



## ANMD-MRS3-021 · Industrial Automation

# Industrial Robots

*A Global Sustainability Due Diligence & Market Research Study*

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

## WHY THIS REPORT

Industrial robots automate repetitive, precise and hazardous production tasks, turning manual lines into high-throughput, consistent and flexible manufacturing systems. This decision-grade study sizes the global market three ways — value, units and installed base (thousand units) — across robot type, payload and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

## SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond productivity, industrial robots deliver measurable resource and energy efficiency, productivity and reduced waste, while higher precision and lower scrap strengthen the resource-efficiency story.

**Mapped Sustainable Development Goals:**

|                             |                                       |                                          |
|-----------------------------|---------------------------------------|------------------------------------------|
| <b>SDG 8</b><br>Decent Work | <b>SDG 9</b><br>Industry & Innovation | <b>SDG 12</b><br>Responsible Consumption |
|-----------------------------|---------------------------------------|------------------------------------------|

**Measurable sustainability outcomes assessed:**

- Resource and energy efficiency in production
- Productivity gains and reduced material waste
- Labour augmentation and safer operations
- Energy use, e-waste circularity and workforce transition as material risks

**Framework alignment:** Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

## WHAT'S INSIDE AT A GLANCE

|                                    |                               |                                  |                               |
|------------------------------------|-------------------------------|----------------------------------|-------------------------------|
| <b>53</b><br>Chapters              | <b>9</b><br>Report Parts      | <b>7</b><br>Regions Covered      | <b>40+</b><br>Country Markets |
| <b>2025–32</b><br>Forecast Horizon | <b>4</b><br>Forward Scenarios | <b>25+</b><br>Companies Profiled | <b>3</b><br>SDGs Mapped       |

## REPORT COVERAGE

**Geographic scope:** North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Asia Pacific is the volume leader (China, Japan, South Korea) on robot density and electronics & auto demand; Europe is the technology leader (Germany, Italy, France); North America accelerates on reshoring and automotive; other regions assessed on their own merits.



## MARKET OVERVIEW

### From early adoption to mainstream scale — where automation turns manual lines into high-throughput production.

The industrial robots market is moving from early adoption to mainstream commercial scale. Demand is driven by Industry 4.0 adoption converging with labour, quality and productivity pressure, supported by maturing momentum across Asia Pacific, Europe and North America. The market is read three ways — value, units and installed base (thousand units) — and forecast under four scenarios, each region reported separately.

- Asia Pacific is the volume leader — China, Japan and South Korea, on robot density and electronics & auto demand
- Europe is the technology leader — Germany, Italy and France, on automotive, machinery and automation
- North America accelerates on reshoring and automotive automation
- Productivity and quality are the differentiator — throughput and quality gains plus labour augmentation, increasingly with data-driven optimisation

## REGIONAL OUTLOOK

Across seven reporting regions, the report separates early commercialisation leaders from high-growth and emerging markets — each profiled in full rather than aggregated into Rest of World.

| Region        | Stage             | Lead Markets & Drivers                                        |
|---------------|-------------------|---------------------------------------------------------------|
| Asia Pacific  | Volume leader     | China, Japan, South Korea — robot density, electronics & auto |
| Europe        | Technology leader | Germany, Italy, France — automotive, machinery, automation    |
| North America | Accelerating      | United States, Mexico, Canada — reshoring, automotive         |
| Middle East   | High-growth       | UAE, Saudi Arabia, Turkey — industrial diversification        |
| Latin America | Emerging          | Brazil, Mexico — automotive, manufacturing automation         |
| Africa        | Emerging          | South Africa — manufacturing, industrial automation           |

## KEY MARKET DRIVERS & RESTRAINTS

| Drivers                                                                                                                                                                                                                                                                                                                                                                       | Restraints                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Automation + labour-productivity convergence</li><li>• Resource &amp; energy-efficiency, productivity gains</li><li>• Policy support (Industry 4.0, automation &amp; reshoring incentives)</li><li>• Manufacturer cost, labour &amp; throughput economics</li><li>• AI, sensor, connectivity &amp; control technology gains</li></ul> | <ul style="list-style-type: none"><li>• Capital cost &amp; integration complexity</li><li>• Interoperability &amp; legacy-system hurdles</li><li>• Skills, change-management &amp; workforce gaps</li><li>• Component, chip &amp; supply-chain cost inflation</li><li>• Cybersecurity, data-governance &amp; adoption barriers</li></ul> |



## SEGMENTATION SNAPSHOT

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| By Robot Type     | Articulated · SCARA · Cartesian / gantry · delta / parallel · cylindrical          |
| By Payload        | Light (<10 kg) · medium · heavy (>100 kg)                                          |
| By Application    | Automotive & transport · electronics & semiconductors · metal, machinery & general |
| By End User       | Manufacturers · system integrators · OEMs · contract producers · plant operators   |
| By Business Model | Direct sale · system integrator · as-a-service · subscription / licensing          |
| By Scale          | Cell · line · plant-wide                                                           |

## TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 2. Industry Discovery Summary — Industrial Robots
- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

### Part II — Market Intelligence, Sizing, Forecasting and Segmentation

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- › Chapter 6. Market Dynamics
- › Chapter 7. Global Market Size and Forecast, 2020–2032
- › Chapter 8. Market Segmentation Analysis
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### Part III — Regional and Country Intelligence

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### Part IV — Technology, Innovation and Category-Specific Intelligence

- › Chapter 19. Technology Landscape and Architecture
- › Chapter 20. Emerging and Next-Generation Technology Intelligence
- › Chapter 21. Category-Specific Intelligence Module
- › Chapter 22. Research, Innovation and Funding Landscape



## Part V — Company, Competition, Patent and Project Intelligence

- › Chapter 23. Competitive Landscape
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- › Chapter 50. Project Intelligence Annex
- › Chapter 51. Forecast Annex
- › Chapter 52. Sustainability KPI Annex
- › Chapter 53. Reference Annexes

## COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans specialist industrial robot vendors, established automation majors, and system integrators. Deal activity — M&A, technology partnerships and platform consolidation — signals a market consolidating around scalable, integrated automation.

### Representative players profiled in the full report:

FANUC Corporation · ABB Ltd · KUKA AG · Yaskawa Electric Corporation (Motoman) · Kawasaki Heavy Industries, Ltd. · and 20+ further profiled players across robot OEMs, automation majors and system integrators.

**Investment intelligence:** venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a Go / No-Go / Conditional-Go investment verdict.



## KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global industrial robots market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do productivity and quality gains change value versus manual production?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the category align with the SDGs and resource-efficiency goals?

## WHY ANMD — THE DIFFERENCE

*Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate, water and natural-capital intelligence and a decision-ready bankability verdict in a single architecture.*

- › Triangulated sizing — every market read three ways so value, volume and area views reconcile rather than conflict.
- › Region-honest forecasting — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- › Integrated evidence base — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- › No-fabrication discipline — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- › Anti-greenwashing rigour — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- › Decision-first structure — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear Go / No-Go / Conditional-Go investment verdict.

## WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, equipment manufacturers and OEMs, system integrators, contract producers and plant operators, automation and operations leaders, policymakers, and corporate strategy and ESG teams.

### Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com) · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

### Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com). The full detailed table of contents will be sent directly to your registered company email address.