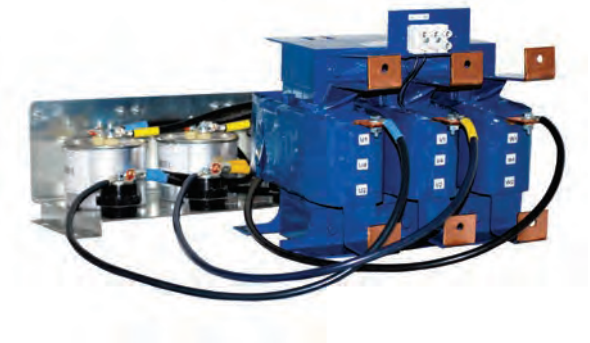
Optimized for High Frequency Motors

High Frequency SineWave Guardian™

Product Selector



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

If you're not leading, you're following. Innovation is here.

At MTE, we have found a way to make our best-in-class motor protection solution, the SineWave Guardian™ Filter, even better. Featuring the same unequaled performance, the market leading High Frequency SineWave Guardian™ uses innovative technology to optimize protection for high frequency motors. Our new filter features reduced voltage drop and virtually eliminates voltage distortion (THVD) generated by Variable Frequency Drives (VFDs). This results in reduced losses, protection against overheating motors, and ultimately providing less downtime. It can protect motors in some of the harshest conditions, with unmatched reliability and durability. The High Frequency SineWave Guardian™ Filter is the optimized motor protection solution for high frequency motors, exclusively by MTE.

MTE
POWER QUALITY. SOLVED.

Specially designed for high frequency motors to reduce voltage distortion, improve efficiency, and extend motor life.

High Frequency SineWave Guardian™ Filters transform the output of Variable Frequency Drives (VFDs) to a near perfect sinusoidal waveform for the best level of protection for high frequency motors. MTE's unique, patent-pending design comes in a smaller size than traditional LC Filters, and offers higher performance and better efficiency.

Increase motor life
Reduce motor audible noise
Reduce radiated emissions

How to properly size your filter

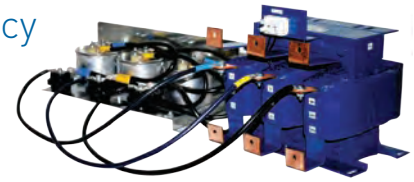
- **Determine voltage and frequency requirements**
- **Reference motor nameplate to determine motor HP or kW and Full Load Amps**
- **Verify motor meets inverter duty standards per NEMA MG1 Section 31**
- **Select filter based on Motor Full Load Amps**
  Do not exceed filter's maximum current rating (amps)
- **Determine derating requirements**
  Reference Performance Specifications table

Understanding the High Frequency SineWave Guardian™ Part Number:

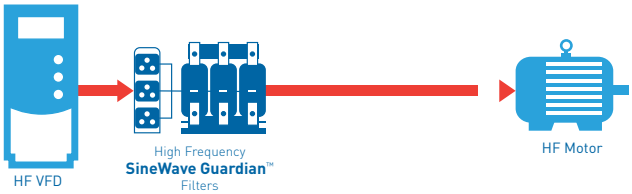
SWG X _ _ _ _ X-HF CC MMM

SineWave Guardian™ Type
M=Open Magnetics (No Enclosure)
Current Rating
0080 is 80 Amps
0600 is 600 Amps
Voltage Frequency Code
D (380V – 480V)
High Frequency
Optimized Carrier Frequency
Maximum Motor Frequency

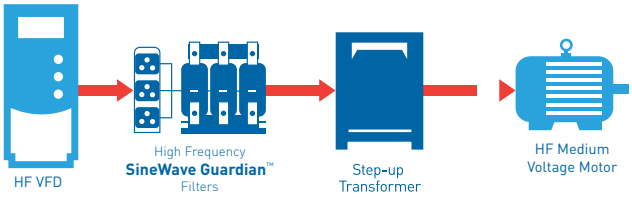
High Frequency SineWave Guardian™



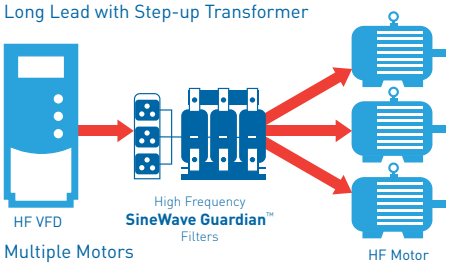
Application Configurations:



Extreme Long Lead to Motor



Long Lead with Step-up Transformer



Multiple Motors

Performance Specifications

Service Load Condition	**Conventional 3 phase motors operating in volts per hertz mode, standard step-up transformer or design for use of filter in sensor less vector mode**
Input Voltage	**380V – 480V +/– 10%**
Harmonic Voltage Distortion	**5% maximum @ 5kHz; 8% maximum @ 6-8 kHz**
Inverter Switching Frequency	**4.8kHz to 8kHz**
Inverter Operating Frequency	**6Hz to 300Hz**
Maximum Ambient Temperature	**-40°C to +60°C modular filter; -40°C to +90°C storage**
Insertion Loss (Voltage)	**6% maximum @ 150Hz; 12% maximum @ 300Hz**
Efficiency	**>99%**
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 any time.

380 – 480V 300Hz

Motor (Ref Only)		Filter Amps Rating	MTE Part Number	Enclosure Type	Filter Dimensions (H x W x D)		Approx Weight		Ref Fig	Watts Loss	Capacitor/Capacitor Panel Assembly Dimensions (H x W x D)		Qty Req'd	Ref Fig
380V kW	480V HP				Inches	Millimeters	Lbs	Kgs			Inches	Millimeters		
37	60	80	SWGM0080D-HF05300	OPEN	10.5 x 12.0 x 9.1	267 x 305 x 231	62	28	1	360	5.8 x 16.3 x 7.6	147 x 414 x 193	1	4
55	75	110	SWGM0110D-HF05300	OPEN	10.1 x 12.0 x 10.1	257 x 305 x 257	78	35	1	451	5.8 x 16.3 x 7.6	147 x 414 x 193	1	4
-	100	130	SWGM0130D-HF05300	OPEN	10.2 x 12.0 x 11.5	259 x 305 x 292	92	42	1	504	5.8 x 16.3 x 7.6	147 x 414 x 193	1	4
75	125	160	SWGM0160D-HF05300	OPEN	10.0 x 12.0 x 11.6	254 x 305 x 295	96	44	1	563	5.8 x 16.3 x 7.6	147 x 414 x 193	1	4
110	150	200	SWGM0200D-HF05300	OPEN	12.1 x 15.3 x 11.2	307 x 389 x 284	136	62	2	718	6.7 x 16.3 x 7.6	170 x 414 x 193	1	4
132	200	250	SWGM0250D-HF05300	OPEN	12.3 x 15.3 x 11.3	312 x 389 x 287	143	65	2	911	6.7 x 16.3 x 7.6	170 x 414 x 193	1	4
160	250	305	SWGM0305D-HF05300	OPEN	12.4 x 15.3 x 12.6	315 x 389 x 320	174	79	2	958	6.7 x 16.3 x 7.6	170 x 414 x 193	1	4
220	350	415	SWGM0415D-HF05300	OPEN	12.3 x 15.3 x 14.3	312 x 389 x 363	244	111	2	1,144	6.7 x 16.3 x 7.6	170 x 414 x 193	2	4
280	450	515	SWGM0515D-HF05300	OPEN	14.2 x 15.3 x 13.1	361 x 389 x 333	258	117	3	1,250	6.7 x 16.3 x 7.6	170 x 414 x 193	1	4
											6.7 x 16.3 x 7.6	170 x 414 x 193	2	4
335	500	600	SWGM0600D-HF05300	OPEN	14.3 x 15.3 x 14.3	363 x 389 x 363	306	139	3	1,321	6.7 x 16.3 x 7.6	170 x 414 x 193	1	4
											6.7 x 16.3 x 7.6	170 x 414 x 193	2	4

Note: Weights and dimensions are for reference only. Please visit **mtecorp.com** for detailed information.

FIGURE 1

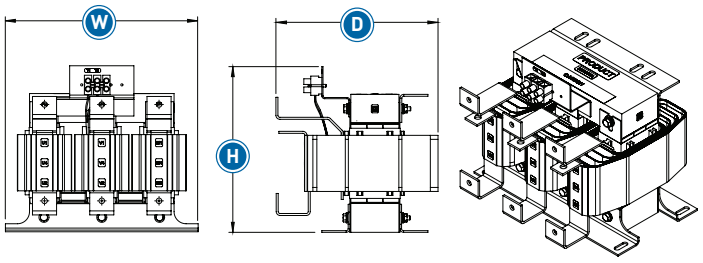


FIGURE 2

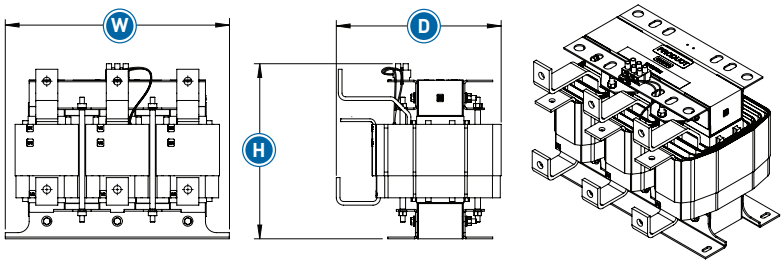


FIGURE 3

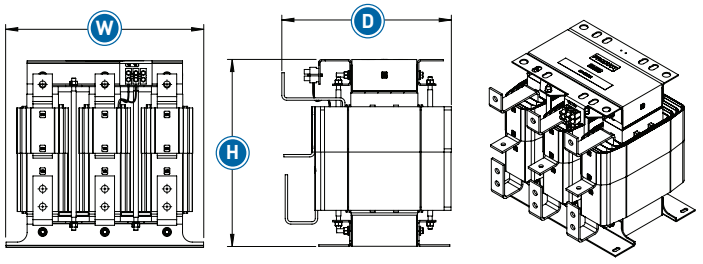
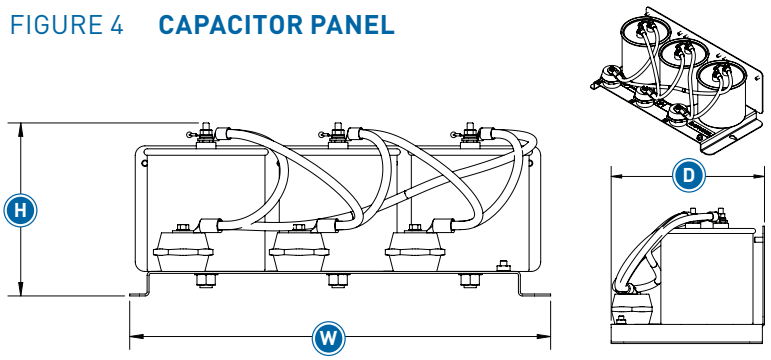


FIGURE 4 **CAPACITOR PANEL**



Note: Figure illustrations are for reference only. Actual hardware may differ. Please visit **mtecorp.com** for detailed information.