

# Domain Information

An introduction to the four domain's extensive range of innovative technologies compiled over more than a century.



The Means to Connect  
The domain's wide product range plays key role in the infrastructure of developing countries.

## Machinery, Equipment & Infrastructure

### Machinery, Equipment & Infrastructure

Machinery, Equipment & Infrastructure's wide range of products, including machine tools, material handling, construction machinery, air-conditioning and refrigeration systems, lay at the foundation of industrial development. MHI applies its broad business experience, high reliability and technical expertise to support social and industrial infrastructure by connecting people to people, businesses to businesses, and the present to the future.

- **Engine Division**  
Engines (Diesel/Gas Engines)
- **Automotive Parts Division**  
Turbochargers/  
Automotive Thermal Systems
- **Air-Conditioning & Refrigeration Division**  
Commercial Use Air-Conditioners/  
Residential Use Air-Conditioners/  
Heat Pump Water Heaters/Heat Pump Module  
Chillers/Centrifugal Chillers/  
Transport Refrigeration Units/  
Applied Refrigeration Use Machinery
- **Machine Tool Division**  
Large Machines/Gear Machines,  
Cylindrical Grinding Machines/  
Special-Purpose Machines/High-Precision Machining  
Centers/Wafer Bonding Machines/  
Precision Cutting Tools/Engine Valves/  
Power Transmissions/  
Precision Position Feedback Sensors
- **Hydraulics & Machinery Division**  
Hydraulic Devices/Testing Systems
- **Business Development Dept.**  
Advanced Mechanical Systems
- **Group Companies**  
Machinery/  
Environmental Protection Systems/  
Mechatronics System Machinery/Printing and  
Paper Converting Machinery/Steel  
Structures/Agricultural Machinery and  
Facilities/Automotive Thermal Systems/  
Material Handling Equipment

### Energy & Environment

Energy & Environment offers optimal solutions in the energy-related fields of thermal power, nuclear energy and renewable energy, in such environmental areas as water and flue gas treatment, and for chemical and industrial plants. MHI's integration of large-scale infrastructure projects supports society and generates new power for the future. By leveraging the benefits of its wide range of products this domain focuses on responding to the needs of its customers and society. MHI is developing new businesses to combine the design, procurement, and construction operations of each of the domain's businesses to become a leading company in the energy and environment-related industries.

- **Thermal Power Generation Systems**  
Mitsubishi Hitachi Power Systems, Ltd.  
Thermal Power Generation Systems/  
Environmental Plants for Coal-Fired  
Facilities
- **Nuclear Energy Systems Division**  
Pressurized Water Reactor (PWR) Plants/  
Advanced Reactor Plants/  
Nuclear Fuel Cycle Plants and Facilities/  
Nuclear Fuel
- **Chemical Plant & Infrastructure Division**  
Chemical Plants/Water Solutions
- **Renewable Energy Business Division**  
Wind Power Systems/  
Pump Applications
- **Marine Machinery & Engines**  
Mitsubishi Heavy Industries  
Marine Machinery & Engine Co., Ltd.  
Marine Machinery and Engines

### Commercial Aviation & Transportation Systems

Commercial Aviation & Transportation Systems delivers advanced land, sea and air transportation systems, including civilian aircraft, commercial ships and transit networks. MHI moves society, supporting its transportation and logistics infrastructures with superior safety, guaranteed quality and first-rate reliability backed by state-of-the-art technology. The domain complies with strict safety regulations and requirements by standardizing production systems and coordinating technological development in each field of land, sea and air throughout its operations and has created an integrated business model for its products to further expand into new markets.

- **Shipbuilding & Ocean Development Division**  
Passenger Ships/Commercial Ships/  
Special-Purpose Vessels/  
Marine Structures/Submersibles/  
Ship Repair & Conversion/  
Technical Services & Automated Systems/  
Engineering Business/  
Overseas Shipbuilding Business
- **Land Transportation Systems Division**  
Land Transportation Systems/  
Air Brake Equipment
- **Commercial Airplanes Division**  
Boeing Sustaining/Bombardier/  
Established Commercial Airplanes
- **787 Division**  
Boeing Sustaining
- **Commercial Aero Engines Dept.**  
Commercial Aero Engines
- **MRJ**  
Mitsubishi Aircraft Corporation  
Independently Developed Aircraft

### Integrated Defense & Space Systems

Integrated Defense & Space Systems provides unified land, sea, air and space defense systems, including naval ships, defense aircraft, missiles, launch vehicles and special vehicles, as well as space-related services. MHI technology and expertise developed in its defense and space business contribute to security across the planet. As Japan's leading defense and space systems integrator, the Integrated Defense & Space Systems Domain combines the technology and expertise of each of its businesses to reinforce MHI's international competitiveness in the space industry and create innovative systems to coordinate land, sea and air defense initiatives.

- **Aircraft Division**  
Defense Aircraft
- **Guidance & Propulsion Division**  
Missile Systems/Aero Engines/  
Applied Products
- **Space Systems Division**  
Space Systems
- **Special Vehicle Division**  
Special Vehicles/Naval Ship Engines
- **Naval Ship Division**  
Naval Ships
- **Maritime & Space Systems Dept.**  
Undersea & Shipboard Systems

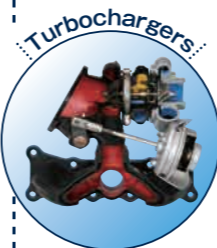
## Pick Up! Domain

## Machinery, Equipment & Infrastructure

As a *monozukuri* (manufacturing) company MHI couples high standard of living and quality of life to support social and industrial foundations necessary to achieve sustained growth of society.

### Engine Division

With a significant share of the domestic market, MHI's diesel and gas engines deliver the world's highest level of environmental and power-generating efficiency. In addition to an array of power generating systems, the company also supports society with its wide range of engines used to power all types of equipment.



### Automotive Parts Division

MHI supplies automakers with high-efficiency automotive air-conditioning systems and turbochargers. In response to growing global demand driven by stricter emission controls, turbocharger sales for passenger vehicles are forecast to expand dramatically. MHI is proud to deliver a wide range of high-quality, high-performance products around the world.

### Air-Conditioning & Refrigeration Division

MHI manufactures residential and commercial use air-conditioners to maintain comfort in homes, office buildings and other spaces, along with commercial heat pump water heaters and module chillers, centrifugal chillers and transport refrigeration units. Through the improved economic efficiency and energy-saving performance of these products, the company contributes to environmental conservation.

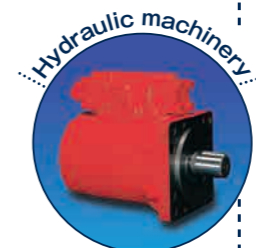


### Machine Tool Division

MHI's precision cutting tools and a wide range of large machine tools and gear machines have captured a top-class share of world markets. Through manufacturing that strives for high precision and high productivity, MHI is supporting industrial infrastructures around the world.

### Hydraulics & Machinery Division

MHI manufactures a wide range of outstanding equipment, including hydraulic components used in construction machinery and power generation systems, and electric hydraulic deck cranes for ships. The company has also developed automobile collision simulators, vibration testing equipment and other innovative testing systems to protect human life from accidents and disasters.



### Business Development Dept.

To respond to the needs of society, MHI produces cutting-edge equipment used in a variety of diversified fields, including such devices as particle accelerators for unravelling the mysteries of space and matter, radiation therapy system for treating cancer, and OLED panels, fast becoming the next generation of thin and lightweight lighting.

## Domain News

### Siemens AG joint venture accelerating global development of steel and metal production



MHI concluded an agreement with Siemens AG of Germany to establish a joint-venture company (JV). The new JV, due to launch in January 2015, will be established through a split and consolidation of the steel and metal production machinery businesses of Mitsubishi-Hitachi Metals Machinery, Inc., an MHI group company, and Siemens MT Business, Siemens group companies, and will provide products involved in all upstream and downstream processes, along with an increased range of value-added products and services.

### MVR-Ex launch: double-column, 5-face milling machines thoroughly suppress thermal displacement



In May 2014, MHI unveiled a new model in its MVR Series of double-column 5-face milling machines, the MVR-Ex. By incorporating an internally cooled main spindle and thermostabilized columns, MHI overcame heat problems and succeeded in enhancing heavy-duty machining and high-precision finishing. MHI is confident this latest model will attract new users and prove popular among existing users.

### Increasing demand for corrugated board fuels orders for corrugating and box-making machines



Mitsubishi Heavy Industries Printing & Packaging Machinery, Ltd., an MHI group company, recently received an order for 20 box making machines from a leading U.S. integrated producer of packaging materials. Two orders for corrugating machinery and a box making machine were also received about the same time from two Korean packaging materials manufacturers. These large orders reflect the company's growing reputation as a world-class manufacturer committed to offering the very best in manufacturing performance.