



2025 KITZ GROUP Environmental Health and Safety Report Digest

Environmental Health and Safety Report Digest

KITZ Group Principle of Environmental Activities

KITZ Group companies aspire to become operations worthy of society's confidence through the supply of environmentally friendly products and services and promotion of environment-responsive corporate activities.

KITZ Group Companies: Environmental Action Policy

KITZ Group companies shall recognize environmental issues as an essential perspective of corporate management and every employee shall positively participate in the following activities.

1. Development and supply of environmentally friendly products and services

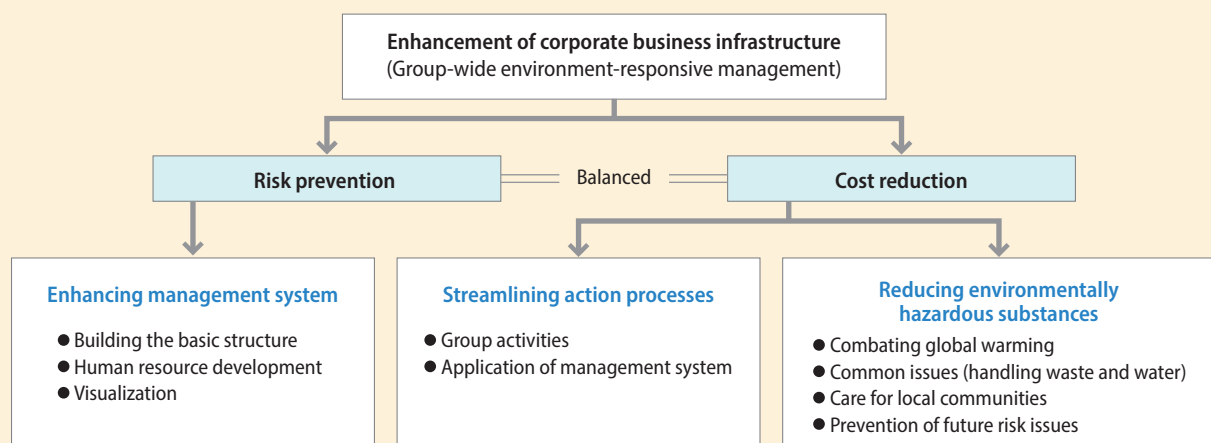
2. Effective use of resources

3. Promotion of reduction, reuse and recycle of waste

4. Prevention of environmental contamination

KITZ GROUP Environment Management Approach and Initiatives

In order to achieve the above target, KITZ will work on the basis of the concept of compatibility between "risk prevention" and "cost reduction". The concept of "compatibility" here is based on the idea that an organization can reduce its future costs by proactively engaging in environmental activities now to prevent soil contamination and other damage; and that they can drastically reduce costs by minimizing their business-related waste. These will also result in widely giving back to society.



KITZ Group Health and Safety Fundamental Philosophy

KITZ places the highest priority on health and safety in all of its activities based on the principle of showing respect for people. Group companies conduct extensive safety and health programs with the goal of zero accident.

KITZ Group Health and Safety Fundamental Policies

1. KITZ maintains stimulating and pleasant workplaces that contribute to the mental and physical wellbeing of all employees.

2. KITZ is dedicated to ensuring health and safety for all employees by complying with Japan's Industrial Health and Safety Act and other associated laws and regulations as well as by adhering to internal rules and standards.

3. KITZ improves health and safety management by educating and training all employees with regard to the knowledge and skills needed for health and safety programs.

4. KITZ is dedicated to ensuring the safety of its machinery and equipment so that employees can do their jobs without concern.

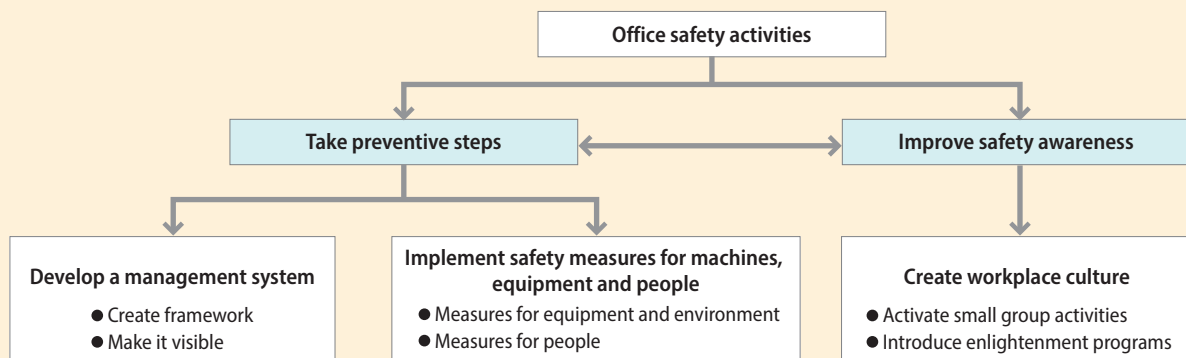
5. KITZ reduces exposure to risk factors with the goal of eliminating potential sources of danger and harm to employees in workplaces.

KITZ GROUP Health and Safety Activities Approach and Initiatives

The company will address safety from two directions: "Enhancement of safety activities and systematic incorporation of prevention measures into production lines" and "Promotion of volunteer activities at workplaces (bottom-up approach via small group activities)". Through this two-pronged approach, the company will encourage a change in every employee's mindset and increase employees' awareness with regard to safety, thereby reforming the corporate culture.

KITZ has formulated the following key actions as measures for employee health and safety with the aims of taking preventive steps for safety and improving safety awareness.

- Develop a management system (comply with health and safety related laws and regulations)
- Implement safety measures for machines, equipment and people (prevent similar accidents)
- Create workplace culture (promote zero accidents)



Promoting Sustainability Management

■ KITZ Group Environmental Activities

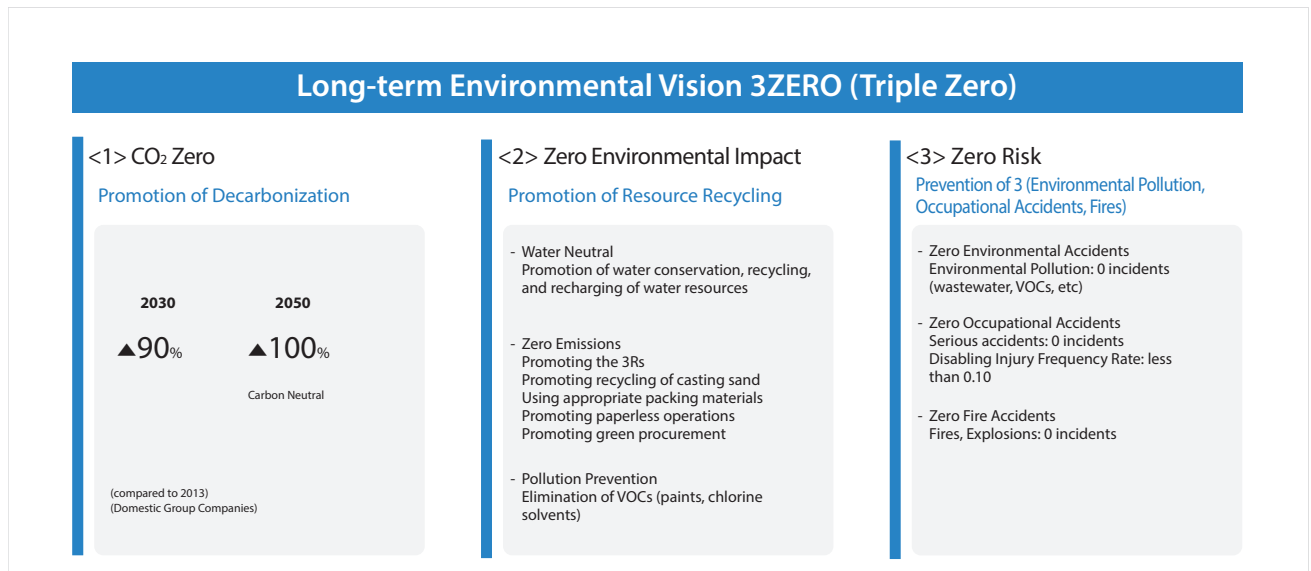
Since the 1998, the KITZ Group has made environmental initiatives an important management theme. By using activities that reduce the impact on the environment as well as developing and providing products and services that are gentle on the environment, we work towards being a reliable corporate group. In order to achieve this, the group has established an environmental management system, actively invested in management resources to use resources effectively, reduce waste, and promote recycling. As for the KITZ Group's environmental targets, we have achieved a 89.0% reduction in CO₂ emissions and a 35.5% reduction in water resources compared to the base year of 2013.

We launched the Green Factory and Safety Factory Certification System in 2023 to certify that business sites have achieved results in these environmental and safety activities. This certification system is designed to promote activities, visualize progress, and accelerate efforts to achieve the goals of the "Triple Zero" long-term environmental vision.

In order to continue to be a corporate group that is trusted and chosen by all stakeholders, and to continue to deliver safety and security to the world through the stable supply of valves, we are convinced that the challenge of achieving triple zero is a management theme that the KITZ Group must pursue with all of its resources.

■ Mid- and Long-term Environmental Goals

In order to provide customers with high-quality products, mainly valves, in a prompt and continuous manner, KITZ has used an integrated production system starting from materials, since its establishment. In particular, casting is an important process that requires advanced production technology and large-scale facilities, while also involving various risks relating to energy, waste, and employee safety. It is for this reason that manufacturing that takes safety and the environment into account is essential, and the reason why we are working towards our long-term environmental vision of "triple zero."



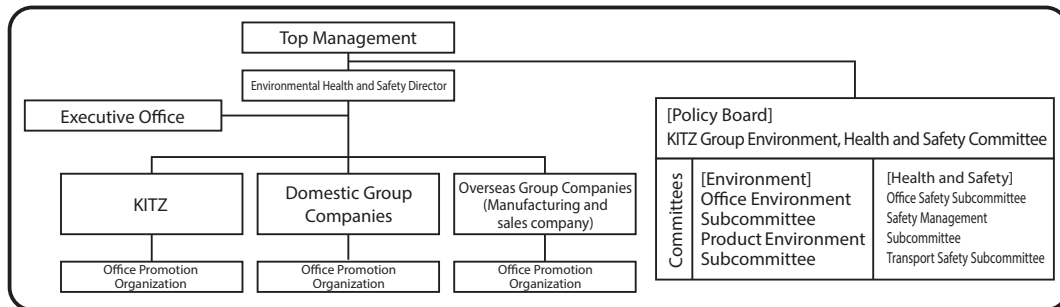
An especially important issue is the CO₂ Zero initiative. In response to the Paris Agreement, Japan has pledged to reduce its emissions from 46% from the base year of 2013 to 2030, and to reduce them to virtually zero by 2050. By having all domestic group companies use renewable energy for their electricity by the end of FY2024, KITZ will work towards achieving the mid-term environmental goal of an 90% or more reduction by 2030, and the long-term environmental goal of becoming carbon neutral by 2050.

The second important issue is Zero Environmental Impact. To this effect, we are tackling three themes: effective use of water resources, a resource closely related to valves; reduction of waste generated by plants and offices, and promotion of manufacturing without organic solvents to minimize not only air and soil pollution but also the impact on the health of employees.

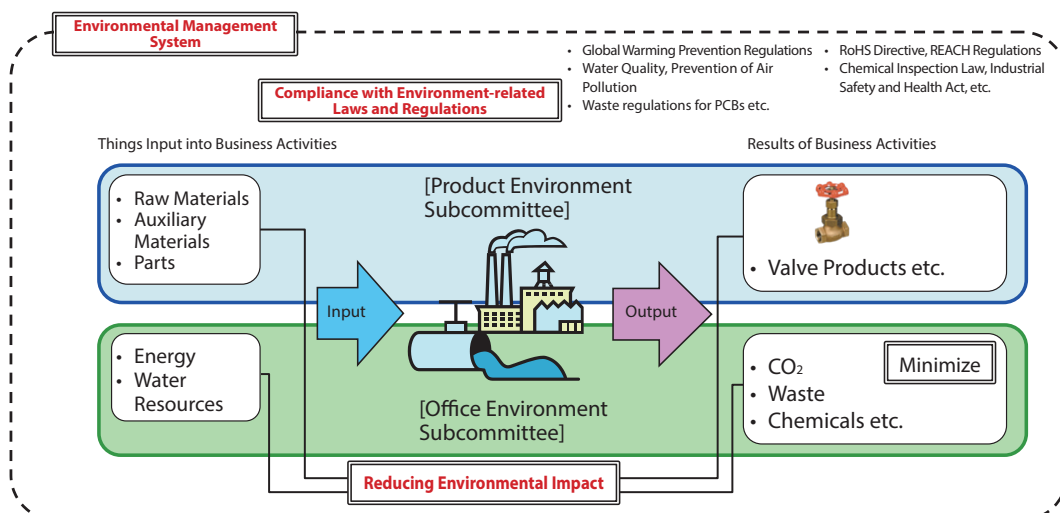
The third important issue is Zero Risk. We are working to maintain safe and secure manufacturing and stable operations through activities to prevent occupational accidents, environmental pollution, and fires.

Environmental Health and Safety Promotion System

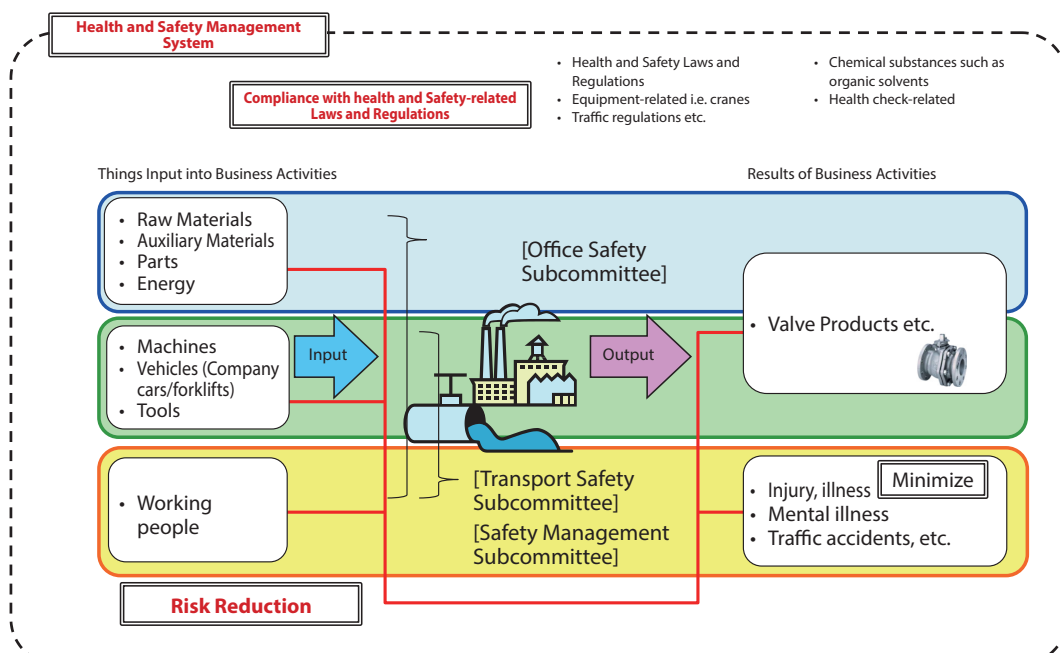
Promotion of Environmental Health and Safety within the KITZ Group is done by the KITZ Group Environment, Health and Safety Committee, which includes group company presidents and executive officers as members, and chaired by the Environmental Health and Safety Director. In addition to confirming the setting of measures and targets related to environmental health and safety, performance evaluation, and compliance with laws and regulations, the committee also deliberates on countermeasures to resolve issues. The Environmental Health and Safety Director reports to the board of directors on the status of implementation and progress management of the long-term environmental vision and environmental capital investment.



KITZ Group Environmental Activities Visual Representation



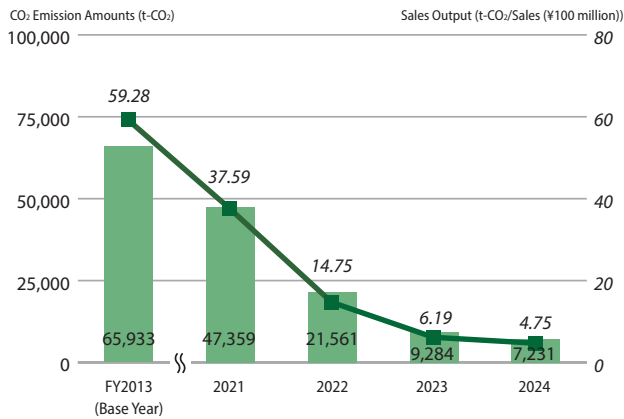
KITZ Group Health and Safety Activities Visual Representation



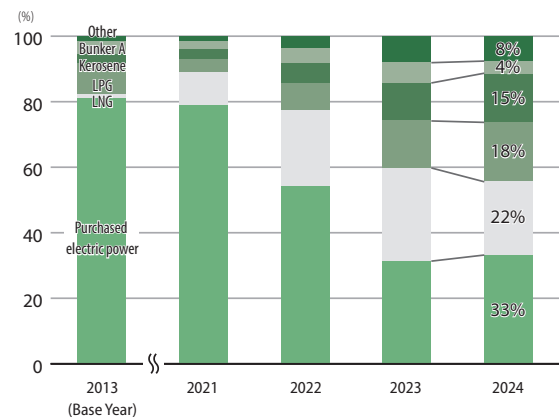
Main environmental and health/safety data

■ KITZ and domestic group companies (including sales offices)
 ■ Basic Sales Unit

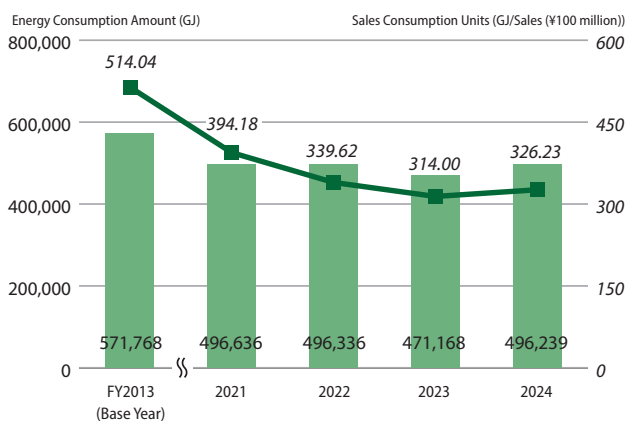
CO₂ Emission (ton- CO₂)



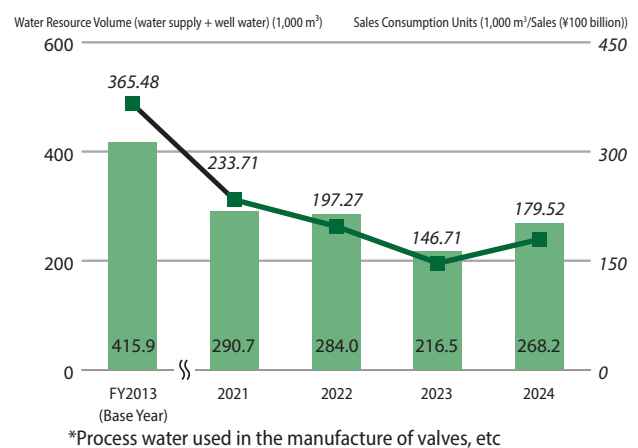
Changes in CO₂ Emission Rates by Energy Type



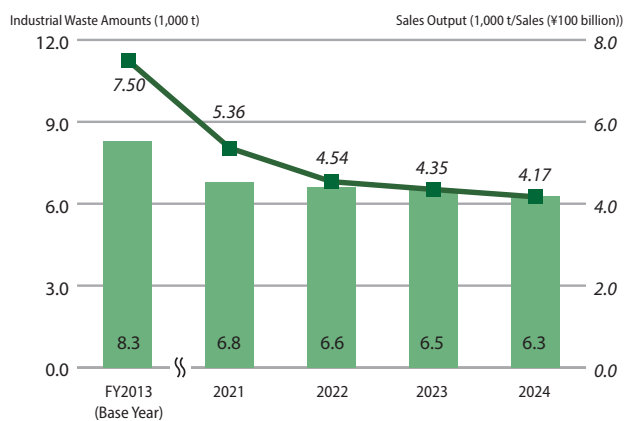
Energy Consumption (GJ)



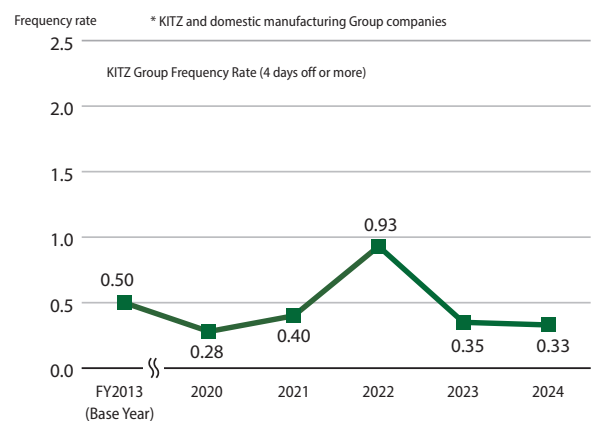
Changes in volume of water resources



Discharge of Industrial Waste (ton)



Trends in frequency rate



*Aggregated from January to December 2020 due to the change in the accounting period

*CO₂ emissions (t-CO₂) are calculated using adjusted coefficients.

Overall Image of Environmental Impact

INPUT			Main Raw Materials		
Major Energies		KITZ Domestic Group Companies			KITZ Domestic Group Companies
● Electricity			● Lead	(t)	1,698
Purchased electric power	(1,000 kWh)	87,323	● Nickel	(t)	413
Solar power generation	(1,000 kWh)	936	● Manganese	(t)	52
● City gas	(1,000 m³)	1,739	● Chrome	(t)	432
● LNG	(t)	980	● Copper	(t)	28,424
● Bunker A	(kl)	102	● Zinc	(t)	12,148
● LPG	(t)	438	Main Auxiliary Materials		
● Kerosene	(kl)	429	● Sand for cores and castings	(t)	3,061
● Cold and hot water	(GJ)	272	● Paint and thinner	(t)	160
Water			● Oil solution	(t)	147
● Clean water	(1,000 m³)	152			
● Underground water	(1,000 m³)	260			
● Recharge volume	(1,000 m³)	▲143			

KITZ GROUP					
Development and Design		Procurement	Production	Logistics	Sales

OUTPUT			Discharge of Waste		
Emission in Air		KITZ Domestic Group Companies			KITZ Domestic Group Companies
● CO ₂	(t)	7,231	● Industrial waste	(t)	6,141
● Dust	(t)	2.4	● Non-industrial waste	(t)	199
● NO _x	(t)	6.0	● Valuable substances	(t)	3,645
● SO _x	(t)	3.1	● Final disposal	(t)	290
			Discharge of PRTR Target Chemicals		
			● Air	(t)	55
			● Waste	(t)	148
			● Public water	(t)	0.1

Environmental Accounting

Environmental Conservation Costs

(Thousand of yen)

Category	Main actions	Capital investment	Expenditures
Cost for premises		183,596	577,807
Breakdown	Pollution control	46,732	134,564
	Global environment protection	77,822	149,724
	Resource circulation	59,041	293,519
Product recycling	Collection and recycling of used goods	0	10,392
Administrative duties	ISO-related works, environmental measurement and disclosure of environmental information	4,780	72,814
Research and development	Development of lead-free and other environmentally friendly products	0	42,715
Social activities	Promotion of greening activities	0	394
Damaged environment recovery	Purification of underground water	0	0
Other costs		0	0
Total		188,376	704,122

Total costs	Costs for environmental conservation	Total operation costs (A)
Total capital investment	5.3% against total operation cost (A)	3,521,143
Total R&D expenditures	1.4% against total operation cost (A)	3,001,580

Environmental Conservation Effects

Category	Numerical targets (Unit)	Results in FY2023	Results in FY2024	FY2024 less FY2023
Effects related with input resources	Consumed total energies (GJ)	471,168	496,115	24,947
	Consumed PRTR materials (ton)	2,987	3,029	42
	Consumed clean water (m³)	151,431	151,882	451
	Consumed underground water (m³)	65,025	116,332	51,307
Effects related with output waste and pollutants	Greenhouse gas emission (ton-CO ₂)	9,284	6,964	(2,320)
	Discharged or displaced chemicals (ton)	216	204	(13)
	Discharged total waste (ton)	6,523	6,340	(183)

Economic Effects of Environmental Conservation Activities

(Net financial gain)

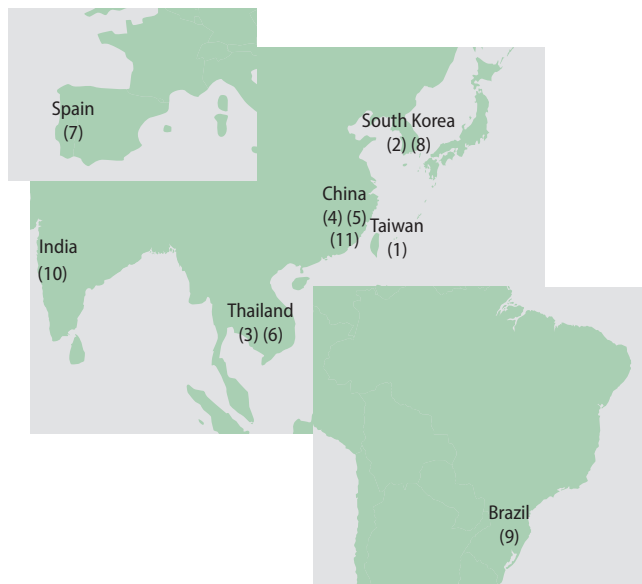
(Thousands of yen)

Details of effects		Amount
Profits	Earned from recycling waste and used products	249,567
Saved expenditures	Saved by energy saving activities	31,610
	Reduced recycling expenditures	238,087
	Saved by waste reduction	5,673
Total		524,937

Scope of compilation is KITZ Corporation (Head Office, Nagasaki, Ina, Chino), KITZ Metal Works Corporation, KITZ Micro Filter Corporation, KITZ SCT Corporation, KITZ SGS Corporation, KITZ Engineering Service Co., Ltd. and Hotel Beniya Co., Ltd., and Hokutoh Giken Kogyo Corporation.

Strengthening of the Environmental and Health & Safety Management System

The KITZ Group has set goals regarding the environment and health & safety in each office and has built a management system to deploy its activities based on ISO 14001 and ISO 45001. 10 sites in Japan and 11 sites overseas have been certified ISO 14001, while 10 sites in Japan and 3 site overseas have been certified ISO 45001. The Group will continue to promote environmental and health & safety management globally.



ISO 14001 and ISO 45001 Integrated Certification Obtained Offices

Name of business office	
KITZ Corporation Nagasaka Plant	KITZ Micro Filter Corporation (Chino Plant, Suwa Plant)
KITZ Corporation Ina Plant	KITZ SCT Corporation
KITZ Corporation Chino Plant	KITZ SGS Corporation
KITZ Metal Works Corporation	Hokutoh Giken Kogyo Corporation(Yamanashi Plant, Minowa Office)

Status of Acquisition of ISO 14001 and ISO 45001 Certification (Overseas)

Name of business office	Date of acquisition	
	ISO 14001	ISO 45001
(1) KITZ Corporation of Taiwan	November 2000	-
(2) KITZ Corporation of Korea	May 2003	July 2021
(3) KITZ (Thailand) Ltd. Bangplee Plant	December 2010	-
(4) KITZ Corporation of Kunshan	December 2010	November 2021
(5) KITZ Corporation of Jiangsu Kunshan	April 2011	-
(6) KITZ (Thailand) Ltd. Amatanakorn Plant	February 2012	-
(7) KITZ Corporation of Europe, S.A.	May 2012	-
(8) Filcore Co., Ltd.	August 2014	-
(9) Metalúrgica Golden Art's Ltda.	December 2019	-
(10) Micro Pneumatics Pvt. Ltd.	August 2020	August 2020
(11) KITZ SCT Corporation of Kunshan	January 2021	-

Calculation Standards (Results in FY2024)

Environmental performance index		Unit	Calculation method
INPUT	Total energy input amount	GJ	Energy amount consumed in business activities (GJ) *Source: FY2023 Energy Supply and Demand Report (Revised Report) (Released April 25, 2025) Agency for Natural Resources and Energy $\Sigma[\text{Each energy annual use amount} \times \text{each unit calorific value}] \times 10^{-3}$ Electricity: 3.6 MJ/kWh Bunker A: 38.9 MJ/ℓ Kerosene: 36.5 MJ/ℓ Light Oil: 38.0 MJ/ℓ LPG: 50.1 MJ/kg City Gas: 45.0 MJ/m ³ Gasoline: 33.4 MJ/ℓ LNG: 54.7 MJ/kg
	Raw materials input amount	Ton	Amount of cold and hot water, the heat source, accepted from local cooling and heating system for ventilation use at the headquarters (Makuhari headquarters until FY2022)
	Use amount of water	m ³	Annual use amount of raw materials directly used for manufacturing of products (t)
			Annual use amount of clean water and underground water (m ³)
OUTPUT	Carbon dioxide (CO ₂) emission amounts	Ton	CO ₂ emitted from the energy used in business activities (t) * List of calculation method and emission coefficients in the calculation, report and publication system under the Law to Promote Global Warming Countermeasures
	Business activities		Electric power (kg-CO ₂ /kWh) Tokyo Electric Power Company, Incorporated: 0.431 Kansai Electric Power Company Co., Ltd.: 0.419 Chubu Electric Power Co., Inc.: 0.421 Hokkaido Electric Power Co., Inc.: 0.535 Tohoku Electric Power Co., Inc.: 0.402 Hokuriku Electric Power Company, Incorporated: 0.496 Chugoku Electric Power Co., Inc.: 0.520 Kyushu Electric Power Co., Inc.: 0.417
			Bunker A: 2.75 kg-CO ₂ /ℓ Kerosene: 2.50 kg-CO ₂ /ℓ Light Oil: 2.62 kg-CO ₂ /ℓ
			LPG: 2.99 kg-CO ₂ /kg City Gas Tokyo Gas: 2.05 kg-CO ₂ /m ³ Osaka Gas: 2.09 kg-CO ₂ /m ³ Narashino City Water and Gas Bureau: 2.21 kg-CO ₂ /m ³ Kita Gas/Suwa Gas: 2.29 kg-CO ₂ /m ³ LNG: 2.79 kg-CO ₂ /kg
	Waste volume		Cold/Hot Water: 0.038 kg-CO ₂ /MJ Gasoline: 2.29 kg-CO ₂ /ℓ
			Dust amount (t) = dust density (g/m ³ N) x dry exhaust gas amount per unit hour (m ³ N/h) x annual operation hours (h/year) x 10 ⁻⁶ SOx (t) = sulfur oxide density (ppm) x dry exhaust gas amount per unit hour (m ³ N/h) x annual operation hours (h/year) x 64/22.4 x 10 ⁻⁹ NOx (t) = nitrogen oxide density (ppm) x dry exhaust gas amount per unit hour (m ³ N/h) x annual operation hours (h/year) x 46/22.4 x 10 ⁻⁹ Final disposed amount: consigned waste amount (t) x final disposal rate *(%) * Municipal Solid Waste: 8.7% Quoted from: Ministry of the Environment "Municipal solid waste emissions and disposal (Results in fiscal year 2022)" Industrial Waste: Figures reported by intermediate processing companies.

Target Period: The period covered is fiscal year 2024 (January 1, 2024 to December 31, 2024).

Scope of Reporting: KITZ Corporation and group companies in Japan (see website).

Policy and Standards for Collection and Reporting of Environmental Performance Information: Listed in compliance with environmental laws and regulations, and the KITZ Group Environmental Philosophy, KITZ Group Environmental Action Policy, KITZ Group Basic Philosophy of Health and Safety, KITZ Group Environmental, Health and Safety Performance Data Calculation Guidelines, and other environment-related internal regulations.

Referenced Guidelines:

The Ministry of the Environment, *Environmental Report Guidelines (2018 Edition)*

The Ministry of the Environment, *Environmental Accounting Guidebook (2005 Edition)*

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