



## GOLF CAR AND UTILITY VEHICLE MARKET

### OVERVIEW

The global golf car and utility vehicle market represents approximately 300,000 electric and gas-powered vehicles per year, most leased to golf courses. North America represents 70 percent of the total golf car world market and is growing 2 to 3 percent annually.

Utility vehicles are used in a variety of turf applications or in manufacturing facilities and airports. They offer a wide variety of uses, from people transport to material handling.

Approximately 70% of the vehicles produced use electric propulsion for which Kinetek provides motors, controllers, transaxles, charging units, regenerative braking capability, and more. The remaining 30% use internal combustion engines. For internal combustion units, Kinetek provides DC starter-generator units.

Low voltage, AC motor technology is emerging as a practical alternative to DC units. Building on technology first developed for the materials handling market, low voltage AC motor technology provides simplicity, increased efficiency, and longer battery life in many applications.

#### Kinetek

Kinetek, through Advanced Motors and Drives, has provided wound-field DC motors to the golf car and utility vehicle market since the early 1990's and now provides low voltage AC induction motors and transaxles developed precisely for these vehicles.

### Products/Technology

- AC and DC motors
- Brushless DC motors
- Electronic controls and systems
- AC and DC pump motors

### Capabilities

- Broad and deep technology base in motors and controls
- Application knowledge and product test expertise
- Advanced design centers globally and precision manufacturing capabilities in China and Mexico
- Ability to package system solutions, adding value for customers
- Strong, effective service and support

### Global Presence

28 Facilities including 13 Design Centers



**Advanced Motors & Drives**<sup>®</sup>

A Kinetek Company<sup>®</sup>



**Kinetek Controls**<sup>®</sup>

A Kinetek Company<sup>®</sup>



## GOLF CAR AND UTILITY VEHICLE MARKET

Advanced Motors and Drives designs and manufactures special purpose AC, DC and brushless DC motors for traction, pump and steering systems in battery operated vehicles.



### Golf Car Motor Control SXDC+ GC

#### Features

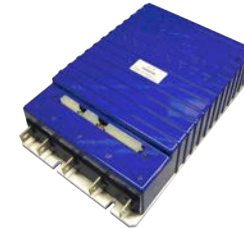
- Surface mount MOSFET technology
- Fully programmable via USB interface
- Full regenerative braking
- Compact size
- Potentiometer or Inductive throttle input



### AC Motor- Golf/Utility

#### Features

- Robust construction for long, reliable service life
- Sealed bearings with high temperature grease
- High efficiency designs for maximum run time
- Extruded aluminum housing provides better thermal dissipation



### Low Voltage AC Motor Controller

#### Features

- Pre-charge circuit
- Serial communication
- FLASH in-circuit reprogrammable memory
- Fault checks and indicator
- Fully compatible with Kinetek Controls LCD display



### Mark I High Frequency Battery Charger

#### Features

- Automatic three-stage charging sequence
- Temperature compensation
- Durable, continuous, maximum output use



### DC Motor- Golf/Utility

#### Features

- Heavy duty commutator construction
- Stainless steel brush springs
- Heavy duty brass brush boxes
- High temperature brush shunt connection
- Easy brush replacement



### SXDC Motor Control

#### Features

- MOSFET, Surface mount design
- Audible & Visual diagnostics
- Fully programmable, PC interface
- Full regenerative braking



### LCD Display - Golf/Utility

#### Features

- 8-character AlphaNumeric
- 12-100 Volts DC
- Customizable, backlit
- 3 Programmable LEDs
- RS232 & CAN Serial Interface
- Battery Status, Hour Meter, & Custom Message Display



### Transaxle 12.375 ratio

#### Features

- Quiet operation from ground gearing
- Light weight aluminum housing
- Durable high torque carrying capacity



#### Corporate Headquarters

6268 East Molloy Road  
East Syracuse, NY 13057

315.434.9303 direct  
315.432.9290 fax  
info@adcmotors.com

www.kinetekinc.com  
www.adcmotors.com