# AXPERT - *i-Sine*
# WIDEBAND HARMONIC FILTER

Harmonics produced by power electronics equipment having non-linear loads adversely affects system infrastructure and loads. WHF from Amtech limits current harmonic distortion to the acceptable limit over a wide load range. Variable Frequency Drive (VFD) draws non-linear current from the mains and produces harmonics distortion. IEEE 519-2014 standard requires various levels of harmonic mitigation. The WHF reduces current THD to less than 5% and helps to meet the standard's requirements.

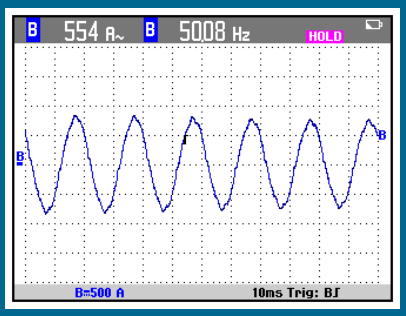
The WHF offers industry leading performance from light loads to the rated load. It is a stand-alone input equipment with its own enclosure, installed adjacent to the VFD. It is designed to reduce harmonics caused by VFDs. One higher rating WHF can also be installed at the input of multiple VFD as an cost effective alternate.

**Features :**

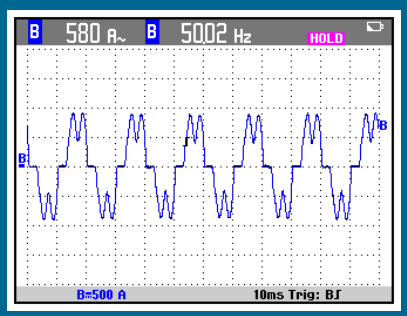
- Limits current harmonic distortion to less than 5% over a wide load range
- IEEE 519-2014 compliant
- Cost effective, maintenance-free filter design - no adjustments needed
- Forced cooled enclosure
- Excellent behavior under partial load conditions
- Extends the life of VFD and other equipments like transformers and motors
- Highest efficiency from partial load to full load
- Easy installation and commissioning

**Typical Applications :**

- VFD with 6-pulse converter




**WHF Input Current**




**WHF Output Current**

AMTECH

AMTECH ELECTRONICS (INDIA) LTD.

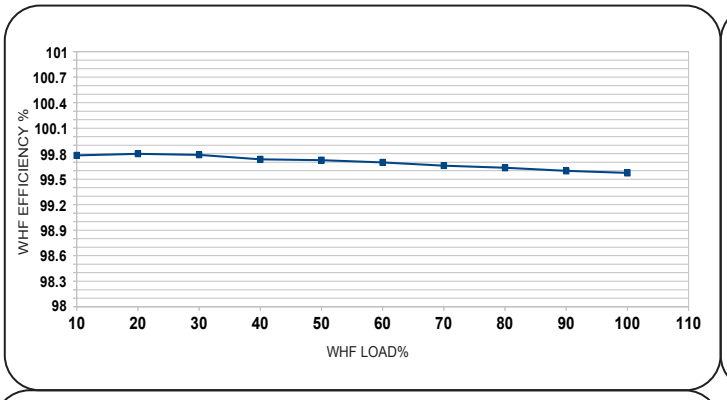
*DRIVE FOR SUCCESS*

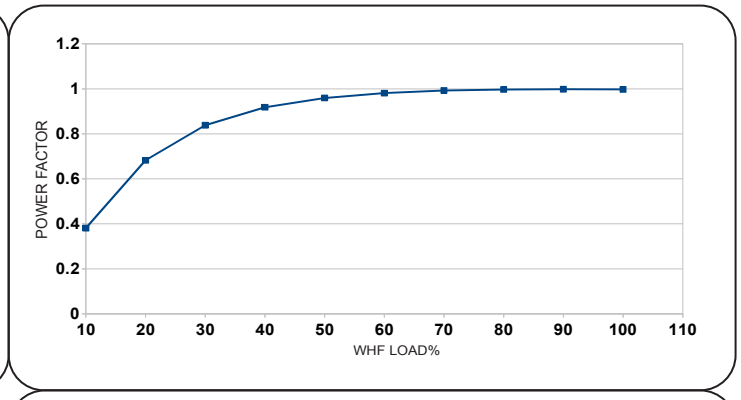

**"Eliminate Harmonics and improve power quality"**

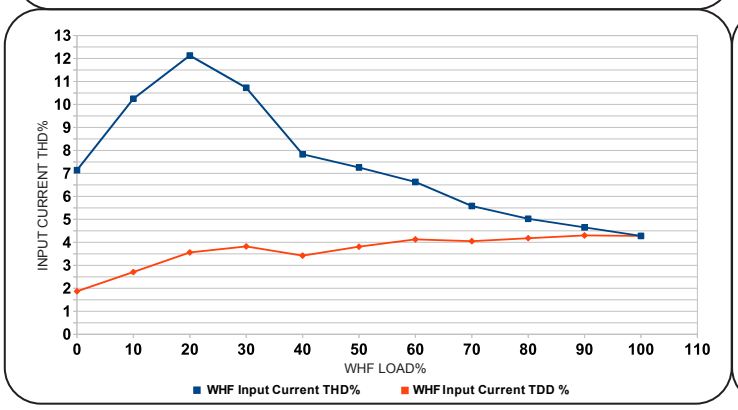
## Standard Specifications

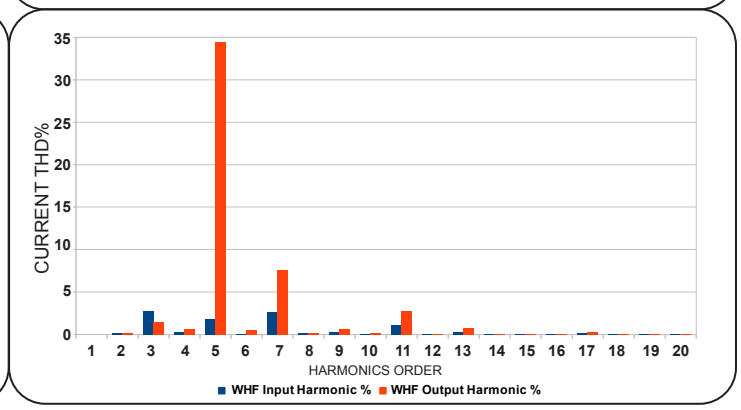
| | | |
|---|---|---|
| Rated Voltage | 380...440 VAC ± 10% (Nominal 415 VAC) | |
| Rated Frequency | 50 Hz ± 1 Hz | |
| Power Rating | 11...355 kW, contact Amtech for high power ratings | |
| Load Types | 3-phase diode bridge rectifier loads such as PWM AC drives, DC Drives | |
| Immunity from Voltage Distortion | Less than 5% THDi at full load with THDv <2%, line voltage unbalance <1%, 3% rated DC choke | |
| Capacitive current (@ no load) | <28% at 415 VAC | |
| Overload Capability | 150% for 60 seconds | |
| Efficiency | 99 to 99.5% at nominal power | |
| Safety monitoring functions | Protected magnetic components against overtemperature using temperature switch (NC type) | |
| Maximum output voltage at no load | +5% RMS Input Voltage | |
| Minimum output voltage at full load | -2% RMS Input Voltage | |
| Insulation class | Class F (155°C) or Class H (180°C) | |
| Insulation level | 2.5 kV AC for 1 minute | |
| Cooling | Forced air cooling | |
| Maximum Ambient Temperature | -15...50°C (5...122°F) | |
| Maximum Storage Temperature | -20...70°C (-4...158°F) | |
| Maximum Elevation | Up to 1,000 m (3,300 ft) without derating (consult Amtech for higher elevations) | |
| Humidity | 95% non-condensing | |
| Degree of protection | IP00 up to 45 kW and IP41 above 45 kW (consult Amtech for higher protection) | |
| Dimensions (HxWxD) in mm (inch) | 30...45 kW | 55...355 kW |
| | 740 (29.1) X 450 (17.7) X 250 (9.8) | 1995 (78.5) X 600 (23.6) X 600 (23.6) |

## Performance Results

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