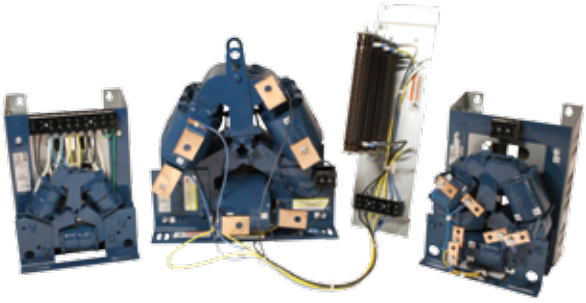
mtecorp.com

dV/dt Filters

dV Sentry™

Product Selector



- **True common mode reduction, peak voltage protection, and rise time reduction**
- **World leading motor protection technology in the market**
- **Low watts loss**
- **Small, advanced, robust design, easily installed**
- **Quiet as a conversation**
- **Three-year warranty**

The future is here.

The dV Sentry™ is the revolutionary solution for motor protection with its unique all-in-one design. It is the only filter on the market proven to provide common mode and rise time reduction, as well as peak voltage protection. This gives greater motor protection over time.

It features a small footprint and easy terminations to make installation faster and easier. Plus, it runs quietly and radiates less heat than previous filters. The dV Sentry is unique, and when it comes to motor protection, there is nothing better.

MTE

POWER QUALITY. SOLVED.

With the patented dV Sentry™, you get the most advanced motor protection in its class.

The unique design of the dV Sentry allows for greater load side protection from voltage spikes and common mode voltages for your AC motors cable and VFDs.

Patented design provides over 50% common mode reduction, peak voltage protection, and rise time reduction - all in one filter.

Low watts loss reduces heating in systems.

Small footprint, with a unique flat design, allows filter to be easily integrated.

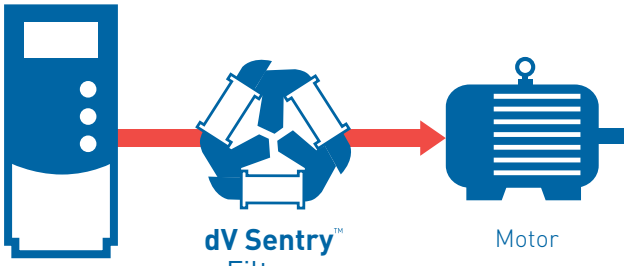
Strong robust design allows the filter to withstand installation and other difficult environments.

Runs quieter, comparable to a normal conversation.

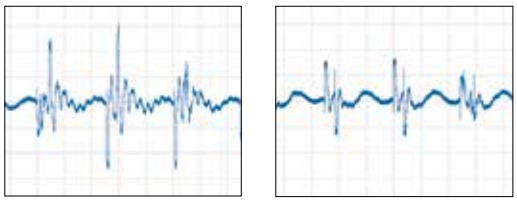
Performance Specifications	
Input Voltage	**208V - 600V +/- 10%; 60Hz**
Inverter Operating Frequency	**0 – 90Hz without derating**
Maximum Ambient Temperature	**-40C to +60C modular filter -40C to +50C enclosed filter**
Insertion Loss (Voltage)	**1.7% @ 60Hz; 2.6% @ 90Hz**
Efficiency	**>99%**
Altitude Without Derating	**3,300 feet above sea level**
Maximum Motor Lead Length	**1,000 feet**
Relative Humidity	**0% to 99% non-condensing**
Current Rating	**100% RMS continuous; 150% for 1 minute; 200% for 10 sec* *Operating in overload will result in increased proportional voltage drop**
Rise Time	**Less than 0.1 uS**
Peak Voltage	**150% of DC bus voltage up to 1,000 feet**
Common Mode Reduction	**50%+ peak current reduction typical**

Final product specifications subject to change at anytime.

dV Sentry™

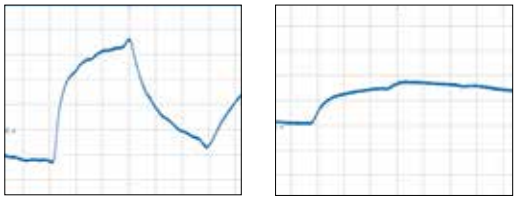


Common Mode Reduction:



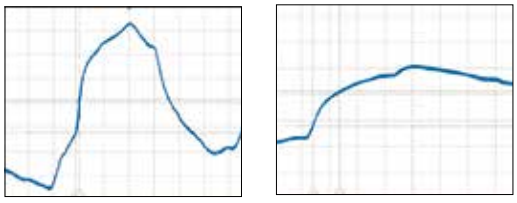
Without dV Sentry | With dV Sentry

Peak Rise Protection:



Without dV Sentry | With dV Sentry

Rise Time Reduction:



Without dV Sentry | With dV Sentry

How to properly size your filter

- **Determine input 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)
- **Specify enclosure style**
  Open (No enclosure)
  NEMA 1/2 (General Purpose Enclosure)
  NEMA 3R (Outdoor Enclosure)
- **Determine derating requirements**
  Reference Performance Specifications table on previous page as well as derating tables listed below:

  Table 1: Drive Output Frequency

  Table 2: Altitude Derating Curve
- **Note: Filters cannot be paralleled for higher current ratings.**

Understanding the dV Sentry Part Number:

DVS X _ _ _ _ E

dV Sentry Filter

Type
P=Open Magnetics (No Enclosure)
G=General Purpose (NEMA 1/2)
W=Weather (NEMA 3R)

Current Rating
(i.e. 0045 is 45 Amps)

Voltage Frequency Code
(208V - 600V)

Derating Curves:

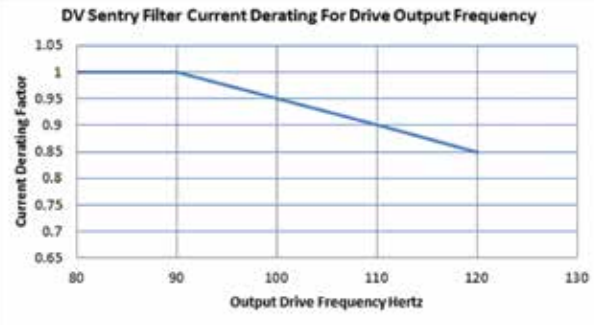


Table 1: Drive Output Frequency

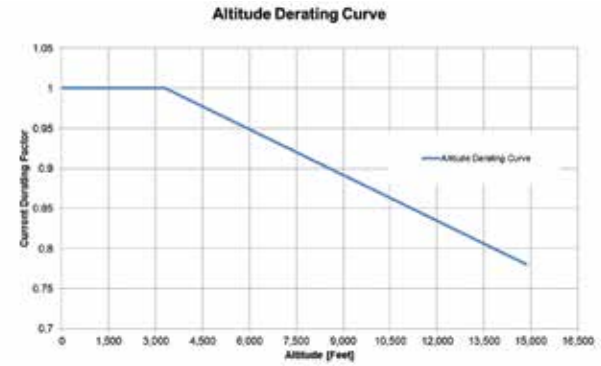
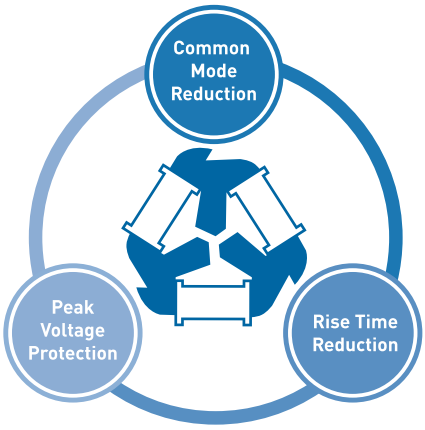


Table 2: Altitude Derating Curve



dV SENTRY™ SELECTION TABLES

208-600V 50/60Hz

Motor (Ref Only)					Filter Amps Rating	MTE Part Number	Enclosure Type	Filter Dimensions (H x W x D)		Approx Weight		Ref Fig	Watts Loss	Resistor Panel Dimensions (H x W x D)		Ref Fig
208V HP	240V HP	380V KW	480V HP	550-600V HP				Inches	Millimeters	Lbs	Kgs			Inches	Millimeters	
0.5	0.75	0.5-1.1	0.5-1.5	0.5-2	3	DVSP0003E	OPEN	9.1 x 6.7 x 7.7	231 x 170 x 196	7	3	2	67	Preinstalled on reactor panel		
						DVSG0003E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	18	8	6		Preinstalled in cabinet		
						DVSW0003E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	29	13	8				
0.75	1	1.5	2	3	4	DVSP0004E	OPEN	9.1 x 6.7 x 7.7	231 x 170 x 196	7	3	2	67	Preinstalled on reactor panel		
						DVSG0004E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	18	8	6		Preinstalled in cabinet		
						DVSW0004E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	29	13	8				
1.5	2	2.2-3	3	5	7	DVSP0007E	OPEN	9.1 x 6.7 x 7.7	231 x 170 x 196	7	3	2	67	Preinstalled on reactor panel		
						DVSG0007E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	18	8	6		Preinstalled in cabinet		
						DVSW0007E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	29	13	8				
2	3	4	5	7.5	9	DVSP0009E	OPEN	9.1 x 6.7 x 7.7	231 x 170 x 196	7	3	2	67	Preinstalled on reactor panel		
						DVSG0009E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	18	8	6		Preinstalled in cabinet		
						DVSW0009E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	29	13	8				
3	4	5.5	7.5	10	12	DVSP0012E	OPEN	9.1 x 6.7 x 7.7	231 x 170 x 196	7	3	2	67	Preinstalled on reactor panel		
						DVSG0012E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	18	8	6		Preinstalled in cabinet		
						DVSW0012E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	29	13	8				
5	5.5	7.5	10	15	17	DVSP0017E	OPEN	9.1 x 6.7 x 7.5	231 x 170 x 191	8	4	2	96	Preinstalled on reactor panel		
						DVSG0017E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	19	9	6		Preinstalled in cabinet		
						DVSW0017E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	30	14	8				
5.5	7.5	11	15	20	22	DVSP0022E	OPEN	9.1 x 6.7 x 8.2	231 x 170 x 208	11	5	2	91	Preinstalled on reactor panel		
						DVSG0022E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	22	10	6		Preinstalled in cabinet		
						DVSW0022E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	32	15	8				
7.5	10	-	20	25	27	DVSP0027E	OPEN	9.1 x 6.7 x 8.2	231 x 170 x 208	11	5	2	92	Preinstalled on reactor panel		
						DVSG0027E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	22	10	6		Preinstalled in cabinet		
						DVSW0027E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	32	15	8				
10	12.5	15	25	30	35	DVSP0035E	OPEN	12.0 x 9.0 x 8.0	305 x 229 x 203	15	7	3	91	Preinstalled on reactor panel		
						DVSG0035E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	25	11	6		Preinstalled in cabinet		
						DVSW0035E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	35	16	8				
12.5	15	18.5-22	30	40	45	DVSP0045E	OPEN	12.0 x 9.0 x 8.0	305 x 229 x 203	16	7	3	88	Preinstalled on reactor panel		
						DVSG0045E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	25	11	6		Preinstalled in cabinet		
						DVSW0045E	NEMA 3R	15.5 x 11.0 x 12.0	394 x 279 x 305	35	16	8				
15	20	-	40	50	55	DVSP0055E	OPEN	12.0 x 9.0 x 8.2	305 x 229 x 208	22	10	3	137	Preinstalled on reactor panel		
						DVSG0055E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	32	15	6		Preinstalled in cabinet		
						DVSW0055E	NEMA 3R	24.0 x 12.5 x 23.0	610 x 318 x 584	75	34	9				
20	25	30	50	60	65	DVSP0065E	OPEN	12.0 x 9.0 x 11.1	305 x 229 x 282	31	14	3	166	Preinstalled on reactor panel		
						DVSG0065E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	41	19	6		Preinstalled in cabinet		
						DVSW0065E	NEMA 3R	24.0 x 12.5 x 23.0	610 x 318 x 584	84	38	9				

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

208-600V 50/60Hz

Motor (Ref Only)					Filter Amps Rating	MTE Part Number	Enclosure Type	Filter Dimensions (H x W x D)		Approx Weight		Ref Fig	Watts Loss	Resistor Panel Dimensions (H x W x D)		Ref Fig
208V HP	240V HP	380V KW	480V HP	550-600V HP				Inches	Millimeters	Lbs	Kgs			Inches	Millimeters	
25	30	37	60	75	80	DVSP0080E	OPEN	12.0 x 9.0 x 11.1	305 x 229 x 282	32	15	3	158	Preinstalled on reactor panel		
						DVSG0080E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	42	19	6		Preinstalled in cabinet		
						DVSW0080E	NEMA 3R	24.0 x 12.5 x 23.0	610 x 318 x 584	85	39	9				
30	40	45-55	75	100	110	DVSP0110E	OPEN	12.0 x 9.0 x 11.1	305 x 229 x 282	36	16	3	175	Preinstalled on reactor panel		
						DVSG0110E	NEMA 1/2	13.2 x 13.0 x 13.1	335 x 330 x 333	43	20	6		Preinstalled in cabinet		
						DVSW0110E	NEMA 3R	24.0 x 12.5 x 23.0	610 x 318 x 584	89	40	9				
40	50	-	100	125	130	DVSP0130E	OPEN	13.5 x 13.6 x 7.9	343 x 345 x 201	56	25	4	273	18.4 x 5.0 x 7.0	467 x 127 x 178	1A
						DVSG0130E	NEMA 1/2	24.0 x 17.1 x 17.0	610 x 434 x 432	97	44	7		Preinstalled in cabinet		
						DVSW0130E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	139	63	10				
50	60	75-90	125	150	160	DVSP0160E	OPEN	13.5 x 13.6 x 9.1	343 x 345 x 231	72	33	4	289	18.4 x 5.0 x 7.0	467 x 127 x 178	1A
						DVSG0160E	NEMA 1/2	24.0 x 17.1 x 17.0	610 x 434 x 432	113	51	7		Preinstalled in cabinet		
						DVSW0160E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	155	70	10				
60	75	110	150	200	200	DVSP0200E	OPEN	13.5 x 13.6 x 9.1	343 x 345 x 231	76	34	4	325	17.0 x 14.0 x 7.0	432 x 356 x 178	1A
						DVSG0200E	NEMA 1/2	24.0 x 17.1 x 17.0	610 x 434 x 432	116	53	7		Preinstalled in cabinet		
						DVSW0200E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	157	71	10				
75	100	132	200	250	250	DVSP0250E	OPEN	15.0 x 15.1 x 10.3	381 x 384 x 262	90	41	5	423	18.4 x 5.0 x 7.0	467 x 127 x 178	1A
						DVSG0250E	NEMA 1/2	33.9 x 17.8 x 20.9	861 x 452 x 531	165	75	10		Preinstalled in cabinet		
						DVSW0250E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	173	78					
100	125	160	250	300	305	DVSP0305E	OPEN	15.2 x 15.1 x 10.4	386 x 384 x 264	94	43	5	481	18.4 x 5.0 x 7.0	467 x 127 x 178	1A
						DVSG0305E	NEMA 1/2	33.9 x 17.8 x 20.9	861 x 452 x 531	170	77	10		Preinstalled in cabinet		
						DVSW0305E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	177	80					
125	150	185-200	300	350	365	DVSP0365E	OPEN	15.1 x 15.1 x 11.8	384 x 384 x 300	125	57	5	564	18.4 x 5.0 x 7.0	467 x 127 x 178	1A
						DVSG0365E	NEMA 1/2	33.9 x 17.8 x 20.9	861 x 452 x 531	200	91	10		Preinstalled in cabinet		
						DVSW0365E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	208	94					
150	175	-	350	450	415	DVSP0415E	OPEN	15.1 x 15.1 x 11.8	384 x 384 x 300	125	57	5	795	18.4 x 5.0 x 7.0	467 x 127 x 178	1A
						DVSG0415E	NEMA 1/2	33.9 x 17.8 x 20.9	861 x 452 x 531	200	91	10		Preinstalled in cabinet		
						DVSW0415E	NEMA 3R	33.9 x 17.8 x 26.0	861 x 452 x 660	208	94					
175	225	250	400-450	500-550	515	DVSP0515E	OPEN	14.9 x 15.1 x 13.3	378 x 384 x 338	158	72	5	798	18.4 x 5.0 x 7.0	467 x 127 x 178	1B
						DVSG0515E	NEMA 1/2	51.3 x 27.7 x 24.9	1303 x 704 x 632	326	148	10		Preinstalled in cabinet		
						DVSW0515E	NEMA 3R	51.3 x 27.7 x 30.0	1303 x 704 x 762	339	154					
200	250	315	500	600	600	DVSP0600E	OPEN	15.1 x 15.1 x 13.4	384 x 384 x 340	165	75	5	822	18.4 x 5.0 x 7.0	467 x 127 x 178	1B
						DVSG0600E	NEMA 1/2	51.3 x 27.7 x 24.9	1303 x 704 x 632	332	151	10		Preinstalled in cabinet		
						DVSW0600E	NEMA 3R	51.3 x 27.7 x 30.0	1303 x 704 x 762	345	156					

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

REFERENCE FIGURES

RESISTOR PANEL

FIGURE 1A

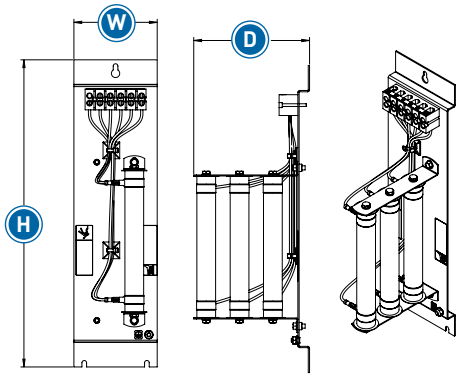
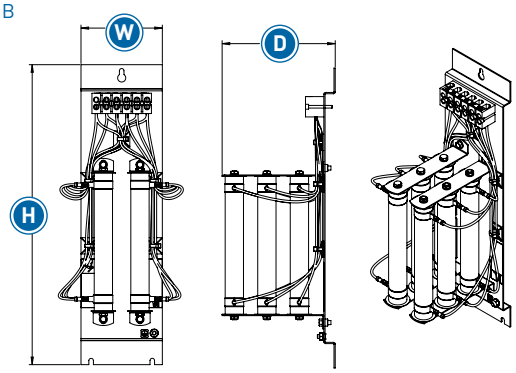


FIGURE 1B



OPEN MAGNETICS

FIGURE 2

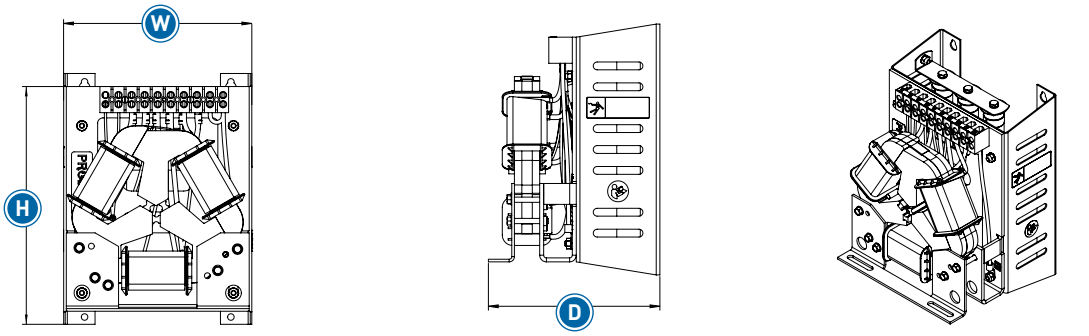


FIGURE3

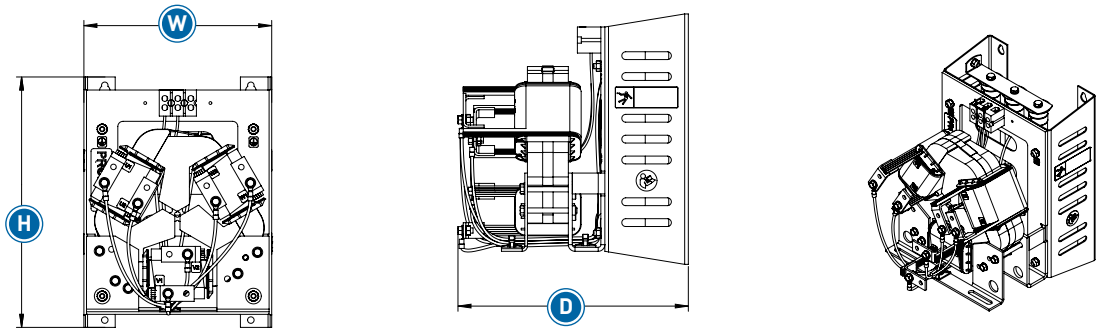


FIGURE 4

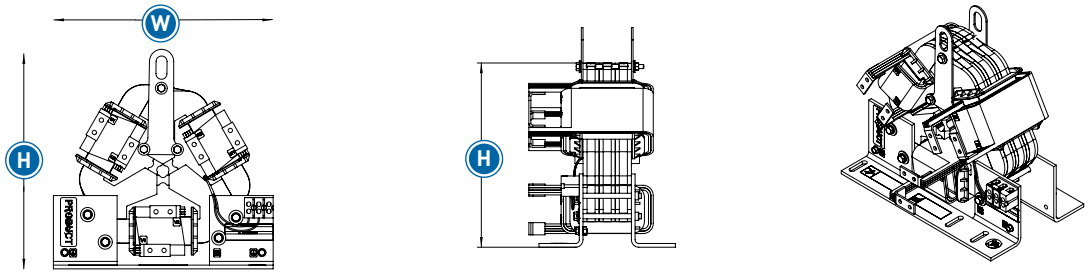
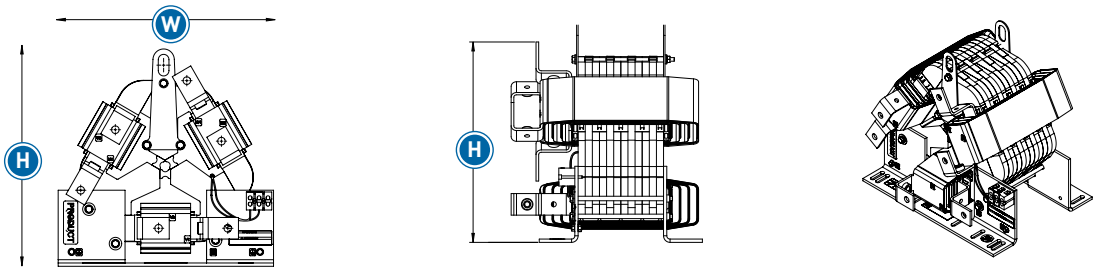


FIGURE 5



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

ENCLOSURES

FIGURE 6

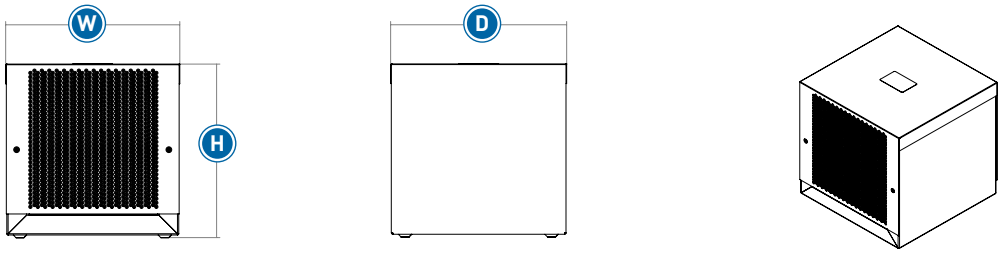


FIGURE 7

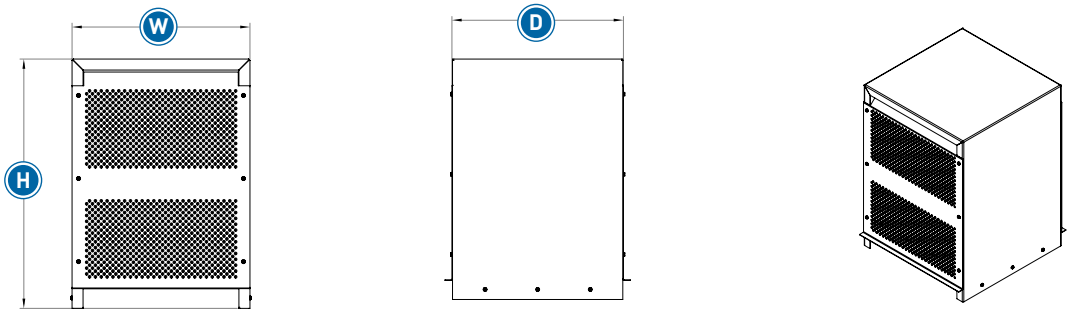


FIGURE 8

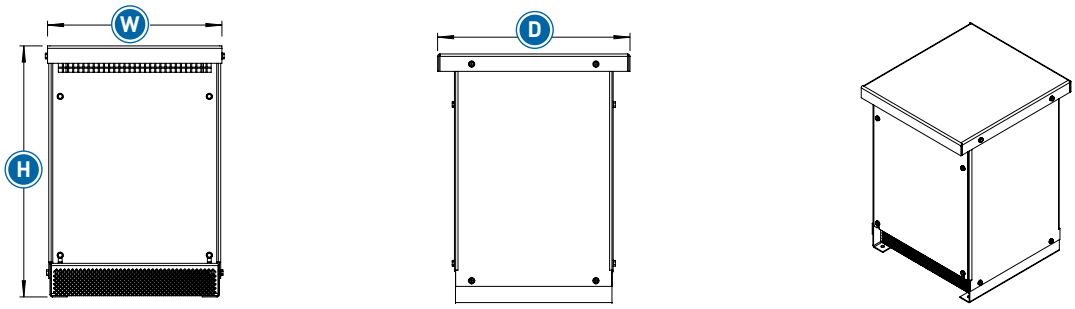
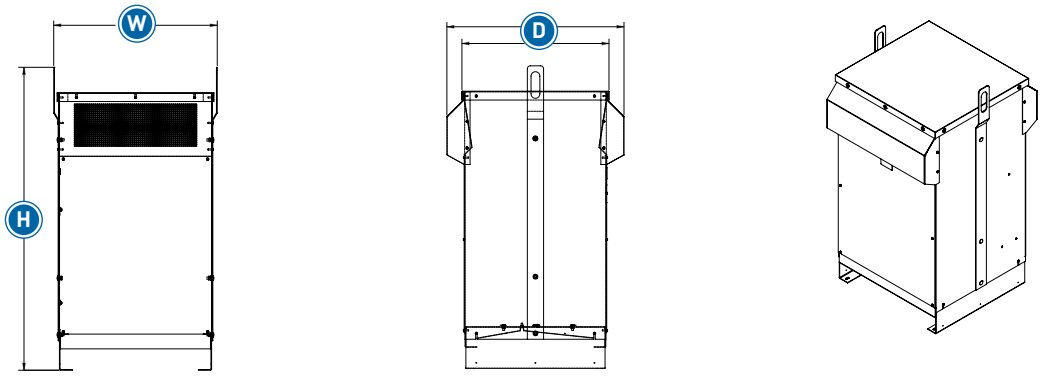
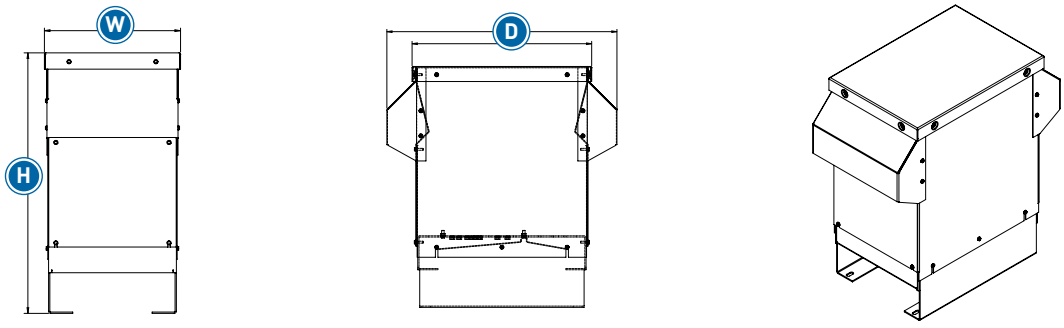


FIGURE 9



NOTE: HOODS ONLY ON NEMA 3R ENCLOSURES

FIGURE 10



NOTE: HOODS ONLY ON NEMA 3R ENCLOSURES

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

The power quality experts.

MTE Corporation was formed in 1982 by bringing together Milwaukee Transformer Co., Transformer Design Inc., and Milwaukee Electronics Corp. – companies that specialized in different fields of magnetics and transformer designs and were long established in their respective fields. MTE vaulted into a leadership role in power quality with its unique AC reactor design and passive filter expertise. We continued to grow as a global leader with innovative Harmonic Filters, Motor Protection Filters and Sinewave Filters.

Now with the addition of TEAL Electronics in 2016, MTE brings a continuum of power quality solutions unmatched in the industry. Building on TEAL's reputation of high-efficiency transformers and durable power conditioning and distribution units for demanding applications, MTE is building the best power quality company by capitalizing on the individual strength of each while bringing a new dimension in management, marketing, and quality.

Our team of professional design engineers has well over 100 years of collective experience in the industry and is complemented by as much experience in operations. Our engineers utilize state-of-the-art platforms and best-in-class simulation/modeling tools so that new designs meet your needs and the latest compliance standards while improving your bottom line.

At MTE, we know power quality because power quality is all we do.

A Handy & Harman company. Better together.

Handy & Harman Ltd. (NASDAQ:HNH) is a diversified manufacturer of engineered niche industrial products with leading market positions in many of the markets it serves. Through its wholly-owned operating subsidiaries, HNH focuses on high margin products and innovative technology and serves customers across a wide range of end markets. HNH's diverse product offerings are marketed throughout the United States and internationally.

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