Series compensation is a well-proven technology that has been used in transmission lines for over 50 years. ABB has developed the MiniCap to allow the distribution networks benefit from this technology in a reliable and economically viable way.

The MiniCap will reduce voltage variation. By reducing the line reactance and the corresponding voltage drop, the voltage of the load-point can be stabilized even for fast load variations. Ferroresonance and subsynchronous resonance are detected and eliminated by a switch mode damping circuit.

**Typical applications**
MiniCap in the distribution network eliminates the steady-state voltage drop along the distribution line as well as the voltage fluctuations associated with start-up and operation of large loads at the feeder end such as saw mills, rolling mills, crusher motors, mining loads, ski lifts, pipeline pumping stations and large induction motors.

**Main advantages**
- Increased power transmission capability through decreased total line reactance
- Improved voltage profile along the line
- Reduced line losses
- Improved continuous and instantaneous voltage regulation and reactive power balance
- Easier starting of large motors
- Increased power factor at the utility source
- Improved load sharing along parallel lines
- Reduced voltage fluctuations (flicker)

**MiniCap rating**
- Maximum system voltage: 36 kV
- Maximum rated current: 600 A
- Maximum short-circuit current: 10 kA
- Capacitor ratings: Up to 12 Mvar
- Basic Impulse Insulation Levels (BIL): Up to 200 kV
- Ambient air temperature range: from -50 °C to +40 °C

**Main components**
The supplied unit will consist of:
- Capacitor bank
- Reactor
- Damping resistor
- Spark gap and its protecting circuit
- By-pass switch
- Control equipment
- Subsynchronous detection included in the control equipment

**Reference installations**
More than 40 MiniCaps are installed in Canada, USA, South-America, Europe, Africa and Australia

**FACTS Care**
Service contract available under ABB FACTS customer service
Standard ABB MiniCap is arranged as shown in the typical single line diagram.

New features (see 3D model)
- Pole-mounted control system
- Communication capabilities
- Elimination of required fence
- Control system based on MACH

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