

SUCCESS STORY

VFD IMPROVES THROUGHPUT EFFICIENCY IN LAUNDRY

INFORMATION

Industry

Commercial Laundry

Application

Washer Unit

Product

Yaskawa GA800 Industrial VFD



Yaskawa GA800 VFDs preventing load imbalances and prolonging equipment life on washers.

THE VFD APPLICATION

In a conventional spin cycle, a washing machine's drum progressively accelerates to high speeds. Uneven distribution of washed clothes can create an imbalance that causes the machine to vibrate excessively at higher speeds. When the vibrations get too large, a vibration sensor, or wobble stick, activates and the machine shuts down to prevent equipment damage. Every time a shutdown occurs, manual load redistribution must be completed by an operator. Additionally, the spin cycle must be restarted meaning the total time for that load increases. By using motor torque variations to detect load imbalances at low speeds, it is possible to identify these imbalances early, thus lowering cycle time and reducing wear on the machine.

APPLICATION CHALLENGES

For this application, the customer required a solution that met the following criteria:

- Detect load imbalance at any speed
- Enhanced machine throughput efficiency
- Configurable load size options
- Prolonged equipment lifespan

THE YASKAWA SOLUTION

A Yaskawa **GA800 Industrial Variable Frequency Drive (VFD)** is the choice to meet the needs of this application, as it provides these useful features:

- Custom firmware implements the imbalance Detection feature for Yaskawa VFDs. imbalance detection is easy with Yaskawa firmware
- Early imbalance detection allows for a quicker load redistribution that improves overall machine efficiency. Machines with this feature produce more laundry cycles over time
- Multiple imbalance levels are possible to tailor operation to the various load sizes being washed, thereby shortening load cycle times
- Yaskawa VFDs maintain a count of the number of imbalances to help identify future repairs, such as a worn shock dampener, faulty spring, or broken machine mount.

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The successful installation of the Yaskawa **GA800 Industrial VFD** is maximizing overall machine efficiency and equipment lifespan for this customer today.

KEY GA800 FEATURES

The Yaskawa **GA800 Industrial VFD** is ideal for industrial operations that require superior performance and extensive use of drive I/O capabilities. This particular model outperforms other VFDs in laundry applications due to Yaskawa's custom Imbalance firmware. Here are some other key features of the **GA800 Industrial VFD**:

- Standard control inputs include eight digital, three analog, two safe torque off, and one pulse input
- Standard control outputs include four digital, two analog, one pulse, and a 24 Vdc supply
- A high-resolution keypad, equipped with a real-time clock, copy and backup functions, and micro-SD storage
- Capability to control various motor types, including induction, permanent magnet (both SPM & IPM), and synchronous reluctance motors
- Normal Duty and Heavy Duty ratings for use in variable torque and constant torque applications
- Support for all major communication networks via an assortment of optional boards (RS-485 Modbus RTU comes as standard)
- Free programming support tools are included, such as DriveWizard and DriveWizard Mobile, Programming Simulator, DriveWorksEZ, Energy Savings Predictor & Harmonic Estimator
- Global certifications such as UL, CSA, CE, TÜV, EAC, RCM, KCC
- Yaskawa's award-winning 24-hour technical support department is free of charge

Contact Yaskawa today to learn more about how you can use Yaskawa AC drives to perfect your material handling industry applications!

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