

MARATHON™ KS SLIP-RING MOTORS GENUINE SPARE PARTS

Industrial Motors

Commercial &
Appliance Motors

Automation

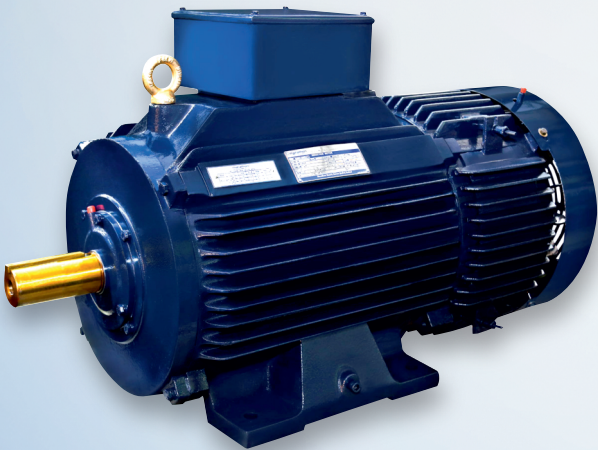
Digital &
Systems

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India



Unleash Efficiency: Marathon's Genuine Spare Parts: Your Assurance for Quality, Interchangeability, and Longevity

Marathon Crane Range Motors have been specifically designed for crane applications and the mechanical features are such that they are particularly suitable for this duty.

APPLICATIONS

Marathon™ Low Voltage Heavy Duty Wound Rotor Crane Range Motors have been designed and rated for driving, hoisting, hauling and other intermittently operated machinery in the metal industries.

Marathon™ GENUINE SPARE COMPONENTS

Marathon is the original equipment manufacturer & reputed in motor industry. Being ISO9000 certified company, the reliability and quality of supplied spare parts are ensured. While ordering spares it is important to state the motor serial number as given on the motor rating plate for ensuring the correct supply of spares in respect to its interchangeability. The qualified spare part is traceable wrt PO / Job specific no. / Part number with QC endorsed tag.

All the spare parts are being painted with epoxy primer coating & finally epoxy finish painting for long last weather protection except particular machining area & mating faces. Those particular area will be protected by thin layer of rust protective lacquer paint.

The key benefits of Marathon supplied spare parts are:

- Assured quality
- Interchangeability
- Hassle free assembly
- Company warranty
- Technical support
- Hologram sticker on every spare parts for originality

CRITICAL SPARE COMPONENTS

Slip Ring Unit: This electromechanical component is used in slip ring motors which collects current from rotating wound rotor and feed resistance into the rotor windings to control the motor's starting running torque and current as per requirement. This helps to restrict starting current and provide required starting torque to accelerate high rotating mass and overcome motor and driven equipment's inertia. The design and construction of slip ring unit is too critical which depends on the current requirement of that motor.



Marathon slip ring design is well proven & field validated for years where Stainless Steel/ copper alloys are used for ring material with different sizes under fabricated or moulded construction. Marathon designed slip ring unit is validated upto max 5 kV voltage rating & 1100 amps current capacity under continuous duty. It is not possible by others to know and design this intricate component that suits our slip ring motor for its long run. Hence, it is advisable to keep it as spare for correct functioning of the wound rotor induction motor.

Carbon Brush Holders & Studs: The function of brush holder is to hold the carbon brushes in correct position with constant right pressure & to run on the slip ring surface for transferring designed current at optimum performance.

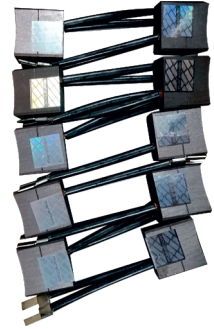
Marathon designed carbon brush holder assembly is an enhanced design to ensure longer brush life with optimal same contact pressure on carbon brushes through springs force. The brush holders are casted brass material in single piece then finished and split into two pieces as left hand & right hand assembly.



Brush studs are non hygroscopic epoxy/DMC moulded with insulation covering to withstand 5 kV@ 60 seconds. Brush holders are designed for spring pressure from 1.5 to 3 kgs. at tip for providing same pressure to all carbon brushes with both as automatically adjusted or adjustable type. Each brush holder & stud is checked as per design specification/works drawing to verify the product quality compliance & endorsed on SQR.

The typical brush inspection is recommended for every 1000 running hours or every 3 months which is earlier for induction motor at field, to clean accumulated brush dust and to check wear & spring tension otherwise it can fail due to arc sparking. As it is vulnerable from maintenance point, so it is advisable to keep this parts as spare for avoiding down time of the slip ring induction motor.

Carbon Brushes: The carbon brushes with shunt(s) are used as current collectors from slip ring unit & conduct current to rotor. Metal graphite carbon brushes are provided by Marathon conforming to IEC®* 60276/IS 13466/IS 13584/IS 13525/Mfg. technical catalogue and selection is done in line with rotor current characteristic curve. Carbon brush is randomly inspected as per design specification/works drawing/ BOM to verify the product quality compliance & endorsed on SQR. The carbon block is sourced from reputed makes only and different grades are used for different motor ratings as per the design criteria.



Typically brushes last about 2 years or more depending on frequency of motor use.

Spurious carbon brushes which are not manufactured as per the above design criteria can lead to uneven and fast wear & tear of the carbon brush which can lead to slip ring unit damage. The excessive carbon dust that gets generated also leads to electrical tracking and sparking which in turn results in the insulation failure of slip ring unit. Slip ring unit failure propagates to failure of the motor.

As it is subjected to wear so it is advisable to keep this parts as spare for avoiding down time of the slip ring induction motor.

NOTE: The whole slip ring unit assembly needs periodic maintenance as a whole. In many cases it is found damaged due to improper periodic maintenance hence it is advisable to keep those parts as spare for correct functioning of the slip ring induction motor.

External Cooling Fan: Air is drawn externally & circulated internally by mounting of external fan/internal fan on the rotor shaft, for keeping motor cool during running condition. Marathon fans are designed in respect of different cooling methods conforming to IEEE/ IS/ IEC standards. These are robust in construction with the design dimensions & blades configuration to meet required air flow quantity.

Marathon cooling fans for slip ring motors are by default metallic cooling fans, Fan bore is machined accurately with respect to shaft dia so that it fits properly. All our fans are dynamically balanced to grade 2.5 of ISO 1940.

It is often experienced that motors under long field operation; external surface area of fan gets accumulation of dust and other debris from working environment due to intake air through motor fan cover/ air inlet passages and hence cooling fans performance become degraded & fan gets imbalanced. Hence existing fan needs dismantling for periodic cleaning. So it is advisable to keep balanced external cooling fan as spare for avoiding down time of the plant during old fan refurbishment period.

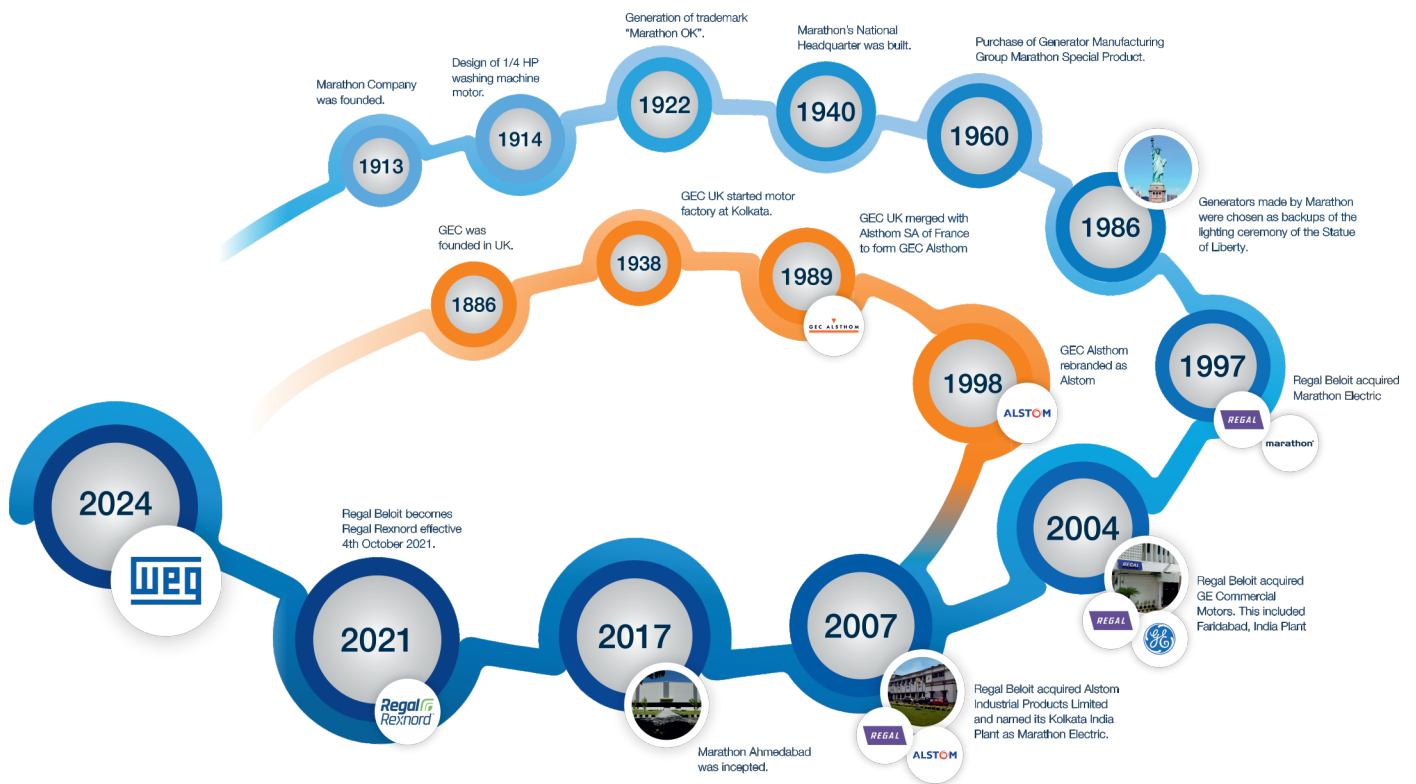
Slip ring motor other components like End shields, Fan Cover, Slip ring cover, motor body, terminal blocks, terminal box etc are also supplied as spare parts.

REFURBISHING OF COMPLETE MOTOR

Marathon also undertakes the complete refurbishing of slip-ring motors which includes complete analysis & testing of the motor, testing of rotor stator health, rewinding of rotor and stator winding as per original engineering specs, thorough dimensional checking of all components and replacing the damaged ones with new component and finally tested for output performance.

SPARE PART SHIPPING

The quality of packing box & packaging is ensured to avoid any transshipment damage & suitable for long storage. All spare components are affixed with hologram stickers to ensure the originality.



The scope of WEG Group solutions is not limited to products and solutions presented in this catalogue.
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The values shown are subject to change without prior notice.
 The information contained is reference values.