

SF6 GAS FILLED STANDARD CAPACITORS



Compressed Gas Capacitors (SF6 filled Standard Capacitors)

SF6 filled compressed-gas capacitors have proven in high-voltage technique as loss-free capacitance standards. Their capacitance is fairly independent of the voltage level, ambient temperature, proximity effects and place of installation. However, the most appreciated property of compressed-gas capacitors are their extremely small loss factor. Therefore, these capacitors are used as standard capacitors in bridge circuits for capacitance and $\tan \delta$ measurements on all kinds of electrical apparatus and insulating media, for instance capacitors, cables, bushings support insulators, power transformers, instrument transformers, circuit breakers, switching rods, generators, plastics, insulating oil etc.

Compressed-gas capacitors as the high voltage arm of capacitor dividers can be used to measure AC and impulse voltage.

Our compressed-gas capacitors used in measuring technique satisfies the following requirements:

- Extremely low loss factor
- Invariable capacitance
- Unaffected by external fields
- Negligibly low partial discharge intensity up to the rated voltage
- Gas tightness
- High mechanical withstand capability
- Highest possible rated voltage of minimum size

Design

The compressed-gas capacitor consists of a high-voltage electrode and several low-voltage electrodes of cylindrical shape. The electrodes are mounted concentrically within an FRP-cylinder, which is filled with SF6-gas. The gas-filling valve, the pressure gauge and shielded connection sockets are provided on the base.

The high-voltage electrode is mounted at the upper end of the FRP-cylinder and is intended for connection to the high-voltage circuit.

The low voltage electrodes are fixed to the capacitor base and connected with the connection sockets over shielded cables. The cable shield is insulated against earth. To prevent external flashover, the capacitor has a top electrode which is spherical or toroidal, depending on the type of capacitor.

All capacitors are equipped with an undercarriage with easy-running swivel wheels.



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