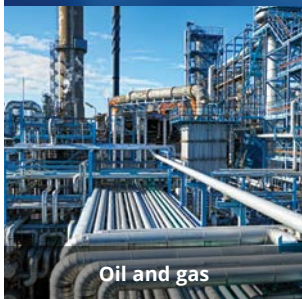


Low-voltage motor control centers (MCC)

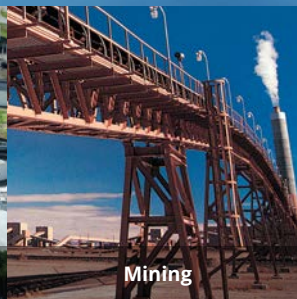
# Excellence in motor control



Oil and gas



Water/wastewater



Mining



Utilities



Industrial



*Powering Business Worldwide*



# Motor control centers



## **Improved maintainability**

with front-accessible motor load blocks and wireway



## **Improved interface**

with standardized bucket component layouts



## **Reduced footprint**

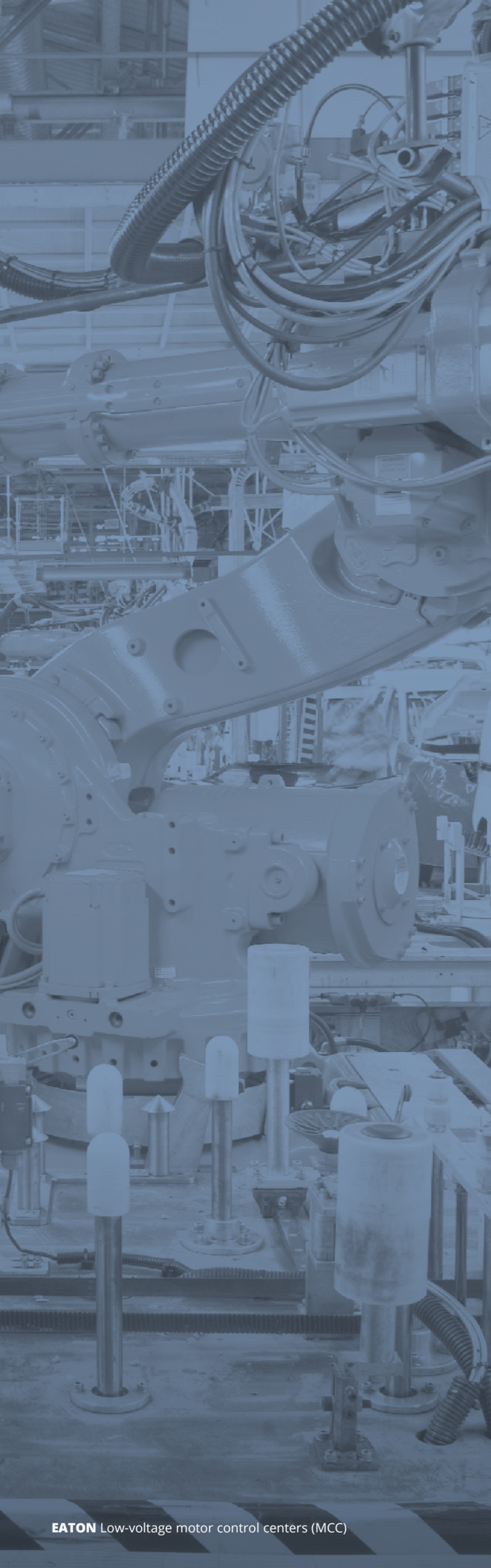
6-inch compact starter and feeder buckets available



## **Arc flash safety solutions**

Increased safety with arc-resistant and arc-preventive technologies





## Freedom™

- UL® 845 listed
- Up to 3200 A horizontal bus
- Up to 1200 A vertical bus
- Up to 800 A ground bus
- Bus standard bracing is 65,000 A—optional up to 100,000 A
- Seismic rated
- All parts and wiring are front accessible for ease of installation and maintenance
- Available in 16-inch and 21-inch depths with the industry's smallest front-to-back design that is 21 inches deep
- Stab in/out units up to 400 A for starters, feeders, variable frequency drives and soft starters
- Smallest soft start in the industry with integral run bypass contactor up to 1000 A



# Arc flash safety solutions

Increased safety with arc-resistant and arc-preventive technologies



## FlashGard®

- Insulated horizontal bus
- Isolated labyrinth vertical bus
- Shutters isolate the vertical bus when unit is removed
- Shutters on the unit isolate the stabs when a bucket is removed
- Padlock accessory locks the unit door closed, allowing only qualified personnel to access the unit
- Proven to reduce the incident arc flash energy during maintenance

### RotoTract™ retracting stabs

- Provides bus isolation, stab indication and lockout features in the initiation of an arc flash event
- Allows the unit to be disconnected from the vertical bus with the door closed



## Freedom+ FlashGard

- The new Freedom MCC common platform makes it possible to allow the installation of multiple Eaton MCC types within the Freedom family
- Eaton Freedom+ MCC common platform is standardized on a labyrinth barrier for the vertical bus
- Pilot indicating light bulbs are LED type to ensure long lifespan, energy efficiency and low maintenance costs
- As a cost-efficient and easy-to-install/troubleshoot, wire marking is enabled for all MCC units—preventing the switch of wires and related accidents

### Features and benefits

- One structure design
- One-bucket design
- Universal divider pan and bucket ground







## Freedom and FlashGard Arc-Resistant

- Tested and verified per IEEE® guideline C37.20.7 and CSA® standard 22.2 No. 0.22-11
- Type 2 accessibility rating
- Main lug and main breaker variants available
- FlashGard RotoTract available
- No exhaust plenums or roof flaps required
- 12-gauge steel on doors, side sheets and back sheets helps contain dangerous arc blast energy
- Robust door hinges and latches ensure doors remain closed during an arc flash event

### FlashGard MCC features and functions

- Prevention: insulation and isolation
- Reduction of time-available fault current by means of breaker Arcflash Reduction Maintenance System™
- Maintaining unit door closed
- Removing voltages dangerous to life
- Remote connect/disconnect racking motor accessory

- 1 Arc-prevention:**  
FlashGard technology
- 2 Reduce severity:**  
Arcflash Reduction Maintenance System
- 3 Containment:**  
Type 2 arc-resistant construction

The unique product combination offers protection for personnel during all stages of MCC maintenance by the inclusion of features that work to help prevent an arc flash from occurring and to contain arc blast energy if an arc flash event occurs.

# Aftermarket support

Aftermarket MCC units extend the life of existing motor control centers while also modernizing the equipment with a wide range of devices that enhance safety, improve energy efficiency and provide intelligence to make more informed decisions. Eaton provides UL 845 approved aftermarket units, support and components for the following MCCs.

## UL 845 Eaton MCC aftermarket units

| Name brand             | MCC                              | Years manufactured |
|------------------------|----------------------------------|--------------------|
| Westinghouse           | 11-300                           | 1935 to 1965       |
| Cutler-Hammer®         | 9800 Unitrol                     | 1956 to 1974       |
| ITE®                   | 5600 Series                      | 1957 to 1976       |
| Gould®                 | 5600 Series                      | 1957 to 1976       |
| Telemecanique®         | 5600 Series                      | 1957 to 1976       |
| Westinghouse           | Type W                           | 1965 to 1975       |
| Moeller                | 200, 3000, MODAN 3000            | 1967 to present    |
| Allen-Bradley®         | Centerline                       | 1971 to present    |
| Cutler-Hammer          | F10 Unitrol                      | 1972 to 1989       |
| Westinghouse           | 5 Star                           | 1975 to 1986       |
| General Electric® (GE) | 7700/8010                        | 1975 to present    |
| Furnas® 89             | Series 89                        | 1979 to 2001       |
| Westinghouse           | 2100 Series ❶                    | 1986 to 1995       |
| Cutler-Hammer          | Freedom Unitrol                  | 1989 to 1994       |
| Westinghouse           | Advantage™ ❶                     | 1991 to 2012       |
| Square D®              | Models 4, 5 and 6                | 1970 to present    |
| Eaton                  | Freedom 2100 ❶                   | 1995 to present    |
| Eaton                  | <b>IT.</b> MCC replacement       | 2002 to 2012       |
| Eaton                  | <b>IT.</b> FlashGard replacement | 2006 to 2012       |
| Eaton                  | Freedom FlashGard                | 2006 to present    |

❶ FlashGard replacement units are available.



Aftermarket support is available at the Fayetteville, NC, main facility and the Portland Power Center, Portland, OR.

For more information, visit  
**Eaton.com/MCC**