



Benshaw Motor Control System

Customized alternative to traditional low voltage MCC Lineups



Introduction

Benshaw Motor Control Systems (BMCS)

The Benshaw Motor Control System provides unmatched flexibility to tailor your system and to meet your exact operational demands. But that's just the beginning.

This unit stands at an impressive 92.5 inches high and offers customizable sections heights of 13, 26, 39, 52, 65 and 78 inches all configurable into widths of 24, 30, and 40 inches.

Fully Welded Construction - Built rugged and made to last, ensuring durability in the most demanding environments.

Customizable Sections - Choose from a range of motor controls, including ATL Starters, VFDs, Soft Starters, and other essential components to fit your specific needs.

Need it faster than the industry standard lead times of 40-80 weeks for traditional MCCs?
Benshaw delivers in HALF that time, helping you keep operations moving smoothly and efficiently.

BENSHAW

Take control. Take performance. Take Benshaw.



Integrated Control Solutions

Benshaw offers custom-configured motor control systems built to the UL 508A standard, tailored to fit your application needs. Our solutions include various combinations of full-voltage starters, solid-state starters, variable speed drives, and breaker feeders.



Features:

- UL 508/508A
- Up to 2000amp circuit breaker or MLO
- Floor mounted with one or more vertical sections
- · Common horizontal bus
- · Fixed mount devices
- Smallest section is 13" (92.5" high design)
- Welded construction
- NEMA 12, 3R, and 4

Customizable to include:

- FVNR ATL full voltage starters
- Soft starters
- Variable frequency drives
- Feeders
- · Power distribution panels
- Incoming / Motor lug only
- Main breaker

Available in two heights:

- 79" H
- 92.5" H

Ratings:

- Up to 42kA
- UL/cUL 508A
- CSA special inspection (optional)
- For 65kA Consult Factory

79" High Single Section



480 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 150HP | 50HP | 500HP | 1200 Amp |
| 30" Wide | 300HP | 75HP | 500HP | 1600 Amp |
| 40" Wide | 500HP | 125HP | 500HP | 2000 Amp |

600 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 200HP | 75HP | 600HP | 1200 Amp |
| 30" Wide | 400HP | 100HP | 600HP | 1600 Amp |
| 40" Wide | 600HP | 150HP | 600HP | 2000 Amp |

Notes:

VFD includes space for line and load reactors.

Fans and filters still need to be sized accordingly.

79" High Dual High Section



480 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 75HP | 10HP | 150HP | 400 Amp |

600 Volt DesigWn

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 100HP | 15HP | 200HP | 400 Amp |

Notes:

No space for reactors or filters.

Limitation for ATL and soft starter is cable size over physical footprint.



92.5" Single Section



480 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 150HP | 50HP | 500HP | 1200 Amp |
| 30" Wide | 350HP | 75HP | 500HP | 1600 Amp |
| 40" Wide | 500HP | 125HP | 500HP | 2000 Amp |

600 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 200HP | 75HP | 600HP | 1200 Amp |
| 30" Wide | 400HP | 100HP | 600HP | 1600 Amp |
| 40" Wide | 600HP | 150HP | 600HP | 2000 Amp |

Notes:

VFD includes space for line and load reactors.

Fans and filters still need to be sized accordingly.

92.5" Two High Section



480 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 100HP | 10HP | 150HP | 400 Amp |

600 Volt Design

| Bucket Width | Max Soft Starter | Max VFD | Max ATL | Max Breaker |
|-----------------|------------------|---------|---------|-------------|
| 24" Wide | 125HP | 15HP | 200HP | 400 Amp |

Notes:

No space for reactors or filters.

Limitation for ATL and soft starter is cable size over physical footprint.

WHY SPECIFY BENSHAW'S BMCS - BENSHAW MOTOR CONTROL SYSTEM

Lead Time:

Very long lead times for traditional MCCs - some as long as 40-80 weeks, Benshaw offers the BMCS with 20-24 weeks lead time.

Design Advantages:

The BMCS units are solidly built to UL/cUL 508A and CSA standards. And, like all the other equipment Benshaw builds, they are heavy duty rated for reliable operation. So, if going into a mine, a cement plant, or an aggregate plant, the BMCS is designed for these and other demanding environments.

You Get What You Pay For:

The BMCS may be a bit costly compared to a traditional MCC. But you would expect this based on the design. The BMCS durable, welded cabinet construction (as compared to erector-set style MCC cabinets) is worth the price.

Traditional MCC vs a BMCS:

The primary difference between a traditional MCC (Motor Control Center) and a BMCS (Benshaw Motor Control System) is the construction. An MCC has removable buckets which can be removed and worked on remotely. The BMCS has fixed gear on a metal backplane and it is not un-pluggable. However, like an MCC, each section of the BMCS can be isolated by a disconnect switch, preventing access to other sections during service.

Installation Considerations:

Install a BMCS anywhere you would use an MCC. Especially if lead time, heavy duty construction and customization are important.

Anything Goes:

Customize your BMCS with nearly anything you want: Full Voltage Starters, Soft Starts, Variable Frequency Drives. Circuit Breaker Feeders, Main Breakers, Power Distribution Panels, Power or Motor Landing Pads ... and more.

Technical Support Services

Our technical support team is available 24/7 to answer questions and solve pressing issues before, during and after the sale.

Benshaw's knowledgeable Technical Support team help you evaluate both current and future motor control system requirements and develop a sound strategy for retrofit, upgrade or replacement. We can also help you submit a Request for Service Quotation. All services are performed by trained, experienced service technicians using the latest engineering, diagnostics and testing equipment.

- Retrofits
- · Field service
- Factory service
- Technical training support
- · Spare/repair parts
- Maintenance

Phone support hotline (1-800-203-2416)

Canada (1-877-291-5112)

Centralized coordination of all support services

24-hour dispatch from our operations in Pittsburgh, PA (USA) and Listowel, ON (Canada)





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