

ABB capacitors and filters

Global product offering

ABB offers a wide range of capacitors, filter components and solutions for LV, MV and HV applications. These components and solutions enable customers to comply with power factor and harmonic limitation targets imposed by utilities and ensure that customer installations operate with maximum efficiency.

ABB's capacitors and filters portfolio consists of various components (e.g. capacitor units, capacitor switches, power factor controllers), that can be assembled into capacitor compensation panels and banks by panel builders and other OEMs. The portfolio also contains solutions (e.g. capacitor banks with and without reactors and active filters) that can be readily and easily installed. Servicing of the equipment becomes easy with a portable capacitance meter and integrated help menus in the ABB capacitor bank and filter controllers.

Product / Offering	Benefits and features	Suggested applications
Low-voltage capacitor units CLMD 	CLMD is a tailor made solution for power factor correction with heavy-duty enclosure for high reliability and a unique sequential protection system with an environmentally friendly dry type design.	CLMD is used for power factor correction in industrial and commercial networks.
CLMD03 	CLMD03 is a standard product with heavy-duty enclosure for high reliability, a unique sequential protection system and a dry type, environmentally friendly design.	The CLMD03 is used for power factor correction in industrial and commercial networks.
CLDB 	CLDB Oil-impregnated (non PCB and non-toxic) capacitors have rigid bushings and are leakage proof with practically no mechanical stress on termination bolts and very low watt losses at termination.	CLDB are used for power factor correction in industrial and commercial networks.
QCap and QCap-L 	QCap and QCap-L are standardized, highly reliable, dry type capacitor with low losses and long lifetime. They are optimized capacitors for thermal dissipation and possess a safe sealing and overpressure disconnection system.	QCap and QCap-L are used for power factor correction in industrial and commercial networks.
Low-voltage CLMD03 Power Module 	The low-voltage power modules are all-in-one, compact and pre-wired power module, and comprise of capacitor, contactor, fuses and discharge resistors. The design is robust, thermally optimised and compact for reliability and safety as well as environmentally friendly and with low losses.	Low-voltage power modules are used for power factor correction in industrial and commercial networks.
Low-voltage shelves 	Low-voltage shelves are single pre-wired subassembly, combining capacitor units, contactors and line fuses, that are compact and easy to install. They have a sequential protection system for high reliability.	Low-voltage shelves are used for power factor correction in industrial and commercial networks.

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<p>Low-voltage contactor switched capacitor banks</p> <p>APCQ</p>  <p>ABBACUS</p>  <p>APFC</p>  <p>LMCB</p> 	<p>Compact range, easy to install and use with the RVC controller, the APCQ comes with a modular design and is exceptionally reliable and safe. It is available with detuning reactors and in two executions (wall-mounted and free-floor standing) and consist of dry type design capacitors.</p> <p>Compact range, reliable and safe, the ABBACUS comes fully assembled, factory tested and ready for connection. It has a modular design with a large range of options, low losses design and a unique sequential protection system.</p> <p>APFC can be completely customised, comes fully assembled, factory tested and ready for connection. It is a flexible solution, and simple and easy to operate thanks to the user-friendly RVC or RVT controllers.</p> <p>LMCB is a compact range of free-standing floor mounted cubicle that is easy to install and with an exceptional reliability and safety. It features ABB CLMD technology and detuning reactors.</p>	<p>APCQ is used for power factor power factor correction in industrial and commercial networks.</p> <p>ABBACUS is used for power factor power factor correction in industrial and commercial networks.</p> <p>APFC is used for power factor power factor correction in industrial and commercial networks.</p> <p>LMCB is used for power factor correction in industrial and commercial networks.</p>
<p>Low voltage thyristor-switched capacitor banks</p> <p>DYNACOMP</p> 	<p>Dynacomp has a modular, compact and standardized design that is easy to install and extend. It is available in single and three phase models. It is equipped with detuning reactors for optimal protection against harmonics while still giving filtering effect.</p>	<p>Dynacomp is used for applications that require ultra-rapid transient free power factor compensation due to fast varying or large low-voltage connected loads, giving additional benefits of transient-free compensation and voltage dip minimization.</p>
<p>Low-voltage step-less reactive power compensators</p> <p>PQC-STATCON</p> 	<p>The low-voltage stepless power compensator, PQC-STATCON is suitable for low- and medium-voltage networks with step-up transformer. It is easy and convenient to operate, install and commission. It offers a touch screen interface. There is no risk of harmonic amplification.</p>	<p>PQC-STATCON is used in applications that require instantaneous and stepless compensation for dynamic reactive power and unbalanced loads.</p>
<p>Medium-voltage fixed metal enclosed capacitor banks</p> <p>SIKAP</p>  <p>EMPAC</p> 	<p>The SIKAP metal enclosed capacitor bank is a fully insulated and fixed reactive power compensation system. The enclosure covers the live parts and protects the bank from short circuit due to external cause, it also increases personal safety. The SIKAP bank is built with single phase capacitor units, mounted in hot dip galvanized steel racks. The units are connected in series and parallel to achieve desired voltage and power ratings.</p> <p>The EMPAC is a metal enclosed fixed capacitor bank installed to provide fixed capacitive reactive power compensation. The EMPAC improves the quality of the electrical supply and the efficient operation of the system. It's installation has other beneficial effects on the system such as: improvement of the voltage at the load, better voltage regulation, reduction of losses and reduction of investments in transmission.</p>	<p>SIKAP is used in applications that require fixed reactive power compensation for a wide range of installations, covering climate conditions between from -40°C to +40°C.</p> <p>EMPAC is used for fixed reactive power compensation for distribution substations and wind farms.</p>

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<p>Low-voltage active harmonic filters</p> <p>PQFI-PQFM- PQFS</p> 	<p>ABB's low-voltage harmonic filters allow filtering efficiency with closed loop control system and individual harmonic selection capability. It performs stepless reactive power compensation of both inductive and capacitive loads and load balancing in both 3 and 4-wire systems and has full redundancy functionality.</p>	<p>Low-voltage active harmonic filters are used for power quality problems caused by harmonics, load unbalance and reactive power demand in industrial and commercial installations.</p>
<p>Power factor controllers</p> <p>RVC</p>  <p>RVT</p> 	<p>RVC measures and displays voltage, current, power factor, THDV and THDI. It has a fully programmable switching sequence, user friendly interface, and its complete auto set-up allows easy commissioning.</p> <p>RVT allows three-phase measurement of power and harmonics. It features programmable warning/protection threshold, intuitive menu navigation and touch screen. Communication is through ethernet, USB and RS485.</p>	<p>RVC is used for control and monitoring of power factor in industrial and commercial networks.</p> <p>RVT is used for control and monitoring of power factor in industrial and commercial networks.</p>
<p>Medium-voltage capacitor units</p> <p>CHDB/CHDE/ CHDF</p>  <p>CHDTP</p>  <p>CHDSP</p> 	<p>CHDB/ CHDE and CHDF are single-phase capacitors with all type of fuse technologies: internal (CHDB) or external (CHDE) fuses or fuseless (CHDF), all film type with low dielectric losses and long life time. These capacitors are highly reliable and have low installation and maintenance costs.</p> <p>CHDTP are three-phase capacitors with very low dielectric losses and a long lifespan. The capacitors are impregnated with biodegradeable, non-PCB fluid and have an extremely low failure rate and high reliability.</p> <p>The CHDSP are split-phase capacitors impregnated with biodegradeable, non-PCB fluid. They have an extremely low failure rate and high reliability.</p>	<p>These type of capacitors are installed for reactive power compensation for all types of power grids and industrial applications in all types of climates.</p> <p>CHDTP are a cost effective method for low reactive power compensation in heavy duty operations in all climatic conditions.</p> <p>Since the CHDSP combines two capacitors in a single housing, it can be used for capacitor applications where space is an issue and in low power capacitor banks in fixed, enclosed and pole mount capacitor applications.</p>
<p>Medium-voltage surge capacitor units</p> <p>CHDSU</p> 	<p>The medium-voltage surge capacitor units feature high transient voltage withstand, low loss dielectric and long life design.</p>	<p>These type of capacitor units are used for surge protection for large motors and generators, medium-voltage switchgear and motor control centres, large transformers.</p>
<p>Dry DC Capacitors</p> <p>DryDCap</p> 	<p>The dry DC capacitors, DryDCap has a compact and dry design with no risk of leakage (environmentally friendly). It allows better protection of the semiconductors having low inductance. The segmented electrode ensures safe end of life.</p>	<p>Dry DC capacitors are used in voltage source converters for modern converter topologies.</p>

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<p>Medium-voltage switched metal enclosed capacitor banks</p> <p>ABBACUS</p>  <p>MMCB</p>  <p>Medium-voltage pole-mounted capacitor banks QPole</p> 	<p>The ABBACUS is a packaged factory assembled and tested reactive compensation system with modular fixed or switched capacitor steps, which will automatically compensate an individual load or the network to maintain a preset level of power factor. The ABBACUS is a 'one stop shop' solution comprising of an integrated package of ABB's premium range of primary and secondary equipment.</p> <p>ABB's premium range of components. Suits a variety of applications. Fully enclosed design to protect the live parts. Up to 5 positions grounding switch for access maintenance.</p> <p>Medium voltage pole-mounted capacitor banks consists of ABB's premium range of components. They have galvanized steel or aluminium frame suitable for pole mounting and are factory assembled with fixed or switched system. They also have bird guards for increased safety and reliability.</p>	<p>The design of the ABBACUS allows compensation for both electrical distribution utilities and large industrial power users including mining, pulp and paper, chemical, petrochemical, wind farms, plastics and heavy industries.</p> <p>Reactive power compensation in industries and utilities.</p> <p>The pole mounted capacitor banks are economical solution for shunt reactive compensation on overhead distribution networks.</p>
<p>Medium-voltage / high-voltage open-rack capacitor banks</p> <p>QBank</p>  <p>HOCB</p> 	<p>QBank is available with internally fused, externally fused or fuseless capacitor units. The major advantage of QBank is the compact design, small footprint and easy maintenance.</p> <p>HOCB can use all types of fuse technologies. It has a compact design that is easy to install and maintain.</p>	<p>QBank is used for Reactive power compensation, voltage stability and harmonic mitigation in small and large installations in all types of climates.</p> <p>HOCB is used for reactive power compensation, voltage stability and harmonic mitigation in small and large installations in all types of power grids and all types of climates.</p>
<p>Medium-voltage/ high-voltage passive harmonic filter banks</p> <p>CHARM</p> 	<p>ABB passive harmonic filters are the ideal solution to render medium/high-voltage networks more efficient and trouble-free from harmonics. It is delivered as a complete package including capacitors, reactors, resistors and instrument transformers.</p>	<p>ABB passive harmonic filter banks are installed for reducing harmonics in small and large utility or industrial installations.</p>
<p>Capacitor controller for pole-mounted capacitor banks</p> <p>CQ900</p> 	<p>Capacitor controllers are a complete solution for controlling and monitoring capacitors on distribution systems. The capacitor banks controllers are fully user programmable via unit faceplate or PC software for maximum flexibility in operation, fast on-board micro-processor for accurate sampling, measurement and decision making and advanced automatic switching. They come with flexible mounting options and IP65 (NEMA 4R) rated enclosure.</p>	<p>Capacitor controllers are installed for automatic control and monitoring of capacitors installed in distribution systems.</p>
<p>Medium-voltage vacuum switches</p> <p>PS switches</p> 	<p>The PS capacitor vacuum switch is designed to reduce lifecycle costs and offer customers true value. The capacitor vacuum switches comes with vacuum technology and superior HCEP solid dielectric insulator technology. It is maintenance-free and 50,000+ CO operations ensure long life.</p>	<p>The PS range of capacitor switches are designed for use in capacitor switching applications. They may be used in metal enclosed capacitor banks, outdoor rack banks, or pole top banks (eg, ABB QPole).</p>

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<p>Portable capacitance meters CB2000</p> 	<p>ABB's capacitance meter is characterized by its compact design and low weight, which makes it easy to carry when conducting measurements. No mains connection is required. It is easy to use and the measured values are clearly presented on the LCD display, which can be read both in daylight and in dark environments.</p>	<p>The capacitance meter is used for maintenance of capacitor banks.</p>

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