

# SineWave Guardian®

Best-in-class SineWave Filter for  
cleaning PWM waveforms  
out to 15,000 ft



- **Increases motor life**
- **Easy to integrate, install and service**
- **Operates in high ambient temperatures**
- **High performance and reliability**
- **Three-year warranty**

## Quality motor protection for miles - literally.

Motor protection and power quality don't have to be a mystery. MTE makes it easy. Case in point: our SineWave Guardian® Filter. This best-in-class filter delivers unequalled performance in cleaning the PWM waveforms generated by Variable Frequency Drives (VFDs). It virtually eliminates high frequency content and voltage peaks, thereby reducing motor heating to give you extended motor life – and less downtime. The SineWave Guardian also offers incredible reliability and durability. It is more efficient and tolerates higher ambient temperatures, making it ideal for a variety of applications from steel mills to oil fields. Its modular design and smaller footprint make it easier to integrate and install. It all adds up to the best SineWave Filter, and the best value on the market today.

SineWave Guardian® Filters transform the output of Variable Frequency Drives (VFDs) to a near perfect sinusoidal waveform for the best level of motor protection. MTE's unique, patented design offers higher performance with smaller size and better efficiency than traditional LC Filters.

**Increase motor life:** Reduce motor heating through reduction of high frequencies associated with VFD output and also reduce motor insulation stress through reduction of motor peak voltages.

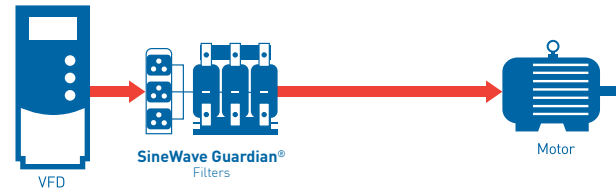
**Reduce motor audible noise:** Reduce audible noise through reducing high frequencies associated with VFD output.

**Reduce radiated emissions:** Reduce emissions through reducing high frequencies associated with VFD output.

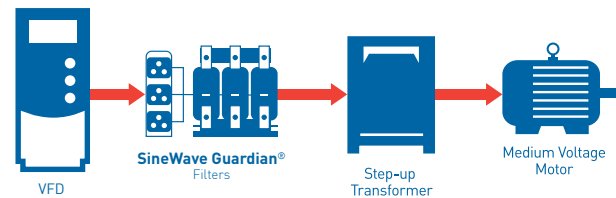
## SineWave Guardian®



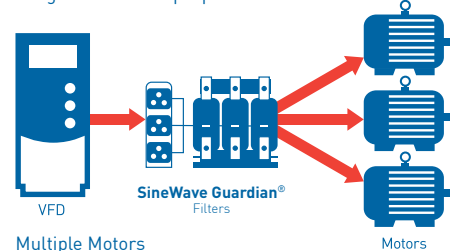
### Application Configurations:



Extreme Long Lead to Motor

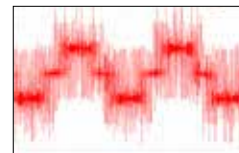


Long Lead with Step-up Transformer

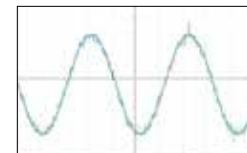


Multiple Motors

### SineWave Guardian Performance:



Without SineWave Guardian



With SineWave Guardian

The SineWave Guardian is a SineWave Filter which protects motors from damage by "cleaning" the sinewave waveform that is generated by the Variable Frequency Drive.

### Performance Specifications

Service Load Condition	Conventional 3 phase motors Standard step-up transformer optional
Input Voltage	208V - 600V +/- 10%
Current Range	2A - 1500A (.75 HP - 1200 HP)
Harmonic Voltage Distortion	5% maximum @ 2kHz
Inverter Switching Frequency	2kHz to 8kHz
Inverter Operating Frequency	6Hz to 75Hz; >75Hz to 120Hz with derating
Maximum Ambient Temperature	-40C to +60C modular filter -40C to +55C enclosed filter -40C to +90C storage
Insertion Loss (Voltage)	6% maximum @ 60Hz
Efficiency	>98%
Altitude Without Derating	3,300 feet above sea level
Maximum Motor Lead Length	15,000 feet
Relative Humidity	0% to 95% non-condensing
Current Rating	100% RMS continuous; 150% for 1 minute intermittent

Final product specifications subject to change at anytime.



**MTE Corporation**

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