

Electric Drives Aren't Just for Toys

Vehicles that were once thought to be too large or applications too demanding for electric drives are now becoming the norm. Vehicles that have traditionally been powered by diesel engines and hydrostatic drives are now using battery power and electric drives due to emission regulations, noise regulations, and overall cost of ownership.

Electric drive systems are just as powerful as their diesel counterparts and offer, in many cases, better performance, quieter operation, and zero emissions. Electric drives deliver full torque at low speeds and very smooth control over a broad range of speeds. Acceleration, deceleration, and speed are easily controlled via CAN communication from the vehicle master controller. The motor controllers monitor many parameters like temperature, amp draw, voltage, and speed, then send fault codes if normal values are exceeded. This makes troubleshooting and service easier than traditional diesel/hydraulic machines. In addition, electric drives run more efficiently. They employ energy from the battery only when required, whereas traditional engine-driven hydraulics waste energy idling when not in use and are oversized for peak demand.

One big advantage of Electric drive systems often overlooked is maintenance. Motor controllers are made to run for up to 20,000 hours with no servicing. AC Induction Motors used on many systems have no brushes and zero maintenance. Regenerative braking turns traction motors into generators slowing the vehicle and putting energy back into the battery, so there is no traditional service brakes to wear-out. Modern electric vehicles use sealed lithium ion batteries requiring no battery maintenance except occasional balance/conditioning charges.

Kraft offers a full line of Products/Services for all your Electric Drive needs

Kraft Fluid System's represents manufacturers who are the technology leaders in the industry, including Schabmueller, InMotion, Schwarzmuller and Lithium Werks. We carry everything from AC and DC electric drive components to integrated drive systems, including:

- Wheel Drives (fixed and steerable versions)
- Electric Motors
- Slew Rings and Bearings
- Motor Controllers
- Battery Systems & Chargers
- Hydraulics

KRAFT

FLUID SYSTEMS

Our electric drives are designed to perform in the most demanding conditions. We have experience with a complete spectrum of battery-powered vehicles, such as: AGV's, amusement park rides, material handling equipment, forklifts, utility vehicles, aviation ground support equipment, and more. Whether you need electric drive components or a complete system, Kraft employs an engineering staff ready to assist in developing applications to achieve optimized vehicle performance.

Why Kraft For All Your Electric Drive Needs?

A pioneer in the field, Kraft is an expert in electric drives with more than 20 years of experience applying electric drive systems to vehicles traditionally propelled by mechanical and hydro-mechanical means.

Our knowledgeable sales personnel have mechanical engineering degrees and startup, project management experience to help you achieve your performance goals by recommending the correct drives and controllers for your system.

For specific applications, our engineers work with OEMs and our suppliers to customize vehicle electric design and motor control software to ensure optimum efficiency and performance.

In addition, Kraft is a factory-authorized service and warranty center for everything we sell.

When you use Kraft, you can expect our factory-trained and certified specialists to offer excellent sales, customer service, engineering support, and repair for all your electric drive needs.

For more information, please contact:

Brian Shockey, Account Manager, bshockey@kraftfluid.com

Ryan Walker, Account Manager, rwalker@kraftfluid.com

Kraft Fluid Systems - Electric Drives Division | 14300 Foltz Parkway, Cleveland, OH 44149

Office: 800.257.1155 | Fax: 440.238.5266

web site: <http://kraftelectricdrives.com/>