



# 6-10" Submersible Motors

FOR 6" AND LARGER DEEP WELL PUMPS

BRCP6SM R2

### SINGLE PHASE, 6" MOTORS (1.15 S.F.) AND REQUIRED CONTROL BOXES

| Motor Order No. | HP  | kW  | Volts | Motor Diameter vs. Flange Diameter | F.L. | S.F. | Control Box Order No. |
|-----------------|-----|-----|-------|------------------------------------|------|------|-----------------------|
|                 |     |     |       |                                    | Amps | Amps |                       |
| 6M051           | 5   | 3.7 | 230   | 6" x 6"                            | 24   | 27.5 | CB05MC3R              |
| 6M071           | 7.5 | 5.5 | 230   | 6" x 6"                            | 36   | 41   | CB07MC3R              |
| 6M101           | 10  | 7.5 | 230   | 6" x 6"                            | 50   | 58   | CB10MC3R              |
| 6M151           | 15  | 11  | 230   | 6" x 6"                            | 72   | 85   | CB15MC3R              |

### THREE PHASE, 6 - 10" MOTORS, 1.15 SERVICE FACTOR, VARIOUS VOLTAGES

| Motor Order No. | HP  | kW  | Volts | Motor Diameter vs. Flange Diameter | Motor Order No. | HP  | kW   | Volts | Motor Diameter vs. Flange Diameter |
|-----------------|-----|-----|-------|------------------------------------|-----------------|-----|------|-------|------------------------------------|
| 6M058           | 5   | 3.7 | 200   | 6" x 6"                            | 6M258           | 25  | 18.5 | 200   | 6" x 6"                            |
| 6M052 *         |     |     | 230   |                                    | 6M252 *         |     |      | 230   |                                    |
| 6M054 *         |     |     | 460   |                                    | 6M254 *         |     |      | 460   |                                    |
| 6M078           | 7.5 | 5.5 | 200   |                                    | 6M308           | 30  | 22   | 200   |                                    |
| 6M072 *         |     |     | 230   |                                    | 6M302 *         |     |      | 230   |                                    |
| 6M074 *         |     |     | 460   |                                    | 6M304 *         |     |      | 460   |                                    |
| 6M108           | 10  | 7.5 | 200   |                                    | 6M404           | 40  | 30   | 460   | 8" x 6"                            |
| 6M102 *         |     |     | 230   |                                    | 6M504           | 50  | 37   | 460   |                                    |
| 6M104 *         |     |     | 460   |                                    | 8M504           | 50  | 37   | 460   |                                    |
| 6M158           | 15  | 11  | 200   |                                    | 8M604           | 60  | 45   | 460   | 8" x 8"                            |
| 6M152 *         |     |     | 230   |                                    | 8M754           | 75  | 55   | 460   |                                    |
| 6M154 *         |     |     | 460   |                                    | 8M1004          | 100 | 75   | 460   |                                    |
| 6M208           | 20  | 15  | 200   |                                    | 8M1254          | 125 | 90   | 460   |                                    |
| 6M202 *         |     |     | 230   |                                    | 8M1504          | 150 | 110  | 460   | 10" x 10"                          |
| 6M204 *         |     |     | 460   |                                    | 10M2004         | 200 | 150  | 460   |                                    |

\* These motors are equipped with a voltage change plug. Order separate voltage change plugs to reduce your motor inventory. If you stock 230 Volt motors and a few 460V plugs you can double your inventory at a very low cost.

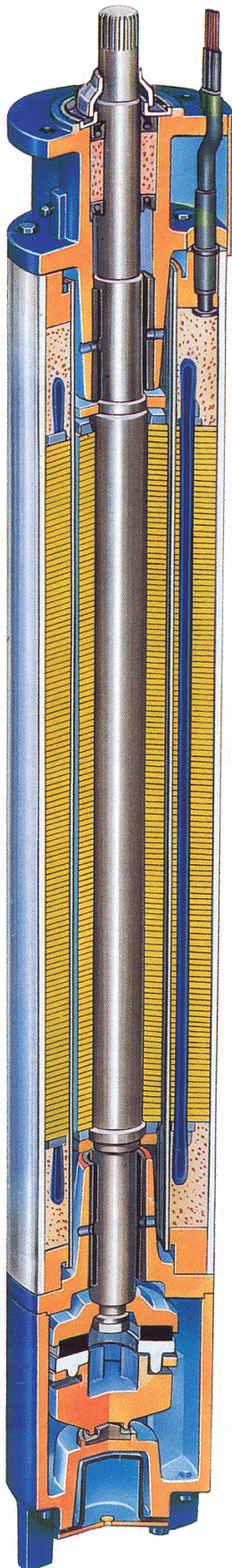
**Change Plug Order Numbers are: PLUG-230V and PLUG-460V**

### 6" GOULDS WATER TECHNOLOGY MOTOR LEADS

| Order No. | Description  | Used On                                |
|-----------|--------------|----------------------------------------|
| CPML-12   | 150", 12 / 4 | 5-15 HP 1Ø; 5 - 25 and 40 HP, 460V, 3Ø |
| CPML-10   | 150", 10 / 4 | 30 HP, 230/460V and 50 HP, 3Ø          |
| CPML-8    | 150", 8 / 4  | Optional for 30-50 HP, 3Ø, any voltage |



## CLASSIFICATION OF SUBMERSIBLE MOTORS



### FOR DEEP WELLS

#### 6" CANNED MOTORS

For Municipal Water Service,  
Industrial Irrigation and  
Building Water Supply.

Single  
Voltage

Dual  
Voltage



#### 8-10" REWINDABLE WATER-TIGHT MOTORS



### GENERAL FEATURES OF CANNED AND REWINDABLE WATER-TIGHT MOTORS

#### 6" Canned Design Motor Features

- **Replaceable Plug-in Motor Lead** - All 6" motor leads are stranded copper for flexibility and strength. Leads are 150" long and field replaceable.
- **Insulation** - The canned motor's stator coil is mounted in a stainless steel frame and is completely sealed in a stainless steel cylinder. The coil wire features moisture resistant insulation which is completely water-proofed for long life.
- **Heat Resistant** - The space between the stator's stainless steel protective can and its frame is filled with a specially formulated patented resin that protects the motor against thermal fluctuation and internal stress.
- **95° F (35° C) Water Temperature (CANNED TYPE: 6", 5 - 50 HP)** - The motors operate with a minimum flow rate of 0.5 ft./sec. (0.15 m/sec) in water temperature up to 95° F (35° C) without any derating of horsepower. This 95° F (35° C) temperature is 18° F (10° C) higher than NEMA standards.

#### 8-10" Rewindable Water-Tight Motor Features

- **Insulation Wire** - The coil conductor insulation material is a specially developed denatured polypropylene, which offers excellent leak-resistant characteristics. Three barriers are applied to the copper conductors to provide complete insulation against the motor's cooling fluid. This design is the result of extensive research and is of superior quality. It insures that Goulds Water Technology motors will have an extremely long service life.

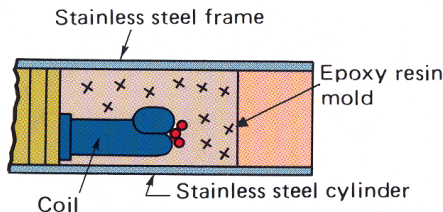
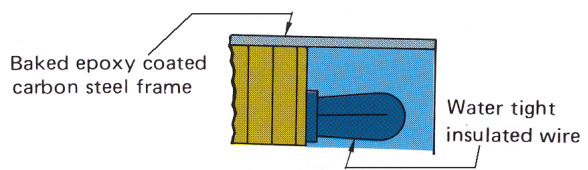
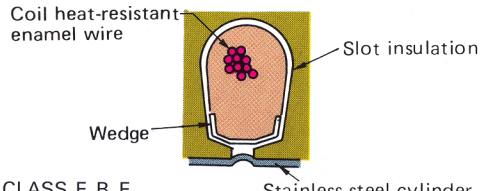
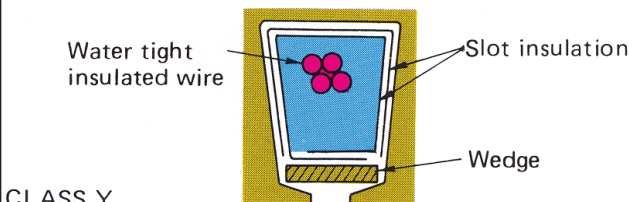
#### Motor Features - Both Designs

- **Sand Resistant Slinger and Lip Seals** - Goulds Water Technology submersible motors feature double-row, grease packed, lip seals to prevent sand from entering the motor. A carbon steel slinger with a baked on epoxy coating prevents sand from entering the lip seal area. Additional protection against sand intrusion is

provided by the close tolerance slinger guide with a .02" fit. This design is field-proven in West Texas wells which are considered to be some of the worst sandy well applications. Best of all, these features are standard for a Goulds Water Technology motor, so there is no need to stock one motor for clean wells and another more expensive motor for the more abrasive, sandy jobs.

- **High Torque Characteristics** - The stator laminations are constructed of high quality, electrical grade, silicon steel which provide high torque even when the motor is subjected to nominal voltage variations.
- **Balancing** - The rotor balance rings (one on each end of the rotor) allow for excellent dynamic balance for the rotating element of the motor.
- **Carbon Sleeve Bearings** - Two carbon, water-lubricated, guide bearings are used to properly align the shaft. The bearings have a large surface area to better support the shaft, reducing whipping, while acting as a steady bushing.
- **Water-Filled Design** - The internal cooling water is mixed with antifreeze and antirust liquid to allow the motor to be stored at -22° F (-30° C). Two water plugs are provided for filling or draining the anti-freeze fluid during maintenance. These plugs are also used to top off and to check the water level.
- **Complete Corrosion and Water-Tight Protection** - All main motor components are made of stainless steel: including the can housing (water tight type motors have baked epoxy coated carbon steel housings), shaft and bolts. All other motor parts are finished with the baked epoxy coating.
- **Baked Epoxy Coating** - All external and internal cast iron parts are coated with a baked epoxy resin that provides excellent resistance to water and corrosion.
- **Quality Control** - All Goulds Water Technology submersible motors are manufactured and tested under the most stringent quality control procedures, providing long service life and trouble-free operation.

### CONSTRUCTION AND INSULATION DETAILS

| TYPE                   | 6" CANNED DESIGN                                                                                                                                                                                                    | 8-10" REWINDABLE WATER-TIGHT DESIGN                                                                                                                                       |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction</b>    |  <p>Stainless steel frame</p> <p>Epoxy resin mold</p> <p>Coil</p> <p>Stainless steel cylinder</p>                                |  <p>Baked epoxy coated carbon steel frame</p> <p>Water tight insulated wire</p>       |
| <b>Slot Insulation</b> |  <p>Coil heat-resistant enamel wire</p> <p>Slot insulation</p> <p>Wedge</p> <p>CLASS E, B, F</p> <p>Stainless steel cylinder</p> |  <p>Water tight insulated wire</p> <p>Slot insulation</p> <p>Wedge</p> <p>CLASS Y</p> |

## 6" CANNED DESIGN

### THREE PHASE, 5-30 HP, 230 AND 460V DUAL VOLTAGE MOTORS



With DUAL VOLTAGE SUBMERSIBLE MOTORS IN YOUR STOCK, you no longer have to worry about inventory balance between 230V and 460V.

DUAL VOLTAGE SUBMERSIBLE MOTORS have all the same specifications of canned type motors plus the unique feature of dual voltage.

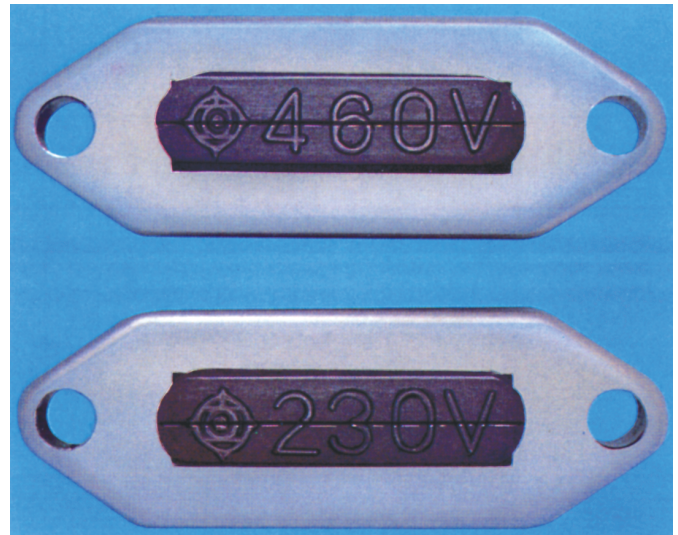
Motor voltage can be changed from 460V to 230V or from 230V to 460V on three-phase, 5 through 30 HP motors by changing voltage plugs.

Voltage plugs are clearly and permanently marked as 230V or 460V. Each plug is usable on all 5 through 30 HP motors.

#### Voltage Plug Order Numbers:

PLUG-230V

PLUG-460V



## 5 - 30 HP (3.7kW - 22kW), 3Ø

### STANDARD SPECIFICATIONS

Cable Connection : Plug-In Type  
Cable Length : 150 inch (3.8 m)  
Shaft : NEMA Splined  
Flange : NEMA Standard  
Speed : 2P 3600/3000 RPM (60/50 Hz)

#### Water Environment

Flow Rate : 0.5 ft./sec. minimum  
pH Level : 6.5 - 8  
Maximum Temperature : 95° F (35° C)

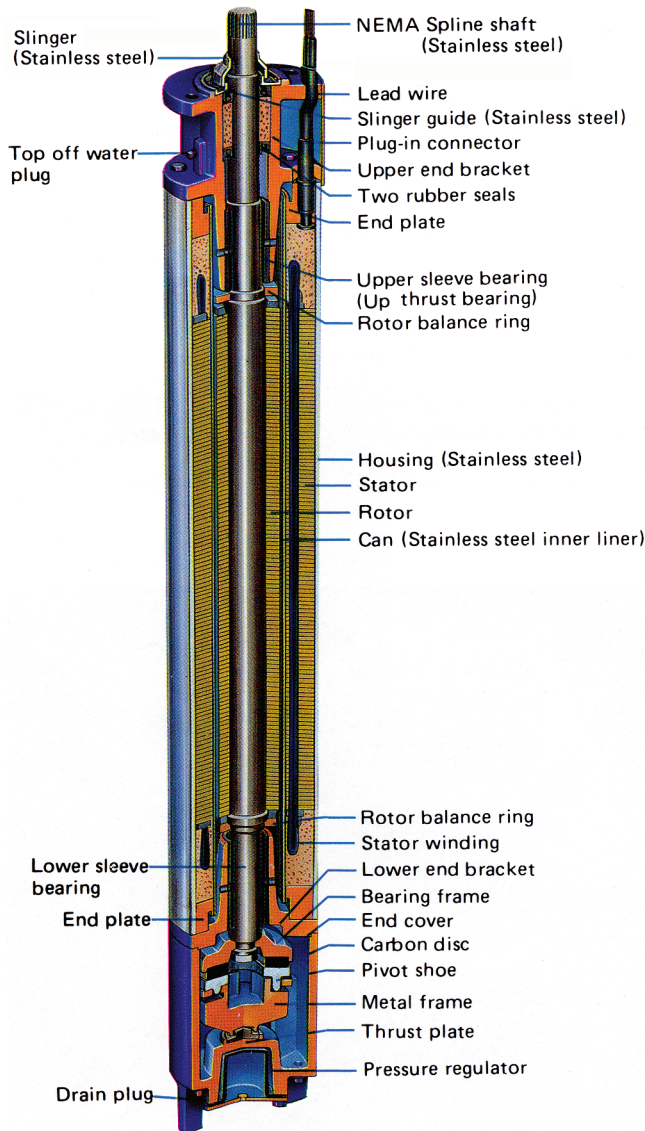
#### Service Factor

1.15 : at 230, 460V/60Hz  
1.00 : at 208, 380V/60 Hz and  
380, 400, 415V/50 Hz



### 6" CANNED DESIGN MOTORS

#### 2 POLE 3600/3000 RPM



6" 5-15 HP (3.7 kW - 11 kW) 1Ø  
 6" 5-50 HP (3.7 kW - 38 kW) 3Ø

#### STANDARD SPECIFICATIONS

|                         |              |                      |          |
|-------------------------|--------------|----------------------|----------|
| <b>Cable Connection</b> |              | Plug-In Type         |          |
| <b>Cable Length</b>     |              | 150 inch (3.8 m)     |          |
| <b>Shaft</b>            |              | <b>NEMA Splined</b>  |          |
| <b>Flange</b>           |              | <b>NEMA Standard</b> |          |
| <b>Speed</b>            | <b>60 Hz</b> | <b>2P</b>            | 3600 RPM |
|                         | <b>50 Hz</b> | <b>2P</b>            | 3000 RPM |

#### Water Environment

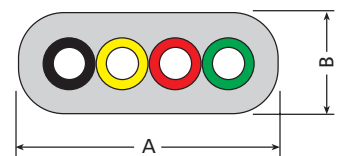
|                            |                |                               |  |
|----------------------------|----------------|-------------------------------|--|
| <b>Minimum Flow Rate</b>   |                | 0.5 ft./sec.<br>(0.15 m/sec.) |  |
| <b>pH Level</b>            |                | 6.5 - 8                       |  |
| <b>Maximum Temperature</b> | <b>5-40 HP</b> | 95° F (35° C)                 |  |
|                            | <b>50 HP</b>   | 77° F (25° C)                 |  |

#### Service Factor

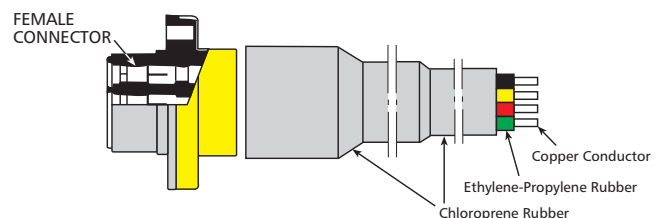
| Service Factor     | Motor             |                                             |
|--------------------|-------------------|---------------------------------------------|
|                    | 1.15              | 1.0                                         |
| <b>6" 5-30 HP</b>  | 230, 460V / 60 Hz | 208, 380V / 60 Hz<br>380, 400, 415V / 50 Hz |
| <b>6" 40-50 HP</b> | 460V / 60 Hz      | 380, 400, 415V / 50 Hz                      |

#### TYPE OF LEAD WIRE - 600V CLASS

Ethylene-Propylene Rubber Insulated  
 Chloroprene  
 Cabtyre Cable  
 Plug-In  
 (Field replaceable.)  
 Color Coded  
 USA Standard  
 (Black, Yellow, Red, Green)



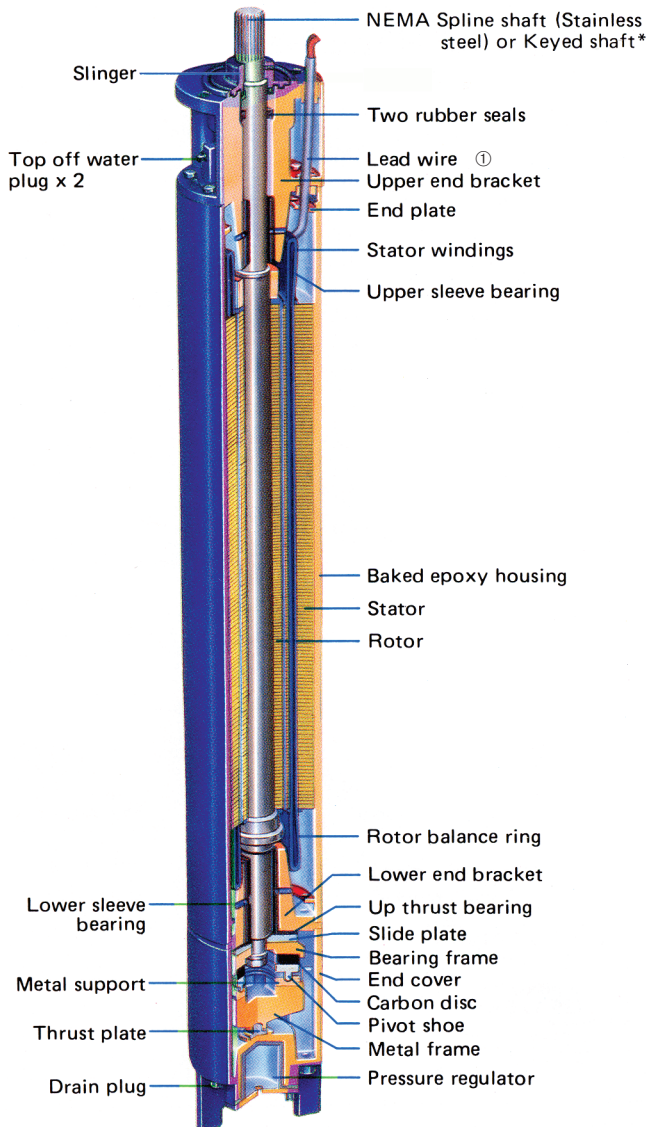
#### CHLOROPRENE CABTYRE CABLE





### 8-10" REWINDABLE WATER-TIGHT MOTORS

#### 2 POLE 3600/3000 RPM

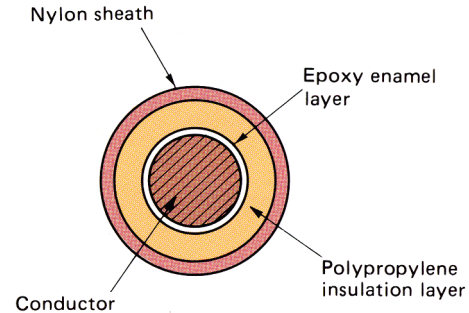


① 8-10" motors do not have a factory installed ground lead.

\*See dimensional data for correct variations.

40-200 HP (30 kW - 150 kW) 3Ø  
2P 3,600/3,000 RPM (60/50 Hz)

#### DESCRIPTION OF WATER TIGHT INSULATION WIRE



The reliability of submersible motors depends on their insulation characteristics. Goulds Water Technology 8-10" motors are the result of years of continuous research and development. Our rewindable water-tight motors feature excellent insulation characteristics thanks to their new patented, water-tight, insulated magnet wire.

The insulation material is a specially developed denatured polypropylene applied over a special enamel layer. An external nylon sheath is applied over this polypropylene layer for extra mechanical protection. These three barriers are applied to copper conductors for complete insulation from the motor's cooling fluid. This insures that Goulds Water Technology motors will have an extremely long service life.

#### STANDARD SPECIFICATIONS

|                         |              |                                                        |
|-------------------------|--------------|--------------------------------------------------------|
| <b>Cable Connection</b> |              | Direct to Stator                                       |
| <b>Cable Length</b>     |              | 200 inch (5 m)                                         |
| <b>Shaft</b>            | <b>2P</b>    | Splined 40-150 HP (30-110 kW)<br>Keyed 200 HP (150 kW) |
| <b>Flange</b>           |              | NEMA Standard                                          |
| <b>Speed</b>            | <b>60 Hz</b> | <b>2P</b> 3600 RPM                                     |
|                         | <b>50 Hz</b> | <b>2P</b> 3000 RPM                                     |

#### Water Environment

|                            |                            |
|----------------------------|----------------------------|
| <b>Minimum Flow Rate</b>   | 0.5 ft./sec. (0.15 m/sec.) |
| <b>pH Level</b>            | 6.5 - 8                    |
| <b>Maximum Temperature</b> | 77° F (25° C)              |

#### Service Factor

| <b>Service Factor</b>   | <b>1.15</b>  | <b>1.0</b>                |
|-------------------------|--------------|---------------------------|
| <b>Motor</b>            |              |                           |
| <b>40-200 HP<br/>2P</b> | 460V / 60 Hz | 380, 400,<br>415V / 50 Hz |



# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

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