

# **Robot Operating System Market by Robot Type (Articulated, SCARA, Cartesian, Collaborative, Autonomous Mobile, Parallel), Application (Pick & Place, Testing & Quality Inspection, Inventory Management), End User and Region - Global Forecast to 2028**

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## **Abstracts**

The robot operating system market is valued at USD 581 million in 2023 and is projected to reach USD 1,082 million by 2028, growing at a CAGR of 13.2% from 2023 to 2028. The complex design of modular robots and controlling electronics is one of the major restraints in the market's growth.

SCARA robot is expected to grow with significant CAGR during the forecast period.

The SCARA robots fall under the Selective Compliance Assembly Robot Arm or Selective Compliance Articulated Robot Arm. Mostly, the parallel axis jointed robots are termed SCARA robots. Owing to the parallel-axis joint layout, the arm is slightly compliant in the X-Y direction but rigid in the Z direction, and hence, these robots are selectively compliant. The SCARA robots are ideal for the workflow where high-speed operations and confined workspaces are required.

Collaborative robots to account for significantly high CAGR during the forecast period.

The market for collaborative robots is expected to grow with significantly high CAGR during the forecast period. The adoption of collaborative robots has been increased in the recent years as it is very safe in performing light day to day tasks and is compatible with sensors, vision systems among others.

Domestic and personal robotics is expected to have a significant market share during the forecast period.

The domestic & personal robotics market includes service robots and personal assistant robot companions, among others. The service robot's robot operating system is employed to create service robots that assist with household chores such as cleaning, cooking, and organizing. By utilizing robot operating system libraries for navigation, perception, and manipulation, these robots can navigate around the home, recognize objects, interact with the environment, and perform specific tasks.

India to grow with the highest CAGR in the Asia Pacific region during the forecast period.

The market for robot operating systems in India is expected to record the highest CAGR during the forecast period. Many foreign manufacturers are setting up their manufacturing facilities in India as the Indian government levies high import tariffs on automotive vehicles and electronics. KIA Motors (South Korea) has invested in India to manufacture cars for sale within the country. Apple Inc. (US) has decided to manufacture smartphones in India with investments from Wistron (Taiwan) and Foxconn (China). Due to the large scale of operations, warehousing and packaging automation in India represents another opportunity for the market.

In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with key industry experts in the robot operating system space. The break-up of primary participants for the report has been shown below:

By Company Type: Tier 1 – 40%, Tier 2 – 40%, and Tier 3 – 20%

By Designation: C-level Executives – 40%, Directors –40%, and Others – 20%

By Region: North America –40%, Europe – 20%, Asia Pacific– 30%, and RoW – 10%

The report profiles key players in the robot operating system market with their respective market ranking analysis. Prominent players profiled in this report include ABB Ltd. (Switzerland), FANUC (Japan), KUKA AG (Germany), Yaskawa Electric

Corporation (Japan), Denso (Japan), Microsoft (US), Omron Corporation (Japan), Universal Robotics (Denmark), Clearpath Robots (Canada), iRobot Corporation (US), Apart from these, Pal Robotics (Spain), Robotnik (Spain), Rethink Robotics (Germany), Stanley Innovation (US), Husarion (Poland), Nanobiotix (Germany), Shadow Robot (UK), Yamaha Motor (Japan), Estun Automation (China), Shibaura Machine (Japan), Hirata Corporation (Japan), Techman Robot (Taiwan), Franka Emika (Germany), Bosch Rexroth AG (Germany), and Kawasaki Heavy Industries (Japan)

## Report Coverage

The report defines, describes, and forecasts the robot operating system market based on integration with other operating systems, robot type, application, end user industry and region. It provides detailed information regarding drivers, restraint, opportunities, and challenges influencing the growth of robot operating system market. It also analyzes competitive developments such as product launches, acquisition, expansion contract, partnership and action carry out by the key players to grow the market.

## Reasons to Buy This Report

The report will help the market leaders/new entrants in the market with information on the closest approximations of the revenue for the overall robot operating system market and the subsegments. The report will help stakeholders understand the competitive landscape and gain more insight to position their business better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market's pulse and provides information on key drivers, restraint, opportunities, and challenge.

The report will provide insights into the following pointers:

Analysis of key drivers ( Rising R&D funds for industrial automation), restraints (High installation cost of low volume production application), opportunities (Rising adoption of low-cost industrial robots), and challenges (Requirement of advanced robotic application to meet consumer expectation)

Product development /Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the robot operating system market.

Market Development: Comprehensive information about lucrative markets; the report analyses the robot operating system market across various regions.

**Market Diversification:** Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the robot operating system market.

**Competitive Assessment:** In-depth assessment of market share, growth strategies, and services, offering of leading players like ABB Ltd. (Switzerland), FANUC (Japan), KUKA AG (Germany), Yaskawa Electric Corporation (Japan), Denso (Japan), among others in robot operating system market.

## Contents

### **1 INTRODUCTION**

- 1.1 STUDY OBJECTIVES
- 1.2 MARKET DEFINITION
  - 1.2.1 INCLUSIONS AND EXCLUSIONS
- 1.3 STUDY SCOPE
  - 1.3.1 MARKETS COVERED
  - 1.3.2 REGIONAL SCOPE
  - 1.3.3 YEARS CONSIDERED
  - 1.3.4 CURRENCY CONSIDERED
- 1.4 STAKEHOLDERS
- 1.5 SUMMARY OF CHANGES
- 1.6 RECESSION IMPACT

### **2 RESEARCH METHODOLOGY**

- 2.1 RESEARCH DATA
  - 2.1.1 SECONDARY DATA
    - 2.1.1.1 List of key secondary sources
    - 2.1.1.2 Key data from secondary sources
  - 2.1.2 PRIMARY DATA
    - 2.1.2.1 Interviews with experts
    - 2.1.2.2 Breakdown of primaries
  - 2.1.3 SECONDARY AND PRIMARY RESEARCH
    - 2.1.3.1 Key industry insights
- 2.2 MARKET SIZE ESTIMATION
  - 2.2.1 BOTTOM-UP APPROACH
    - 2.2.1.1 Approach to derive market size using bottom-up analysis (demand side)
  - 2.2.2 TOP-DOWN APPROACH
    - 2.2.2.1 Approach to derive market size using top-down analysis (supply side)
- 2.3 MARKET BREAKDOWN AND DATA TRIANGULATION
- 2.4 RESEARCH ASSUMPTIONS AND LIMITATIONS
  - 2.4.1 RESEARCH ASSUMPTIONS
  - 2.4.2 RESEARCH LIMITATIONS
- 2.5 PARAMETERS CONSIDERED TO ANALYZE RECESSION IMPACT ON ROBOT OPERATING SYSTEM MARKET

### **3 EXECUTIVE SUMMARY**

#### **3.1 RECESSION IMPACT ON ROBOT OPERATING SYSTEM MARKET**

### **4 PREMIUM INSIGHTS**

#### **4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN ROBOT OPERATING SYSTEM MARKET**

#### **4.2 ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE**

#### **4.3 ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY**

#### **4.4 ROBOT OPERATING SYSTEM MARKET, BY COUNTRY**

### **5 MARKET OVERVIEW**

#### **5.1 INTRODUCTION**

#### **5.2 MARKET DYNAMICS**

##### **5.2.1 DRIVERS**

5.2.1.1 Rising adoption of automated systems to increase industrial production

5.2.1.2 Increasing deployment of flexible and cost-effective cobots

5.2.1.3 Focus of robot manufacturers on developing affordable robotic systems for

SMEs

##### **5.2.2 RESTRAINTS**

5.2.2.1 Complexities in developing optimal designs of modular robots

5.2.2.2 High installation costs of industrial robotic systems

##### **5.2.3 OPPORTUNITIES**

5.2.3.1 Growing popularity of RaaS model

5.2.3.2 Rapid technological advancements in robotics

##### **5.2.4 CHALLENGES**

5.2.4.1 Interoperability issues associated with IIoT-powered robots

5.2.4.2 Requirement for complex robot programming methods

#### **5.3 VALUE CHAIN ANALYSIS**

#### **5.4 ECOSYSTEM ANALYSIS**

#### **TABLE 1 ROLE OF COMPANIES IN ROBOT OPERATING SYSTEM ECOSYSTEM**

#### **5.5 PRICING ANALYSIS**

##### **5.5.1 AVERAGE SELLING PRICE (ASP) OF INDUSTRIAL ROBOTS**

#### **TABLE 2 AVERAGE SELLING PRICE OF INDUSTRIAL ROBOTS BASED ON PAYLOAD CAPACITY**

#### **TABLE 3 AVERAGE SELLING PRICE OF INDUSTRIAL ROBOTS OFFERED BY TOP 3 COMPANIES (USD)**

- 5.5.2 AVERAGE SELLING PRICE TREND
- 5.6 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES
  - 5.6.1 REVENUE SHIFTS AND NEW REVENUE POCKETS FOR PLAYERS IN ROBOT OPERATING SYSTEM MARKET
- 5.7 TECHNOLOGY ANALYSIS
  - 5.7.1 KEY TECHNOLOGY TRENDS
    - 5.7.1.1 Integration of industrial robots with vision systems
  - 5.7.2 COMPLEMENTARY TECHNOLOGIES
    - 5.7.2.1 Deployment of IIoT and AI technologies in industrial robots
- 5.8 PORTER'S FIVE FORCES ANALYSIS
- TABLE 4 PORTER'S FIVE FORCES ANALYSIS
  - 5.8.1 INTENSITY OF COMPETITIVE RIVALRY
  - 5.8.2 BARGAINING POWER OF SUPPLIERS
  - 5.8.3 BARGAINING POWER OF BUYERS
  - 5.8.4 THREAT OF SUBSTITUTES
  - 5.8.5 THREAT OF NEW ENTRANTS
- 5.9 KEY STAKEHOLDERS AND BUYING CRITERIA
  - 5.9.1 KEY STAKEHOLDERS IN BUYING PROCESS
- TABLE 5 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP 3 END-USER INDUSTRIES (%)
  - 5.9.2 BUYING CRITERIA
- TABLE 6 KEY BUYING CRITERIA FOR TOP 3 END-USER INDUSTRIES
- 5.10 CASE STUDY ANALYSIS
  - 5.10.1 RETHINK ROBOTICS OFFERS BAXTER ROBOTS TO MINIMIZE MANUAL LABOR
  - 5.10.2 CLEARPATH ROBOTICS PROVIDES AUTOMATED VEHICLES TO IMPROVE MINING OPERATIONS
  - 5.10.3 WIND RIVER SYSTEMS DEPLOYS VXWORKS ROS IN ROBOTS TO ENSURE CONSOLIDATED CONTROL
  - 5.10.4 OMRON CORPORATION DEVELOPS AUTONOMOUS INTELLIGENT VEHICLES TO INCREASE WORKPLACE SAFETY
- TABLE 7 USE OF HRC SAFETY SOLUTIONS TO IMPROVE MANUFACTURING PRODUCTIVITY
- TABLE 8 IMPLEMENTATION OF ROBOTIC INTEGRATION PROJECTS TO SUPPORT AGRICULTURAL MANUFACTURING
- TABLE 9 INSTALLATION OF COMPACT ROBOTS TO BOOST PRODUCTION OF RESPIRATORY PROTECTION MASKS
- TABLE 10 DEPLOYMENT OF AUTOMATIC PACKAGING MACHINES TO FACILITATE BULK PALLETIZING



## TABLE 11 ADOPTION OF SCARA ROBOTS TO MINIMIZE HUMAN ERRORS AT MANUFACTURING PLANTS

### 5.11 TRADE ANALYSIS

#### 5.11.1 TRADE DATA FOR HS CODE 847950

### 5.12 TARIFF ANALYSIS

#### TABLE 12 MFN TARIFF FOR INDUSTRIAL ROBOTS EXPORTED BY US, 2022

#### TABLE 13 MFN TARIFF FOR INDUSTRIAL ROBOTS EXPORTED BY CHINA, 2022

#### TABLE 14 MFN TARIFF FOR INDUSTRIAL ROBOTS EXPORTED BY GERMANY, 2022

### 5.13 PATENT ANALYSIS

#### TABLE 15 TOP 20 PATENT OWNERS, 2012–2022

#### 5.13.1 LIST OF MAJOR PATENTS

#### TABLE 16 MAJOR PATENTS RELATED TO ROBOT OPERATING SYSTEMS

### 5.14 KEY CONFERENCES AND EVENTS, 2022–2024

#### TABLE 17 ROBOT OPERATING SYSTEM MARKET: LIST OF CONFERENCES AND EVENTS

### 5.15 REGULATORY LANDSCAPE

#### 5.15.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS RELATED TO ROBOTICS

#### TABLE 18 NORTH AMERICA: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

#### TABLE 19 EUROPE: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

#### TABLE 20 ASIA PACIFIC: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

#### TABLE 21 ROW: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

#### 5.15.2 STANDARDS AND REGULATIONS RELATED TO ROBOTICS

#### TABLE 22 NORTH AMERICA: SAFETY STANDARDS FOR ROBOTICS

#### TABLE 23 EUROPE: SAFETY STANDARDS FOR ROBOTICS

#### TABLE 24 ASIA PACIFIC: SAFETY STANDARDS FOR ROBOTICS

#### TABLE 25 ROW: SAFETY STANDARDS FOR ROBOTICS

## **6 INTEGRATION WITH ROBOTICS SIMULATORS AND SOFTWARE**

### 6.1 INTRODUCTION

#### 6.1.1 GAZEBO

#### 6.1.2 OPENCV

#### 6.1.3 PCL



6.1.4 MOVEIT

6.1.5 ROS-INDUSTRIAL

## **7 ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE**

7.1 INTRODUCTION

TABLE 26 ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2019–2022 (USD MILLION)

TABLE 27 ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2023–2028 (USD MILLION)

7.2 ARTICULATED ROBOTS

7.2.1 RELIANCE ON ARTICULATED ROBOTS TO AUTOMATE INDUSTRIAL OPERATIONS TO DRIVE SEGMENTAL GROWTH

TABLE 28 ARTICULATED ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 29 ARTICULATED ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

7.3 SCARA ROBOTS

7.3.1 ADOPTION OF SCARA ROBOTS IN HIGH-SPEED APPLICATIONS TO CONTRIBUTE TO MARKET GROWTH

TABLE 30 SCARA ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 31 SCARA ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

7.4 PARALLEL ROBOTS

7.4.1 DEPLOYMENT OF PARALLEL ROBOTS IN MATERIAL HANDLING AND PACKAGING TO ACCELERATE SEGMENTAL GROWTH

TABLE 32 PARALLEL ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 33 PARALLEL ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

7.5 CARTESIAN ROBOTS

7.5.1 USE OF CARTESIAN ROBOTS TO ENSURE INDUSTRIAL WORKSPACE AUTOMATION TO DRIVE MARKET

TABLE 34 CARTESIAN ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 35 CARTESIAN ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

7.6 COLLABORATIVE ROBOTS

7.6.1 IMPLEMENTATION OF COLLABORATIVE ROBOTS TO INCREASE EFFICIENCY OF LIGHT-DUTY TASKS TO PROPEL MARKET

TABLE 36 COLLABORATIVE ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 37 COLLABORATIVE ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

7.7 AUTONOMOUS MOBILE ROBOTS

7.7.1 UTILIZATION OF AUTONOMOUS MOBILE ROBOTS TO MINIMIZE HUMAN INTERVENTION TO FUEL MARKET

TABLE 38 AUTONOMOUS MOBILE ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 39 AUTONOMOUS MOBILE ROBOTS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

## **8 APPLICATIONS OF ROS-BASED ROBOTS**

8.1 INTRODUCTION

8.2 PICK & PLACE

8.2.1 INCREASING FOCUS OF INDUSTRIAL PLAYERS ON ENHANCING PRODUCTIVITY TO DRIVE SEGMENTAL GROWTH

8.3 PLASTIC INJECTION & BLOW MOLDING

8.3.1 PRESSING NEED TO AUTOMATE INJECTION MOLDING MACHINERY OPERATIONS TO BOOST DEMAND FOR ROBOTIC SYSTEMS

8.4 PCB HANDLING & ICT

8.4.1 SURGING DEMAND FOR ROBOTS TO PERFORM COMPLEX PCB HANDLING & ICT TASKS TO FUEL MARKET GROWTH

8.5 TESTING & QUALITY INSPECTION

8.5.1 GROWING USE OF AUTONOMOUS SYSTEMS FOR WORKFLOW EFFICIENCY INSPECTION TO CONTRIBUTE TO MARKET GROWTH

8.6 METAL STAMPING & PRESS TRENDRING

8.6.1 RISING INSTALLATION OF AUTOMATED METALWORKING TOOLS IN MANUFACTURING PLANTS TO DRIVE MARKET

8.7 CNC MACHINE TENDING

8.7.1 INCREASING DEPLOYMENT OF ROBOTS TO PERFORM REPETITIVE MACHINE TENDING TASKS TO SUPPORT MARKET GROWTH

8.8 CO-PACKING & END-OF-LINE PACKAGING

8.8.1 SURGING ADOPTION OF ROBOTS TO AUTOMATE PACKAGING TASKS TO BOOST SEGMENTAL GROWTH

8.9 MAPPING & NAVIGATION

8.9.1 RISING INTEGRATION OF MAPPING & NAVIGATION FUNCTIONALITIES INTO ROBOTS TO ACCELERATE MARKET GROWTH

8.10 INVENTORY MANAGEMENT

8.10.1 INCREASING APPLICATIONS OF AUTONOMOUS SYSTEMS IN WAREHOUSE INVENTORY MANAGEMENT TO DRIVE MARKET

8.11 HOME AUTOMATION & SECURITY

8.11.1 GROWING USE OF ROBOTS IN HOME SURVEILLANCE APPLICATIONS TO FUEL SEGMENTAL GROWTH

8.12 PERSONAL ASSISTANCE

8.12.1 INCREASING ADOPTION OF ROBOTS TO PERFORM DAILY TASKS TO CONTRIBUTE TO MARKET GROWTH

## **9 ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY**

9.1 INTRODUCTION

TABLE 40 ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2019–2022 (USD MILLION)

TABLE 41 ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2023–2028 (USD MILLION)

9.2 AUTOMOTIVE

9.2.1 INCREASING USE OF ROBOTS FOR AUTOMOTIVE SUPPLY CHAIN MANAGEMENT TO DRIVE MARKET

TABLE 42 AUTOMOTIVE: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 43 AUTOMOTIVE: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 44 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 45 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2023–2028 (USD MILLION)

TABLE 46 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 47 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2023–2028 (USD MILLION)

TABLE 48 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 49 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2023–2028 (USD MILLION)

TABLE 50 ROW: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY

COUNTRY, 2019–2022 (USD MILLION)

TABLE 51 ROW: ROBOT OPERATING SYSTEM MARKET FOR AUTOMOTIVE, BY COUNTRY, 2023–2028 (USD MILLION)

### 9.3 ELECTRICAL & ELECTRONICS

9.3.1 SURGING DEMAND FOR MINIATURIZED ELECTRICAL & ELECTRONIC EQUIPMENT TO BOOST SEGMENTAL GROWTH

TABLE 52 ELECTRICAL & ELECTRONICS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 53 ELECTRICAL & ELECTRONICS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 54 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 55 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 56 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 57 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 58 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 59 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 60 ROW: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 61 ROW: ROBOT OPERATING SYSTEM MARKET FOR ELECTRICAL & ELECTRONICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

### 9.4 METALS & MACHINERY

9.4.1 RISING ADOPTION OF AUTONOMOUS SYSTEMS IN MACHINE-TENDING APPLICATIONS TO FUEL MARKET GROWTH

TABLE 62 METALS & MACHINERY: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 63 METALS & MACHINERY: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 64 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 65 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 66 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 67 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 68 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 69 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 70 ROW: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 71 ROW: ROBOT OPERATING SYSTEM MARKET FOR METALS & MACHINERY, BY COUNTRY, 2023–2028 (USD THOUSAND)

## 9.5 CHEMICALS, PLASTICS & RUBBER

9.5.1 PRESSING NEED TO INSTALL INDUSTRIAL ROBOTICS SYSTEMS IN CHEMICAL, PLASTICS & RUBBER PLANTS TO DRIVE MARKET

TABLE 72 CHEMICALS, PLASTICS & RUBBER: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD THOUSAND)

TABLE 73 CHEMICALS, PLASTICS & RUBBER: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD THOUSAND)

TABLE 74 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 75 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 76 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 77 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 78 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 79 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 80 ROW: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 81 ROW: ROBOT OPERATING SYSTEM MARKET FOR CHEMICALS, PLASTICS & RUBBER, BY COUNTRY, 2023–2028 (USD THOUSAND)

## 9.6 FOOD & BEVERAGE

9.6.1 SHIFT TOWARD AUTONOMOUS TOOLS FOR FOOD & BEVERAGE PACKAGING TO CONTRIBUTE TO SEGMENTAL GROWTH

TABLE 82 FOOD & BEVERAGE: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD THOUSAND)

TABLE 83 FOOD & BEVERAGE: ROBOT OPERATING SYSTEM MARKET, BY



REGION, 2023–2028 (USD THOUSAND)

TABLE 84 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 85 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 86 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 87 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 88 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 89 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 90 ROW: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 91 ROW: ROBOT OPERATING SYSTEM MARKET FOR FOOD & BEVERAGE, BY COUNTRY, 2023–2028 (USD THOUSAND)

## 9.7 HEALTHCARE

9.7.1 RISING DEPLOYMENT OF ROBOTIC SYSTEMS TO ASSEMBLE MEDICAL DEVICES TO ACCELERATE DEMAND

TABLE 92 HEALTHCARE: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD THOUSAND)

TABLE 93 HEALTHCARE: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD THOUSAND)

TABLE 94 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 95 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 96 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 97 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 98 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 99 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 100 ROW: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 101 ROW: ROBOT OPERATING SYSTEM MARKET FOR HEALTHCARE, BY

COUNTRY, 2023–2028 (USD THOUSAND)

## 9.8 WAREHOUSING & LOGISTICS

9.8.1 INCREASING RELIANCE ON ROBOTICS TO AUTOMATE WAREHOUSING & LOGISTICS TASKS TO SUPPORT MARKET GROWTH

TABLE 102 WAREHOUSING & LOGISTICS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD THOUSAND)

TABLE 103 WAREHOUSING & LOGISTICS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD THOUSAND)

TABLE 104 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 105 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 106 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 107 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 108 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 109 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 110 ROW: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 111 ROW: ROBOT OPERATING SYSTEM MARKET FOR WAREHOUSING & LOGISTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

## 9.9 DOMESTIC ROBOTICS

9.9.1 RISING ADOPTION OF ROS-INTEGRATED PERSONAL ROBOTS TO DRIVE SEGMENTAL GROWTH

TABLE 112 DOMESTIC ROBOTICS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 113 DOMESTIC ROBOTICS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 114 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 115 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 116 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 117 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)



TABLE 118 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 119 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 120 ROW: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 121 ROW: ROBOT OPERATING SYSTEM MARKET FOR DOMESTIC ROBOTICS, BY COUNTRY, 2023–2028 (USD THOUSAND)

#### 9.10 OTHERS

TABLE 122 OTHERS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD THOUSAND)

TABLE 123 OTHERS: ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD THOUSAND)

TABLE 124 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 125 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 126 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, 2019–2022 (USD THOUSAND)

TABLE 127 EUROPE: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, 2023–2028 (USD THOUSAND)

TABLE 128 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 129 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, BY COUNTRY, 2023–2028 (USD THOUSAND)

TABLE 130 ROW: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, BY COUNTRY, 2019–2022 (USD THOUSAND)

TABLE 131 ROW: ROBOT OPERATING SYSTEM MARKET FOR OTHERS, BY COUNTRY, 2023–2028 (USD THOUSAND)

## 10 ROBOT OPERATING SYSTEM MARKET, BY REGION

### 10.1 INTRODUCTION

TABLE 132 ROBOT OPERATING SYSTEM MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 133 ROBOT OPERATING SYSTEM MARKET, BY REGION, 2023–2028 (USD MILLION)

### 10.2 NORTH AMERICA

TABLE 134 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET, BY ROBOT

TYPE, 2019–2022 (USD MILLION)

TABLE 135 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2023–2028 (USD MILLION)

TABLE 136 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2019–2022 (USD THOUSAND)

TABLE 137 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2023–2028 (USD THOUSAND)

TABLE 138 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 139 NORTH AMERICA: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.2.1 RECESSION IMPACT ON MARKET IN NORTH AMERICA

10.2.2 US

10.2.2.1 Reliance of SMEs on ROS-powered robots to increase productivity to boost market

10.2.3 CANADA

10.2.3.1 Requirement for flexible automation systems to contribute to market growth

10.2.4 MEXICO

10.2.4.1 Implementation of automation systems in manufacturing plants to support market growth

10.3 EUROPE

TABLE 140 EUROPE: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2019–2022 (USD MILLION)

TABLE 141 EUROPE: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2023–2028 (USD MILLION)

TABLE 142 EUROPE: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2019–2022 (USD THOUSAND)

TABLE 143 EUROPE: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2023–2028 (USD THOUSAND)

TABLE 144 EUROPE: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 145 EUROPE: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.3.1 RECESSION IMPACT ON MARKET IN EUROPE

10.3.2 UK

10.3.2.1 Rising adoption of robots in manufacturing facilities to drive market

10.3.3 GERMANY

10.3.3.1 Surging deployment of robotics in EV production plants to boost demand

10.3.4 ITALY

10.3.4.1 Increasing use of industrial robots in automobile manufacturing to accelerate market growth

#### 10.3.5 FRANCE

10.3.5.1 Growing adoption for EVs to augment demand for ROS-powered robots

#### 10.3.6 SPAIN

10.3.6.1 Rising implementation of robots in pharmaceutical and automobile factories to fuel market growth

#### 10.3.7 REST OF EUROPE

### 10.4 ASIA PACIFIC

TABLE 146 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2019–2022 (USD MILLION)

TABLE 147 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2023–2028 (USD MILLION)

TABLE 148 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2019–2022 (USD THOUSAND)

TABLE 149 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2023–2028 (USD THOUSAND)

TABLE 150 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 151 ASIA PACIFIC: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

#### 10.4.1 RECESSION IMPACT ON MARKET IN ASIA PACIFIC

#### 10.4.2 CHINA

10.4.2.1 Installation of autonomous systems in electrical & electronic facilities to drive ROS demand

#### 10.4.3 JAPAN

10.4.3.1 Deployment of industrial robots to replace manual work to accelerate market growth

#### 10.4.4 SOUTH KOREA

10.4.4.1 Reliance on industrial robotic systems over human workforce to drive market

#### 10.4.5 INDIA

10.4.5.1 Use of cobots by SMEs in manufacturing sector to contribute to market growth

#### 10.4.6 REST OF ASIA PACIFIC

### 10.5 ROW

TABLE 152 ROW: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2019–2022 (USD MILLION)

TABLE 153 ROW: ROBOT OPERATING SYSTEM MARKET, BY ROBOT TYPE, 2023–2028 (USD MILLION)

TABLE 154 ROW: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2019–2022 (USD THOUSAND)

TABLE 155 ROW: ROBOT OPERATING SYSTEM MARKET, BY END-USER INDUSTRY, 2023–2028 (USD THOUSAND)

TABLE 156 ROW: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 157 ROW: ROBOT OPERATING SYSTEM MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.5.1 RECESSION IMPACT ON MARKET IN ROW

10.5.2 MIDDLE EAST & AFRICA

10.5.2.1 Rising adoption of industrial robotic systems to fuel market growth

10.5.3 SOUTH AMERICA

10.5.3.1 Surging demand for robots to automate manufacturing facilities to boost market

## **11 COMPETITIVE LANDSCAPE**

11.1 OVERVIEW

11.2 KEY STRATEGIES ADOPTED BY MAJOR PLAYERS

TABLE 158 KEY STRATEGIES ADOPTED BY MAJOR COMPANIES, 2019–2023

11.3 3-YEAR REVENUE ANALYSIS FOR TOP 5 COMPANIES

11.4 MARKET SHARE ANALYSIS, 2022

TABLE 159 ROBOT OPERATING SYSTEM MARKET: DEGREE OF COMPETITION

TABLE 160 ROBOT OPERATING SYSTEM MARKET: RANKING ANALYSIS

11.5 COMPANY EVALUATION MATRIX, 2022

11.5.1 STARS

11.5.2 EMERGING LEADERS

11.5.3 PERVASIVE PLAYERS

11.5.4 PARTICIPANTS

11.6 STARTUP/SME EVALUATION MATRIX, 2022

11.6.1 PROGRESSIVE COMPANIES

11.6.2 RESPONSIVE COMPANIES

11.6.3 DYNAMIC COMPANIES

11.6.4 STARTING BLOCKS

TABLE 161 LIST OF KEY STARTUPS/SMES

11.7 COMPETITIVE BENCHMARKING

TABLE 162 OVERALL COMPANY FOOTPRINT

TABLE 163 ROBOT TYPE: COMPANY FOOTPRINT

TABLE 164 END-USER INDUSTRY: COMPANY FOOTPRINT

TABLE 165 REGION: COMPANY FOOTPRINT  
11.8 COMPETITIVE SCENARIOS AND TRENDS  
11.8.1 PRODUCT LAUNCHES  
TABLE 166 PRODUCT LAUNCHES, 2020–2022  
11.8.2 DEALS  
TABLE 167 DEALS, 2020–2022  
11.8.3 OTHERS  
TABLE 168 OTHERS, 2019–2022

## **12 COMPANY PROFILES**

(Business overview, Products/Solutions/Services offered, Recent Developments, MNM view)\*

### **12.1 KEY PLAYERS**

#### **12.1.1 ABB**

TABLE 169 ABB: COMPANY OVERVIEW  
TABLE 170 ABB: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 171 ABB: PRODUCT LAUNCHES  
TABLE 172 ABB: DEALS  
TABLE 173 ABB: OTHERS

#### **12.1.2 FANUC CORPORATION**

TABLE 174 FANUC CORPORATION: COMPANY OVERVIEW  
TABLE 175 FANUC CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 176 FANUC CORPORATION: PRODUCT LAUNCHES  
TABLE 177 FANUC CORPORATION: DEALS  
TABLE 178 FANUC CORPORATION: OTHERS

#### **12.1.3 KUKA AG**

TABLE 179 KUKA AG: COMPANY OVERVIEW  
TABLE 180 KUKA AG: PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 181 KUKA AG: PRODUCT LAUNCHES  
TABLE 182 KUKA AG: DEALS

#### **12.1.4 YASKAWA ELECTRIC CORPORATION**

TABLE 183 YASKAWA ELECTRIC CORPORATION: COMPANY OVERVIEW  
TABLE 184 YASKAWA ELECTRIC CORPORATION:  
PRODUCTS/SOLUTIONS/SERVICES OFFERED  
TABLE 185 YASKAWA ELECTRIC CORPORATION: PRODUCT LAUNCHES  
TABLE 186 YASKAWA ELECTRIC CORPORATION: DEALS  
TABLE 187 YASKAWA ELECTRIC CORPORATION: OTHERS

#### 12.1.5 DENSO CORPORATION

TABLE 188 DENSO CORPORATION: COMPANY OVERVIEW

TABLE 189 DENSO CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 190 DENSO CORPORATION: PRODUCT LAUNCHES

#### 12.1.6 MICROSOFT

TABLE 191 MICROSOFT: COMPANY OVERVIEW

TABLE 192 MICROSOFT: PRODUCTS/SOLUTIONS/SERVICES OFFERED

#### 12.1.7 OMRON CORPORATION

TABLE 193 OMRON CORPORATION: COMPANY OVERVIEW

TABLE 194 OMRON CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED

#### 12.1.8 UNIVERSAL ROBOTS A/S

TABLE 195 UNIVERSAL ROBOTS A/S: COMPANY OVERVIEW

TABLE 196 UNIVERSAL ROBOTS A/S: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 197 UNIVERSAL ROBOTS A/S: PRODUCT LAUNCHES

TABLE 198 UNIVERSAL ROBOTS A/S: DEALS

#### 12.1.9 CLEARPATH ROBOTICS INC.

TABLE 199 CLEARPATH ROBOTICS INC.: COMPANY OVERVIEW

TABLE 200 CLEARPATH ROBOTICS INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 201 CLEARPATH ROBOTICS INC.: PRODUCT LAUNCHES

TABLE 202 CLEARPATH ROBOTICS INC.: DEALS

#### 12.1.10 IROBOT CORPORATION

TABLE 203 IROBOT CORPORATION: COMPANY OVERVIEW

TABLE 204 IROBOT CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED

### 12.2 OTHER PLAYERS

#### 12.2.1 PAL ROBOTICS

#### 12.2.2 ROBOTNIK

#### 12.2.3 RETHINK ROBOTICS

#### 12.2.4 STANLEY INNOVATION, INC.

#### 12.2.5 HUSARION

#### 12.2.6 NEOBOTIX

#### 12.2.7 SHADOW ROBOT COMPANY

#### 12.2.8 YAMAHA MOTOR CO., LTD.

#### 12.2.9 ESTUN AUTOMATION CO., LTD.

#### 12.2.10 SHIBAURA MACHINE CO., LTD.

- 12.2.11 HIRATA CORPORATION
- 12.2.12 TECHMAN ROBOT INC.
- 12.2.13 FRANKA EMIKA
- 12.2.14 BOSCH REXROTH AG
- 12.2.15 KAWASAKI HEAVY INDUSTRIES, LTD.

\*Details on Business overview, Products/Solutions/Services offered, Recent Developments, MNM view might not be captured in case of unlisted companies.

## **13 APPENDIX**

- 13.1 DISCUSSION GUIDE
- 13.2 KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL
- 13.3 CUSTOMIZATION OPTIONS
- 13.4 RELATED REPORTS
- 13.5 AUTHOR DETAILS APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)  
TABLE 218 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY END USER,

### **2021–2028 (USD MILLION)**

#### 9.4.1 CHINA

- 9.4.1.1 Increasing clinical trials for stem cells and innovations to drive market  
TABLE 219 CHINA: STEM CELL MANUFACTURING MARKET, BY PRODUCT,

### **2021–2028 (USD MILLION)**

- TABLE 220 CHINA: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)
- TABLE 221 CHINA: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)
- TABLE 222 CHINA: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES, BY TYPE, 2021–2028 (USD MILLION)
- TABLE 223 CHINA: STEM CELL MANUFACTURING MARKET, BY APPLICATION,

### **2021–2028 (USD MILLION)**

- TABLE 224 CHINA: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)



TABLE 225 CHINA: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 226 CHINA: STEM CELL MANUFACTURING MARKET, BY END USER,

**2021–2028 (USD MILLION)**

9.4.2 JAPAN

9.4.2.1 Growing collaborations for stem cell research to drive growth

TABLE 227 JAPAN: STEM CELL MANUFACTURING MARKET, BY PRODUCT,

**2021–2028 (USD MILLION)**

TABLE 228 JAPAN: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 229 JAPAN: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 230 JAPAN: STEM CELL MANUFACTURING MARKET FOR S

9.4 ASIA PACIFIC

FIGURE 23 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET SNAPSHOT

TABLE 210 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY COUNTRY,

**2021–2028 (USD MILLION)**

TABLE 211 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY PRODUCT,

**2021–2028 (USD MILLION)**

TABLE 212 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 213 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 214 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 215 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY APPLICATION, 2021–2028 (USD MILLION)

TABLE 216 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 217 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR CLINICAL

APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 218 ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY END USER,

**2021–2028 (USD MILLION)**

9.4.1 CHINA

9.4.1.1 Increasing clinical trials for stem cells and innovations to drive market  
TABLE 219 CHINA: STEM CELL MANUFACTURING MARKET, BY PRODUCT,

**2021–2028 (USD MILLION)**

TABLE 220 CHINA: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 221 CHINA: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 222 CHINA: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES,

BY TYPE, 2021–2028 (USD MILLION)

TABLE 223 CHINA: STEM CELL MANUFACTURING MARKET, BY APPLICATION,

**2021–2028 (USD MILLION)**

TABLE 224 CHINA: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 225 CHINA: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 226 CHINA: STEM CELL MANUFACTURING MARKET, BY END USER,

**2021–2028 (USD MILLION)**

9.4.2 JAPAN

9.4.2.1 Growing collaborations for stem cell research to drive growth  
TABLE 227 JAPAN: STEM CELL MANUFACTURING MARKET, BY PRODUCT,

**2021–2028 (USD MILLION)**

TABLE 228 JAPAN: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 229 JAPAN: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 230 JAPAN: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES,

BY TYPE, 2021–2028 (USD MILLION)

TABLE 231 JAPAN: STEM CELL MANUFACTURING MARKET, BY APPLICATION,

**2021–2028 (USD MILLION)**

TABLE 232 JAPAN: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 233 JAPAN: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 234 JAPAN: STEM CELL MANUFACTURING MARKET, BY END USER,

**2021–2028 (USD MILLION)**

9.4.3 INDIA

9.4.3.1 Increasing prevalence of genetic disorders to support growth

TABLE 235 INDIA: STEM CELL MANUFACTURING MARKET, BY PRODUCT,

**2021–2028 (USD MILLION)**

TABLE 236 INDIA: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 237 INDIA: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 238 INDIA: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES,

BY TYPE, 2021–2028 (USD MILLION)

TABLE 239 INDIA: STEM CELL MANUFACTURING MARKET, BY APPLICATION,

**2021–2028 (USD MILLION)**

TABLE 240 INDIA: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 241 INDIA: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 242 INDIA: STEM CELL MANUFACTURING MARKET, BY END USER,

**2021–2028 (USD MILLION)**

## 9.4.4 REST OF ASIA PACIFIC

TABLE 243 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY PRODUCT, 2021–2028 (USD MILLION)

TABLE 244 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 245 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 246 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 247 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY APPLICATION, 2021–2028 (USD MILLION)

TABLE 248 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 249 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 250 REST OF ASIA PACIFIC: STEM CELL MANUFACTURING MARKET, BY END USER, 2021–2028 (USD MILLION)

## 9.4.5 ASIA PACIFIC: IMPACT OF RECESSION

## 9.5 LATIN AMERICA

9.5.1 GROWING PHARMACEUTICAL INDUSTRY IN REGION TO DRIVE MARKET GROWTH

TABLE 251 LATIN AMERICA: STEM CELL MANUFACTURING MARKET, BY PRODUCT, 2021–2028 (USD MILLION)

TABLE 252 LATIN AMERICA: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 253 LATIN AMERICA: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 254 LATIN AMERICA: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 255 LATIN AMERICA: STEM CELL MANUFACTURING MARKET, BY APPLICATION, 2021–2028 (USD MILLION)

TABLE 256 LATIN AMERICA: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 257 LATIN AMERICA: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 258 LATIN AMERICA: STEM CELL MANUFACTURING MARKET, BY END

USER, 2021–2028 (USD MILLION)

9.5.2 LATIN AMERICA: IMPACT OF RECESSION

9.6 MIDDLE EAST & AFRICA

9.6.1 INCREASING FUNDING AND COLLABORATIONS TO DRIVE MARKET GROWTH

TABLE 259 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET, BY PRODUCT, 2021–2028 (USD MILLION)

TABLE 260 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET FOR CONSUMABLES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 261 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET FOR INSTRUMENTS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 262 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET FOR STEM CELL LINES, BY TYPE, 2021–2028 (USD MILLION)

TABLE 263 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET, BY APPLICATION, 2021–2028 (USD MILLION)

TABLE 264 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET FOR RESEARCH APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 265 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET FOR CLINICAL APPLICATIONS, BY TYPE, 2021–2028 (USD MILLION)

TABLE 266 MIDDLE EAST & AFRICA: STEM CELL MANUFACTURING MARKET, BY END USER, 2021–2028 (USD MILLION)

9.6.2 MIDDLE EAST & AFRICA: IMPACT OF RECESSION

## **10 COMPETITIVE LANDSCAPE**

10.1 INTRODUCTION

10.2 KEY STRATEGIES ADOPTED BY PLAYERS

FIGURE 24 STEM CELL MANUFACTURING MARKET: STRATEGIES ADOPTED BY KEY PLAYERS

10.3 REVENUE SHARE ANALYSIS OF TOP 5 PLAYERS

FIGURE 25 REVENUE SHARE ANALYSIS FOR TOP 5 COMPANIES (2020?2022)

10.4 MARKET SHARE ANALYSIS OF TOP 5 PLAYERS

FIGURE 26 STEM CELL MANUFACTURING MARKET: MARKET SHARE ANALYSIS OF TOP 5 PLAYERS (2022)

10.5 COMPANY EVALUATION QUADRANT FOR KEY PLAYERS

FIGURE 27 STEM CELL MANUFACTURING MARKET: COMPANY EVALUATION MATRIX FOR KEY PLAYERS (2022)

10.5.1 STARS

10.5.2 EMERGING LEADERS

10.5.3 PERVASIVE PLAYERS

10.5.4 PARTICIPANTS

10.6 COMPANY EVALUATION QUADRANT FOR START-UPS/SMES

10.6.1 PROGRESSIVE COMPANIES

10.6.2 STARTING BLOCKS

10.6.3 RESPONSIVE COMPANIES

10.6.4 DYNAMIC COMPANIES

FIGURE 28 STEM CELL MANUFACTURING MARKET: COMPANY EVALUATION MATRIX FOR START-UPS/SMES (2022)

10.7 COMPETITIVE BENCHMARKING

10.7.1 STEM CELL MANUFACTURING MARKET: DETAILED LIST OF START-UPS/SMES

TABLE 267 STEM CELL MANUFACTURING MARKET: DETAILED LIST OF START-UPS/SMES

10.8 STEM CELL MANUFACTURING MARKET: COMPETITIVE BENCHMARKING OF START-UPS/SMES

TABLE 268 STEM CELL MANUFACTURING MARKET: COMPETITIVE BENCHMARKING OF START-UPS/SMES

10.9 COMPETITIVE SCENARIO AND TRENDS

TABLE 269 STEM CELL MANUFACTURING MARKET: PRODUCT LAUNCHES (2021–2023)

TABLE 270 STEM CELL MANUFACTURING MARKET: DEALS (2021–2023)

TABLE 271 STEM CELL MANUFACTURING MARKET: OTHER DEVELOPMENTS (2021–2023)

## **11 COMPANY PROFILES**

11.1 KEY PLAYERS

\*Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

11.1.1 THERMO FISHER SCIENTIFIC, INC.

TABLE 272 THERMO FISHER SCIENTIFIC, INC.: COMPANY OVERVIEW

FIGURE 29 THERMO FISHER SCIENTIFIC, INC.: COMPANY SNAPSHOT (2022)

11.1.2 MERCK KGAA

TABLE 273 MERCK KGAA: COMPANY OVERVIEW

FIGURE 30 MERCK KGAA: COMPANY SNAPSHOT (2022)

11.1.3 LONZA GROUP

TABLE 274 LONZA GROUP: COMPANY OVERVIEW

FIGURE 31 LONZA GROUP: COMPANY SNAPSHOT (2022)

11.1.4 DANAHER CORPORATION

TABLE 275 DANAHER CORPORATION: COMPANY OVERVIEW

FIGURE 32 DANAHER CORPORATION: COMPANY SNAPSHOT (2022)

11.1.5 SARTORIUS AG

TABLE 276 SARTORIUS AG: COMPANY OVERVIEW

FIGURE 33 SARTORIUS AG: COMPANY SNAPSHOT (2022)

11.1.6 BECTON, DICKINSON AND COMPANY

TABLE 277 BECTON, DICKINSON AND COMPANY: COMPANY OVERVIEW

FIGURE 34 BECTON, DICKINSON AND COMPANY: COMPANY SNAPSHOT (2022)

11.1.7 EPPENDORF SE

TABLE 278 EPPENDORF SE: COMPANY OVERVIEW

FIGURE 35 EPPENDORF SE: COMPANY SNAPSHOT (2022)

11.1.8 CORNING INCORPORATED

TABLE 279 CORNING INCORPORATED: COMPANY OVERVIEW

FIGURE 36 CORNING INCORPORATED: COMPANY SNAPSHOT (2022)

11.1.9 BIO-RAD LABORATORIES, INC.

TABLE 280 BIO-RAD LABORATORIES, INC.: COMPANY OVERVIEW

FIGURE 37 BIO-RAD LABORATORIES, INC.: COMPANY SNAPSHOT (2022)

11.1.10 TAKARA BIO INC.

TABLE 281 TAKARA BIO INC.: COMPANY OVERVIEW

FIGURE 38 TAKARA BIO INC.: COMPANY SNAPSHOT (2022)

11.1.11 FUJIFILM HOLDINGS CORPORATION

TABLE 282 FUJIFILM HOLDINGS CORPORATION: COMPANY OVERVIEW

FIGURE 39 FUJIFILM HOLDINGS CORPORATION: COMPANY SNAPSHOT (2022)

11.1.12 GETINGE AB

TABLE 283 GETINGE AB: COMPANY OVERVIEW

FIGURE 40 GETINGE AB: COMPANY SNAPSHOT (2022)

11.1.13 TERUMO CORPORATION

TABLE 284 TERUMO CORPORATION: COMPANY OVERVIEW

FIGURE 41 TERUMO CORPORATION: COMPANY SNAPSHOT (2022)

11.1.14 BIO-TECHNE CORPORATION

TABLE 285 BIO-TECHNE CORPORATION: COMPANY OVERVIEW

FIGURE 42 BIO-TECHNE CORPORATION: COMPANY SNAPSHOT (2022)

11.1.15 HIMEDIA LABORATORIES PVT. LTD.

TABLE 286 HIMEDIA LABORATORIES PVT. LTD.: COMPANY OVERVIEW

11.2 OTHER PLAYERS

11.2.1 STEMCELL TECHNOLOGIES, INC.

11.2.2 MILTENYI BIOTEC GMBH



- 11.2.3 PROMOCELL
- 11.2.4 ANTEROGEN CO. LTD.
- 11.2.5 CELLGENIX GMBH
- 11.2.6 PLURISTEM THERAPEUTICS INC.
- 11.2.7 DAIICHI SANKYO
- 11.2.8 ORGANOGENESIS HOLDINGS INC.
- 11.2.9 VERICEL CORP.
- 11.2.10 AMERICAN CRYOSTEM CORP.

(Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats))\*

## **12 APPENDIX**

- 12.1 KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL
- 12.2 CUSTOMIZATION OPTIONS
- 12.3 RELATED REPORTS
- 12.4 AUTHOR DETAILS

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