
Case Study: NARTP

Rooftop Pump Package | Outdoor Enclosure Design

Project Type	Commercial HVAC System
System	Duplex Pump System
Pump Basis	Centrifugal Pumps
Fabrication	Pump package, enclosure, piping integration
Key Requirement	Rooftop Installation with Weather Protection
Manufacturer	FabPro Systems

Engineering Challenge

The project required a pump system to support a dry cooler, but the engineer wanted to avoid installing equipment in the basement mechanical room. The system needed to be installed on the roof and designed to meet several additional requirements:

- Operate in outdoor conditions
- Integrate with the dry cooler system
- Meet system flow and head requirements
- Maintain reliability in a fully enclosed structure

This created additional challenges related to system protection, coordination, and installation.

FabPro Solution

FabPro designed and fabricated a custom enclosed packaged pump system engineered specifically for rooftop installation. The system was paired with an Evapco dry cooler and designed using project data provided by Energy Transfer Solutions and the consulting engineer. Key elements included:

- Pumps sized to meet system flow and head requirements
- A fully enclosed structure for outdoor rooftop conditions
- Integrated piping and system layout
- Packaged design to reduce field assembly and simplify installation

The result was a complete system that could be installed directly on the roof.

FabPro's Role

FabPro was responsible for the design and fabrication of the pump package, including:

■ Pump selection and system sizing
■ Enclosure design for rooftop conditions
■ Fabrication of the packaged system
■ Coordination with the engineer
■ Collaboration with the contractor
■ Support during startup and operation

FabPro worked with all project stakeholders to ensure the system met performance and installation requirements.

Challenges & Resolution

After installation, a leak was identified in the enclosure roof. FabPro responded immediately by:

■ Sending technicians to the site
■ Inspecting the enclosure
■ Completing repairs to resolve the issue

The problem was addressed quickly, minimizing disruption to the project.

Project Results

The completed system delivered:

■ A fully operational rooftop pump package
■ Proper integration with the dry cooler system
■ Elimination of the need for basement installation
■ Simplified installation and system layout

The packaged approach allowed the project team to meet both design and installation goals.

System Summary

Application	Rooftop HVAC Cooling System
System Type	Enclosed Pump Package for Dry Cooler
Pump Model	Centrifugal Pump System
Fabrication	Pump package, enclosure, piping integration
Paired Equipment	Evapco Dry Cooler

Need a Custom Pump Package?

FabPro Systems designs and fabricates custom pump assemblies, skid packages, and mechanical system bases for commercial and industrial applications. If your project requires a custom fabricated system or BAA-compliant solution, contact our team to discuss your requirements.

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