

SEASONED SOLUTIONS

ENHANCING UNDERGROUND
SALT MINING OPERATIONS

YASKAWA SUCCESS STORIES



When you're hundreds of feet underground, there's no room for error.

A deep-shaft salt mining operation needed to optimize its conveyor system, which hauled tons of material through tunnels stretching for miles. Twin overhung motors powered the belts—but without proper tuning, the setup was vulnerable to vibration, wear, and costly downtime.

Product GA800 Series VFD

Industry Mining & Aggregates

Application Salt Mine Conveyor

CHALLENGE Historically, the non-Yaskawa drives used in this application were difficult to commission, often requiring up to two weeks of tuning to achieve acceptable performance. This forced the customer to install drives early in each project timeline to accommodate the extended setup. After repeated startup delays, they opted to tolerate up to seven degrees of vibration at startup—as long as it settled during operation. While this workaround kept production moving, it resulted in inconsistent performance and costly delays, reinforcing the need for a drive solution that could be tuned quickly, precisely, and brought online with significantly less effort.

SOLUTION A drive specialist from Yaskawa's local distributor assessed the customer's underground conveyor system and recommended the GA800 Industrial VFD—engineered for heavy-duty applications like salt mining. Drawing on his experience, he identified the right drive features, configured the settings, and pre-programmed the drives prior to installation.

Power to the drives was not available until later than planned, and a two week startup typical of previous systems would have caused project delays. With the GA800, startup went flawlessly on the first run with zero vibration. Thanks to Yaskawa's advanced drive performance and preprogrammed setup, startup was completed in just one day, keeping the project on schedule.

The GA800 delivered smoother, more precise control, eliminated startup vibration, and reduced mechanical wear—improving both reliability and working conditions. The successful outcome established Yaskawa and its distributor as trusted partners for future system upgrades.

COMPANY HIGHLIGHTS

A major producer of rock salt, this company operates deep-shaft mines that yield up to 18,000 tons per day for highway de-icing applications. By leveraging innovative technology, they drive productivity, efficiency, and environmental safety across their operations.

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RESULTS

REDUCED Vibrations

No more vibration at startup. Just smooth, reliable performance.

IMPROVED Conveyor Control

Customized drive application enabled greater process control.

EXTENDED Conveyor Component Lifespan

Less vibration resulted in longer equipment life.

STREAMLINED Commission Time

Faster startup means less downtime and more productivity.



Looking to modernize conveyor systems with reliable VFD technology? Contact Yaskawa today.

KEY GA800 FEATURES

- Standard control inputs which 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 microSD 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

SCAN HERE



For more information on the GA800 Series VFD visit: www.yaskawa.com/GA800

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