

## CASE STUDY



### Precision Motion Without Pneumatics: A Safer, Quieter Alternative

#### SEGMENT

Automation Solutions & Integration

#### DIVISION

JHFOSTER

#### CUSTOMER

**Metal Manufacturing**  
**Southeastern Minnesota**

A long-standing JHFOSTER customer, this Minnesota-based manufacturer is recognized for its high standards in quality and performance within the precision metal fabrication space. Though the relationship spans over two decades, a new project presented an opportunity to re-engage and deliver a targeted solution to support the customer's evolving operational and safety needs.

#### THE CHALLENGE

The customer was using a pneumatic cylinder to support a repetitive motion task. While functional, the system lacked the speed and force control required for consistency and operator safety. The nature of pneumatic movement, fully extended or retracted with limited control, created variability in the process and introduced risks in certain operator-dependent tasks. Noise levels and facility layout limitations further influenced their interest in an alternative solution.

#### THE SOLUTION

Drawing on more than 27 years of motion control experience, the JHFOSTER team worked closely with the customer to engineer a simple, effective, and fully electric motion system.

The solution included:

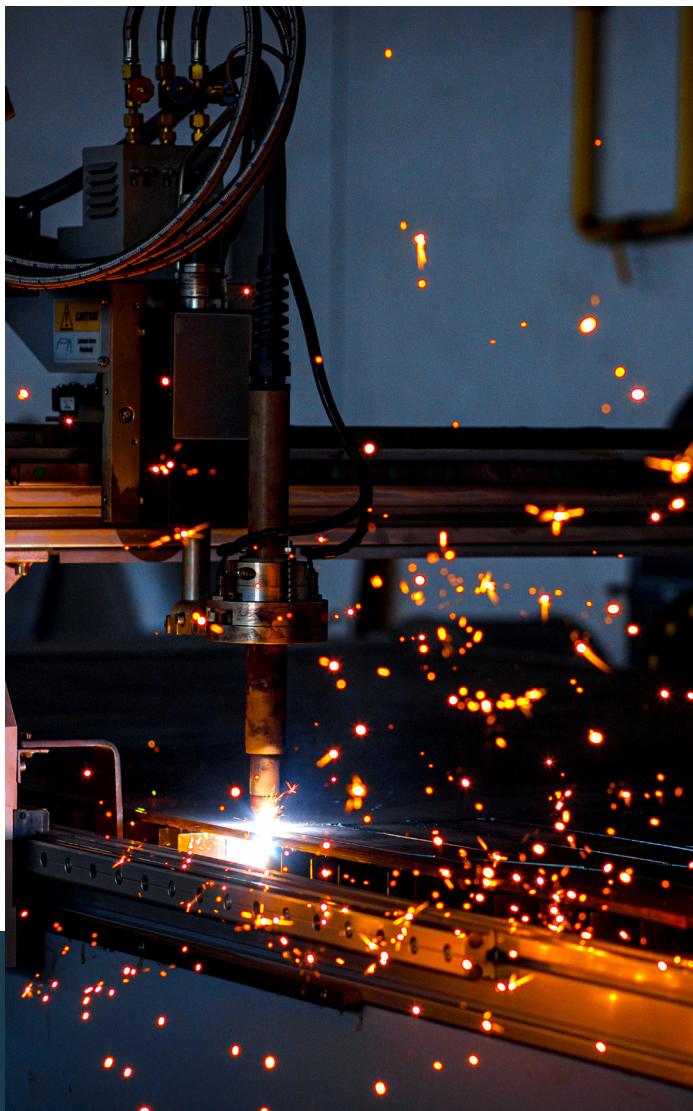
- Two color-coded foot pedals for intuitive control—Yellow to extend, Red to retract
- Full operator control over actuator position, speed, and force
- Instant stop capability by simply removing foot pressure
- No compressed air required, reducing noise and energy use
- Portable configuration using only a 120-volt power supply

JHFOSTER provided a complete turnkey package, including the electric actuators, foot switches, cabling, and a UL-certified control panel designed in-house with complete schematics.

## IMPLEMENTATION

The customer began with two initial units to assess performance and operator feedback. Following successful integration, they ordered an additional four systems to support broader use across their production lines.

While formal performance metrics are still being compiled, the customer has already noted improvements in process control, operator confidence, and shop-floor noise levels



## CUSTOMER FEEDBACK



This system gives our team precise, repeatable control and peace of mind. It's quieter, safer, and easier to use than our old pneumatic setup. The electric actuators from JHFOSTER perform exactly as promised.

— Operations Leader,  
Southeast Minnesota Manufacturer



## LOOKING AHEAD

As production scales, the Window & Door Manufacturer continues to rely on JHFOSTER for strategic guidance, fast support, and technical depth. Expansion of air system upgrades and automation integration is already underway at additional U.S. locations.

## EXPLORE COMPRESSED AIR UPGRADES

Interested in quiet, precise, and portable actuator systems for your facility? Talk to a JHFOSTER motion expert today. [www.jhfoster.com](http://www.jhfoster.com)

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