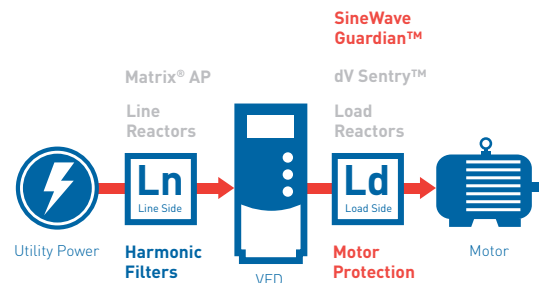
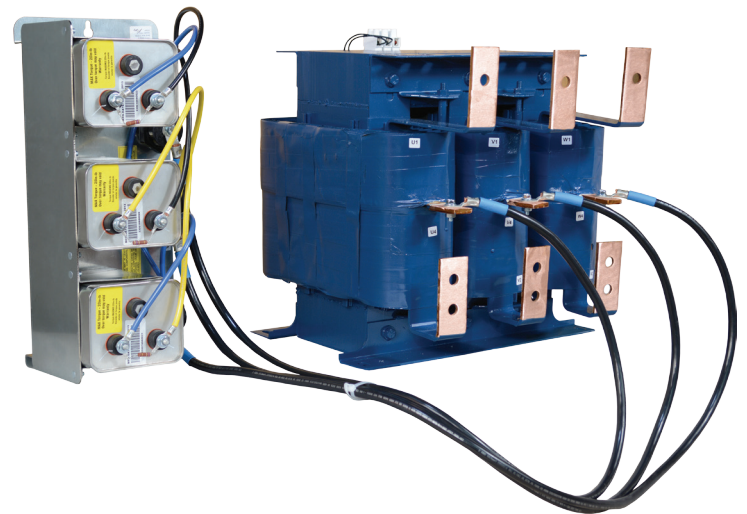


# SineWave Guardian™

## Product Selector

### For motor protection, there is nothing better.

Motor protection and power quality don't have to be a mystery. MTE makes it easy. Case in point: our new 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.



MTE SineWave Guardian Motor Protection Filters transform the output of your VFD to a near perfect sinusoidal waveform for the best level of motor protection.

## Improve efficiency, improve motor life, and improve your bottom line with our new SineWave Guardian.

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, patent-pending design offers high performance with smaller size and better efficiency than traditional LC Filters.

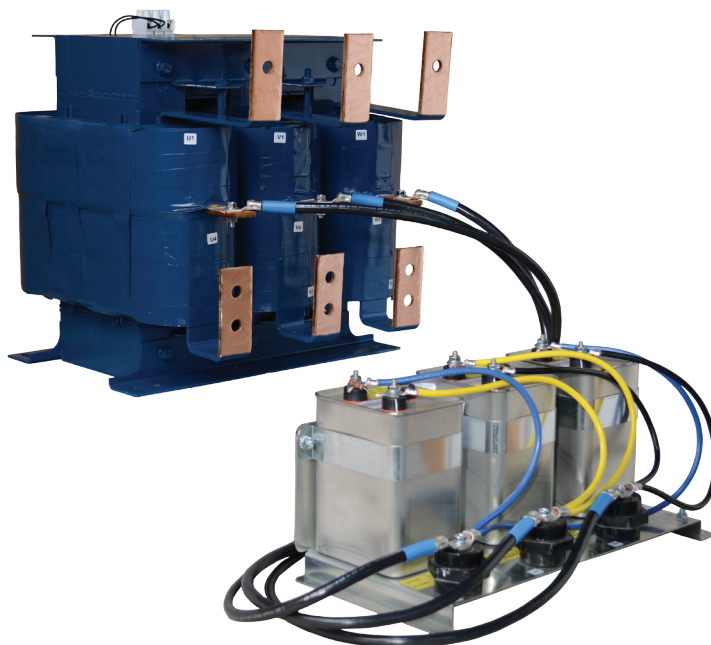
**Increase motor life:** Reduce motor heating through reduction of high frequencies associated with VFD output and also reduce motor insulation stress through reduction of motor peak voltages.

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

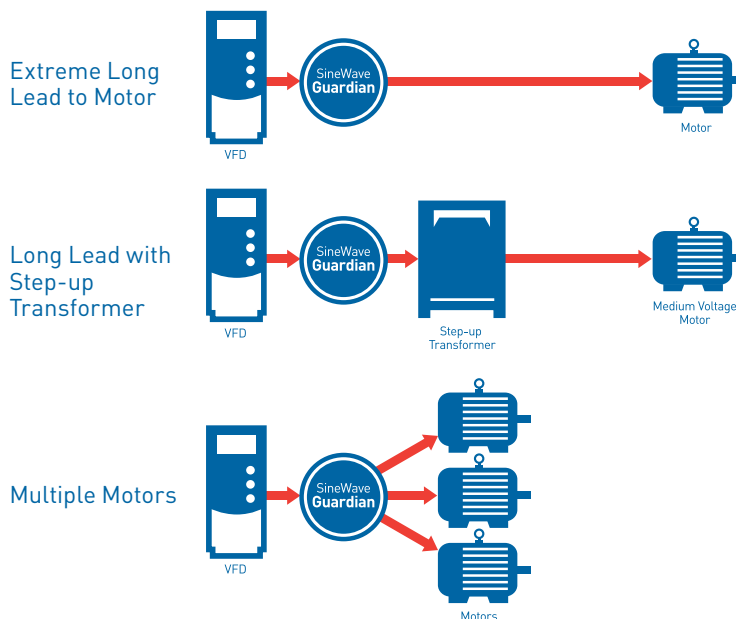
**Reduce radiated emissions:** Reduce emissions through reducing high frequencies associated with VFD output.

**Protect your motor cable:** The reduction of high frequencies associated with VFD output eliminates the need for special motor cables.

**Industry leading THREE year warranty:** The best products deserve the best warranty.



### Application Configurations:



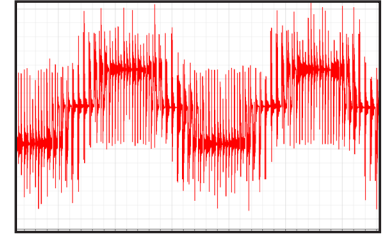
We know  
power quality, because  
**power quality  
is all we do.**



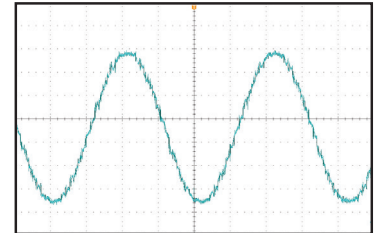
## Performance Specifications:

Service Load Condition	Conventional 3 phase motors operating in volts per Hertz mode Standard step-up transformer
Voltage	380V - 480V +/- 10%
Input Voltage Wave Form	PWM
Harmonic Voltage Distortion	5% maximum @ 2kHz
Inverter Switching Frequency	2kHz - 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%
Current range	2A - 720A
Available form factors	Modular NEMA 1 & 2 NEMA 3R
Altitude without derating	3,300 feet above sea level
Agency Approvals	UL, cUL, and CE Listed to UL508 type MX and CSA-C22.2 No 14-95, File E180243
Maximum Motor Lead Length	15,000 feet
Relative Humidity	0% to 95% non-condensing
Current Rating	100% RMS Continuous 150% for 1 minute Intermittent
Warranty	THREE Years from the date of shipment

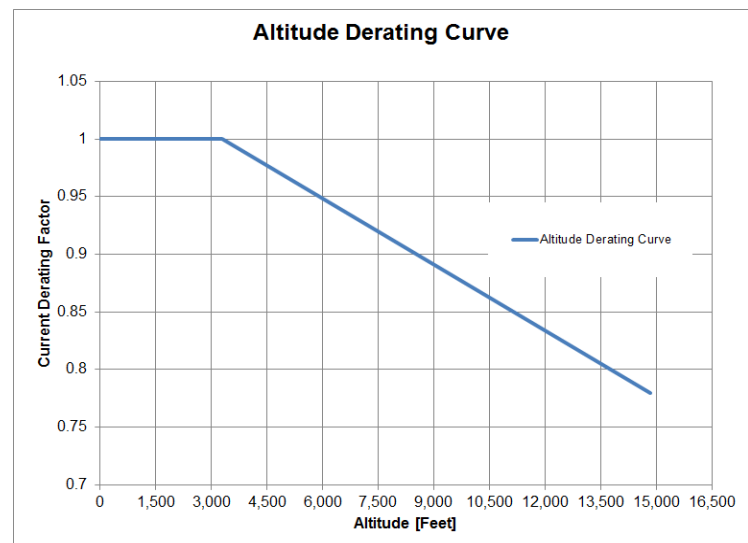
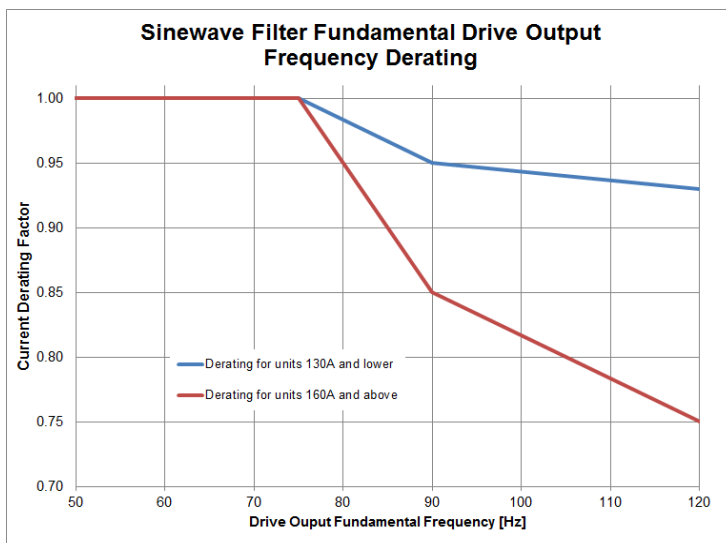
### Without SineWave Guardian



### With SineWave Guardian



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



## Selection Tables:

Select filters based on the Full Load Amps (FLA) of the motor. If the FLA is greater than the current rating of the filter, use the next larger filter. Note: The motor KW and HP ratings listed below are for reference only.



380V Motor KW	460V Motor HP	Amps Rating	Modular					3-Phase Capacitor (in.) (H X D) Capacitor Panel (in.) (H X W X D)	Capacitor Ref. Figure
			Part Number	Weight (lbs.)	Open Magnetics (in.) (H X W X D)	Ref. Fig.	Watts Loss		
0.55	0.75	2	SWGM0002D	6	4.5 X 4.4 X 2.6	7	25	7.5 X 2.9	1
0.75	1.5	3	SWGM0003D	8	4.5 X 4.4 X 3.3	7	45	7.5 X 2.9	1
2.2	3	5	SWGM0005D	12	6.7 X 8.0 X 4.8	7	75	7.5 X 2.9	1
3	4	7	SWGM0007D	13	6.7 X 8.0 X 5.1	7	91	7.5 X 2.9	1
4	5.5	9	SWGM0009D	15	6.7 X 8.0 X 5.1	7	97	7.5 X 2.9	1
5.5	7.5	12	SWGM0012D	13	6.7 X 8.0 X 5.4	7	127	7.5 X 2.9	1
7.5	10	17	SWGM0017D	20	7.5 X 9.0 X 4.8	7	130	7.5 X 2.9	1
11	15	22	SWGM0022D	31	8.7 X 10.5 X 6.7	7	135	7.5 X 2.9	1
-	20	27	SWGM0027D	34	8.7 X 10.5 X 6.7	8	140	7.5 X 2.9	1
18.5	25	35	SWGM0035D	38	8.9 X 10.5 X 6.7	8	210	7.5 X 3.9	1
22	30	45	SWGM0045D	43	8.8 X 10.5 X 7.2	8	225	7.5 X 3.9	1
-	40	55	SWGM0055D	53	8.8 X 10.5 X 8.2	9	301	8.3 X 3.9	1
30	50	65	SWGM0065D	62	10.8 X 12.0 X 8.6	9	310	8.3 X 4.9	1
37	60	80	SWGM0080D	73	10.8 X 12.0 X 9.0	9	387	8.3 X 4.9	1
55	75	110	SWGM0110D	105	10.7 X 12.0 X 10.5	9	395	8.3 X 4.9	1
-	100	130	SWGM0130D	108	10.7 X 12.0 X 11.5	10	420	8.3 X 4.9	1
75	125	160	SWGM0160D	151	14.5 X 15.3 X 11.3	10	595	6.9 X 16.3 X 7.6	2
110	150	200	SWGM0200D	158	14.5 X 15.3 X 11.8	10	650	6.9 X 16.3 X 7.6	2
132	200	250	SWGM0250D	215	14.5 X 15.3 X 13.8	10	775	6.9 X 16.3 X 7.6	2
160	250	305	SWGM0305D	249	14.6 X 15.3 X 14.9	11	945	6.9 X 16.3 X 7.6	2
200	300	365	SWGM0365D	299	14.6 X 15.3 X 15.3	11	1,050	6.9 X 16.3 X 7.6	2
220	350	415	SWGM0415D	313	14.6 X 15.3 X 15.0	11	1,137	6.9 X 16.3 X 7.6	2
280	450	515	SWGM0515D	348	15.0 X 15.3 X 16.3	12	1,235	10.7 X 16.3 X 7.6	2
335	500	600	SWGM0600D	471	18.3 X 24.0 X 14.6	12	2,225	7.9 X 16.3 X 7.6	2
375	600	720	SWGM0720D	664	18.2 X 24.0 X 14.6	13	2,300	6.9 X 16.3 X 7.6 7.9 X 16.3 X 7.6	2

Note: Information is for reference only. Consult [www.mtecorp.com](http://www.mtecorp.com) for detailed information.





## Selection Tables:

Select filters based on the Full Load Amps (FLA) of the motor. If the FLA is greater than the current rating of the filter, use the next larger filter. **Note:** The motor KW and HP ratings listed below are for reference only.



Amps Rating	NEMA 1/2					NEMA 3R				
	Part Number	Weight (lbs.)	Enclosure	Size (In.) (H X W X D)	Ref. Fig.	Part Number	Weight (lbs.)	Enclosure	Size (In.) (H X W X D)	Ref. Fig.
2	SWGG0002D	20	CAB-13V	13.8 X 13 X 13	3	SWG0002D	62	CAB-12AP3	24 X 12.5 X 22.9	5
3	SWGG0003D	21	CAB-13V	13.8 X 13 X 13	3	SWG0003D	64	CAB-12AP3	24 X 12.5 X 22.9	5
5	SWGG0005D	25	CAB-13V	13.8 X 13 X 13	3	SWG0005D	68	CAB-12AP3	24 X 12.5 X 22.9	5
7	SWGG0007D	27	CAB-13V	13.8 X 13 X 13	3	SWG0007D	68	CAB-12AP3	24 X 12.5 X 22.9	5
9	SWGG0009D	27	CAB-13V	13.8 X 13 X 13	3	SWG0009D	70	CAB-12AP3	24 X 12.5 X 22.9	5
12	SWGG0012D	27	CAB-13V	13.8 X 13 X 13	3	SWG0012D	68	CAB-12AP3	24 X 12.5 X 22.9	5
17	SWGG0017D	34	CAB-13V	13.8 X 13 X 13	3	SWG0017D	75	CAB-12AP3	24 X 12.5 X 22.9	5
22	SWGG0022D	79	CAB-17V	24 X 17 X 17	4	SWG0022D	87	CAB-12AP3	24 X 12.5 X 22.9	5
27	SWGG0027D	82	CAB-17V	24 X 17 X 17	4	SWG0027D	90	CAB-12AP3	24 X 12.5 X 22.9	5
35	SWGG0035D	86	CAB-17V	24 X 17 X 17	4	SWG0035D	94	CAB-12AP3	24 X 12.5 X 22.9	5
45	SWGG0045D	145	CAB-17V	24 X 17 X 17	4	SWG0045D	145	CAB-12AP3	24 X 12.5 X 22.9	5
55	SWGG0055D	101	CAB-17V	24 X 17 X 17	4	SWG0055D	108	CAB-12AP3	24 X 12.5 X 22.9	5
65	SWGG0065D	136	CAB-17AP2	34 X 17.8 X 21	5	SWG0065D	143	CAB-17AP3	34 X 17.8 X 26	5
80	SWGG0080D	147	CAB-17AP2	34 X 17.8 X 21	5	SWG0080D	154	CAB-17AP3	34 X 17.8 X 26	5
110	SWGG0110D	179	CAB-17AP2	34 X 17.8 X 21	5	SWG0110D	187	CAB-17AP3	34 X 17.8 X 26	5
130	SWGG0130D	182	CAB-17AP2	34 X 17.8 X 21	5	SWG0130D	189	CAB-17AP3	34 X 17.8 X 26	5
160	SWGG0160D	317	CAB-26AP2	51.3 X 27.7 X 25	6	SWG0160D	330	CAB-26AP3	51.3 X 27.7 X 30	6
200	SWGG0200D	324	CAB-26AP2	51.5 X 27.7 X 25	6	SWG0200D	337	CAB-26AP3	51.3 X 27.7 X 30	6
250	SWGG0250D	381	CAB-26AP2	51.5 X 27.7 X 25	6	SWG0250D	394	CAB-26AP3	51.3 X 27.7 X 30	6
305	SWGG0305D	415	CAB-26AP2	51.5 X 27.7 X 25	6	SWG0305D	428	CAB-26AP3	51.3 X 27.7 X 30	6
365	SWGG0365D	465	CAB-26AP2	51.5 X 27.7 X 25	6	SWG0365D	478	CAB-26AP3	51.3 X 27.7 X 30	6
415	SWGG0415D	479	CAB-26AP2	51.5 X 27.7 X 25	6	SWG0415D	492	CAB-26AP3	51.3 X 27.7 X 30	6
515	SWGG0515D	619	CAB-42AP2	87.6 X 44 X 31	6	SWG0515D	624	CAB-42AP3	87.6 X 44 X 40	6
600	SWGG0600D	744	CAB-42AP2	87.6 X 44 X 31	6	SWG0600D	748	CAB-42AP3	87.6 X 44 X 40	6
720	SWGG0720D	937	CAB-42AP2	87.6 X 44 X 31	6	SWG0720D	941	CAB-42AP3	87.6 X 44 X 40	6

Note: Information is for reference only. Consult [www.mtecorp.com](http://www.mtecorp.com) for detailed information.

# 3-PHASE CAPACITOR

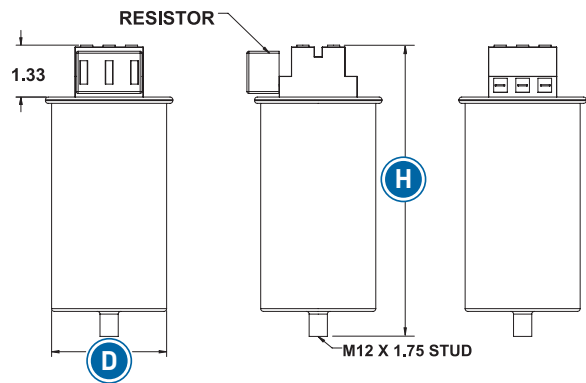
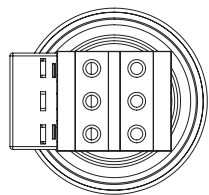
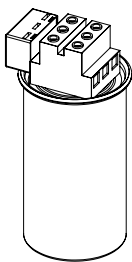


FIGURE 1



# CAPACITOR PANEL

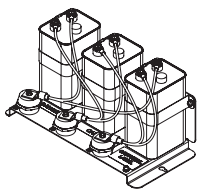
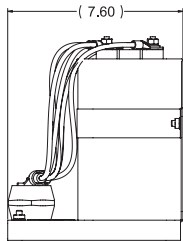
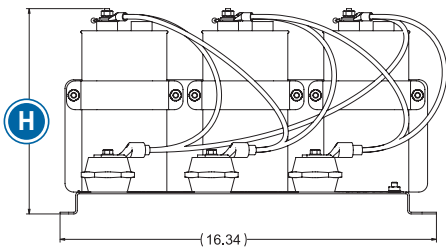
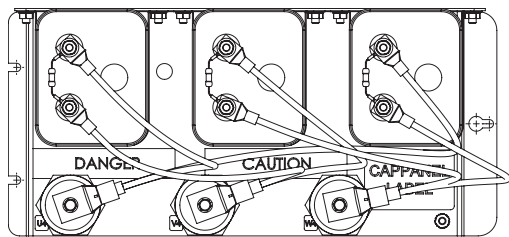


FIGURE 2

# ENCLOSURES

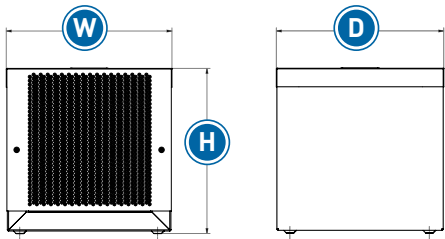


FIGURE 3

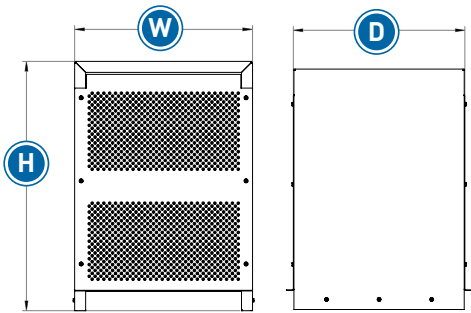
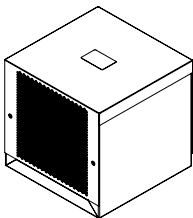
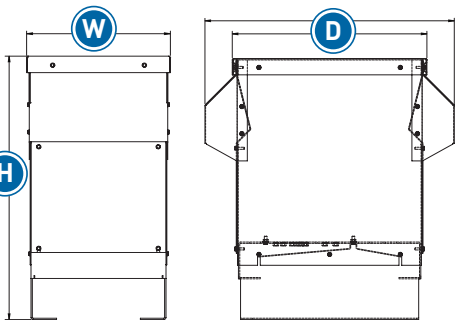
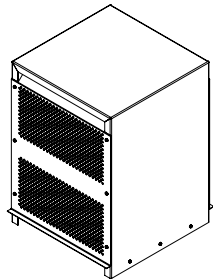
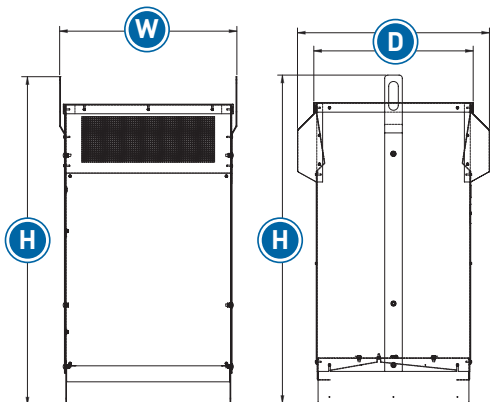
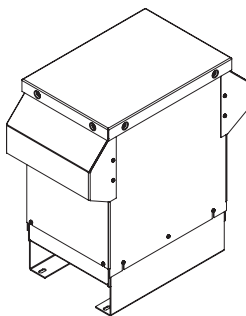


FIGURE 4



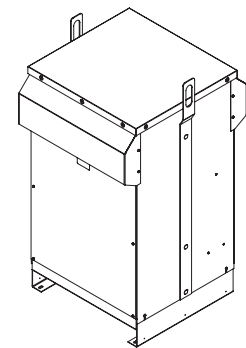
NOTE: HOODS ONLY ON NEMA 3R ENCLOSURES

FIGURE 5



NOTE: HOODS ONLY ON NEMA 3R ENCLOSURES

FIGURE 6





# MODULAR MAGNETICS

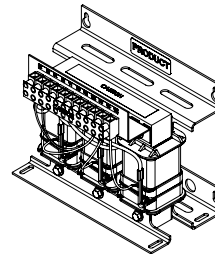
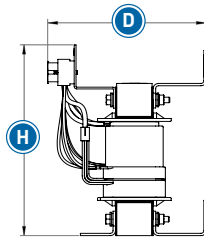
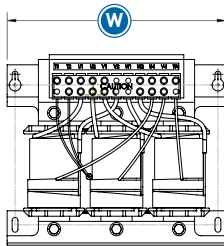


FIGURE 7

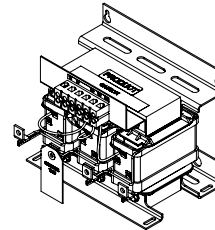
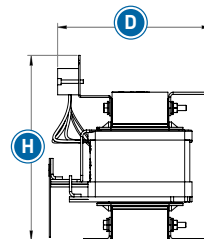
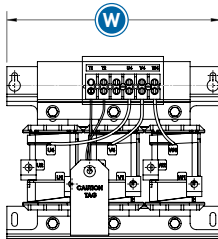


FIGURE 8

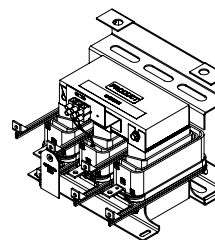
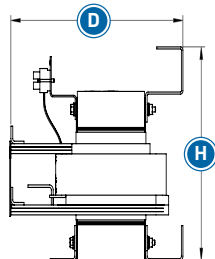
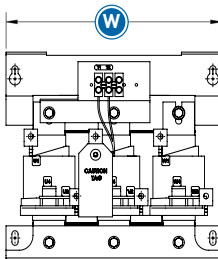


FIGURE 9

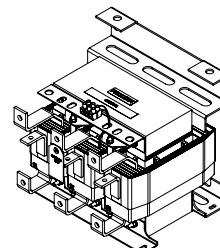
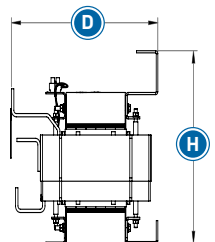
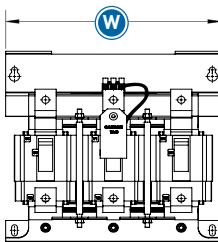


FIGURE 10

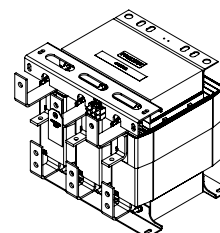
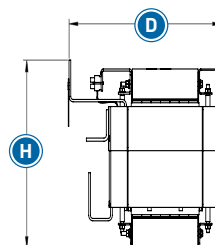
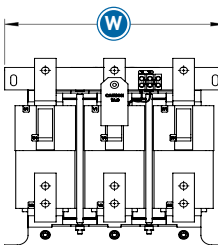


FIGURE 11

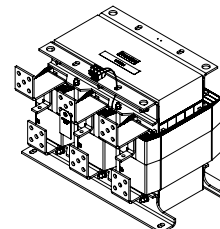
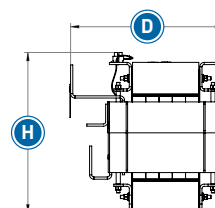
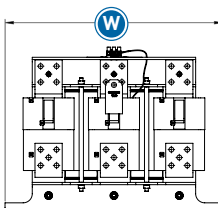


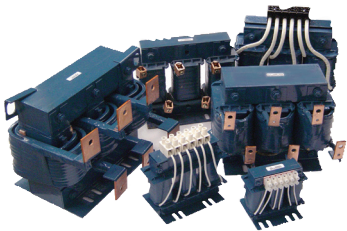
FIGURE 12

Note: Figure illustrations are for reference only. Actual hardware may differ.

Data subject to change without notice.  
Consult [www.mtecorp.com](http://www.mtecorp.com) for detailed information.

## Simple, robust power quality solutions that are never over engineered.

Power quality management requirements vary significantly. By utility. By industry. By application. By country. By site. That is why we offer a variety of power quality and filter products, for both input (line-side) and output (load-side) of Variable Frequency Drives (VFDs) and power conversion equipment. These components represent strategic parameters of power quality. We can provide you with a complete power quality solution.



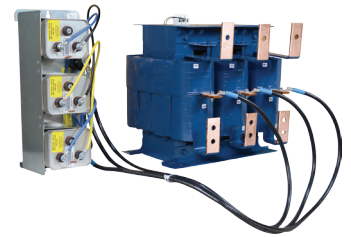
RL and RLW Line/Load Reactors help keep your equipment running longer by absorbing many of the power line disturbances which otherwise damage or shut down your inverters, variable speed controllers, or other sensitive equipment.



MATRIX® AP Harmonic Filters can help ensure that your system meets the IEEE-519 requirements for harmonic current.



The dV Sentry™, with its patented Triple Defense Core, is our latest technological innovation and the only proven filter that provides common mode reduction, peak voltage protection, and rise time reduction—all in one unit.



SineWave Filters transform the output of your VFD to a near perfect sinusoidal waveform for the best level of motor protection.



Power quality.  
Solved.

### **MTE Corporation**

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