SUCCESS STORY

VFD EFFICIENTLY MANAGES HIGH-INERTIA STAMPING PRESS

INFORMATION

Industry Machine Tool

Application Stamping Press

Product

Yaskawa GA800 Industrial VFD





A properly tuned Yaskawa GA800 VFD overcomes regenerative energy in large stamping press applications.

COMPANY HIGHLIGHTS

The customer is a metal stamping business with several facilities operating throughout the U.S. and Canada.

THE VFD APPLICATION

The customer has several large stamping presses operating on obsolete DC drives which they would like to retrofit with modern AC drives. There are several factors specific to press applications that need to be considered when choosing a drive solution. First, presses often require quick start-stop cycles with rapid acceleration and deceleration. Second, it is important to maintain consistent press speed through the cycle. And third, loads on a press can fluctuate through the cycle making it a challenge to maintain stable motor operation.

APPLICATION CHALLENGES

For the press in discussion, there was concern about the VFDs ability to accurately control the speed and provide enough torque to properly and consistently complete the press cycle. The customer requires a rapid cycle time and there was a worry that the heavy press would cause the motor to regen to the extent it would trip out the VFD or require additional braking hardware.

Not part of their schedule, the customer had a DC drive failure at one of their factories and needed a plan to get back up and running before the upcoming Labor Day weekend was over.

THE YASKAWA SOLUTION

The Yaskawa Sales Representative had a good relationship with the Maintenance Supervisor at the customer and was brought in to discuss the application with maintenance and engineering. Working with the local distributor and Yaskawa's technical support, the team created a plan to tackle the press application and the GA800 was recommended for the job. To optimize control the drive was set to Advanced Open Loop Vector Control (AOLV). This allowed for precise control of the torque at varying speeds. To make sure the drive could decelerate the press fast enough without the need for a brake, the Overvoltage Suppression feature was used to keep the drive from faulting out when the load caused the motor to enter regeneration.



Yaskawa America, Inc.

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More GA800 Industrial VFD information:

https://www.yaskawa.com/ga800-drive



Find a Yaskawa representative:

https://www.yaskawa.com/supporttraining/support/sales-search



YASKAWA

Along with a capable product and best-in-class technical support, one of Yaskawa's strengths is inventory and that strength came to the rescue for this project. Yaskawa was able to ship a 250A GA800 drive overnight the Friday before Labor Day weekend. Installation took place over the weekend and startup was scheduled for that very holiday Monday. A drive specialist from the local distributor was able to attend the startup on-site and a Yaskawa Technical Support Engineer was able to assist remotely even with it being a holiday. The technical team was able to adjust a few additional parameters to fine tune the process and get the press running at the customer's desired speed, saving the customer from the need for additional costly dynamic braking hardware.

The customer was impressed by Yaskawa's ability to provide a replacement drive quickly and by the collaborative effort of Yaskawa technical support and the local distributor's startup support during a holiday weekend. The customer has since committed to using Yaskawa drives as their corporate standard, stating that the Yaskawa GA800 VFD has significantly improved their press control and reduced downtime.

KEY GA800 FEATURES

The Yaskawa GA800 Industrial VFD brings a set of notable advantages:

- Standard control inputs which include eight digital, three analog, two safe torque off, and one pulse
- Standard monitor 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 for fault history storage
- Normal Duty and Heavy Duty ratings for use in variable torque and constant torque motor applications
- Capable of controlling various motor types, including induction, permanent magnet (both SPM & IPM), and synchronous reluctance motors
- Global certifications such as UL, CSA, CE, TÜV, EAC, RCM, KCC
- Yaskawa's award-winning 24-hour technical support, free of charge

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

Yaskawa America, Inc.