

FROM WOUND UP TO WORRY-FREE

VFD MODERNIZES WASTEWATER
PUMP CONTROL



YASKAWA SUCCESS STORIES

Facing rising maintenance costs and outdated equipment, an East Coast wastewater treatment facility sought a smarter way to control its centrifugal pumps. The legacy system was complex, inefficient, and no longer sustainable.

With Yaskawa's support, the facility upgraded to a modern, energy-efficient drive solution that simplified operations, improved performance, and cut down on maintenance.

Product FP605 Industrial VFD

Industry Water & Wastewater Treatment

Application Wastewater Pump

CHALLENGE The facility's original setup relied on wound rotor motors paired with liquid rheostats to regulate pump speed. While still operational, the system presented several issues:

- **Overly Complex:** Multiple components and enclosures made wiring and maintenance time-consuming.
- **Outdated and Inefficient:** Replacement parts were scarce, and energy use was high.
- **Limited Performance:** The system lacked the precise control and energy savings of modern VFDs.

The customer was interested in converting the existing wound rotor motors to operate as standard induction motors by shorting the rotor rings. However, it was unclear whether this approach would meet their long-term sustainability goals.

SOLUTION Yaskawa's drive expert determined that converting the wound rotor motors wouldn't meet the facility's long-term efficiency or reliability goals. Instead, they recommended replacing them with inverter-rated induction motors paired with FP605 drives for improved control, simplified maintenance, and greater operational efficiency.

To ensure a smooth transition, Yaskawa helped plan a phased removal of the legacy system, minimizing downtime during the upgrade. The new setup eliminated liquid rheostats, streamlined wiring, and reduced enclosure space. Yaskawa also provided thermal calculations and cooling strategies to handle VFD-generated heat, along with on-site training to empower the customer's team to operate and maintain the system with confidence.

COMPANY HIGHLIGHTS

An East Coast wastewater treatment facility serves over 30 towns, processing incoming water from local pumping stations. Its reliable operation is critical to maintaining clean water, protecting public health, and preventing environmental contamination.

IT'S PERSONAL

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RESULTS

SIGNIFICANT

Energy Savings

The new system reduced energy use by 40%, delivering over \$150,000 in annual savings.

SIMPLIFIED

Design

Fewer components and streamlined wiring improved reliability and maintenance access.

IMPROVED

System Control

The FP605 delivered precise motor control for better efficiency and responsiveness.

SOLUTIONS

For Life

Engineered for unmatched longevity and performance, Yaskawa VFDs are trusted by municipalities that value efficiency and a lasting partnership.



KEY FP605 FEATURES

The Yaskawa FP605 Industrial VFD brings a set of notable advantages:

- A high-resolution keypad, equipped with a real-time clock, copy and backup functions, and microSD storage to keep a fault history
- Stall Prevention & Torque Limit features to manage motor current to and machine stress to acceptable levels
- Global certifications such as UL, CSA, CE, TÜV, EAC, RCM, KCC
- Yaskawa's award-winning 24-hour technical support is free of charge

Looking to modernize pump station control with high-efficiency VFDs? Contact Yaskawa today.

SCAN HERE



For more information on the FP605 Series VFD visit: www.yaskawa.com/FP605

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