For GCBs, recovery voltage to drop not lower than 50% of the rated phase-to-ground voltage after 100 ms.
In order to fulfill customer’s requirements of producing both GCB TRV as well as a constant power frequency recovery voltage, a new type of hybrid (single phase) circuit is developed:

- produce the required fault current
- produce TRVs of steepness adequate for GCB
- produce realistic, constant power frequency recovery voltages
- independent control of current, TRV and RV voltages in development tests
- realistic simulation of events occurring at re-strike. Upon re-strike, a large current is provided by the current circuit.

In figure the building blocks of the hybrid test-circuit are outlined, with the functionalities of each of the relevant parts: current circuit (red), TRV circuit (green) and RV circuit (red). Also shown are the real wave traces as realized in a GCB test with this circuit.
G: Short-circuit generators; MB: master breaker; MS: making switch; AB: aux breakers; TO: test GCB; PT: power transformer; ML: re-ignition installation; GP: triggered spark-gap; SA: surge arrester; R,L,C: resistor, reactor, capacitor; U, I: voltage-, current measurement