

Aiming for a Sustainable Society and a Sustainable World

The JTEKT Group has positioned the environment as one of its main management issues.

In March 2011, we formulated the JTEKT Group Environmental Vision, comprising our Environmental Philosophy and Environmental Policy, and we have been promoting measures that contribute toward the realization of a sustainable society and a sustainable world through a promotional framework in which JTEKT Corporation and the JTEKT Group as a whole work together as one.

Environmental vision

JTEKT Group Environmental Vision

Environmental Philosophy

The JTEKT Group is aiming for “ZERO” environmental burden of business activities and products throughout their lifecycle in order to conserve the global environment for future generations and realize a sustainable society.

Environmental Policy

Based on our corporate philosophy, all JTEKT employees share the JTEKT GROUP VISION and JTEKT WAY in promoting global environmental conservation activities autonomously and proactively in accordance with JTEKT’s management strategy, including both internal and external issues.

1. Make a continuous improvement in our environmental management system to enhance environmental performance.
2. Comply with environment-related laws, regulations, treaties, agreements, and other requirements related to our business activities. Promote harmony with community environments, maintain / improve environmental conservation, and strive to prevent environmental pollution.
3. Conduct environmental management activities designed to the lifecycle of our products, and pursue the following:
 - (1) Develop and design environmentally friendly products
 - (2) Procure raw materials with low environmental burden, and control / reduce CO₂ emissions, waste and chemicals, etc., at every manufacturing stage
4. Protect biodiversity in consideration of locational conditions of each JTEKT site and establish a society in harmony with nature through ecosystem conservation.

Promotional structure

Global Environmental Conservation Committee

JTEKT has established the Global Environmental Conservation Committee, which is chaired by the president, to promote environmental management. Under the guidance of this committee, individual environmental subcommittees roll out activities based on ambitious goals.

Global environmental management

We are working to further strengthen our environmental management, not only at JTEKT but also at our 19 Group companies in Japan and 38 Group companies overseas (as of March 31, 2019).



Environmental Action Plan 2020

Environmental Challenge 2050: Philosophy and guidelines

With the goal of realizing a sustainable society in line with the vision of “For the children of the future,” JTEKT formulated the Environmental Challenge 2050 Guidelines for measures aimed at minimizing JTEKT’s environmental footprint by 2050. The JTEKT Group’s Environmental Challenge 2050 is based around five key pillars—Products / Technologies, Creation of a low-

carbon society, Creation of a recycling-based society, Harmony with nature / Biodiversity, and Environmental management—and the Group is working together as one to take up the challenge of minimizing its environmental footprint and maximizing environmental value.

Formulated and announced in May 2016

Environmental Challenge 2050

Category	Guideline
1. Products / Technologies	<ul style="list-style-type: none"> ● Contribute to the building of an environmentally friendly society using our capabilities in the development of products and technologies ● Actively promote the development of products that are expected to contribute toward reducing the burden on the environment, including components for fuel cell vehicles (FCVs), etc.
2. Creation of a low-carbon society	<ul style="list-style-type: none"> ● Work to minimize CO₂ emissions throughout the product lifecycle, from materials and component procurement through to design, manufacturing, and eventual disposal ● Work to minimize CO₂ emissions from factories engaged in the manufacturing of products by 2050 ● Expand the development and adoption of innovative new processes and production equipment ● Implement day-to-day improvements and enhance the efficiency of production equipment at our factories ● Shift over to the use of renewable energy, hydrogen energy, etc.
3. Creation of a recycling-based society	<ul style="list-style-type: none"> ● Work to minimize emissions and expand recycling at the production stage ● Implement source control measures (including yield enhancement, etc.) and use strengthened separation measures, etc., to enhance the value of waste materials (generation of valuable resources) ● Effectively utilize recycled materials and expand internal recycling ● Work to minimize water usage through the cyclical utilization of water used in our factories, etc., and ensure that wastewater discharged from our factories is discharged in a cleaner state
4. Harmony with nature / Biodiversity	<ul style="list-style-type: none"> ● Promote activities aimed at fostering harmony with nature and protecting ecosystems, not only on a JTEKT-wide basis but also in collaboration with the Toyota Group and with government agencies and NPOs
5. Environmental management	<ul style="list-style-type: none"> ● Build a corporate culture and cultivate professionals oriented toward actively conserving the earth’s environment ● Strengthen employees’ environmental awareness and cultivate people who can make a positive contribution to the environment, both within and outside the company ● Expand the implementation of global-scale environmental activities

Environmental Action Plan 2020

JTEKT’s Environmental Action Plan 2020 is a five-year action plan formulated as the first step toward achievement of the Environmental Challenge 2050 goals, and includes concrete, quantitative targets that the JTEKT Group will be working to

meet. The Group as a whole is working together as one to realize these objectives, and in fiscal 2018 some of the targets were met ahead of schedule.

Environmental Action Plan 2020 Targets, Fiscal 2018 Activity Results

(Excerpt)

Category	Implemented by	Item	Base year	FY2020 targets	FY2018 results
Products / Technologies	Global	Product-based CO ₂ reduction contribution ^{*1}	—	800,000 t	816,000 t
		CO ₂ emissions	Target basic unit for FY2020 × Production volume		—
Creation of a low-carbon society	JTEKT independent	CO ₂ basic unit ^{*2}	FY2008	15% reduction	16.0% reduction
		Basic unit of CO ₂ from distribution	FY2012	8% reduction	18.6% reduction
		CO ₂ basic unit	FY2012	10% reduction	12.8% reduction
Creation of a recycling-based society	JTEKT independent	Basic unit of waste	FY2008	18% reduction	25.8% reduction
		Basic unit of packaging material	FY2012	8% reduction	7.4% reduction
		Basic unit of water usage	FY2012	8% reduction	26.0% reduction
		Basic unit of waste	FY2012	8% reduction	7.1% reduction
	Global	Basic unit of water usage	FY2012	8% reduction	53.1% reduction

*1 Contribution toward reducing CO₂ emissions equivalent to or greater than overall CO₂ emissions through products

*2 CO₂ emissions associated with the production factors—including raw materials, energy, labor, etc.—required to produce a given quantity of product

For more information about Environmental Action Plan 2020, please visit JTEKT’s website. <https://www.jtekt.co.jp/news/160531.html> (in Japanese only)

Toward setting targets for 2030

In order to realize the goal of minimizing CO₂ emissions that was stated in Environmental Challenge 2050, JTEKT has set intermediate goals in the form of interim targets for 2030.

Our approach toward setting an overall emissions target for 2030

We have set our overall emissions target for 2030 in line with the goal of staying within a 2°C increase from pre-industrial levels, which was agreed on at the 2015 United Nations Climate Change Conference (COP21) in Paris.

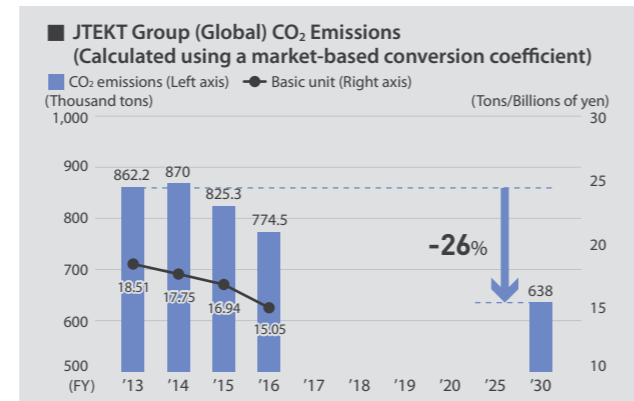
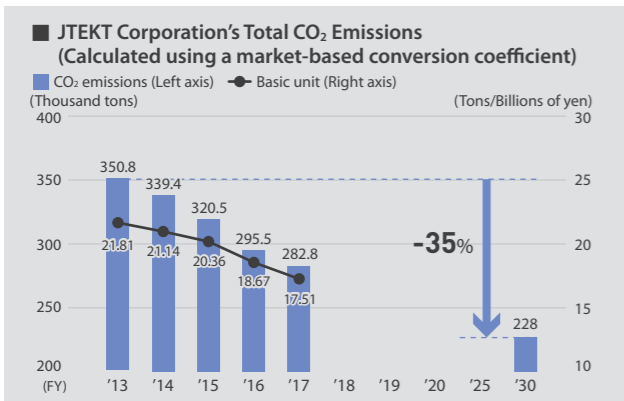
Target value

We have set a global target of reducing overall CO₂ emissions by 26% compared to fiscal 2013. Within Japan, by prioritizing the reduction of energy consumption through production technology innovation and day-to-day improvements, we are aiming to reduce CO₂ emissions by at least 35% compared to fiscal 2013.

Scenario analysis in regard to climate change

In relation to our setting of overall CO₂ emission reduction target for 2030, we have been utilizing the climate change scenario analysis framework developed by the TCFD^{*3} to evaluate climate-related risks and opportunities, and review our medium-term objectives.

^{*3} The Task Force on Climate-related Financial Disclosures (TCFD) was established by Japan's Financial Stability Board (FSB) to encourage business enterprises to use the TCFD's climate change scenarios to adjust business strategy and risk management based on the results of assessment of the climate-related risks and opportunities for the individual enterprise in question, and to disclose the anticipated impact on the enterprise's finances.



[Conversion coefficient used to calculate CO₂ emissions]

With regard to the management of CO₂ emissions per unit of production output in the period up until 2020, we have adopted a conversion coefficient that facilitates assessment of the results achieved in the company's improvement efforts.

For overall emissions management in the period from 2021 onward, to ensure that CO₂ emissions data more closely reflects the actual situation, calculation is performed using the market-based conversion coefficient specified by the individual electric power company for the year in question.

Concrete measures adopted in fiscal 2018

Measures to reduce CO₂ emissions through production technology innovation (Development of energy-saving equipment)

We are working to reduce CO₂ emissions through production technology innovation, with the aim of meeting our CO₂ emissions reduction target for fiscal 2020 (which is to reduce emissions by 50% compared to fiscal 2001).

(Example) Energy-saving equipment development

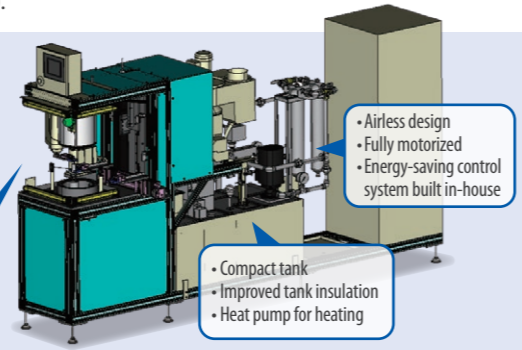
Energy-saving small-sized cap cleaning machine, designed and manufactured in-house

Cleaning machine: Development began in 2014
2018: Energy-loss reduction and full-scale motorization

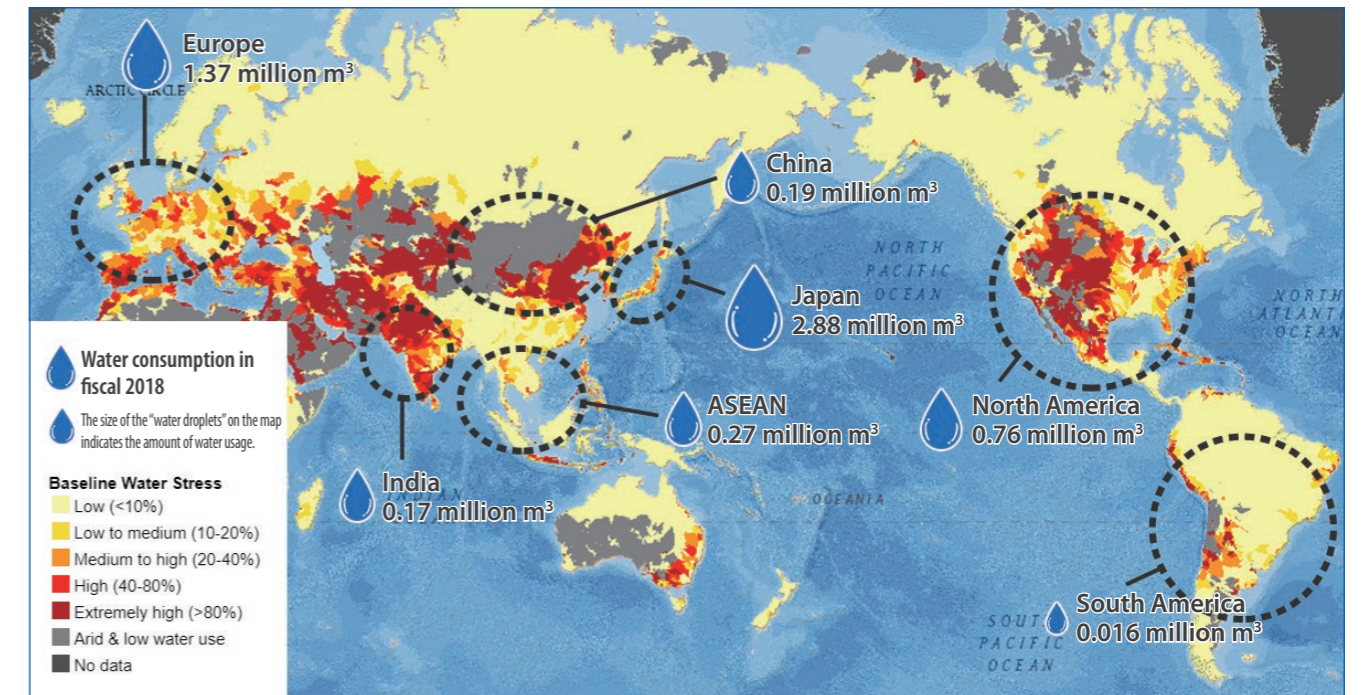
Equipment size
1.5 m² footprint, 1.5 m in height
50% smaller than conventional models

Energy efficiency
Realizes a **30%** improvement compared to conventional models

- Compact size
- Effective cap cleaning
- Electric cylinder design



Initiatives for reducing water consumption



Water risk assessment

In addition to realizing efficient utilization of water resources by improving water consumption per unit of production output, starting from 2017 JTEKT has also been assessing the level of water risk at each of its business locations, using Aqeduct^{*4}.

In the future, when working to reduce water usage, we will strive to ensure the effective utilization of water resources by implementing measures based on water risk assessment results—including forecasts—and on actual water consumption and water dependency levels at each facility.

^{*4} Aqeduct is a database run by the World Resources Institute (WRI). It provides global maps and data showing various types of water risk, including physical water stress, water quality, regulatory risk relating to water resources, reputation risk, etc.

Water risk countermeasures

On the basis of the water risk assessment results of various JTEKT production locations around the world, India and the Dalian region of China were assessed as having the highest level of water risk.

Based on surveys of actual water consumption and the overall state of water usage in regions with high water risk, in India, where there is a problem with unsatisfactory water quality, reverse osmosis (RO) equipment has been adopted so that water quality can be improved before water is supplied to production processes. As the actual amount of water consumed by JTEKT's business operations in areas with high water risk is relatively low (172,000 m³ in India and 187,000 m³ in China), it was determined that the level of risk associated with water usage was limited.

We are currently working to reduce water consumption at JTEKT's Tokushima Plant in Japan and at JTEKT AUTOMOTIVE LYON S.A.S. in France, which have been using relatively large amounts of underground water and river water.

Implementing measures to reduce underground water consumption (Bearing Business Headquarters, Tokushima Plant)

As a measure to reduce consumption of underground water, starting from fiscal 2018 JTEKT's Tokushima Plant has been taking steps to recycle the cooling water used in heat treatment. Prior to this, because the cooling water circuit for heat treatment equipment functioned as a closed circuit, water was discharged into a nearby river after use.

A cyclical system has now been adopted to reduce underground water consumption, focusing in particular on the heat treatment equipment at five plants, which had a particularly high level of water consumption (28,000 m³ per month). In fiscal 2018, countermeasures were implemented for two sets of heat treatment equipment and five sets of conversion furnaces, realizing a reduction in underground water consumption of 14,690 m³ per month (176,280 m³ per year), representing a year-on-year improvement of 20%. Regarding countermeasures for the remaining heat treatment furnaces in fiscal 2019, it is anticipated that the adoption of cyclical systems will be completed for all five plants' heat treatment equipment.

