

Harmonics & Power Quality

HARMONICGUARD® **PASSIVE**

Poor power quality can be a result of variable frequency drives or other types of non-linear loads using a power conversion process that causes current and voltage distortion. This resulting distortion is known as harmonics.

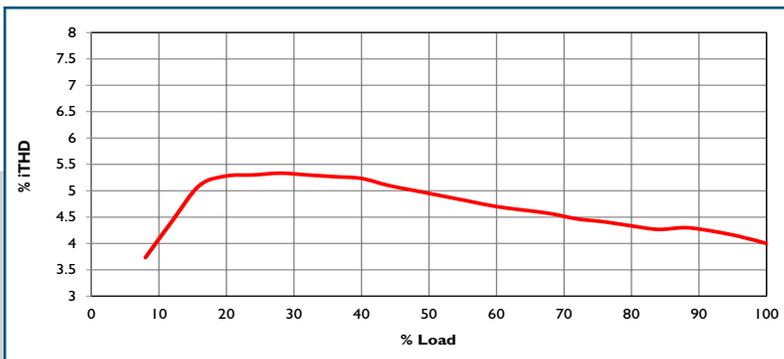
Issues caused by harmonics may include:

- Transformer and distribution equipment overheating
- Random breaker tripping
- Sensitive equipment failure
- Poor power factor

HarmonicGuard Passive Filter

- Limits current harmonic distortion to less than 5% over a wide load range
- Industry leading performance under high background voltage distortion
- True 100kA SCCR
- Fuse Monitor available
- IEEE 519-2014 compliant
- Branch circuit protection via fuses
- Generator compatible
- Increases drive uptime
- Eliminates nuisance tripping
- For Type 3R enclosures: 150 HP and above units include hardware for floor mounting. 125 HP and below include standard hardware for wall mounting or optional floor stand available.

iTHD% vs. % Load



HGP Filters vs. Other Harmonic Solutions

The HarmonicGuard Passive (HGP) filter is built using the highest quality components and is able to operate under the harshest conditions. The UL 508A open panels, Type 1, Type 3R, and Type 12 enclosures include 100kA SCCR, safety fusing and easy internal access.

Compared to 18-pulse drives, the HGP:

- Is a more efficient and reliable solution at reduced loads
- Has a better THID at reduced loads
- Saves money by reducing operation costs and energy loss
- Corrects power factor in both the VFD and filter
- Has a smaller footprint

Oil & Gas Industry Application

The HGP filter is uniquely suited for power quality needs in oil and gas fields. Excessive background voltage distortion, often found in remote oil and gas applications, reduces the effectiveness of standard passive filters. In these applications, the HGP filter performs well with distortion as high as 5%.

Typical Applications

- Oil & Gas
- Steel Industry
- Water/Wastewater
- HVAC Systems
- Machining
- Airports
- Commercial Buildings
- Hospitals
- Irrigation Fields, Farms
- Extruders
- Pulp & Paper



Reliable  Advanced Power Quality

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