

KRAFT FLUID SYSTEMS

Electric Drives Division



New Battery Powered Digger-Derrick Takes Market by Storm

Kraft helps Skylift revolutionize the utility market with an all-new battery powered electric drive system for the MD6000.



Battery Powered MD6000 with Diesel Backup

Skylift Inc., a manufacturer of utility equipment in Lorain, OH, joined with Kraft Fluid Systems to develop the company's first electric powered machine, the MD6000-E Digger-Derrick.

Challenge

Skylift asked Kraft to help design an electric drive system for their all new MD6000 E-Series Digger-Derrick that drills holes for utility line pole placement. Besides battery power, the new machine must use same hydraulic system and have diesel engine backup.

Solution

Kraft specified an InMotion GSM generator/motor that mounts between the engine and the hydraulic pump, while all other components remain the same as the previous version. In electric mode, the GSM works as a motor driving the hydraulic pump with battery power. The machine can also be operated utilizing the diesel engine in case of battery failure or loss of charge. The engine and generator charge the Lithium-Ion batteries, or the onboard battery charger can be plugged into a standard 120 VAC outlet.

Results

MD6000 has been field tested and customers love the quietness with no loss of power. Operators no longer require hand signals to communicate due to diesel engine noise. The simple and more efficient operation requires almost no extra training. The MD6000 can operate a full day on battery power.

HIGHLIGHTS

CLIENT NAME

Skylift Inc.

LOCATION

Lorain, OH

PROFESSIONAL SERVICES

- Design & Engineering
- Custom Programming
- Field Sales Application Expertise
- Start-Up Support

EQUIPMENT SPECIFIED

- InMotion Generator/Motor
- InMotion Motor Controller
- Danfoss Plus+1 Controller
- Lithionics Battery System
- Hilliard Centrifugal Clutch

RESULTS

Kraft has contributed to the successful design of an innovative machine that is powerful and extremely quiet - improving jobsite safety and allowing longer work hours.

CLIENT QUOTE

"Kraft was instrumental in helping us design and specify the electric drive system for our new machine. We couldn't be happier with their help."

-Donald Simonovich
Chief Engineer, Skylift Inc.