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Technology Upgrades for the Installed Base

Distribution System

A Commitment to the Installed Base

Our employees are committed to supporting all Cutler-Hammer® and Westinghouse® Distribution and Control equipment, no matter when it was manufactured by Eaton's electrical business, or how long it has been in service. Our dedicated Aftermarket Organization provides products, services and expertise through a focused management team, sales engineers and technicians that work to keep customers' equipment operating.

Eaton also offers multiple solutions to extend the life of other manufacturers' equipment, including modernization, technology upgrades, reconditioning and repair. Support for other manufactures' equipment include:

- General Electric®.
- Square D®.
- Federal Pacific®.
- ITE®.
- Siemens®.
- Siemens-Allis™.
- Allen-Bradley®
- Allis-Chalmers.

Eaton's innovative engineering provides the highest level of life extension to support the industry's installed base, regardless of the original manufacturer.

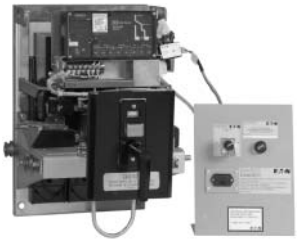
Replacement Components and Renewal Parts

A full line of replacement components and renewal parts is available for the existing installed base of Cutler-Hammer and Westinghouse equipment. These replacement components and renewal parts are *new*, not used or surplus material. The use of original production tooling, assembly fixtures, and original specifications and drawings guarantees compatibility with existing equipment.

Equipment Modernization and Upgrades

Cutler-Hammer equipment modernization and upgrades can extend the life of your existing equipment. They can economically upgrade Cutler-Hammer and Westinghouse products, as well as those of other manufacturers. These state-of-the-art upgrades are engineered to provide:

- Solutions for obsolete electrical equipment.
- New technology for aging equipment.
- Retrofit, repair and remanufacturing processes.
- Monitoring, protection and control capabilities to your system.
- Genuine new replacement components and renewal parts.



Breaker Reconditioning and Trip System Upgrades with Arcflash Reduction Maintenance Switch™

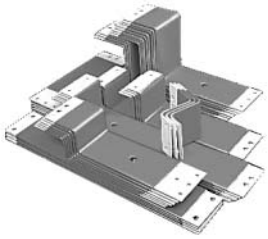
Digitrip™ RMS Trip Unit Retrofit Kits are available for Eaton, Westinghouse, and other manufacturers of low voltage power breakers. These retrofits will improve circuit protection while increasing breaker and electrical system reliability. See **Tab 17**.

Motor Control Center Bucket Retrofits

Freedom™ 2100, Advantage™ and ***IT.*** replacement starter units can be used to increase the capacity of a motor control center without investing in a completely new assembly. Competitive retrofits and new buckets are also available for other manufacturers' units, using current Eaton technology. See **Tab 14**.

Power Breaker Replacement

New DB, DS, DSII, Magnum™ DS and SPB power breakers are available for replacement, to fill existing cells, or in a cell retrofit package for upgrading existing older low voltage switchgear. These breakers are electrically and mechanically identical to the original vintages of DB, DS, DSII, Magnum DS and SPB breakers. See **Tab 17**.



Switchgear Fluidized Epoxy Bus

Existing switchgear bus can be replaced or returned to our factory, regardless of the original manufacturer for reinsulation, using the custom fluidized epoxy bed process. It is available from 600 volts to 15 kV for switchgear, bus runs and other equipment. See **Tab 17**.

Medium Voltage Starter Upgrades

Vacuum contactors can be retrofitted or retrofilled into existing medium voltage air magnetic starters, achieving the benefits of vacuum technology without the expense of a completely new assembly. See **Tab 13**.

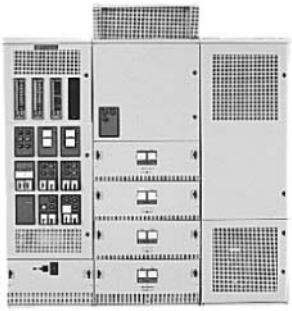
Replacement Vacuum Breakers

MVVR (Medium Voltage Vacuum Replacement) breakers provide a means to cost-effectively modernize existing air magnetic medium voltage switchgear while further increasing its effective life. See **Tab 17**.

Distribution System (Continued)

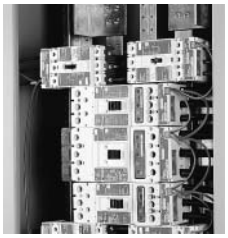
PowerNet

Eaton's Cutler-Hammer PowerNet™ system is designed to manage the power distribution system. This integrated power management system is the ideal tool to help manage energy costs, troubleshoot power quality problems, and ensure the reliability and integrity of the electrical distribution system. See **Tab 11**.



Excitation Control

Eaton's complete family of static exciters are designed for application on medium to large electric utility and industrial generators and motors. See **Tab 19**.



Submetering Retrofits

Eaton's Cutler-Hammer IQ Energy Sentinel submetering device can be easily retrofitted on Series C® Breakers, or those of other manufacturers, in existing equipment. When combined with the PowerNet system, the IQ Energy Sentinel can now provide submetering at numerous levels of monitoring and energy management. See **Tabs 4** and **10**.

Power Management Products

Eaton's Cutler-Hammer IQ Metering and Protective Relaying products are multifunctional communicating products based on microprocessor technology. They are designed to replace existing electromechanical devices and can be applied at low, medium and high voltage points in the electrical distribution system. These devices offer communications capabilities to link electrical distribution equipment to PowerNet Power Management Software. See **Tab 10.**

Replacement Molded Case Breakers and Accessories

Circuit breaker replacements and upgrades are designed for use in panelboards, switchboards, motor control centers, control panels, combination starters, individual enclosures, and bus duct plug-in units. See **Tabs 3**, **4**, **9** and **14**.

TVSS System Retrofits

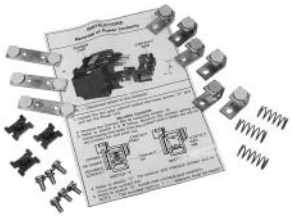
Protect solid-state devices from the damaging effects of transient overvoltages. TVSS systems retrofits can be installed in low voltage distribution gear or retrofitted into existing switchboards, panelboards, and motor control center units to eliminate the transient surge before it can reach sensitive equipment. See **Tabs 4** and **17**.

Low Voltage High Resistance Pulsing Ground Systems

Type C-HRG provides service continuity by providing a ground path for ground current via resistance that limits current magnitude and includes a means to trace the fault source. See **Tab 16**.

Installation and Start-Up Services

Installation and start-up services can be provided for Cutler-Hammer equipment, as well as equipment manufactured by other organizations. See **Tab 23**.



Genuine LV Control Renewal Parts

Genuine factory-warranted LV control renewal parts are available to support the complete line of Cutler-Hammer and Westinghouse design starters and contactors. Renewal parts include contact kits, coils, overload relays and heaters, to name a few. See **Tab 13**.

Cutler-Hammer is a federally registered trademark of Eaton Corporation. Westinghouse is a registered trademark of Westinghouse Electric Company LLC. Allen-Bradley is a federally registered trademark of Rockwell Automation. Federal Pacific Electric is a federally registered name of Electro-Mechanical Corporation. General Electric is a federally registered trademark of General Electric Company. ITE is a federally registered trademark of Integrated Technologies Engineering (ITE). Siemens is a federally registered trademark of Siemens AG. Siemens-Allis is a trademark of Siemens Energy & Automation, Inc. Square D is a federally registered trademark of Schneider Electric.

Typical Distribution System

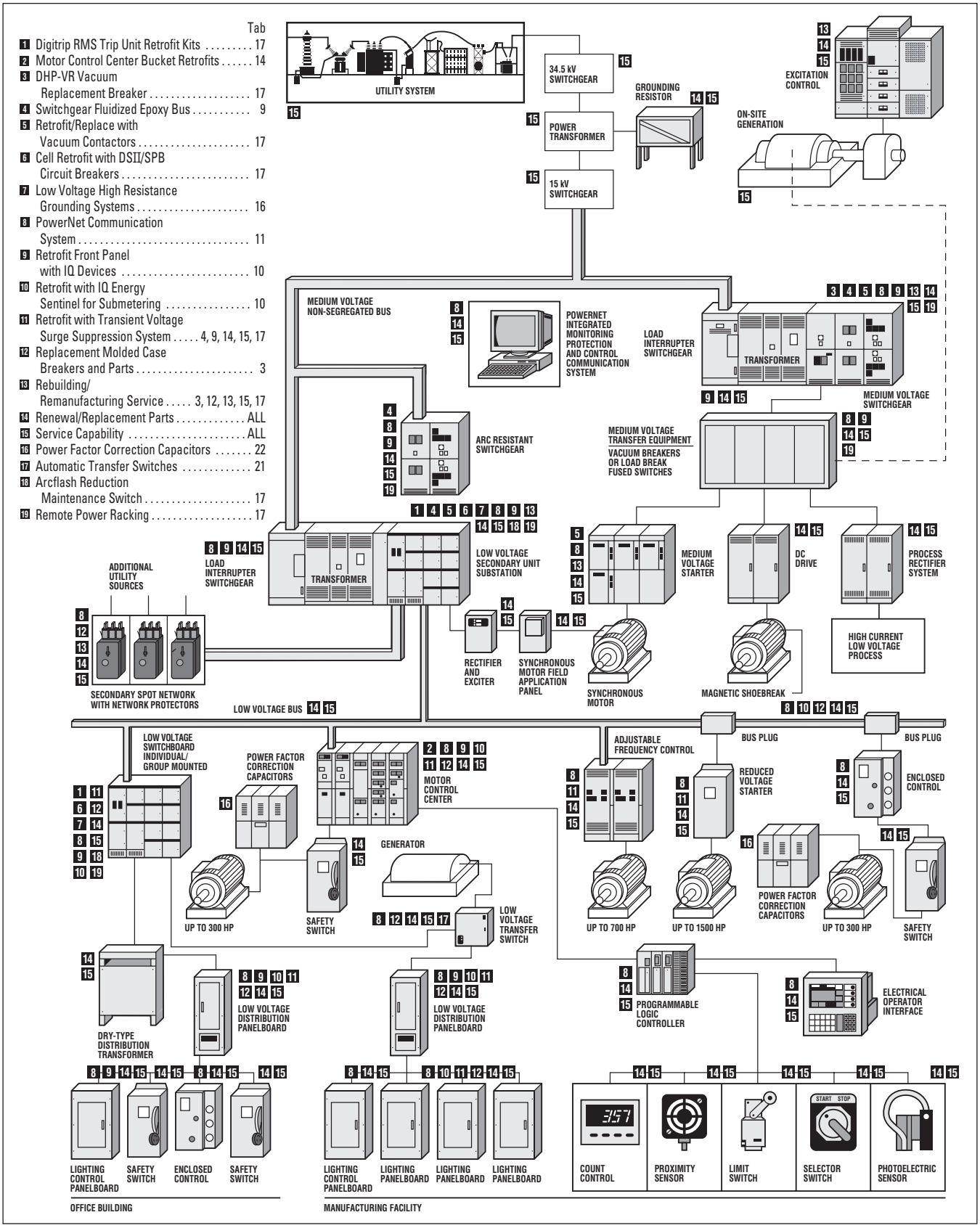


Figure 2-1. Product and Services for Life Extension and Equipment Upgrades Overview