

CONCRETE INC.

-PRECISELY ENGINEERED HIGH STRENGTH CONCRETE-



Fibercrete®

*MODULAR
GROUND SLEEVES*



Concast Fibercrete® Modular Ground Sleeves provide for a stable and attractive base for any utility pad mount apparatus.

The Fibercrete® Modular Ground Sleeve is precisely engineered with high strength, fiber and steel reinforced concrete. Its high strength/weight ratio yields an extra tough, lightweight unit that saves handling and shipping costs.



Low in place cost plus concrete's proven durability and pleasing appearance provide for a truly economical and attractive installation.



Concast, Inc. was founded in 1969 by Mr. Ben Tilsen, past owner and president. Ben is a concrete technologist known for his work in light weight aggregates and fiber reinforced concrete. He and Concast, Inc. hold patents on material and design in these fields. Concast is a member of the American Concrete Institute and the National Precast Concrete Association.

Concast Inc. has specialized in concrete products for the electrical industry since 1969.

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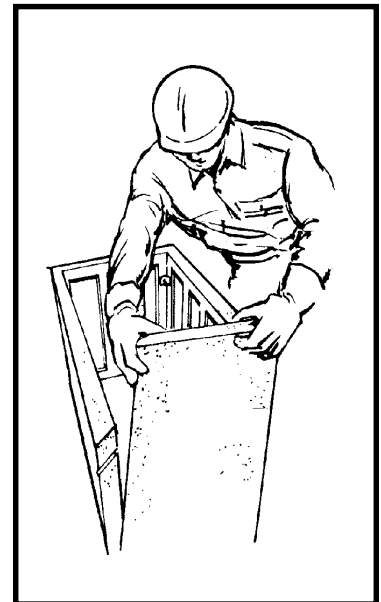
REDUCE INSTALLATION COST WITH CONCAST FIBERCRETE® MODULAR GROUND SLEEVES

IN-PLACE COST IS LESS than site cast concrete, conventional precast concrete, plastic mortars, or fiberglass plastics.



BENEFITS:

- **HANDLING IS EASY.** A crew of two or three can install a Modular Ground Sleeve without using hoisting equipment. Shipping costs are saved by its light-weight construction.
- **HIGH STRENGTH MATERIAL.** Fibercrete® construction makes possible a 3/4" material thickness with high strength, providing safe, reliable support for electrical apparatus. Waffled rib design supports normal equipment loads without warping.
- **LONG LIFE.** Concrete construction means long life plus fire and corrosion resistance. Inert mineral composition resists temperature extremes, rain, and UV degradation from the sun.
- **IMPACT RESISTANT.** Fibercrete® has about three times the impact resistance of ordinary concrete. In addition, the ground sleeves are designed with a reinforced top flange. The result is superior resistance to damage or abrasion from mowers, snow plows and vandals.
- **RODENT PROOF.** Tough Fibercrete® is resistant to gnawing animals.
- **FLAT AND RIGID.** Modular Ground Sleeves will not warp, providing a safe and secure installation. Fibercrete®'s rigidity resists the "racking" and door jamming that occur if equipment enclosures do not rest on a level surface.
- **NATURAL APPEARANCE.** Smooth stone-like surfaces blend with natural environment.



Modular Ground Sleeves shipped unassembled to reduce shipping cost.

FEATURES:

WAFFLE PANEL DESIGN. Fibercrete® MGS's unique waffle panel design reduces weight, makes handling easier, and greatly reduces shipping costs.

PATENTED MODULAR DESIGN. The patented Ground Sleeve offers a wide range of flexibility with its four part interlocking wall design.

IDEAL USES:



SWITCHGEAR



HAND HOLES



SECTIONALIZERS

DETAIL DRAWINGS PROVIDED.

Concast will provide detail drawings for engineering approval, and to assist construction supervisor in installation. Drawings will show overall ground sleeve size, weight, and any accessories required.

FROM ADVANCED CONCRETE TECHNOLOGY.

Advanced technology makes possible light, thin shell, precast concrete products which can replace more massive units in ordinary steel reinforced concrete. Drawing from more than 30 years of research and experience, Concast Inc. developed Fibercrete®, a proprietary blend of high strength concrete reinforcing with special fibers, using steel reinforcing where required.

QUALITY ASSURANCE AND RESEARCH.

Concast designs Fibercrete® products for specific applications, then tests them thoroughly for performance. The company molds and cures these products under precise controls at its Zumbrota, MN factory. Research continues at Concast to develop and test new and improved specialized products for the electrical distribution industry.

GUIDE SPECIFICATIONS.

(Complete recommended specifications can be found at the end of the Modular Ground Sleeve Catalog)

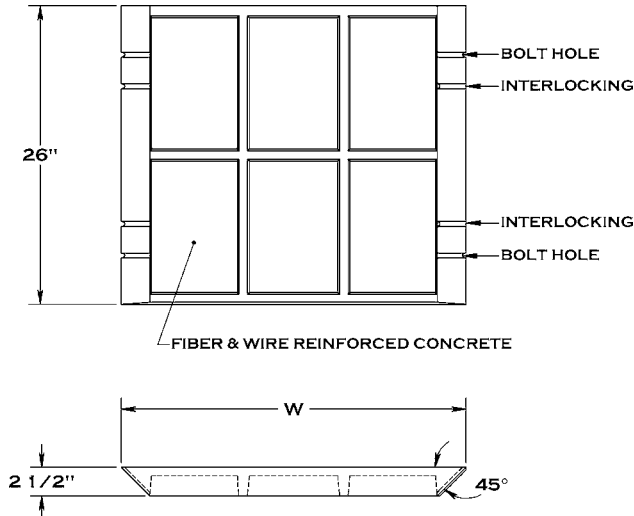
Ground Sleeves shall be Concast Fibercrete® or approved equal. It shall be composed of cement mortar, reinforced by alkali resistant fiber, and deformed high tensile welding wire.

CONCAST'S ROLE: TO SERVE YOU.

*For any special needs, contact your Concast Manufacturing representative, or call the factory direct.
Concast can make special sizes to meet your requirements.*

SIDE PANEL SIZE CHART

SIDE PANEL DETAIL



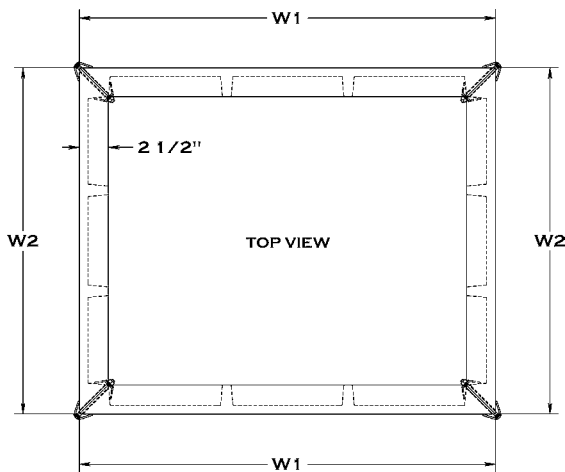
PART#	W	PART#	W
MG-15	15	MG-50	50
MG-18	18	MG-54	54
MG-20	20	MG-56	56
MG-22	22	MG-58	58
MG-26	26	MG-60	60
MG-30	30	MG-64	64
MG-34	34	MG-66	66
MG-36	36	MG-68	68
MG-38	38	MG-70	70
MG-42	42	MG-72	72
MG-44	44	MG-74	74
MG-48	48	MG-78	78

Sizes above are standard, for additional sizes please contact your local representative.

Proper mating: All ground sleeve panels are designed with interlocking corner joints to prevent vertical shifting.

Added Depth: Standard depth of Modular Ground Sleeve is 26". For additional depth units can be stacked.

Versatility: Modular Ground Sleeves have many uses. Common uses are: Electrical equipment bases, Hand holes, Junction/Splice boxes, and Pull boxes.



Values for "W1" and "W2" can be chosen from chart above.

Modular Ground Sleeves can be purchased as individual side panels or as an unassembled unit.

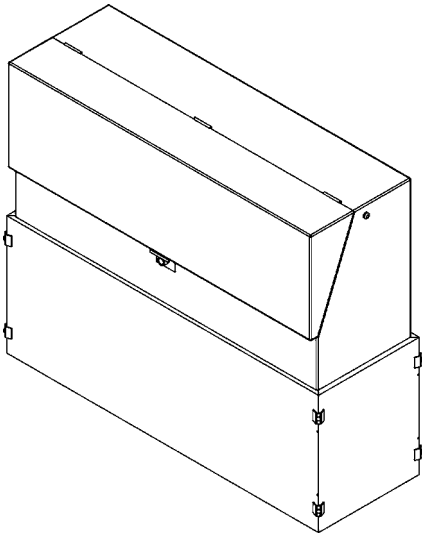
Ways to order using example shown.

Individual Sides: (Qty: 2) MG-W1 and (Qty: 2) MG-W2.

Unit: (Qty: 1) MGS-W1-W2

For every four panels ordered one hardware kit will be supplied.

Preassembled MGS units can be purchased.

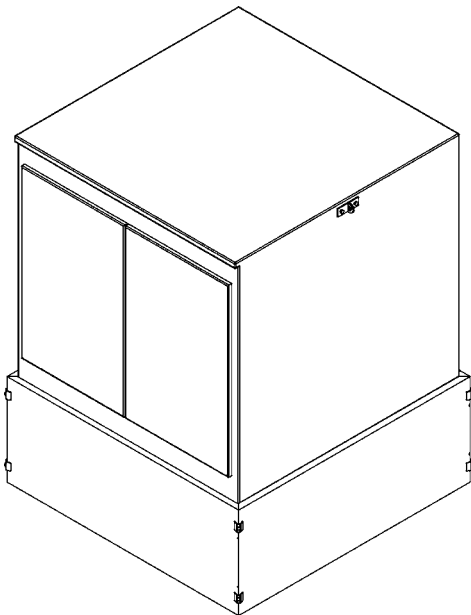


Vertical side walls found on Concast Modular Ground Sleeves allow for minimal excavation.

2 1/2" top flange allows for maximum cable opening, and is ideal for sectionalizers.

CONCAST MGS	OPENING SIZE
MGS-15-26	10 X 21
MGS-15-60	10 X 55
MGS-18-26	13 X 21
MGS-18-30	13 X 25
MGS-18-48	13 X 43
MGS-18-60	13 X 55
MGS-22-30	17 X 25
MGS-22-36	17 X 31
MGS-22-60	17 X 55
MGS-22-66	17 X 61
MGS-22-78	17 X 73

COMMON SIZES SHOWN, OTHERS AVAILABLE.



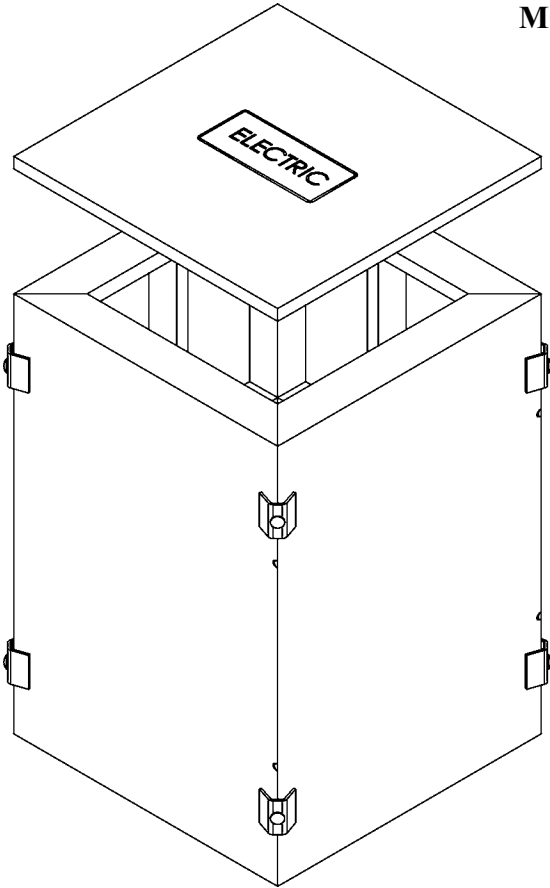
Although ground sleeves are traditionally used with sectionalizing cabinets they also make a great and economical basement for switchgear and other larger enclosures.

CONCAST MGS	OPENING SIZE
MGS-36-38	31 X 33
MGS-42-54	37 X 49
MGS-42-68	37 X 63
MGS-44-58	39 X 53
MGS-44-66	39 X 61
MGS-64-68	59 X 63
MGS-68-72	63 X 67
MGS-74-78	69 X 73

COMMON SIZES SHOWN, OTHERS AVAILABLE.

Above are lists of some common modular ground sleeve sizes, for additional sizes please contact your local Concast Representative. For a list of Concast Representatives in your area please visit our website at: www.concastinc.com/rebs.htm

MODULAR HAND HOLES (MHH)



Any Modular Ground Sleeve can be used as a hand hole. All hand holes come standard with cover, which can be stamped with desired marking.

HAND HOLE
MHH-15-15
MHH-15-30
MHH-18-18
MHH-18-36
MHH-22-22
MHH-22-42
MHH-26-26
MHH-26-48

HAND HOLE COVERS

Standard hand hole covers come unstamped. To order a specific marking choose from the list below.

- C - COMMUNICATION
- E - ELECTRIC
- F - FIBER OPTIC
- G - GAS
- L - LIGHTING
- T - TELEPHONE

ANY MGS SIDE PANEL SIZE CAN BE USED FROM CHART ON PAGE 6.

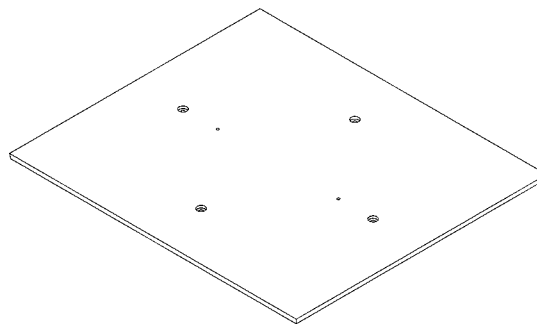
Example of an MHH-18-18 with cover stamped
ELECTRIC: MHH-18-18-E
(As shown on detail to left)

FIBERCRETE® MODULAR GROUND SLEEVE COVERS

For safety and security reasons covers are used for delayed equipment installation, where a modular ground sleeve is installed prior to equipment.

Fibercrete® Modular Ground Sleeve covers can be used for making any ground sleeve into a hand hole or junction box.

Example Part#: 42-44-C
(42-44) - Refers to ground sleeve size
(C) - Cover



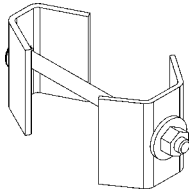
COVERS ARE SECURED WITH TAMPER PROOF PENTAHEAD BOLTS.

ADDITION COVERS:

Other covers can be manufactured to fit your needs:

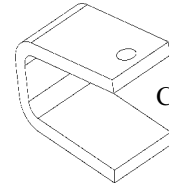
- Aluminum
- Steel Galvanized
- Spring Assist

HARDWARE KIT

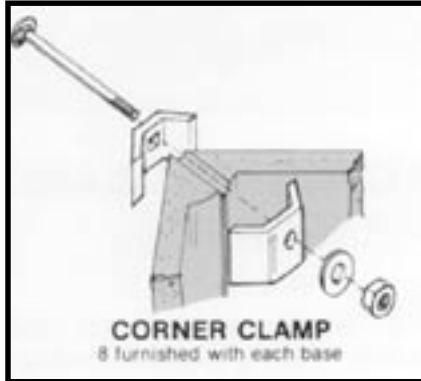


CORNER CLAMP ASSEMBLY

A hardware kit is included with every Modular Ground Sleeve unit. Corner Clamps are provided for assembling MGS. C-Clamps are provided to attach equipment to top flange of modular base. All hardware is Yellow Zinc plated (other finishes available).



C-CLAMP



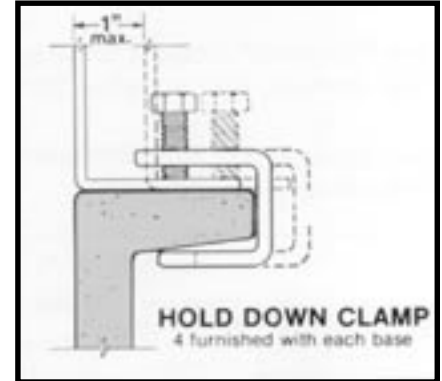
KIT INCLUDES:

-8 Corner Clamp Assembly

- 1 Carriage bolt 5/16" x 4 1/2"
- 1 Outside Corner Clamp
- 1 Inside Corner Clamp
- 1 Washer
- 1 Hex nut 5/16"

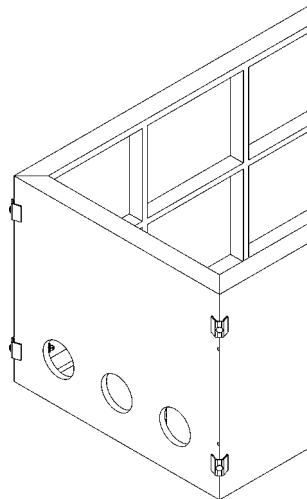
- 4 Hold Down Clamps

- 1 C-Clamp
- 1 Hex bolt 3/8" x 1"



HOLES AND KNOCKOUTS

When conduit/cables can not be routed deep enough to enter bottom of Modular Ground Sleeve, holes or knockouts may be provided in side wall. Fibercrete® can be drilled with any masonry tools on site or Concast will predrill or void out any required holes or knockouts.



Holes and Knockouts are typically needed:

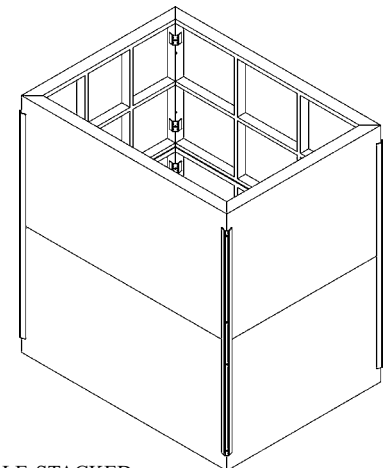
- When used in conjunction with Fibercrete® Trench System.
- For duct bank or conduit entry.
- For substation control building applications.

STACKING

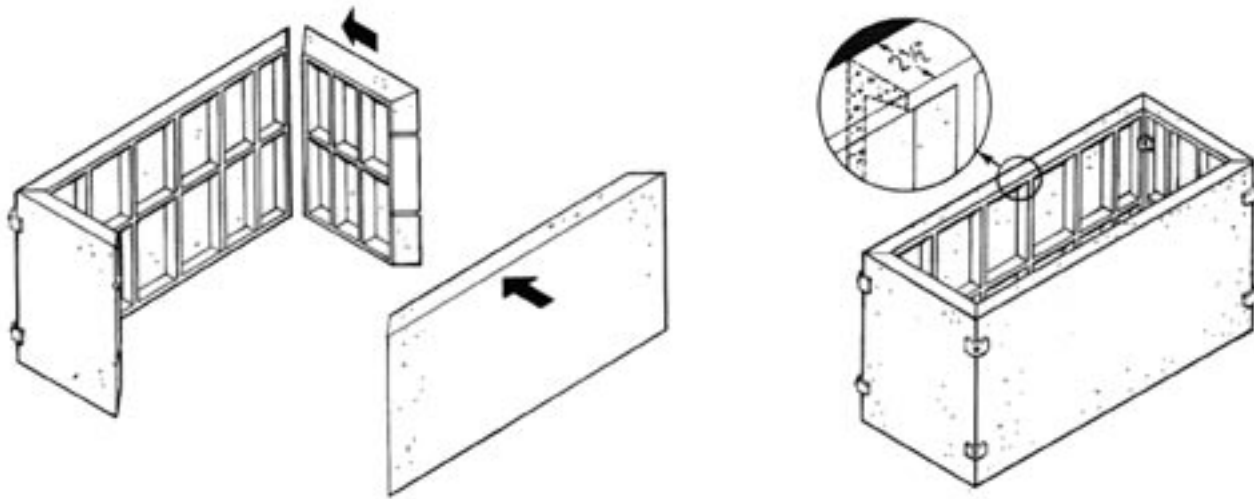
Standard Modular Ground Sleeves are 26" deep. When additional depth is required ground sleeves can be stacked. Hardware kits for stacked ground sleeves are the same with the exception of continuous outside corner clamps to tie stacked sleeves together. Stacked units are also supplied with industrial adhesive/sealant to seal and bond sleeves together at joint.

Preassembled:

Although units are usually delivered unassembled to save on shipping costs, any MGS standard or stacked can be preassembled at factory and shipped as one rigid unit.



DOUBLE STACKED SHOWN, DEEPER UNITS CAN BE MADE.



Modular Ground Sleeves have a top and a bottom side. Top side is flat and the bottom has a slight draft. An up arrow is located on the inside of each panel to identify correct orientation. To ensure proper installation follow steps below.

STEP 1: Align two side panels in correct upright position. Ensure that interlocking corners are mated properly. Using hardware provided bolt corner together. Copy step for all four corners.



STEP 2: If ground sleeve is not assembled in excavated hole, placement can be done one of two ways. Small light weight units can be placed by hand. Larger units may need hoisting equipment.



STEP 3: Once ground sleeve is in desired location, check to ensure that unit is level, and that entire bottom flange is supported equally. Backfill to desired grade.



STEP 4: Center equipment onto ground sleeve. Using hold down clamps provided with kit, attach equipment to top flange of ground sleeve.



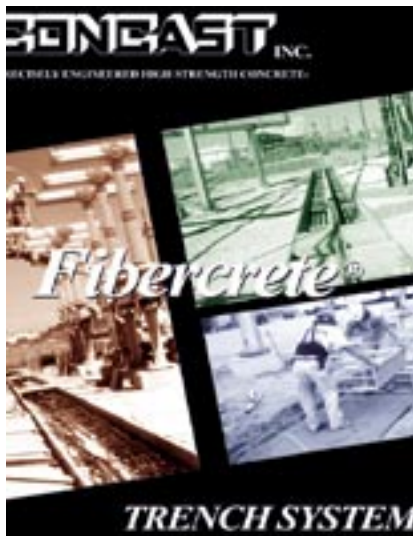
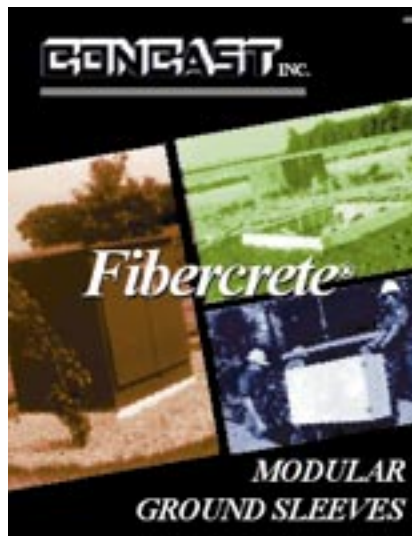
**SPECIFICATIONS FOR MODULAR
GROUND SLEEVES****1. GENERAL**

- 1-A.** Ground sleeve shall be composed of cement mortar reinforced by alkali resistant glass fibers, manufactured by Concast incorporating a minimum of 4 percent volume A.R. glass fibers.
- 1-B.** Ground sleeve will be of modular design easily assembled by two people. Composed of four side wall panels and hardware kit.
- 1-C.** Corners of modular panels will be designed with interlocking male-female parts to reduce vertical shifting of panels.
- 1-D.** The ground sleeve shall be constructed with internal ribs to increase strength.
- 1-E.** The ground sleeve shall be of waffle design to reduce overall weight of unit.
- 1-F.** The ground sleeve shall have a rigid, flat, and stable top surface.
- 1-G.** Each unit shall be equipped with hold down clamps to secure equipment to base.
- 1-H.** The ground sleeve must not warp, degrade under sunlight, or support flame or rust.
- 1-I.** The finished ground sleeve shall not sustain combustion.
- 1-J.** The ground sleeve must not be affected by asphalt, road salts, fertilizers, transformer oil, other common chemicals, weather, sunlight or other normal service conditions that it might be exposed to.
- 1-K.** Freezing - The ground sleeve shall be designed and constructed so that it and any hardware used will not trap or hold water, and will be able to withstand repeated freeze thaw cycles.
- 1-L.** Color - The color used in manufacture of ground sleeve shall be natural concrete gray.
- 1-M.** Temperature Limits - The ground sleeve shall be capable, with equipment installed, of withstanding temperature variations of -40 degrees C to +65 degrees C without cracking, splitting, or deforming.

2. DRAWINGS

- 2-A.** Drawings must be made available upon request for engineering approval and field installation and identification.
- 2-B.** Drawings will be in AutoCad format or equal and can be mailed, faxed, or emailed upon customer's request.

OUR COMPLETE LINE OF CATALOGS



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