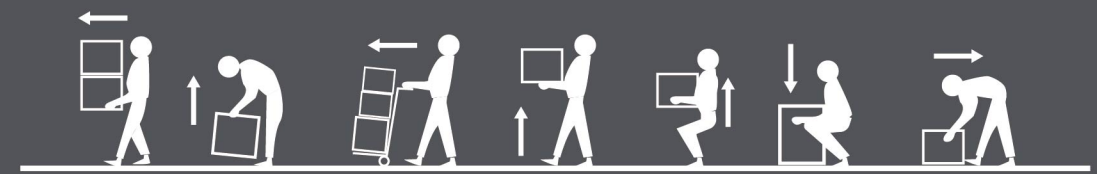




## **Liftoal, derived from 'Lift to All'.**

It embodies our mission to make ergonomic lifting accessible to **every workplace, ensuring safety and efficiency for all.**



Ergonomic Excellence | Elevate Safety | Lift Smart | Efficiency in Motion | Workplace Wellness

## About Ergonomics

Industrial ergonomics plays a vital role in optimizing workplace design and practices to promote worker health, safety, performance and productivity in industrial settings. By integrating ergonomic principles, solutions and equipment into all aspects of work design and management, organizations can achieve greater efficiency, productivity, and employee satisfaction while reducing the risk of work-related injuries and errors.

### 01



#### Comprehensive Hazard Mitigation

Industrial ergonomics encompasses the identification and mitigation of ergonomic risks and human errors in the workplace. By addressing factors such as repetitive tasks, awkward postures, excessive force exertion, and inadequate workstation design, ergonomic interventions aim to reduce both the risk of musculoskeletal disorders (MSDs) and the occurrence of human errors. This proactive approach enhances worker safety, reduces injuries, and improves overall productivity.

### 02



#### Worker Well-being and Productivity

Prioritizing ergonomic principles leads to improved worker comfort, health, and satisfaction, ultimately enhancing productivity and efficiency. By designing workstations, tools, and processes with ergonomics in mind, companies can minimize fatigue and discomfort, leading to fewer errors, reduced absenteeism, and increased job satisfaction.

### 03



#### Customized Solutions

Effective industrial ergonomics involves tailoring solutions to the specific needs and tasks of individual workers and workplaces. This includes implementing adjustable workstations, ergonomic tools and equipment, job rotation, training programs, and ergonomic assessments to address unique challenges and optimize ergonomic performance.

Automobile

Logistics

Manufacturing

Innovation

Reel & Roll



Make your work as enjoyable as playing



## AUTOMOBILE

  
Passenger Car

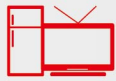
  
Commerical Vehicle


  
Auto Parts

## MANUFACTURING

  
Machinery & Assembling

  
Chemical & Pharmacy

  
Home Appliances

  
Food & Beverage

## LOGISTICS

  
Warehouse

  
Baggage Handling

  
Container Unloader

## INNOVATION

  
EV Battery

  
Pack Handling

  
New Material

## REEL & ROLL

  
Material Feeding

  
Product Unloading

  
Shaft Handling



## AUTOMOBILE

Industrial manipulators are essential in automobile manufacturing, playing vital roles across production stages. In final assembly lines, they seamlessly integrate components like seats, doors, and dashboards. In welding lines, they meticulously assemble parts to form structurally sound bodies. Additionally, in auto parts production lines, manipulators streamline processes to meet increasing demands.

Beyond traditional pneumatic manipulators, semi-automatic and fully automatic manipulators equipped with advanced features have gained popularity. These cutting-edge systems enhance efficiency and accuracy, driving progress within automotive manufacturing.

■ Passenger Car

■ Commercial Vehicle

■ Auto Parts





## LOGISTICS

In the logistics industry, where efficiency and safety are paramount, industrial manipulators play a vital role in meeting these demands. With robust lifting capabilities and remarkable flexibility, these manipulators are tailor-made to streamline various tasks within logistics operations. Equipped with customizable lifting attachments, such as claws designed to accommodate diverse shapes and sizes of goods, industrial manipulators excel in swiftly and accurately executing a range of handling tasks.

By integrating industrial manipulators into logistics processes, companies can significantly enhance their operational efficiency. Furthermore, the reduction in labor costs and the ability to handle tasks with greater accuracy contribute to overall cost-effectiveness and competitiveness in the industry.

■ Warehouse

■ Baggage Handling

■ Container Unloader



## MANUFACTURING

In the modern manufacturing industry, the complexity of assembly requirements presents challenges for traditional lifting equipment such as cranes and hoists. For instance, the substantial torque generated during bolt tightening often results in failures. To address this issue, the adoption of versatile industrial manipulators has become essential. These cutting-edge manipulators offer unmatched flexibility, enabling precise and reliable handling of complex assembly tasks.

In essence, industrial manipulators serve as a transformative solution for modern manufacturing challenges, empowering businesses to overcome assembly obstacles, mitigate operational risks, and achieve higher levels of productivity and quality.

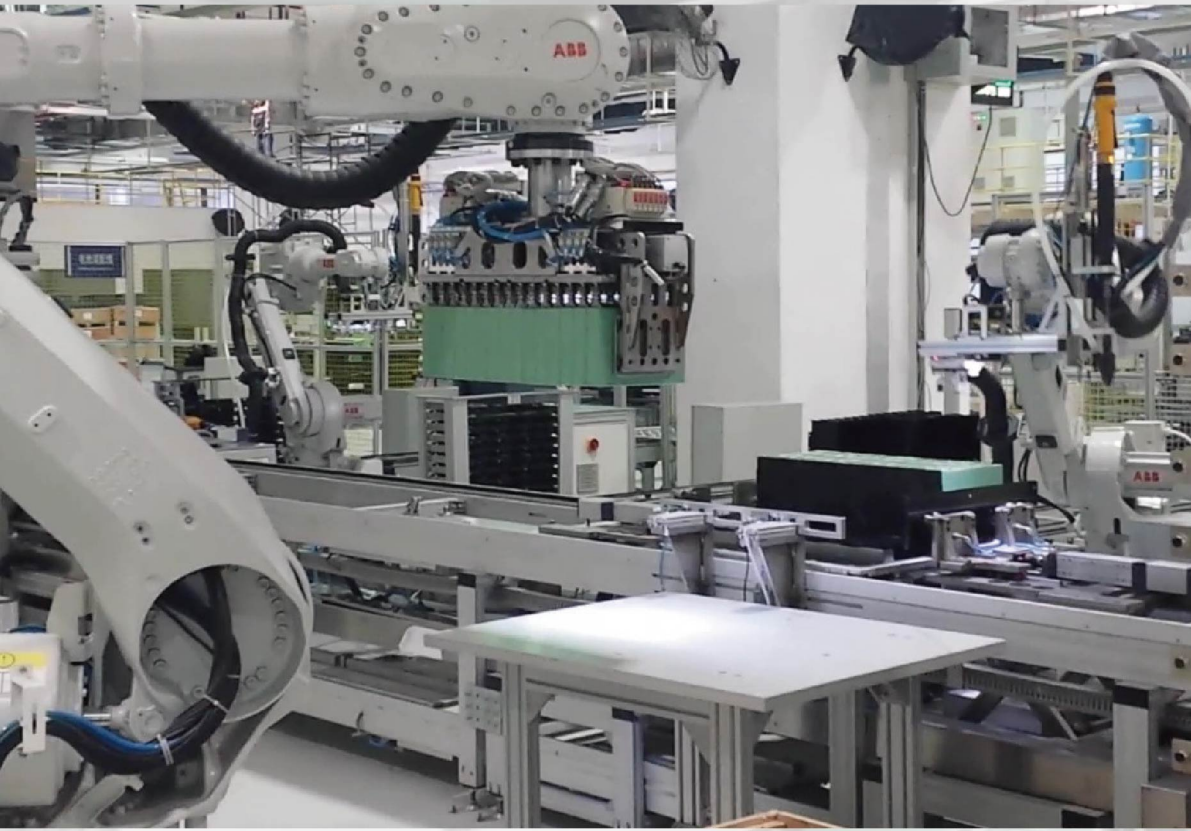
- Machinery & Assembling
- Chemical & Pharmacy
- Home Appliances
- Food & Beverage



## INNOVATION

In the production of innovation product, such as EV battery cells and modules, various industrial manipulators are essential for tasks such as electrode coating, baking, winding, lamination, formation, volume separation, packaging, and offline processes. Given the fragility of the parts' outer surfaces, industrial manipulators are vital to maintain the integrity of the components at every stage of the manufacturing process.

These manipulators serve crucial functions in handling materials and parts, guaranteeing precision and efficiency throughout the production line. In the innovation industry, their significance becomes even more pronounced as they enable seamless execution of intricate processes, ultimately contributing to the advancement of cutting-edge technologies.



■ EV Battery

■ Pack Handling

■ New Material

## REEL & ROLL

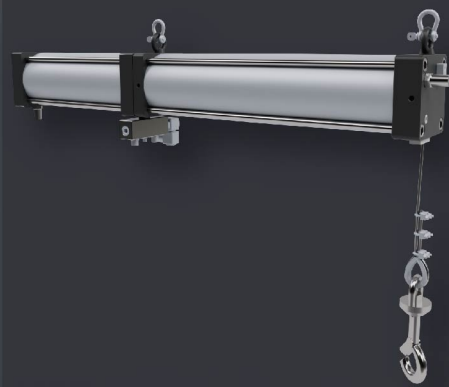
In the high-speed reel and roll production process, efficiency is paramount. Industrial manipulators are essential for expediting operations and ensuring continuous and efficient handling.

These specialized manipulators are engineered to swiftly and precisely maneuver reels and rolls, enabling seamless transitions between production stages. By tailoring the forks to match the specific dimensions and weight of the objects, operators can optimize handling procedures, reducing downtime and maximizing productivity.



- Material Feeding
- Product Unloading
- Shaft Handling

Air balancer



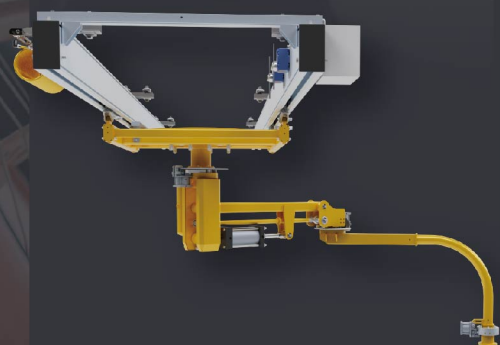
SolidGrip ProBooster



RailGlide TeleBooster



Jib Crane FoldingAssistor



SolidGrip MiniBooster



SolidGrip SuperBooster



Jib Crane Assistor



■ Gripper



■ Rail System



■ Liftoal Air Balancer



■ Intelligent Balancer

## Gripper

Grippers, also referred to as jigs or fixtures, are devices crafted to simplify and enhance the lifting, picking up, or holding of objects. They mimic the capabilities of the human hand, especially for tasks demanding precise positioning and delicate object handling. Grippers are available in diverse types customized for specific applications, ensuring adaptability across a wide range of industries and tasks.



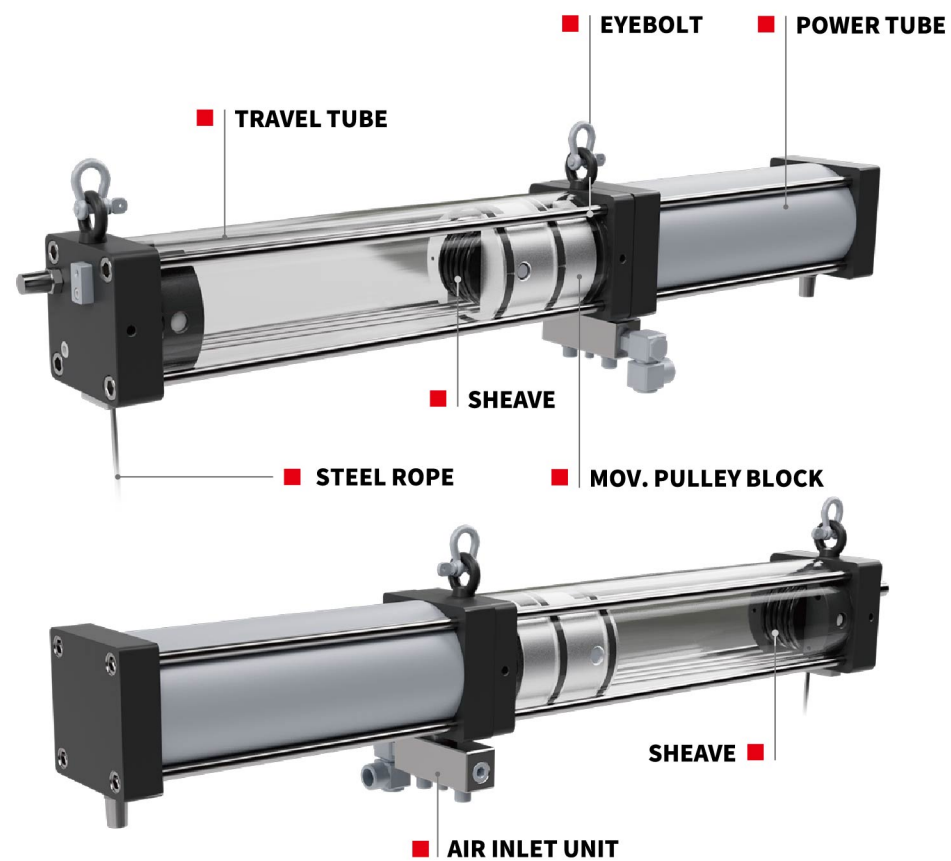
### System Components

An industrial manipulator consists of numerous components, such as lifting arms, pneumatic or intelligent balancers, grippers, rail systems, control systems, and so on. Drawing from two decades of experience, LIFTOAL has developed a comprehensive range of system components and delivered a series of industrial manipulators tailored to diverse industries.

## Liftoal Air Balancer

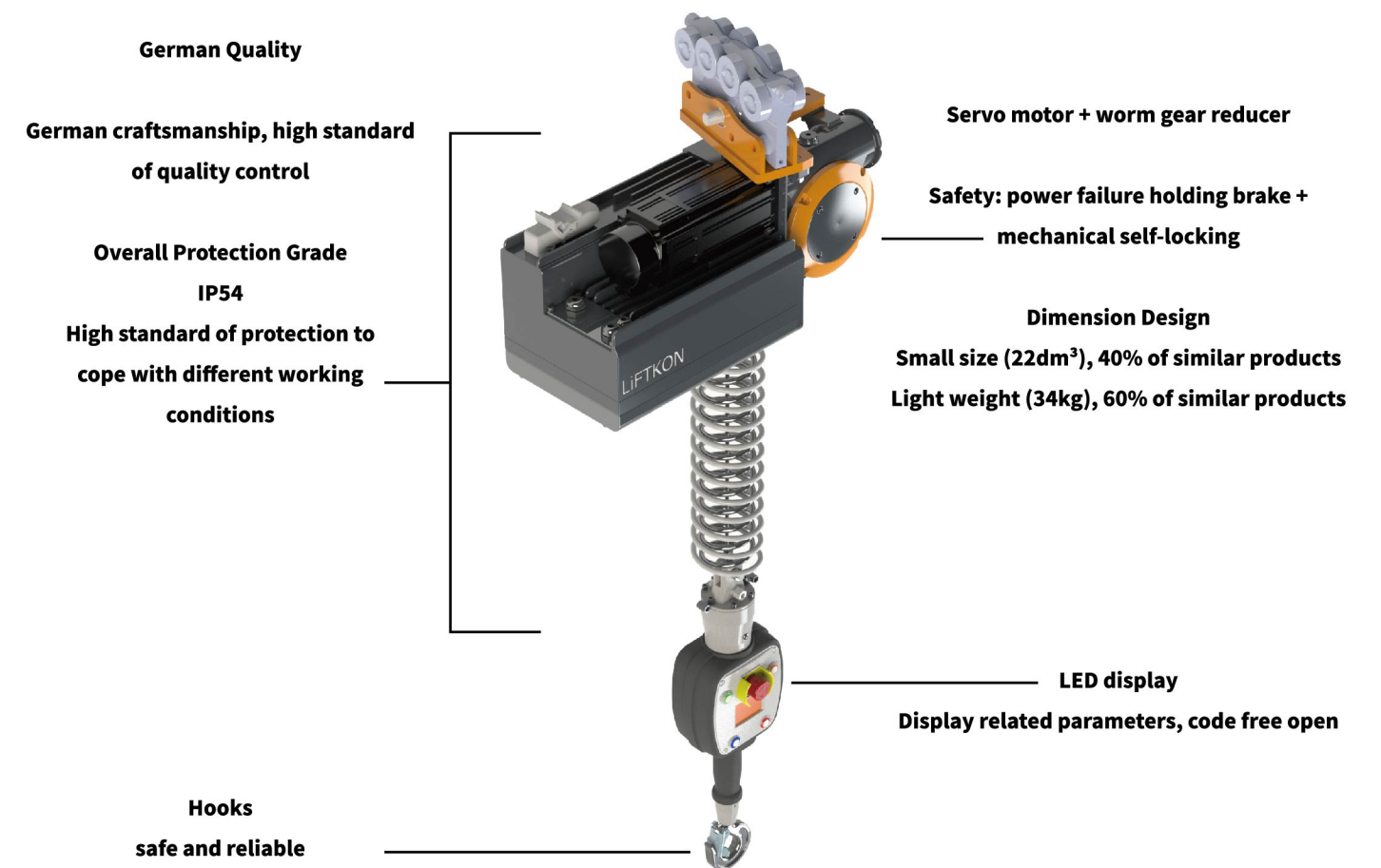
LIFTOAL ergonomically designed air balancer, perfect for repetitive lifting tasks. It seamlessly integrates with a diverse range of manipulators and lifting equipment, offering versatility across various assembly and manufacturing industries. Its user-friendly design ensures effortless operation, making it an ideal solution for streamlining lifting processes and enhancing efficiency in your operations.

- Reduces Operator Fatigue and Related Injuries.
- “Float” function of a range of 100-150mm Up or down
- Simple to Operate
- Easy to Install and Maintenance
- No Expensive Electronic Components contained



## Intelligent Balancer

Intelligent Balancers redefine lifting and maneuvering tasks with cutting-edge technology. By blending machine strength with human-like perception, these devices optimize operational efficiency. They excel in lifting heavy objects onto pallets, performing repetitive motions, and achieving high-precision positioning. Intelligent Balancers streamline operations while prioritizing safety and precision, making them ideal for a wide range of tasks.



## Rail System

Originating from Europe, our rail system design innovatively combines various movements in the X, Y, and Z directions of the coordinate system, facilitating the lifting and handling of heavy objects in space. Utilizing a combination of linear movements, it enables effortless navigation in three-dimensional space, particularly on flat surfaces, achieved through a low-damping rail system. Meticulous craftsmanship is evident in the design, with attention to detail in components such as rails, trolleys, and rail accessories. The damping of linear horizontal movements is significantly reduced, ensuring a smoother and gentler movement experience.



■ Modularization

■ Integrated Design

■ Versatile Combination Applications

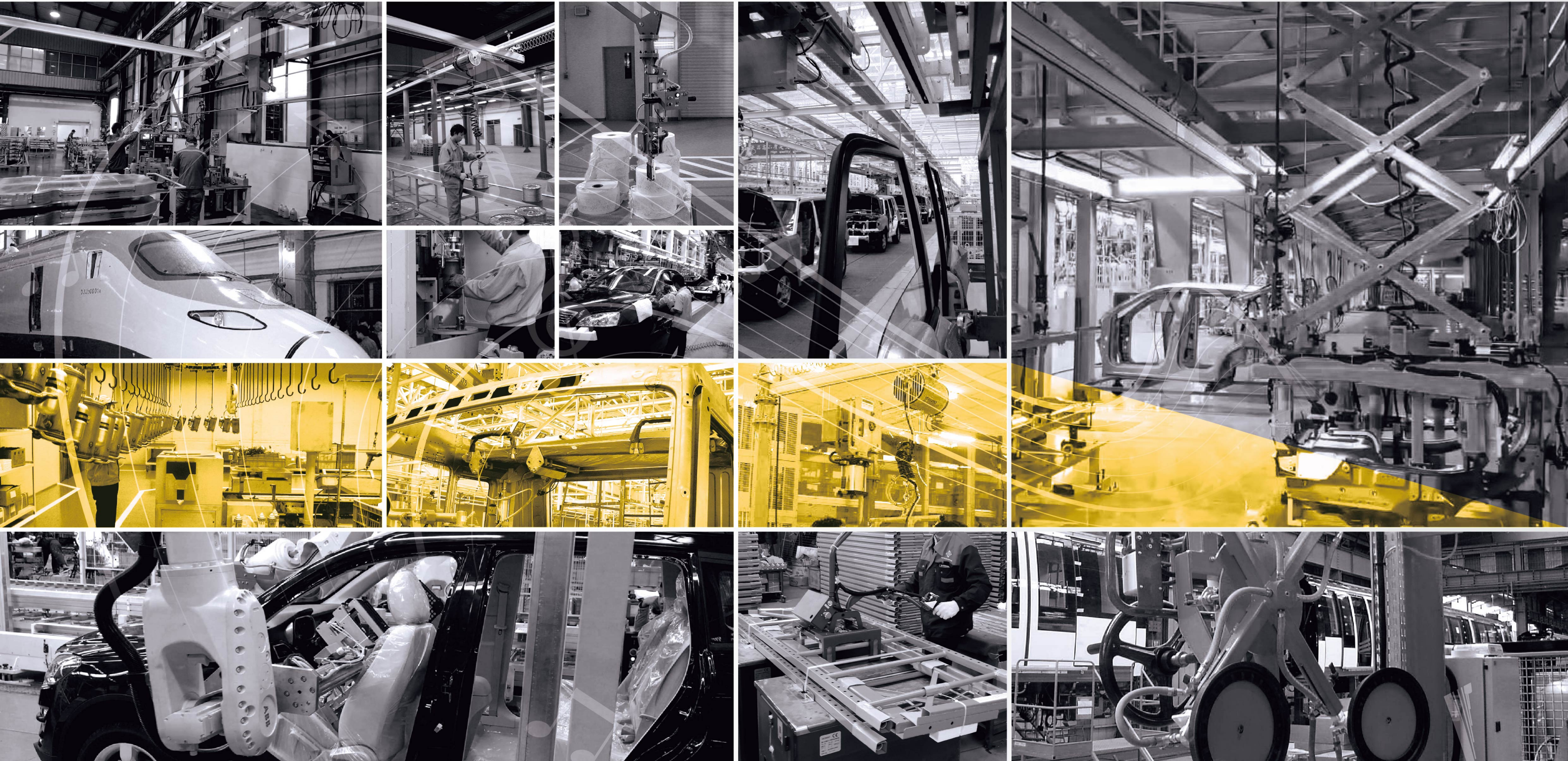
# ERGONOMIC LIFTING SOLUTIONS

Your Smarter Lifting Solution Partner

The logo for LIFTOL, featuring the word "LIFTOL" in a bold, black, sans-serif font. A red swoosh underline is positioned above the letters "I", "F", and "T". A small red dot is placed to the right of the letter "L".

LIFTOL

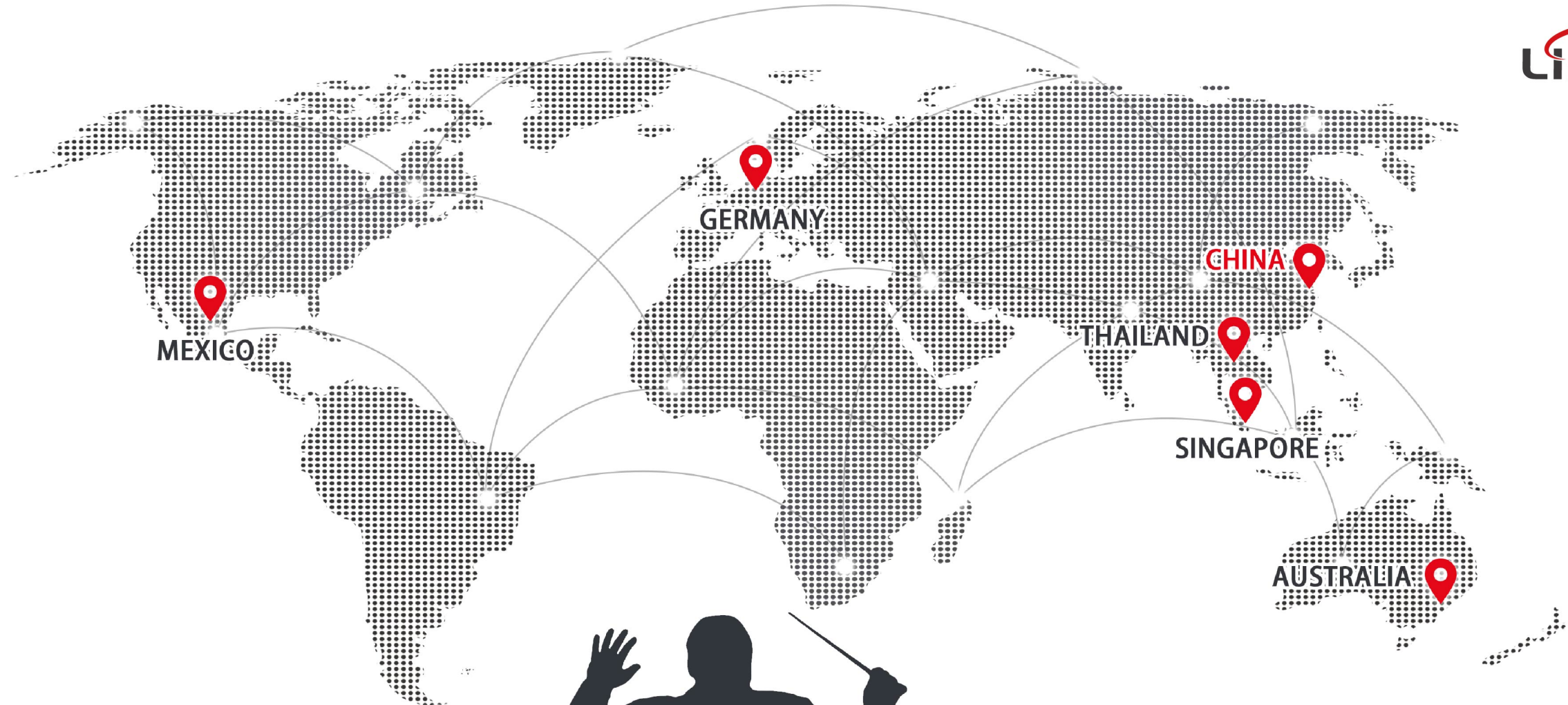
**2000** ..... **2005** ..... **2010** ..... **2015** ..... **2020** ..... **Present** .....



# About Us

## INDUSTRIAL MANIPULATOR EXPERT

With over 20 years of experience in industrial manipulator applications, LIFTOAL is committed to delivering ergonomic material handling solutions for enterprises worldwide. Our expertise spans from transfer, assembly, and high-precision positioning to torque protection for bolt tightening, machine feeding, product packaging, and high-frequency logistic turnover. Our objective is to alleviate labor burdens, streamline production processes, and enhance work efficiency and safety. We strive to meet customization requirements, ensuring a tailored solution that perfectly fits the unique operations of our customers.



## **YOUR SMARTER LIFTING SOLUTION PARTNER**

We firmly believe that the industry is the foundation of social and economic progress, and that industrial workers deserve the highest level of respect and care. Through the implementation of our smarter, ergonomic lifting solutions, LIFTOAL will assist you in mitigating work-related risks, optimizing production workflows, enhancing overall productivity, and ultimately strengthening your market competitiveness across enterprises.