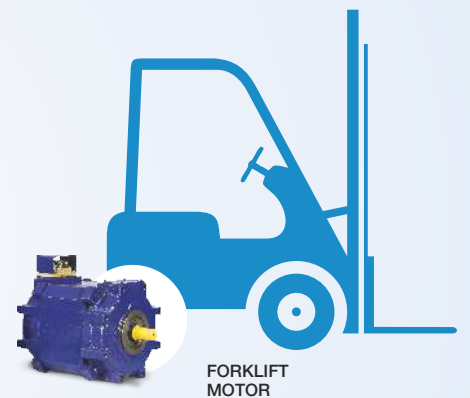
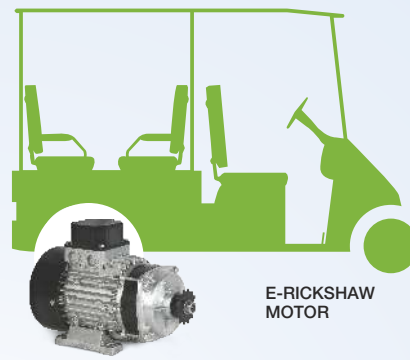
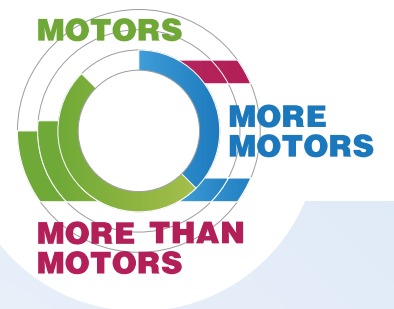


**NEW**

## SOLUTIONS FOR AUTO SECTOR



**SOLUTIONS FOR  
AUTO SECTOR**



**ABOUT LAWKIM MOTORS**

Lawkim is a part of the Godrej Group, one of the most trusted brands in India. Established in 1961, Lawkim specialises in manufacturing various types of electric motors for industrial applications. We endeavour to constantly provide new and advanced technology products to the industry, which can enhance productivity, save energy or simply improve work conditions. Our years of experience in the industry is now leveraged for offering value-added products, so that you can benefit through more precise, reliable and economical offerings.

**MOTORS FOR  
ELECTRIC FORKLIFT AND STACKER**

With decades of experience in manufacturing industrial motors, Lawkim has developed a range of 3 phase motors best suited for use in Forklifts and Stackers. These motors demonstrate high energy efficiency and peak performance even in the most demanding working conditions. They are thoroughly tested in adverse conditions and pass through rigorous trials. These motors are being used by leading manufacturers of Forklifts and Stacker systems.

**Benefits over conventional DC motor**

- No need to change brushes and commutators
- Greater travelling and lifting speed
- Higher gradeability
- Efficient recharge during braking
- Extended battery working life

**Benefits over  
conventional diesel forklift**

- Easy to operate
- Sturdy and stable
- Low noise level
- Zero emission. No pollution



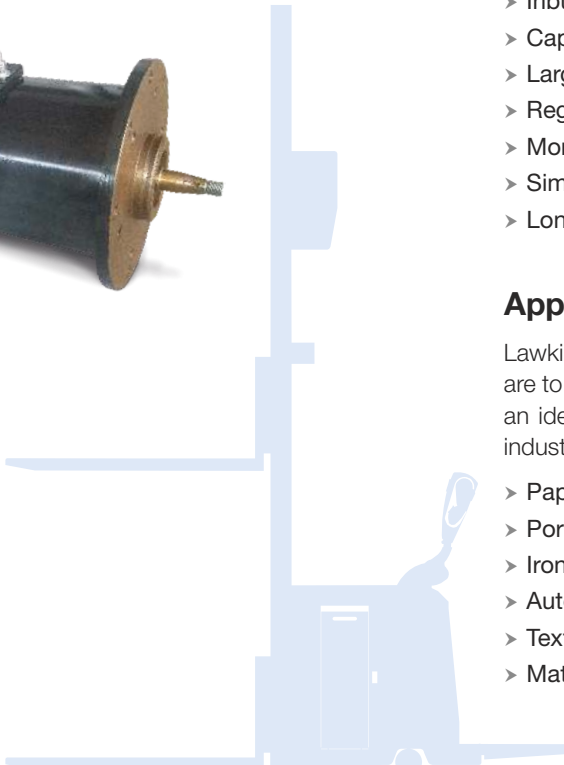
**Features**

- 3 Phase Induction motors  
Rating: 1.3 kW to 20 kW  
Battery V: 24, 48, 72  
Poles: 2P, 4P and 6P
- Maintenance-free, simple and rugged
- Inbuilt speed and thermal sensors
- Capable of handling heavy torque
- Larger braking torque at higher speeds
- Regenerative braking, therefore reduced abrasion
- More energy-efficient
- Simple construction allows easy integration
- Longer, trouble-free life

**Applications**

Lawkim motors are designed for rigorous use where heavy loads are to be handled and continuous operation is required. They are an ideal choice for Forklifts and Stackers used in the following industries

- Paper industry to handle bigger and heavier reels
- Ports and logistics centres for emptying containers
- Iron and steel industry plants
- Automotive industry
- Textile industry
- Material movement within factory for any other industry



## MOTORS FOR GOLF CARTS

In an effort to provide a superior indigenous alternative to imported golf cart motors, Lawkim has developed a range of advanced technology, compact and reliable motors. They are perfect solutions for small battery powered vehicles used on golf course or in large factories or premises for inspection, hunting, cruising and so on. Lawkim Golf Cart Motors prove to be an ideal replacement for imported motors and come with an assurance of economy, lower maintenance and local service support.

### Advantages over conventional fuel type vehicles

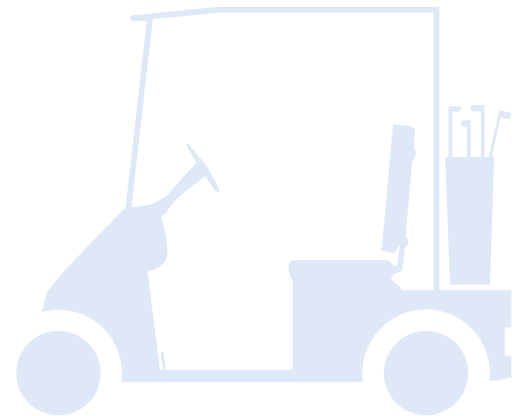
- No emission. No pollution
- No fuel consumption
- Very low noise level
- Less maintenance

### Features

- Peak torque across the entire RPM band
- High efficiency
- Capable of climbing hills

### Applications

- Golf cart motors are used for wide applications including hunting, off-road, golfing, cruising and even racing.



## MOTORS FOR BICYCLES

A bicycle is a common, simple and economical transport solution for an individual. It is also best suited in rough terrains and offers great manoeuvrability. Through our Innovation Centre, we have taken this simple means of transportation to the next level. With the development of a special motor by Lawkim, now the bicycle can run on battery power while unleashing the potential of this most simple and economical means of transport. Travelling long distances or the use of bicycles by senior citizens and children is now an enjoyable experience with Lawkim Hub Motors for bicycles.

### Benefits over conventional fuel type bikes and pedal type cycles

- No fuel consumption
- No emission or pollution
- Lower and easier maintenance. Can be fitted on the front or rear wheel
- No noise
- No need of an engine unlike fuel bikes
- Pleasant and effortless ride whenever you don't feel like pedalling

### Features

- BLDC Hub Motor with hall sensor commutation
- Most energy-efficient
- Smoother start up from dead stop
- Smooth and balanced all across the RPM range
- Runs better at higher voltages
- Planetary gears to boost torque

### Applications

- These motors are ideally suited for electric bikes and cycles



NEW

## MOTORS FOR E-RIKSHAWS

Lawkim Innovation Centre is constantly striving to develop new products and technologies which will help in conserving natural resources, energy and nature. At the same time, a great deal of attention is paid to make these innovations relevant for society through their applications for empowering and enriching common people's life quality.

Development of motors for E-Rickshaws is one such step. These motors run on battery power and can be easily fitted with various types of 3-wheeler models which help in providing low cost transport solutions in urban as well as rural areas.



### Applications

- > E-Rickshaws and other 3-wheeler applications which are used for commuting on short routes in rural and urban areas.



### Benefits over conventional fuel type rickshaws

- > No fuel consumption
- > Zero emission. No pollution
- > Silent means of transportation
- > Easy to drive
- > Battery-run rickshaw is a low-emitter, complementary transport for low income people who suffer most from lack of transport facilities
- > Can be powered by solar energy

### Features

- > BLDC motors exhibit better heat dissipation, improved efficiency and greater power density
- > Compact size, reduced weight and high speed range
- > Inbuilt protection for overcurrent, undercurrent and temperature
- > Various system interlocks to ensure safety of passengers
- > Rugged design ensures longer and trouble-free life
- > Smooth torque delivery
- > Increased battery cycle time due to low power consumption
- > High energy efficiency
- > High torque and wide speed range



Manufacturing Plant  
 Godrej & Boyce Mfg. Co. Ltd.  
 Gat No. 431, Village Shindewadi,  
 Post Shirwal, Taluka Khandala,  
 Dist. Satara 412 801 INDIA

Tel: +91 2169 244 401/02/03/04/05  
 Mobile: +91 98238 52228  
 E-mail: lkmmtrgr@godrej.com



Corporate Office  
 Godrej & Boyce Mfg. Co. Ltd.  
 Pirojshanagar, L.B.S. Marg, Vikhroli,  
 Mumbai 400 079 INDIA

www.lawkimindia.com | www.godrej.com



Regional offices: Mumbai | Delhi | Ahmedabad | Lucknow | Pune  
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