

PACKAGED TO PERFORM

MODERNIZED SYSTEMS FOR
WASTEWATER TREATMENT PLANT



YASKAWA SUCCESS STORIES

A regional East Coast utility operates several wastewater pump stations that are vital to the area's infrastructure. But when aging 18-pulse VFDs at the main treatment plant became a growing maintenance burden, it was clear the system needed a smarter, more sustainable path forward.

Product U1000 MATRIX VFD

Industry Water & Wastewater Treatment

Application Wastewater Pump

CHALLENGE The main treatment plant depended on aging 18-pulse drives that introduced multiple challenges:

- **Bulky Cabinets and Complex Wiring** – Consumed valuable space and made maintenance difficult.
- **Poor Power Quality** – Dirty incoming power created reliability concerns and added stress on components.
- **Strict Uptime Requirements** – At least three of four pumps had to remain operational at all times.
- **Risk of Harmonic Penalties** – Excessive harmonic distortion threatened utility fines.

The customer needed a modern, compact VFD solution that could meet performance expectations and be installed with minimal disruption.

SOLUTION Yaskawa's local distributor recommended the U1000 MATRIX Packaged Drive as a high-efficiency, compact retrofit solution. Its 3-wire in, 3-wire out configuration enabled the removal of the bulky 18-pulse cabinets and simplified the wiring process. New mains were installed to improve power distribution and support independent drive servicing, ensuring continued operation. Despite the complexity of the upgrade – and thanks to the U1000's short lead time – each unit was installed quickly and on time. Yaskawa provided on-site training to ensure the customer's technicians could confidently optimize and maintain the system long-term.

COMPANY HIGHLIGHTS

This regional authority is responsible for wastewater management across multiple locations, operating a large network of pump stations that transport wastewater to a central treatment facility. These stations are essential for overcoming geographic and infrastructure-related flow challenges.

IT'S PERSONAL

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RESULTS

REDUCED

Energy
Consumption

A more efficient design now saves the municipality \$20,000 every year in electricity costs.

REDUCED

Maintenance
Demands

Fewer components and simplified wiring improved system reliability.

IMPROVED

Efficiency & Control

The U1000 provided advanced motor control and low harmonic distortion.

SOLUTIONS

For Life

Engineered for longevity and efficiency, Yaskawa builds lasting partnerships through VFDs and support that keep municipalities running.



KEY U1000 FEATURES

- Adheres to the 5% input Total Harmonic Distortion (iTHD) standard as per IEEE 519 guidelines for harmonic mitigation at the input stage
- Adjustable torque limit and overtorque settings for optimized acceleration and machine protection
- Equipped with a Safe Torque Off (STO) safety feature, meeting the requirements of IEC62061 (SIL3) and EN/ISO 13849-1 (PLe)
- Does not rely on bus capacitors that degrade over time, contributing to a long product lifespan
- Built-in fusing
- Access to Yaskawa's award-winning 24-hour technical support is free of charge

Need to upgrade aging wastewater systems with efficient, compact drives? Contact Yaskawa today.

The Yaskawa U1000 Industrial MATRIX VFD is a compact, robust solution for ultra-low harmonics and/or full regeneration. It is the ideal choice for power quality and energy savings.

SCAN HERE



For more information on the U1000 Series VFD visit: www.yaskawa.com/U1000

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