

Assemble by

engineer

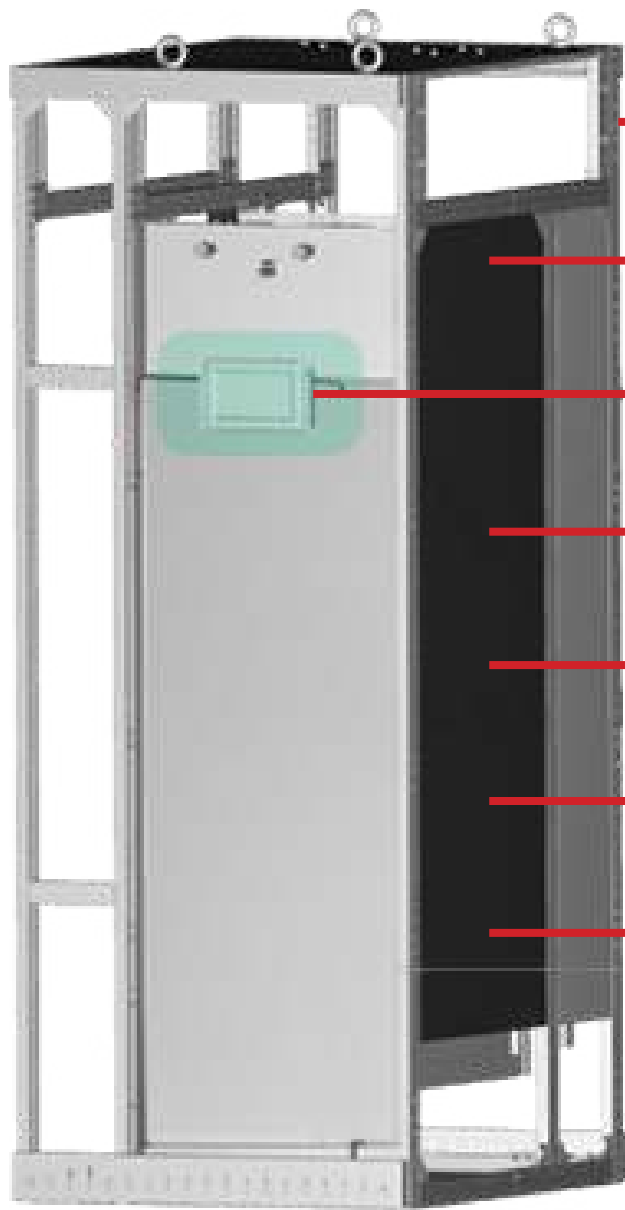


Power Quality Solutions

PQS

HRGKS

Engineer Hybrid Reactive Power Compensator



Components:

Cabinet (2000 x 800 x 600)

100 kVar SVG

Touchscreen controller

460 V capacitor

METH 7% inductors

Siemens contactors

Special designet fuse

Possible system options:

200 kVar – 650 kVar



+



+



FUNCTIONS OF THE **HRGKS** SYSTEM:

Hybrid Reactive Power Compensation



Combines a detuned capacitor bank and a Static Var Generator (SVG).



Operates in parallel with the loads to provide dynamic and accurate reactive power control.

Optimized Capacitor Bank Control



SVG functions as a power factor correction (PFC) controller for the detuned capacitor bank.



Uses standardized detuned capacitor step ratio (1:1:1:1:1) for simplicity and cost efficiency.



SVG manages intermediate steps, eliminating the need for different step ratings.



Efficient Reactive Power Management



Capacitor bank covers the main capacitive reactive power demand.



SVG module compensates for smaller and fluctuating requirements.



Provides both capacitive and inductive compensation in real time, preventing overcompensation.

CAPACITOR BANK POWER
+
SVG PRECISION

HRGKS SYSTEM ADVANTAGES:

Stepless & Seamless Output:

No visible steps in reactive power, ensuring smoother performance than using capacitor banks or reactor banks alone.

Single CT Input:

Only one CT signal required—no duplication needed.

No System Hunting:

No additional controllers required for capacitor or reactor banks.

No need for different step ratios:

Capacitor banks can be built with all steps of the same rating (e.g., 50 kvar), simplifying the design and requiring only one type of capacitor unit in stock.

Capacitive & Inductive Real-Time Compensation:

HRGKS also provides inductive reactive power, ensuring accurate balance and preventing overcompensation from steps or loads.

No Risk of Harmonics:

Eliminates harmonic amplification and resonance in the system.

Compact & Expandable:

Space-saving design with straight forward scalability.





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