

ENVIRONMENTAL REPORT

2022



**To contribute to the
wellbeing of society
through precision
measurement
technologies**

President Message

The Mitutoyo Group has been engaged in discussions toward achieving carbon neutrality, covering the supply chain, while steadily reducing CO₂ emissions, beyond the EMS activities that we have been engaged in.

In September 2022, we established specific targets to achieve carbon neutrality by 2050, announced our endorsement of the TCFD recommendations, and launched initiatives to be implemented throughout the entire value chain.

Going forward, we will strengthen our sustainability governance framework to achieve the SDGs by once again identifying materialities (priority issues) to solve issues throughout society, including by making efforts toward carbon neutrality.

This 2022 Environmental Report outlines the environmental conservation activities of the Mitutoyo Group in fiscal 2021, and from this year we will enhance the content of the report to integrate all aspects of sustainability, while accelerating our efforts toward carbon neutrality. Find out what actions Mitutoyo is taking to address climate change and solve issues in society in this report.



Yoshiaki Numata
President

November 2022



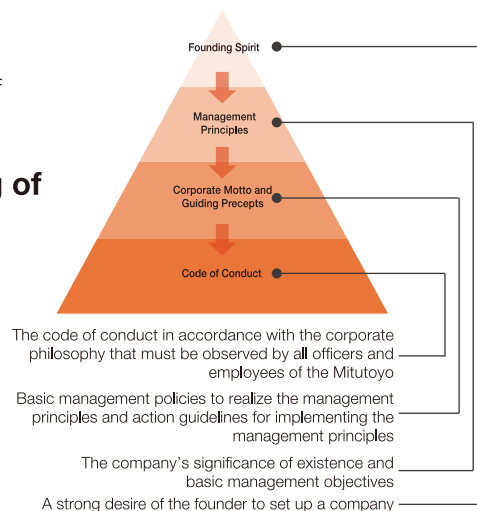
Mitutoyo Group Management Principles

The Mitutoyo Group's Code of Ethics (Mitutoyo Group Code of Conduct) defines the Mitutoyo Group's philosophy system based on the significance of its existence, its social mission, and the spirit of its founding.

Management Principles: To contribute to the wellbeing of society through precision measurement technologies

This management philosophy means to accomplish the following six tasks:

- Provide solution engineering to support our client business development
- Contribute to the global industrial and technological advances through refinement and innovation of precision measurement technology
- Cultivate healthy relationships and common prosperity with trading partners
- Support and promote global peace, human happiness and harmony with the environment
- Apply business practices that reflect the integrity of Mitutoyo and our world-leading brand
- Nurture a vibrant corporate culture that inspires a passion in our personnel to do their best, to be the best



Business Overview

Since our establishment in 1934 with the aim of domestically manufacturing micrometers, the Mitutoyo Group has been developing a variety of precision measuring instruments that meet the needs of the industry for advanced, high-speed, and labor-saving precision measurement technology, contributing to advanced precision measurement and looking ahead to the future as an expert in precision measurement.

We will continue to contribute to the development of the industry with new technologies and products based on our precision measurement technologies.





Environment Policy

Our actions for the environment

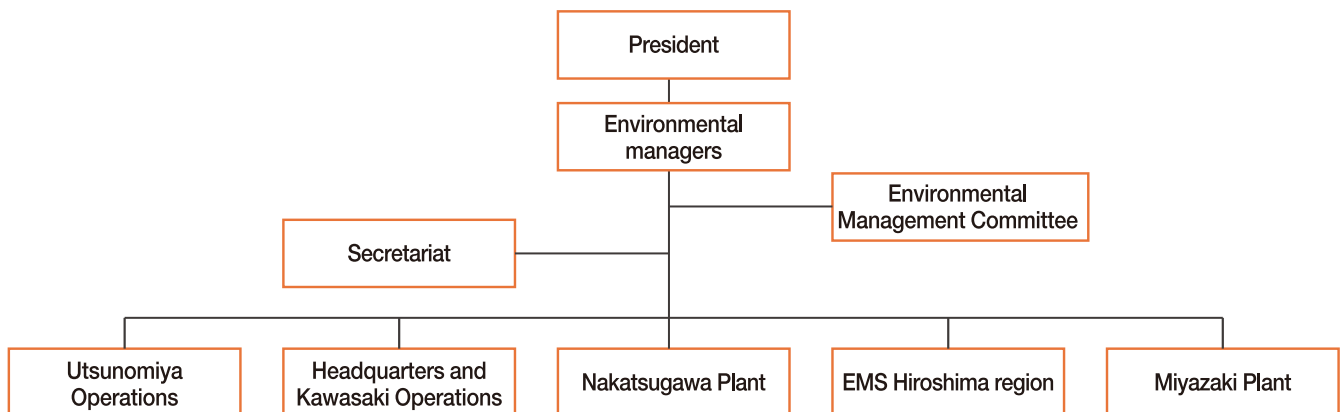
Mitutoyo Group with its management principle of “Contributing to the wellbeing of society through precision measurement technologies,” provides precision measurement instruments to customers through the development, design, manufacture, sales, and service of precision measurement instruments. We, who are working at Mitutoyo Corporation recognize that the preservation of the global environment is one of the most important issues for all human beings, in keeping with the “good environment” stated in our corporate motto, and we will work to continuously maintain and improve the environmental management system by participating in all business activities, products and services that affect the global environment, and to protect the global environment and prevent environmental pollution.

1. We will establish a voluntary environmental management system to reduce the environmental impact of our business activities, products, and services.
2. We will comply with all laws, regulations, ordinances, and other requirements that we have decided to accept in our business activities.
3. We will work on the following to protect the global environment and prevent environmental pollution.
 - (1) Reduction in carbon dioxide emissions
 - (2) Development and design of environmentally conscious products
 - (3) Promotion of resource and energy conservation
 - (4) Promotion of waste reduction and recycling
 - (5) Reduction of hazardous chemicals
4. We will set environmental goals and review them periodically to continuously improve environmental performance.
5. We will implement educational and awareness-raising activities on our environmental policy and make it known to all of our employees (including our permanent employees) and those who work for us.
6. We will publish the environmental policy for both internal and external use.

Established: December 10, 2012
Implemented: January 1, 2022



Environment Management System



Scope of Report / Reporting Period

This report covers the Mitutoyo Group’s environmental conservation activities in fiscal 2021 (January to December 2021).

Scope: Five Mitutoyo Group sites in Japan

- Utsunomiya Operations:** Small Tool Plant, Microcord Plant, Kiyohara Plant
- Headquarters and Kawasaki Operations**
- Nakatsugawa Plant**
- EMS Hiroshima region:** Kure Plant, Shiwa Plant, Gouhara Plant
- Miyazaki Plant**

*Kochi Plant will be covered from January 1, 2023.



ISO 14001 Certification

ISO 14001 Certification Acquired Across the Entire Mitutoyo Group

The Mitutoyo Group is actively engaged in environmental conservation activities with the aim of becoming a company that can coexist in harmony with society.

Until 2012, each business division had established its own voluntary environmental management system, however, in order to further reduce our environmental impact, we established a company-wide environmental management system in 2013 and obtained ISO 14001 certification for the entire Mitutoyo Group.



Internal Audits

Mitutoyo also conducts **mutual audits among sites**, in which auditors from one site visit another site to conduct audits.

*In fiscal 2021, mutual audits among sites were suspended due to the COVID-19 pandemic.

Purpose of mutual audits among sites

To match the level of audits, and to make suggestions for operational improvement based on cases at other sites.

Sites subject to mutual audits in fiscal 2022 (divisions)

EMS Hiroshima region, Kure Plant (indirect divisions)



Environmental Management Training

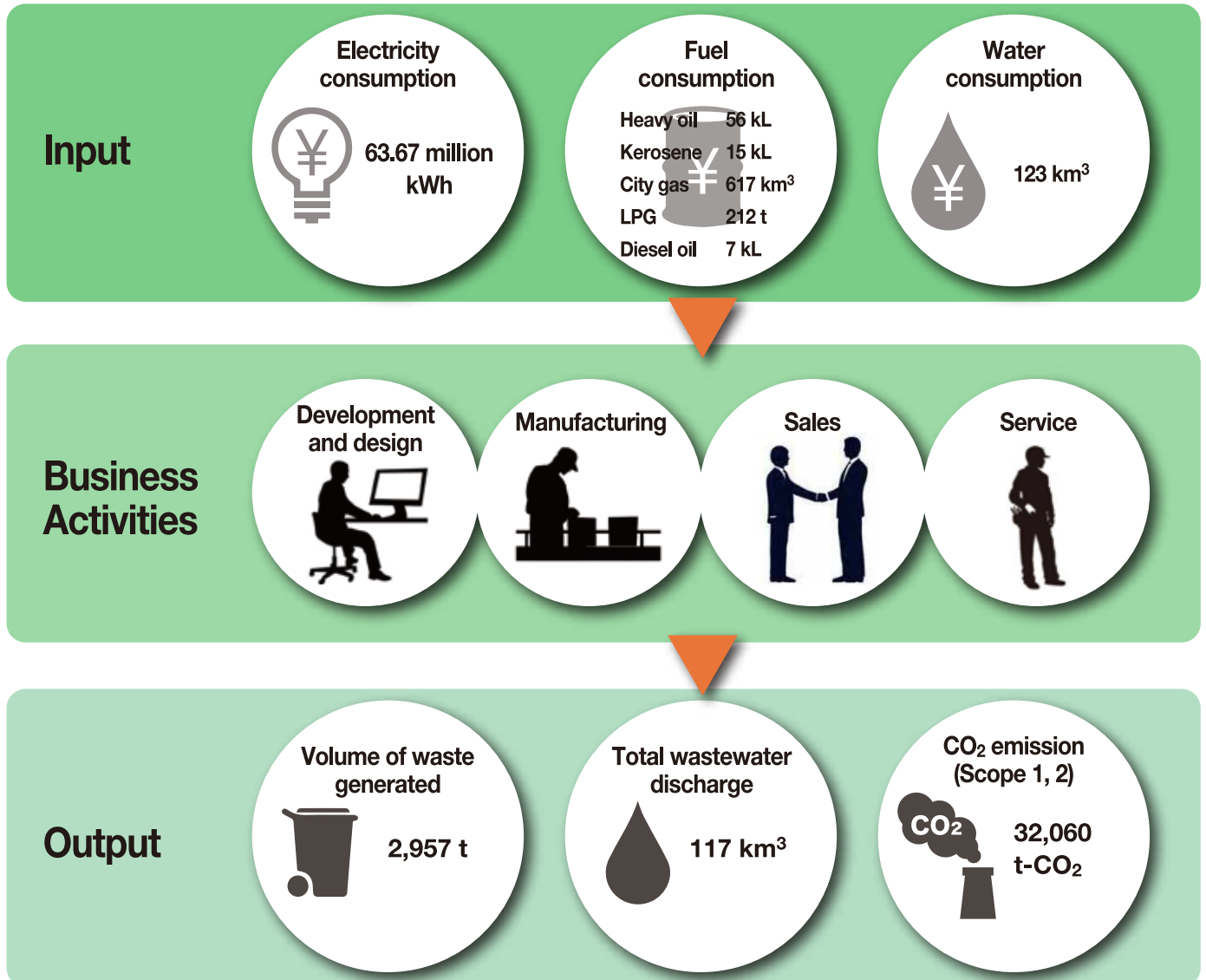
Name	Target	Participants	Total time (minutes)
New environmental training	New employees, mid-career hires, etc.	192	8,170
General training	All employees (including directors, employees of affiliated companies, etc.)	3,183	98,705
Training to secure competence	Personnel engaged in specific operations	284	38,055
Internal auditor training	Internal auditors	68	23,040
Total		3,727	167,970



Business Activities and Environmental Impact

Overview of Environmental Impact

Below is the total environmental impact of the Mitutoyo Group's business activities.



Environmental Impact of Each Site

The following table shows the environmental impact of the Mitutoyo Group's five sites in fiscal 2021.

Item Unit		Site	Utsunomiya Operations	Headquarters and Kawasaki Operations	Nakatsugawa Plant	EMS Hiroshima region	Miyazaki Plant
Input	Fuel consumption (calculated as crude oil)	kL	89	615	4	361	6
	Electricity consumption	10,000 kWh	2,925	941	317	1,770	414
	Water consumption	km³	37	52	6	25	4
Output	CO ₂ emission	t-CO ₂	13,182	5,355	1,475	10,049	2,000
	PRTR substance emission (atmospheric)	kg	245	1,056	2	2,319	944
	Total water discharge	km³	34	51	6	22	4
	Volume of waste generated	t	766	332	55	1,715	79



Carbon Neutral Initiatives

This report includes the latest status of the initiatives that have been implemented since fiscal 2022.

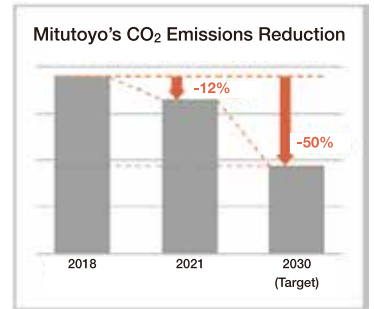
1. Commitment

Mitutoyo Group will contribute to the realization of a decarbonized society toward carbon neutrality by 2050 to fulfill its corporate responsibility to address global climate change issues.

- We will reduce our CO₂ emissions (Scope 1, 2) by 50% from 2018 levels by 2030. We formally endorsed TCFD's recommendations in September 2022.

- We expressed our support for the TCFD* recommendations in September 2022.

*TCFD (Task Force on Climate-related Financial Disclosures)



2. Specific Initiatives

The Mitutoyo Group is actively making efforts to “use renewable energy” and “introduce energy-saving and highly efficient production equipment” to achieve the world's most competitive “**Made in Japan**” manufacturing. We will continue to meet the growing demand for precision measuring instruments while further accelerating the reduction of CO₂ emissions throughout the entire value chain.

Examples of Initiatives

We are switching to 100% CO₂-free hydroelectric power generation in the Utsunomiya Operations and at our Kochi Plant.

- Utsunomiya Operations
Introduction of “Tochigi-Furusato Electric Power Supply Service”
*However, Kiyohara Plant uses a different electric power company



- Kochi Plant
Introduction of “Kochi Family Support Electricity”
*50% of electricity consumption to be covered by hydroelectric power generation from August 2022




Initiatives to Reduce Environmental Impact

1. Efforts to Reduce Energy Consumption

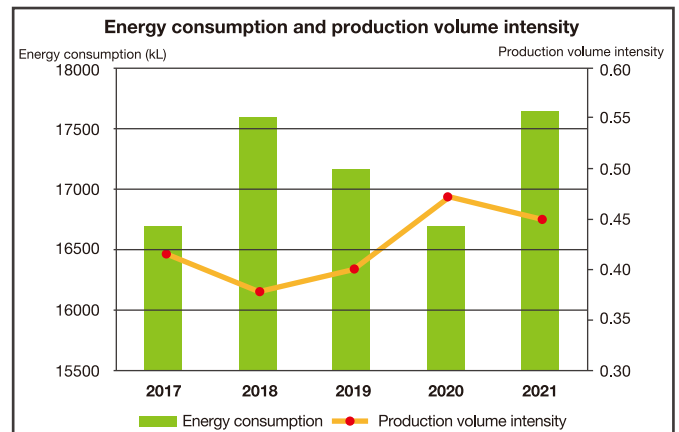
To promote the efficient use of electricity, fuel, and other energy sources, we are switching to energy-saving equipment and enhancing energy-saving systems when equipment is upgraded. We are also working to improve the efficiency of energy use through improvements in our business activities.

Major capital investments related to power energy conservation

- Installation of energy-saving compressors and air monitoring systems
- Introduction of high-efficiency air conditioning systems and review of air conditioning specifications
- Installation of power monitoring devices
- Use of LED for lighting fixtures

Major improvements related to energy conservation

- Reduction of waste parts and streamlining of operations by improving manufacturing quality
- Construction of production lines to cope with production fluctuations
- Reduction of paper documents and improvement of work efficiency through IT
- Promotion of reuse of packaging materials for large equipment





Initiatives to Reduce Environmental Impact

2. Initiatives for Recycling and Resource Recovery of Waste Materials

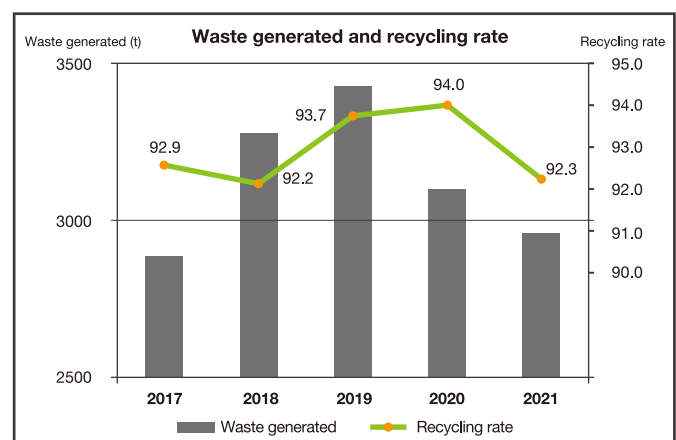
The Mitutoyo Group recycles waste as a valuable resource, reducing its volume, and resource recovery.

Examples of Major Initiatives for Waste Reduction

- Use of returnable containers for parts transport
- Adoption of specialized transport jigs and reuse of packaging materials
- Return of containers for purchased goods (pails and drums)
- Extending the service life of coolant liquid by using preservatives and floating oil separators
- Reuse of used office files, etc.
- Use of wooden packing boxes for both domestic and export use

Examples of Major Initiatives for Improving the Recycling Rate

- Waste plastics ⇒ Material and thermal recycling
- Specializing processing machines by material
⇒ Separation and Resource recovery of chips
- Compressed grinding sludge into briquettes
⇒ Resource recovery
- Recycling etchant waste from scale manufacturing equipment
- Recycling of wastewater in an ion exchange tower
(Recycled into pure water and returned to the line)
- Reuse by closed wastewater treatment
(plating line, scale production, water jet cutter)
- Recycling of used grinding stones by returning to manufacturers
- Valuable disposal of used PCs



3. Initiatives for Soil and Groundwater Remediation at the Headquarters and Kawasaki Operations

Since 1991, when soil and groundwater contamination was identified at the Kawasaki site, efforts have been made to clean up the site by pumping groundwater to prevent it from leaking outside the site and by vacuum extraction of underground gas. In addition, surface gas surveys and borehole investigations of the entire site (excluding areas where it is difficult to conduct surveys) have been conducted since February 2008, and a report was submitted to Kawasaki City in August 2008, together with a plan for future measures.

The progress of the measures to date is as follows.

Substances	Target	Standard level (mg/L)	Maximum concentration in the premises (mg/L)		
			August 2008*	December 2021	
Volatile Organic Compounds (VOC)	Tetrachloroethylene	Groundwater	0.01	120	5.7
	Trichloroethylene	Groundwater	0.03	15	0.42
	Cis-1,2-dichloroethylene	Groundwater	0.04	20	1.1
Heavy metals	Hexavalent chromium compounds	Groundwater	0.02	0.41	0.01

*These figures were reported in the 2008 Environmental Report.

We will continue to work to further improve soil and groundwater with the guidance of Kawasaki City.



Environmentally Conscious Products 1

The Mitutoyo Group is committed to the development of environmentally conscious products. The following is a list of major environmentally conscious products shipped in fiscal 2021.

<p>CNC Coordinate Vision Measuring Instruments QUICK VISION Pro Series</p>  <p>Mitutoyo</p>	<ul style="list-style-type: none"> - Strobe snap function for high-speed measurement included as a standard feature - Tracking auto-focus model for instantaneous focusing on the object to be measured - Can be equipped with the stream function that enables non-stop vision measurement without stopping the stage by synchronizing the XY main unit drive and strobe illumination to shorten the measurement time by far <p>● Key points of environmental considerations</p> <ul style="list-style-type: none"> - Packing material: Reinforced corrugated cardboard instead of wooden crates for small and medium-sized packages (for improved recyclability) - Chemical substance regulations: Compliant with RoHS Directive (EU) 2015/863
<p>High-Speed Coordinate Measuring Machine / Probe MACH Ko-Ga-Me/MPP-001/ MTP-001</p>  <p>Mitutoyo</p>	<ul style="list-style-type: none"> - Attachable renewed model of MACH Ko-Ga-Me with condition monitor and newly developed probes - Two dedicated probes (MPP-001/MTP-001) have improved noise resistance compared to conventional models by adopting digital communication function <p>● Key points of environmental considerations</p> <ul style="list-style-type: none"> - Chemical substance regulations: Compliant with RoHS Directive (EU) 2015/863 - No air source required - I/O signal on-board for efficient in-line system construction
<p>Near Infrared Corrected Objective Lens for Bright Field M Plan Apo NIR</p>  <p>Mitutoyo</p>	<ul style="list-style-type: none"> - Infinity correction / long working distance - For bright-field / near-infrared observation and laser processing - Plan Apochromatic Specifications - Designed to correct from visible range (general observation wavelength range) to near-infrared range (wavelength: up to 1800 nm) <p>● Key points of environmental considerations</p> <ul style="list-style-type: none"> - Use of raw materials compliant with RoHS Directive/regulations - Use of raw materials compliant with PFOS regulations - Use of raw materials compliant with REACH regulations - Minimized use of foaming agents other than biodegradable foaming materials - Minimization of wood usage
<p>Linear Scale System for Control ABS ST700 Generation. C</p> <p>*Limited shipped product for PSFS Reference product for comparison: ABS ST700 Gen.B</p>  <p>Mitutoyo</p>	<p>Strengthens the competitiveness of the mainstay ST700 Offered for use in the new PSFS model, the industry leader in actual equipment</p> <ul style="list-style-type: none"> - Improved basic performance such as accuracy and resolution by electromagnetic induction pattern and improvements - New scale attachment method improves accuracy and visual quality and reduces man-hours - Waterproof protection of IP67 <p>● Key points of environmental considerations</p> <ul style="list-style-type: none"> - The substrate mounting method has been changed from adhesion to screw fixation, eliminating the adhesion process - The structure is made waterproof by integrally molding the housing and packing, eliminating the silicon molding process - Board-to-board connection was changed from FPC to BtoB connector, eliminating the FPC reinforcement adhesion process <p>The above measures eliminated processes related to the adhesion of detectors. (4 min ⇒ 0 min, detector assembly lead time 3 days ⇒ 1 day)</p>



Environmentally Conscious Products 2

Coordinate Measuring Machine Accuracy Check Gage Daily Check Gage



Mitutoyo

- Gage used in combination with Condition Monitor* to mutually manage CMM accuracy trends between the customer and Mitutoyo
- * Service for users with maintenance contracts: Uploads CMM status and gage measurement results to the cloud environment to share information
- Maintains the reliability of measuring machines, detects abnormalities early, and prevents sudden outages

● Key points of environmental considerations

- Reduces waste materials, packaging materials, etc. with the in-house production of parts
- Gauge weight requirement of 8 kg or less has been reduced to 6.3 kg to reduce workload

Environment-resistant Type Gauge Head Linear Gauge LG200 Series



Mitutoyo

- Slim type contact sensor with the highest level of accuracy and environmental resistance in its class

● Key points of environmental considerations

- Longer service life due to improved spindle sliding durability
- Low power consumption (-30% compared with conventional products)

Pocket Type Test Indicator 531-5**-10 Series



Mitutoyo

- Slim and easy-to-use test indicator that can be inserted deeply, avoiding interfering objects

● Key points of environmental considerations

- The number of dies for parts has been reduced by sharing parts such as the outer frame, bearing holder, and long needle with other series (513-46*-10)
- Reduced number of screws (two screws)



Environmental Accounting

The Mitutoyo Group compiles environmental accounting in accordance with the guidelines set by the Ministry of the Environment in order to quantitatively grasp the costs and effects of environmental conservation activities.

Environmental Conservation Costs

In fiscal 2021, our environmental conservation costs totaled approximately 1,574 million yen for investments and expenses. The main investment was approximately 839 million yen for updating air conditioning equipment and compressors, and the total expense was approximately 735 million yen for waste recycling and wastewater treatment facility management, etc.

(Unit: thousand yen)

Environmental conservation costs				
Category		Details of main initiatives	Investment	Expense
1. Business area costs			830,790	507,700
Detail	(1)-1 Pollution prevention costs	Costs for prevention of water pollution and noise	13,052	100,203
	(1)-2 Global environmental conservation costs	Costs for prevention of global warming and energy conservation	817,103	248,739
	(1)-3 Resource recycling costs	Costs for recycling, treatment, and disposal of waste; costs for efficient use of resources	635	158,757
2. Upstream / downstream costs		Additional costs related to the provision of environmentally conscious products	0	4,995
3. Administrative activity cost		Costs for development and operation of environmental management systems; costs for environmental impact monitoring	0	221,901
4. R&D cost		Costs for research and development	0	0
5. Societal activity cost		Costs for supporting environmental conservation organizations	7,946	666
6. Environmental damage response cost		Costs for nature restoration	0	0
Total			838,736	735,262

Environmental Conservation Effects

Environmental conservation effects						
Classification of environmental conservation effects	Environmental performance indicators (unit)		Previous period (Base period)	Current period	Difference from base period (Environmental conservation effect)	
	Environmental conservation effects related to resources input into business activities	Energy input	Electricity	MWH		60,501
Fuel use in crude oil			kL	1,129	1,074	54
Water input			1,000 m ³	139	124	15
Environmental conservation effects related to environmental impact and waste discharged from business activities	Greenhouse gas emissions		t-CO ₂	33,782	32,060	1,722
	Total emissions of waste and other materials		t	3,072	2,955	117
	Final disposal of waste		t	292	330	
	Total water discharge		1,000 m ³	134	117	17
Environmental conservation effects related to goods and services produced by business activities	Wood consumption		t	177	186	-9
	Styrofoam		kg	0	0	0

Economic Effects of Environmental Conservation Measures

(Unit: thousand yen)

Details of effects		
Revenue	Business income from recycling of waste generated in main business activities, etc.	49,639
Cost savings	Reduction of energy costs through energy conservation (purchase of electricity, fuel, etc.)	-56,988
	Reduction of waste disposal costs due to resource conservation or recycling	-18,601
	Others	-4,938
Total		-30,887

*Negative values for environmental conservation effects and economic effects associated with environmental conservation measures indicate an increase compared to fiscal 2020 levels.

*The economic effects associated with environmental conservation measures represent only economic effects calculated on a reliable basis, and do not include economic effects based on theoretical values.



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