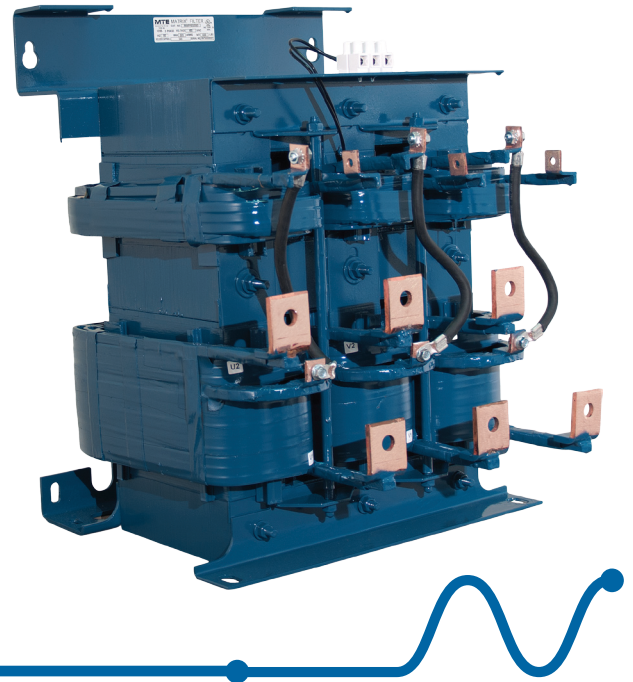




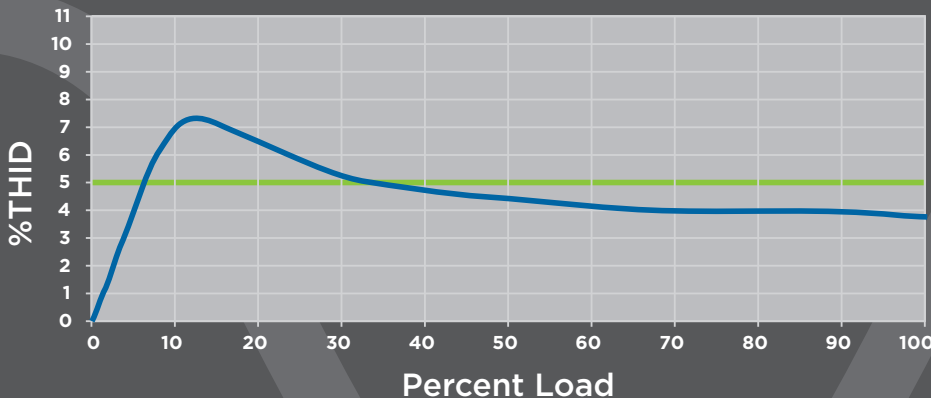
IMPROVE YOUR POWER QUALITY & ENERGY EFFICIENCY...WITH MTE'S NEW **ADAPTIVE PASSIVE TECHNOLOGY\*** TO ACHIEVE BETTER THID PERFORMANCE OVER A WIDER LOAD RANGE



\*Patent Pending

HELPS MEET IEEE-519 REQUIREMENTS (5% THID) WHEN USED AT LIGHTER LOADS

Percent THID for Series AP (165A)



**Guaranteed THID performance:  
8% MAX at 30% load  
5% MAX at full load**

**MTE MATRIX FILTERS HAVE EVOLVED AGAIN INTO A BETTER SOLUTION**

**AP FEATURES:**

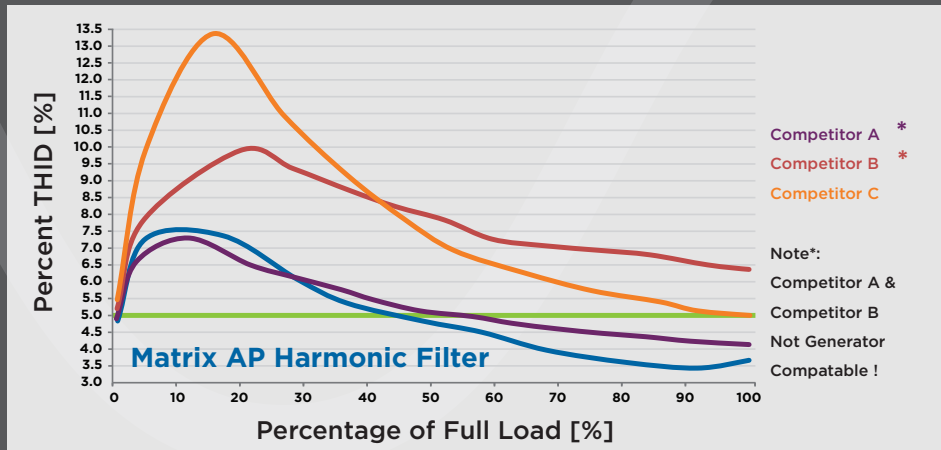
- No Resistors Required
- No Fans Required
- Fewer Capacitors
- Modular Components
- Standardized Wiring
- Top Lifting Provisions

**DESIGNED TO BE CONVECTION-COOLED & COMPATIBLE WITH GENERATOR SYSTEMS**

WITH MTE'S NEW, INNOVATIVE ADAPTIVE PASSIVE TECHNOLOGY\*, THE MATRIX® AP FILTER IS THE MOST ADVANCED HARMONIC FILTER DESIGN WHICH ALSO PROVIDES IMPROVED POWER FACTOR AND ENERGY EFFICIENCY.

# ADAPTIVE PASSIVE PERFORMANCE

The Matrix AP achieves superior harmonic mitigation compared to other harmonic filter designs.



Our “Adaptive” patented technology allows the Matrix AP to adapt to various loads while still providing optimized THID performance. The superior design integrates the magnetic core and the shunt core into the same lamination stack. Not only is this unit more efficient with six pulse drives than a stand-alone 18 pulse rectifier, it’s more economical and less expensive.



## THE MATRIX AP ALSO:

- Extends service life of electrical equipment, especially transformers and motors, due to the virtual elimination of CEMF and the skin effect.
- Reduces energy costs by improving system efficiency and reliability.
- Uses hi-current capacitors with threaded connections for a more reliable robust connection.
- Lowers capacitance resulting in less voltage rise at No Load at the PCC and on the DC Bus.
- Reduces the possibility of resonance between the drive and filter with improved C/L ratio—eliminating the need to add another reactor and the requirement to change certain parameters in the drive.

## SPECIFICATIONS

Load	6 pulse rectifier
Input Voltage	Nominal voltage VAC +/- 10%, 3 Phase
Frequency	Nominal Frequency + .75 Hz
Input Voltage Line Unbalance	1% maximum
Maximum Source Impedance	6.00%
Minimum Source Impedance	1.5%
Service Factor	1.00
Ambient Temperature (Operating)	
Enclosed Filters	320A and Above: -40 to +45 degrees C Below 320A: -40 to +40 degrees C
Open Panel Filters	-40 to +50 degrees C
Storage Temperature	-40 to +70 degrees C
Altitude	0 to 3300 Feet above sea level without derating
Relative Humidity	0 to 95% non-condensing
Agency Approvals: UL and cUL Listed	UL508 and CSA-C22.2 No 14-95 File E180243 (3HP to 1000HP, 120VAC to 600VAC, 50Hz, 50/60Hz, & 60Hz Three Phase)
Guaranteed Performance: Total Harmonic Current Distortion	8% MAX at 30% LOAD 5% MAX at FULL LOAD
Enclosure Color	NEMA 1/2 - ANSI 61 Gray NEMA 3R - RAL 9003 White

## APPLICATIONS

- AC variable frequency drives
- DC adjustable speed drives
- Battery chargers
- Elevator drives
- Fans and pumps
- HVAC systems
- Induction heating equipment
- Welding operations
- Any 6 pulse diode power supply
- Uninterrupted Power Systems (UPS)

## INDUSTRIES

- Oil and Gas Pumping
- Utilities
- Water and Wastewater Treatment
- Printing, Pulp & Paper
- Steel/Chemical/Automotive
- Mining

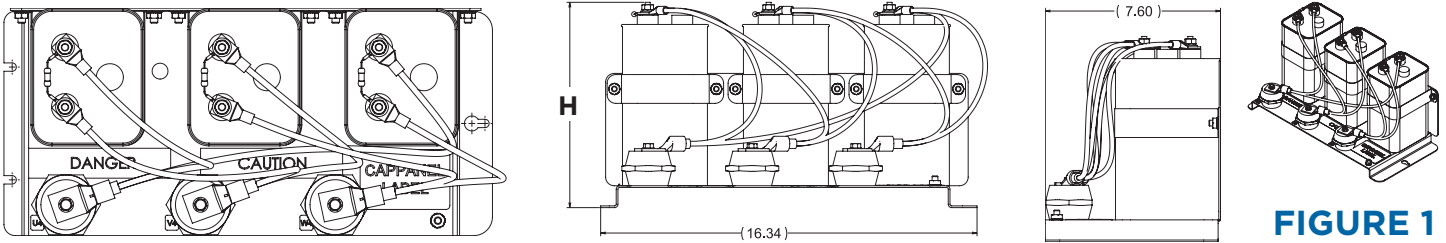
# SELECTION TABLES:

THE MATRIX AP IS AVAILABLE IN OPEN PANEL, NEMA 1/2 AND NEMA 3R

Amps rating	Open Panel				Watts Loss	Capacitor Assemblies Size (in.) (H x W x D)	Capacitor Ref. Figure
	Cat. PN.	Weight (lbs.)	Filter Size (in.) (H x W x D)	Ref. Figure			
83	MAPP0083D	135	14 X 12 X 10.7	2	600	8.7 X 5.6 X 6.6	N/A
103	MAPP0103D	145	14 X 12 X 11.1	2	702	7.9 X 16.3 X 7.6	1
128	MAPP0128D	165	20 X 15.25 X 11.7	2	1,035	7.9 X 16.3 X 7.6	1
165	MAPP0165D	223	20 X 15.25 X 12.75	2	1,096	7.9 X 16.3 X 7.6	1
208	MAPP0208D	237	20 X 15.25 X 12.75	2	1,343	7.9 X 16.3 X 7.6	1
240	MAPP0240D	327	20 X 15.25 X 13.75	2	1,514	7.9 X 16.3 X 7.6	1
320	MAPP0320D	439	20 X 15.25 X 14.6	2	1,543	8.9 X 16.3 X 7.6	1
403	MAPP0403D	433	23.25 X 15.25 X 15.75	2	1,932	10.7 X 16.3 X 7.6	1
482	MAPP0482D	483	23.25 X 15.25 X 15.75	2	2,137	7.9 X 16.3 X 7.6	1
						7.9 X 16.3 X 7.6	1
636	MAPP0636D	736	24.8 X 24 X 16	3	2,509	8.9 X 16.3 X 7.6	1
						8.9 X 16.3 X 7.6	1
786	MAPP0786D	911	25 X 24 X 17.5	3	2,771	10.7 X 16.3 X 7.6	1
						10.7 X 16.3 X 7.6	1
850	MAPP0850D	983	25 X 24 X 19.8	3	3,163	8.9 X 16.3 X 7.6	1
						8.9 X 16.3 X 7.6	1
						7.9 X 16.3 X 7.6	1
1000	MAPP1000D	1137	25 X 20 X 21.4	3	4,206	8.9 X 16.3 X 7.6	1
						8.9 X 16.3 X 7.6	1
						10.7 X 16.3 X 7.6	1
1200	MAPP1200D	1297	25 X 24 X 23.3	3	4,400	10.7 X 16.3 X 7.6	1
						10.7 X 16.3 X 7.6	1
						10.7 X 16.3 X 7.6	1

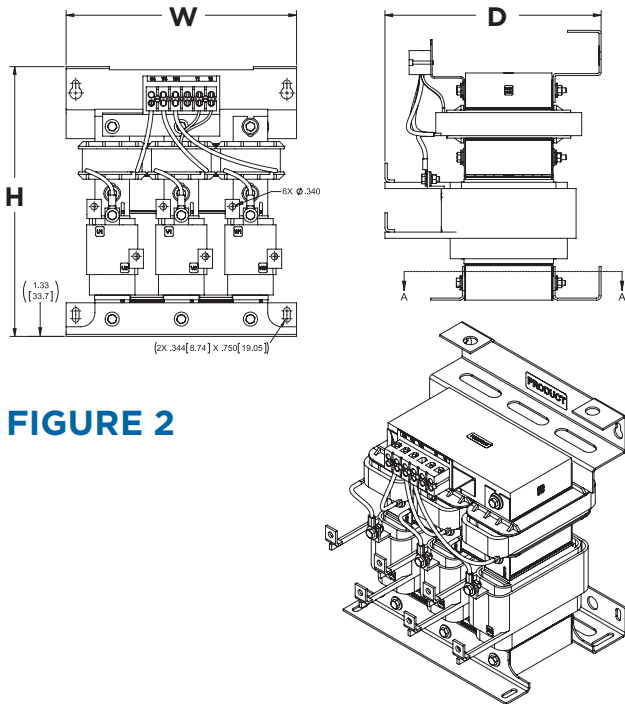
Amps rating	NEMA 1/2				NEMA 3R			
	Cat. PN.	Weight (lbs.)	Enclosure	Size (in.) (H x W x D)	Cat. PN.	Weight (lbs.)	Enclosure	Size (in.) (H x W x D)
83	MAPG0083D	230	CAB-17AP2	34 X 17.8 X 21	MAPW0083D	238	CAB-17AP3	34 X 17.8 X 26
103	MAPG0103D	313	CAB-17AP2	34 X 17.8 X 21	MAPW0103D	321	CAB-17AP3	34 X 17.8 X 26
128	MAPG0128D	333	CAB-26AP2	51.3 X 27.7 X 24.9	MAPW0128D	347	CAB-26AP3	51.3 X 27.7 X 30
165	MAPG0165D	392	CAB-26AP2	51.3 X 27.7 X 24.9	MAPW0165D	406	CAB-26AP3	51.3 X 27.7 X 30
208	MAPG0208D	405	CAB-26AP2	51.3 X 27.7 X 24.9	MAPW0208D	419	CAB-26AP3	51.3 X 27.7 X 30
240	MAPG0240D	489	CAB-26AP2	51.3 X 27.7 X 24.9	MAPW0240D	503	CAB-26AP3	51.3 X 27.7 X 30
320	MAPG0320D	630	CAB-26APD2	76 X 27.7 X 22	MAPW0320D	656	CAB-26APD3	76 X 27.7 X 34
403	MAPG0403D	673	CAB-26APD2	76 X 27.7 X 22	MAPW0403D	700	CAB-26APD3	76 X 27.7 X 34
482	MAPG0482D	702	CAB-42AP2	87.6 X 43.7 X 31	MAPW0482D	710	CAB-42AP3	87.6 X 43.7 X 40.1
636	MAPG0636D	1077	CAB-42AP2	87.6 X 43.7 X 31	MAPW0636D	1084	CAB-42AP3	87.6 X 43.7 X 40.1
786	MAPG0786D	1252	CAB-42AP2	87.6 X 43.7 X 31	MAPW0786D	1260	CAB-42AP3	87.6 X 43.7 X 40.1
850	MAPG0850D	1386	CAB-48AP2	84 X 49.2 X 36.5	MAPW0850D	1393	CAB-48AP3	84 X 49.2 X 45.5
1000	MAPG1000D	1640	CAB-48AP2	84 X 49.2 X 36.5	MAPW1000D	1647	CAB-48AP3	84 X 49.2 X 45.5
1200	MAPG1200D	1700	CAB-48AP2	84 X 49.2 X 36.5	MAPW1200D	1707	CAB-48AP3	84 X 49.2 X 45.5

# CAPACITOR PANEL

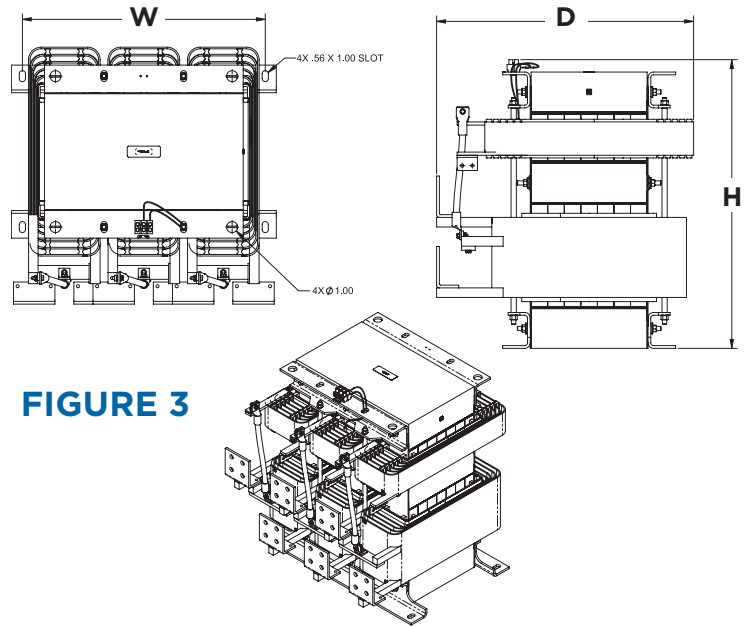


**FIGURE 1**

# OPEN MAGNETICS

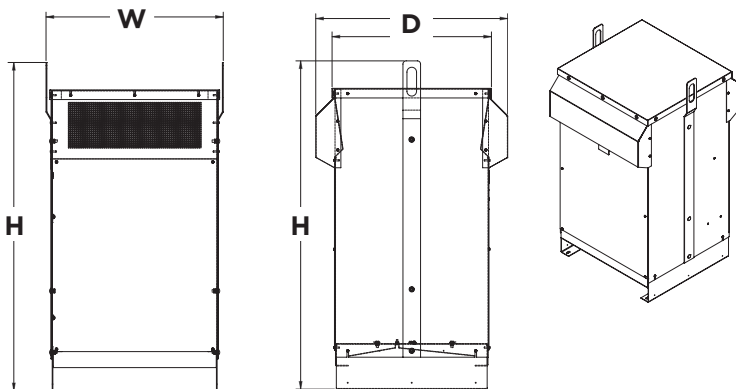


**FIGURE 2**



**FIGURE 3**

# ENCLOSURES



## MATRIX AP BENEFITS

- Less Heat Generated
- Reduction In Component Wiring
- Field Serviceability
- Simplified Field Wiring
- Power Factor Control (Contactor Option)
- Location Portability
- Environmentally Flexible
- Configurable

Our representative in your area is



N83 W13330 Leon Road,  
Menomonee Falls, WI 53051  
P: 800.455.4MTE (4683) F: 262.253.8222

Form MAP-PSL-E March 2012

MTE Corporation - Driving Power Quality

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