

**YASKAWA ELECTRIC CORPORATION**

<https://www.yaskawa-global.com/>

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# Our Identity

Since 1915, Yaskawa Electric has concentrated on “electric motors and their applications” as its primary business focus, thereby supporting the vanguard industries of each era.

The company has committed to “becoming a technology-centered company” and pioneered the concept of “mechatronics”, far ahead of its global competitors. Yaskawa continues to uphold a quality-first management philosophy, with a steadfast resolve to develop groundbreaking and world-class technologies and products. Yaskawa’s core technologies are “motion control,” “robotics,” and “power conversion.” These technologies and products born and created out of our search for elaborate control of mechanical movements contribute on a daily basis to improvements in the quality and efficiency of manufacturing around the world.

Our passion for manufacturing is timeless and will never change.

1915



YASKAWA Electric Manufacturing Co. was established as a limited partnership 1915年

1958



DC servo motor Minertia motor 1958年

1977



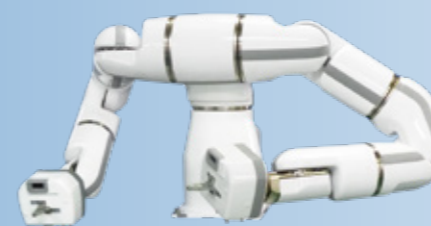
Japan's first all-electric industrial robot "MOTOMAN-L10" 1977年

2005



Dual-arm robot 2005年

2013



Robot for biomedical applications 2013年

2017



Collaborative robot MOTOMAN-HC10DT Small robot MotoMINI 2017年

2021



YRM-X Controller



AC Servo Drive Σ-X Series 2021年

1917年

Commercialized Three-phase induction motor

1974年

The world's first general-purpose transistor AC drive

1983年

AC servo drive series

2011年

Generator for large-scale wind power generation

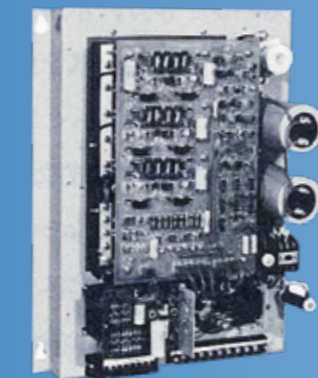
2015年

New model of small robot The world's first AC servo motor with built-in amplifier Next-generation AC drive

2020年

AC Drive GA500

1917



1974



1983



2011



2015



2020

\*In the late 1960s, Yaskawa Electric was at the forefront of the global stage, pioneering the fusion of "mechanism" and "electronics" in what became known as the concept of 'mechatronics'. This concept came to fruition through the integration of our customers' machinery with Yaskawa's electronic products, leading to an unprecedented enhancement in quality and functionality.



# Our Principles

In 1979, the company established its corporate principles, which were rooted in the “founding motivation” of its founder, Daigoro Yasukawa.



Statue of Daigoro Yasukawa

## Yaskawa Principles



Founder Daigoro Yasukawa

This principle always serves as a flag for the significance of our existence, the core values of “Quality”, “Profitability” and “Market”, as well as the daily code of conduct.

The spirit behind this is our origin, which never changes over time. We take this origin as the foundation of our mind for the sustainable growth of the Yaskawa Group into the future, and put it into practice every day as the criteria of judgment, to realizing our principles.

## Our Purpose

Yaskawa’s mission is to contribute broadly to social development and human welfare through the execution of our business.

## Our Values

To achieve the mission, our group has set the following three objectives and work hard to achieve them.

### 1. Quality

Always developing and improving world-class technologies with a focus on quality

### 2. Profitability

Working to improve management efficiency and secure Profit necessary for the sustainable growth

### 3. Market

Serving the needs of our customers and pursuing customer satisfaction

## Our Actions

- ✓ Stay customer-focused.
- ✓ Pursue both high quality and high profitability.
- ✓ Work hard to overcome the competition with a fighting spirit.
- ✓ Broaden our perspective and change our thinking.
- ✓ Deepen mutual trust and strive for unity and cooperation.

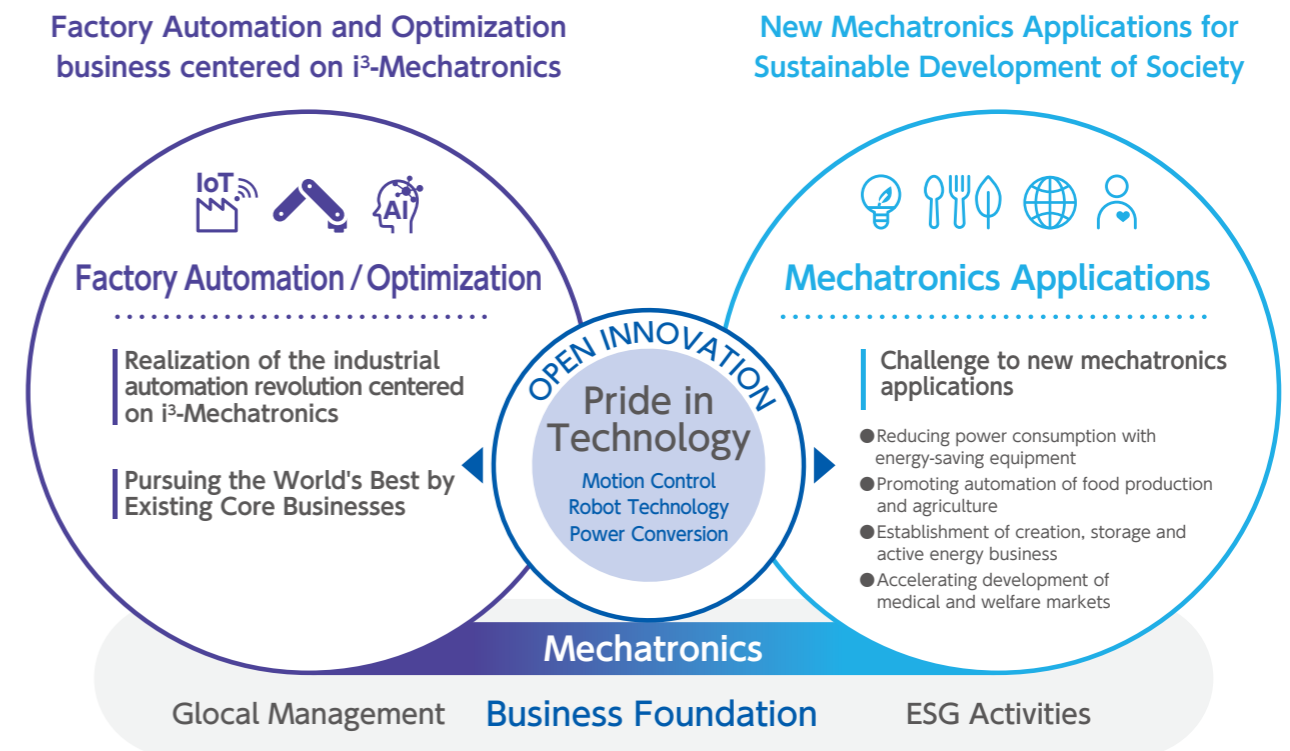


# Our Vision

In 2015, the 100-year anniversary of our company's founding, the Company saw a dramatic change in the business environment as an opportunity and adopted the "Vision 2025" as a blueprint for its future management.

## Yaskawa's Vision for 2025

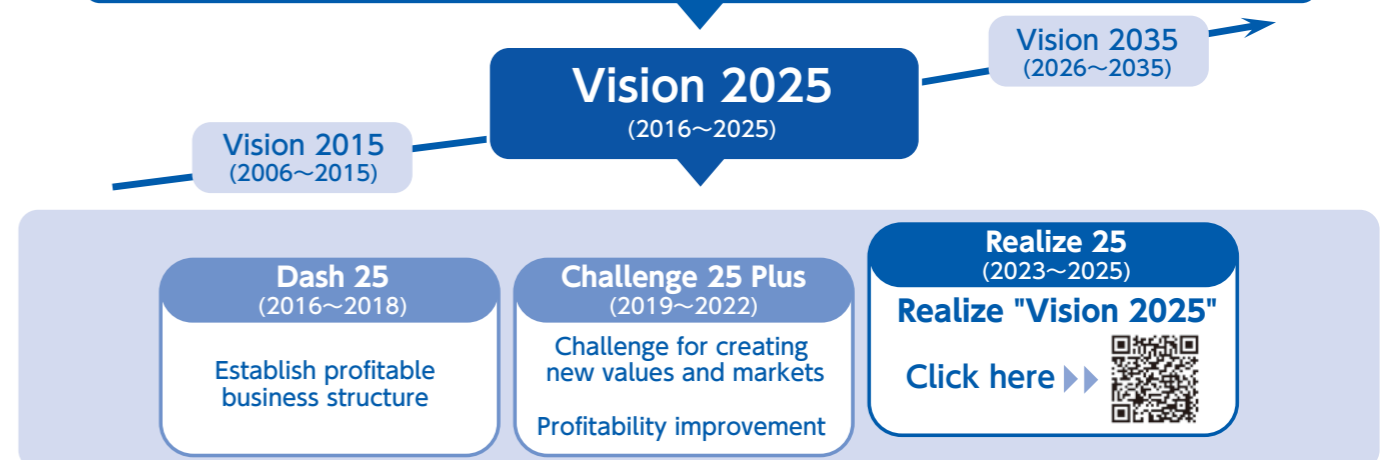
By advancing our core businesses, we will contribute to solving our customers' management issues. We will also create new added value for society by expanding new fields that apply mechatronics technology.



※ i<sup>3</sup>-Mechatronics: Solution Concept for Realizing a New Industrial Automation Revolution

**Yaskawa's Vision for 2025**

Contribute to solving customers' management issues in addition to creating new added value to society, through evolution of core businesses, and expansion into new fields by applying mechatronics technology





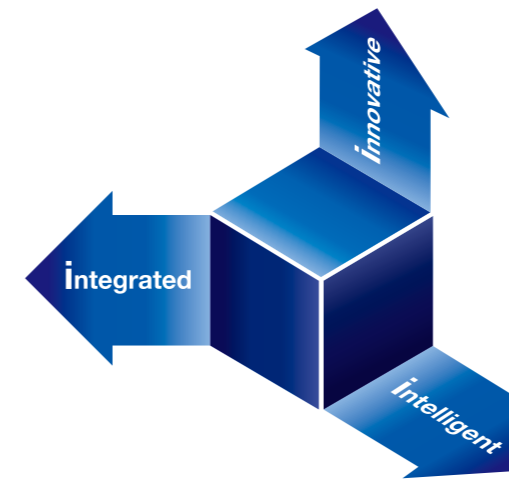
# i<sup>3</sup>-Mechatronics

Yaskawa launched the solution concept "i<sup>3</sup>-Mechatronics" in 2017.



## Solution Concept i<sup>3</sup>-Mechatronics

The three "i"s, "integrated," "intelligent," and "innovative" of the i<sup>3</sup> (i cube) are concepts that contribute to solving customers' management issues and transform the company's business model.



### THREE steps to realize i<sup>3</sup>-Mechatronics

#### Step 1 integrated

- A production site is visualized with data by motors which act as a sensor.
- Further automation is promoted by linking components such as robots, servo drives and AC drives etc. and their processes.
- FA layer is wired with IT layer.

#### Step 2 intelligent

- Data driven analysis and learning (big data analysis and AI)

#### Step 3 innovative

- Data is fed back and turned into a movement for the improved productivity.

### Smart factory realized by i<sup>3</sup>-Mechatronics



\* 1: Edge is an information processing field for data analysis and feedback that require real-time performance at production sites or factories.

\* 2: YASKAWA Cockpit is a software that able to collect, store, and analyze real-time data on equipment and devices at production sites.



# Driving Society

With 100 years of experience with motors and their control we contribute to industrial and social developments with technologies we have cultivated.

## Motion Control

### AC servo drives and AC drives that command a world No. 1 share

The motion control business broadly consists of two product lineups: AC servo drives and AC drives. AC servo drives, which excel at high-speed and high-precision position control, are applied to various high-speed and high-performance equipment and automatic machines. AC drives control the rotation speeds of motors by flexibly changing the power-supply frequencies of motors. The emergence of AC drives drastically upgraded the productivity of factories, and contributed to advancements in industrial and social development and energy savings. We, as a leading company of motor controls, have gained trust from our customers with a solid record of performance.

### Major applications of AC servo drives

- Semiconductor and liquid LCD manufacturing equipment
- Chip mounters
- Machine tools
- Food and packaging machinery
- Textile machines
- Robots



AC Servo Drive  $\Sigma$ -X series  
Motion controller "MP3000 series"

### Major applications of AC drives

- Air-Conditioning equipment
- Elevators and escalators
- Fans and pumps
- Cranes
- Conveyors



PM motor



YASKAWA AC Drive series  
GA700



Matrix converter  
U1000

### Application of AC drive technology to utilization of renewable energy

For the prevention of global warming, there is an increasing need to utilize renewable energy. Through the application of AC drive technology, we have commercialized power conditioners for solar power generation and drive systems for electric vehicles toward energy creation/application/storage.



# Smart Factory

Realization of ideal automation for humans and robots to coexist and cooperate



## Robotics

### Industrial robot "MOTOMAN" operating globally

Since the debut of the all-electric industrial robot "MOTOMAN" in Japan in 1977, we have taken a leading role in the world's industrial robot market. Starting with arc welding for automobile production, for which we remain a market leader, our robots have assumed an active role in every industrial field including spot welding, handling, assembly and coating, as well as handling and transport in clean rooms for liquid crystal, organic EL displays and semiconductor manufacturing.

As one solution to the labor shortage in recent years, the scope of robot applications is extending to the food industry and other markets where there has been little practice in robotic automation.



Spot welding



Palletizing

### From robots that replace to humans to robots that work with humans

Robots are now expanding their usage not only for industry but also many other fields through improving their speed and accuracy as well as handling complex movement and enhancing their safety function to collaborate with humans.

Yaskawa developed a robot that can work with humans without the need for a safety fence in 2017. With this robot, we support for the automation in the industries such as the consumer electronics, computers and communication equipment, in which robots have yet to be introduced as much.



Collaborative robot  
MOTOMAN-HC20DTP

Note: Risk assessment is needed at any cases though MOTOMAN-HC series doesn't need a safety fence.



# Secure Lifeline

Yaskawa's system engineering technology supports our life 24 hours a day.

## System Engineering

### Ensuring the stable operation of water treatment plants and other public facilities

We support public electric facilities for which stable operation is essential, such as water treatment plants and transportation infrastructures. For water supply/sewage facilities that cannot be stopped even for one moment, we offer not only assured reliability but also solutions that meet social needs, including environmental protection and disaster prevention. For the emerging needs, such as energy savings, advanced water purification, and effective utilization of facilities, we propose and construct new systems making full use of the leading-edge system engineering technology.



Sewage activity monitoring room

### Offering optimum control systems with advanced technology

For many years, we have been engaged in the development, design, and production of electric equipment for industrial systems, and have accumulated a wealth of experience. Our control units and drive units have been adopted in every blast furnace operating in Japan, and have also secured top share around the world in large-scale blast furnace\* systems, supporting their stable operations on a 24-hour basis. We contribute to a comfortable life and the creation of an affluent society by offering highly reliable industrial systems with advanced technology and high-quality products.

\*Volumetric capacity 5,000 m<sup>3</sup> or more



Blast furnace facility

### Contributing to effective utilization of renewable energy and products for solar power generation

Utilization of renewable energy is being pressed forward worldwide, and we have commercialized generators and converters for large-scale wind power generation. In addition, we have created a lineup of large-capacity drive solutions from low voltage to high voltage. By reducing the total cost of photovoltaic power generation using power conditions for photovoltaic power generation, we are contributing to the conversion of renewable energy into a mainstay power source.



Generator and converter for large scale wind turbines



PV inverter



# Passion for Innovation

Continuously taking on challenges for high-value added technological innovation to change the world



YASKAWA Technology Center

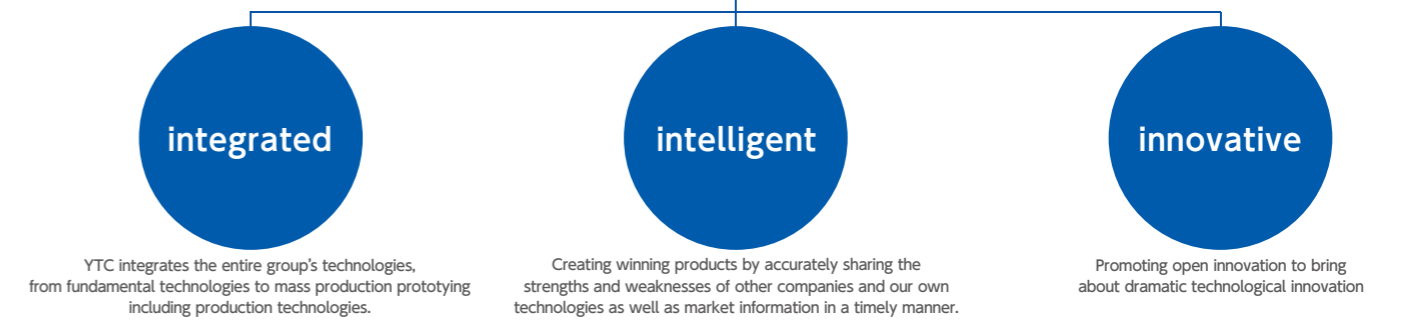
## Research & Development

Yaskawa Electric Corporation put into the "Yaskawa Technology Center (YTC)," an innovation base that integrates basic technology development, production technology development, product development, product and facility design, quality control, and mass production prototyping, with the aim of building a development system that can quickly respond to customer demands.

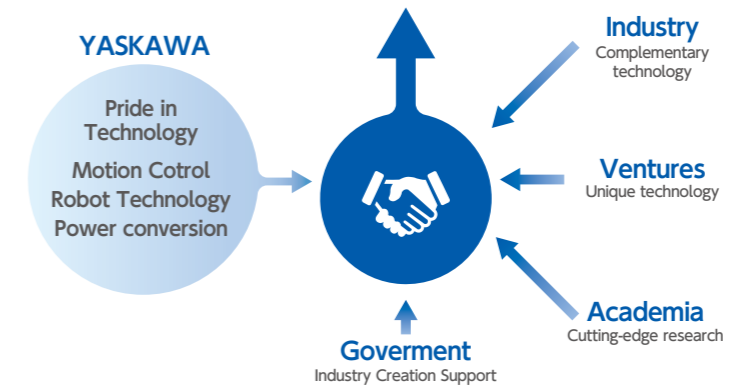
At YTC as our hub location, we will work to create an innovative and efficient development environment and promote the development of the world's first and best products.

### YTC Concept

With open innovation in cooperation with the Yaskawa Group, YTC will become a base that integrates technologies to develop winning products for customers in a timely manner



### Inspiration of further innovative technology



Our goal of open innovation





# Action for Society

We will contribute to the sustainable development of the economy and society, and strive to continuously increase corporate value.



## Sustainability

The Yaskawa Group will respond to the trust and expectations of all stakeholders, including customers and business partners, people in countries and regions where we conduct business, shareholders and investors, and employees. In addition, we will contribute to the sustainable development of the economy and society by implementing our management principle of “contributing to the development of society and the welfare of humankind through the conduct of business” and strive to continuously increase corporate value.

### Sustainability Policy







We will strive to realize a sustainable society and increase corporate value through the implementation of the Yaskawa Group Principle of Management which is to leverage the pursuit of our business to contribute to the advancement of society and the well-being of humankind.

1. We will contribute to the value creation for customers and society through creating innovation by cutting-edge mechatronics technologies.
2. We will realize fair and transparent corporate management through communication and collaboration with stakeholders around the world.
3. We will work to resolve social issues globally with the aim of achieving SDGs as a universal goal.

### Sustainability Challenges and Targets

In addition, in line with the formulation of the Sustainability Policy, we have prepared challenges and targets related to sustainability.

#### Create Social Value and Solve Social Issues through Business Activities

- 1 Realize revolutionary industrial automation with our partners through “i<sup>3</sup>-Mechatronics” 
- 2 Build clean social infrastructure and foundation for safe and comfortable living    
- 3 Develop new technologies and business domains through open innovations 

#### Strengthen Management Foundation that Contributes to Sustainable Society/Businesses

- 4 Sustainable and productive manufacturing   
  - Introduction of cutting-edge manufacturing
  - Improvement of product safety and quality
  - Reduction of greenhouse gas emission through the Green Process
  - Construction of a sustainable supply chain
- 5 Create a rewarding workplace and human resource development    
  - Diversity and inclusion
  - Occupational safety
  - Contribution to local communities
  - Human resource development
  - Human rights and work practices
- 6 Fair and transparent governance system 
  - “Aggressive” governance system utilizing the Corporate Governance Code
  - Enhancement of compliance
  - Strengthening of information security



# Company's Outline

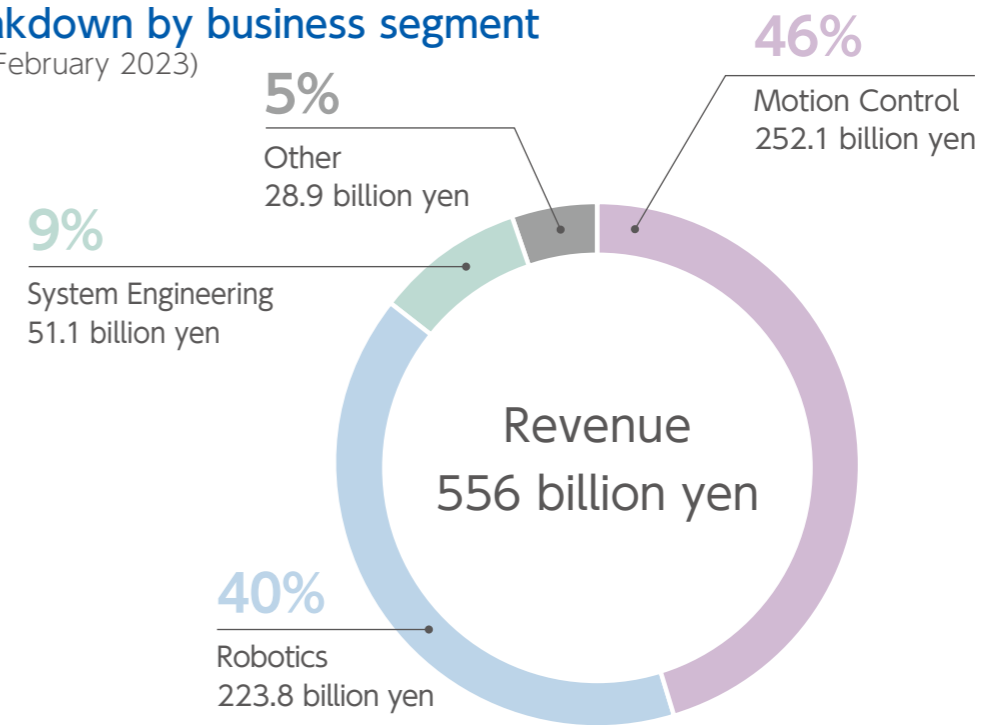


Robot Village

## Corporate Outline (As of March 1, 2023)

<b>Corporate Name</b>	YASKAWA Electric Corporation	<b>Representative</b>	Masahiro Ogawa, Representative Director, President
<b>Founded</b>	July 16, 1915	<b>Capital Stock</b>	30.6 billion yen
<b>Head Office</b>	2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu 806-0004, Japan Phone +81-93-645-8801 Fax. +81-93-645-8831	<b>Number of Shares Outstanding</b>	266,690 thousand shares
		<b>Number of Shareholders</b>	41,345
		<b>Employees</b>	Consolidated 13,094
		<b>Revenue</b>	Consolidated 556 billion yen (Fiscal year ended February 2023)

## Sales breakdown by business segment (year ended February 2023)



## Directors and Executive Officers (As of July 1, 2023)

Representative Director, Chairman of the Board <b>Hiroshi Ogasawara</b>	Director and Member of the Audit and Supervisory Committee <b>Yuji Nakayama</b>	Senior Executive Officer <b>Michael Stephen Knapek</b>	Executive Officer <b>Masahiko Okura</b>
Representative Director, President <b>Masahiro Ogawa</b>	Director and Member of the Audit and Supervisory Committee <b>Takeshi Ikuyama</b>	Senior Executive Officer <b>Junichi Nakano</b>	Executive Officer <b>Takenori Otsuka</b>
Representative Director, Senior Managing Executive Officer <b>Shuji Murakami</b>	Outside Director, Member of the Audit and Supervisory Committee <sup>(*)</sup> <b>Toshikazu Koike</b>	Senior Executive Officer <b>Nobuaki Jinnouchi</b>	Executive Officer <b>Michiaki Higuchi</b>
Director, Senior Executive Officer <b>Yasuhiko Morikawa</b>	Outside Director, Member of the Audit and Supervisory Committee <sup>(*)</sup> <b>Kaori Matsuhashi</b>	Senior Executive Officer <b>Kenji Ueyama</b>	Executive Officer <b>Shunrin Mizutani</b>
	Outside Director, Member of the Audit and Supervisory Committee <sup>(*)</sup> <b>Keiji Nishio</b>	Senior Executive Officer <b>Bruno Schnekenburger</b>	Executive Officer <b>Yasushi Ichiki</b>
	Outside Director, Member of the Audit and Supervisory Committee <sup>(*)</sup> <b>Yaeko Hodaka</b>	Senior Executive Officer <b>Tatsuya Yamada</b>	Executive Officer <b>Albert Shiina</b>
		Senior Executive Officer <b>Hiroshi Takata</b>	Executive Officer <b>Shoichiro Shimoike</b>
		Senior Executive Officer <b>Ayumi Hayashida</b>	Executive Officer <b>Yasuo Adachi</b>
		Senior Executive Officer <b>Manabu Okahisa</b>	

<sup>(\*)</sup>1 Indicates an Outside Director as provided in Article 2-15 of the Companies Act.  
<sup>(\*)</sup>2 Indicates a designated Independent Director as stipulated by the Tokyo Stock Exchange.



# Global Network

Worldwide Yaskawa

Yaskawa's worldwide network includes business bases in approx. 30 countries and production bases in 13 countries.

## Europe



YASKAWA EUROPE GmbH

- Germany**
  - YASKAWA EUROPE GmbH
- Sweden**
  - YASKAWA NORDIC AB
- U.K.**
  - YASKAWA ELECTRIC UK LTD.
  - YASKAWA UK LTD.
- Italy**
  - YASKAWA ITALIA S.R.L.

- France**
  - YASKAWA FRANCE SAS
- Spain**
  - YASKAWA IBERICA S.L.
- Finland**
  - YASKAWA FINLAND OY
- Norway**
  - THE SWITCH ENGINEERING OY
- Netherlands**
  - THE SWITCH MARINE DRIVE NORWAY AS
- Netherlands**
  - YASKAWA BENELUX BV
- Slovenia**
  - YASKAWA SLOVENIJA D.O.O.
  - YASKAWA RISTRO D.O.O.
- Czech Republic**
  - YASKAWA CZECH S.R.O.
- Poland**
  - YASKAWA POLSKA SP. ZO. O.

## North America



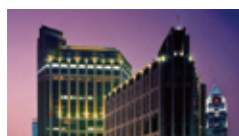
YASKAWA AMERICA, Inc.

- U.S.A.**
  - YASKAWA AMERICA, INC.
  - SOLECTRIA RENEWABLES, LLC
- Canada**
  - YASKAWA CANADA INC.
- Mexico**
  - YASKAWA MEXICO S.A. DE C.V.

## Middle East•Africa

- Israel**
  - YASKAWA EUROPE TECHNOLOGY LTD.
- Turkey**
  - YASKAWA TURKEY ELEKTRIK TICARET LTD. STI.
- South Africa**
  - YASKAWA SOUTHERN AFRICA (PTY) LTD.

## Asia Pacific



YASKAWA ELECTRIC (CHINA) CO., LTD.

- China**
  - YASKAWA ELECTRIC (CHINA) CO., LTD.
  - SHANGHAI YASKAWA DRIVE CO., LTD.
  - YASKAWA TSUSHO(SHANGHAI) CO., LTD.
  - YASKAWA ELECTRIC (SHENYANG) CO., LTD.
  - YASKAWA SHOUGANG ROBOT CO., LTD.
  - YASKAWA (CHINA) ROBOTICS CO., LTD.
- Korea**
  - YASKAWA ELECTRIC KOREA CORPORATION
- Taiwan**
  - YASKAWA ELECTRIC TAIWAN CORPORATION
- Singapore**
  - YASKAWA ASIA PACIFIC PTE. LTD.
- Thailand**
  - YASKAWA ELECTRIC (THAILAND) CO., LTD.
- Indonesia**
  - PT. YASKAWA ELECTRIC INDONESIA
- Vietnam**
  - YASKAWA ELECTRIC VIETNAM CO., LTD.
- Malaysia**
  - YASKAWA MALAYSIA SDN. BHD.
- India**
  - YASKAWA INDIA PRIVATE LIMITED

# Network in Japan

Our group force responds with technical skills and trust.

We flexibly meet customer needs with two R&D centers and five production bases in Japan.



## Group companies in Japan

- YASKAWA AUTOMATION & DRIVES CORP.
- YASKAWA MECHATREC CORPORATION.
- SUEMATSU KYUKI CO., LTD.
- FOOD & AGRI MECHATRO SOLUTION. INC.
- AI CUBE INC.
- ROBOTIC BIOLOGY INSTITUTE INC.
- BESTACT SOLUTIONS INC.
- i3 DIGITAL CORPORATION.
- YASKAWA CONTROLS CO., LTD.
- YASKAWA LOGISTEC CORPORATION.
- YASKAWA MANUFACTURING CORPORATION.
- DOEI CORPORATION.
- YASKAWA OBVIOUS COMMUNICATIONS INC.