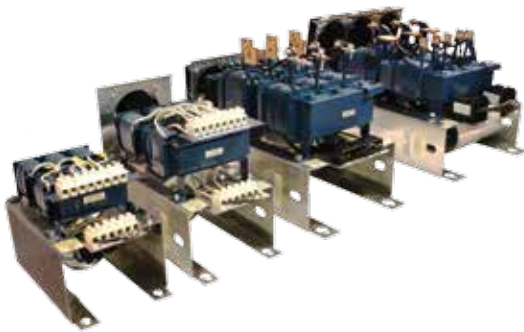


Harmonic Filters
Matrix® APAX

Product Selector



- **Compact passive harmonic filter**
- **Meets 10%-15% harmonic distortion requirements**
- **Over temperature switch included**
- **Easy to integrate and install**
- **Designed in the USA**

Power quality just got easier to achieve.

The patented Matrix® APAX is the convenient solution for meeting specific harmonic distortion requirements. Designed in the USA and built to meet MTE's proven standards for quality, the Matrix® APAX helps reduce harmonic distortions caused by Variable Frequency Drives (VFDs).

It features a one-panel design with fewer connections and optional contactor positions. This makes it easier to integrate and easier to install. With Matrix® APAX Harmonic Filters, power quality, energy efficiency and reduced downtime are easy to afford.

The convenient, easy-to-install solution for harmonic filtering.

The Matrix® APAX Harmonic Filter can be specified for use on the input of your VFD or other 6-pulse rectifier power supply to meet the 10%-15% requirement for harmonic distortion.

Improves system efficiency and reliability

Helps extend service

Alleviates system downtime

| Performance Specifications | |
|-----------------------------|--|
| Service Load Condition | Load: 6-pulse rectifier only |
| Input Voltage | 380V - 415V +/- 10%; 50 + 0.75Hz; 3-phase |
| Maximum THID | With DC link: 12% @ 40% load; 8% @ full load Without DC link: 17% @ 40% load; 12% @ full load |
| Maximum Ambient Temperature | -40C to +50C open panel filters -40C to +90C storage |
| Insertion Loss @ Full Load | <5% |
| Efficiency | >98% |
| Altitude Without Derating | 3,300 feet above sea level |
| Relative Humidity | 0% to 95% non-condensing |
| Current Rating | 150% for 1 minute duration |
| Fan Life Expectancy | 80,000 hours @ 40C |

Final product specifications subject to change at anytime.

How to properly size your filter

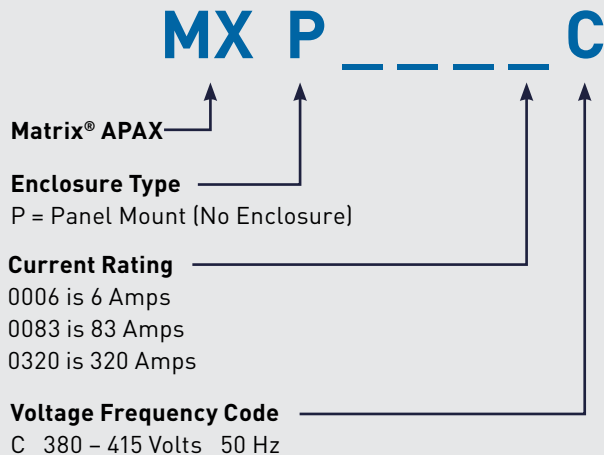
- **Determine voltage and frequency required**
- **Reference motor nameplate to determine motor HP or KW and Full Load Amps**
- **Select filter based on Motor Full Load Amps**
Do not exceed filter's maximum current rating (amps)
- **Determine derating requirements**
Reference Performance Specifications table on previous page

Matrix® APAX Options

Contactor Wiring Option: Opens capacitors under light load conditions

- User configurable wiring block
- See image below
- Allows for user to disconnect option to meet their application
- Shipped with factory installed jumpers that must be removed for installation of contactor option

Understanding the Matrix® APAX Part Number:



Matrix® APAX Harmonic Filter comes standard with field installable contactor options.

| 385 - 415V 50Hz | | | | | | | | | | | |
|---------------------|--------------------------|--------------------|-------------------|----------------------------------|-----------------|------------------|-----|------------|---------------|---|-------------|
| 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) | |
| | | | | Inches | Millimeters | Lbs | Kgs | | | Inches | Millimeters |
| 1.5 | 6 | MXP0006C | OPEN | 12.6 x 7.4 x 8.9 | 320 x 188 x 226 | 20 | 9 | 1 | 65 | Preinstalled on reactor panel | |
| 2.2 | 8 | MXP0008C | OPEN | 12.6 x 7.4 x 8.9 | 320 x 188 x 221 | 24 | 11 | 1 | 74 | Preinstalled on reactor panel | |
| 3.7 | 11 | MXP0011C | OPEN | 12.6 x 7.4 x 9.1 | 320 x 188 x 231 | 30 | 14 | 1 | 94 | Preinstalled on reactor panel | |
| 5.5 | 14 | MXP0014C | OPEN | 12.6 x 7.4 x 9.3 | 320 x 188 x 236 | 33 | 14 | 1 | 106 | Preinstalled on reactor panel | |
| 7.5 | 21 | MXP0021C | OPEN | 17.4 x 7.6 x 11.4 | 442 x 193 x 290 | 39 | 18 | 2 | 192 | Preinstalled on reactor panel | |
| 11 | 27 | MXP0027C | OPEN | 17.4 x 7.6 x 11.4 | 442 x 193 x 290 | 43 | 20 | 2 | 212 | Preinstalled on reactor panel | |
| 15 | 34 | MXP0034C | OPEN | 17.4 x 7.6 x 11.4 | 442 x 193 x 290 | 47 | 21 | 2 | 205 | Preinstalled on reactor panel | |
| 18.5 | 44 | MXP0044C | OPEN | 17.4 x 7.6 x 11.4 | 442 x 193 x 290 | 53 | 22 | 2 | 270 | Preinstalled on reactor panel | |
| 22 | 52 | MXP0052C | OPEN | 20.0 x 10.6 x 12.5 | 508 x 269 x 318 | 73 | 33 | 3 | 278 | Preinstalled on reactor panel | |
| 30 | 66 | MXP0066C | OPEN | 20.0 x 10.6 x 12.2 | 508 x 269 x 310 | 78 | 35 | 3 | 359 | Preinstalled on reactor panel | |
| 37.5 | 83 | MXP0083C | OPEN | 20.0 x 10.6 x 13.1 | 508 x 269 x 333 | 92 | 42 | 3 | 378 | Preinstalled on reactor panel | |
| 45 | 103 | MXP0103C | OPEN | 20.0 x 10.6 x 13.8 | 508 x 269 x 351 | 104 | 47 | 3 | 397 | Preinstalled on reactor panel | |
| 55 | 128 | MXP0128C | OPEN | 20.2 x 10.6 x 14.3 | 513 x 269 x 363 | 115 | 52 | 3 | 480 | Preinstalled on reactor panel | |
| 75 | 165 | MXP0165C | OPEN | 25.5 x 14.8 x 14.3 | 648 x 376 x 363 | 145 | 66 | 4 | 668 | Preinstalled on reactor panel | |
| 93 | 208 | MXP0208C | OPEN | 25.6 x 14.8 x 14.6 | 650 x 376 x 371 | 163 | 74 | 4 | 732 | Preinstalled on reactor panel | |
| 112 | 240 | MXP0240C | OPEN | 25.6 x 14.8 x 15.7 | 650 x 376 x 399 | 193 | 88 | 4 | 768 | Preinstalled on reactor panel | |
| 150 | 320 | MXP0320C | OPEN | 25.8 x 14.8 x 15.6 | 655 x 376 x 396 | 209 | 95 | 4 | 929 | Preinstalled on reactor panel | |

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

OPEN MAGNETICS

FIGURE 1

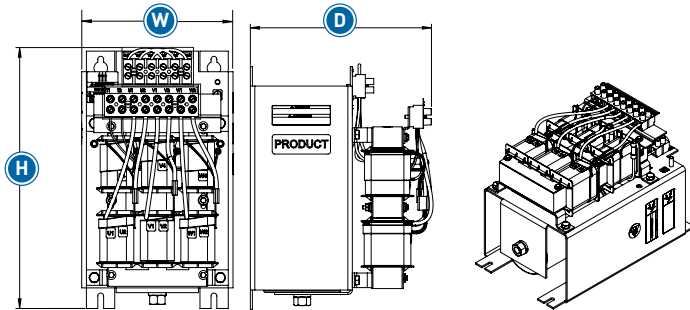


FIGURE 2

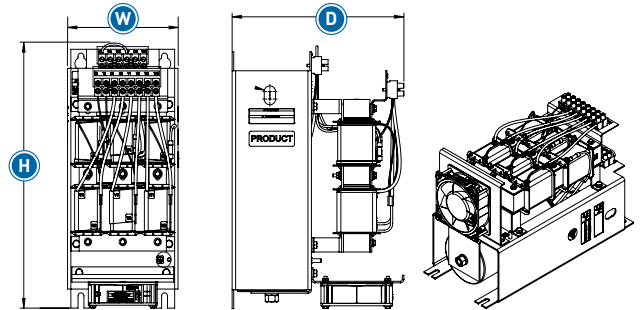


FIGURE 3

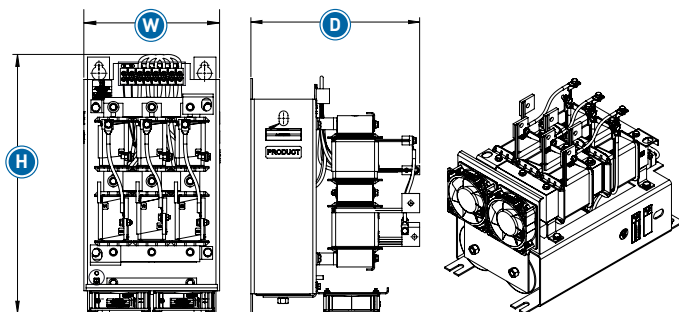
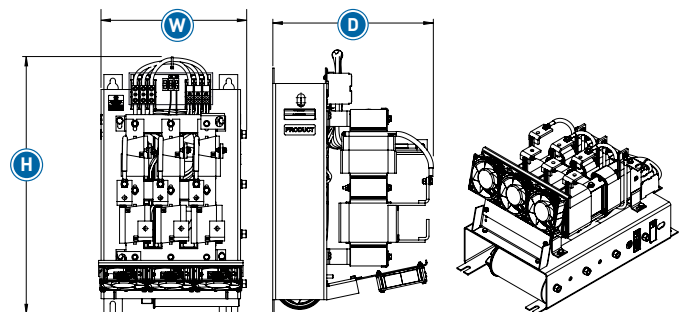


FIGURE 4



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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