



BENSHAW
Applied Motor Controls



Service Capabilities

RETROFITS, REPAIRS, SPARE PARTS, FIELD
ENGINEERING AND TECHNICAL TRAINING SERVICES ...
ALL PART OF OUR COMMITMENT TO YOU

Rapid | Rugged | Global

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Introduction

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

From retrofits to repairs, Benshaw is committed to meeting your requirements. Whether you need simple modifications made to a Benshaw control or drive package, a custom-engineered upgrade to optimize production from an existing machine control panel, technical training for key personell, or a turnkey, plant-wide control modernization program, Benshaw is here to help.

Benshaw's knowledgeable Technical Support team can 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.

Standard controls, parts, packaged assemblies and electrical/electronic components are stocked and ready to ship from Benshaw.

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



Retrofit Solutions

Extend the life of your motor and controls without the expense of replacing the entire structure by choosing to retrofit with Benshaw.

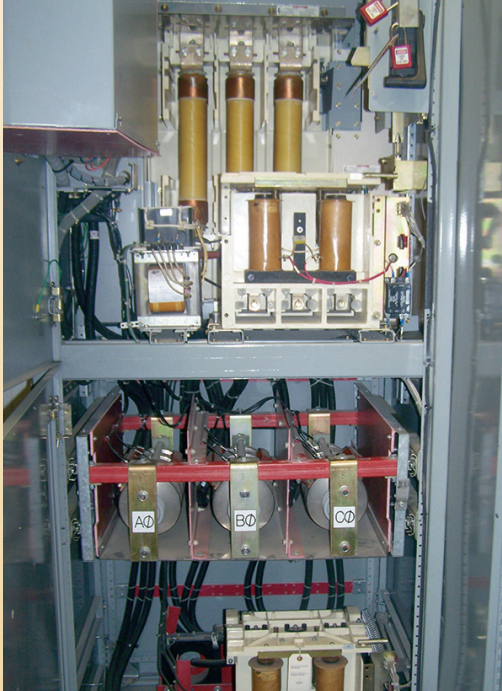
Space constraints, new wiring requirements and other expenditures can easily turn an equipment replacement project into a CAPEX nightmare. Our retrofit solutions, on the other hand, provide an opportunity to lower total project costs by upgrading only the components that need enhanced performance. Benshaw offers a range of retrofit options for upgrading almost any type of starter or variable frequency drive: From simple control upgrades to complete motor control modernization packages.

Industrial applications specialists at Benshaw are available to help you evaluate current and future control system requirements and develop a sound strategy for retrofit, upgrade or replacement. And when you're ready to make a move, Benshaw can follow through with a complete design, production, field installation and testing service package.

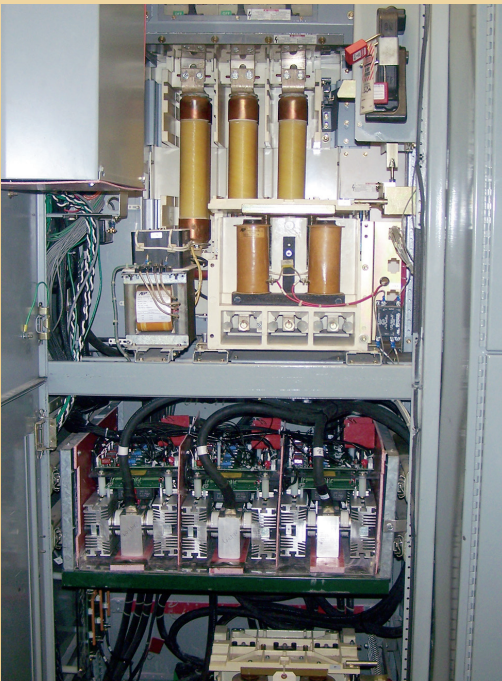
Benshaw has extensive experience retrofitting motor controls from all major low and medium voltage equipment suppliers, including Motortronics, Solcon, ABB, Allen Bradley, Eaton, GE and Siemens. Our retrofit solutions keep reliable equipment working while upgrading performance, protection and other important features.

Benefits of a retrofit include:

- Increased expected lifetime of equipment
- Capital costs for retrofit are less than expenditures for full replacement
- New technology improvements can be utilized to enhance efficiency and performance
- Improved safety standards for arc flash mitigation
- Improved availability of spare parts
- Enhanced system reliability



Before: Obsolete power section



**After: New state-of-the-art
3000HP power section**

ENGINEERED RETROFIT PROGRAM

Benshaw offers a wide variety of solutions to all of your retrofit needs. In our Engineered Retrofit Program, Benshaw Application Engineers and Service Technicians will review your current equipment and provide recommendations to upgrade your existing equipment with minimal cost and impact. We are able to reuse existing equipment, enclosures and stub-ups from a variety of different manufacturers.

Units that qualify for the Engineered Retrofit Program:

- Synchronous starters using Benshaw supplied field controls
- Benshaw starters rated above 4800V
- Benshaw starters rated for greater than 3000HP at 4160V
- Non-Benshaw starters

For very intricate projects, Benshaw will send an engineering or technical representative to your site to obtain full measurements and to better understand the full scope of your project. Benshaw will then design a custom retrofit to meet your needs and budget. Before you spend significant money to replace existing working equipment, contact Benshaw to see what our team can do for you.

To determine if your starter is applicable for a retrofitting, we will need the following information:

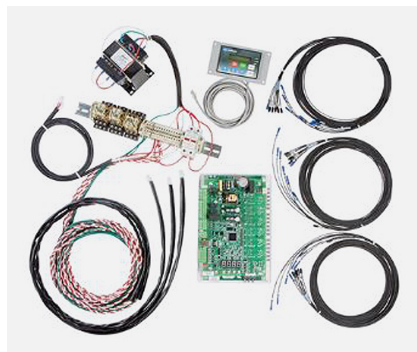
- Model number
- Serial number (for Benshaw units)
- Drawings (for non-Benshaw units)
- Equipment rating (HP, voltage, FLA)
- Enclosure size

QUICKSHIP RETROFIT PROGRAM

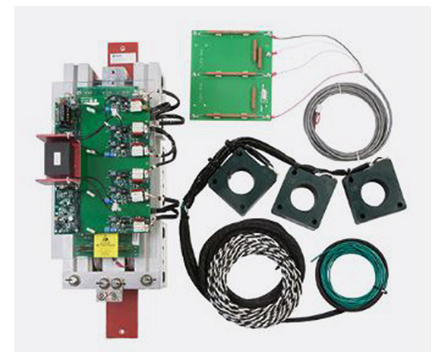
Benshaw stocks a wide range of low and medium voltage MX³ emergency retrofits for same day shipment.



Low Voltage Retrofit Kit



Medium Voltage Control Section

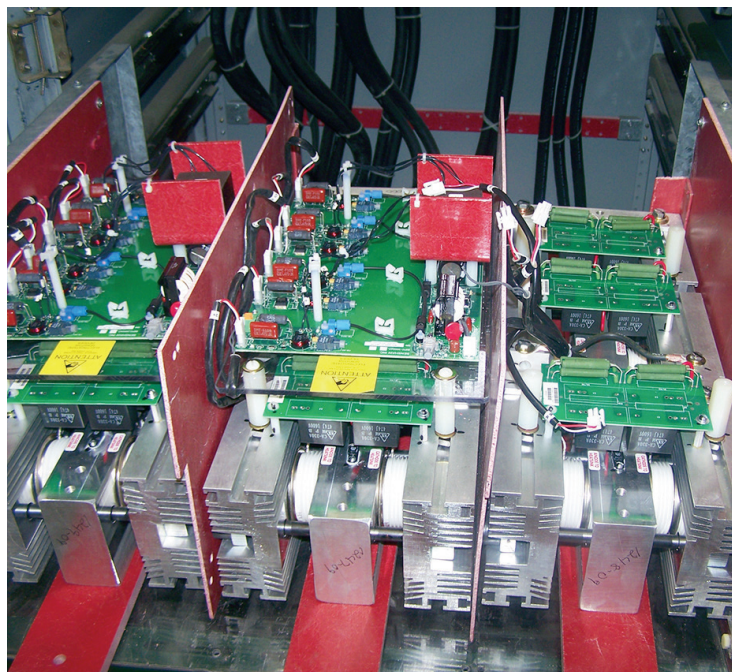


Medium Voltage Power Section

For Benshaw customers with older equipment using obsolete control cards, our emergency retrofit kits provide an ideal solution to get back up and running with minimal downtime. Our emergency retrofit kits for enclosed and chassis starters include all of the components needed. They also upgrade your system with Benshaw's latest MX³ technology.

Example legacy product retrofits include:

- DMS replaced by MX² or MX³ technology ... depending upon the installation.
- Micro II replaced by MX² or MX³ technology ... depending upon the installation
- MX replaced by MX² or MX³ technology ... depending upon the installation



Contact Benshaw today to see if your unit qualifies for our QuickShip Retrofit Program.

Service Team Capabilities

Benshaw's applied motor control solutions enable end users to address market demands, reduce downtime, achieve safety requirements and minimize energy costs. Repairs, spares, field engineering and technical training services are all part of our commitment to you.

Field Services:

- Installations and commissioning
- On-site repairs (scheduled/emergency)
- On-site retrofits and upgrades

Factory Services:

- Send-in repair (scheduled/emergency)
- Benshaw and Authorized Service Centers
- Send-in retrofits and upgrades
- QuickShip modifications

Technology Retrofits:

- Solid state motor controls and drives
- Electromechanical motor controls

Maintenance Services:

- Thermography
- Service contracts
- Preventive maintenance agreements
- Power quality solutions

Technical Training:

- Benshaw training center
- In-class training at your facility
- Customized programs

Spare Parts:

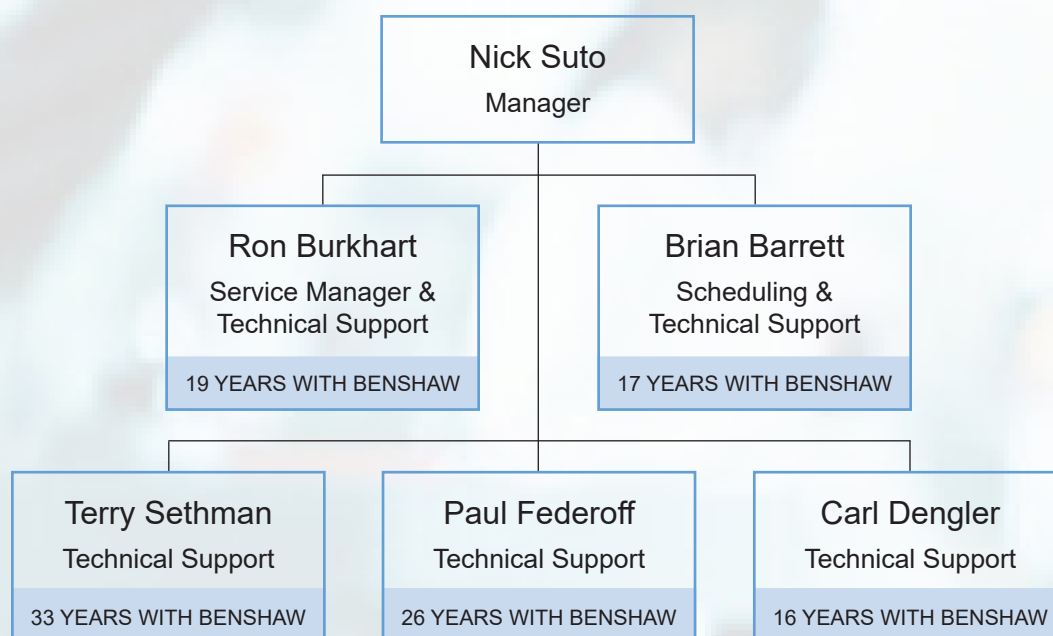
- 24/7/365 availability
- Emergency delivery courier available
- Replace or repair

KEY SERVICE TEAM MEMBERS



Knowledgeable service team members are highly experienced and strategically located across the United States.

Inside Technical Support Team



Field Service Engineers

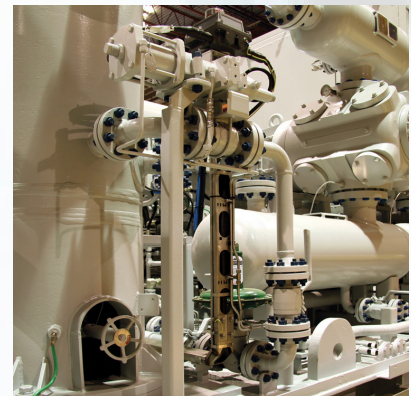
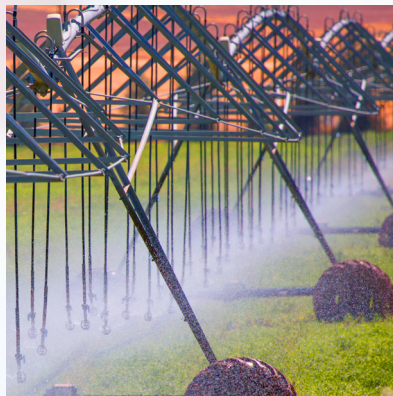
- Richard Amorose
- Kirk Nye
- Byron Fisher
- James Zibert
- Jeff Batty

INDUSTRIES & APPLICATIONS

Benshaw is a valued source for applied motor control solutions that address the unique requirements of many different commercial and industrial applications. Our rugged, reliable products and application-driven approach to applied motor control and protection — combined with decades of experience in applying soft start technologies to real world motor control requirements — provides distinct advantages and true value for our customers.

Over the past four decades, Benshaw's skilled applications engineering team has amassed a wealth of experience in applying soft start motor control and protection technologies to customer applications. Our passion for sharing what we've learned is based on a core objective at Benshaw: To help our customers get the best possible performance from their motor driven systems ... right from the start.

- HVAC/Refrigeration
- Irrigation & Agriculture
- Continuous Process Industries
- Mining/Aggregates/Cement
- Water/Wastewater
- Oil & Gas
- Marine



Ecommerce



BENSHAW EXPRESS

Benshaw Express is a convenient, time-saving tool for Benshaw authorized distributors. The Benshaw web store enables users 24/7 access to:

- Check product pricing and availability
- Place and track orders for soft starters, variable frequency drives, full voltage controls, molded case circuit breakers and more
- View invoices and recent order history
- Configure packaged products

Access Benshaw Express by following the link on Benshaw.com or directly at BenshawExpress.com.



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Benshaw - Aucom Ltd. International

- Germany
- Dubai
- Korea

www.Benshaw.com