

## ***TransMax® vs. K-Rated Transformers***

The transformers included in **Harmonics Limited's TransMax®** product are premium transformers featuring:

- TP-1 Efficiency with a DOE-2016 premium efficiency option
- Copper or aluminum windings
- Low 115°C rise with 80°C option
- Electrostatic shielding

**Harmonic Suppression System (HSS®)** technology prevents third harmonics currents from:

- Flowing in the phase or neutral conductors from the transformer out to the furthest load
- Combining in the shared neutral conductor
- Circulating in the transformer delta windings

With the **Harmonic Suppression System** transformers do not need to be K-rated or oversized and doubled neutrals are not required.

Premium K-rated transformers of the same kVA, by the nature of their design, typically have a lower impedance. This lower impedance results in slightly HIGHER harmonics currents throughout the system, causing higher harmonic heat losses, decreased useable capacity, increased neutral-to-ground voltage, and increased energy usage.

K-rated transformers do not mitigate harmonic currents. They are simply designed to withstand the heat produced by these extra currents and to not fail when subjected to harmonic overheating.

The **Harmonics Limited TransMax** products, using standard impedance transformers with the **Harmonic Suppression System** provide:

***With the Harmonic Suppression System, transformers do not need to be K-rated or oversized and doubled neutrals are not required.***

- up to 20% reduced phase current
- up to 80% reduced neutral current
- up to 96% reduced 3rd harmonic neutral current
- up to 8% lower harmonic heat losses
- up to 20% more useable load capacity per phase
- up to 70% lower neutral-to-ground voltage
- up to 8% lower energy consumption

**Harmonic Suppression System** benefits, matched by no other harmonic mitigating product, include:

- true kW energy savings
- harmonic current reductions out to the furthest load
- no requirement for double neutrals or oversized switchgear
- no need to oversize the transformer and then de-rate it

For further information contact us or see more information at [harmonicslimited.com](http://harmonicslimited.com)