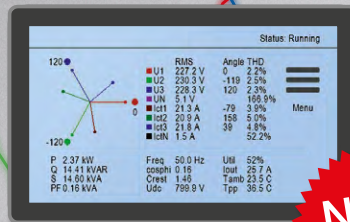




# FRAKO Modular Active Filter

Power Quality enters a new generation



**NEW!**  
Voltage-controlled

Modern medical equipment, the latest LED technology and present-day motor control systems make the most exacting demands on power supply quality. Certain loads, however, greatly distort the supply-side waveform by generating harmonics. This situation often calls for an improvement in power quality. With the FRAKO Modular Active Filter, the distortion caused by individual loads, groups of consumers or the entire electrical installation is reduced to a tolerable level or totally eliminated from the network.

## Clear benefits

- Modular construction – maximum reliability
- Waveform distortion minimized for increased service life
- User-friendly touchscreen
- User-friendly remote service
- Current-controlled
- New: voltage-controlled

## Operating principle

FRAKO Modular Active Filters measure the current drawn by a nonlinear load, plus the level of voltage harmonics. The current harmonics are determined and digitally processed. A power electronic inverter generates a compensating current to counterbalance the harmonic current in the load circuit, so that the power network only needs to supply the fundamental component of the current. This reduces the operating costs for energy and component wear, in addition to preventing unscheduled shutdowns.

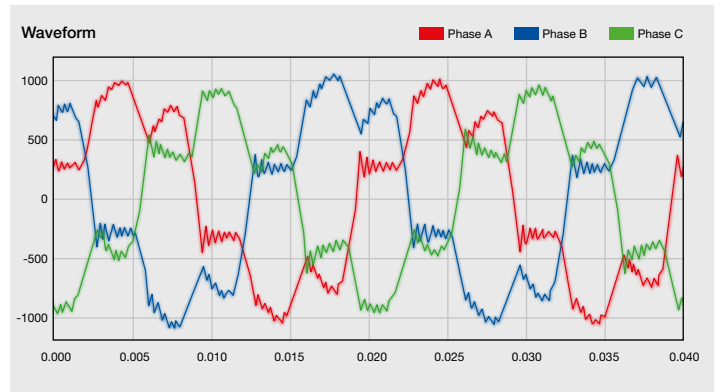
When the instrument is installed as a voltage-controlled active filter, no current transformer is needed, as the parameters required for control purposes are acquired from the supply voltage. This technique offers significant advantages for an overall improvement of power quality in the supply network.

A FRAKO Active Filter is deployed in two straightforward steps: Once the network conditions have been analysed and a solution for eradicating the supply-side distortion has been engineered, the permanent monitoring instrumentation is installed to optimize the network power quality.

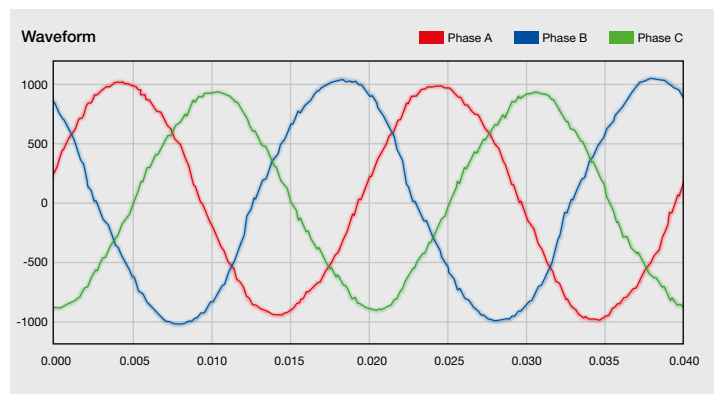
## Optimum applications for FRAKO Power Quality

- Water and wastewater treatment plants
- Plastics industry (e.g. extruders)
- Sheet metalworking (e.g. stamping presses)
- Public buildings, clinics
- Machinery
- Welding equipment
- Automotive industry

Please contact us if you have any questions or would like to know more about the benefits offered by the FRAKO Modular Active Filter.



Waveform of a load current without an active filter



Waveform of above load current with an active filter

## Technical data

- Nominal power ratings:  
83 kVA (I = 120 A), 166 kVA (I = 240 A), 249 kVA (I = 360 A)
- Nominal voltage range = 208–480 V
- Supply frequency 50/60 Hz  $\pm 2\%$
- 3-phase compensation for individual harmonics up to the 49th
- < 1 ms reaction time
- Web server, Ethernet (Modbus TCP) for IT connectivity
- Optional touchscreen

