



EBARA

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Fluid Handling Division
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Packaged Pump System

Installation and Application



City Of Southside, Alabama Selects EBARA Packaged Pump System For Emergency Lift Station Upgrade



Project Highlights

End User:

Southside Water Works and Sewer Board, Southside, AL

Industry:

Municipal wastewater, sewage

Problem:

Emergency Lift Station Rehabilitation

Result:

Cost effective, expedited and simplified installation

Products Installed:**EBARA Model EP1 Duplex Packaged Pump System**

- Factory pre-assembled and sole source responsibility for complete station provided
- Two, 30HP model DLFU submersible cast iron wastewater, sewage pumps
- Pumps rated to deliver 150 GPM at 145' TDH with K-series impeller design to reduce clogging
- R7 insulated fiberglass enclosure with large doors
- Pre-cast reinforced polymer concrete base provide resistance to H₂S corrosion
- Dual four-inch liquid filled pressure gauges protected from wastewater by pressure isolator ring
- Standard check valves
- Emergency by-pass connection
- Thern portable hoist

Southside, AL Selects EBARA EP1 *Expedited, Cost Effective Solution For Emergency Lift Station Upgrade*

OVERVIEW

The city of Southside, Alabama has experienced tremendous growth over the last decade. Located on the banks of the Coosa River, Southside is a relatively small, but progressive city and is always looking for ways to improve the quality of life for its residents. Just as so many other municipalities face aging infrastructure challenges, Southside determined a need to upgrade and replace one of its main lift stations that had become troublesome and costly for many years.

SCOPE OF CHALLENGE

The traditional suction lift station located on Highway 77 is one of Southside's main lift stations and has been in service since 1991. The station had experienced several problems over the last few years including multiple failures due to the age and strain on the system. As a result of these failures, the high costs for repairs and the encroaching seasonal inclement weather, the situation was quickly considered an emergency installation. A quick turnaround was very critical in order to meet the needs of the flows coming into the system and the system not being out of service for a very long time.





THE SOLUTION

CDG Engineers & Associates worked with The Eshelman Company to select and install an EBARA EP1 duplex packaged pump system to replace the existing self-priming system that failed. Two, 30 HP submersible model DLKFU pumps each rated to deliver 150 GPM at 145' TDH were specified as part of the system to accommodate the current conditions and allow for the anticipated expansion the system faces. The K Series design was specified to reduce clogging from fibrous waste (non-dispersibles) and thereby reduce maintenance and increase efficiency of operation.

The old station was removed and the 20' deep wet well cleaned and epoxy coated prior to installation. The EBARA packaged system is pre-assembled at the factory and shipped directly to the site ready to be installed.

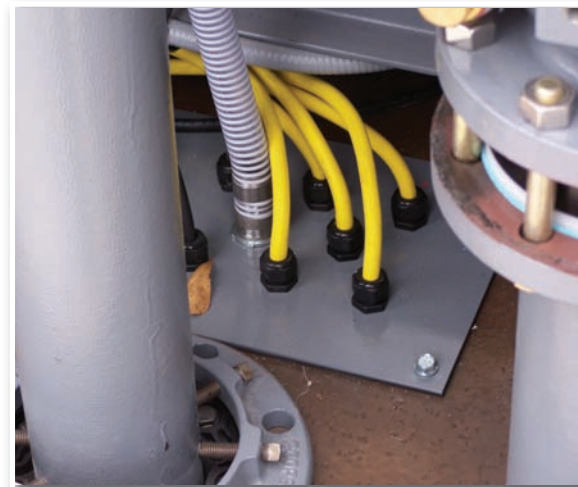
EBARA's standard package design includes a corrosion resistant, steel reinforced, polymer concrete base. Wet-well access covers are pre-cast into the base frame providing durability and sturdiness. All discharge piping, valves and controls are protected inside an R7 insulated, weatherproof fiberglass enclosure. Large doors on both sides of enclosure provide easy access to system components.

Safety grates protect personnel from falling into the wet well when the access doors are open. Penetrations for the piping and cables are sealed from the wet well to prevent harmful gases from entering the enclosure. Dedicated pressure gauges and sensing piping for each pump are standard on the EBARA system. Onyx pressure sensor rings isolate the gauges from the pumped wastewater to eliminate clogging of pressure gauge lines and ensure accurate, repeatable pressure readings.

"Everything is at 'head and hand' level," explained Jeff Harrison, PE, CDG Engineers & Associates. "This eases maintenance and removes the need to send personnel into dangerous confined spaces present in traditional below ground valve vaults."

The station runs on 460/3/60, and is designed with a float switch level control system with reduced voltage soft starters to limit inrush current to the station.

This station was loaded with nearly optional features, including individual board mounted discharge gauges, an emergency bypass connection and a (Thern) portable hoist; these options making regular maintenance more manageable and efficient.





THE RESULT

The installation concluded with a “clean-water” (accommodated by The City of Southside’s Fire and Rescue Department) start-up and testing with minimal onsite adjustments made to the controls and floats to ensure optimal performance.

Once the EBARA EP1 packaged station arrived on site, it was installed and on line at the end of the second day. It was a very quick retrofit, which kept downtime and bypass pumping to a minimum and was delivered and installed well within the city of Southside’s capital budget.

What would have taken 2 months to install a new system, the city of Southside was able to complete in 2 days due to the refurbishment of the existing wet well and the selection of the single-source and complete EBARA packaged pump system.

“The package station concept incorporates all the necessary equipment in one factory built unit with a company that has decades of experience providing reliable sewage pumps,” said Ed Moore, Vice President, The Eshelman Company. “We feel confident the EBARA packaged system is going to be a cost effective solution for any city looking to put in a replacement – or new – lift station.”

[Click here or scan the code to watch the video!](#)



“... going with the EBARA system was going to be the best solution...”

Jeff Harrison
CDG Engineers & Associates

Engineered for Performance

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