Hirata

The Global Production Engineering Company

Hirata

CP2104-2104DK01-E900DK01

Company Profile

With Human

An advanced production system must be "People-friendly"

Technical innovation never stops and any new production system
must achieve not only higher quality and up-time,
but also flexibility to cope with various changes in the production environment.

No matter how automated or sophisticated a system is,
production can never be completely human independent.
It must satisfy the management with its efficiency and
profitability as well as be friendly to manufacturing engineers,
operators, and maintenance personnel.

"People-friendly" is an important concept as we,
as a system integrator of production equipment to be chosen
by customers across the world,
want to continue making systems that also nurture natural human ability.

President **Yuichiro Hirata**

Management Philosophy

Hirata

MAKES THE BEST USE OF ITS MEMBERS.

We believe we could be perfect only if every member of Hirata can grow as a person
and enhance his/her capabilities to complement each other's weakness.

CHALLENGES TECHNICAL INNOVATION.

Our world changes very fast. We must be innovative to be creative and to meet ever upgrading needs.

RESPECTS HUMANITY.

We design our products to free people from jobs which can be done by machines.
Human being should do what only he/she can do.

OPENS THE DOOR TO THE CREATIVE LIFE.

We want our company to be a place where we can improve ourselves and live creative lives.

CONTRIBUTES TO THE SOCIETY.

We are allowed to succeed or expand only because our society accepts us.
The contribution to the society should be our standard.

MAKES OUR CUSTOMERS SUCCESSFUL.

We should be entitled to make profit only when we make our customers successful.
Our profit is the result of the performance of our job, otherwise we can never get any further business from them.

Mission Statement

We pursue technological innovation in a courageous manner, and contribute to the development of society,
making personal progress and enhancing our capabilities.

History

Manufacturing is making daily progress around the world. Hirata's mission is to support manufacturing in various industrial fields.

Manufacturing is making daily progress aiming a better life.
Hirata manufactures and markets production systems for various industrial fields, such as the automobile, semiconductor, and home electronics industries.
Ever since our establishment, we have manufactured a variety of production equipment in a wide range of industrial fields.
With this past performance and experience, Hirata's unique know-how and technologies in manufacturing for various fields provide manufacturers, which are our customers, with a high level of advice to meet their challenges.
For years to come, we will keep trying to create new value with our original ideas.

1951 Establishment of Hirata Sharyo Industrial Co., Ltd.

Hirata Sharyo Industrial Co., Ltd. established in Kumamoto with 1 million yen in capital to manufacture and market industrial vehicles.

Production and distribution of industrial vehicle

1953 Began manufacturing of conveyor in search of essence of conveyance streamlining

Started manufacturing of conveyors based on the idea of "Our goal is to develop lightweight, easy-to-use, efficient transporter vehicle. Conveyors mean pursuit of conveyance streamlining". The first prototype was completed in 1959.

1964 Delivered its first television assembly line

1970 Started making free-flow conveyors

Streamlining conveyance and conveyor system
Automation and robot developments

This manufacturing method brought stress relief of workers, dramatic decrease of defective products, and increased production efficiency. This method of leveraging human abilities represents the philosophy of Hirata Corporation and is our inheritance.

SCARA-type robot
Arm Base AR-300 ▶

1974 Foundation of Hirata Corporation

In the era of expanding business including automatic assembling machines for home electrical appliances, mutually related three companies of Taihei Conveyor which was mainly dealing with portable conveyors, Hirata Vehicle Industries which was focusing conveyors for home electrical industry, and Hirata Industrial Commerce merged to establish Hirata Corporation.

1977 Development of Cartesian coordinate robot "Machine Base"

Based on the insight "Automation will ultimately reach robot", started mastering electronics. Manufactured a simple digital display controller, and then developed the "Machine base" through repetitive improvements.

1980 Expand overseas office network aiming to be a global company

Began to deliver assembly lines not only to domestic manufacturers but also to overseas major home electronics manufactures, and established our first overseas office in the United States. Following this, established affiliate companies in Europe, Southeast Asia, and China. Dedicated to further exploration of business opportunities by making smoother maintenance and support available also abroad.

Introduction of software technology
Manufacture and distribution of production system

2001 Big orders for engine assembly lines of automotive related equipment

Started the automotive related equipments business from mid-1980s. Accepted a major order for engine assembly lines for a car manufacturer located in North America in 2001. As our high performance and quality was recognized, sales of automobile related equipments business soared after this.

2001 Production start of semiconductor related equipment

Began to go into the semiconductor market and started production at full scale with a focus on carrier devices including load port, wafer transfer robot, EFEM.

2006 Going public

In December, after 60 years in business and on 55th years anniversary of foundation, Hirata finally has become listed on the JASDAQ stock exchange (currently Tokyo Stock Exchange JASDAQ market).

2007 Development of 10th generation glass substrate transfer robot

2016 Living with Kumamoto, headquarters moved from Tokyo to Kumamoto

In 1981, headquarters were moved from Kumamoto to Tokyo to promote global business. In April, when considering the validity of moving back to Kumamoto to improve efficiency of business as we have achieved original goals, a big earthquake occurred in Kumamoto. For the sake of our hometown, we have decided to move our headquarters to Kumamoto in the 65th annual meeting of shareholders.

Be a production system manufacturer whose main business is the the fields of automobiles, semiconductors, and home appliances

2014 Development of ECO electric stopper that can be used in various fields

In the field of stopper which is widely used for conveyor system, we leveraged our practical accomplishments and experiences in variety of fields to have developed the Eco Electric stopper that is electric based and energy-saving, different from air cylinder type that was mainly used in that time.

◀ Eco Electric stopper

2012 Development of robots such as new SCARA robots and small Cartesian robots

Developed horizontal multi-articulated (SCARA) robots which have industry leading speed, cartesian coordinate small robots which have wide variety of combination, and controllers that can handle products from other manufacturers and brought them to market.

◀ 10th generation glass substrate transfer robot

2017 Change of our stock market listing to the First Section of Tokyo Stock Exchange

2020 Completion of Headquarters building

In June, a new factory which began construction in 2018 was completed. The functions of headquarters and factory were merged under our policy of "design, administration, and management should always be with field". The first floor (three-story ceiling) is for manufacturing work, and the fourth floor is equipped with a clean room to assemble semiconductor related carrier devices and other products.

Realizing performance, cost, quality, safety, and production efficiency

Production Engineering

We make an effort to develop production systems jointly with customers from a total system perspective, which includes management of customer requirements, components, process sequence, operability proposals, reviewing and checking stability, risk analyses, and production efficiency.
ACS is a good example. This is what Hirata proposes as a system concept, and we have a record of high reliability in actual performance, especially in the automotive-related production business.

Hirata combines different standards to form a unique method.

ACS Concept Assembly Cell System

The ACS is Hirata's unique production engineering system concept. It is an assembly line system of highly standardized modules, allowing for great reliability and cost performance in a short time.

- **Integration** Equipment and parts used at each operation of the manufacturing process are standardized and integrated into standardized modules.
- **Flexibility** Each module is equipped with a range of functions adaptable to different manufacturing processes.
- **Quality** Stable product quality and a minimization of equipment failure are assured through standardization.

A conventional assembly line
〈 Single-function machine 〉

A dedicated, single-function machine is stationed at each stage of the manufacturing process.

Integration

An assembly line based on the ACS concept
〈 Standardized module(s) 〉

Standardized modules enable high-mix manufacturing through multiple processes.

- Accelerates production start-up by shortening the time to install and qualify equipment.
- Simplifies the assembly line by standardizing parts to reduce space and ease maintenance.
- Shortens the assembly line and reduces in-process inventory.
- Adapts readily to product changes or future assembly line changes.
- Supports changing production output by modifying equipment quantity or layout.

Global and hospitable support

Support

Hirata has established 6 domestic production facilities in Japan and 9 subsidiaries abroad. We provide on-site support to customers from an overall perspective, such as practical training, maintenance, and updates tailored to production sites in various countries.

Features

Hirata offers reliable production systems based on our enhanced integrated services ranging from development to installation, run-off, and start-up support, and maintenance service support.

Hirata's services are designed to be completely integrated and include R&D solution proposals, design, component manufacturing, assembly, inspection, and testing, installation, run-off, and start-up support, and maintenance service support. These in-house capabilities ensure quick and stable delivery of high quality and low cost products on a timely basis.

Enhancing the reliability of our products and realizing a low cost and short delivery time

Manufacturing

We provide services with high and stable quality through our integrated systems that completely handle processes from just one component to installation, run-off, and start-up.
Furthermore, we achieve a low cost and short delivery time utilizing our in-house manufacturing equipment.
Our engineers have global experience in a wide variety of fields and products and deep knowledge of production technology and sites. They are now playing an important role as system integrators covering multiple systems and manufacturers and are receiving a high reputation for their work.

Machine tool

- 5-face machining center
- CNC multi-tasking machine
- High-performance machining center
- Laser cutter
- Horizontal grinding machine
- Wire-cut electric discharge machine
- NC press
- Die-casting press, etc

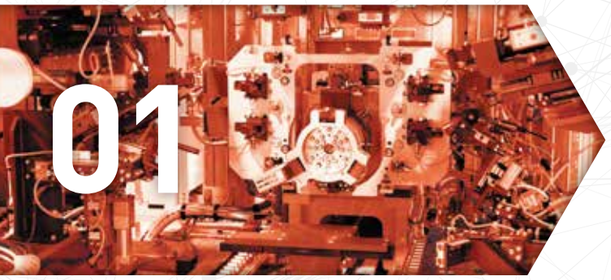
Other equipment

- Precision measuring machine
- Large-scale baking painting facility
- Clean rooms, etc.

Industries Served

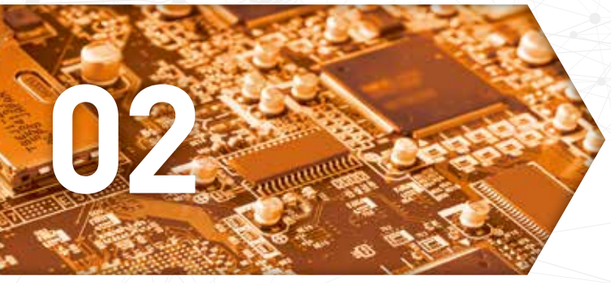
We support the manufacturing processes of our customers by providing high-quality, high-efficiency, and easy-to-use production systems.

We manufacture and deal in production systems for various fields including automobiles, semiconductors and home electronics.
We keep challenging ourselves to respond to the needs of various industries by utilizing our technologies and know-how accumulated through a wide variety of manufacturing experiences.



Automotive related production equipment

We manufacture and market electric vehicle related equipment, powertrains (engine, transmission, etc.), and assembly equipment for electric control machines.



Semiconductor related equipment & Panel manufacturing systems

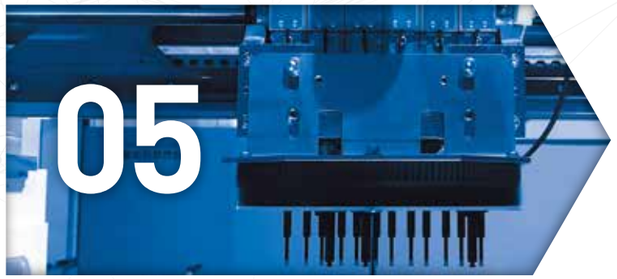
We manufacture and market load ports, atmosphere/vacuum-corresponding wafer transfer robots and related integrated Equipment Front End Module.
We provide cutting systems, coater systems and lamination systems of glasses used for organic EL, LCD, and so on.

Industrial robots

We manufacture and market controller units and various component robots of the Hirata manufacturing system.

FA unit sales

Hirata's versatile, safe- and user- friendly FA Units are now on sale on a single unit basis.



Intelligent power module

We manufacture and market power module-related production such as vacuum reflow equipment for fluxless solder and mounters.

Transfer machine

Material handling equipment is one of Hirata's base points, and we provide equipment that cover a variety of essential elements across all fields and jobs.

Home appliance assembly

We manufacture and market production equipment for manufacturers of home electronics and electrical appliances such as flat-screen televisions, refrigerators, and vacuum cleaners.

Medical / Chemistry & Physics device

We manufacture and market medical/chemistry and physics devices for use in the development of new medicines, etc.

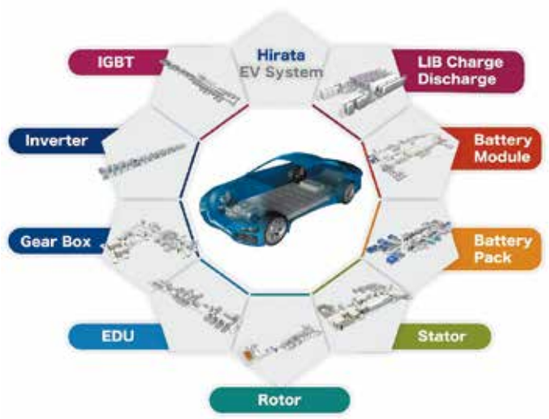
01

Automotive related production equipment

Hirata has long been involved, and domestically and internationally valued, in the automotive industry. We design, produce, and sell assembly equipment ranging from electric vehicle related business, powertrains such as transmissions and engines to more specific components like computerized control systems, sensors, air compressors, and ABS brake modules.

We provide a consistent solution for all processes. Operation can be confirmed before delivery and maintenance is also simple.

We completely handle devices and equipment for electric vehicles, engines, transmissions, and component-related products. Comprehensive tests are run before delivery to ensure correct operation, and preparation and maintenance become a simple matter with our use of standarized solution.



Electric Vehicle related equipment

- Drive unit
- Battery package
- Motor assembly
- Inverter power module assembly

Engine related equipment

- Complete engine assembly
- Cylinder head assembly
- Cylinder block assembly
- Piston assembly
- Valve assembly installation
- Valve cotter mounting
- Crank shaft assembly
- Leak tester
- Cold tester
- Piston insertion machine

Transmission related equipment

- CVT assembly
- Automatic transmission assembly
- DCT assembly
- Carrier assembly
- Manual clutch assembly
- Automatic clutch assembly
- Torque converter insertion

Electric Vehicle related equipment

We are capable of handling equipment that is used in assembling motor including stator and rotor, electrical drive unit, battery module and pack line.


EDU-Gear Box


EDU (Electric Drive Unit)


Inverter


IGBT

Engine related equipment

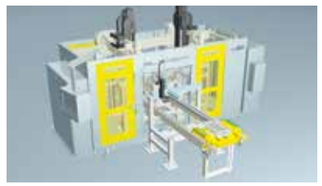
We are capable of handling the full range of equipment that is used in assembling engines including engine assembly equipment, cylinder head assembly equipment, and piston assemblies for powertrain products.

Transmission related equipment

We are capable of assembling cases, pulley valves, torque converters, etc. for CVT (Continuously Variable Transmission), automatic transmission, and DCT (Dual Clutch Transmission). We also handle gear box in EV drive.

Component related equipment, others

We respond to various needs such as electronic devices for vehicles, ABS, compressors, motors for hybrid vehicles, and inverters utilizing in-house standard robots and standard modules.


Valve assembly equipment


Carrier assembly equipment


Cantilever conveyors


Cold tester
Test under the condition of non-combustion


Clutch assembly equipment


Gripper transfer assembly for automotive parts

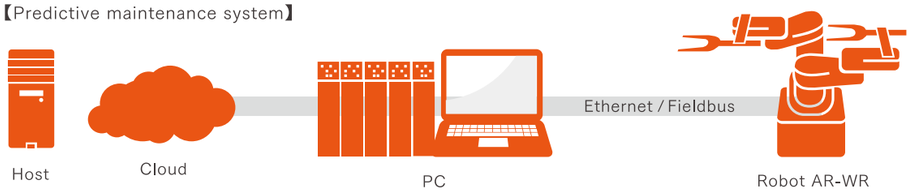
02

Semiconductor related equipment & Panel manufacturing systems

We manufacture and market platforms for manufacturing systems, transfer systems, and heat treatment systems in the front-end process of semiconductor manufacturing, and in the assembly and testing process, mainly manufacture and market in-process transfer systems. In the panel manufacturing system, we help customers to make a suitable plan for plant layout and distribution, such as coater and laminating systems for flat panels and base plates used for organic EL, LCD, and systems for cutting, transfer, division, and shifting of glass.

System architecture utilizing long years of experience
and know-how, and the addition of predictive maintenance function on robots.
Performing maintenance at a proper timing based on robots status.
Controls by Ethernet, PC, PLC and so on are available in semiconductor products.

【Predictive maintenance system】



- Pre-notification feature for preventive purposes
- Analysis
- Networking
- Data gathering

Semiconductor related equipment

In the field of semiconductor-related production equipment, we manufacture and market the load port which transfers silicon wafers to individual processing equipment, wafer transfer robots(atmospheric type and vacuum type), EFEM which integrates the load port and wafer transfer robots, and vacuum platform.We also manufacture and market road ports, transfer robots and related integrated Equipment Front End Module for FOPLP*.
In the field of semiconductor related equipments, the N_2purge load port, N_2EFEM, and others are available for the sake of miniaturization while transportation equipments of TAIKO Wafer can also be used.

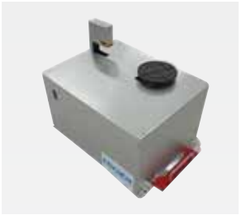
＊Fan Out Panel Level Packaging

300mm Equipment
Front End Module/Sorter series

Load ports
300mm KWF series

Wafer transfer robot
AR-WR series (atmospheric)

300mm vacuum platform
(OEM/ODM)



150/200/300mm prealigner

Wafer transfer robot
AR-WnV Series (low & high vacuum)

Transfer robot for FOPLP

Load port for FOPLP

Transfer robot for 4 port

Panel manufacturing systems

In the panel manufacturing systems, Hirata provides cutting systems, coater systems and lamination systems of glasses used for organic EL, LCD, and "Auto-loader systems", which utilize transfer robots.

Deposition equipment for OLED

Coater systems
Head Coater HC series

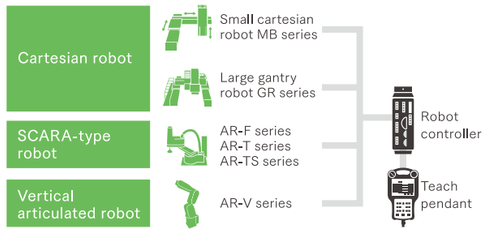
Laser glass odd-shaped processing system for 3 to 8 inch

03

Industrial robots

We manufacture and market many types of robots and control systems to various industries.
Our core technology, industrial robot is incorporated in the production equipment of various field such as automobile, semiconductor, and home electronics as part of the system.

From small to large size robots with usability and safety as well as high speed and high accuracy.




Vertical articulated robot AR-V series


Suspended SCARA-type robot AR-T series


SCARA-type robot AR-TS series

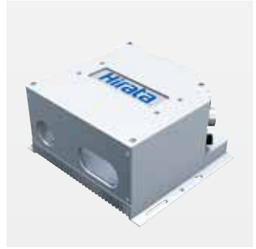

SCARA-type robot
AR-F series


Small cartesian robot
MB series


Gantry robot GR series

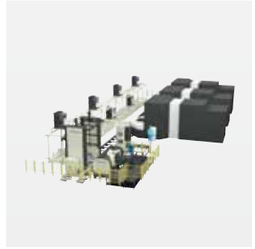

Robot controller HNC-X8M


Multifunctional teach pendant



3D machine vision HV-P series


Automatic chamfering machine


Automatic large pallets feeding systems

04

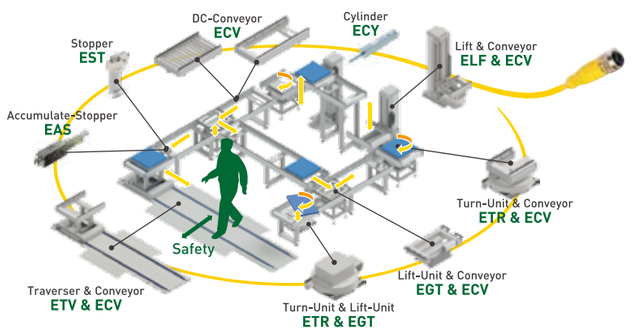
FA unit sales

Hirata eco ELECTRIC SERIES

We have various units to build a transfer line utilizing the Eco Electric DC conveyor as its core.

Hirata's transfer system is human- and environment-friendly

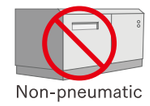
Aiming for reducing CO_2 emissions, many car manufacturers has clearly displayed the shift to electric vehicles (EV). This demands their factories to take quick action to reduce CO_2 emission. One of these actions is "making airless". Since all products of Eco Electric series being sold under FA unit sales are operated using DC24V, "making airless" can be easily achieved. Various products included in this series are both safety-conscious and easy-to-use as well as compatible with various global safety standards (excluding some products) which makes them useful under many different situations.



All-electrification of transfer line

They operate just by ON/OFF of DC24V and do not require any air device, driving board, controller, or inverter. This contributes to reducing the running cost and installation space.

ALL DC24V


Non-pneumatic

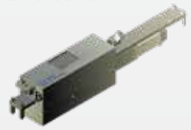
Eco Electric DC Converyor ECV series

This conveyor is a DC version of our safe and easy-to-use free flow conveyor which was realized by our long years of experience and includes uniquely developed DC brushless motor (HIRATA BLUE MOTOR) to make this DC operatable. This does not require a driving board. This is an eco conscious and smart conveyor which needs only DC24V for its operation.

Eco Electric Stopper EST series

Device to halt a work (palette) on the conveyor at the predefined position. This does not require a controller and needs only DC24V for its operation. It has a proven record in car manufacturing equipments and can be utilized in any field including home electronics.

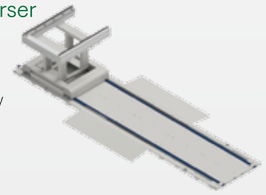
Balancing Stopper EAS series



Stopper to store multiple works (palette) on the conveyor and supply one by one.

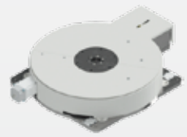
Eco Electric Traverser ETV series

While a traverser moves around, workers can safely step into the low-floor rails. Transfer will not be stopped.



Eco Electric Turn unit ETR series

Actuator of 90˚/180˚ rotation type utilizing an electric cylinder. This unit is used to rotate an object and can be used to change the flow direction of works on a conveyor by attaching the conveyor on this.










05

Intelligent power module

As one of our approaches to developing environmentally-conscious products, we develop and produce and sell power module-related equipment such as vacuum reflow machines for lead-free solder.
A power module is a module with a driving circuit such as IGBT controlling electrical power, as well as self-protected functions, which is used in various fields such as automotive and home electronics, including flat-screen televisions.

Integrated production system for power module

It provides a fully automated line which includes parts implementation, various jointing equipments, external inspections, and traceability systems.

Mounter ACS-PM series for Intelligent Power Modules

High speed and precision placing of Power Modules including IGBT tips, solder sheets, and insulated substrates. Machine bases are standardized and designed for dispensing and screw tightening.

Formic Acid Vacuum reflow oven HVMR-G series for Intelligent Power Modules

Removes oxide film by heating under the formic acid atmosphere after vacuum reduction. Non-contact heating with lamp heater enables fast heating.

06

Transfer machine

We manufacture and sell highly versatile automated warehouses, rack-less stockers which have no limitations on size or number of openings, and more. We have a proven record in the fields of automobile and home electronics, and are contributing many industries.

Smart rack-less stocker

Flexible rack-less stocker which has no limitations on size or number of openings to store. It flexibly accommodates stacking, sorting, and storing of various shapes of objects.

Automated warehouse

We provide automated warehouse systems that accommodate various needs ranging from high-speed, high-precision, or clean room standard to multi-picker.

Distribution system and solution

We provide a logistics system that has safety, versatility, and scalability by combining the automated warehouse, robot, and picking system with the leading-edge low thrust device.

07

Home appliance assembly

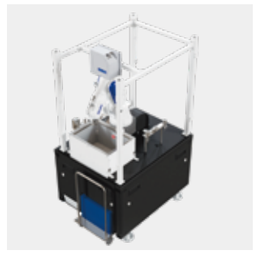
We globally offer services related to component manufacturing to final assembly of the fast-evolving home electronics products such as mobile devices including smartphones and tablets as well as high-quality displays and high-performance vacuum cleaners by efficiently utilizing Hirata group's transfer, robot, and clean/precision technologies.

Home electronics component assembly system

An example of the most appropriate base machine utilized for the assembly of small components of home electronics. A wide variety of work is possible by using two in-house SCARA-type robots.

Mobile equipment assembly system ACS-MD

An assembly line system for mobile devices such as smartphones. This is a flexible standard module that supports high-speed production and needs less space, and is equipped with our SCARA-type robots.



3D picking system

System to automate input and output of small parts for equipments or lines operated manually. Hirata robot controller can be connected quickly using the default settings.

08

Medical / Chemistry & Physics device

We manufacture and market medical/chemistry and physics devices that are used in the healthcare field and in the development of new medicines. We endeavor to contribute to society by providing products that are easier to use and have high reliability.

Fully automatic continuous slicer Tissue-Tek Smart Section

(Sakura Finetek Japan Co., Ltd.)

This equipment enables automatic production of pathological specimens by slicing the specimens such as cancers into the thickness of a few microns. The system contributes to the medical field not only by its efficiency but also precise operation.

Multi-specimen cell disruption device

The equipment allows you to disrupt cells to extract DNA, RNA, and proteins.
The equipment is operative with a single press of a button and comes in compact and desktop size.

Filtration membrane breakage monitoring system

The system condenses fine particles in water and acquires them only a few microns in size that flow through when the filter membrane breaks, and detects them by image processing.
24-hour real-time, remote monitoring is also possible.

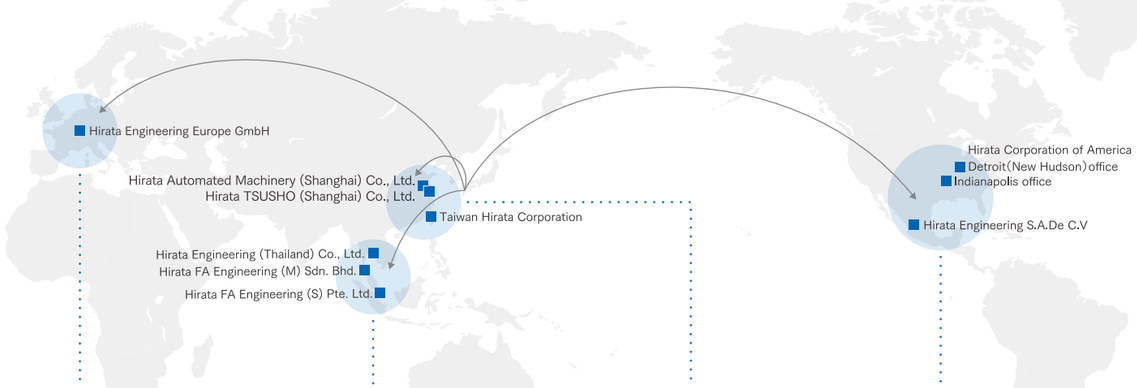
Global Capabilities

Hirata ensures delivery of services by maximizing our experience in over 40 countries and know-how with extensive knowledge of our production sites.

Hirata's customer base spreads out to over 40 countries in the world including Japan.
We deploy 9 subsidiaries in North America, Europe, South East Asia, China, and Taiwan,
where we can provide quick and flexible responses to inquiries for new businesses as well as operation, support, maintenance, and updates.
Anywhere in the world, we provide production systems complying with customers' production philosophies and taking into account practical issues such as local labor practices and safety standards.

9 overseas subsidiaries

We deploy 9 subsidiaries in North America, Europe,
South East Asia, China, and Taiwan.



Europe

Hirata Engineering Europe GmbH (Germany)
Est.1993
http://www.hirata.de

South East Asia

Hirata FA Engineering (S) Pte. Ltd.(Singapore)
Est.1991
http://www.hirata.com.sg

Hirata Engineering (Thailand) Co., Ltd.(Thailand)
Est.2004

Hirata FA Engineering (M) Sdn. Bhd.(Malaysia)
Est.2012

China,Taiwan

Hirata Automated Machinery (Shanghai) Co., Ltd. (China)
Est.2006
http://www.hirata-cn.com

Hirata TSUSHO (Shanghai) Co., Ltd.(China)
Est.1999
http://www.hirata-hts.com

Taiwan Hirata Corporation (Taiwan)
Est.2006
http://www.hirata.com.tw/

North America

Hirata Corporation of America(USA)
Est.1980

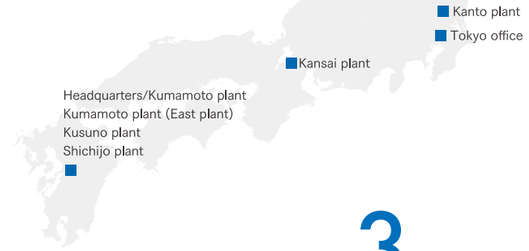
Hirata Engineering S.A.De C.V(Mexico)
Est.2000

Company Profile

Company Name	Hirata Corporation
Headquarters	111 Hitotsugi, Ueki, Kita, Kumamoto, 861-0198 Japan TEL. 81-96-272-0555　FAX. 81-96- 272-7901
Representatives	Yuichiro Hirata, President
Date Established	Dec. 29, 1951
Accounts Closed	Mar. 31 (annually)
Capital	2,633 million yen
Stock Exchange Listings	First Section of the Tokyo Securities Exchange (Code : 6258)
Primary Client Banks	Higo Bank, Sumitomo Mitsui Banking Corporation, MUFG Bank, Ltd,　Kagoshima Bank, The bank of Fukuoka, Kumamoto Bank, Sumitomo Mitsui Trust Bank
Fields of business	Manufacture and sales of various manufacturing line systems, Industrial robot and logistic equipment
Subsidiary Company	3 domestic subsidiaries　9 overseas subsidiaries
Auditing Corporation	KPMG AZSA LLC
Membership	Japan Industrial Robot Association、SEMI Japan、 Kumamoto Association of Corporate Executives

7 domestic branches

In Japan we have 7 locations (6 plants),
which include Headquarters, Kumamoto plants,
Kanto plant, Kansai plant,　Kusuno plant,
Shichijo plant, and Tokyo office.
We offer regional support to the best of our ability.



Domestic branches

Headquarters/ Kumamoto plant
Est.1964

Kumamoto plant (East plant)
Est.1988

Kusuno plant
Est.1984

Shichijo plant
Est.2008

Kanto plant
Est.1968

Kansai plant
Est.1981

Tokyo office
Est.2016

3 domestic subsidiaries

Domestic subsidiaries with knowledge of "Hirata-ism" work closely with us in various fields of industry.

Taihei Technos Co., Ltd.
Est.1980
http://www.taiheitechnos.co.jp

Hirata Field Engineering Co., Ltd.
Est.1999
https://hirata-fe.com

Trinity Inc.
Est.1986
http://www.3inc.jp