinished hardboard paneling has Smoke Developed and Fuel Contributed Indexes of zero. It is rated Class I in most building codes. / Masonite Corp. GB, LR, I*

362 PANELING / "Marbletone" paneling is rated Class I by most building codes, and is designed to meet fire safety codes in commercial, institutional and high-rise buildings. The prefinished hardboard paneling sells for approximately \$30 per 4x8 panel. / Masonite Corp. GB, LR, I*

363 PANELING / "Sunrise" paneling is designed to meet fire safety codes in commercial, institutional and highrise buildings. "Sunrise" is one of three woodgrain patterns in the line, all of which meet the Class I requirements of most building codes. The panel sells for approximately \$30 per 4x8 panel. / Masonite Corp. GB, LR, I*



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364 PORCELAIN PANELS / Porcelain-on-steel panels laminated to gypsum board is recommended for laboratories, hospitals, food processing plants and other installations where it is desirable to retard bacteria growth. Panels are said to be inexpensive. / AllianceWall Corp. GB*

RESILIENT FLOORING

365 RUBBER WALL BASE / Rubber wall base that can be readily wrapped around outside corners conforms to minor floor and wall irregularities. Base comes in six colors: black, brown, dark brown, light brown, green, and off-white. It is available in 4-ft lengths and in heights of 2-½, 4, and 6 in. / VPI. GB*

366 SHEET FLOOR / Classicon comes 6- and 12-ft wide for either residential or light commercial use for seamless installation. A special barrier coat called "Aquebar" guards against alkali and moisture-borne rot from concrete slabs. Textured surface and embossed, intricate designs are featured in a 15 mil wear layer. Priced at \$11.95 per sq yd plus installation. / Mannington Mills, Inc.



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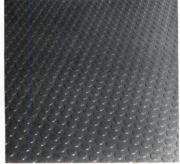
367 PLANK FLOORING / Plank flooring is reproduced in detail, down to the pegs, in "Trinatta" brand flooring. Made of a resilient polyurethane material, "Trinatta" flooring is available in widths of 4.4, 6.4 and 8.4 in., in 5-ft lengths. It comes in seven colors. / 3M Co.

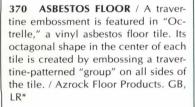
368 SYNTHETIC TURF / Created for indoor or outdoor use, the new "Super Commercial Turf" is tufted on tight gauge equipment, into a preneedled backing material to assure the positive tuft-lock and dimensional stability required. The pile is 68 oz. of 5700 denier fibrillated ribbon. / Instant Turf Industries.

369 VINYL FLOOR / "Seagate" inlaid sheet vinyl flooring for commercial interiors, features a small-chip pattern. "Seagate" is avilable in a 6-ft width in eight colors. It is an .090-in.gauge floor recommended for heavyduty use, and costs approximately \$.95 to \$1.05 per sq ft installed. / Armstrong Cork Co., GB, ICR, LR, I*









371 NO-WAX FLOOR / "Gibraltar" is a lightly marbleized pattern for hospitals, schools and other installations. It is available in six colors, and is part of the "Architect's Choice" line of stain-resistant, no-wax flooring, available in 6-ft and 12-ft widths. It meets ASTM. UL and Federal standards. / Mannington Mills, Inc.

372 RUBBER TILE / The tile is constructed homogeneously of synthetic rubber compound and compression molded with a design profile of 1-in. diameter raised bevelled discs, according to the company. Raised disc design in high profile (.050 in.) or low profile (.025 in.) conforms to Federal Specification SS-T-312B, Type II, dated 10/10/74. Priced at \$1.50 / sq ft. / Flexco, Div. of Textile Rubber Co., Inc.





375

SPECIAL COATINGS & SURFACINGS

373 ROOF SEALER / "Level Seal" has a low-melting-point asphalt base, which allows good penetration into the felts, yielding a longer-lasting built-up system. The deep penetration feature will in most cases, eliminate the need for a primer by keeping the felts saturated, pliable. / Republic Powdered Metals.

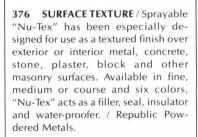
374 ROOF WATERPROOFING / "Alumanation 301" is a sprayable or brushable cold-applied waterproofing that seals, retards rust and protects roofs from chemical and weather attack. In addition to its highly reflective surface, temperatures inside the structure may be reduced up to 15F. / Republic Powdered Metals.

375 RE-ROOFING / "Permaroof" is a heavy-duty fibered asphalt coating with rubber added for extra durability and flexilibity. A special wet-surface additive makes it possible to apply "Permaroof" to wet or damp surfaces for emergency repairs. / Republic Powdered Metals.









377 POOL SURFACE / "Hydro-Kote" surfacing, based on polyester resin and "Micro-Mix" reinforcement/filler, is for old and new concrete swimming pools. It will withstand both the acids and chlorinated water plus expansion and contraction of concrete over an extended period. / Southeastern Pools Inc.

378 WALL COATING / A deep textured stucco effect for interior walls and ceilings is claimed with "Ruff-It" acrylic wall coating. "Ruff-It" adheres to most interior wall surfaces, and has a one or two hour working life. Priced at \$.06-28 /sq ft. / Z-Brick Co.







381

379 ROLL PLASTER / Flexi-Wall plaster-in-a-roll covers rough surfaces, spans voids and permits direct application over concrete blocks. The product combines woven jute with partially set-up gypsum sealed with a soil-resistant, clear acrylic coating. / Flexi-Wall Systems, Div. of Wall & Floor Treatments, Inc. GB*

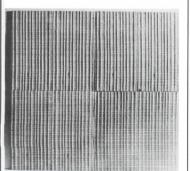
SPECIAL FLOORING

380 EPOXY FLOORING / POR-ROK epoxy anti-slip kit is a long-life epoxy topping for heavy duty resurfacing and new construction. The resin-hardener ratio is one to one and clean dry silica aggregate is added. It is easy to trowel and will self level. / Hallemite.

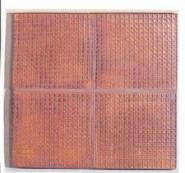
381 BOWLING RESURFACING / "Perma-Lane" is a high-pressure laminate material with a wood-like appearance, recommended for resurfacing bowling lanes and approach areas. The company claims the product provides a consistent bowling surface, and that it is easy to install and maintain. / General Electric Co., Laminated & Insulating Materials Business Dept.



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TILE

382 CERAMIC FLOOR / Most floors feature grids, circles or lines in low relief and in simple geometric configurations. This pattern and several others are 12 in. sq. Others are 6, 9 and 128 in. sq. All are available in a range of glaze colors. / Design-Technics. GB*

383 CERAMIC WALL / The network of intersecting lines produces a texture which is shown here in a matt off-white glaze. As with all of the other company patterns this design is also available in a large range of matt, glossy or metallic glazes. Tiles are 18 in. sq./ Design-Technics. GB*

384 CERAMIC FLOOR / One of a new series of ceramic floor tiles, this pattern is available in both 6-in. sq and 9-in. sq modules, and in a range of colors, in matt, semi-gloss and metallic glazes. / Design-Technics. GB*



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385 CERAMIC WALL / A 12-by 18-in. ceramic wall surfacing design is available in natural clay colors and matt or glossy glazes. The tile is illustrated in one of the new metallic finishes available on all of the designs. / Design-Technics. GB*

386 DENSE GROUTS / Twelve colors, plus white and gray, are offered for matching the color of ceramic, mosaic and quarry tile. / W.R. Bonsal Co.

387 TILE PAVERS / Available in seven colors (glazed and non-glazed), "Paverstone" also comes in three textures and three unit sizes (6 by 8 in., 8 by 8 in., 6 by 16 in.), with coordinated bullnose and cove base trim units. Units are ¾ in. thick. / Metropolitan Ceramics. GB*



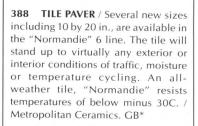
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389 IMPORTED TILE / "Heatherbrown" is an unglazed quarry tile combining natural earth tones. It is stocked in the United States in the following sizes: 4-, and 6-in sq.; 3-by 6-in; 4-by 8-in., and a 6- by 6-in. hexagon. / Shep Brown Assocs. GB*

390 CERAMIC WALLS / Abstract patterns and sculptured textures are recommended for exterior and interior walls up to 24 ft in height and in any length. Design W220 is priced at \$20.50/sq ft./ Forms & Surfaces.



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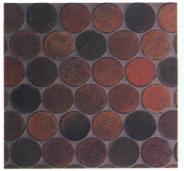
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391 PAVER TILES / In two colors, Camel and Chocolate Brown, the tiles are frost-proof, vitreous, with an unglazed, smooth surface. They are suggested for virtually any interior or exterior floor and wall applications. All are available in 6-in. squares and in brick-shapes. All sizes are ¾ in. thick. / United States Ceramic Tile Co. GB*

392 MOSAIC TILE / A 2-in. hexagon-shape ceramic mosaic tile is available in 43 solid and flecked colors, in 2-sq ft paper face-mounted sheets. Body of the tile is ¼-in. thick, frostproof and impervious. Standard trim is available. Priced at \$1.24-\$1.48/sq ft. / American Olean Tile Co. GB*

393 WALL TILE / The dappled sheen of copper, bronze, gold and olive contribute to "Renaissance" ceramic tile look. It is available in 4¼-in. sq plain and scored, and 6 in.-sq sizes, recommended for interior walls and counters. Priced at \$1.10/sq ft. / American Olean Tile Co. GB*





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395 ROUND TILE / "Pacifica" comes in 2-in. rounds. Tiles can be used on walls, or floors in residential or commercial installations. / Hastings Tile. GB, I*

396 FLOOR TILE / "Terra Form," a collection of ceramic floor tile in a variety of sizes, shapes and textures is available in 16 natural ceramic colors including browns, tans, whites, blue, green and velvety black; "Terra Form" contains surface irregularities and slight dimensional differences which promote the inherent clay characteristics. / Franciscan Tile, Interpace Corp. GB, I*





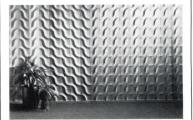
399



397 VINYL WALLCOVERING "Barn Door," a deeply textured pattern, has been added to the line of VINCO commercial vinyl wallcoverings. "Barn Door" has a fabricsupported construction, weighs 33 oz. per linear yard and is 54 in. wide. It conforms to Federal Specification CC-W-408A for Type II, heavy-weight vinyl wallcoverings. Priced at \$.82/sq. yd. / Stauffer Chemical Co.

398 WALLCOVERING / "Shiraz," from the "Cambay" Collection of handprinted authentic Persian and 18th Century European wallcoverings, is available in six colorways, 27-in. wide after trimming. / Nils Anderson Studios, Inc.

399 METAL WALL PANELS / A series of metal sheets and panels for walls, doors, columns, elevators and fixtures features low relief sculptured textures hydroformed into bronze, copper, stainless steel and aluminum in a variety of finishes. Pictured is design WM111. It is available in sizes 2 by 8 ft through 4 by 10 ft and priced at \$3.70 to \$6.85/sq. ft. / Forms & Surfaces.

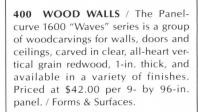




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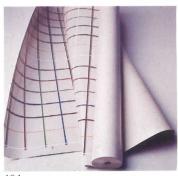


401 WOOD WALLS The Panelcurve 1104 Series for walls, doors and other architectural applications is carved in redwood, oak and other hardwoods and available in a variety of finishes. All panels are ¾ in. thick and 111/4 in. wide with lengths ranging from 36 to 120 in. Priced at \$37 to \$53. / Forms & Surfaces.

402 BRONZE WALLS / Design FGM25 is part of a collection of lowrelief bonded bronze textures for interior walls, doors, furniture, fixtures, elevator doors and elevator cabs; it is available as castings or panels in standard 3- by 8-ft and 3- by 10-ft sizes. / Forms & Surfaces.



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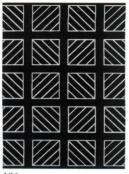




403 REDWOOD PANELS / Redwood mosaic panels are made of end-grain blocks of all-heart redwood, 1/4-in. thick, bonded to a plywood backing. Panels are 12 in. wide and 8 or 10 ft long. / Forms & Surfaces.

404 WALLCOVERING / "Linear," as shown, is printed in primary colors on a bone vinyl background. It is also available in off-white on a plastic coated brown Kraft paper ground and with black, white, and light grey lines on a charcoal gray linen vinyl. Priced at \$32 per roll. / Karl Mann Assocs.

405 MADRAS WALLS / Shown are two Madras plaid designs from a group of four, from the "Nice Collection." Design repeat is 8 in. Wall covering is fully trimmed, scrubbable, strippable, pre-pasted, and gravure-printed. / Wall Trends International.







406 WALLCOVERING / "Cross Patch Ditto," a silk screened wallcovering printed on a polished vinyl background is 27 in. wide. Custom grounds and colors are available. It is also available printed on fabric. / First Editions Wallcoverings & Fabrics, Inc.

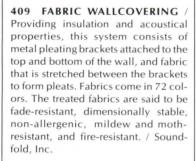
407 WALLCOVERING / "Left Oblique," a silkscreened wallcovering printed in two colors on a linen background, is 27 in. wide. There are four different widths of the stripe. Custom colors are available. / First Editions Wall Coverings & Fabrics, Inc.

408 WALLCOVERING / "Sante Fe," from the "This Good Earth" wallcoverings collection, comes in five colorways. The collection is pretrimmed, scrubbable/washable, strippable, gravure-printed on fabric-backed vinyl, weave, and Mylar grounds. James Seeman Studios, Inc.



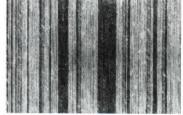




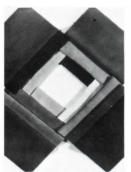


410 VINYL WALLCOVERINGS / A lightweight line of commercial vinyl wallcoverings, the Korolite Rainbow Collection comes in patterns and textures in 222 colors. Made of fabricbacked vinyl, the UL-rated, Type I wall coverings will not fade, according to the manufacturer. They are recommended for hotels and offices. / B. F. Goodrich Co., General Products Div. GB*

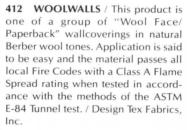
411 VINYL WALLCOVERING / Deeply textured "Vicrtique" wallcovering is backed with a non-woven fabric. Vicrtique has a thermal insulating "K" factor of 0.23. Weighing 15 oz. per sq. yd., it has the strength of heavyweight wallcoverings. / L. E. Carpenter & Co. GB*







414



413 VINYL WALLCOVERINGS "Vicrmode" is 19 oz. per lineal yard.

Widths are 54 in. and the fire-resistant rating is Class A. It is available in 13 colors. / L. E. Carpenter Co., Inc.

414 WALL SUEDE / A lightweight 14 oz. PVC wall suede that can be hung like paper, has a cotton backing, and is styled in 15 colors appropriate for furniture laminating, draperies and accessories. Suede-Tex is 54-in. wide. / Suede-Tex.







WOOD FLOORING

415 PARQUET / "Saxony Bond-Wood" parquet in factory fabricated panels comes in Guiana teak, red oak. white oak and black walnut, in 19-in. squares that are 5/16 in. thick. Four equal squares are in each panel, with eight equal half squares. Units are shipped unfinished and can be installed over concrete or wood. / Harris Mfg. Co.

416 WOOD FLOORING / Multi-Play resilient floor system is recommended for gyms, handball courts, roller rinks, recreation rooms, etc. Tiles (11% by 11% in.) of high-pressure densified wood particles are bonded to each other, not to the substrate and the surface rests on a resilient sheet foam layer over the entire substrate to achieve a uniform resilience. / ARCO/Chemical Co., Architectural Products. I*

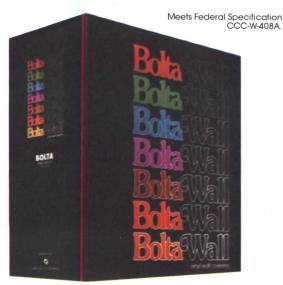
417 PREFINISHED PARQUET / "Designer Teak," a basketweave pattern with a variety of custom colors, and factory finished, comes 5/16 by 2 by 12 in. / Bangkok Industries, Inc.

Bolta Wall covering vinyl wall covering makes you fluent in the language of Inner Space.

BoltaWall lets you speak a breathtaking language of bold vistas and crisply defined interior spaces. In a brilliant collection of commercial and contract vinyl fabric wall coverings that gives you more than thirty dazzling patterns, and more than 600 pattern and color combinations.

BoltaWall speaks dramatically and functionally in commercial buildings, health-care facilities, educational institutions, hotels, motels, churches and residences. With shimmering Mylars® and glossy wetlooks that expand and brighten spaces. With the tooled metal look of hammermark and the natural elegance of travertine marble, cork and woodgrain patterns. With bold, embossed geometrics. And with an exceptional selection of fabric designs, including silk, burlap, linen, brushed suede, grass cloth, shadowstripe, herringbone and faded corduroy. All easy to install, scrubbable and strippable for easy, economical maintenance.

When you want to be heard, speak BoltaWall...the language of environment...the language of drama... the language of function...the new language of inner space!



For additional information write:

Wallcoverings Reading, Massachusetts 01867

For more data circle A48 on inquiry card



D61 FLOOR BASE / A product data sheet introduces rubber wall base, designed for ease of installation and lasting appearance. Product meets FS SS-W-40a, and is available in six colors, three heights, and cove or straight styles. / Vinyl Plastics, Inc. GB*

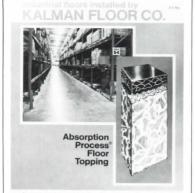
D62 VINYL WALL COVERING / Product folder shows several applications of *BoltaWall* fabric-backed vinyl wall coverings; a chart lists all patterns and applicable physical properties, fire ratings, and code approvals. / Bolta Wallcoverings.

D63 EPOXY FLOORING / Eight different epoxy flooring systems are shown in application photos in a 24-page brochure. Full descriptions of each product include physical properties, chemical resistance, OSHA and other code approvals, etc. / Hallemite. GB, ICR, E*

D64 TENNIS SURFACE / A color brochure introduces *Indoor Plexicushion* sub-surface, specifically developed for indoor tennis courts. A rubber-fortified multi-coat system said to reduce player fatigue, it is topped with *Plexipave* color finish. / California Products Corp.

*In 1978 Sweet's Catalog File(s).

D65 WOOD STAINS / Illustrated with full color application photos, a 16-page booklet provides information on types of wood stains, how to apply, color effects, exterior and interior staining, stains for furniture, and hints for better results. / Samuel Cabot, Inc. LR*



D66 INDUSTRIAL FLOORS / An eight-page brochure covers the on-site installation of self-polishing, dust-free Absorption Process Topping concrete floors for industrial buildings and warehouses. / Kalman Floor Co., Inc. ICR*

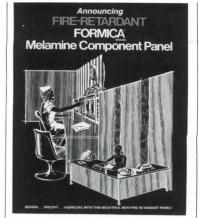
D67 VINYL WALLCOVERINGS

Vinyl wallcovering construction and the standards used for grading are explained in a 16-page color catalog. Full information is provided on the durability, maintenance benefits, safety and economy of *Genon* commercial products and specialized wallcoverings. / The General Tire & Rubber Co. I*



Eternawall color/texture selector gives swatch samples of this vinyl-surfaced gypsum board designed for interior partitions and high-traffic commrcial and institutional areas. Technical data is included, with tips for maintenance, cleaning, and care. / Georgia-Pacific

Corp. I*

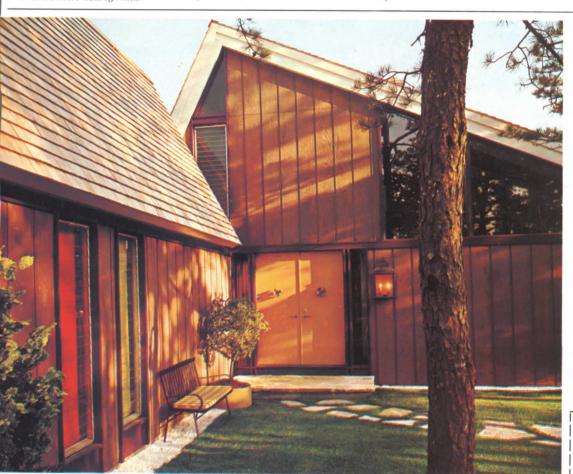


D69 FIRE-RATED LAMINATE

Complete specification details and application information on fire-rated *MCP* panels are given in a four-page brochure. Illustrations show a range of possible applications of the prefinished melamine panel. / Formica Corp.

D70 CERAMIC TILE / Sparamics is a 1¼- by 1¼-in. size tile mounted in standard 12-in.-sq modules. A fourpage folder illustrates available colors, and lists applicable Federal and other code approvals. / United States Ceramic Tile Co. GB*

more literature on page 104



Cape Cod home; Architects: Bedar & Alpers, Boston, Massachusetts; treated with Cabot products.

"Cabot's Stains, the Original Stains and Standard for the Nation Since 1877"

Naturally beautiful wood...

Cabot's STAINS

Here is wood at its wonderful best. Cabot's Stains, so easy to apply, accent the grain, protect and beautify in a choice of 87 unique colors. Stains enhance the natural beauty of wood, are readily applicable to all surfaces: tex-

tured, smooth, or striated. A stained surface grows old gracefully, never cracks, peels, or blisters. Today the trend is toward stains ... Cabot's Stains.



Samuel Cabot Inc.

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- Send color card on Cabot's Stains.
- Please send Cabot handbook on stains.



Three ceiling problems, three Conwed solutions.



ough treatment

e are actually two Conwed® solutions is problem. Our ultra-hard Rock Face® and panels provide both abuse-tance and beauty and are ideal for pervised corridors and public places, re abuse is heavy—such as a gymnasium offer an Impaction® Ceiling System. Lesigned to take a blow from a high ball, give with it, then snap back into e, It's U.L. fire rated too! Both of these ions were introduced by Conwed.

2. Grime and grease

There are certain areas where cleanliness is crucial: kitchens, hospitals, laboratories, supermarkets. For these problem areas, Conwed makes the Metal Face Ceiling. The vinyl-coated, metal-clad surface resists penetration of dirt, moisture and odors. Even areas with concentrations of grease come clean with a sponge and mild detergent solution. The washable ceiling is another Conwed first.

3. High humidity

Conwed Ceramic Ceilings are designed to withstand high humidity and are resistant to heat and corrosive chemical fumes. They offer excellent acoustical control, a pleasing appearance and a two-hour U.L. fire rating. An obvious application is for swimming pools, but the Ceramic Ceiling is also appropriate for installation under outside canopies or soffits and in areas as diverse as kitchens and industrial plants.

And as many more solutions as there are problems.

Conwed has been making ceiling products for over 50 years. We've had one basic way of doing things—isolate a need, and develop a product solution in a form contributing to interior design and

minimal maintenance. This approach has made Conwed a concept and product innovator. For more ceiling solutions, write Conwed Corporation, 332 Minnesota Street, P.O. Box 43237, St. Paul, Minnesota 55164.



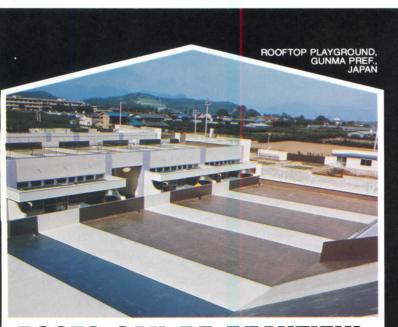
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- AND WATERTIGHT!

LONDECK all-vinyl sheeting was specifically developed to withstand the elements without shrinking, warping or excessive aging. Proved over 20 years, Londeck lets you turn ordinary roofs into usable recreation or parking areas . . . balconies or walking decks into practical, headache-free design elements. Send for your free data and samples today!



continued from page 97

D71 CERAMIC MOSAIC / Applications in homes, schools, restaurants and swimming pools of ceramic mosaic tiles are illustrated in a 16-page brochure. All stock patterns and colors are shown; installation techniques are described. / American Olean Tile Co. GB*

OFFICE LITERATURE / Divisions 9, 10

D72 TILE PRODUCTS / Individual data sheets on quarry tile, Caribbean and Tuscany tile, ceramic mosaics, Crystalline, Renaissance, Georgetown Blend and counter top trim show close-up and in-place photos of each product; all dimensions are listed. / American Olean Tile Co. GB*

SPECIALTIES

D73 LOCKERS / Mondrian steel lockers are available in 19 bright colors and three styles which can be arranged to form a mural effect, as shown in an eight-page product brochure. Rubber bumpers dampen door closing noise; steel lockbar is tamper-proof. / Republic Steel Corp., Industrial Products Div. GB*



D74 SHOP/OFFICE EQUIPMENT Over 1600 different steel equipment and office furniture products are presented in an illustrated catalog. New additions to the line include light- and heavy-duty pallet racks, and portable cabinet bench with lockable storage. / Lyon Metal Products, Inc. GB*

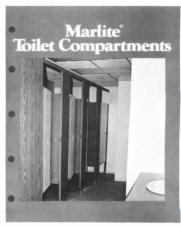
D75 CHALKBOARD / A selection guide shows the company's 10 most popular colors of porcelain-on-steel chalkboards. The fabrication process is summarized, and the guide includes details on the manufacturer's 50-year guarantee. / Alliancewall Corp. GB*

D76 PORCELAIN-ON-STEEL

Panels of porcelain-enameled steel are shown in a variety of building applications in a 16-page catalog. Full technical data, including code conformations and test results as well as installation details, are included. / Alliancewall Corp. GB*

D77 HAND DRYER / The Fastaire electric dryer produces a high-speed air flow, drying hands without electrical heating elements or coils. An illustrated data sheet describes the vandal-resistant unit, which meets CSA, UL, and Federal specifications. Priced from \$186.00 / Humphrey, Inc.

D78 STORAGE SYSTEMS / Product fact sheets explain the Compactus system of mobile, space-saving industrial and office shelving, offered in a choice of manual, semi-automatic, and fully-automatic operation modes. / Drummex, Inc.



D79 TOILET COMPARTMENTS

Catalog sheet outlines two series of Marlite compartments: an all highpressure laminate line and economy systems. / Marlite Div., Masonite Corp.



D80 WASHROOM COLORS / Using illustrations of colored accessories integrated with matched wall paneling, compartments and counters, the "Planning Guide for the Color Coordinated Washroom" presents a full line of dispensers, waste receptacles, vanities, counters, shower dividers, etc. / Bobrick Washroom Equipment Inc.

*In 1978 Sweet's Catalog File(s).

← For more data circle A57 on inquiry card

more literature on page 115

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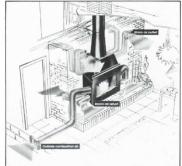
specialties



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ACCESS FLOORING

430 ACCESS FLOOR / For in-floor service distribution in new construction or remodeling, the "InterLoc" system provides a solid feel by interlocking panels and pedestals throughout the floor area, according to the manufacturer. / Liskey Architectural Mfg. Inc. GB*

FIREPLACES

431 FIREPLACE / The "Provider" combines an air circulating system with a built-in, high-volume fan for rapid room heating. The fan, which operates either manually or automatically through thermostatic control, circulates the air through a large heating chamber. / Preway, Inc.

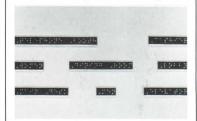
432 FIREPLACE/The "Octa-Therm" UL-listed heat circulating fireplace provides up to 42,600 Btu /pr/hr of additional heat with an average home fire, and is capable of circulating heat to three rooms through direct ducts. Zero wall clearance is claimed. / Martin Industries.



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FLAGPOLES

433 FLAGPOLES / The "Rainbow" line of fiberglass flagpoles is available in a variety of standard colors, including white, aluminum, bronze and black. These flagpoles are manufactured utilizing a filament winding process; then overcoated with a gel coat. / American Flagpole. GB*

GRILLES & SCREENS

434 PORTABLE GATES / Heavy gauge, heavy duty steel gates roll easily to any location. Gates are available in two heights: 6½ and 8½ ft, in units that fit corridors from 3½ ft to 18 ft wide. / List Industries Inc.

IDENTIFYING DEVICES

435 BRAILLE LETTERS / A Braille alphabet of plastic is recommended for hotels, offices, building complexes, etc. Each Braille character has the corresponding alphabetical character molded into the back so that Braille can be installed without error. / Scott Plastics Co.



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BANKING HOURS 9 A.M. TO 3 P.M. DRIVE - UP WINDOWS 8 A.M. TO 7 P.M.

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436 PLEXIGLAS LETTERS / Numerals and accessory items are provided in 18 styles of 1/2-in. thick, injection molded *Plexiglas*, in four standard colors: white, black, red, and blue. Internationally accepted and recognized symbol/accessory items are also available. / Scott Plastics Co.

437 CHANGEABLE LETTERS / "Clip-Eze" letters are available in any one of 18 standard letter styles and colors. Sizes range from 1½ to 10 in. / Scott Plastics Co.

438 IDENTIFICATION / Signs are offered in bronze or aluminum plate, satin brushed. Letters are 1/8-in. thick, cut-out adhesive mounted to backplate, machine engraved and filled with baked enamel. / Supersine Co. GB*

LOCKERS
PARTITIONS
POSTAL SPECIALTIES
STORAGE SHELVING
TELEPHONE ENCLOSURES
TOILET & BATH ACCESSORIES
WARDROBE SPECIALTIES

ACCESS FLOORING

GRILLES & SCREENS

IDENTIFYING DEVICES

FIREPLACES





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439 DIRECTORY / People are directed by these pylons (2- by 2- by 8-ft) at Detroit's Renaissance Center. They were designed by Hauser Associates, Inc., Atlanta. The top 25 per cent of the pylon is brass with etched copy. The color band and bottom portion are molded fiberglass panels with vinyl legends. / Matthews Architectural Div. GB*

440 CUSTOM-MADE SIGNAGE

The product can be used to create historical murals, decorative wall hangings, etc. The process itself is a system which imbeds any image—from line to halftone—in anodized aluminum which can be then cut to any shape desired. / Metalphoto Corp. GB*

441 PATIENT ROOM PLAQUE

Multiple changeable messages are self-contained in this self-storing multi-purpose patient room sign which displays the patient room number, patient names and pertinent personal information as well as any number of printed vinyl inserts relevant to patient care. Priced at \$35. / Architectural Graphics, Inc. GB*



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442 DIRECTORY / "Series 600" features a fabricated acrylic or wooden case mechanically fastened to a wall mounted back panel with a variety of inserts offered. Cases may be fabricated in any size up to 9 sq ft from acrylic plastic, or select woods. / Architectural Graphics, Inc. GB*

443 ILLUMINATED SIGNS / Full bleed graphics are possible with this retainer system; while there are no exposed fasteners, lamping is easily accomplished. Signs may be sized as required with standard finishes for the aluminum cabinet. Sign faces may be acrylic or fiberglass. / Architectural Graphics, Inc. GB*

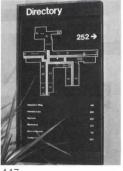
444 WALL/DOOR PLAQUE / Dimensional plaques with depths of ½, ¾, or 1 in. are fabricated from core material with plastic laminate faces and returns. Copy is surface screen printed in any letter style desired. / Architectural Graphics, Inc. GB*



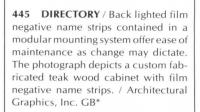
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446 GRAPHICS SCULPTURE

Weathering steel wide flanged members oxidized dark bronze form the structure aspect of this 25-ft-high sign, which features chrome plated, cast bronze lettering pin mounted to the web of the wide flanged member. / Architectural Graphics, Inc. GB*

447 MAGNETIC DIRECTORY /

Using a name strip guide and a preprinted lettering sheet, names may be quickly burnished onto the name strips. Removal of obsolete copy is easily accomplished with cellulose. Priced at \$240. / Architectural Graphics, Inc. GB*



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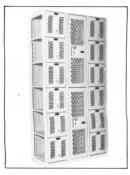
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448 GRAPHICS / "Photographics" subsurface graphics are reverse printed on vinyl and pressure-bonded to *Plexiglas*. The dry-ink method used permits free use of photographic effects converted into line art. / Design-A-Sign Co., Inc. GB,I*

449 COLOR LETTERS / An epoxy with a broad color range is available as color inserts in bronze and aluminum letters. There are nine standard colors; 36 colors are available. There are eight metal finishes, 11 typefaces, and sizes ranging from ¾ to 9 in. in height. / Design-A-Sign Co., Inc. GB,I*

LOCKERS

450 HANDLE-LESS LOCKER / The new feature provides a smooth, flushfront appearance by eliminating a protruding door handle. The flanged pocket assembly, which also serves as a door pull, is constructed of cold rolled steel and projection welded to the locker door. / Penco Products, Inc. GB*





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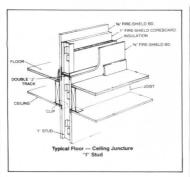
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451 SECURITY LOCKERS / All-welded factory assembled athletic and corridor lockers have extra heavy gauge reinforced doors that are 25 per cent thicker than most unassembled locker doors. The recessed handle locking mechanism and concealed hinge leaf help prevent forced entry. / List Industries Inc. GB*

PARTITIONS

452 OPERABLE WALL / The No. 2500 operable wall series is a tophung, manually operated system. Economical L's, T's and crossovers are used to achieve 90-degree turns. Continuous contact seals on the panels provide a light and sound barrier. / Richards-Wilcox Mfg. Co. ICR*

453 SHAFTWALL SYSTEM / A drywall partition system developed to enclose elevator shafts and other vertical chases, "I Stud Cavity Shaftwall" weighs less than 10 lbs psf for the 2-hr fire-rated system. All components are non-combustible. / Gold Bond Building Products. GB*



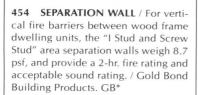
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455 **DEMOUNTABLE PARTITION** / "Contempo-Wall" systems offer a choice of methods for erecting walls using *Durasan* vinyl-covered gypsum panels, and feature lightweight aluminum trim components. / Gold Bond Building Products. GB, ICR*

456 ACOUSTICAL SCREENS / "Harter/Wall" is an expandable, movable accoustical wall program. It has visual permanence with the ability to be moved or rearranged quickly with three standard heights and six panel widths. External framing is aluminum extrusions or oak, with a steel inner frame. Priced at \$97 to \$184 per linear foot. / Harter Corp.



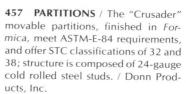
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458 FULL-HEIGHT PARTITION / The "Divisiflex 304" floor-supported panels require no screws, molding or special ceiling treatment to install. In addition, the panels are self-leveling. Panel colors range from neutral tones to bright accents; vinyl surfaces may have a jute texturing or a woodgrain pattern. / Modernfold—An American Standard Co. GB,CC*

459 ACOUSTICAL SCREENS / The "AUS-1 Series" features unitized construction of fire-retardant materials with a one-piece rigid frame of aluminum. The system provides a sound absorption minimum NRC rating of .85 without septum. Any size screen up to 60- by 72- in. can be furnished, with different fabric colors on each side. / Vaughan Walls, Inc. GB,I*



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460 FIRE-RATED PARTITIONS / "Fireguard" models are UL-listed for Class C 1 hour and Class B 1½ hour ratings and offer over-sized certificates for partitions up to 24 ft high and unlimited widths. Partitions are also sound rated and have an all-steel construction. / The Won-Door Corp. GB*

461 SPACE DIVIDER / Panels provide visual and sound barriers as well as display surfaces for the mounting of graphics. The panel is "all of one piece" with all connectors, moldings and joining elements as part of the basic panel. Priced from \$80. / The Carter Co.

POSTAL SPECIALTIES

462 MAILBOXES / Pedestal-mounted "6700 Series" rearloading units have a standard compartment size 5 in. high by 6 in. wide by 15 in. deep. Other standard features include natural anodized aluminum finish, five pin cam, and lock with dust/rain cover. Approved types are offered (8, 12, and 16 compartments). / Bommer Industries, Inc.GB*



















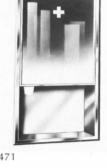








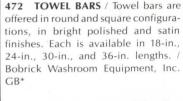




TELEPHONE ENCLOSURES

469 TELEPHONE BOOTHS / The "ADCO 20-L" model comes in standard exterior colors or woodgrain vinyl laminate. Shelf and interior walls are #4 finish stainless steel. All trim is satin anodized aluminum. / Acoustics Development Corp. GB*





473 WASHROOM UNITS / Designed for public washrooms, units are 581/4 in. high and recess into rough wall openings 56½ in. by 12½ in. Combination paper towel dispenser/ waste receptacle models are manufactured of type 304 stainless steel, with all welded construction. / Bobrick Washroom Equipment, Inc. GB*

474 DISPENSER / A unit for dispensing iodine-based antiseptic solutions and all types of synthetic detergents, "Model B-90" was designed for use in surgical scrub-up areas and emergency rooms. The 18-fl. oz. capacity container is covered by a stainless steel hood. / Bobrick Washroom Equipment, Inc. GB*

STORAGE SHELVING

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463 MOBILE FILING / A heavy-duty manual-assist mobile filing and storage system, Dial-An-Aisle provides a gear-train arrangement whereby a force factor of 1/2-lb hand pressure on the crank of the activating wheel will move 1,000 lbs of weight. Carriage weight capacity has been increased to 20,000 lbs. / Spacesaver Corp.

464 SHELVING SYSTEM / An electric mobile carriage shelving system extends to 68 ft or longer and up to 15 ft high. Carriages shuttle sideways on steel tracks, have a weight capacity of 90,000 lbs per double-sided unit. / Spacesaver Corp.

465 CABINET BENCH / "Model 3001" portable cabinet bench for shop and office features 2-in.-high back and end stops. A flat working surface can be obtained by inverting the top. Inside, the cabinet bench provides 12 sq ft of storage area. Benches are finished in Dove Gray baked-on enamel. / Lyon Metal Products, Inc. GB*

466 PALLET RACKS / Rack provides multi-level storage for palletized loads. Stock components, in a range of sizes of regular and heavy-duty types, are interchangeable. All parts are finished in Dove Grav baked enamel. / Lyon Metal Products, Inc. GB*

467 CENTRAL FILES / Centrac rotates at the press of a button for fast reference to cardbooks, folders, cards, binders, computer print-outs. Custom configurations are offered. / Acme Visible Records, Inc.

468 RECORDS STORAGE/ Magic Aisle V high-density storage and retrieval systems are electrically operated and all ranges move simultaneously to provide five-second entry to any record. Constructed of steel with unitized carriage design, units hold up to twice the number of records in the same space used by conventional filing units. / Acme Visible Records, Inc.

TOILET & BATH ACCESSORIES

471 FIRST AID CABINET / A recessed stainless steel first aid cabinet is equipped with a dispenser for 50 paper cups. Model B-516 recesses into a rough wall opening 16 in. wide, 291/4 in. high. / Bobrick Washroom Equipment, Inc. GB*



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- 475 HAIR DRYERS / "Model FH" is a fully recessed commercial unit measuring 12¾ in. by 10% in. by 6% in. with a three minute timer that produces high velocity warm air for quick drying. The dryer features a stainless steel housing. / Electric-Aire Corp.
- 476 SHOWER ENCLOSURES / "Showerfold" styles feature patented glide retainer systems and nylon rollers for smooth, noiseless operation. The frames are made of corrosion-proof anodized aluminum. All models come in standard custom widths. / Kinkead Industries, Inc. LR*
- 477 HAND DRYER / An aluminum casting that has a highly polished, chrome-like finish is designed to withstand hard abuse. "Model HD02" dries hands and face in less than 30 seconds, and connects to any 120 VAC source. Priced at \$195. / Humphrey, Inc.



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- 478 HAND/HAIR DRYERS / Fast-drying, vandal resistant UL-listed hand and hair dryers feature a reinforced die-cast cover, brushless motor engineered for a life of 10,000 hours, and a side-mounted heating element designed for safety. All dryers are available either surface-mounted or recessed. / Excel Mfg. Corp. GB*
- 479 BORAX DISPENSER / To permit individual testing, the company is offering a trial kit containing a "Model 7" dispenser, which can be mounted on wall or counter, and a 4 oz. pouch of "Luron Fine Powered Lotion Soap." Priced at \$8.95. / U.S. Borax, GB*
- 480 METAL MIRROR / The pan-type metal mirror comes in stainless steel or chrome-plated steel. It is bent back 90 degrees on all four sides to form a ¼-in. recess. This mirror is recommended for psychiatric wards, prisons and other areas where breakage is a problem. / All Metal Mfg. Co.



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- 481 SEAT COVER DISPENSER / This recessed stainless steel unit holds 1000 paper seat covers and two rolls of toilet tissue. It is designed to be mounted in the side or back wall of an end toilet compartment. / The Charles Parker Co. GB*
- **482 GRAB BAR** / A stainless steel grab bar with escutcheon flanges which snap over the bar's wall flanges provides permanent, vandal-proof concealed mounting. It is available in both 1¼- and 1½-in. diameters, with satin finish or a non-slip gripping surface. / The Charles Parker Co. GB*

483 COLORED HARDWARE / "Spectra" is a newly developed process for color coating any of the more than 500 items in the "MODRIC" range of hardware. / The Ironmonger.



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- **484 SOAP DISHES** / Both the nylon soap-dish and cup holder are wall mounted and are available with nonremovable fittings. They are made in ten colors and are stocked. / The Ironmonger.
- 485 TOILET COMPARTMENT / This line of compartments features stainless steel corner reinforcements. All door hardware is either brass or stainless steel. Emergency access is provided with a recessed slide latch: the compartment door can be opened by lifting it up ½ in. Baked enamel, porcelain enamel and plastic laminate finishes are offered. / International Fabricators, Inc. GB*

WARDROBE SPECIALTIES

486 COSTUMER/"Graphic Square" will accommodate up to 50 hangers. Unit measures 20-in. sq and stands 54½ in. high. It is offered in yellow, white, sand, black, and brown. / Vogel-Peterson Co.



Heatilator Fireplace reduces the high cost of installation and increases useable heat.

It reduces installation time. In less than one day a carpenter can set the fireplace into position and assemble the quick-locking chimney system. The Heatilator Fireplace can be installed almost anywhere, which means you can design your houses to meet any customer's taste.

It reduces your cost. A real wood-burning Heatilator Fireplace can be installed for less than 1/2 the cost of a traditional fireplace. It requires no additional floor supports, thus giving you location flexibility while saving you money.

It increases heat-efficiency. As energy-conserving houses become more and more in demand, the added feature of a heat-circulating Heatilator Fireplace provides your home buyers with a more efficient supplemental heat source. It also adds greater resale value to their home.

It's guaranteed. Heatilator Fireplaces are precision engineered in design to be smoke-free. Each built-in Mark 123 fireplace also comes complete with a 20-year guarantee on materials and workmanship.

For detailed information: write Heatilator Fireplace, A Division of Vega Industries, Inc., 1987 W. Saunders Street, Mt. Pleasant, Iowa 52641. Or, call our toll-free number: 800-553-8905. (lowa residents call collect: 319-385-8880.)





D81 INSTITUTIONAL STORAGE / A product bulletin shows how public, private and institutional libraries, schools and museums can turn aisles into usable storage space, adding 80 per cent more capacity in the same floor space. Material includes information on safety devices for public operation of both manual and electric-driven systems. / Spacesaver Corp.



D82 FILING/STORAGE / An application guide provides conceptual drawings of how storage/space can be used efficiently, and illustrates a variety of typical applications for computer tapes, office files, X-rays, law files, etc. Mobile storage units from 3- to 68-ft long are shown. / Spacesaver Corp.

D83 SIGNAGE / "Visual Identification Systems" outlines the manufacturer's suggestions for effective signanalysis, planning and implementation for complete signage systems. / Federal Sign.

D84 FIREPLACES / Illustrated with photos and diagrams, a product brochure introduces the *Energy-Mizer* line of built-in and free-standing fireplaces, which draw the air required for combustion from outside the home. Circulating fans are available with all models. / Preway, Inc.

D85 HAT/COAT RACKS / Tubular steel hat and coat racks are shown in a four-page brochure. Commercial and institutional units include floor-, wall-, and ceiling-mounted applications. / Bevco Precision Mfg. Co. GB*

Reprints of an article, "Effect of Louvered Sun Screens upon Fenestration Heat Loss" by John I. Yellott, from the ASHRAE Transactions 1972, contains the results of extensive tests performed on this manufacturer's line of sun control screens. / KoolShade Corp. GB, E*

D87 GRAPHICS / Complete information on construction, physical properties, and dimensions for *Fiberlite* and *Fibergraphic Monoliths* is included in a 16-page brochure on architectural signage systems. Photographs also show a variety of interior and exterior applications of *Spectralegends*, plaques, wooden signs, etc. / Architectural Graphics, Inc. GB*

D88 WASHROOM ACCESSORIES / A 32-page catalog provides dimensional data, code acceptances, and complete product presentations for a full line of wash centers, towel and soap dispensers, grab bars and railings, hospital and custodial accessories, etc. / Bradley Corp. GB*

EQUIPMENT

D89 HOME APPLIANCES / Dozens of residential refrigerator/freezers, electric ranges, dishwashers, laundry appliances and room air conditioners are shown in a 52-page catalog. Various energy saving features are discussed; dimensional and technical data are given for each product. / Hotpoint. GB, LR*

D90 ATHLETIC EQUIPMENT / Illustrated product bulletin features urethane foam/crash mats and jump pits for indoor and outdoor field and gymnastic events. / Challenger Athletic Products, Inc.



Wilcox International Inc.
394 West RANDOLFH STREET * CHICAGO, RLINGUS SERSE
PHONE: (312) 254-2396/TRLEX: 25-4196/CARLE; WILCOXINT

D91 REGISTRATION DESKS / Fourpage brochure introduces a line of fully equipped, ready-to-install front desk units. Offered in three design styles, desk modules are available in 3-ft 9-in. and 5-ft heights. / Wilcox International, Inc. GB*

D92 FORK LIFT BRIDGES / Detailed engineering drawings are included in a 16-page booklet on bascule bridges for moving industrial in-plant traffic across depressed rail spurs, ramps, etc. Literature describes the bridge's heavy-duty construction and safety features. / Autoquip Corp. GB, E*

D93 BOOK STACKS / Color chart reproduces all 10 epoxy powder paint colors now available as standard finish for this line of library bookstacks and related media equipment. / Estey Corp.

D94 FOOD SERVICE / Illustrated product brochure describes a line of compact refrigerated units for restaurant and institutional use. Self-contained sandwich-salad units, compact refrigerators, and storage freezers are UL-listed and NSF-approved. / Star Metal Co.

D95 RANGE HOOD / Illustrated sheet gives full dimensional and design information on the *Kich-n-vent* "2100 Series" vent hood, adaptable for ducted or ductless installation. / Home Metal Products.

D96 WASTE HANDLING / How to use trash as a source of free fuel energy while virtually eliminating waste disposal costs is the subject of a 12-page brochure on pyrolitic incineration. Literature shows various equipment configurations and on-site applications. / Kelly Co., Inc. GB*

FURNISHINGS

D97 OAK FURNITURE / Color photographs, dimensions, finish and upholstery specifications and prices for the "Everywhere" series of red oakframed furniture for contract applications are given in an eight-page catalog. Units shown include an all-wood stacking arm chair, lounge furniture, and wood base and trestle tables. / Adden Furniture.



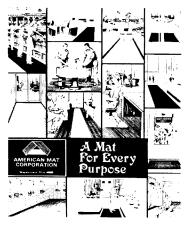
D98 OFFICE FURNITURE / Contemporary office components are pictured in stylized group settings which include desks, tables, chairs, credenzas, filing cabinets and assorted modulars. Catalog also gives complete dimensions and finish options for each item. / Lyon Metal Products, Inc. GB*

D99 OFFICE SYSTEM / Color brochure introduces the "UPS: Upholstered Panel System," showing how the fabric-covered screens, panel-hung work surfaces, and task/ambient lighting components fit together for an energy-efficient, comfortable work station. A companion 58-page planning manual provides full technical information on the "UPS;" an acetate overlay ambient illumination calculator is included. / JG Furniture, Div. Burlington Ind.



E01 AMBIENT/TASK LIGHTING / A "glare sheet" and a lighting calculator ruler to help design office lighting systems are included in a booklet describing the "ESP" ambient and task lighting units. / GF Business Equipment, Inc.

E02 OPEN OFFICE / The components available in the revised "Environmental Systems Program" are illustrated by photographs of several major open office installations. The color catalog includes dividers, work surfaces, storage elements and ambient and task lighting fixtures. A product summary sheet lists dimensions, finishes and types available. / GF Business Equipment, Inc.



E03 MATS/MATTING / A 28-page color catalog includes photos, descriptions and product specifications for a complete line of mats for commercial, industrial and institutional use. / American Mat Corp.

more literature on page 124

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ATHLETIC EQUIPMENT

498 SHOOTING BOOTH / Permanently-mounted equipment for target ranges, "Model SB-7A" booth separates shooters. Removable plastic panels conceal control wiring and 10-gauge steel liner. Optional foldaway barricades provide for simulated training of shooting from behind obstructions. / Detroit Bullet Trap Corp. GB*

499 SWIMMING SCOREBOARD The solid state electronics and twowire control system used in the ULlisted "SW6320" swimming scoreboard are said to ensure a virtually unlimited operating life with minimal maintenance requirements. / Fair-Play Scoreboards. E*

BANK & VAULT EQUIPMENT

500 DRIVE-IN TELLER / The direct vision Trans-Vista drive-in system allows a teller to serve more than one customer at a time. Transactions are transported in a 41/2-in. pneumatic tube carrier. / Mosler, An American Standard Co. GB, E*

501 AUTOMATIC TELLER / These two teller machines use externallysupplied intelligence: ECT terminals in many branches may be connected to a central controller by dedicated telephone lines. Each ECT unit can perform such automated functions as dispensing cash, transferring funds, accepting deposits, etc. / Mosler, An American Standard Co.

502 DRIVE-IN BANKING / Econo-Vision is designed for wall openings 5 ft in width, or in combinations, for wall openings of 8, 10, or 14 ft widths. It can be supplied factoryglazed with 1-3/16-in.-thick bullet resistive glass. / Diebold, Inc.

503 SAFE DEPOSIT BOXES American deposit boxes are available in nine basic sizes, all easily numbered and secured to individual reguirements. Pick-proof locks provide 275,000 potential key changes; each use requires both customer and custodian keys. / Mosler, An American Standard Co. GB, E*

504 BRANCH MONITORING

Two risk management systems, the BRM-1 with Hi-Line security feature, and the BRM-X remote multiplexing technique, are UL-approved for Grade AA and A installations. These purchase systems provide fail-safe monitoring of many alarm conditions; they can localize specific occurrences at remote locations. / Mosler, An American Standard Co. GB, E*

505 VAULT DOOR / Monolithic insulation in door and frame, and door jamb baffles, help provide protection for the "432" vault door, certified by UL for 4-hr fire and water labels. Wall flanges will clasp a 71/2- to 10in.-thick wall without shims or extensions. / Mosler, An American Standard Co. GB, E*

506 TELLER WINDOWS / Banking traffic of three or more lanes can be accommodated by the 36180 Vistra teller stations. Designed for use with direct vision remote transaction systems, draft-proof units have stainless steel trim plates and UL-approved glare-reducing bullet-resistive glass. / Mosler, An American Standard Co., GB, E*

ATHLETIC EQUIPMENT BANK & VAULT FOUIPMENT COMMERCIAL EQUIPMENT DARKROOM EQUIPMENT FOOD SERVICE EQUIPMENT LABORATORY EQUIPMENT LAUNDRY FOUIPMENT LIBRARY EQUIPMENT LOADING DOCK EQUIPMENT RESIDENTIAL EQUIPMENT WASTE HANDLING EQUIPMENT





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COMMERCIAL EQUIPMENT

507 MINI-STORE / Depending on the various lighting, storage, demonstration counters and showcases reguired, these 10- by 13-ft "Instant Stores" range in price from \$8,000 to \$20,000. The Modline II tubular steel frame is said to be quickly assembled; special panels secure the unit at night. / Kidde Merchandising Equipment Group.

508 FLOWER CABINET / Pre-wired movable gold-finish refrigerated flower merchandiser needs only a 3-ft wide wall space. A mirrored interior and indirect lighting are included. / Nor-Lake, Inc. GB*

DARKROOM EQUIPMENT

509 PORTABLE DARKROOM / Suitable for commercial, school or residential use, the PortaLab structure is constructed of modular panels 7- to 12-ft high in standard sizes of 4- by 6-, 6- by 6- and 6- by 8-ft. Options include sinks, electrical outlets, ventilation system, shelving and floor. / Porta-Fab Div., Keene Corp.





FOOD SERVICE EQUIPMENT

510 FOOD MERCHANDISER / Twoand three-section cases for refrigerated or frozen food display have a blank illuminated panel for sales information. The refrigerated case features the Vari-Air adjustable fan system for user control of optimum product quality. Raetone merchandisers are UL, NSF, and CSA-approved. / Victory Mfg., Div. McGraw-Edison Co.

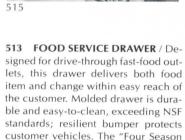
511 DISHWASHER / The UL- and NSF-listed Commander 18 door-type dishwashing machine has die-formed doors and channels. The solid-state time control operates by opening and closing the doors: machine fills, turns on heat, starts operation and compensates for water loss. Price: \$2000./Insinger Machine Co.

512 ICE MAKER/DISPENSER / The Ice Station fits into space 32-in. wide; 225- and 400-lb capacity models are available painted; in stainless steel; or with woodgrain vinyl fronts. Key- and coin-operated models are options for hotel and motel locations. / Kold-Draft Div., Uniflow Mfg. Co. GB, E*









Fast Food Server" is weather-stripped

and gasketed. / Lambco, Inc.

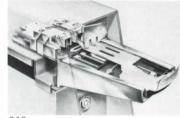
514 SANDWICH/SALAD UNIT / Refrigerated food preparation unit holds eight sandwich or salad pans; tray prevents food drippage from pan-well area to products below. Cabinets are finished in brown acrylic enamel with stainless steel cover, back splash, worktop and full-width crumb tray. Units are built to UL and NSF specifications. / Nor-Lake, Inc. GB*

515 HOT WATER DISPENSER / Applicable for all lavatory-type water usage, the UltraHot water dispensing system provides warm and hot water from a cold water line. Atmospheric pressure storage tank holds warm water; a push-button next to the faucet dispenses instant 190 F water for beverages, etc. / In-Sink-Erator Div., Emerson Electric Co. GB*





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LABORATORY EQUIPMENT

516 BIOLOGICAL COOLER / This laboratory or blood bank refrigerator has an air-cooled, hermetically sealed cooling unit needing no drain. Interior and exterior construction is one-piece reinforced fiberglass with a high-luster white finish. Units are UL- and NSFapproved. / Jordon Scientific Products.

LAUNDRY EQUIPMENT

517 WASHER/EXTRACTOR / "System 4" machines offer eight pushbutton programs for soil and fabric needs. Thirty-five and 50-lb capacity units have 30-in.-diameter cylinders; laundry supplies can be automatically injected. Cycles can be altered or stopped by pushbutton. / Pellerin Milnor Corp. GB*

518 LAUNDRY COIN SLIDE / Offered as factory-installed standard equipment, this coin slide is owneradjustable to accept 22 different prices, from 5 cents to \$1.10. Washer and dryer control centers are vandalresistant; coin boxes are larger than previous models. / Maytag Co.



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519 LAUNDRY FOLDER / Up to four lanes of primary folding at speeds up to 200 ft per minute can be accommodated by the "Omega" folder. Simpleto-operate solid-state controls permit by-passing of primary and cross-folds at will, as well as automatic rejection of unsatisfactory items. / G. A. Braun, Inc. GB*

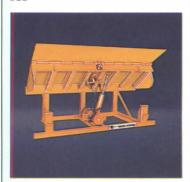
520 ENERGY-SAVING WASHERS

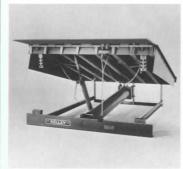
The coin-operated UL-listed commercial washer shown above provides all-cold-water rinse cycles; redesigned pump and tub improve washer performance. Service access door tilts open for adjustments, and has been reinforced for greater vandal-resistance. / General Electric Co. GB*

521 HOTEL WASHER / The "Washmaster 500" washer/extractor for onpremises laundries in hotels, motels, restaurants, and health care facilities, is completely automatic, controlled by a micro-digital computer process. OSHA approved safety door lock is standard. / Econ Systems, Div. of Economics Laboratory, Inc. E*



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LIBRARY EQUIPMENT

522 LIBRARY SHELVING / Steel. laminated, and hardwood end panels may be selected for these single- and double-faced adjustable library shelves. Self-leveling frame is said to be easily assembled without bolts. Atlantic Store Fixtures Ltd.

LOADING DOCK EQUIPMENT

523 HYDRAULIC DOCKBOARD Said to have the live load capacity of a full-size dockboard but needing only a fraction of the space, the Poweramp "Mini-Ramp" lists for under \$1,000. Ramps may be pit-installed or freestanding in 6- and 7-ft widths. / Systems, Inc. GB, ICR*

524 HEAVY-DUTY LEVELERS / This line of mechanical and hydraulic docklevelers has a lip hinge configuration which elimates the front hinge mounting plate, and attaches lip directly to ramp load beam supports for a long service life. / Kelley Co., Inc. GB*



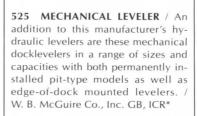
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526 DOCK LEVELER / Special safety features have been included in the design of this spring-powered mechanical-type leveler for permanent pit installation. A lip projector and lip lock ensure that the lip is in a safe position as the ramp rises, then the lock automatically engages to support the lip. / Kinnear Metalcraft, Div. Harsco Corp. GB, ICR*

RESIDENTIAL EQUIPMENT

527 AUTOMATIC WASHERS / Energy conservation improvements on these home and commercial washing machines include five individual temperature combinations with cold water rinse. The top-loading washers use less water per load. / SpeedQueen Div., McGraw-Edison Co.



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528 REFRIGERATOR / "Model 777F" undercounter refrigerator is 24-in. wide and can be installed flush to a wall on both sides: a fan provides air circulation through the toe space. Unit has 6.5 cu ft refrigerated space, and stores 40 lbs of frozen food. It is available in standard appliance colors; a stainless steel door is an option. / King Refrigerator Corp. GB*

529 WASTE DISPOSAL / This ULand CSA-rated disposer has a stainless steel grind wheel and shredder ring for corrosion resistance. "Snap-Lock Mount" uses steel clamps instead of bolts for installation. / Hobart Corp.

530 COMPACT LAUNDRY / The "Thin Twins" is a washer-dryer combination designed for the space and budget limitations of apartment owners, mobile homes, etc. Units can fit side-by-side in about 4-ft of wall space, or they can be stacked or wall-mounted. / Whirlpool Corp.







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531 REFRIGERATOR / The "Serva-Door" feature provides access to the most often used food items without opening the entire refrigerator section. The side-by-side Model "EED251MM" also offers ice and water service through the door. Separate controls allow adjustment of both refrigerator and freezer temperatures. / Whirlpool Corp.

532 MICROWAVE OVEN / Operated by finger touch on the glass control panel, a microprocessor activates all controls for cooking selection and timing. The user can "program" the oven to defrost frozen foods, automatically cook to a preset time, and turn off. Oven is UL-listed, Bureau of Radiological Health. / Tappan Appliance Div. LR*

533 DROP-IN RANGE / Said to use one-third less energy during oven baking, the "Town House" range features closed-door smokeless broiling, interchangeable griddle/grille surface, and a lift-up cooktop. / Modern Maid.



535 MICROWAVE OVEN / Built-in double oven (Model RK 966G) features a lower self-cleaning oven and a microwave upper oven that cooks by time or temperature. The ovens are designed for a 27-in. base cabinet. The variable-power levels on the microwave oven provide a range of approximately 100-625 watts. / General Electric Co.

536 KITCHEN CABINETS / The flush-door, hidden hinge style is available in Formica, in 13 solid colors, and 12 woodgrains. "La Porte" is a slatted door effect. White, washable interiors, a variety of hardware and interior features and accessories, are offered. / Roseline Products, Inc.

537 KITCHEN / From West Germany, this line has pull-out drawers on roller runners; spring-loaded hinges; and toe-kicks that serve as auxiliary storage areas. / Hastings Poggenpohl Kitchens. GB, I*

538 CABINETS / Doors are recessed panel frame construction. Drawer fronts are 34-in, solid hardwood with matching edge design. Heavy duty monorail positive close hardware, 3-point nylon roller suspension, selfclosing hinges, and felt bumpers are supplied. / Connor Forest Industries.

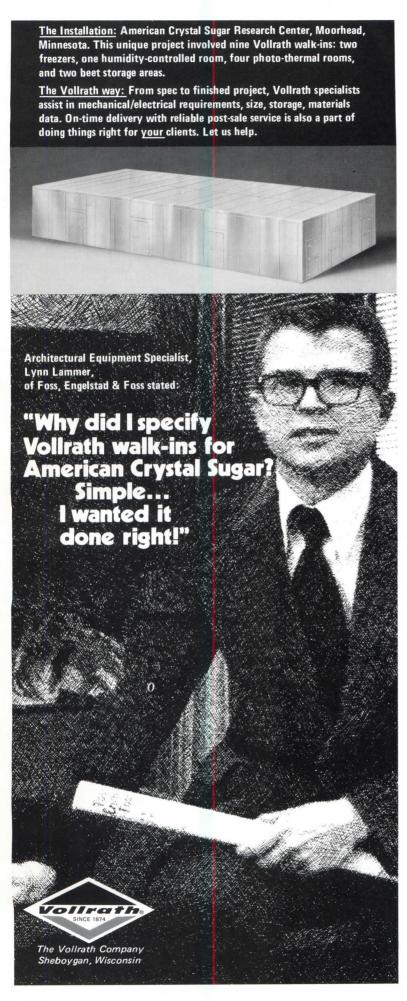
539 KITCHEN CABINET / "Penthouse," a customized kitchen with a full complement of accessories and options, features laminate finishes in either solid colors, or woodgrain. Both come with white Formica interiors. Roseline Products, Inc.

WASTE HANDLING **EQUIPMENT**

540 INCINERATOR / Pyrolytic incinerators have an energy recovery capability ranging from 300,000 Btu/hr on the Model 200 to 2.7 million Btu/hr on the Model 1280 incinerator. The heat recovery system is available to three versions: flue-gas to air; to water; or to steam. / Kelley Co., Inc. GB*

541 TRASH COMPACTOR / An auto-control, multiple story drop chute trash compactor, "Model 2400-40" provides automatic feeding and compaction of loose waste in multi-story buildings with existing waste chute disposal systems. Size: 78 in. high by 401/8 in. wide by 77 in. deep. / The Tony Team, Inc.

542 WASTE COMPACTOR / The "Commander 150" solid waste compactor has light emitting diodes to indicate the stages of operation. An emergency button will stop it in midcycle. Key-operated and push button controls are featured. / Command Products, Div. of Owatonna Tool Co.



For more data circle A62 on inquiry card

Rail & Truck Dock **Shelters**





Proven fuel energy savers. Truck and rail shelters limit air flow at busy loading doors plus they protect workers and products from the elements. Wet, slippery floors and ramps are eliminated.

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Look At Docklevelers Two Ways





To Save Your Clients' Money

VIEW ONE. With today's high labor and material handling costs, more and more owners are realizing they can't afford inefficient plain concrete docks. Many are adding permanent docklevelers to their present docks. . . and insisting they be included in new docks. Why?

Because a permanent dockleveler will pay for itself in less than a year. Some figures show a permanent dockleveler can save \$4000.00 per truck position per year . . . and often give 12 to 15 years service. VIEW TWO. Take an inside look at a Kelley Permanent Dockleveler. Compare it with any other dockleveler. The patented Kelley safety

and operating features — cross traffic legs, single enclosed power pack, lip hinge supports, single adjustment point, plus optional emergency "Panic Stops" — are not available on any other dockleveler. These features are what make Kelley the world's most preferred dockleveler... because they help attendants and equipment operate more efficiently... with far greater safety. So why let your clients settle for substitute docklevelers? Recommend Kelley. Then contact your Kelley Representative. He's well qualified to help you choose the best size and capacity dockleveler for your client's needs.



Kelley Company, Inc. 6720 North Teutonia Avenue Milwaukee, Wisconsin 53209 Phone: (414) 352-1000

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continued from page 115

E04 ACOUSTICAL PANELS / Detailed photos show finishes and fabrics used in the construction of acoustical control screens, wall panels and accessories for use in office landscape applications. Products with a NRC of from .50 to .90 are included; Class A and B panels meet PBS requirements. Also included is a detailed price list. / Techniques In Wood.

E05 WALL PROGRAM / Six-page folder shows an expandable, movable acoustical panel system in three heights: 42-, 58-, and 73-in. Wall frames may be aluminum or oak. / Harter Corp.

E06 LOUNGE SEATING / "Three different systems in one" is said to describe the "VMS" seating series, which consists of club chairs, settees and sofas, plus an ottoman and tables. A four-page color folder introduces the lounge collection designed by Mark Vosbeek. / Harter Corp.

E07 OFFICE SEATING / Six recently introduced office chairs, including desk swivels, secretarials and pedestal base chairs, are shown in a six-page color folder. The "Muffin" upholstered units are offered with bases in Nylon powder coated finish or with optional chrome base. / Harter Corp.

SPECIAL CONSTRUCTION

E08 PORTABLE ENCLOSURES / Selection sheet reproduces the colors available in PortaFab buildings and Penrail and Penciline partition systems. Full physical specifications for the acrylic and baked enamel coatings are given. / Keene Corp., Porta-Fab

E09 SHIELDED ENCLOSURES / Performance data and construction details on both radio-frequency and electromagnetic shielding for hospitals and research centers are given in an eight-page catalog. X-ray protective materials, radiation/blast doors, and nuclear components are also described. / Ray Proof Div., Keene Corp.

E10 MEMBRANE STRUCTURES / IIlustrated with color photographs of air and membrane structures, a 32-page booklet, "Soft Shell Structures," introduces the variety of shelters and enclosures possible using coated synthetic fabric. Applications include exhibition halls, sports arenas, skating rinks, airplane hangars and warehouses. / Helios Tension Products, Inc. E11 STRUCTURAL FIBERGLASS / A four-page brochure describes the design and construction of a 38- by 60-ft pool building using fiber glassreinforced plastic structural pultrusions, rod, bar and sheet. Extren FRP is available in two different resin systems: non-corrosive and fire retardant. / Morrison Molder Fiber Glass Co.

E12 OUTDOOR COOLERS / Prefabricated walk-in coolers and freezers constructed of panels with 4-in. thick foamed-in-place urethane insulating core are said to be ideal for outdoor installation, according to a product handbook. / Bally Case & Cooler, Inc.

E13 COOLER INSULATION / A chart compares the insulation values of this manufacturer's urethane-core metal panels with a number of other products. ASHRAE data and the results of independent tests are included. / Bally Case & Cooler, Inc. GB*

E14 LONG-BAY BUILDINGS / Engineering refinements described in two data sheets allow for column-free bays up to 50-ft long and 60-ft wide. Two metal building systems are discussed: a beam-and-column structure with a gabled roof; and a single-slope building with a virtually flat roof. / Armco Building Systems.

E15 SOLAR HEATING / A 16-page brochure explains the long-term controlled testing involved in the development of the Suncell air-to-air system, and describes the "f-chart method" of analysis of comparative costs and pay-back periods pertinent to solar energy installations in home, office and industrial applications. / Research Products Corp.

E16 LIGHTED CEILINGS / Individual lighted ceilings used by architects to update and showcase financial institutions are shown in color photos in a 12-page brochure. / Integrated Ceilings, Inc.

E17 CEILING SYSTEMS / A 24-page catalog describes a complete "single source" line of acoustical materials, modular suspension systems, Holophane luminaries, and air distribution equipment. Color photographs show actual installations; sound, thermal and fire ratings are included. / Johns-Manville Sales Corp., Holophane Div. GB*

CONVEYING SYSTEMS

E18 SCISSOR LIFTS / A four-page product brochure presents the Titan line of industrial lift tables and upenders, available in capacities of up to 150,000 lbs. / Autoquip Corp. GB, E*

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545 TAPESTRIES / Based on the company's "Architectural Painting" system, the tapestries, in 48- or 72-in. widths, on fire resistant polyester fabric, are produced with their own mounting system. Any scene, art object or design that can be photographed can be reproduced. / 3M Co.

546 WALL HANGING / Three-dimensional fiber sculptures by Ira Shareff combine fur, shells, natural fibers, feathers with leather strips and silk cord, priced at \$1,200. / Tunnel Gallery at Karl Mann Assocs.

547 WORKS ON PAPER / Available as limited editions are prints, embossings, water colors, gouaches and hand painted and collaged banners, all by contemporary artists. Shown: "Katzenjammer," serigraph by Givati, priced at \$165. / Tunnel Gallery at Karl Mann Assocs.



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548 ARTWORK / A collection of sculpture from Africa and New Guinea has been newly acquired by the company. Shown is Baga figure from Guinea, priced at \$600. / Karl Mann Assocs.

CABINETS & STORAGE

549 DRAWER SYSTEM / The "Modular Drawer System" drawers come in five sizes from 3 to 18 in. Drawer fronts can be specified in six finishes including wood veneers. Locks and drawer inserts for pencils, stationery, etc., are available. / Herman Miller, Inc.

550 STORAGE UNITS / One-piece molded plastic "Unicell" components include fronts, shelves, trays, drawers and interfacing subcontainers. Management-supply-distribution systems offer individual units that can be moved on rollers or wall-hung, and freestanding units along with those designed for special use. / Monitor Products.



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551 STORAGE / A rigid storage system for home or office, the "Polvara" group made of rigid polyurethane consists of corner joints, shelves and stacking cubes. / Kartell/Beylerian.

552 SHELVING SYSTEM / The "Criterion-Module" plastic laminate storage systems are assembled at the job site, without use of special tools or skills. Woodgrains and solid colors may be selected from a wide range of available *Formica* or *Texolite* laminates. / Lamica Corp.

553 FILING / Hundreds of magnetic tape reels can be accessible in seconds in this configuration of the *Lektriever 110*. Users can customize the *Lektriever 110* for storing virtually any combination of media, ranging in size from 3 by 5 in. to 11½ by 18 in. / Sperry Univac, Div. of Sperry Rand.

ARTWORK
CABINETS & STORAGE
FABRICS
FLOOR MATS
FURNISHING ACCESSORIES
FURNITURE
RUGS
SEATING
WINDOW TREATMENTS



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FABRICS

554 WOOL / Fabric #98190, "Wheat Grid," is a textured wool, 51-in. wide. It is 100 per cent wool, and recommended for upholstery and wall covering applications. / Scalamandre' Silks Inc.

555 UPHOLSTERY FABRIC / "Jordan" is an upholstery fabric of small, heavily-textured squares in wool with a modacrylic backing for strength. Five neutral tones and red and blue are offered. / Stow/Davis.

556 RIBBED FABRIC / "Hannover" is custom woven in West Germany, of 67 per cent wool, 33 per cent viscose. / Gretchen Bellinger, Inc.



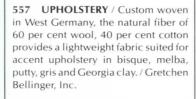
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558 FABRIC PROGRAM / A fabric program for upholstered chairs and "Action Office" fabric-covered components consists of five different fabrics: standard "Action Office" solids, "polynit," vinyl, "hopsak" and "hopsak plus," in 21 coordinated colors. Fire retardancy is now standard on all fabrics except "polynit." / Herman Miller, Inc.

559 WOOL / "Savoie," custom woven in France, is a 51 in. wide, 100 per cent wool face basket weave, with a 10 per cent woven cotton backing. / Gretchen Bellinger, Inc.



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560 GRASS MATS / "Car-Grass" indoor-outdoor mat has a high quality vinyl back to keep water from going through to damage floor coverings. It is available in four colors in standard sizes up to 4 by 8 ft. / American Mat Corp.

561 FOYER GRATING / Embossed grating of polyvinyl chloride can be used indoors or outside. It freespans widths to 18 in., is structurally sound and anti-skid. Available by the square foot or custom-made with stainless steel frame, it may also be furnished with a stainless steel collector tray. / Whitten Corp.

562 MATS / "Kid Futurus" carpet tile is said to exceed the flammability requirements of DOC-FF-1-70. New bonding of rubberized fabric surface to fiberglass back enhances the durability of this all-purpose flooring material, used indoors or out. / Cactus Mat Mfg. Co. GB,I*



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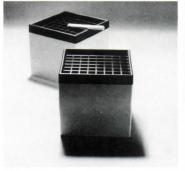
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FURNISHING ACCESSORIES

563 FILING UNIT / "Active File" consists of a shallow steel tray, with a resilient foam pad and steel divider blades inside. Units are available in standard widths of 24, 30, 36, 42, 48, or 60 in., in a range of colors. / GF Business Equipment, Inc. I*

564 ASH TRAY / Desk ash tray comes in white plastic with a chromed top, black interior and measures approximately 12 in. across, and 2½ in. high. Stand has storage for waste paper. It measures 12 in. wide, and approximately 21 in. high. / Hastings Il Bagno Collection.

565 BRONZE PLANTERS / Bonded bronze planters, benches, litter receptacles and smoking urns are scaled for large architectural spaces. Pictured is the 60 in. diameter by 16 in. high planter, with a sculptured texture. / Forms and Surfaces.



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566 ASHTRAYS / Designed by G. De Ferrari and P. Maccarone, these floor and desk ashtrays are made of ABS with melamine grid insert. The floor unit stands 15¾ in. high and is 4¾ in. sq. / Kartell/Beylerian.

567 FIBERGLASS TRAYS / "Toteline" fiberglass reinforced plastic trays and containers come in standard colors, and can be custom molded in any color or with molded-in design. The food handling trays meet FDA, NSF and B.I.S.S.C. standards. / Molded Fiber Glass Tray Co.

FURNITURE

568 TASK LIGHTING / Used in conjunction with the "Series 9000" and "Mobiles" furniture lines, "Lite-Savers" are placed below overhead storage equipment on unit assemblies, or they span open desk work surfaces between end panels. / Steelcase, Inc.



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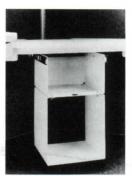
Gae Aulenti, the furniture frame is aluminum extrusion, with fused color finishes. Foam cushion on seating is bonded to curved laminated plywood shell. Chairs and sofas in the line are priced from \$215 to \$1,350 plus fabric. Tables are priced from \$880 to \$1,180. / Knoll International.

570 TABLES / Designed by Charles Pfister, these tables feature mix-and-match finishes on legs and tops. Available with oak, elm or mahogany veneer tops, the tables can also be ordered in solid lacquer colors, with chrome or wood bases. Priced from \$1,348 to \$1,614. / Knoll International.

571 PULL-DOWN BED / Available in twin, double, extra-long twin, extra-long double and queen sizes, the wall bed and night table has a 24-in. recess. Melamine laminate finish in a walnut pattern is standard. / Sico Inc. GB*



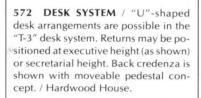
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573 WORD PROCESSING / Designed to facilitate paper handling by word processors, a slide tray and a collection tray are mounted on slides on the bottom of the work surface that holds the typewriter. Both trays are metal and come in white. They have an ASTM-E class A fire rating. / Westinghouse Architectural Systems Div.

574 TABLE LAMP / The #9245 tubular fixture rests on a 7-in. deep base and extends to 13-in. high. It is made of *Trexiloy* metal in a polished "chrome" finish to house one 60 watt tubular lamp. / Architectural Supplements, Inc.



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575 INTERLINERS / "Vonar" interliners improve the flammability performance of upholstered furniture in limited ignition situations. The "Vonar" interliners in limited open flame test situations have been shown to be capable of reducing the likelihood of ignition of furniture as a unit. / DuPont Co., Elastomer Chemicals Dept. I*

576 **DESKS** / A radial, panel end desk series includes full suspension drawers with oak interiors. The series is offered in rift-cut oak veneers and a variety of finishes. / The Gunlocke Co., Inc.

577 OPEN OFFICE / The system's steel frame accommodates a variety of insert panels, including open or glazed panel inserts. The cabinet components provide a standard shelf, a flipper-door cabinet, a lateral hanging file, a pull-out lateral file shelf, or a writing surface that glides out. / American Seating Co., Am Se Co Office Products Group.



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578 WORK STATION / Shown is an "Emetric" open plan office, separated from other work areas by acoustical screens of straight and curved panels. Acoustical panels have an NRC rating of .80, but may be ordered in a higher NRC capacity. Illumination comes from ambient/task fixtures. / Eppinger Furniture Inc. ICR, I*

579 OFFICE SYSTEM / The "Free-Dimensional" system, designed by Warren H. Snodgrass, now offers task ambient lighting, engineered by ITT-Wakefield Lighting. T/AL meets current GSA requirements and is UL approved. The series includes work station lighting, light towers, file-top mini-lights, and adjustable desk-top lighting. / Stow/Davis.

580 OPEN OFFICE / The "Options System" incorporates a range of panel sizes and 20- and 28-in. deep work stations. The midpoint reveal and the underside of the top cap provide a continuous track for mounting worktops and storage components. / Helikon Furniture Co., Inc.

581 TABLE / "TB-7EB" tables feature parts of solid oak butcher block with catalyst lacquer finish; stain colors are available. / Tuohy Furniture Corp.

582 TABLE / "TB-2" tables of 1½-in. thick solid oak butcher block top with radius edges have bases of 14 gauge steel columns, solid bar stock legs, cast iron spiders, and rubber cushion glides. / Tuohy Furniture Corp.

583 DORM FURNITURE / Wood dormitory furniture includes moderately priced desk, chest, bookcase, bed and wardrobe that utilize a metal framework with a solid wood shell. / Adden Furniture.

584 EXECUTIVE PLAN / Action Office "Options Program" offers dark stained wood veneers for panels and components, chrome trim, smoked Plexiglas panels and a dark-tone finish on panel frames, file bin tops, paperhandling devices, etc. / Herman Miller, Inc.

585 ENGINEER STATIONS / Technical work stations and office components in the Action Office furniture systems include service table; 36-in. deep work surfaces; wide project drawers; rolled drawing storage unit; drawer caddie; panel-hung drafting board; and panel drawing clip. / Herman Miller, Inc.

586 CASEWORK / System features sliding chalkboards; storage space for catalogs; sliding projection screen; choice of woodgrains or solid color exteriors (high pressure laminate); and concealed hinges. / Lamica Corp.

587 TABLE LAMP / Hidden light source diffuses light so that there is no glare. Top shade can be swung aside allowing for a direct upward spot. Lamp comes in polished chrome and colors. / Koch + Lowy Inc.

588 OVERHEAD CABINETS / Laminated particleboard construction faced in white oak veneer is featured in this line of cabinets with up-lights. Various sizes are available. Reveal strips are painted black and exposed portions of hangers are mirror polished, copper-nickel-chrome. / JG Furniture, Div. of Burlington Ind.

589 TASK LIGHTING / The "F" light fastens to the desk top and has a twolamp housing. Support column is available in either mirror polished aluminum or white baked enamel. Options include an oak valance, silver parabolic louver, and convenience outlets on support columns. / JG Furniture, Div. of Burlington Ind.



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590 MACHINE STATION / Primary and secondary work surfaces extend from a utility kiosk which houses a HID ambient light fixture and provides space below for task oriented microcomputers. A slot along the rear edge of the work surfaces allows electrical wires to be dropped into the system's hollow walls. / Harvey Probber Inc.

591 LIGHTING / Ambient/task HID lighting features a patented optics chamber, with a horizontally mounted lamp that eliminates ceiling "hot spots." "ESP" indirect luminaires are available either as a 72-in. freestanding optics unit or as a panel postmounted unit integrated with the "ESP" open office furnishings. / GF Business Equipment, Inc. I*

592 PANEL SYSTEM / The redesigned panel system features lightweight, clean-lined panels and a range of panel sizes: 42 in., 51 in., 62 in., and 79 in. Vertical slots are used to attach and support hang-on components. / GF Business Equipment, Inc. I*

593 OFFICE SYSTEM / The "soft" "PAS System" has been expanded to offer panels that are: soft, tackable and acoustic; see-through; and curved. Work surfaces are manufactured in oak veneer, plastic laminate and vinyl covered versions. / Sunar Ltd.

594 KD MODULES / Desks, runoffs and machine table and machine, storage, and file enclosures are modular, allowing for KD shipments. Modularity allows the designer to use purely or mix and match natural oak veneer with nugget brown plastic laminate. / Sunar Ltd.

595 LIGHT FIXTURES / Four portable indirect lighting fixtures, each with an exclusive optical chamber, may be used individually or in combination to provide uniform lighting for offices, lobbies and reception rooms. / Specified Products, Inc.

596 CERAMIC LAMP / Moderately priced ceramic table lamps, wall sconces and kerosene vessels, designed by Stuart Barnes, are made from oxidation fired, fully vitrified stoneware with matte glaze. They are offered in eight colors and opaque white. / Robert Long Inc.

RUGS

597 WOOL RUG / "Canson" is a 100 per cent hand-tufted wool rug or carpet. The ribbed corduroy look is achieved by a shirred wool high ridge and a low loop. Custom colors are available. / V'Soske, Inc.

598 WOOL RUG / Shown is a 100 per cent wool rug with a smooth, fully sheared high level and a low loop, pebbly level. Custom colors available. / V'Soske, Inc.

SEATING

599 STACK CHAIR / "Model 1300" can be stacked or ganged in rows. Available with optional fixed or tiltable armrests that fold out of the way for unlimited stacking, it is available in laminated wood or upholstered nylon fabrics. / Clarin Corp.

600 PULL-UP CHAIR / Designed by Don Albertson, the occasional chair with oval-shaped, chrome-plated steel tubing is available in two sizes—medium and large—and with cushion covers in a variety of fabrics and colors to fit into any color scheme. Priced from: \$150-\$261 (medium chair); \$175-\$315 (large chair). / Westinghouse Architectural Systems Div.

601 CIRCLE SEATING / A choice of fabrics, colors, and textures is offered from polyesters to wools. Designed by Leif Blodee, the grouping is composed of chairs with foam over a tubular steel and plywood inner frame. Cast iron connectors lock into the lower rim of individual pieces. / American Seating Co., Am Se Co Office Products Group.



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602 CHAIRS / Special purpose chairs will accommodate work surface heights of 29 through approximately 43 in. A semi-hydraulic "Auto-Lift" control, actuated by a lever under the seat, allows instant up and down adjustment of the seat height. Model "9027" has a foot-ring fixed to the base. / Cramer Industries, Inc.

603 OFFICE SEATING / The "700 Series" features oval tubular chrome bases and arms. Four or five leg bases are offered on all except sled base models. Detailing includes welded caster sockets and polished chrome end caps. / All-Steel Inc.

604 LAMINATED CHAIR / The "Skagen" chair is laminated of many layers of oak veneer. A selection of natural cane, all-oak veneer, or upholstered seats and backs is offered. / R-Way Furniture Co. I*

605 LOUNGE SEATING / Seating is offered in tailored upholstery in leather, or fabric with contrasting leather or grosgrain welting. A seat and back supporting frame made of cold rolled profiled steel is embedded in cold molded polyurethane foam. / B & B America.

606 SIDE CHAIR / The "Aurora" occasional chair is available with a sled runner base and with a swivel base. Frame is a plywood shell, foam upholstered. It may be covered in fabrics, vinyls, leathers or suedes, or C.O.M./ Stendig, Inc.

607 ARMCHAIR / "Sioux," designed by Eero Aarnio, is offered in solid oak, carved, curved, and joined so that the entire frame seems to be molded from a single piece of wood. Seat and back cushions are made of polyurethane foam and covered in fabrics or C.O.M. / Stendig, Inc.

608 REED ARM CHAIR / This hand woven reed chair with a tapered arm that will fit under any table of standard height, is coated in matte acrylic for protection. It is available with swivel, on glides, with hooded ball casters, and executive mechanism. The chair comes with upholstered seat and back attached with Velcro. Priced at \$188 (list). / Jansko Inc. I*

609 EXECUTIVE CHAIR / "T-Back 2494 M" chair comes in two heights, for middle and upper management levels. / The Gunlocke Co., Inc.

610 GUEST CHAIR / The "De Fuccio 2505" chair is a solid oak, bent wood chair offered in four color finishes, including tangerine, brick, yellow, and blue, as well as a standard range of oak finishes. / The Gunlocke Co., Inc.

611 GUEST CHAIR / A bent ply guest chair designed by William Sklaroff combines a solid wood back post with radial bent plywood and a segmented seat cushion. / The Gunlocke Co., Inc.

612 TABLET ARMCHAIR / The "TAB" tablet arm is available on a group of contemporary shell chairs. Priced at \$198.50. / Gregson Mfg. Co.

613 LOUNGE CHAIR / The "Camacho" chair designed by Claudio Cadei can be upholstered in over 100 fabrics from the company, or in C.O.M. The chair measures 32 in. high, 46 in. wide, and 40 in. deep. / Fortress, Inc.



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614 STACKING CHAIR / The stacking arm chair is constructed of solid red oak and stacks seven high. Avail-

red oak and stacks seven high. Available in an upholstered or all-wood version, the chair is part of the new "Everywhere Series" of solid red oak tables, chairs, and lounge seating. A dolly for 14 chairs is also available. / Adden Furniture.

615 STOOLS / As the latest addition to the family of "Ergon Chairs," the "Ergon Stool" accommodates different body sizes and postures. It can be specified with a round or oblong backrest and seat heights range from 24¼-28¼ in. to 27½-31¼ in. / Herman Miller, lnc.

616 OFFICE SEATING / The "Rollback Chair and Stool" feature a cylindrical rollback mechanism which adjusts up and back in seven positions. Available with or without armrest, chairs are upholstered in 21 colors or striped fabrics. / Herman Miller. Inc.



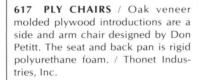
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618 OAK SEATING / A round solid oak connecting device is simply attached between the lateral molded plywood stretchers to form a modular seating unit. A similar ganging device is also available with the armchair. / Thonet Industries, Inc.

619 SEATING SYSTEM / The "Flex" seating system has a black polyethylene shell that fits on round solid oak leg posts. Connecting elements are rounds of solid oak affixed by simple screws. / Thonet Industries, Inc.



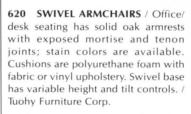
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621 LOUNGE MODULES / "Mesa 6," designed for use in single unit applications or in linear or geometric arrangements, includes a lounge module, ottoman, low table, planter, waste receptacle, and display case, each in a 30- by 30-in. oak butcher block base module. / Tuohy Furniture Corp.

622 CHAIR / The "St. Olaf" chair may be used individually in armchair or side chair applications. Stacking armchair has solid oak parts. Contoured plywood seat and back has polyurethane foam padding and fabric or vinyl upholstery. "St. Olaf" chairs are available with brass-plated steel interlocking connectors. / Tuohy Furniture Corp.



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623 CHAIR / The "Lambda" chair frame parts are solid oak with radius edges; standard finish is catalyst; stain colors are available. The molded seat is polyurethane foam bonded to contoured plywood with fabric or vinyl upholstery. / Tuohy Furniture Corp.

624 CHAIR / Frames of flexible Finland plywood with flat surface of melamine laminate in specifier's choice of color or pattern have clear finished edges. Over-all width: 22 in. *Karin* was designed by Gunter Eberle. Vecta Contract.

625 MODULAR SEATING / Modular reception or lobby seating, featuring squared-off and wedge-shaped modules; the "810 series" is available in 28-in.-wide modules. The seat height is 17 in. / Mueller Furniture Corp.



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626 MIES REPRODUCTIONS /

These reproductions include the MR reclining frame chair (1932); the MR armless chaise lounge and coffee table (1931); and the Tugendhat chair with arms (1929). All the upholstered pieces are in leather or fabric. / Knoll International.

627 OFFICE CHAIRS / The Morrison / Hannah "2308" office chair comes with swivel or swivel tilt base, and with casters and glides. Bases come in polished aluminum or high gloss fused color finishes. Removable foam cushions with plywood insert attaches to frame with either button or cord. Priced from \$350 to \$461. / Knoll International

628 BREUER CHAIR / Designed by Marcel Breuer, the "MB Lounge Chair" is tubular steel upholstered in leather or fabric over rubber and steel suspension. Arms can be in hardwood, ebony finished; solid oak, lacquer finished; or upholstered over foam and hardwood. Priced from \$482 to \$547. / Knoll International.



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629 FIBER SEATING / The "Artisan Collection," applicable for both contract and residential use, includes chairs, tables, seating and storage in a variety of fibers that are woven over wood and steel frames. / Harvey Probber, Inc.

630 FLOATING SEATING / The seat, back and table elements are suspended above invisible steel support structures, and the bases are available fully upholstered as shown or in solid oak. The seats are high resilient foam molded into vacuum formed plastic shells. / Harvey Probber, Inc.

631 TWO-SEAT SOFA / "Dominque," a two seater, features quilted seat, back and side cushions suspended between structural support columns. It was designed by Charles C. Keane. / Harvey Probber, Inc.



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633 MODULAR SEATING / The "Centa" element can be used as a single chair, or lined up for multiple seating. Designed by Tito Agnoli, it combines a chrome frame with leather upholstery. / Arflex/Beylerian.

634 LOUNGE SEATING / "Strips" is a collection of armchairs, sofas, beds and tables. The outer lining is a quilted, stitched covering divided into separate sections held together by zippers and attached to the frame with snap buttons. Covering is removable. / Arflex/Beylerian.



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635 CONFERENCE CHAIR / This design by Milo Baughman is constructed of natural finish rounded oak. Also available in a dark oak finish, the chair features a tight seat and back which is upholstered in a wool and nylon blend fabric. Priced at \$357 (list). / Thayer Coggin Institutional, Inc.

636 EXECUTIVE CHAIR / This swivel-till executive chair designed by Milo Baughman features a reversible seat cushion and a half-round chrome plated steel base. The curvilinear shaped arms, back and seat are upholstered in a wool and nylon blend which meets all fire codes. Priced at \$463 (list). / Thayer Coggin Institutional. Inc.

637 SWIVEL CHAIR / A high back swivel executive chair by Milo Baughman features two reclining positions. The oak trimmed arms and base of the recliner are available in a natural or dark finish. Upholstery fabric shown is a blend of wool and nylon. Priced at \$695 (list). / Thayer Coggin Institutional, Inc.



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638 OAK-TRIMMED SEATING / Designed by Milo Baughman, the seating has rounded oak perimeters on the sofa, loveseat, and the lounge chair. All are upholstered in a polyester and nylon blend fabric. The cocktail table (\$240) and the pedestal table (\$138) are in mitered melamine laminate. Seating list prices range from \$770 to \$957. / Thayer Coggin Institutional, Inc.

639 LOUNGE SEATING / "VMS" designed by Mark Vosbeek is three systems in one: curved modular; rectilinear seating; or unit seating with club chairs, settees and sofas. Armless, arm units plus cube, ottoman, and tables are offered. Priced from \$259 to \$1,004 per unit. / Harter Corp.

640 MUFFIN CHAIRS / "Muffin" series of six office chairs designed by Kuypers Adamson Norton Ltd. features seats and backs that are blowmolded from high-density plastic. Nylon powder coated finish is available in six colors on arm and armless models. Priced between \$136 and \$250. / Harter Corp.



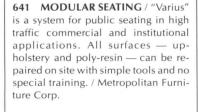
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642 SIDE CHAIR / Designed by Jay Heumann, the chair is intended for multi-purpose applications: side chair, pull up chair, small conference chair, etc. The #536 features oak or walnut arm and leg. / Metropolitan Furniture Corp.

643 SOFT SEATING / The "539 Series" has a sculptured soft arm detail and the "540" uses separate arm pillows. Both groupings are available in a range of sizes including corner and "U"-shaped sectionals. / Metropolitan Furniture Corp.



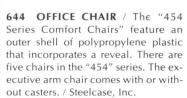
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645 OFFICE CHAIRS / The *Responsive Group*, one of four chair groups comprising *Function Formula Seating*, was developed by Wilkhahn of West Germany. *Responsive Group* chairs are available in a variety of low-, mid-, and high-back configurations, with or without arms. / Haworth, Inc. 1*

WINDOW TREATMENT

646 SHUTTERS / Curvilinear shutters are available with $1\frac{1}{2}$, $2\frac{1}{2}$, $3\frac{1}{2}$, and $4\frac{1}{2}$ -in. wide louvers, available in both horizontal and vertical styles. / Pinecrest Inc.



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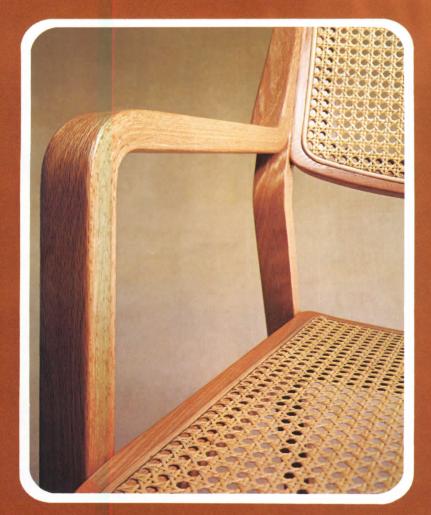


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647 SHUTTERS / Shutters are available in 2½, 3½, and 4½-in. wide louvers, for vertical and horizontal windows, room dividers, doors, bifolds, in 30 colors. / Pinecrest Inc.

648 SHOJI PANELS / Shoji screens, room dividers, doors, and window treatments are offered, with many additional designs available. / Pinecrest Inc.

649 MINI-BLINDS / One-in. aluminum slats and tapeless construction, plus a clear plastic tilt wand and raising cord, are features of "Classique" blinds, available in 57 colors. Sizes are available to fit small windows up to large expanses of glass. / Liken Home Furnishings.



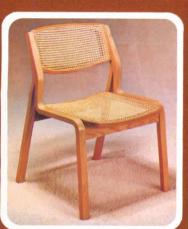
R-WAY

Distinctive, functional and versatile. The Skagen™ chair series combines the strength and natural beauty of laminated oak...the aesthetics and sympathy of discriminating design, and the well known quality of R-Way craftsman ship. Truly outstanding seating.

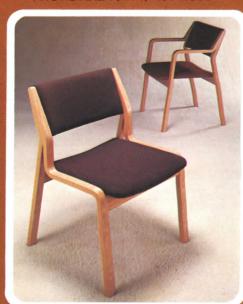
Write for the complete color catalog. Patent Pending.

the Ichair SKOGEN

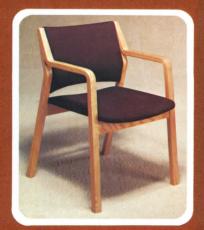
R-WAY FURNITURE COMPANY SHEBOYGAN, WISCONSIN 53081 PHONE AREA (414) 457-4833





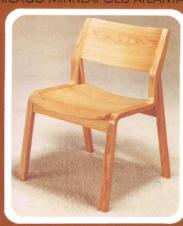


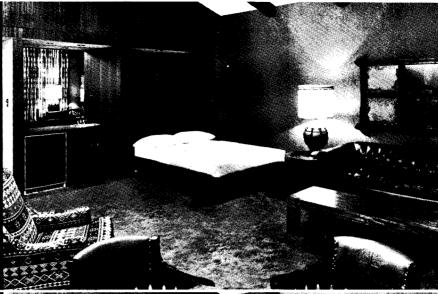
SHOWROOMS . DALLAS SEATTLE SAN FRANCISCO NEW YORK CHICAGO MINNEAPOLIS ATLANTA













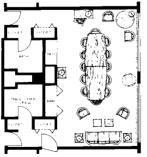
When the bed goes up and the meeting begins, good things start to happen. Things like meeting room sales, catering service sales for coffee breaks, lunches, dinners and drinks. Plus equipment rental, extra phone calls and miscellaneous in-store sales.

These sales are all in addition to the higher revenues from rooms utilizing the SICO convertible concept. Major hotels report that because rooms equipped

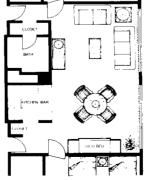
with SICO wall beds and multi-use furniture command higher rates, they can produce one-third more revenue than conventional rooms, and sell additional rooms to those attending the meetings. In addition, results indicate that when 15% of a hotel's rooms are SICOequipped and a strong marketing plan is developed, bottom-line figures rise considerably. Mail the coupon below for the complete story.



The SICO Single Convertible Parlor, for business people who plan to hold meetings of from 2 to 12 people.



The SICO Double Convertible Parlor is for medium size meetings of from 12 to 20, and is the approximate size of two double bedrooms.



The SICO Convertible Suite is the answer for those who need spacious multi-purpose

FREE BROCHURE Get all the facts on how you can take advantage of this high-profit. fast-growing market. Write or phone today.

Name	Property	
Title		<u>.</u>
Address		
	State	Zip

Phone (Your inquiry answered within 24 hours.)

P.O. Box 1169, Dept. AR10 Minneapolis, MN 55440 Phone: (612) 941-1700 Cable: WILSICO

For more data circle A74 on inquiry card

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INTEGRATED CEILINGS

662 INTEGRATED CEILING / This grid offers uninterrupted regress, reveal edge flanges and full mitered flanges at all intersections. Roll formed from 25-gauge steel, ceiling locks together in three planes to meet vertical, lateral and torsional loads. / Johns-Manville Sales Corp., Holophane Div. GB*

PREFABRICATED BUILDINGS

663 PRE-ENGINEERED STORE / The commercial purpose single-slope building system features a soffitted setback area at the front wall that permits individual store fronts. Available in lengths from 621/2 ft to unlimited increments of 20-, 24- or 28-foot bays. / Armco Building Systems.

664 PORTABLE HOUSING / "Trans 10" can be used wherever quick, portable housing is required. Sizes range from 3m to 3m (approx. 10- by 10-ft) up to 3m by 6m (approx. 10- by 20-ft); all are completely portable by use of fork lift trucks. Priced from \$4,400. Pease Co., Builder Div.

665 PRESS BOXES / Fully-assembled units are prewired and prefabricated to NEC and BOCA standards, easy to install and maintain, and can be equipped with shelving, air conditioning, restrooms, plus many other options. / Keene Corp., Porta-Fab Div.

666 IN-PLANT OFFICES / Available with thermal, sound control or fireretardant cores, modular-type panel systems are equipped with ribbed steel dust covers as standard equipment as well as with acoustical ceilings in two-, three- or four-wall units up to 20 sq ft and 12 ft high. / Keene Corp., Porta-Fab Div.

667 BUILDING SYSTEM / A preengineered structural system with straight sidewall columns in place of traditional tapered members, the "WBF-II" system is available in 40-, 50- and 60-ft widths offering bays of 20, 25 and 30 ft. / Butler Mfg. Co., Buildings Div. GB, ICR*

668 STRUCTURAL SYSTEM / A new metal diaphragm roof and structural system called "MBF" uses preengineered metal roof and structural components with load bearing tilt-up or precast concrete walls. The standard primary structural system consists of a single or multi-span simple span trusses in 10-ft increments. / Butler Mfg. Co., Buildings Div.

669 TWO-STORY SYSTEM / A twostory structural system, which utilizes a dry floor that can accommodate all normal floor loadings, features a double lock, standing-seam roof. The structural system will accept all of the company's curtain wall offerings, as well as conventional curtain walls. / Butler Mfg. Co., Buildings Div. GB,

670 INSULATED BUILDING / "Energy Miser" insulated buildings feature wall and roof sandwich panels composed of exterior steel faces and finished interior faces with 21/2 in. of polyurethane foam insulation in the middle. The panels are factory fabricated as furnished units. / Stran Building Div., National Steel Products Co.

INTEGRATED CEILINGS PREFABRICATED BUILDINGS RADIO-FREQUENCY SHIELDING **SOUND & VIBRATION CONTROL** SPECIAL PURPOSE ROOMS **SWIMMING POOLS** TOTAL ENERGY SYSTEMS



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RADIO/FREQUENCY SHIELDING

671 LEAK DETECTOR / Portable, battery-operated RF Leak Detector (Model RP-948-1) assures integrity of radio-frequency shielded enclosures and structures. A self-contained DC power supply pack is also provided. / Ray Proof Div., Keene Corp.

SOUND & VIBRATION CONTROL

672 NOISE CONTROL / Eckoustic functional panels reduce background noise and reverberation in auditoriums, gymnasiums, etc., and can be attached in a uniform pattern on walls or ceilings. / Eckel Industries, Inc. GB*

673 NOISE CONTROL ROOM / The *TEC* noise barrier panel system — a patented component system of 2-in. acoustic panels, connectors, floor channels, and ceiling caps—provides an efficient method for quickly isolating and protecting people from noisy equipment and machinery. / Eckel Industries, Inc.



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SPECIAL PURPOSE ROOMS

674 ANECHOIC CHAMBER / The chamber walls, floor and ceiling are lined with carbon-impregnated foam pyramids to absorb stray microwave radiation. The entire room is completely shielded from outside electromagnetic interference. / Keene Corp., Ray Proof Div.

675 COOLER DOOR / Door assemblies for walk-in coolers-freezers feature spring loaded, self-closing hinges and magnetic vinyl door gasketing. When the door is within 10 per cent of being closed, a piston action, automatic door closer is triggered to engage and close door. / Nor-Lake, Inc. GB*

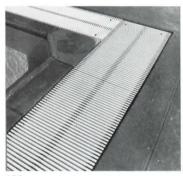
676 SAUNA HEATER / Although the company builds pre-fabricated saunas, they are suggesting the use of this heater with custom designed saunas. The heater features stainless steel construction, is designed for wall mounting, but is convertible to floor standing. / Viking Sauna Corp. of Canada.



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SWIMMING POOLS

677 SWIMMING POOL / System is especially suited to elevated sites. The self-supporting structured aluminum sidewalls contain all perimeter piping. The all-aluminum welded floor is designed to compensate for contraction, expansion, and shear movement, and the leakproof tank carries a five-year warranty. / Chester Products. Inc. GB*

678 POOL / PassWall wall section shows patented recirculation gutter and stainless (12 gauge) steel wall with backup welded buttresses. Underwater light is optional. / KDI Paragon Inc. GR*

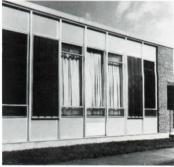
679 OVERFLOW TRENCH / Freespanning widths to 18 in., this overflow trench cover grating of rigid polyvinyl is impervious to swimming pool chemicals, is non-metallic and never needs coating or refinishing. It is vandalproof and can be supplied with permanent depth markers in red or black. / Whitten Corp. GB*



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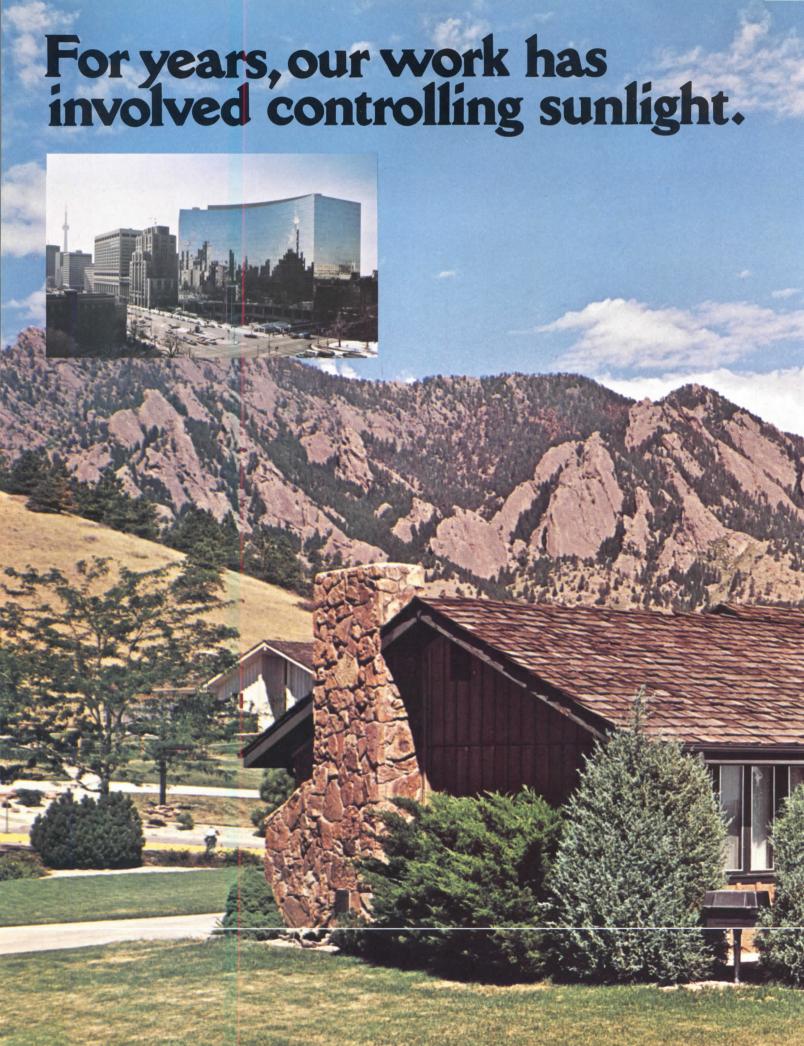
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TOTAL ENERGY SYSTEMS

680 SOLAR COLLECTOR / The "2000" flat plate air type collector is pre-assembled, and multiple units can be butted together and bolted in place. The unit can be used in commercial, industrial and residential applications for makeup and forced air heating, hydronic space heating, domestic and process hot water, and process hot air drying. / Solaron Corp. GB, ICR, E*

681 SOLAR FURNACE / The furnace has a row of collector/storage tubes placed close to the solar window wall. Natural convection currents move the air around the tubes. A 20-ft long, 8-ft high furnace could provide over 150,000 Btu's of heat on a sunny day. / Solar Components Div., Kalwall. ICR*

Airheater" is installed as the wall of a building, or outside of existing walls or roofs. When fitted to a south wall in most areas of New England, such a collector can be expected to produce the heat equivalent of about one gallon of fuel oil per heating season for each sq ft of collector area. / Solar Components Div., Kalwall. ICR*



OFFICE LITERATURE / Divisions 14, 15 continued from page 124

E19 VERTICAL CONVEYORS / Materials handling equipment for offices, banks and hospitals are outlined in a 12-page brochure on selective vertical conveyor systems. / Acco, Chain Conveyor Div.

E20 CHAIN HOISTS / An improved line of *Write-way* electric chain hoists, with a tension-type overload cutoff device that is independent of hoist gearing, is described in a 12-page color brochure. / Acco, Hoist & Chain Div.

E21 ELEVATOR CONTROL / A product bulletin introduces the Miprom—microprocessor elevator logic control—designed for massmarket elevators in low- and medium-rise buildings using geared traction and oil hydraulic units. / Montgomery Elevator Co. GB, CC*

E22 CHAIN HOISTS / Hand and electric hoists, trolleys and accessories are described in an illustrated catalog. Load capacity and lifting speeds are listed. / CM Hoist Div., Columbus McKinnon Corp. E*

E23 CONVEYOR COVERS / A 12-page illustrated brochure describes design and installation of longitudinal (overland), circumferential (on site), and gallery (full enclosure) corrugated steel conveyor covers. / Armco Steel Corp., Metal Products Div.

E24 DOCK LEVELERS / Both mechanical and hydraulic docklevelers for permanent industrial applications are explained in a four-page brochure. Ramps, bumpers and loading lights are also shown. / Kelley Co., Inc. GB*

MECHANICAL

E25 HVAC PRODUCTS / A full line of air-handling equipment is shown in a 16-page illustrated catalog. Included are rooftop units, VAV terminals, heat recovery equipment, etc.; specialized brochures are listed for each product. / McQuay Group, McQuay-Perfex Inc.

E26 ROOFTOP PACKAGE / An eight-page bulletin describes weatherproof *Roofpak* central station air handlers. The catalog is illustrated with a detailed cut-away drawing of the unit; diagrams show the available arrangements. / McQuay Group, McQuay-Perfex, Inc.

E27 WATER COOLERS / A shortform catalog shows representative selections of the manufacturer's "Deluxe," "Standard Plus" and "Spaceette" series, as well as bottled water coolers. Catalog provides dimensional data and color options. / Elkay Mfg. Co. GB*

E28 FINNED-TUBE RADIATORS / Steam and hot water radiation heaters are shown in a 40-page catalog. Complete engineering and dimensional data are given for the Versa-Line steel or copper/aluminum finned-tube units; photos show the heaters in place. / Sterling Radiator, Div. of Reed National Corp.

E29 AC UNITS / A 20-page illustrated catalog provides performance data, physical data, cooling coil application ratings and hot water heating capacities for *Seasonmaker* fan coil air conditioning units for apartments, hotels and offices. / McQuay Group, McQuay-Perfex Inc.

E30 TWO-HANDLE FAUCETS / Color photographs show several models of "Crystal-Glo" faucets for kitchen, lavatory or tub. The 83½-year *Bradseal* cartridge valve warranty is explained. / Bradley Corp.

E31 DRINKING FOUNTAINS / Stainless steel and pre-cast stone fountains are illustrated in a short-form catalog. Each drinking fountain is described; color and finish options are listed. / Elkay Mfg. Co.

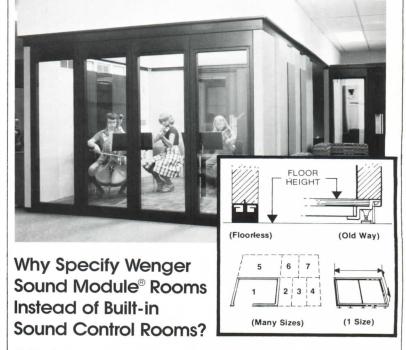
E32 HEAT PUMP / The energy savings possible with the "50RQ/PQ" heat pump are detailed in an eightpage product brochure. A chart compares cooling and heating efficiencies with other brands. Physical and ASHRAE data are given for the three units in the line. / Carrier Air Conditioning.

E33 SHAMPOO LAVATORY / Color folder features the "Carousel" lavatory, 25½-in. wide by 16-in. deep, which has a swing-away spout and special retractable spray and hose fitting for convenient shampooing, baby baths, etc. / Eljer Plumbingware. E*

E34 VAV SYSTEM / The low-pressure-loss design of these variable air volume terminal units is explained in an illustrated catalog. The system's major components, including the linear throttling valve and matched plenum slot diffuser, are described. / Carnes Co., Div. Wehr Corp.

E35 BASEBOARD HEATERS / Heavy-duty metal fronts (16- or 18-gauge) are featured on the *LB* 2 commercial/institutional baseboard radiation heating units. Product ratings are given in a four-page brochure; section drawings show dimensions. / Sterling Radiator, Div. Reed National Corp.

SOUND DESIGNI



GUARANTEED RESULTS—that's why Wenger preengineered Sound Module® rooms are a better choice than built-in rooms. You are **SURE** of specified sound isolation and you get a **KNOWN** acoustical presence within the rooms.

THREE MORE BIG REASONS:

- -OVER 50 SIZES AVAILABLE.
- -FUTURE FLEXIBILITY FOR CLIENT (rooms can be moved—even to another building)—can be changed in size and configuration.
- FLOORLESS CONSTRUCTION lowers cost; means no marring of floors since there's no permanent attachment to building.

See Sweet's Architectural File (13.18/WE) for details and specs. Then call us **TOLL FREE**: 800-533-0393 (In Minn., call (507) 451-3010 **COLLECT**).



5810K Wenger Building Owatonna, Minnesota 55060

- GUARANTEED
 SOUND CONTROL
- FLEXIBILITY
- LOWER COST

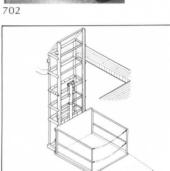
For more data circle A79 on inquiry card

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CONVEYORS & CHUTES

695 PALLET CONVEYOR / A modular materials handling vertical conveyor has a maximum lift height of 80 ft, a maximum rate of 240 loads per hour, and a maximum load of 4000 lbs per platform. System transports cargo to any level, and discharges it onto interfacing equipment at speeds up to 130 ft per minute. / Z-Loda Corp.

conveyor brush / A rotary cylinder type conveyor cleaning brush with no-load rubber bristles to prevent caking of materials can be ordered for off-the-shelf delivery. Minet "RM 2" abrasion resistant, open face, pure, natural gum rubber brush is designed for heavy use while reducing belt wear. / General Splice Corp.

697 MATERIALS HANDLING / "Telelift" automated document-handling and materials-distribution systems carry anything weighing up to 20 lbs automatically from any station to any of 1000 possible stations within the system. Each self-powered car moves at about 100 ft per minute. / Mosler — An American Standard Co. GB,E*

698 STORAGE/RETRIEVAL / A

Monobloc tunnel-picking system, which provides integration of order-picking and storage operations, handles 12,000 different items and permits 3,000 picks to be made daily. The picking tunnels, measuring 12 ft wide and 11 ft high, are located at floor level within the center three rows of racks. / Acco, Integrated Handling Systems.

699 DOCUMENT CONVEYOR / Orda-Flo includes heavy duty belt drive units, and wide radius corners that convey documents. Many optional accessories are available including work stations, veneer side panels, inclines, and station drop boxes. / Acme Visible Records, Inc.

ELEVATORS

700

700 HOLELESS ELEVATORS / Holeless hydraulic elevators, with new provisions for the handicapped, have capacities of 2000 and 2500 lbs and travel at speeds of up to 125 ft per minute for two or three stops. The "HLS" line incorporates a sidemounted telescoping plunger with a cantilevered car frame. / Otis Elevator Co. GB*

701 PRE-ENGINEERED ELEVATOR

The line includes 35 models, ranging from a 1500-lb capacity "add-on" elevator to 4500-lb hospital-size geared traction units. Included in the line are both hydraulic and traction elevators designed for the special needs of the handicapped. / Dover Corp., Elevator Div. GB*

702 PRE-ENGINEERED ELEVATORS

/ Pre-engineered elevators with solid state controls are easy for handicapped persons to use. Dimensions comply with U.S. Housing and Urban Development Department Minimum Property Standards. With a 2,000-lb capacity, for 13 passengers, they have 9 per cent more space than standard 2,000-lb elevators. / Otis Elevator Co. GB*

LIFTS

703 VERTICAL LIFTERS / The lifters are freestanding and manufactured in modules so that they can be installed in existing buildings. The machines are available in capacities from 500 to 50,000 lbs. and lift heights to 60 ft. / Giant Lift Equipment Mfg. Co., Inc.



CONVEYORS & CHUTES ELEVATORS LIFTS

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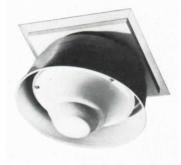


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AIR DISTRIBUTION EOUIPMENT

716 CEILING/WALL FANS / Fans designed for installation by do-ityourselfers, and easy to decorate with either paper or paint, come with either a plastic grille or the conventional aluminum one. / Miami-Carey Co.

717 HEAT RECLAIM / The heat reclaim unit is a combination exhaust/supply fan and "Q-Pipe Thermal Recovery Unit" in one housing, designed specifically for commercial kitchens. The thermal recovery unit salvages waste heat from the exhaust air and uses it to temper make-up air. Gaylord Industries, Inc. GB*

718 POWER VENT / The "Fumex-8" UL-listed power vent removes smoke, grease, fumes, and odors from home kitchens, laboratory hoods, and other small volumes. Aluminum impeller, parts and housing can be painted. Unit uses standard house current, with a maximum input 120 watts. / Penn Ventilator Co., Inc.

719 PROPORTIONER SYSTEM / An incremental system for use in new and renovated structures, the proportioner is a compact modular unit incorporating heat reclaim, a built-in economizer cycle, and automatic summer/winter changeover. The proportioner system blends outside air and return air and delivers it to the conditioned space. / MKM Corp.

720 VARIABLE AIR VOLUME / "VariTrane" variable air volume units can be used in schools to office buildings. "VariTrane" control terminal units are equipped with an integral linear slot-type diffuser. / The Trane Co. GB, ICR*

721 DOUBLE-FILTRATION UNIT / Specifically for hospitals and health clinics, the "Weathermaker" air handling unit Model 39E can, with options, provide precise cooling, dehumidification, heating, humidification, circulation, and high efficiency filtration in 13 blow-through sizes with capacities ranging from 2,500 to 63,000 cfm. / Carrier Air Conditioning.

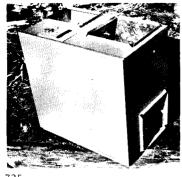
722 FIBER GLASS DUCT / "Micro-Aire HV-3" rigid round duct is a high pressure, high velocity, preformed fiber glass duct specifically designed for VAV energy-efficient heating and cooling systems. The cylindrically formed sections are covered with a tough triple-layered, fire-resistant scrim reinforced foil jacket. / Johns-Manville, E*

723 FIBER GLASS DUCT / "Micro-Aire J/FLX" is a UL 181 Class I labeled. flexible, insulated air duct designed for both heating and cooling applications in low pressure air conditioning systems. Micro-Aire J/FLX duct is designed to provide air duct, thermal insulation, sound absorption, and vapor barrier in a single product. / Johns-Manville. E*

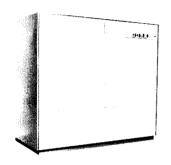
724 CEILING FANS / This brassfinished ceiling fan has new coatings on motor housing, blade irons, mounting system, canopy, and optional light adaptor. Real wood blades (52 in.) with pecan finish are balanced to the fraction of an ounce. Priced from \$160 to over \$400. / Hunter Div., Robbins & Myers, Inc.

AIR DISTRIBUTION EQUIPMENT AIR TREATMENT EQUIPMENT COMBUSTION EXHAUST EQUIPMENT FIRE PROTECTION EQUIPMENT FUEL HANDLING EQUIPMENT HEAT GENERATION HEAT PUMPS HVC TERMINAL UNITS MECHANICAL CONTROLS MECHANICAL INSULATION PLUMBING FIXTURES & TRIM REFRIGERATION EQUIPMENT VALVES

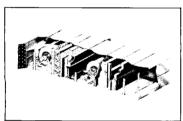
WATER SUPPLY & TREATMENT







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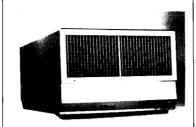
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725 SOLAR AIR-MOVER / The "Solar Air Handling Mover" (SAM) provides air flow in the key solar heating operation modes, i.e. collector to storage; collector to house; storage to house; auxiliary heat to house. The SAM-10 series is designed for small capacity systems. / Solar Control Corp.

AIR TREATMENT **EQUIPMENT**

726 COMPUTER ROOM AC / Computer room air conditioners ranging from 3 to 15 tons are available in aircooled, water-cooled, or glycolcooled direct expansion refrigeration models. Chilled water models are available in 7½, 10, and 15 ton sizes. Air conditioners are available in 18 colors to match computer equipment. / The Trane Co. GB, ICR*

727 AIR HANDLER / A line of ROOFPAK central station air handlers is available in four cabinet sizes, ranging from 4,000 cfm to 40,000 cfm; with up to 72 different coil arrangements and each unit can include up to 20 rows of heating and cooling coil. / McQuay Group, McQuay-Perfex Inc.



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728 AIR PURIFIER / "F20-2PH" electric air purifier for use in large interior areas removes up to 99.7 per cent of most pollutants, including smoke, dust, pollen, and many bacteria. The unit filters 1000-1400 cu ft of air per minute. / Flintrol, Inc.

729 HUMIDIFIERS / Two highcapacity, power humidifiers for under the duct installation are air-driven, require no electricity, and feature a built-in damper. "Waltonaire Double By-Pass Model UD-175" is ARI certified to deliver 24 gallons per day. / Walton Laboratories.

COMBUSTION EXHAUST EQUIPMENT

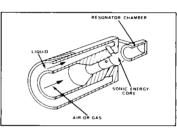
730 HEAT RECLAIMER / An automatic flue damper that chokes off stack drafts, The Heatkeeper is installed in the stack between the furnace and the chimney, electrically connected in series with the furnace control unit. All operating components are UL-listed. / Maid-O'-Mist Div., Heating and Air Conditioning Specialties.



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FIRE PROTECTION EQUIPMENT

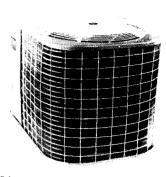
731 SPRINKLER HEAD / Concealed installation hides sprinkler head behind cover plate that's installed flush with ceiling tile. Combustion heat causes the plate to fall off, exposing a fusible element. / Grunau Sprinkler Mfg. Div.

FUEL HANDLING EQUIPMENT

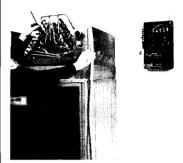
732 FILTER ELEMENTS / Filter elements for all types of fluid filtration applications offer particle selectivity from 0.5 micron, and varying sizes for different flow rates. / Fluid Handling Div., Keene Corp.

HEAT GENERATION

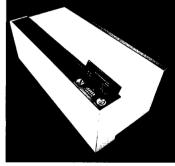
733 SONIC OIL BURNERS / Burner makes it possible for plants to burn #6 and other heavy residual fuel oils without smoke. Using compressed air wave, it shatters oil into a fine, highly combustible mist. / Sonic Combustion Systems, Inc.



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HEAT PUMPS

734 HEAT PUMP / Called the HS series, the units are in two- and threeton sizes. HS split-system heat pumps provide year-round service for residential and commercial buildings at outside temperatures ranging from 115 F to -20 F. / Westinghouse Central Residential Air Conditioning Div. LR*

735 ADD-ON HEAT PUMP / An add-on heat pump, specifically designed to work with electric and fossil-fuel forced air furnaces, the "Maximizer" operates below the balance point by "cycling" with the existing furnace to heat a home. This cycling continues down to 10 E, when the heat pump shuts down and the furnace handles the entire load for the house. / York Div. of Borg-Warner. LR*

736 HEAT PUMP / A three-model line of single package, "thru-the-wall" heat pumps to provide individual room heating and cooling for motels, hotels, multi-family structures, etc., Zoneline III extended range heat pumps come in cooling capacities of 9,000-, 11,800-, and 14,000-Btuh. / General Electric Co. GB, E*



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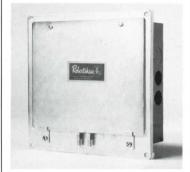




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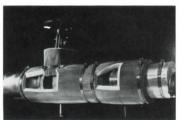


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737 HEAT PUMPS / Executive Weathertron heat pumps intended for new residential construction, existing homes, or light commercial applications are available in 2- to 5-ton capacities, with an Energy Efficiency Ratio (EER) range of 7.7 to 8.6. Other features are "Quik-Attach" couplings. / General Electric Co., GB, ICR, LR, E*

738 HEAT PUMP / The "HP10" produces cooling EER's of more than 8. The HP10 will be marketed as a matched system, consisting of: the HP10 outdoor unit, a specially designated CBP10 blower-coil-filter indoor unit and a refrigerant line set. / Lennox Industries Inc.

HVC TERMINAL UNITS

739 CEILING DIFFUSER / The extruded aluminum diffuser channels air in one direction only instead of two. By installing "Moduline" air terminals near walls, the architect has the option of using the "Moduline" units in perimeter heating systems. The diffuser is available on model 37AG and 37AJ "Moduline" air units with nominal capacities of 200 cfm and 100 cfm. / Carrier Air Conditioning.

MECHANICAL CONTROLS

740 BOILER CONTROL / A multiple fire tube boiler control center for monitoring new and existing oil or gas fired boilers in industrial, commercial, institutional, and utility buildings provides instant readout on any boiler malfunction. / Thermal Equipment,

741 ENTHALPY SELECTOR / Model H100 measures airstream total heat (enthalpy) content for optimization of outside- and return-air usages in air handling systems. Supply-air pressure 20 psig; range 20-45 Btu/lb of dry air; standard 3-15 psig output. Robertshaw Controls Co., Control Sys-

MECHANICAL INSULATION

742 JACKETED INSULATION

"Temp-Fit" is a binder-free, ceramic fiber, blanket reusable insulating material adhered to a light-weight, corrugated Type 304 stainless steel jacket. This is suitable where access for inspection or repair may be necessary. / Johns-Manville, E*

PLUMBING FIXTURES & TRIM

743 WATER-SAVING CLOSET / A one-piece, water-saver closet, the "Silhouette II Conserver" uses 31/2 gallons or less compared to 5 to 51/2 gallons for conventional closets. It has a round-front bowl, a positive nonoverflow feature and a standard 12-in. rough-in. / Briggs. LR*

744 TUB/SHOWER FITTING /

"Slick-Fit," for one-piece fiberglass tub/shower units, is an all-brass, twovalve fitting that installs directly to the fiberglass without any bracing. Featured are "U/R-Pak" washerless cartridges. / Universal-Rundle Corp.

745 CHINA TOILETS / Black- and brown-colored china toilets match the "Bright" line of acrylic tubs and lavatories. Red, yellow, and orange colors are also offered. / Universal-Rundle Corp.

746 SECTIONALIZED SHOWER /

The 36-in. "Comboshower," a sectionalized shower unit, consists of three wall sections, an optional top and the molded shower base. It is available in white, marble creme, blue, gold, and green. / Universal-Rundle Corp.

747 BARRIER-FREE LAV / "Model WR1370" is vandal-resistant, while providing full access by disabled persons. All piping is contained within the recessed pedestal and bowl. There are no outboard valves to be piped through the wall. / Bradley Corp. GB, ICR, E*

748 BEDSIDE LAV/TOILET

"Pirouette HWP-5" combines a water closet and lavatory in a compact console designed for bedside installation. Vinyl clad cabinet conceals a fully functional water closet that swings into an operable position when the cabinet door is opened. / Hospital Ware, Div. of APFC.

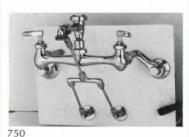






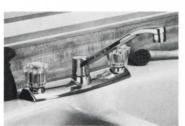






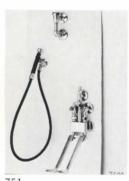


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749 LAV/WATER CLOSET / A lavatory and water closet combination is available in two styles. The cabinet model has a gooseneck faucet with wrist blade handles mounted on the top of cabinet. The recess model installs flush to the wall with its supply faucet mounted on the upper panel of the rear plate. / Hospital Ware, Div. of APFC.

750 SERVICE FAUCETS / Faucets are 8-in. wall mounted, acorn pattern type, with renewable seats and rubber and duck stem packings. The faucets can be furnished with loose key stop inlets or adjustable inlet arms with integral stops. They are equipped with a vacuum breaker spout with hose end and pail hook. / Royal Brass Mfg. Co.

751 HOSPITAL FITTINGS / The line consists of 8- and 12-in. deck mounted lavatory faucets, 8-in. wall mounted faucets, and 4-in. centersets with rigid or swivel gooseneck spouts with aerators or rose spray outlets, 4-in. wrist handles or 6-in. elbow handles. All faucets are equipped with renewable seats. / Royal Brass Mfg. Co.

752 WASH STATION / Compact. multifunction units provide soap dispenser, mirror, internal storage shelf, towel dispenser, cup dispenser, door, basin, and electrical connections for 110-125 volt AC service. Models are fabricated of 22 gauge, 18-8 stainless steel, and cabinets feature all-welded construction. / American Dispenser Co., Inc. GB*

753 WATER COOLER / A wheel chair level water cooler that features a soft touch, self-closing push bar operation is designated "Model HCWC-8." The bubbler on this new water cooler can be activated by pushing the 12-in. bar in the middle or on either end. The apron and cabinet are fabricated from cold rolled steel finished in gray enamel. Priced at \$650. / Sunroc Corp.

754 WASHERLESS FAUCET / Waterfall features an 8-in. high swing spout, a built-in water volume regulator, and two-handle washerless water control. A water volume control that provides 2.75 GPM, plus or minus .25 at 80 psi conserves water and eliminates splashing. / Delta Faucet Co.

755 LAV/CABINET / The "Minessa" provides a 9- by 14-in. bowl area, flat counter space, and an integral angled fitting ledge, punched for 4-in. centerset. The unit is 13-in. front to back, and available in colors, in marbleized. and in white. / Eljer Plumbingware, Wallace Murray Corp. E*

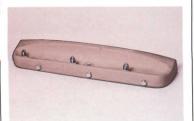
756 TWO-HANDLE FAUCET Called "Crystal-Glo," the line includes models for the kitchen and bath as well as tub/shower fittings. Special decorative handles are formed of highly reflective crystal-like acrylic or lightly polished metal. / Bradley Corp.

757 CAST IRON LAV / "Hi-Lite" colors in cast iron, self-rimming lavatories include "Burnt Orange," "Daffodil," and "Cocoa." These colors are available in Owen (round) and Edwin (oval) lavatories as well as in the Carousel shampoo lavatory. / Eljer Plumbingware, Wallace Murray Corp.

758 FIXTURES/FITTINGS / A selection of lavatory, kitchen sink, and shower fittings, as well as the "Emblem" closet and "Savon" urinal, feature watersaving benefits. In controlled laboratory tests conducted by Dynamics Research and Development Corporation, total average savings of 40 per cent in the household water usage, by plumbing fixtures and supply and waste fittings, is indicated as possible. / Eljer Plumbingware, Wallace Murray Corp. E*

759 KITCHEN SINKS / Two new colors for kitchen sinks are now available: "Burnt Orange" and "Daffodil." Manufactured in cast iron, sinks have a porcelain enamel finish, and are available in single or double compartment models. / Eljer Plumbingware, Wallace Murray Corp. E*

760 WASH CENTERS / Two Bradpack wash centers are designed to serve both handicapped and nonhandicapped users. Models Nos. 1027 and 1127 incorporate a vertical mirror which has been lowered to the 40-in. bottom height from floor required for wheelchair users. / Bradley Corp.



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761 FOUNTAIN / Model 1409 vandal-resistant wall-hung drinking fountain is cast aluminum with an anodized finish. Unit features heavyduty bubblers, push-button valves, bottom plate, and waste strainer. Freeze-proof valve system is available. Priced at \$633.34. / Haws Drinking Faucet Co. GB, CC*

762 WATER CONSERVER

"Flushmate," a toilet flushing device, is designed for connection to nearly all close-coupled residential toilet bowls. A push on the Flushmate button opens the main valve and compressed air forces the water through the bowl. Priced at \$69.95. / Water Control Products/N.A., Inc.

763 CHINA COLOR / For lavatories and two-piece toilets, "Royal Parchment" in Mansfield high-fired mirror china, is fadeproof, unaffected by household acids or cleansers, and is impervious to stains. / Mansfield Sanitary, Inc.



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764 TUB DECK FAUCET / An extralarge tub-rim spout and valve unit is designed to fit on large sunken tubs, custom-sized tubs, and tub decks. It provides an extra heavy water flow that will fill over-sized tubs quickly. The valves can be installed on 1%-in. thick decks, while the spout fits even thicker ones. / Grohe Div. of Flygt Corp.

765 FLOOD-PROOF FAUCET / A lavatory faucet, with a spout that swivels yet is "flood-proof," features a spout that extends 6-in. over the lavatory rim. The spout's swivel action is limited to 120 degrees. The handles are color-coded. / Grohe Div. of Flygt Corp.

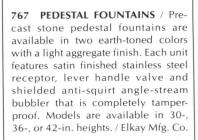
766 WATER COOLER / A selfcontained water cooler features a non-pressurized cooling system that safeguards against water damage. Cabinet is bonderized baked enamel with rust-resistant, one-piece removable wrapper for servicing. Basin is #20 gauge stainless steel, type 303, satin luster finish. Eight or 13-gph models are available. / Elkay Mfg. Co. GB*





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768 CHAIR-LEVEL COOLER / A self-contained wall hung cooler, Model EHL-8 has self-closing wrist blade handles mounted on each side of unit for access by the handicapped, hooded stream projector, and built-in flow regulator for 20 to 100 psi. One piece backsplash and basin is #20 gauge stainless steel, type 302. / Elkay Mfg. Co. GB*

769 COLOR-MATCHED TUBS

Color-matched, self-rimming tubs in 5- and 6-ft sizes, are stocked in: red, blue, green, yellow, bone, orange, or white. All tubs are perfectly matched to the company's line of "Ariete" vitreous china bath fixtures. Other standard features include: armrests; chrome-plated handles; and a nonskid surface. / Hastings II Bagno Collection, GB, I*



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770 WHIRLPOOL BATH / The "Serie 2001" circular whirlpool jet action bath has eight jets. The unit also features thermostatic mixer controls, contoured seat, anti-slip bottom, and grip handle. It can be ordered with circular shower enclosure. / Hastings Il Bagno Collection. GB, I*

771 PEDESTAL BASIN / Available are patterned water closets, pedestal basins, bidets, accessories, and tile. Also offered are bath fittings in gold and black ebony. / Hastings II Bagno Collection. GB*

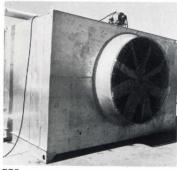
772 PEDESTAL BATHS / Vitreous china bath fixtures in colors, textures, and patterns are available for all the "Ariete" and "Pegaso" line of bath fixtures, and accessories such as soap dishes, tumbler holder, shelf, and mirror. / Hastings Il Bagno Collection. GB,



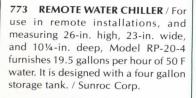
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774 NO-DRAIN COOLER / The coolers utilize the available water source to create a supply of one gallon of cold drinking water per hour. Water is dispensed from a push-button faucet into disposable cups. A "drip receptor" replaces the drain and can be emptied by detaching from the cooler. The cabinet is of heavy-gauge steel, with a plastic laminated top. / Ebco Mfg. Co.

REFRIGERATION EQUIPMENT

775 COOLING TOWER / Prepackaged models range from 100 to 900 tons. Adjustable pitch blades allow maximum utilization of rated horsepower, and blades are corrosion-resistant solid cast aluminum alloy. / The Marley Cooling Tower Co.



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776 PRE-WIRED REFRIGERATION /

Systems consist of factory-wired condensing unit sections and separate evaporator sections. Condensing units (shown), individually or multiple racked and remotely installed, include condensing unit, complete control panel assembly, drier, sight glass, hand and expansion valves. All necessary components are pre-piped, sealed, and interwired. / Nor-Lake, Inc. GB*

777 CONDENSING UNITS / Model 568B/RCUHL condensing units are available in six cooling capacities from 22,000 through 58,000 nominal Btuh. The units feature ARI-certified energy efficiency ratios (EER's) that range from 8.1 to 9.0 Btuh per watt, when used with the next size larger indoor evaporator coil. / BDP Co., Div. of Carrier Corp.

778 CONDENSING UNIT / Designed specifically for the apartment market, the HS12 condensing unit contains two complete refrigeration and electrical systems. One condensing unit can serve two units. The HS12 is available in four sizes: 2, 3, 4, and 5 ton. / Lennox Industries, Inc.



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779 BACKFLOW PREVENTER / The company has added six sizes, 2½ through 10 in., to its line of both reduced zone and double check backflow preventers which protect potable water systems from the backflow or back siphonage. / Lawler ITT, Fluid Handling Div., ITT.

WATER SUPPLY & TREATMENT

780 HOT WATER TANK / A hot water storage tank, and an electric water heater with a solar connection both come in 30, 40, 52, 66, 80, and 120 gallon capacity sizes. Insulation surrounds the entire tank. / A.O.Smith Corp., Consumer Products Div. GB*

781 WATER HEATERS / A line of energy-saving residential water heaters, *Conservationist* models have *Thermogard* dip tube and a new thermostat control shows the most energy efficient temperature area in which to operate the heater. / A.O. Smith Corp., Consumer Products Div. GB*



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TEMPERATURE ALARM / A high temperature alarm system gives an audible and visual warning whenever the temperature of a hot water source exceeds a preset limit (usually 110 F). The system enables hospitals, and other institutions to comply with safety rules. / Powers-Fiat, Div. of Powers Regulator Co.

783 SOLAR WATER HEATER / A modular solar system that heats domestic hot water supplies directly—eliminating the need for complex heat exchangers—is designed for homes and light commercial buildings. The system includes flat plate solar collectors and a hot water storage tank with controls, valves, and pumps. / PPG Industries. GB*

784 HOT WATER GENERATOR / A hot water generator can heat up to 100 per cent of the hot water used in a home with heat formerly wasted by heat pumps. Unit attaches to side of heat pump or on adjacent wall and is connected to the home's hot water system. / Friedrich Air Conditioning & Refrigeration Co.

E36 NOISE REDUCTION / An illustrated brochure offers detailed instructions on how to build noise-reducing machinery enclosures and supplemental walls using Acoustilead sheet lead. Applications of Acoustilead sheet as a plenum barrier and as a sound-blocking wrap for pipes and ducts are discussed in separate brochures. / Federated Metals Corp., Div of ASARCO Inc. GB*

E37 PLUMBING FIXTURES / Color catalog provides full product specifications for washfountains, column and wall showers, safety fixtures and products especially designed for the handicapped. A list of the manufacturer's representatives is included. / Bradley Corp.

E38 AIR CLEANER / A color folder outlines the air-cleaning capacity of the F52 return grille electronic air cleaner for residential applications. A 20-page technical manual provides installation diagrams, NBS test results, electrical schematics, etc. / Honeywell, Residential Div. LR*

E39 FAUCETS / Over 400 photos and drawings, indexed for easy reference, illustrate a full line of general and residential faucets, laboratory fittings and food service products. The 82-page catalog also has a section on the maintenance and repair of faucet fittings. / The Chicago Faucet Co.

ELECTRICAL

E40 WOOD POLES / A brochure gives installation and technical information on decorative, natural wood luminaire mounting poles; color photos show the product in place. / ITT Landmark Lighting.

E41 WIRING BOXES / An eight-page catalog features an expanded selection of *Quick/Click* plastic outlet, ceiling, and steel stud electrical wiring boxes. / Slater Electric Inc.

E42 LINEAR LIGHTING / Color product photographs, sectional diagrams, and photometric data are given for each louver/lens configuration available in the QFS: Quad Fluorescent System; a 16-page brochure uses sketches to suggest possible applications for the pendant- or surfacemounted linear lighting series. / Lightolier, Inc.

E43 MARINE WIRING / Two cruising adapters have been added to a line of wiring devices especially constructed to resist the destructive conditions found in marine environments. A 10-page catalog also describes grounding devices, boxes, covers, plates, etc. / Crouse-Hinds Arrow Hart Inc.

E44 SELF-THREADING UNIONS / An illustrated data sheet introduces *Thredmaker* unions for rethreading rigid and IMC conduit in place. Connector, coupling, and union applications are listed. / Crouse-Hinds Co.

E45 STREET/AREA LIGHTING / The "RSL 350" luminaire/pole unit is now available for HPS, metal halide and mercury lamps, with a choice of prismatic refractors. An eight-page brochure provides application photos and complete photometric data. / Johns-Manville Sales Corp., Holophane Div.

E46 RECESSED FLUORESCENTS / Close-up illustrations included in a 50-page catalog permit the architect to evaluate the appearance of various recessed fluorescent fixtures. Photometric, engineering and test data are given for each fixture. / Lightolier Inc.

E47 CONTRACT LIGHTING / Over 160 items for both commercial and industrial applications are included in a 72-page short form lighting catalog. / Benjamin Div., Thomas Industries, Inc.

E48 WIRING DEVICES / This manufacturer's premium-grade *Spec-Master* line of switches, receptacles, nylon/armored plugs, connectors, locking devices and wallplates is described and illustrated in a color brochure. Test and code data are included. / Leviton Mfg. Co., Inc. E*

E49 RADIANT HEATING / A 20-page brochure outlines the benefits claimed for the *Radex* UL-listed radiant heat system installed in the ceiling of residences, multi-family housing, institutions, etc. Cable installation requirements are discussed. / Proko Industries, Inc. GB*

E50 ELECTRIC HEATERS / Wattages, dimensions and prices for a full line of wall-, duct-, sill and baseboard heaters are given in an eight-page catalog. All heaters are CSA-approved. / Federal Pioneer Ltd. CC*

E51 RACEWAYS / Two product booklets contain the most recent code and usage information for intermediate metal conduit, recognized for use under all conditions and occupancies, including hazardous areas. / Allied Tube & Conduit Corp.

E52 HID STORE LIGHTING / Cost and energy saving considerations are featured in a booklet on high intensity discharge lighting for merchandising areas. The effect of HID lamps on both merchandise and people is discussed. / Westinghouse Electric Corp.

E53 POWER MONITOR / Data sheet explains the *KLMP-3000* monitor which controls peak electrical power loading. Wiring installations and power factors are covered. / Katolight Corp.

E54 STANDBY POWER / An illustrated brochure introduces a line of industrial standby generators in sizes from 10 to 1400 kW. Units may be diesel-, gas-, natural gas-, or LPG-fueled; material describes representative power packages. / Katolight Corp.

E55 LOW-COST LIGHTING / An illustrated folder cites specific examples of factories, stores and offices which are said to have saved significant amounts by using *Econ-o-Watt* fluorescent lamps. / Westinghouse Electric Corp.

E56 INDUSTRIAL LIGHTING / An actual cost comparison worksheet allows building owners to compute individual savings achieved by substituting HID lamps for other light sources. Worksheet is included in an illustrated brochure on *Ceramalux* and metal halide lamps. / Westinghouse Electric Corp.

E57 LIFE SAFETY / Product brochure describes a number of security and life-safety systems, including lobby speakers and security annunciator, fire alarms and detectors, and patient/staff communication systems for hospitals and nursing homes. / Exide Safety Systems Div., ESB Inc.

E58 INTERIOR LIGHTING / The benefits of indirect lighting are detailed in an eight-page illustrated brochure. A line of portable freestanding fixtures, as well as wall and ceiling units, is covered in the *Fountains of Light* literature. / Specified Products, Inc.

E59 TIME CONTROLLER / The *Optimiser* combines a programmable timer with solid-state logic circuitry to delay morning hvac startup until the last possible moment, based on actual conditions at the time. A folder discusses possible cost savings and explains its operation. / Robertshaw Controls

E60 LENS / Technical brochure gives lamping, dimensional and visual data on the *3-E* lens for a one-lamp, 1- by 4-ft fluorescent luminaire, specially designed for energy efficient lighting in corridors and small offices. / KSH, lnc.

E61 HID DIMMERS / Color foldout describes an automatic, solid-state dimming system said to reduce power costs and provide excellent lighting flexibility. Control operates with all HID lamps: mercury vapor, high pressure sodium, and metal halide. / Wide-Lite Corp.

E62 COMMERCIAL LIGHTING / Spectra V Series 111 commercial interior lighting is said to be particularly suitable for applications with limited plenum space. A color folder describes the luminaire's design and operation. / Wide-Lite Corp.

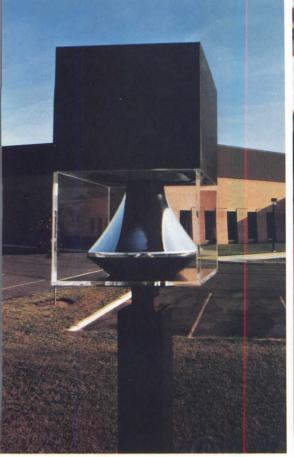
E63 LIGHTING / More than 40 fixtures for commercial, industrial and institutional applications are illustrated in a 48-page condensed lighting catalog. Wraparound, surface and suspended, fluorescent, floodlight, industrial HID and roadway lighting types are included. / Westinghouse Electric Corp.

E64 INDOOR/OUTDOOR / Booklet on the *Pericline Series*, said to provide glare-free decorative illumination using less wattage per pole, includes spacing charts, photometric data, and templates and worksheets to aid lighting designers. / Moldcast Lighting, Div. of Wylain, Inc.

E65 FIXTURE FINISHES / Features, specifications and actual sample discs of the available finishes — porcelain, polyester, acrylic and standard alkyd — are supplied in a brochure on interior lighting fixtures for industrial and commercial applications. / Westinghouse Electric Corp.

E66 COST CALCULATOR / A brochure provides step-by-step instructions to allow comparisons between existing flood, street, or industrial lighting installations and a variety of energy-saving alternatives. / Westinghouse Electric Corp.

E67 AC POWER SYSTEMS / Complete engineering data for battery-powered emergency lighting systems is given in an eight-page brochure. / Chloride Systems U.S.A. E*







Contemporary Pericline

Traditional Pericline

Bollard Pericline

Efficient Alternatives to Glare The Pericline® Optical System

The Pericline Optical System eliminates harsh, vision destroying glare from the luminaire — yet, in actual comparison, outperforms other luminaire systems in its broad distribution of effective illumination on the ground. The result is evenly lighted environments with exceptional visual comfort *plus* the highest degree of energy efficiency available today.

As examples of this unmatched performance, the Moldcast® Pericline system provides up to 60%* more "square feet of illumination per watt" than the best box-shaped "cutoff" luminaires and over 30%* more than the harsh glare-producing "Cobra-head". This efficiency allows wider pole spacings, fewer luminaires and lower power consumption.

The patented Pericline system is available in contemporary and traditional luminaire styles each with a unique, softly illuminated appearance which makes them as beautiful at night as in the day. Models are available for pole and wall mounting in a wide range of sizes and finishes from 1000 watts HID for large area lighting to 70 watts HID for below-eye-level "Bollard" units.

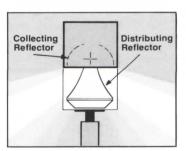
If you want the pleasant, human appearance of a gaslight luminaire... yet, need the most efficient illumination available today, there is no substitute for the Moldcast Pericline Optical System.

For your next new project or restoration, contact us for lighting recommendations and efficiency comparisons. Write: Moldcast Lighting, Interstate 80 at Maple Avenue, Pine Brook, New Jersey 07058. In Canada: VARCO Industries, Ltd., Dorval, Quebec H9P 2N4.



Standard Prismatic Lens

Moldcast Pericline System



The Pericline Optical System.Light is projected outward by the patented dual reflector train in a highly efficient, gradated beam. Maximum beam intensity strikes the ground 2½ to 3 times the mounting height from the pole. Beam intensities nearer to the pole are gradually reduced providing uniform levels of high illumination across wide areas.

high illumination across wide areas.

At 75° above vertical, the beam of light abruptly disappears leaving the unit glare free throughout normal viewing angles with only a soft "gaslight" glow at the source.

MOLDCAST LIGHTING

A Division of Wylain, Inc.



^{*} Based on minimum foot-candles required.

uci16

electrical



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COMMUNICATIONS

797 SPEAKERS / A portable speaker designed for sound reinforcement or studio monitor applications has an EIA sensitivity rating of 48 dB at 9.2m (30 ft) from 1 milliwatt (equivalent to 95.5 dB at 1.2m—4 ft—with a 1-watt input). / Shure Brothers, Inc.

798 TAPE MAGAZINE / "Trak-4" 4-track system consists of a playback unit, and a tape "magazine" enclosing two 7-in. stacked tape reels. Its design eliminates any tape threading. Priced at \$495. / Tape-Athon Corp.

799 ENTRY INTERCOM / "Securi-Com," designed for existing and new construction, needs no wiring to individual apartments. Model 2701 is for buildings with eight to 36 apartments; model 2702, 37 to 72 apartments. / Nutone Div., Scovill.



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801 SCHOOL SOUND / Facilities are available for transmitting record, cassett, radio, tape, or microphone programs to any classroom at a preset sound level which never requires manual readjustment. There is single-button all-call capability, and a built-in program monitor speaker. / Rauland-Borg Corp.

802 TELEPHONE SYSTEM / "Telecenter II" provides direct-dialing twoway telephone conversation between all telephones. Optional features include alarm signaling, automatic time signaling, and zone or group call capability. / Rauland-Borg Corp.



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803 CALL-A-NURSE / "Call-a-Nurse" systems for extended care facilities are now approved under UL Standard 1069. Call-cord/pillow speaker combines call-placement functions with entertainment features, such as TV channel selection, volume, and on-off. / Rauland-Borg Corp.

804 AMPLIFIER / "Spectrum-Master" professional in-wall type amplifiers include: 35-watts RMS, 60-watts RMS, and 100-watts RMS. In-wall amplifiers are recommended for school auditoriums, gymnasiums, etc. / Rauland-Borg Corp.

805 INTERCOM / The "9300 Series," with its 10-watt RMS output, is designed for use in high-noise level industrial environments. The 9200 Series provides up to 12 simultaneous conversations, and offers two- or three-station systems, with provision for an expanded network. / Rauland-Borg Corp.

COMMUNICATIONS
ELECTRICAL & ELECTRONIC CONTROLS
ELECTRICAL HEATING-COOLING
ELECTRICAL SUPPORTING DEVICES
LIGHTING
MOTORS & CONTROLS
POWER GENERATION
PROTECTIVE SYSTEMS
RACEWAYS
SERVICE & DISTRIBUTION

WIRING DEVICES



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806 PHONE SWITCH / An electronic device enables one, by means of a telephone call, to switch on electrically operated devices. Unit weighs 2 lbs, and is priced at \$95.00 to \$115.00. / I. J. Enterprises.

807 BUILDING CONTROL / Color CRT option combines functions of slide projector and alphanumeric readout to provide graphics with real-time values appearing in point symbols. Computerized systems, capacities and functions are offered as needed for single and multiple buildings. / Robertshaw Controls Co., Control Systems Div.

808 HOSPITAL INTERCOM / The "Tempus System" provides patient-to-staff communications plus patient and bed status information as well as doctors' registry. / Executone, Inc.



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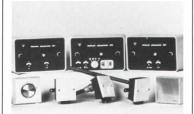
809 EQUALIZER / "Model 1650" active equalizer is designed for use in a variety of industrial or professional sound systems requiring accurate control of environmental-acoustical conditions. Each of the 1650's 28 filters provides up to 15 dB attenuation at its center frequency. Priced at \$1152. / Altec Lansing. GB*

810 BUILDING CONTROL / The Delta system provides five software programs for building control: hvac equipment programming; power demand monitoring control; outdoor air control; reheat reduction; and lighting control. / Honeywell Commercial Div. F*

811 POWER MANAGEMENT / The "PMM" is a microprocessor based master load controller designed to monitor, forecast and control facility energy usage including air conditioning, heating, ventilation, refrigeration and lighting. Priced at \$5635. / Texas Controls, Inc.



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ELECTRICAL & ELECTRONIC CONTROLS

812 POWER MONITOR / The "KLMP-3000" is used in monitoring peak demand. It is a low cost system designed for the small- and medium-sized user. Maximum power requirement is 20 watts, 120 VAC, 50/60 HZ. / Katolight Corp.

813 CONTROLLER / Proportional controllers, step controllers, valve actuators, valve bodies, with sensors and remote peripherals have air supply requirements. UL-listed components are modular. / Robertshaw Controls Co., Controls Systems Div.

814 SOLID-STATE CONTROL

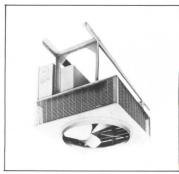
"Optimiser" utilizes solid-state logic, with inside and outside temperature sensors to determine latest possible start-up. Design preheat, advance preheat, unoccupied minimum temperature are adjustable. UL-listed. / Robertshaw Controls Co., Control Systems Div.



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815 PRESSURE SWITCHES / "KAM-LOK II," suitable for 600-VAC service, is available in 800- through 4000-ampere ratings, UL-listed. Switches can be mounted two high. /

816 SETBACK CONTROL / "Patriot" room thermostat for residential and commercial application features push-button temperature setback for day or night use. The temperature range of unit is 32 to 86F. Its application is for 24 volts. / Ammark Corp.

ELECTRICAL HEATING-COOLING

Crouse-Hinds Co.

817 UNIT HEATER / Heavy-duty industrial vertical down blow electrical unit heaters are available from 5 to 50 kW, and 208 to 600 volts, single and 3 phase. "Save-a-watt cycle" automatically turns on the fan when ceiling temperatures in high bay areas reach a predetermined point. / Markel Electric Products, Inc. E*



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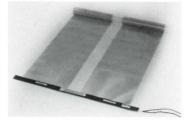


818 SILL CONVECTORS / Custom wall-to-wall systems and unit convectors combine standard components into a system that can include variable heat densities, inactive sections and control enclosures. Individual cabinets may be up to 10 ft long with inconspicuous seaming. / Markel Elec-

tric Products, Inc. E*

819 COMPUTER HVC / mini-MATE is a spot-cooler, designed expressly for the minicomputer market. System requires no ductwork or floor space. It is mounted overhead, within standard 2-by 4-ft ceiling tile. Additional units may be added. / Liebert Corp.

820 RADIANT HEAT / Low temperature electric radiant heat ceiling panels blend with acoustical tiles and fit concealed spline and tegular ceilings. Silicone sealing panels for use in swimming pool areas are also available. / Aztech International Ltd.



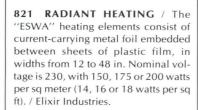
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822 FAN COIL UNITS / "Unitaire II" room fan coil units with electric heat and mounted control package have received UL listing. Features include choice of motor capacities and voltages (115, 208, 230 and 277V). / Airtherm Mfg. Co.

ELECTRICAL SUPPORTING DEVICES

823 HOLDING GRIPS / Pulling, support and strain-relief cable grips are for light-, medium- and heavy-duty applications. Support grips relieve the strain on hanging or inclined cables. Strain relief grips are available in most types of deluxe "water-tite" cord grips, "liquid-tite" flexible connectors and box connectors. / Slater Electric Inc.



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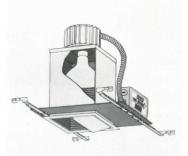
LIGHTING

824 TEXTURED LIGHT / This ceiling is trademarked *TIBURON*, and utilizes hollow acrylic 4-in. modules to create low-brightness, non-glare lighting. *TIBURON* is suspended on *Sturdi-Grid* of ¾-in. or 1-in. inverted tees. / United Lighting and Ceiling Corp. GB*

825 EMERGENCY LIGHTING

LAMPAK is designed to mount inside the fluorescent fixture, but outside the ballast channel. It can physically be placed between or alongside the 40-watt tubes, or even between the legs of a "U" lamp. This unit features fully-automatic 90-minute operation. / Dual-Lite Inc. GB, ICR, E*

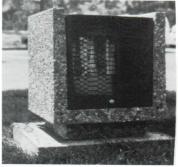
826 FLUORESCENT / Designed for indoor or outdoor applications, this fixture features a 16-gauge steel base with a polycarbonate lens. Optional features include a wood grain vinyl strip for the face of the lens, high output ballasts, gasketing, and a grounded convenience outlet. / Kenall Mfg. Co.



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827 COMMERCIAL LIGHT / The line includes a grouping of specification grade "Alzak" recessed reflectors, wall washers, square downlights, step baffles and multipliers. They are available in a range of sizes, designed for maximum performance with specified lamps. / Progress Lighting.

828 SURGICAL LIGHT / "Challenge 22" has an optical system using a tungsten-halogen light and specially designed filters that can be adjusted to small, medium, or large light-beam patterns from a lighthead mounted control lever. Available with 9 ft or 54 in. track, 54 in. rotating track, or central mounting fixtures, "Challenge 22" can be installed in almost any ceiling. / AMSCO/American Sterilizer Co.

829 FLOODLIGHT / Floodlight fixtures with stainless steel housings enclosed in wet-case concrete are now available in sizes ranging from 12 in. to 26 by 28 in. "Lans-Cube" units feature weather, dust and vandal resistance. Wattages from 100- to 400-watt HID sources are available. / Sterner Lighting Systems, Inc.



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830 HANDRAIL / Illuminated handrails, available with fluorescent, incandescent, or cold cathode light, are available in varying runs. Available in standard 6- and 8-ft modules, unit is offered in custom designs. / Sterner Lighting Systems, Inc.

831 CUTOFF / A reflector and lighting assembly that offers precision cutoff, photometric flexibility and ease of installation, inspection and maintenance, "Unitized Ballast Reflector" is offered in a range of luminaire shapes, styles and with cutoff to meet site requirements. / Sterner Lighting Systems, Inc.

832 EMERGENCY LIGHT / This unit has a sealed 6-volt battery that recharges to full capacity in 24 hours. Unit fits a rough wall opening 91/2 by 221/2 by 37/8 in., and comes with two, three or four heads. Container is offwhite. Priced at \$175 (consumer net). / Teledyne Big Beam.

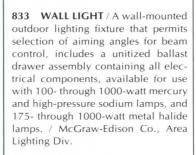




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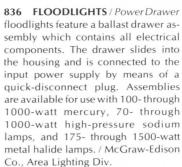
834 AREA LIGHT / A combination of cutoff optics and a calibrated adjustable mounting fitter permits the fixture to be tilted to produce IES Type II, III or IV light distribution patterns. Area lights also feature a unitized ballast drawer assembly. / McGraw-Edison Co., Area Lighting Div.

835 SPORTS LIGHT / A heavy-duty cast luminaire meets requirements of current IES recommended practices for sports and recreational lighting, and comes with reflector systems that produce a beam spread as tight as NEMA Type 1 classification. / McGraw-Edison Co., Area Lighting Div.









837 CONCOURSE LIGHT / Three housing sizes in square or round shape take ballast assemblies for 100- to 1000-watt mercury, 70- to 1000-watt high-pressure sodium and 175- to 1500-watt metal halide lamps. Units are furnished with bronze or black finish. / McGraw-Edison Co., Area Lighting Div.

838 WALL MOUNT / Using a lowpressure sodium lamp, the 55-watt lighting fixture housing and door frame are of heavy cast aluminium construction and the unit is weatherproof with a fully gasketed lens assembly and housing. The diffuser is a one-piece prismatic lens. / Benjamin Div., Thomas Industries Inc.



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839 OUTDOOR LIGHT / The "Horizon" sodium series, available for either ceiling or wall application, has cast aluminum construction. The 35-watt fixtures, which are weatherproof and fully gasketed, are available in bronze or aluminum polyester enamel finish. / Benjamin Div., Thomas Industries Inc.

840 SODIUM LIGHTING / Called "The Intensifier," the fixture is enclosed and gasketed, making it suitable for use in wet locations and hazardous areas. The housing, of corrosion-resistant construction, has a lifetime porcelain enamel finish. / Benjamin Div., Thomas Industries, Inc.

841 LPS FIXTURE / "Monitor" is available for 35- and 55-watt lowpressure sodium lamps. The fixture is recommended for low watt night-time security illumination; construction includes a die-formed steel body finished in acrylic enamel paint. / Guth Lighting, Div. of Sola Basic Industries.



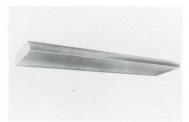




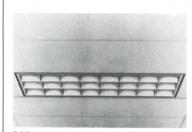
842 TUBE LIGHT / The "Super Tube" fluorescent lighting system consists of horizontal cylinders suspended from chain, stem or cable. It may be bracketed to walls and partitions. One-piece housing is extruded in high-gloss standard and custom enamels. / Columbia Lighting, Inc. LR,

843 LOW-LEVEL LIGHT / The square-bodied fixture has optional black-out panels to provide light distribution control from 360 to 90 degrees. Its all cast aluminum construction offers vandal resistance. Priced at \$207. / C-E Elsco Lighting Products.

844 OUTDOOR LIGHTING / The sharp cutoff of the "Sausalito" provides control with precise distribution, allowing excellent levels of illumination within the area desired, according to the company. Priced at \$266. / C-E Elsco Lighting Products.

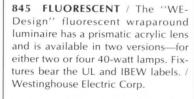


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846 PARABOLIC LUMINAIRES Recessed fluorescent fixtures in both static and air-handling versions are available in a choice of luminaire sizes, louver configurations and lamp combinations; these low-brightness fixtures are designed for offices, schools and banks. / Westinghouse Electric Corp.

847 INDUSTRIAL FIXTURE / The "Verti-flex" fixture is applicable to locations requiring wide beam spreads at mounting heights from 10 to 25 ft. / Westinghouse Electric Corp.

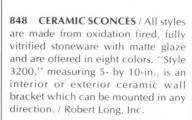




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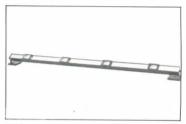
849 WALL BRACKET / "Style 3260," measuring 434 in. in diameter, is a simply shaped ceramic housing for a G-40 type lamp and can be mounted on both ceiling or wall junction boxes. Six strong colored, high gloss glazes are available in addition to the eight standard matte glazed colors. / Robert Long, Inc.

850 MIRROR LIGHT / "Mirrolite" bronze solar glass baffle arrangement maintains the fixture's reflective appearance in direct sunlight. This tempered, high-impact-resistant fixture is recommended for parking lots and walkways. Standard finish is statuary bronze acrylic enamel. / ITT Landmark Lighting.





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851 PLAZA LIGHT / The "Champagne Lite" is available in four shades: clear, translucent, bronze or smoked. It can be mounted onto a 1-1/2-in. diameter tenon. / ITT Landmark Lighting.

852 AREA LIGHTING / "Formlite" accommodates all major light sources and wattages, and various mounting arrangements are available. Housing finish is electrostatically applied matte black acrylic enamel. Other colors are available. / ITT Landmark Lighting.

853 WIDE-ANGLE FLOOD / The 'Q400" light uses a self-cleaning double-ended 200W Tungsten Halogen lamp, and excellent color rendition is claimed. Unit is recommended for museum applications. A selflocking yoke permits it to be locked in all planes. / Lighting Services Inc.



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- **854 DISPLAY LIGHTING** / Many configurations are possible with this 1-ft wide enclosure channel available in lengths of 2, 3, and 4 ft. The enclosure provides mechanical and electrical support for 1-ft sq fixtures which may be inserted wherever desired along the channel. / Lighting Services Inc.
- **855 COVE LIGHT** / Continuous lens effect around the perimeter of a room or corridor is achieved in this unit for hospitals, schools, and other commercial installations. / Alkco Mfg.Co.
- **856 NIGHT LIGHT** / The #106 is designed with a cast aluminum, vinyl finished face plate. A 20-watt lamp provides low-level illumination on the floor. / Alkco Mfg. Co.



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- 857 LIBRARY LIGHT / Lighting fixture mounted directly on stacks directs light down on book shelves while indirect lighting component adds general illumination. Lighting can be moved with stacks if required. / Alkco Mfg. Co.
- **858 SIGNAGE** / Disappearing letter effect emphasizes the message when sign is on; wording disappears when it is off. Many standard messages are available. / Alkco Mfg. Co.
- 859 SECURITY LIGHT / The #8500 Series is a fluorescent fixture designed for mounting in the corner of a corridor or room. Lexan lenses, tamperproof door frame and heavy gauge metals are available. / Alkco Mfg. Co.



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- **860 DARKROOM LIGHTS** / Units are available recessed or surface mounted, in one-, two-, or three-gang models with one piece stainless steel door frames and *Kodak* filter. / Alkco Mfg. Co.
- **861 BED LIGHTS** / Extruded aluminum bed light #1776 has a wire-way that snaps in or out for maintenance. It is available in 3- and 4-ft lengths for up to four fluorescent lamps. / Alkco Mfg. Co.
- 862 FLUORESCENT / Fluorescent lighting fixtures feature unbreakable "alkcorylic" diffusers and black housing. Various mounting positions are offered. Vinyl applied lettering is available for graphics system. / Alkco Mfg. Co.



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- 863 WALL LIGHT / An enclosed architectural wall-mounted lighting fixture that changes "faces" in minutes features interchangeable decorative vinyl-on-steel facia inserts (walnut, teak or colors). / Keene Lighting Div., Keene Corp.
- 864 LIGHT / A low-pressure sodium luminaire for roadway and security lighting has a high impact strength ABS housing. Both the 55-watt and 35-watt lamps are interchangeable in the luminaire. / Trimblehouse Corp.
- 865 CEILING FIXTURES / Ceilingmounted or wall-bracketed lighting fixtures can be used individually or in combination. The "InPort" fixtures are said to eliminate direct glare and reflection. / Specified Products, Inc.



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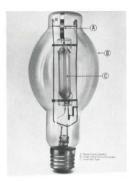


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866 CHANDELIER/The product has a bronze-tone acrylic shade and a brushed antique finish. "Penthouse" (M-2259) coordinates with other fixtures in the line. Dimensions for the four-light chandelier are: 21¾ in. square, 10 in. high, and 48 in. long. Priced at \$141.85. / Thomas Industries, Inc.

867 LIGHT STANDARDS / Laminated wood lighting standards feature metal components that are anodized cast aluminum or galvanized steel. Standards are available in mounting heights from 8 to 40 ft in straight models. / J. H. Baxter & Co.

868 FLUORESCENT LAMP / The "Ultralume" lamp white light can be made either warm or cool in appearance or can be made to match the color of any of the present white fluorescent lamps, providing both outstanding color rendering and high light output, according to the company. / Westinghouse Electric Corp.



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869 MERCURY LAMPS / A mercury vapor lamp that automatically extinguishes when its outer glass envelope is destroyed is offered in eight types, four 175-watt versions and four 400-watt varieties. / Westinghouse Electric Corp.

870 VAPOR LAMP / A low wattage, self-ballasted vapor lamp for residential, commercial and industrial applications has a standard medium screw base that fits ordinary incandescent sockets. The bulb has an average rated life of 16,000 hours and initial light output of 2,200 lumens. / Westinghouse Electric Corp.

871 SODIUM LAMPS / Most 175watt mercury lamps produce 8,500 lumens while the new 100-watt "Ceramalux" bulb has an initial output of 9,500 lumens, according to the company. / Westinghouse Electric Corp.



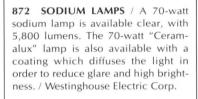
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873 FLOODLIGHT / Areamaster floodlight is prewired with integral ballast for 400W metal halide and mercury lamps or 250W-400W high-pressure-sodium lamps. All models are furnished with multi-tapped ballast primary for 120V, 208V, 240V, or 277V operation; all are also available for 480V operation. Priced at \$227.70. / Appleton Electric Co. GB*

874 FLUORESCENT EXIT / Featuring two fluorescent lamps in each unit which operate in both the normal and emergency mode, the lights are said to provide six times the lumens of comparable incandescent units. Under normal conditions, the lights operate on standard 115 volt current (or 277 volt optional). / Emergency Lighting and Systems, Inc.



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875 WALL LUMINAIRE / The "Somerset," a square wall pack designed to depress and spread light uniformly, utilizes a vandal-resistant polycarbonate lens and features a completely waterproof, all aluminum housing. It accommodates wattages of up to 175 mercury vapor and metal halide, and up to 150 high-pressure sodium. / J. H. Spaulding.

876 LUMINAIRE / This wall- or pole-mount luminaire features a one-piece cylindrical, roll-formed aluminum housing and removable top cover. It is designed for tennis courts, shopping centers and malls, etc. Hinged stainless steel lens frame holds the tempered glass lens. / J. H. Spaulding.

877 RECESSED FIXTURE / Paralouver II low brightness recessed fixtures for static/air supply or heat transfer/air supply functions can be switched for one, two or three lamp operation. Natural aluminum or gold-finished louvers are offered. / Day-Brite Lighting Div., Emerson Electric Co.







HID FIXTURE / A 2- by 2-ft recessed HID fixture controls direct glare. Models are available for mercury or metal-halide lamps in 175-, 250- and 400-watt sizes, and with 4-, 9-, or 16-cell louvers. / Day-Brite Lighting Div., Emerson Electric Co.

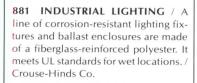
AREA LUMINAIRES / Luminaires with low-glare optical performance, for lighting medium-sized areas with high-pressure sodium lamps, produce a Type V circular distribution pattern. The luminaires may be topmounted singly on posts or sidemounted with arms for two-, three-, or four-light combinations. / Crouse-Hinds Co, GB*

880 BOLLARD / Two stylized bollard lights with low-glare optical performance are available with a choice of 50/100-watt mercury vapor and 70/100-watt high-pressure sodium lamps and integral ballasts. The standard one-piece lens is of impact-resistant acrylic. / Crouse-Hinds Co. GB*





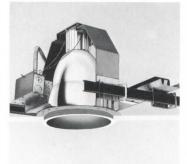




HID FIXTURE / Designed for large-area lighting from low poles or wall mounts to pole-mounting heights up to 60 ft, a 1000-watt metal-halide downlight provides sealed construction and a choice of lenses. "Series IX" luminaires can be used with dimming systems. / Wide-Lite Corp.

883 INDUSTRIAL LINE / HID low bay lighting fixtures are available for mercury vapor, metal halide or high-pressure sodium lamping and may be specified with either closed or open bottom clear prismatic acrylic refractors. / ITT Indoor Lighting.









885 DOWNLIGHTS / HID recessed downlights are open reflector type. One of the "3000 Series" fixtures features a semi-gloss taupe enamel finish on the aperture baffle, important where HID lighting will be integrated with incandescent lighting. / ITT Indoor Lighting.

886 EXITS / Offered with both single- and double-faced models— and either wall, ceiling or end mounting—the emergency power unit is wired for 120V or 277V operation. It features a nickel cadmium 6-volt battery, UL listed for 90 minute operation. / ITT Indoor Lighting.







887 EMERGENCY LIGHT / Units are available in both single and twin cylinders, either recess or surface mounted, with a 12-hour maximum recharge cycle. Efficient 350 lumen tungsten halogen lighting heads provide even, low-glare illumination. / Chloride Systems U.S.A. E*

888 EMERGENCY LIGHT / Fully automatic, voltage regulated, solid-state charger provides a high-charge rate immediately and automatically upon restoration of AC electrical service after a power failure. Unless otherwise specified, the unit will be furnished at 120 volts 60 Hz. / Chloride Systems U.S.A. E*

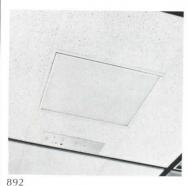
EMERGENCY LIGHT / The "M-6" emergency luminaire has a wood-grain vinyl front panel and choice of silver or bronze metal trim. With solid-state electronics, fully automatic operation, unit meets UL, NEC, OSHA, Life Safety Code requirements. / Johns-Manville Sales Corp., Holophane Div.



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890 HID LUMINAIRES / *Petrolux* indoor/outdoor HID luminaires are UL-listed for hazardous location use Class I, Div 2; Class II, Div 1 & 2; and Class III. The E & G refractor series offers a choice of light distributions. / Johns-Manville Sales Corp., Holophane Div.

891 HID LIGHTING / Classpak luminaire provides indirect HID lighting. The stem-mounted circular fixture features a choice of HPS, metal halide and mercury lamps. / Johns-Manville Sales Corp., Holophane Div.

892 SEISMIC LIGHT / Seismically qualified Holophane lighting/ceiling systems for nuclear power plants are custom-designed to fit each application and to meet Nuclear Regulatory Commission standards. Ceiling consists of posts and bracing rods to hold it in place vertically and horizontally, and to isolate it from the walls. / Johns-Manville Sales Corp., Holophane Div.



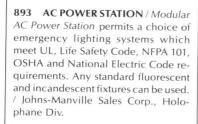
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894 TRACK LIGHTS / The "Vienti Series" track lighting fixtures have a quick-lock mounting adapter. Lampholders swivel in a virtually complete circle as well as pivot up and down. / Halo Lighting Div., McGraw-Edison Co. GB, ICR, LR, I*

895 EXIT LIGHT / An "Add-on Emergency Pack" is available in 120-volt and 277-volt versions, and meets or exceeds all OSHA, NEC and NFPA requirements. Down lighting is a feature added into all company non-recessed exit lights. / Halo Lighting Div., McGraw-Edison Co. GB, ICR*



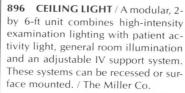
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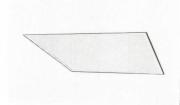


897 CEILING LIGHT / Product has hand-blown glass bell; 150-watt operation; and is finished in white opaque changing to clear glass at the bottom. It measures 14 in. high and is priced at \$165. / Koch + Lowy.

898 LIGHTING/SIGNAGE / Customized composite poles house traffic signals, decorative banners, signage, trash cans, planters, benches. Mast arms are up to 34 ft long. Traditional through contemporary styles can be made. / Moldcast Lighting, A Div. of Wylain, Inc.



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899 TROFFERS / "Pinnacle" series non-air troffers are offered as 2- by 2-ft and 2- by 4-ft fixtures, featuring flush floating extruded aluminum door frames with metalized parabolic louvers. The fixture housings are die formed steel. / ITT Indoor Lighting.

900 TROFFER/Three series of 4-ft sq air and non-air handling troffers feature a variety of refractors and diffusers; die formed steel housings; formed steel or extruded aluminum door frames; and concealed hinges. / ITT Indoor Lighting.

901 FLUORESCENTS / Two fluorescent fixture series designed for heavy-duty industrial use include deep drawn embossed reflector ribs for strength; heavy gauge rigidized steel channels and reflectors; cadmium plated hardware; reflector aligner clips. / ITT Indoor Lighting.



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902 HID LUMINAIRE / Parkpak indoor/outdoor luminaire features polycarbonate refractor and choice of HPS, metal halide and mercury lamps. It mounts on ceilings, walls or poles. / Johns-Manville Sales Corp., Holophane Div.

903 SODIUM LIGHTING / Pericline lighting for indoor and outdoor applications comes in contemporary, traditional and bollard styles. The series is now available for 70-watt highpressure sodium to 1000-watt mercury vapor and metal halide lamps. / Moldcast Lighting, A Div. of Wylain, Inc.

904 EMERGENCY LIGHT / "Ultra-Lite" is a self-contained fixture designed to provide two hours of emergency lighting. The light source is a quartz halogen lamp. Fixture is available for either surface or recess mounting. It is 81/2 in. square by 1 in. high when recessed and 31/4 in. high when surface-mounted. / Yorklite Electronics, Inc.

905 TRACK LIGHTS / A bronze finish has been added to this line of residential "Power-Trac" lighting. The finish will be available in 4-, 8- and 12-ft miniature residential track. Lampholders come in various sizes and shapes. / Halo Lighting Div., McGraw-Edison Co. LR, I*

906 OUTDOOR BRACKETS / Wall or arm mounted units are provided with optical systems that confine the light to predictable design parameters without visible offense or glare. Models are available with flat tempered clear glass or clear, amber or bronze acrylic box diffusers. / Gardco Lighting, Gardco Mfg. Inc. GB, E*

907 OUTDOOR LIGHTING / Preassembled and pre-wired mounting yokes allow units to be easily installed on new or existing poles. "Form 17 JH Style" is equipped with flat tempered clear glass lens; "Form 17 JD Style," clear, amber or bronze acrylic box diffusers. Finishes: black or bronze anodized. / Gardco Lighting, Gardco Mfg. Inc. GB, E*

908 CUTOFF FLOODLIGHT / Features include easy access, unitized ballasts, rotatable optics, bronze or black anodized housing and poles. / Gardco Lighting, Gardco Mfg. Inc. GB, E*

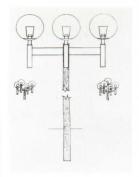
909 LUMINAIRE / A low-pressure sodium vapor wall pack can be used with either 35-watt or 55-watt 20,000-hour low-pressure sodium lamps. It utilizes an asymmetrical specular "Alzak" reflector to cover wide areas. Resistant to weather extremes, mechanical shocks, vandalism, and dirt penetration, the "LPS 2001 WallPak" is designed for heavy duty. /QL, Inc.

910 REFLECTOR LAMP / The 75watt "PAR-36" reflector lamp is little more than half the length of a standard PAR-38 lamp. As a result of this and its insulated prong base, the new reflector bulb can be used in shallow fixtures to about 3 in. / Westinghouse Electric Corp.

911 AREA LIGHT / The "PL" family of rectangular shaped area lights with cut-off characteristics are available in sizes ranging from 70 watts to 1500 watts in mercury vapor, metal halide, high-pressure sodium and lowpressure sodium. Light is cut-off at 78 degrees above the horizontal. / Trimblehouse Corp.

912 PENDANT / "The Orient" has chrome accents and is available in billiard green and pure white acrylic. It measures 151/2 in. wide and takes a 100-watt bulb. Priced at \$40. / Koch + Lowy.

913 DIMMING SYSTEM / The "MD-5" mercury-vapor dimming system locates all dimmers in a remote dimmer bank for component accessibility and maintenance. Suitable for 100, 175, 250- or 400-watt mercury vapor lamps at 277 volts, the MD-5 system provides a dimming range of from 100 per cent to 5 per cent. / Westinghouse Electric Corp.



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914 DESIGN SERVICES / Custom design and fabrication services are offered for chandeliers, wall sconces, bollards, ball globes, low-mount ground lights, architectural styled area lighting and lanterns. Light sources such as low-pressure sodium, highpressure sodium, and metal halides can also be incorporated in the designs. / Trimblehouse Corp.

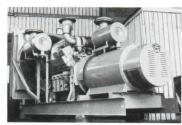
915 LIGHTED RAILING / Lighted "Rigidrail" aluminum handrail features recessed incandescent or flourescent lights. It is available in standard lengths of 20 ft and may be specified in Duranodic or clear anodized finishes. / Construction Specialties, Inc.

916 COMMERCIAL LIGHT / Lighting for indoor and outdoor commercial and industrial applications uses HID lamps, including sodium vapor. / Benjamin Div., Thomas Industries, Inc.





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917 AREA LIGHT / The "Centercube" luminaire is designed to provide even, low-glare illumination levels of large areas. It will accept up to four 1000-watt high-pressure sodium lamps; the all-aluminum housing is sealed and weather tight. / Trimblehouse Corp.

MOTORS & CONTROLS

918 ENCLOSURE / Corrosion-resistant enclosures house toggleoperated manual motor starters, manual motor-starting switches and fractional horsepower starters. These enclosures are made of Krydon, a fiberglass-reinforced polyester. / Crouse-Hinds Co.

POWER GENERATION

919 ENGINE-GENERATOR / Standby power (750 KW) is available in this generator that meets IEEE, NEMA, CSA standards and where applicable, NFPA standards together with EGSMA recommendation. / Katolight Corp. E*



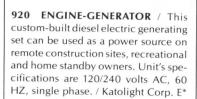
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PROTECTIVE SYSTEMS

921 STANDBY POWER / "Access Power" is a solid state AC computerized emergency standby system in a steel wall mount cabinet. The system provides 60 Hz power at specified voltages to standard fluorescent and incandescent fixtures, or other essential equipment. / Standby Systems, Inc.

922 ALARM SYSTEM / "Century 21" alarm system conforms to all existing requirements for UL certified grades AA, A and B security for both vault and safe protection. / Mosler, An American Standard Co. GB, E*



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923 VIDEOTAPER / Instant replay is one feature of the "Photoguard TV-II" video tape recorder for continuous surveillance of check-cashing and other fraud-prone operations. Options include on-off power switches which can be set for facility opening and closing times. / Mosler, An American Standard Co. GB, E*

924 SURVEILLANCE / The "Photoguard" camera line includes a 35mm cartridge-load camera. The "PG-35-C" takes sharp pictures in available light, acts instantly on demand, and can be set at either two or four frames per second. The camera meets all requirements of the Bank Protection Act. / Mosler, An American Standard Co. GB, E*

925 INFRARED DETECTOR / A passive infrared detector that covers a 75-degree angle is an indoor widerange motion sensor for up to 1600 sq ft of space. Priced at \$250. / Fire-Lite Alarms, Inc. E*



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926 SAFETY CENTERS / Communications equipment for life safety requirements of high-rise structures and building complexes includes: "Recom 10," firefighters' emergency communications system; "Recom 20." emergency public alerting system; and "Recom 30," public emergency communications system. / Robertshaw Controls Co., Control Systems Div.

927 SECURITY MONITOR / "FMS 1000" is a modular fire and security monitoring system which utilizes multiplexed transmission in obtaining the status of remote devices. All "FMS 1000" components may be equipped with 24-hour standby power when necessary. / Robertshaw Controls Co., Control Systems Div.

928 SMOKE DETECTORS / The "F655-1" is a dual-chamber ionization smoke detector capable of being used in conjunction with several F655 series mounting bases. The bases are available with lamp indication, twowire operation and flush mounting options. / Robertshaw Controls Co., Control Systems Div.

929 SMOKE DETECTOR / The "F650" series ionization duct smoke detector provides early detection of smoke and products of combustion moving through ventilation systems. The unit is a self-contained model operating on 120 VAC. / Robertshaw Controls Co., Control Systems Div.

930 FIRE ALARM / The "FMS 500" is a modular, solid-state control panel, offering complete input/output programming. Function modules provide local control functions, fire alarm input zone monitoring and supervision, relay contact outputs, and supervised power outputs. / Robertshaw Controls Co., Control Systems Div.

931 CONTROL PANEL / The "C306/C324" series control panel is a basic fire alarm control, single zone, designed for use with heat, manual station, smoke and/or ionization detection devices. The control can be used in homes or light commercial application. Priced at \$250:00. / Fire-Lite Alarms, Inc. E*

RACEWAYS

932 RACEWAY / "Walkertrak" is a flexible overhead raceway system which meets NEC requirements and is UL-listed. The flexible cable sets used to interconnect raceways and T/P poles are preassembled for 277V lighting, 120V lighting, and 120V power. / Walker Parkersburg Div. of Textron,

933 SWITCH BOXES / Two phenolic switch boxes designated types 1032F and 2030F, feature two stainless steel inserts which will not corrode when exposed to wet plaster or dry wall compound. Each insert has two contact points to engage the thread of the push-in device in a firm grip. / GTE Sylvania. E*

934 OUTLET BOX / A phenolic outlet box, with a 21.5 cu in. wiring capacity, designated type 4170, features 31/4 in. and 4 in. threaded openings for fixture mounting. / GTE Sylvania. E*

935 OUTLET BOX / A three-gang box, Catalog No. S3-54-R has a volume of 54.0 cu in. and the Quick/Click feature which secures the wiring device quickly and simply. All knockouts can be removed from either inside or outside of the box. / Slater Electric Inc.

936 EXPANSION UNIONS / Expansion unions can be used anywhere ½-in., ¾-in., and 1-in. rigid conduit is used, indoors and outdoors, in ordinary or hazardous locations to connect conduit to conduit, a junction box, or device enclosure. / Crouse-Hinds Co.

SERVICE & DISTRIBUTION

937 UNDERFLOOR BOX / A threegang size floor box with a "big-hand" access opening permits "clear-floor" landscaping by locating standard duplex receptacle and other devices within the floor box body, below the floor surface. The box accommodates both high and low voltage devices. / Midland-Ross Corp. E*



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938 JUNCTION BOXES / Explosion-proof "EJB" series junction boxes have an outer flange with a compression-type neoprene gasket for the watertight seal, and a flametight ground joint that makes them explosion-proof and dust-ignition-proof. They are available in various sizes. / Crouse-Hinds Co.

939 TRANSFER SWITCHES / Solidstate control circuit breaker transfer switches, ranging from 30 through 2000 amperes, perform as main contacts, transferring the load between normal and emergency power sources. / Kohler Co. E*

WIRING DEVICES

940 FLEXIBLE WIRING / A flexible wiring system that replaces conventional branch circuit wiring for both lighting and power distribution, "Reloc" uses the plug-in concept with cable sets and other components that are completely relocatable and reuseable. / Reloc Div., Lithonia Lighting.



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941 RECEPTACLES / These duplex receptacles have nylon faces and bodies to withstand high abuse. Rated at 125V AC, 60 Hz, with NEMA configurations for 15A or 20A, in ivory, white or brown, they are UL listed. / Leviton Mfg. Co., Inc. E*

942 RECEPTACLE / Hospital-grade single "U" grounding receptacle is made of unbreakable glass reinforced Lexan 500 resin. These devices meet or exceed all UL tests for "Hospital Grade" receptacles and are available in brown, ivory, white, grey and red. / Slater Electric Inc.

943 RECEPTACLES / Hospital grade devices have a long-life neon bulb that shines through each face of the duplex receptacle. Lexan 500 resin body is virtually indestructible. / Slater Electric Inc.

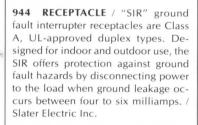


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945 SINGLE COVERS / Self-closing protective covers are molded of Lexan with a clear, transparent lid. A weather-resistant gasket and stainless steel screws are provided. / Slater Electric Inc.

946 ELECTRO/CONNECT / Product is a flexible metal-clad plug-in branch circuit wiring system for commercial and institutional buildings, including flexible factory-wired metal-clad cables with integral snap-in connectors. multi-receptacle boxes for lighting, power and signal interchanges and interface components to join the system to all electrical devices. / Day-Brite Lighting Div., Emerson Electric Co



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947 RECEPTACLE / "CPS" model 6 heavy-duty 20-ampere receptacle features a top-hinged cover on a 45degree downward-angled receptacle housing that incorporates one-piece molded gasket. The new design provides an environmental seal. / Crouse-Hinds Co.

948 RECEPTACLE / Ark-Gard 2 incorporates three spring-loaded slide keys to ensure lockout capability. The slide keys prevent the faceplate from being rotated into an operating position until an ENP plug is fully inserted in the receptacle. / Crouse-Hinds Co.

949 OUTLET COVER / Corrosionresistant, watertight covers for 15-, 20-, and 30-amp wiring outlets protect outlet receptacles when covers are open with plugs engaged. They are available with single or duplex outlets that accept standard 2-, 3-, and 4-pole grounded plugs. / Crouse-Hinds Co.

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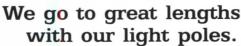
SMALL

or lower than the others. And you'll be getting the very best quality, plus exclusive features like Sterner's U-B-R.

What the hell is a U-B-R?

Sterner's Unitized Ballast/Reflector assembly. It's a complete system that includes capacitor, ballast, socket, lamp, and hydro-formed reflector in a single,

hinged, removable module. It contains a quick connect and disconne system, and also provides easy access for installation and maintenance. All this plus precision photometrics. Neat, huh?



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Round Straight and Square Straight in steel and aluminum. Plus special

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lug, a strain relief, multi-tap CWA ballastry,
stainless steel hardware, and waterproof fuse holders
for HID systems with base ballastry. Then, just to make
sure your life is not complicated by problems, we test
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