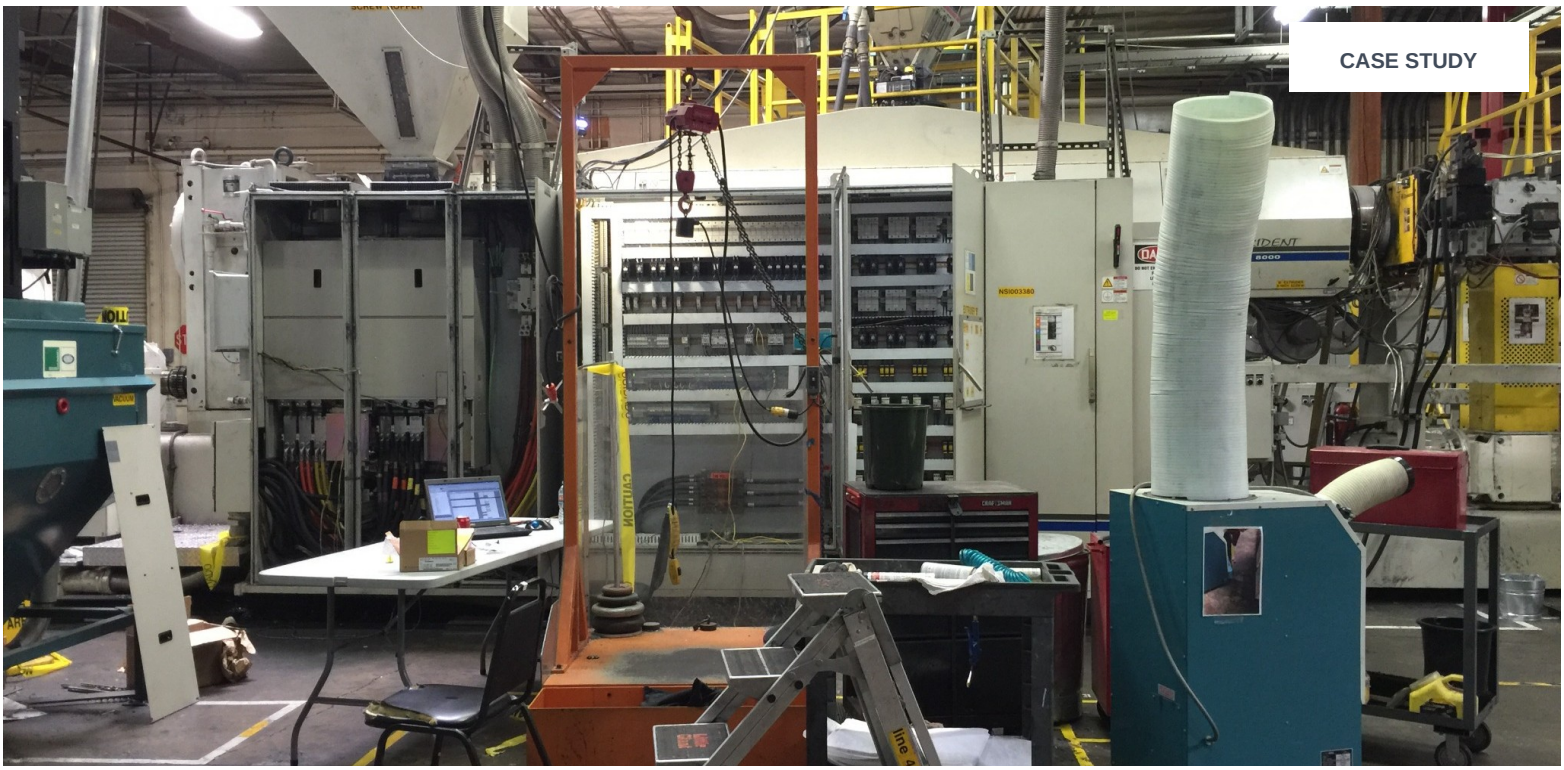
CASE STUDY



Control Concepts

Control Concepts replaced two large-horsepower Allen-Bradley PowerFlex 700S drives with Yaskawa technology on a critical extrusion line.

300 HP + 800 HP AB TO YASKAWA

WHAT WE DID

After a 300 HP PowerFlex 700S failed, Control Concepts installed a locally available Yaskawa A1000 and integrated it with the facility's existing Allen-Bradley ControlLogix PLC, PanelView interface, encoder feedback, and motor. The facility later had Control Concepts retrofit its main 800 HP PowerFlex 700S drive to Yaskawa as well.

ABOUT THE CLIENT

A Southern California manufacturer operates a PTi Trident 5000 sheet extrusion line with large-horsepower drives integrated into an Allen-Bradley control system. This project involved 300 HP and 800 HP PowerFlex 700S drive applications.

THE CHALLENGE

When the 300 HP PowerFlex 700S failed, the quoted OEM replacement carried a five-week lead time. The extrusion line was critical to production, so the customer could not wait for the replacement. The new drive also had to work with the existing ControlLogix PLC, PanelView interface, encoder feedback, and motor.

THE SOLUTION

Control Concepts had a 300 HP Heavy Duty Yaskawa A1000 available locally and began the retrofit immediately. The drive was configured in closed-loop vector mode and auto-tuned to the existing motor.

Drive data was mapped and scaled through the existing ControlLogix PLC and PanelView so operators could continue using the system as before. The documented 300 HP retrofit was completed in two days. The facility later had its main 800 HP PowerFlex 700S drive retrofitted to Yaskawa technology as well.

The 300 HP retrofit was completed in two days, avoiding the five-week OEM lead time and returning the critical line to production.

DRIVE CONFIGURATION

300 HP

Yaskawa A1000

Closed-loop vector control

ALLEN-BRADLEY INTEGRATION

ControlLogix PLC

PanelView interface

THE RETROFIT INCLUDED:

1. Remove the failed 300 HP PowerFlex 700S drive.
2. Install the locally available Yaskawa A1000.
3. Verify encoder feedback and motor compatibility.
4. Configure closed-loop vector control and auto-tune the drive.
5. Map and scale drive data through ControlLogix and PanelView.
6. Complete startup and return the extrusion line to production.

THE RESULTS

1

TWO-DAY 300 HP RETROFIT

The failed drive was replaced, integrated, commissioned, and returned to operation in two days.

2

AVOIDED A FIVE-WEEK LEAD TIME

The customer did not have to wait for the quoted OEM replacement while a critical extrusion line remained down.

3

LOWER TOTAL COST

The complete 300 HP retrofit cost less than the quoted replacement OEM drive without installation.

4

RETAINED EXISTING CONTROLS

The Yaskawa drive was integrated with the existing ControlLogix PLC, PanelView interface, and motor feedback system.

PROJECT AT A GLANCE

+

300 HP + 800 HP

Drive retrofits

2 DAYS

300 HP retrofit completed

YASKAWA A1000

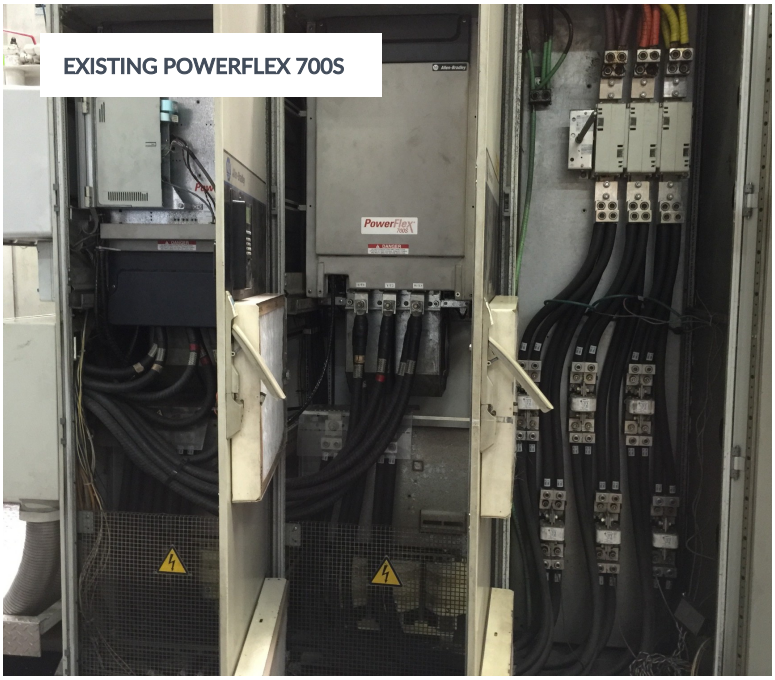
300 HP drive platform

CLOSED-LOOP VECTOR

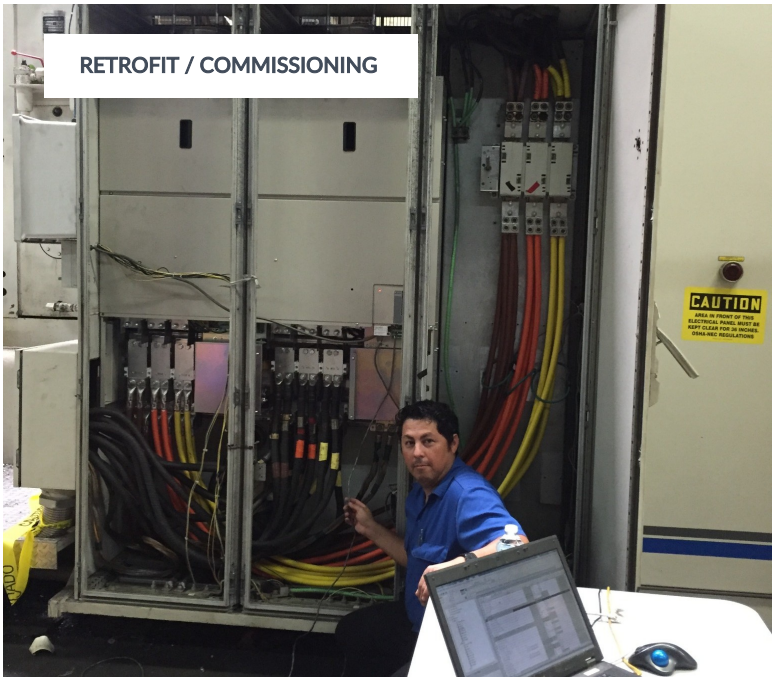
Control mode

ALLEN-BRADLEY

Existing controls retained



EXISTING POWERFLEX 700S



RETROFIT / COMMISSIONING

CASE STUDY

Need to replace an obsolete or unavailable industrial drive without replacing your existing control system?

SCHEDULE A CALL

Control Concepts provides industrial drive retrofit support for high-horsepower extrusion and other critical applications, including replacement selection, installation, PLC integration, startup, and commissioning.

800-447-0691