

## Yaskawa Releases Z1000U HVAC Matrix Drive

*Matrix Technology Provides Harmonic Mitigation, Power Factor Control, and Energy Savings in a Single Compact Package*

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**Waukegan, Ill.** The Drives & Motion Division of Yaskawa America, Inc. announces the release of the Z1000U HVAC Matrix Drive.

The HVAC Matrix drive (Z1000U) provides extremely low harmonic distortion in a space-saving design, along with the same HVAC-specific features as the standard Z1000. This single component solution achieves excellent low distortion levels all by itself, completely without the need for additional countermeasures such as passive filters or multi-pulse arrangements.

Unlike conventional drives, Yaskawa's matrix technology employs a system of 9 bi-directional switches that are arranged in a matrix to convert a three-phase AC input voltage directly into a three phase AC output voltage. It eliminates the need for a rectifying circuit and a DC bus that are used in traditional AC drive inverters. Matrix technology reduces total harmonic distortion levels to less than the IEEE compliance standard of 5%, without the need for reactors and filters. The result is a smoother current waveform that reduces stress on the system power supply and infrastructure. Additionally, reduced distortion improves displacement power factor to 0.98 through the entire load and speed range, reducing energy costs.

Not only does the HVAC Matrix drive provide outstanding harmonic performance, but being a member of the Z1000 family, it provides the same user experience for those already familiar with commissioning and maintaining the standard Z1000.

Other features of the HVAC Matrix Drive include the following:

- Integrated input fusing to provide 100kA SCCR
- Eco-Mode to achieve near across-the-line THD
- Integrated C2 EMC filter
- Embedded BACnet communications (BTL Certified)
- Multi-language LCD operator with Hand/Off/Auto and Copy function
- Internal real-time clock for event stamping
- High carrier frequency (low motor noise) capability
- 0-400 Hz output frequency

Available NEMA 1 models include ratings of 1 to 100 HP (208V) and 7.5 to 350 HP (480V). Z1000U is offered both as a stand-alone drive, as well as in packaged Bypass and Configured solutions.

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**About Yaskawa**

The Drives & Motion Division of Yaskawa America, Inc. manufactures industrial automation equipment. Its products include industrial AC drives; commercial HVAC drives; spindle drives and motors; servo amplifier systems and motion controllers; and low-voltage industrial control switches. The company's products are used in automotive, building automation, chemical and petrochemical, food and beverage, machine tool, material handling, metal forming, packaging, pharmaceutical, solar, plastics and rubber, and textile applications. Yaskawa America's Motoman Robotics Division makes industrial robots that can weld, assemble, cut and handle goods for manufacturers.

Yaskawa America, Inc. employs more than 1,000 people at its headquarters in Waukegan, IL, its manufacturing facilities in Buffalo Grove, IL and Oak Creek, WI, and in offices across the United States. For more information on the Z1000U HVAC Matrix Drive, please visit our website at [www.yaskawa.com](http://www.yaskawa.com).