Crane solutions for
every handling challenge

ElectroMech

Solutions | Service | Satisfaction

Equipped to Excel

ElectroMech is a USD 100 million, multinational group in Material Handling with its global headquarters in Pune and having a presence in 60 countries. We have manufacturing plants in the UAE, Indonesia and Saudi Arabia with the Global Design & Development Centre and Asia's largest overhead crane manufacturing facility in Pune, India.

We are an innovation-led, customer-centric, technology-driven, fast-progressing global group, which offers advanced Material Handling Solutions to a wide spectrum of industries for the most challenging applications. Our customers across the world rely on us for our design capability, high manufacturing standards and service excellence.

We are serving clients from various sectors such as automotive, railways, shipbuilding, aerospace, energy, metal, nuclear, defence, heavy engineering, process plants, food & beverages, pharmaceuticals, construction, infrastructure, warehousing and logistics.

ElectroMech
Solutions | Service | Satisfaction

Solutions for every handling challenge

Overhead Cranes

Industrial Overhead Cranes

- Standard EOT Cranes
  - Single Girder EOT Cranes
  - Double Girder EOT Cranes

Gantry Cranes

- Gantry Cranes
  - Single Girder Gantry Cranes
  - Double Girder Gantry Cranes
- Semi-gantry Cranes
  - Single Girder Semi-gantry Cranes
  - Double Girder Semi-gantry Cranes

Light Crane Systems

- Underslung Cranes
- HB Cranes

Jib Cranes

- Wall Mounted Jib Cranes
- Pillar Mounted Jib Cranes

Wall Travelling Cranes

Stacker Cranes

Process Cranes

- Hot Metal Handling Cranes
- Steel Plant Cranes
  - Coil Handling Cranes
  - Long Product Handling Cranes
- Grabbing Cranes
  - Waste To Energy Cranes
- Tunnel Mucking Systems

tyton™ (Rubber Tyred Gantry Cranes)

- Single Girder tyton™
- Double Girder tyton™

Explosion-proof Cranes

Customised Solutions

- Triple Girder Cranes
- Single Failure Proof Cranes
- Telescopic Cranes
- Jib Cranes - Underslung

Hoists

- Electric Wire Rope Hoists
- Electric Chain Hoists
- Pneumatic Hoists
- Explosion-proof Hoists
- Manual Chain Pulley Blocks

Other Material Handling Equipment

- Steerable Transfer Car (STC)
- Transfer Trolleys
- Railway Traversers
- Spreader / Lifting Beams

Services

Equipped to Excel

Harnessing technology to ensure higher reliability

We endeavour to maximise value to our customers in terms of cost of ownership, high reliability, high safety and ultimately, higher productivity. Our engineering team is continuously engaged in upgrading our solution offerings to ensure that our customers' material handling experience is of the highest standard. ElectroMech is proud to be at the forefront of technology with an evolving product range that provides our customers with the best possible solutions, be it advanced safety features or fully customised equipment.

Further, to ensure that we meet the challenges of various industries, we have assimilated world-class technology with guidance from global leaders in various specialised fields of material handling equipment and systems.

Far-reaching solutions

As a result of our pursuit of world-class technology, our equipment can be seen operating flawlessly at diverse locations. ElectroMech supplies a variety of cranes and hoists in capacities ranging from 80kg to more than 300t across different industry verticals, such as automotive, shipyards, infrastructure, metallurgy, power, heavy engineering, manufacturing, general engineering, etc.

ElectroMech's equipment is prominently present in the infrastructure segment. We are proud that many major infrastructure projects, such as roads, metro railways, bridges, dams and power plants have been made operational by using equipment supplied by ElectroMech.

Variety, versatility, safety, reliability, productivity, convenience and peace of mind are the standard features of offerings from ElectroMech. This is proven by the several repeat orders received from major industrial groups across the world.

The infrastructure

At ElectroMech, we have been involved in the designing, manufacturing and commissioning of material handling systems with a special emphasis on cranes and hoists, since 1979.

Our main manufacturing facility located in Pune, in western India, with an annual production capacity of over 2000 standard cranes, is one of the biggest single location facilities in the world. This facility is spread over 140,000sq.m. and is equipped with state-of-the-art machinery, such as CNC cutting machines, semi-automated girder manufacturing fixtures, shot-blasting systems and one of the largest paint booths in the

Equipped to Excel

industry. Dedicated load-testing facilities enable us to validate new products and design developments. The facility has 24 work-stations to accommodate multiple cranes simultaneously and has the flexibility to accommodate cranes of all sizes.

The entire manufacturing activity is supported by a strong IT backbone that ensures the availability of reliable data, providing the intelligence to take quick decisions. Our proprietary software platform, Emote, is unique in the industry and provides timely insights about crane health, usage patterns and possible risks.

The team

Any business needs a good team. Great people are the cornerstone of an exceptional customer experience. Recognised as a 'Great Place To Work®' for several consecutive years, ElectroMech attracts and retains the best talent in the industry. This ensures that our customers are always looked after by the best people in the industry. A collective crane design experience of over 400 years provides our customers with peace of mind, knowing that they are in the right hands.

Global presence

ElectroMech is amongst the top crane manufacturers globally, with its products and solutions working in 60 countries across a wide spectrum of industries.

In addition to our global headquarters located in Pune, India, our international operations are managed from Dubai, UAE. We also have our own dedicated manufacturing facilities in the UAE, Saudi Arabia and Indonesia.

Our network of sales engineers and service technicians spread across various parts of MENA, South Asia and South East Asia ensures that we are never far from our customers.

1 **Global Design Centre**

4 **Manufacturing & Assembly**

8 **Despatch & Logistics**

2 **Kitting & Stores**

3 **CNC Plasma Cutting**

5 **Internal Inspection**

6 **Shot Blasting**

7 **Painting**

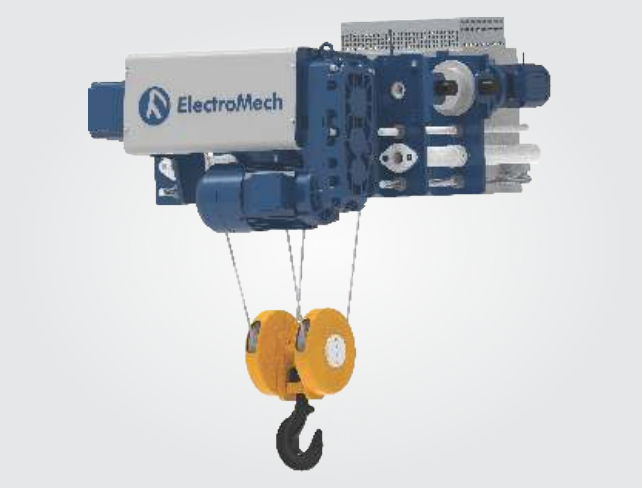
9 **Erection & Commissioning**

10 **Aftersales Services**

ELR Hoists

The new, powerful ELR Series of Hoists is a culmination of our extensive experience in the Hoist & Crane technology. This range is perfectly suited for low and medium duty applications in several industries such as automotive, engineering workshops, electrical, fabrication, chemicals, plastics, process industries and so on. Designed after careful evaluation of handling requirements of such industries and through our in-depth research, the new ELR Series promises great perfor-mance.

The ELR Series Hoist incorporates advanced features for higher safety so that you are confident while using it for critical applications. Its sturdy design assures absolute reliability, a long life, minimal maintenance, and complete value for your money. The ELR Series Hoist is light in weight, which reduces your structural costs and it can easily be adapted to different work environments providing immense flexibility at the workplace. With all these features and capabilities, the new ELR Series is truly the best-in-class hoist.



Constructional features

- Compact, light-weight, modular yet robust construction
- Hardened and ground helical gears
- Involute spline for CT wheel
- Minimum welding involvement

Electrical features

- Variable Frequency Drive (VFD) for
  - Smooth start-stop and step-less, variable speed control
  - In-built protection against overload, short circuit and earth fault
  - Reduced motor starting current
  - Alarm and fault indication display on drive
  - Motor voltage and current display on VFD
- IP 54 protection for control panel
- Protection against under-voltage, over-voltage, phase sequence and imbalance
- All motion drives fitted with MCB for short circuit protection
- Plug and play arrangement for panel wiring ensures safety and allows ease of maintenance
- Power on-off switch for isolating incoming power
- For pole changing motor option – Two-speed offering through dual pole motor

Mechanical features

- Lower rope fleet angle ensuring higher life of rope
- Flanged wheels in cross travel (compared to flange-less wheels of other makes adding to maintenance cost)
- Direct drive for 50% of the wheels
- Anti-fall lugs
- Hook with safety latch
- Spline shaft for hoisting gearbox ensuring easy assembly
- Spring loaded rollers ensure correct tightness of the rope on the drum
- Steel core wire ropes with higher breaking strength
- Compact design with low installation and maintenance cost

Safety features

- Frequency inverter for CT and hoist
- Wire rope with the highest safety factor
- Two-step limit switch for lifting
- Overload limiter through VFD
- Hook with safety latch

Single Girder Overhead Cranes

ElectroMech manufactures Single Girder Overhead Cranes in SWLs ranging from 250kg to 20t in different configurations.

- Beam/Box type main girders (dependent on spans)
- Precise control of the up/down motion and/or travel motion can be achieved by fitting Variable Frequency Drives in the panels (optional).
- Control can be either through a Pendant Push Button station or a Radio Remote Control (optional).
- Optimised geometry ensuring maximum hook coverage and the lowest head rooms.

Jib Cranes

Jib Cranes assist the staff and multiply human efforts, handling loads up to 6300kg precisely and effortlessly.

Jib Cranes are useful especially for loading or unloading of workpieces on machine tools. These are also useful for loading or unloading of trucks. They can also become an inseparable part of a standalone workstation.

Column mounted Jib Cranes are necessary when no other appropriate support near a workstation is available.

Wall mounted Jib Cranes are ideal solutions for workstations located near walls or vertical structures.

ElectroMech designs and manufactures such Jib Cranes to suit specific client requirements.

Wall Travelling Cranes

Single Girder Wall Travelling Cranes are designed for operation on a lower level beneath a large travelling crane system. These cranes provide additional handling possibilities and ensure smooth and trouble-free material handling between different working areas.

A wall travelling crane installed at right angles across the hall can serve several workstations. Single Girder Wall Travelling Cranes are available for a maximum load capacity up to 5000kg and for a maximum outreach of 10m depending upon the load capacity.

Double Girder Overhead Cranes

ElectroMech manufactures Double Girder Overhead Cranes in SWLs ranging from 1000kg to more than 300t.

These cranes incorporate customised open winch type crabs.

ElectroMech can supply fully customised Double Girder Cranes as per the client requirements for different duty cycles and for diverse range of applications.

Double Girder Cranes can be given for a very large range of spans, heights of lift as well as a large range of speeds.

Double Girder Cranes can have only a main hoist or a combination of a main hoist as well as auxiliary hoists (useful especially for load tilting).

Double Girder Cranes can also be provided with multiple hoisting trolleys running on the same bridge.

Precise control of the up/down motion and/or travel motion can be achieved by fitting Variable Frequency Drives in the panels (optional).

Control can be either through a Pendant Push Button station or a Radio Remote Control (optional) or through a Control Cabin (optional).

We can also offer Double Girder Overhead Cranes for the steel industry which are capable of withstanding extreme requirements of operating speeds and operating conditions.

Semi-gantry and Gantry Cranes

These versatile cranes are used mainly for activities in steel stockyards, pre-cast segment yards and other outdoor applications. These are self-propelled cranes running on rails installed at the ground level and do not require any supporting structures.

These cranes can be supplied in Single Girder or Double Girder options depending on requirements of SWLs, speeds, heights of lift and other characteristics.

Hoisting for these cranes can be through a suitable model of standard electric wire rope hoist depending on the application requirement for a single girder configuration. For Double Girder Gantry cranes, the hoisting can either incorporate standard crabs or fully customised open winch type crabs (up to 250t).

Power supply to these cranes is traditionally provided through a Cable Reeling Drum. These cranes can also be fitted with on-board generators depending on the site conditions.

Precise control of the up / down motion and / or travel motion can be achieved by fitting of Variable Frequency Drives in the panels(optional).

Control can be either through a Pendant Push Button station or a Radio Remote Control (optional) or through a Control Cabin (optional).

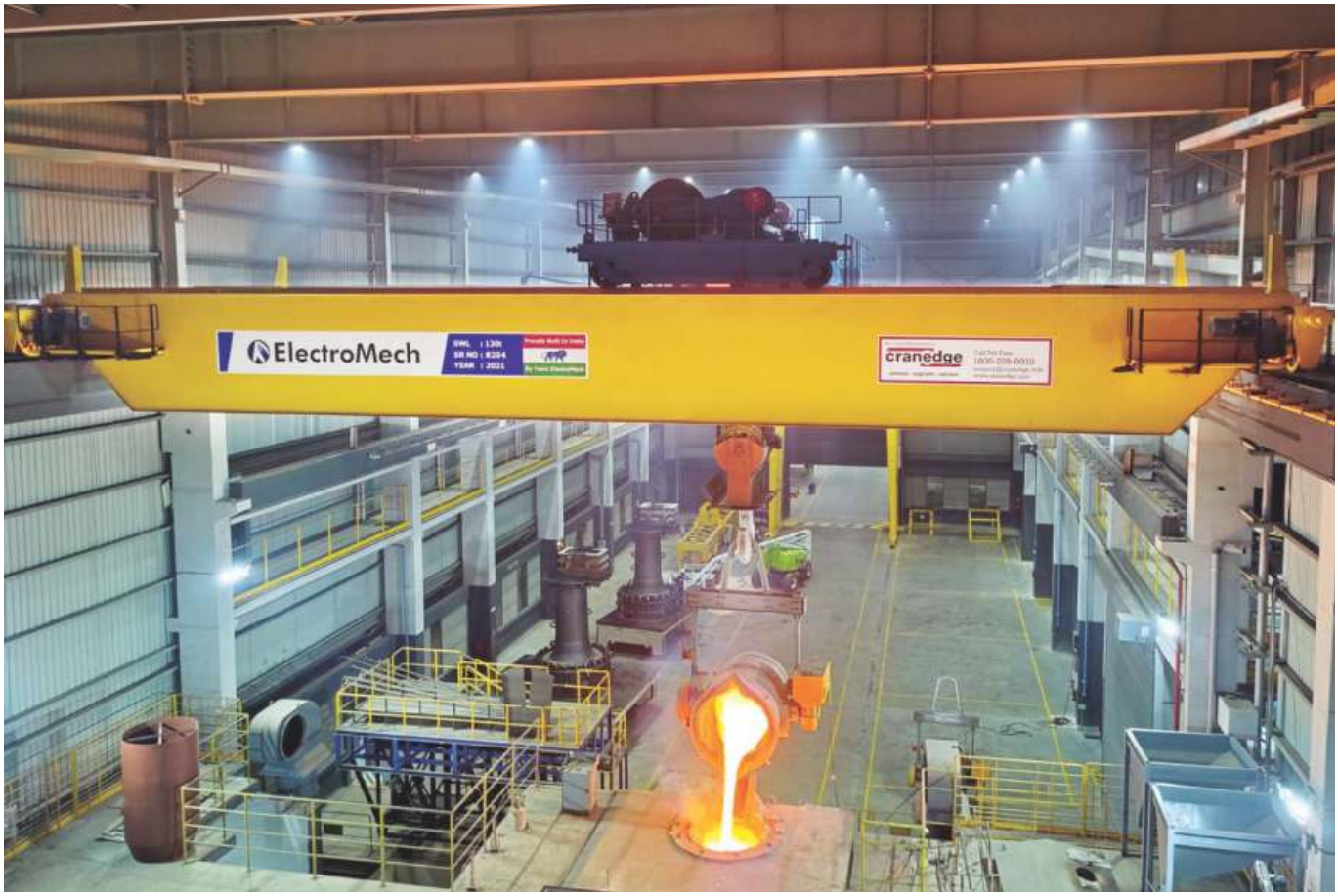
We can also provide different versions of these cranes to suit your requirement. For example -

- In workshops where part utilisation of the shop bay is required, a Semi-gantry crane can be provided.
- Cranes with overhangs on one/both sides.
- An auxiliary hoisting mechanism can also be fitted on the main hoisting trolley.
- Multiple hoisting trolleys running on the same bridge.

Hot Metal Handling Cranes

Handling molten metal is an essential activity in any metal processing plant. Molten metal is poured into ladles for shifting it to the next process station, such as the billet/ bloom caster. Usually, an overhead crane is used to handle the ladle, which on reaching the appropriate process station, is tilted to pour the molten metal into the caster.

This demands cranes that offer high precision in handling and extremely safe operation with a redundancy feature. The crane, including the control panel, needs to be designed to withstand very high ambient temperatures in the plant. Sometimes, the control panel also has to be provided with an air cooling arrangement. ElectroMech offers such cranes in different capacities, even up to 300t, with tilting arrangements using an auxiliary hoist.



Single Failure Proof Cranes

Customised Solution for Nuclear Plants

Accurate solutions for ensuring highest level of safety and optimising space while achieving economy.

The radioactive environment in nuclear plants and the hazardous nature of materials being handled requires solutions that are advanced and specially designed to be extremely safe. ElectroMech has earned experience and expertise in this field through its solutions like Single Failure Proof (SFP) cranes. Different variations of this crane are customised to suit requirements at various operational points. For example, in a main reactor building, the SFP crane is installed at the top of the reactor building dome. The SFP crane has redundant systems built into it, so that if one system fails, the backup system ensures that the work cycle is completed. The crane is designed to ensure structural integrity during an earthquake and to allow safe shut down of equipment. These cranes are manufactured using special grades of steel and components of the highest quality. Every crane is rigorously tested in our factory before despatch and installation.

Patented Control Technology

tyton™ – Rubber Tyred Gantry Cranes

Single & Double Girder RTG Cranes

tyton™ - Rubber Tyred Gantry Crane from ElectroMech is an electrically driven Rubber Tyred Gantry Crane, popularly known as RTG the world over. It is a custom-designed solution for your material handling requirements, enabling the lifting and movement of loads anywhere across large outdoor yards or factories in multiple directions. Along with optimised utilisation of floor space, tyton™ benefits industries by addressing several material handling challenges and provides the much-needed flexibility, safety and ease of operation.

Being tyre-mounted, it does not require permanently fixed rails, allowing exceptional flexibility in movement. The tyton™ is designed to operate on gradients and various types of surfaces. It is self-propelled and driven by electric motors using VFDs, has a rigid structure designed to withstand dynamic forces and can be easily disassembled and transported. It is also easy to operate the tyton™ using a radio remote control compared to any other mobile equipment used for similar applications.

This revolutionary equipment has been completely designed, developed and manufactured in-house by ElectroMech.

Features:

- **Gradeability** - Up to 5%. Can be operated on uneven surfaces
- **Electrically driven** - No hydraulics involved (no power supply or runway needed)
- **Intact floor** - Constant pressure on the floor irrespective of the amount of load lifted
- **Versatility** - Capability of operating on various surfaces
- **Portability** - Can be easily disassembled and transported
- **High safety** - Safe handling of long and odd-shaped items
- **Effortless turning** - Can negotiate turns easily
- **Robust structure** - Designed for dynamic loads
- **Tandem operation** - Two RTGs can be easily coupled to handle long objects
- **Low cost of ownership** - Low maintenance, high uptime, high productivity and minimal expenses for infrastructure development

Shaft / Tunnel Mucking Systems

ElectroMech has developed a unique and cost-effective bulk material handling system for extraction and disposal of overburden generated during construction of tunnels. These systems can very efficiently remove overburden generated during construction of deep shafts which access tunnels as well as the overburden generated during the tunnelling operation itself.

The typical heights of lift for such systems are in the range of 50m to 300m. The typical hoisting speeds are in the range of 10m/min to 30m/min.

Several such systems designed and manufactured by ElectroMech are being used by several major construction companies and are operational at various construction sites all over the world. This includes projects where tunnelling is involved in rail and road construction, underground drinking water schemes, underground tunnels for sewerage and tunnelling required in hydroelectric projects.

Stacker Cranes

Indigenously designed and manufactured by ElectroMech

- First conceptualised and introduced by ElectroMech in 1993
- Second iteration of the original design with slew bearing for smooth operation
- Combination of an EOT crane and forklift
- Optimises warehouse space by providing a highly effective, quick and safe solution for storing and retrieving material from vertical racking systems
- Allows for narrower aisles as compared to the space required by a forklift to manouevre
- Racks support the crane. No additional structure required
- Electrically operated, no diesel fumes or batteries to be recharged
- No danger of tipping over
- Supplied to several customers across the world

Steerable Transfer Cars (STC)

The Steerable Transfer Car (STC) from ElectroMech is a safe, robust and technologically advanced solution for a wide range of material handling applications in industries. Its open design load-carrying platform is suitable for a variety of materials with varying dimensions and odd shapes.

The Steerable Transfer Car is a heavy-duty, electrically-driven equipment available in a range of capacities and sizes to meet your challenging requirements. It is fitted with rubber tyres and has a short turning radius that allows great manoeuvrability across large yards, workshops or factories. STC can be used on concrete or asphalt surfaces and can negotiate a gradient of up to 5 percent making its use more versatile across a large spectrum of industries.

Solutions

Underslung Jib Cranes

Customised Solution

A few workstations have localised handling requirement, which cannot be met by any standard equipment. A large investment in the double girder EOT crane is not justifiable and hence, uncalled for.

When a leading manufacturing company of tyres for off-road vehicles was looking for such a solution, we developed a heavy-duty underslung jib crane for them. This was a column-mounted jib crane built using wire rope hoist and provided with an auxiliary chain hoist to tilt the job during operations. The chain hoist was mounted on a separate beam track that was underneath and perpendicular to the main jib arm. The economical solution competently addressed the challenge and increased productivity in handling operations.

Solutions

Spreader/ Lifting Beams

A spreader beam is a 'below-the-hook' lifting attachment. It stabilises and supports bulky and heavy loads during lifting. With the use of the spreader beam, the load gets distributed across two or more points. A spreader beam converts lifting loads into a compression force in the beam and tensile force in the slings.

Eventually, this distributes the lifting load across the slings which, in turn, are connected to the hook of a lifting attachment. The ElectroMech Spreader Beam provides an optimum solution with specialised products for the Oil & Gas sector. Our spreader beams are custom-engineered, manufactured in our state-of-the-art factory, and subjected to rigorous tests. Spreader beams from ElectroMech are available in different capacities up to 300t and are subjected to stringent quality norms while adhering to different standards across the globe.

Services

Service offerings

- **Crane Life Cycle Services**
  - Crane Health Assessment
  - Annual Maintenance Contracts (AMC)
  - Other Services
- **MORE for Your Cranes**
  - Modernisation
  - Overhauling
  - Repairs
  - Enhancing Capacity
- **Upkeep & Upgrade**
- **Operator Training**
- **ROMON** (Rope Condition Monitoring)
- **RAMON** (Rail Monitoring)
- **Modification & Relocation**
- **Erection & Commissioning**
- **Products for Advanced Safety**
- **EMote - IoT & Remote Diagnostics**
- **CE-LIFE Service**

Services for you

At ElectroMech, we pursue the concept of offering 'Service at your doorstep' for reaching 'Zero downtime' and building 'Lifetime relationships'.

Our experienced and trained team is strategically located across the regions, supported by a strong logistics and inventory management system with quick access to spares. We have a knowledge bank on a variety of cranes and applications, and a host of products to optimise crane efficiency.

Our team is well trained on various aspects to ensure a very high up time of your cranes and ensure safe operations. This training includes crane architecture, systematic methods for quick diagnosis of problems and quicker methods to solve them, domain knowledge, safety procedures to be followed while working in your plant, precautions to ensure safe working of cranes, etc.

Once you engage us, your cranes are in safe hands.

CE-LIFE Service

- Know the remaining service life of your crane
- Conduct safe operations
- Extend asset life
- Plan your investments

After a certain period when the crane is subject to rigorous use and fatigue, it requires to be audited for performance and to know threat perception.

CE-LIFE is a service offering from ElectroMech that conducts such audit and lets you know the balance working life of your crane using a scientific approach, advanced tools and equipment, and various engineering models.

How do we go about conducting a CE-LIFE audit?

The Crane Condition and Performance Assessment under CE-LIFE includes,

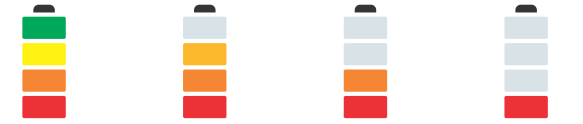
- Inspection and assessment of the present condition of the crane and its components
- Study of the prevailing operational aspects and the usage pattern of the crane
- Analysis and identification of consumption (as a percentage) of the Design Working Period (DWP) of crane components to indicate their remaining life
- Recommendation on operational, maintenance and safety aspects to enhance reliability, minimize downtime, and improve safety and the life of the crane

The design analysis is carried out as per ISO 12482 Part 1 guidelines. Such an analysis further gives an idea about the Load Spectrum as per FEM.

Taking into consideration the Class of Duty and Load Spectrum, the Class of Utilization can be determined, which is a good indicator of the Remaining Life of all critical components of the crane, such as the Main Hoist, Auxiliary Hoist, CT Mechanism, LT Mechanism, Structure, Hook Block, Rope Drum, etc.

Unique method to indicate equipment life

For a very clear assessment of your crane and better understanding of it, we have developed a unique crane health indicator tool.



Healthy Condition	Health required to be checked on periodic basis	Immediate care required	Intensive care required

Benefits of CE-LIFE

- **Planning CAPEX –** Gives you sufficient time to plan your investment
- **Safety hazards can be foreseen –** Advance knowledge about the end-of-life condition can help avert untoward incidents.
- Postpone major investment through refurbishment and modernization
- Sometimes, refurbishment will suffice and is more economical than buying a new crane
- Optimum utilization of the asset
- Giving additional life to your crane

Services

EMote Service

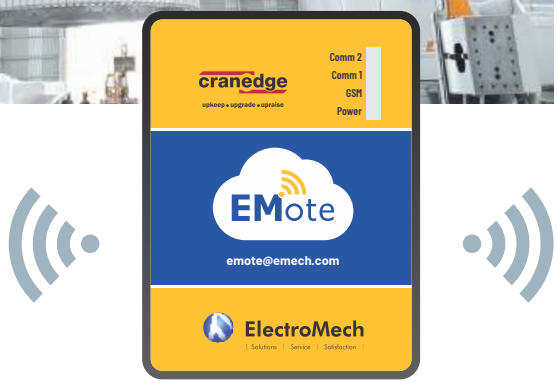
Effective use of IoT for maximising productivity and minimising downtime

EMote
IoT Industry 4.0

Tech-enabled Solutions

Emote is helpful in remote diagnostics of crane health and offers remote support for maintenance. Various sensors and condition monitoring devices fitted on the crane collect and transmit data in real time. The information is displayed in easy-to-understand formats such as graphs and tables. Such data can be easily accessed by the customer and the ElectroMech team to make an informed decision about proactive and preventive maintenance.

By using EMote, the ElectroMech team is able to provide remote support. Promptly attending to such issues helps in improving productivity and workplace safety.



Remote diagnostics of crane health, usage patterns and possible risks. Remote support for timely maintenance.

To know more about EMote, talk to our Service Engineer.

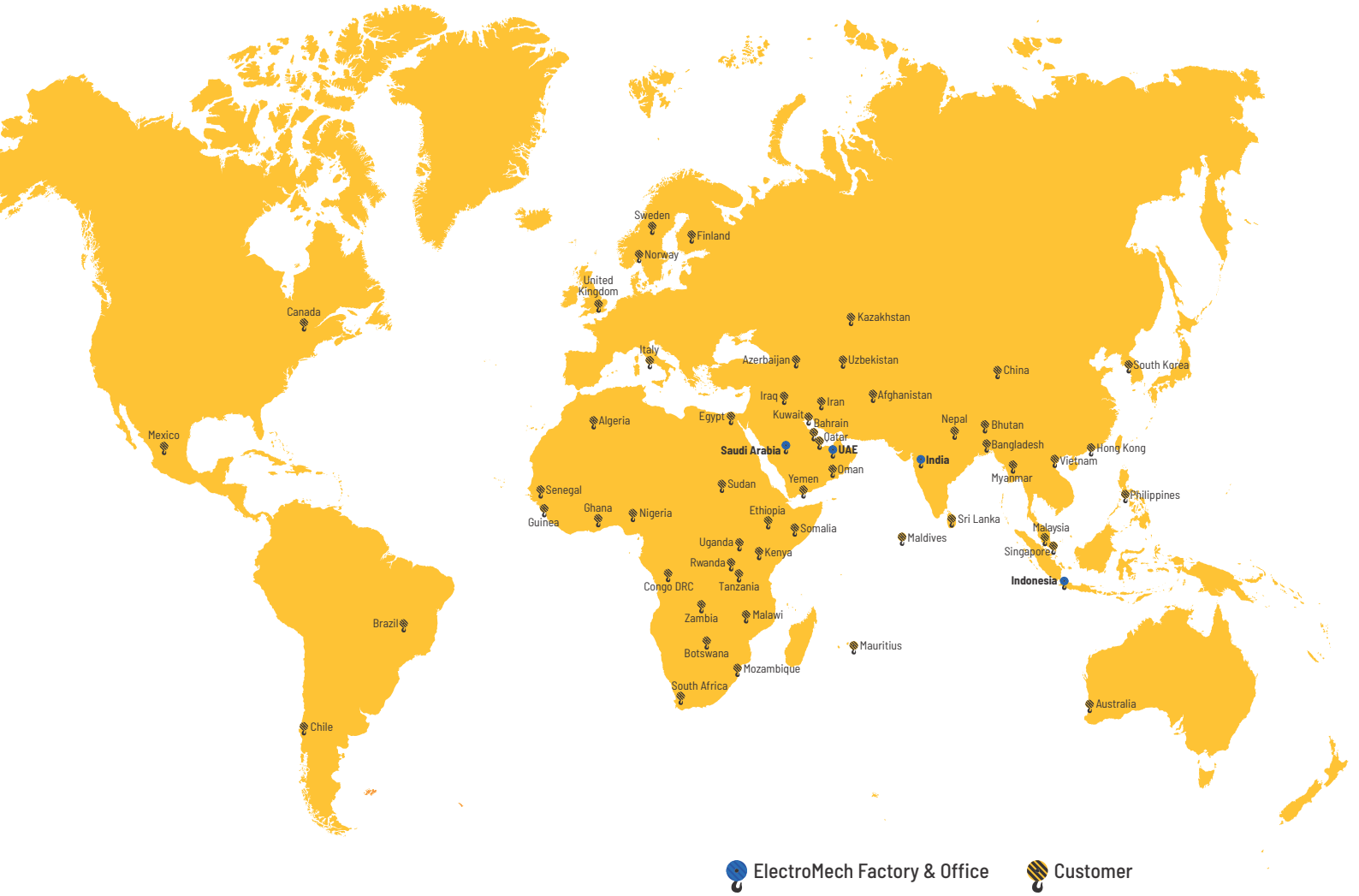
A World of Satisfaction

ElectroMech has earned a noteworthy reputation of being a most reliable name in the field of material handling systems through its products and prompt, efficient service. Our clients all over the world have been experiencing a delight and satisfaction.

The sturdy ElectroMech cranes are operating year-after-year in extreme climatic conditions, irrespective of whether it is the sweltering heat of Rajasthan or the Middle East, or the biting chill of the Himachal or Afghanistan.

Our experience with cranes, installed at small workshops as well as at gigantic shipyards, expands our knowledge base. We are inspired to sharpen it further for designing advanced cranes for more critical applications.

Our happy customers all over are a source of immense satisfaction for team ElectroMech.



This is a pictorial representation and does not purport to be the political map.

ElectroMech Material Handling Systems (India) Pvt. Ltd.

Gat No. 316, At post Kasar Amboli,
Tal. Mulshi, Dist. **Pune** 412 115 **INDIA**

Telefax:+91-20-6654 2222
E-mail: cranes@emech.in

Pt. ElectroMech Manufacturing Industries

Jl. Jati Raya Blok J 10 No. 01B,
Newton Techno Park, Desa Serang,
Cikarang Selatan, Kab. Bekasi,
Jawa Barat 17530, **Indonesia**

Tel.: +62 21 899 23111
E-mail: contactus@emech.id

ElectroMech Industry Company

Al Thabat Building, Office # 4,
2nd Floor, King Saud Street,
Shamaliya, P. O. Box 20216,
Al Khobar, Eastern Province,
Kingdom of Saudi Arabia

Tel.: +966- 53 496 6487
E-mail: contactus@emech.sa

Electro Mech Equipment Trading LLC

Shop No. 8, Sector No. 44,
Plot No. 13, Mussafah Industrial
Area, **Abu Dhabi, UAE**

Tel.: +971-2-5588035
Fax: +971-2-5588235
E-mail: contactus@emech.ae

ElectroMech

Solutions | Service | Satisfaction |

ElectroMech FZE

LOB 19 1002, P. O. Box 263019,
Jebel Ali Free Zone, **Dubai, UAE**

Tel.: +971-4-8857466
Fax: +971-4-8857655
E-mail: contactus@emech.ae

Manufacturing Facilities & Offices

India | Indonesia | Saudi Arabia | UAE

www.emech.com

follow us on:

20250108127

Int. Profile - 05 / 0125 / D / KaleidoscopeB2B.com