



INDIA'S FIRST INDIGENOUS
INDUSTRIAL ROBOT



ACE Robotics

NEXT STEP IN INDUSTRIAL PRODUCTION

Smart, Reliable & Affordable



Solutions to your **Production Problems**

www.acerobotics.in

+91 95000 39024, +91 95000 37053

Why Choose Us?



Improved Accuracy & Efficiency

- **Precision & Quality Control:** Achieves sub-millimeter precision while significantly improving quality control and reducing material waste or rework.
- **Enhanced Safety & Ergonomics:** Protects workers by automating hazardous tasks, heavy lifting, and difficult positioning, leading to a drastic reduction in workplace injuries.
- **Maximum Production Uptime:** Enables 24/7 continuous production at high speeds, handling repetitive operations far more efficiently than manual labor.
- **Solves Labor & Fatigue Issues:** Bridges the gap in labor shortages while eliminating human error and fatigue-related mistakes common in repetitive manual work.

Key Advantages

- **Increased Output & Speed:** Drives higher productivity and throughput while significantly shortening cycle times.
- **Cost & ROI Efficiency:** Lowers long-term labor costs and reduces operational downtime, typically delivering a full ROI within 18–24 months.
- **Consistent & Flexible Performance:** Ensures steady manufacturing performance and allows for flexible automation across multiple different tasks.
- **Market Competitiveness:** Improves product accuracy and safety, making the facility more competitive in the global manufacturing landscape.

Common Use Cases We Solve



Industrial Painting Robot

Delivers precise, uniform coating with advanced spray control. Ensures high-quality finishes while reducing material waste. Designed for continuous operation in demanding environments. Improves efficiency, safety, and overall production quality.



Pick and Place Robot

Fast, accurate handling for components of any size. Streamlines assembly and packaging with seamless motion control. Supports high-speed production lines without slowdowns or error. Boosts throughput while ensuring consistent placement accuracy.



Grinding / Buffing Robot

Achieves consistent surface finishing with precision and control. Automates grinding, deburring, and polishing for flawless results. Reduces manual effort and improves worker safety in high-risk tasks. Delivers smooth, uniform finishes for metals, alloys, and complex parts.

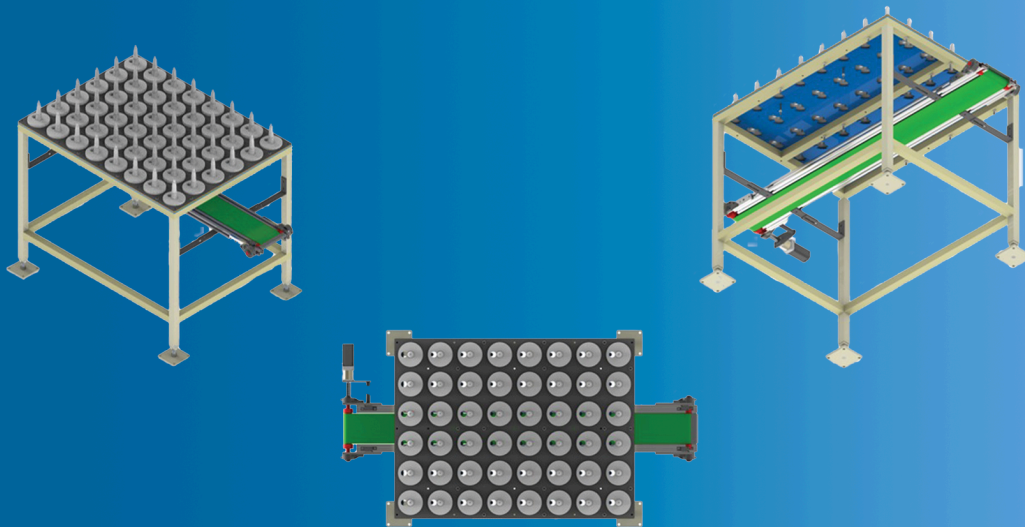


Welding Robot

Provides strong, clean welds with superior repeatability. Automates MIG and spot welding applications with ease. Enhances operator safety in high-heat environments. Delivers reliable performance for heavy-duty manufacturing.

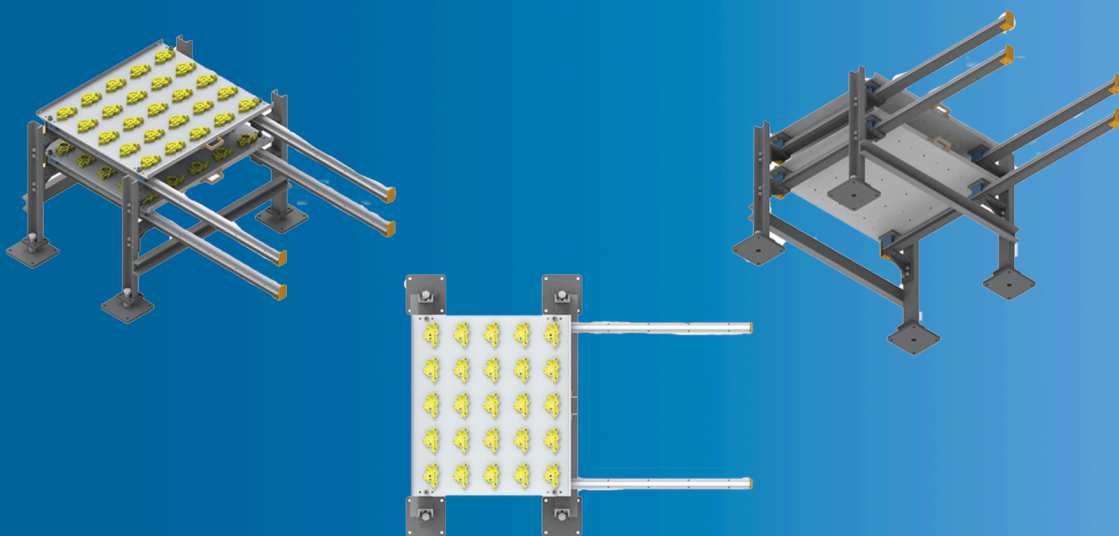


Flexible, Accurate Pallet System and Robust Power Supply



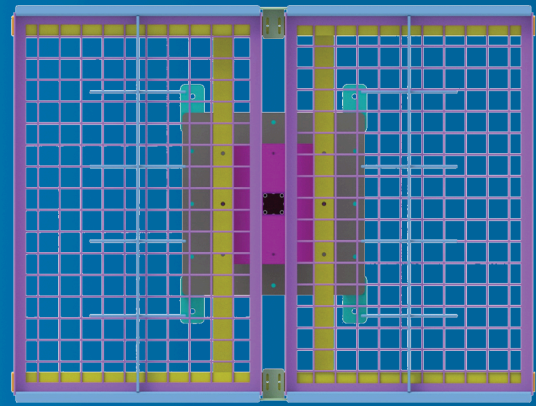
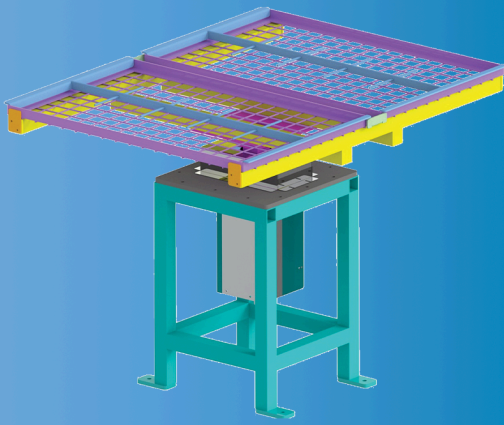
Input–Output Pallet System

- o Designed for seamless part feeding and discharge in automated pick-and-place applications.
- o Precision-engineered fixture layout ensures accurate positioning for consistent robot handling.
- o Integrated conveyor interface enables smooth loading, unloading, and reduced cycle time.
- o Robust steel structure delivers high durability for continuous industrial operation.
- o Ideal for improving throughput, minimizing manpower, and achieving reliable, repeatable automation.



Movable Pallet System

- o Engineered with linear guide rails for smooth and precise pallet transfer between loading and robotic work zones.
- o Enables quick changeover and continuous production by allowing offline loading and unloading.
- o Accurate part positioning ensures reliable pick-and-place performance with minimal downtime.
- o Heavy-duty structure and guided motion provide stability, safety, and long service life.
- o Perfect for high-mix, high-volume automation lines to maximize productivity and workflow efficiency.



Rotary Painting Fixture

- o Designed with a precision rotary indexing mechanism to present parts at optimal angles for uniform paint coverage.
- o Enables continuous loading, rotation, and unloading to reduce cycle time and increase throughput.
- o Stable, vibration-free structure ensures consistent positioning for high-quality finish and repeatability.
- o Supports multi-side coating in a single setup, minimizing manual handling and overspray losses.
- o Ideal for automated robotic painting lines requiring accuracy, efficiency, and superior surface finish.



Drive & Control Integrated Electrical Cabinet

All-in-one cabinet integrating robot drives, PLC, safety circuits, and control systems for centralized automation management. Optimized layout ensures reliable power distribution, clean wiring, and easy maintenance access. High-performance drives deliver precise motion control and smooth, synchronized robotic operation. Built with industrial-grade components and protection features for safe, continuous shop floor use. Compact, plug-and-play design reduces installation time, simplifies troubleshooting, and enhances system efficiency.

Robotic Welding Power Source

Advanced inverter-based power source engineered for stable arc performance and superior weld quality. Delivers precise control of current, voltage, and wire feed for consistent, repeatable robotic welding. High-speed communication interface ensures seamless integration with automated robot systems. Energy-efficient design reduces power consumption while maintaining high duty cycle operation. Ideal for MIG applications in demanding industrial environments requiring reliability and productivity.



Our Robot Series

MEET THE i+Series FAMILY - 3kg/6kg/20kg/30kg/50kg

The i+ series family has two members the i+Lite and i+Duo. Each robot offers different processing capabilities and they share the same ease of use and dependability that makes them a valuable addition to any production facility. i+ series robots can typically work on the production line, thanks to a built-in configurable programming interface. Greater productivity, improved product quality, reduced cost and peace of mind are ways we're making automation accessible to everyone.

i+Lite

Small but powerful, the i+ Lite robot has a payload of 3kg/6kg/20kg/30kg/50kg and reach radius of 1000mm/1200mm/1850mm/2550mm. With 360-degree rotation, this low payload robot handles **1 CNC Machine Tending** jobs with high precision and can easily perform any repetitive tasks with ease.

i+Duo

Small but powerful, the i+ Duo robot has a payload of 3kg/6kg/20kg/30kg/50kg and reach radius of 1000mm/1200mm/1850mm/2550mm. With 360-degree rotation, this low payload robot handles **2 CNC Machine Tending** jobs with high precision and can easily perform any repetitive tasks with ease.



Model	i+Lite 3kg	i+Duo 3kg	i+Lite 6kg	i+Duo 6kg	i+Lite 20kg	i+Duo 20kg	i+Lite/Duo 30kg	i+Lite/Duo 50kg
SPECIFICATION								
Payload	3kg	3kg	6kg	6kg	20kg	20kg	30kg	50kg
Reach	1000mm	1000mm	1200mm	1200mm	1850mm	1850mm	3165mm	2550mm
Degrees Of Freedom	6 DoF	6 DoF	5/6 DoF	6 DoF	6 DoF	6 DoF	6 DoF	6 DoF
Programming	10 inch touch input with GUI application	10 inch touch input with GUI application	10 inch touch input with GUI application	10 inch touch input with GUI application	10 inch touch input with GUI application	10 inch touch input with GUI application	10 inch touch input with GUI application	10 inch touch input with GUI application
PERFORMANCE								
Power Consumption (Max Utilisation)	900W	950W	1900W	2100W	6000W	6000W	6500W	9000W
Power Consumption (Nominal Utilisation)	400W	450W	950W	1050W	4500W	4500W	4500W	7500W
MOVEMENT								
Positional Accuracy	+/- 0.5mm	+/- 0.5mm	+/- 0.05mm	+/- 0.05mm	+/- 0.05mm	+/- 0.05mm	+/- 0.07mm	+/- 0.1mm
Positional Repetability	+/- 0.05mm	+/- 0.05mm	+/- 0.05mm	+/- 0.05mm	+/- 0.05mm	+/- 0.05mm	+/- 0.07mm	+/- 0.1mm
AXIS MOVEMENT (deg)								
Axis 1	-150 to +150	-150 to +150	-150 to +150	-150 to +150	-150 to +150	-150 to +150	±160	±160
Axis 2	0 to +130	0 to +130	0 to +130	0 to +130	0 to +130	0 to +130	±70	±70
Axis 3	0 to +130	0 to +130	0 to +130	0 to +130	0 to +130	0 to +130	-75/+115	-75/+115
Axis 4	-90 to +100	-90 to +100	-90 to +100	-90 to +100	-90 to +100	-90 to +100	±180	±180
Axis 5	-90 to -90	-90 to -90	-90 to -90	-90 to -90	-90 to -90	-90 to -90	±120	±125
Axis 6	-180 to +90	-180 to +90	-180 to +90	-180 to +90	-180 to +90	-180 to +90	±360	±360
MAX SPEED (deg/sec)								
Axis 1	90	90	90	90	90	90	89	84
Axis 2	90	90	90	90	90	90	85	52
Axis 3	90	90	90	90	90	90	88	52
Axis 4	90	90	90	90	90	90	245	245
Axis 5	90	90	90	90	90	90	270	223
Axis 6	90	90	90	90	90	90	337	223
FEATURES								
I/O ports								
Digital input	12	12	12	12	12	12	12	12
Digital output	12	12	12	12	12	12	12	12
I/O Voltage requirement	24v	24v	24v	24v	24v	24v	24v	24v
I/O Current requirement	600mA to 1.5	600mA to 1.5	600mA to 1.5	600mA to 1.5	600mA to 1.5	600mA to 1.5	600mA to 1.5	600mA to 1.5

Our Seamless Integration Journey

From the first handshake to the final bolt, we ensure your robotic solution is engineered for precision and built for your specific environment.

Phase 1: Discovery & Site Analysis

We don't believe in one-size-fits-all. Our process begins with a deep dive into your operational challenges.

- **Consultative Needs Assessment:** Our sales and engineering experts meet with your team to define the specific problem statement.
- **On-Site Technical Audit:** We visit your facility to capture critical spatial data, environmental variables, and workflow nuances to ensure the robot fits perfectly within your existing footprint.



Phase 2: Bespoke Engineering & Design

This is where your solution takes shape. Our design team focuses on the "Three Pillars" of robotic efficiency:



- **Custom Tooling:** Engineering specialized grippers and End-of-Arm Tooling (EOAT) tailored to your product.
- **Material Handling:** Designing optimized input-output pallet systems for seamless flow.
- **Performance Simulation:** Rigorous cycle time calculations and feasibility studies to guarantee ROI.

Phase 3: Production & Quality Assurance

Once the design is finalized, our procurement and manufacturing teams bring the digital model to life using premium components.

- **Digital Demonstration:** Before shipping, we send you high-definition video proof of your robot performing its intended task in our lab.
- **Factory Acceptance Test (FAT):** We invite you to our premises for a live "Working Model" demonstration. This allows your team to see the speed, precision, and safety features in person.



Phase 4: Deployment & Optimization

We don't just "drop off" a machine; we integrate a new member into your workforce.



- **Seamless Installation:** Our implementation team handles the physical deployment and final integration into your factory floor.
- **Hyper-Care Period:** For the first ~72 hours of operation, our engineers remain on-site to monitor performance, train your staff, and ensure a smooth transition to full-scale production.

Benefits for Clients

INCREASE in

- ⚙️ Production Quantity
- ⚙️ Efficiency
- ⚙️ Quality
- ⚙️ Preference for New Orders
- ⚙️ Respect among Clients & Peers

DECREASE in

- Quality Rejections ⚙️
- No. of Labour ⚙️
- Labor Sourcing Pain ⚙️
- Machine Damages ⚙️
- Non-Productivity Losses ⚙️
- Labour Management Expenses ⚙️

[Accommodation, Transport, Meals, Safety, etc.]

OUR ESTEEMED CLIENTS



and more...

OUR EDUCATIONAL PARTNERS



ACE Robotics Private Limited

sales@acerobotics.in | www.acerobotics.in | +91 95000 39024, +91 95000 37053
ARR Building, 1st Floor, 47A North Phase SIDCO, Thiru Vi Ka Industrial Estate,
Chennai - 600032

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