Multiple transformer-based solutions to reduce energy consumption and improve power quality in distribution systems. The Harmonics Limited family of products contains a variety of technologies, each uniquely designed to address power quality problems caused by harmonic distortion.

**Harmonic Suppression System (HSS)**

HSS® is the only technology that eliminates harmonic currents from the transformer to the farthest load. Using HSS, energy consumption (kW) can be reduced up to 7% and phase capacity held captive by harmonic currents is released, effectively increasing system capacity up to 20%.

**Standards**
- Built in accordance with NEMA, ANSI, UL and CSA standards
- UL and CSA Listed

**Features, Functions, Benefits**
- Patented HSS technology allows transformers to be sized exactly to the load. No need to de-rate or oversize panels.
- Lower installation costs
- Reduced energy consumption
- Longer equipment life
- ROI can be less than 24 months

**SysteMax™**

A stand-alone, passive harmonic suppression system that blocks the flow of 3rd harmonic current in the secondary of a distribution transformer.

SysteMax installs on the neutral of an existing distribution transformer. It is sized to the transformer (15 kVA to 1,000 kVA). The enclosure is UL/NEMA Type 1, steel with ANSI –61 gray paint.

**TransMax™**

DOE-2016 Standard transformer and patented Harmonic Suppression System technology in a single enclosure.

The basic transformer is 480V primary, 208Y/120V secondary, with either copper or aluminum windings, 115°C rise, insulation class 220°C with electrostatic shielding.

Options available include 80°C rise, low noise (-3dB) and 208V primary. The enclosure is UL/NEMA Type 1, steel with ANSI –61 gray paint.

Standard sizes range from 30 kVA to 500 kVA.

**The Harmonics Guarantee**

Harmonics Limited products are warranted to be free from defects in materials and workmanship under normal use and service for a period of five years from the date of purchase. Our products are UL certified. We are proud members of the U.S. Green Building Council. [www.usgbc.org](http://www.usgbc.org).
Solutions for Harmonics in Power Systems

Multiple transformer-based solutions to handle problems caused by third harmonic current.

Dry Type Three Phase Ventilated Transformers
Harmonics Limited offers a full line of transformers within the 600 volt class. All of the units in this line have these properties:
- DOE-2016 Standard for energy efficiency
- NEMA 3R heat cured powder coat finish enclosure
- 220°C insulation class
- Manufactured to NEMA, ANSI, UL and CSA Standards

Features, Functions, Benefits
- Designed with lower weight and smaller size for easier handling and installation
- Large connection compartment for ease of wiring and installation
- Quiet operation for installation flexibility
- Hassle-free front cover installation
- Primary taps provided to compensate for voltage variations
Consult factory for options not listed in descriptions.

Non-Linear Transformers
Harmonics Limited’s K-factor rated non-linear transformers provide safe and efficient operation in non-linear load environments designed to meet the needs of a pre-electronic era. These units prevent severe overheating in distribution transformers.

Specifications
- 15 to 750 kVA
- K-4, K-13, K-20 units standard
- Primary voltage range of 600V to 208V
- Secondary voltage 480Y/277V and 208Y/120V
- 60Hz with 50Hz option
- Aluminum windings, copper as an option
- Temperature rise 150°C standard with 115°C and 80°C options
- Electrostatic shield
- Cores designed for reduced flux densities to compensate for harmonic voltage distortion

HMT / Zig-Zag Transformers
The HMT (Harmonic Mitigating Transformer) is a three phase transformer with 0° or -30° displacement between the primary and the secondary.

An HMT is used to reduce current harmonics on the primary side of a transformer and voltage distortion on the secondary. A single HMT reduces the flow of triplen harmonics, 3rd, 9th, 15th, 21st, etc into the transformer primary. Used together on the same power line a 0° and -30° HMT will also reduce the 5th and 7th harmonics.

These transformers are designed to reduce voltage distortion when powering non-linear loads.

Specifications
- 15 to 1,500 kVA
- 480V primary voltage, option of 208V
- Secondary voltage 208Y/120V
- 60Hz with 50Hz option
- Available in copper or aluminum
- K-13 standard with K-4 and K-20 options
- Temperature rise 150°C standard with 15°C and 80°C options
- Electrostatic shield