



The SPGLbTBB series open rack capacitor banks are especially designed to compensate the reactive energy and power line loss in power networks outdoor for the normal load in 6-550kV power system and DC transmission, as well as special off for the load with harmonics content, permitting not only the correction of the fluctuation caused by lineal, but also the non-lineal electrical loads.

The capacitor banks are provided disassembled, complete with all accessories for their operation. The electrical connection is a double star connection with an insulated neutral. They are equipped with a current unbalance protection.

Degree of protection is IP00. The standardization requires frames that can contain from 6 to 24 single-phase capacitors from the standardized series. The maximum power is 14.4 Mvar with a maximum voltage of 24 kV. The following standard versions can be provided for indoor or outdoor installation. The two versions differ in that the CT is in resin and in oil respectively.

- With or without expulsion fuses.
- With or without inrush current limiting reactors.

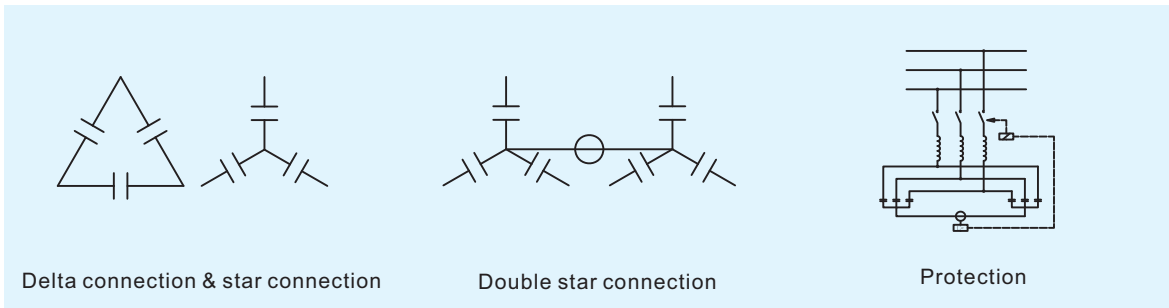
Banks with higher power or voltage can be realized using the stacking frameworks specialty.

**The complete bank is normally composed as follows:**

- Single-phase capacitors
- Capacitor bank kit which includes frame, insulators, connections, screws and nuts
- Unbalance protection composed of CT and recessed maximum current relay to be fitted on control panel
- Various accessories including expulsion fuses, inrush current limiting reactors, earthing knife switches, overload protection, key-operated interblock systems between different banks.

**Connection and protection of capacitor bank**

- Up to 7.2kV between phase and for reactive power lower than 300Kvar, a three phase capacitor is used and in parallel for higher power.
- Up to 13.8kV between phase, single phase capacitor unit are used with either delta connection and parallel connection of deltas if necessary, or star or double star.
- Up to 24KV between phase, single phase capacitor unit are used with star or double star.
- Above 24KV between phase, single phase capacitor unit in double star should be used with two or more capacitor in series per star branch.

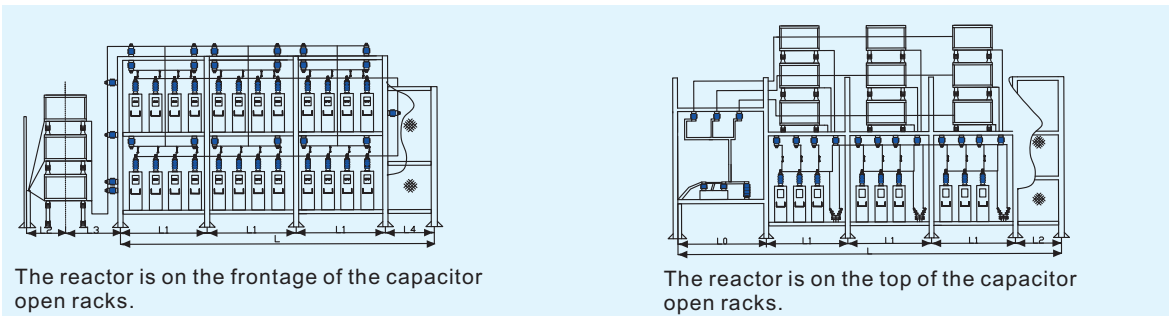


Protection is ensured by an unbalance current relay (normal less 1A) used to detect the current flowing between the neutrals of the star connection, each phase should be used overload protection, the setting current is normal 1.43 times the rated current of the capacitor bank.

**Rates:**

Voltage (kv): 3~36kv  
 Power (kvar): 900~20040kvar

**Version of the design solutions**



The reactor is on the frontage of the capacitor open racks.

The reactor is on the top of the capacitor open racks.