

TERUMO ENVIRONMENTAL REPORT 2003



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### Editorial Policy

The *Terumo Environmental Report 2003* introduces Terumo's environmental conservation activities over the one-year period from April 2002 to March 2003. In producing this report, we have referred to the Japanese Ministry of the Environment's *Environmental Reporting Guidelines* (FY2002 ed.) and *Environmental Performance Indicators for Business* (FY2002 ed.) as well as the Ministry's *Environmental Accounting Guidelines 2002* for reporting our environmental accounting. This report is conceived as a vital tool for communication between Terumo and our readers, and we have endeavored to make it as readable as possible to ensure maximum readership. We are still working to perfect our reports, and welcome all reader opinions and suggestions so that we may continue to improve and refine our efforts. Please use the survey enclosed with this report or email us with your feedback. The *Terumo Environmental Report* will continue to be an annual publication.

Name of organization: Terumo Corporation  
(including some overseas sites)  
Year under review: Fiscal 2002  
(April 1, 2002 to March 31, 2003)  
Date of issue of this report: October 2003  
Date of issue of next report: October 2004

### A History of Caring for the Environment

1971	Environmental control section established at the Ashitaka Factory.
1972	The method of treating mercury-contaminated wastewater at the Ashitaka Factory changed from precipitation to a chelate adsorption facility.
1975	Wastewater treatment plant installed at the Fujinomiya Factory.
1976	Acid-based surface treatment of needle hubs( base portion of needle ) abolished in favor of plasma treatment, which generates no acid waste fluid. Fujinomiya and Ashitaka Factories signed an anti-pollution agreement with Fujinomiya City.
1979	LPG, which produces lower levels of flue gas, replaced heavy oil as boiler fuel for the Fujinomiya Factory.
1980	Thermoplastic elastomer replaced rubber as the material for syringe gaskets, thereby eliminating SOx emissions at incineration. A wastewater treatment plant was installed at the Ashitaka Factory.
1981	Intravenous solution containers made of non-PVC materials( TERUPAK ) introduced. Ethylene vinyl acetate( EVA )was chosen because it produces no noxious gases when incinerated.
1982	Trichloroethylene( TCE )completely phased out ahead of its designation as a controlled carcinogen.
1983	Gamma irradiation, which produces no gas emissions, introduced as the sterilization method used at the Kofu Factory. Non-mercury digital thermometers launched on the market.
1984	Terumo's 70-year history of mercury thermometer manufacturing ended in favor of eliminating mercury-containing instruments.
1989	Glass vacuum blood tubes replaced by plastic products made of a polyester material that can be safely incinerated.
1991	Non-PVC infusion sets went on the market. Polybutadiene was chosen for the tubing because it emits no noxious gases when incinerated.
1992	Digital blood-pressure monitors for hospital use debuted as part of our drive to eliminate mercury and to protect the environment in clinical settings.
1994	Production of urethral balloon catheters made of natural rubber ceased. Balloon catheters made of thermoplastic elastomers, which produce no SOx when incinerated, launched on the market.
1996	Use of controlled ozone-depleting CFCs ceased in manufacturing processes at the Kofu Factory( and subsequently at other factories ). Infusion sets with a new type of plastic spike go into production; use of non-metallic spikes facilitates sorting and incineration of hospital waste.
1997	Terumo's Environmental Management Department established. A cogeneration power plant started operation at the Kofu Factory, supplying 60% of the factory's electricity requirements. The Fujinomiya and Ashitaka Factories switched from LPG to natural gas ( LNG ), which emits less CO <sub>2</sub> . The use of heavy oil abolished entirely( from all production facilities ).
1998	More compact, lightweight syringes introduced, reducing the waste volume of discarded syringes by approximately 25%. Corporate offices began switching to recycled paper for photocopying purposes.
1999	Terumo's Environmental Policy formulated. A cogeneration power plant began operation at the Fujinomiya Factory. Corporate offices began switching to recycled paper for printing of catalogs and design change notifications etc. Non-PVC materials introduced for manufacturing CAPD bags for home use. The switch to polypropylene, which emits no noxious gases when incinerated, reduced waste by 40%.
2000	The Terumo Environment Committee established. A cogeneration power plant started operation at the Ashitaka Factory. Packaging recycling began under contract with the Japan Containers and Packaging Recycling Association. Labeling to identify packaging materials and equipment components was introduced. Internal environmental auditing commenced. Diesel-fueled company vehicles completely phased out. <i>Terumo Environmental Report 2000</i> published( now an annual report )
2001	Operation of incinerators at Kofu and Ashitaka Factories discontinued. Use of PCB-containing equipment abolished, with all such equipment transferred to storage. Pediatric infusion sets manufactured from non-PVC materials were introduced. Around 80 employees and their families participated in a communal clean-up at Mt. Fuji.
2002	Use of benzene and chloroform at Kofu Factory abolished. Incinerators at Kofu and Ashitaka Factories dismantled and removed. Around 130 employees and their families joined with participants from Kofu and Fujinomiya areas in a communal clean-up at Mt. Fuji. An observation well( for inspecting groundwater )installed at the Kofu Factory. Infusion sets using a substitute DEHP plasticizer went on sale.

## A Message from the President

### Aiming Ever Higher

In fiscal 2000, Terumo issued its first ever *Environmental Report*. One of the stated objectives in the report was to reduce the amount of waste going to landfill generated at production plants in Japan to 30% of FY1996 levels by FY2005. Our efforts led to the achievement of this target in fiscal 2001, four years ahead of schedule. So we've raised the bar, this time aiming to reduce the volume of waste we generate by concentrating on efficient use of resources, such as raw materials, beginning in FY2002. However, our environmental activities must involve more than simply chasing numerical targets. We are not truly acting to preserve the environment if we do not implement environmental initiatives in all of our regular business activities, including research and development, production and sales. And our efforts must be sustained. By promoting these initiatives as an integral part of our core business, involving all of our major operations, we aim to reduce the amount of waste going to landfill to 20% of FY1996 levels from the current fiscal year onwards. Terumo aspires to streamline its business activities and conserve the environment at the same time.

To promote environmental conservation in the course of our regular business activities requires an accurate assessment of the use of resources that such activities entail. I hope that we will use Terumo's new information system, scheduled for completion by 2004, to gain a deep and concise assessment of the impact that our business activities have on the environment.

In recent years, the Terumo Group has expanded its production bases to the U.S., Europe and Asia, and our international group companies are placing increasing importance on environmental initiatives. Terumo is committed to gathering environment-related information from all of our overseas bases and, beginning with this report, continuing to disclose that information through our *Environmental Report*.

Our environmental conservation activities are the starting point for our business activities. We resolve to develop and enrich our vision with the help of your honest opinions and suggestions.



**Takashi Wachi**  
President and Chief Executive Officer  
Terumo Corporation

# Environmental Management Corporate Philosophy and Environmental Policy

Here at Terumo, our goal is a harmonious relationship between medical safety and the environment. In 1999, guided by our corporate philosophy of "contributing to society through healthcare", we formulated an environmental policy consisting of five tenets. As a leading company in the medical supplies field, we take our global environment conservation initiatives seriously.

## Corporate Philosophy (adopted November 1996)

### Contributing to society through healthcare

We contribute to society by providing valued products and services in the healthcare market and by responding to the needs of healthcare providers and the people they serve.

#### Open management

We maintain a fundamental policy of open management, work to secure and return to our benefactors a suitable profit, and strive to develop our business on a global basis as befits a leading company in the industry.

#### Respect for our associates

We emphasize respect for the individual, promote intercultural understanding, and encourage openness in the workplace in accordance with our slogan "Associate Spirit" as we prepare to meet the challenges of the future.

#### Enhanced value

We emphasize the importance of scientific thinking, creativity, and time appropriation, and respond in depth to customer needs by creating valued products and services.

#### Corporate citizenship

We conduct our business activities in a fair and equitable manner and act responsibly toward the environment as we fulfill our responsibilities as good corporate citizens.

#### Safety and reliability

We pride ourselves on our commitment to the development of technologies and quality assurance systems that ensure safe, reliable products.

## Terumo's Environmental Policy (adopted December 1999)

Guided by our corporate philosophy of "contributing to society through healthcare," the Terumo group, as a leading supplier of medical equipment, has formulated and implemented wide-ranging environmental protection programs in order to remain a trustworthy, conscientious member of the global business community. Not only do our policies help protect the Earth, they help us to provide safe and reliable medical equipment to society.

**Terumo has resolved to self-monitor all its activities in order to maintain its standing as an active supporter of environmental protection. Terumo is committed to:**

- controlling the impact our activities have on the environment
- developing environmentally conscious products
- taking steps to protect the environment from pollution
- making effective use of energy and resources
- reducing waste

**Terumo will follow international environmental protection laws, regulations and agreements.**

**To protect and audit its environmental protection activities, Terumo has established an environmental management system.**

**As a member of the global community, Terumo will support environmental protection activities.**

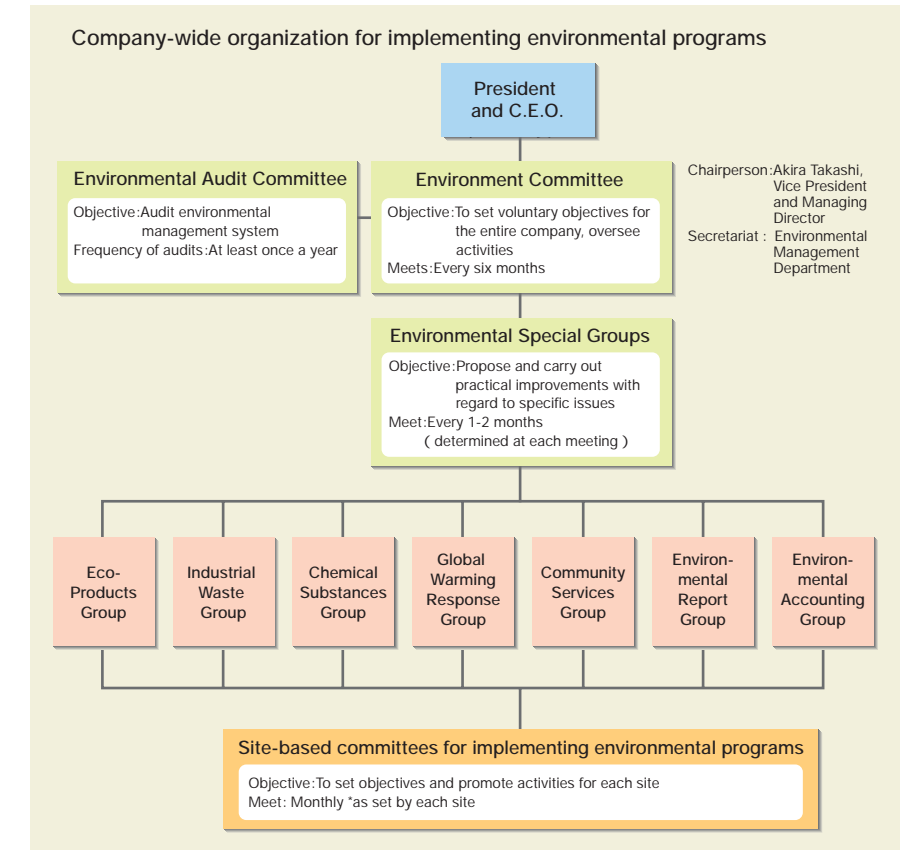
**To increase awareness of environmental issues within the company, Terumo will conduct in-house activities and educational seminars for employees.**

# Environmental Management System

Terumo's environmental initiatives are promoted at the site level based on voluntary objectives determined by the Environment Committee. The Plan Do Check Action (PDCA) Cycle is used in reviewing and evaluating performance, and the results are reflected in the next round of management system objectives, ensuring the progressive improvement of our activities.

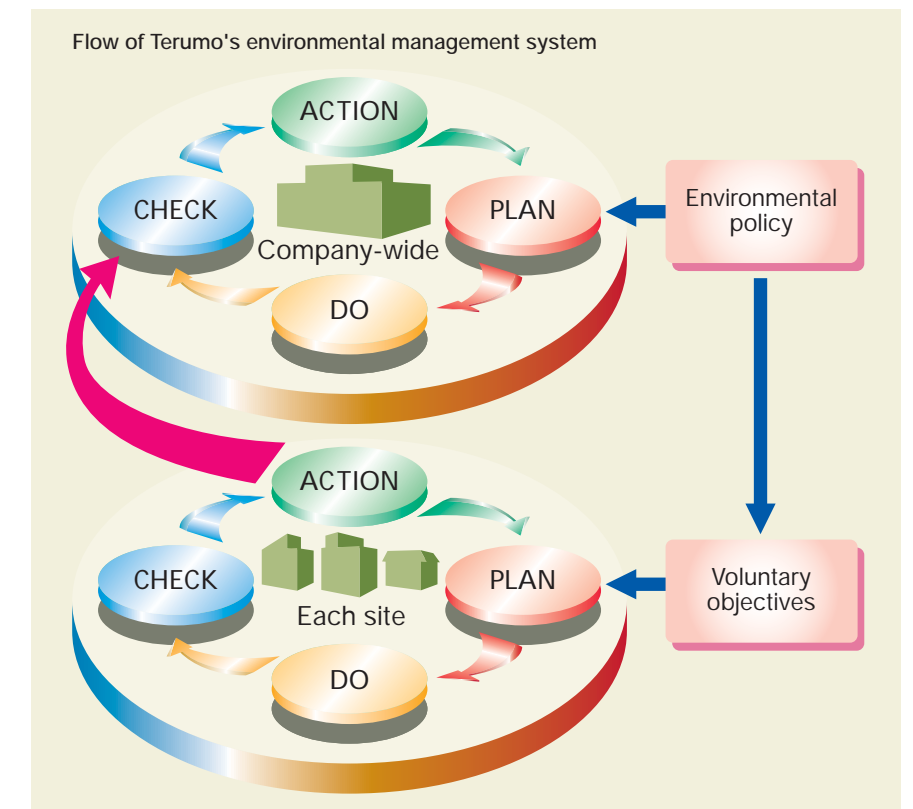
## Company-wide Organization for Implementing Environmental Programs

The chart at right shows our company-wide organization for implementing environmental programs. At the peak, the company vice-president serves as chairperson of the Environment Committee. The Environment Committee is responsible for setting voluntary objectives and measures for environmental conservation activities for the entire company, as well as monitoring their progress. The Environmental Audit Committee conducts environmental audits of each site to ensure that the environmental management system operates effectively, and their responsibility for auditing divisions external to their own guarantees that fairness and objectivity are maintained. We are working to improve auditing techniques through the use of independent methods, and aim to bring our auditing standards up to match those of the auditing certification bodies. Environmental special groups are charged with proposing and carrying out practical improvements with regard to specific issues, and site-based committees for implementing environmental programs draft action plans for their respective sites based on set policy and promote information sharing.



## Environmental Management System

Terumo's environmental initiatives are implemented at each site and across the entire company based on voluntary objectives determined by the Environment Committee. Performance is reviewed and evaluated by the Environment Committee, and the results are reflected in the next round of voluntary objectives and action plans, using the PDCA Cycle to effect ongoing improvement in environmental conservation activities. A feature of this system is that every employee in every division is involved in planning and implementation, in accordance with the spirit espoused in our corporate philosophy of respecting our associates and aiming to become a trusted corporate citizen. We include activities that lead to improved environmental performance as an integral part of our business activities in order that our environmental activities are not relegated to the realm of mere regulations and words. In this way, we build and operate our own practicable and effective independent environmental management systems compliant with the international environmental standard ISO14001.



# Summary of Environmental Activities in FY2002

The following environmental protection activities were implemented in FY2002 to meet our voluntary objectives set in accordance with our environmental policy. An outline of specific activities and their results will be reflected in next year's objectives.

## Highlights of Environmental Protection Activities in FY2002

Infusion sets using a substitute DEHP <sup>*1</sup> plasticizer went on sale.	( P13 )
Use of benzene and chloroform at Kofu Factory abolished.	( P15 )
An observation well was installed at the Kofu Factory( to monitor groundwater contamination ).	( P16 )
Incineration at the Ashitaka and Kofu Factories was abolished and the incinerators dismantled.	( P17 )
Joint communal clean-up of Mt. Fuji with Kofu and Fujinomiya areas( approx. 130 participants )	( P18 )

## A Message from the Chairperson of the Environment Committee

Again in FY2002 the entire company dedicated great effort to our environmental protection activities, as a result of which we managed to meet our medium-term objectives, including reduction of dichloromethane emissions and waste for final disposal ahead of schedule.

Our future environmental protection initiatives will serve not only to fulfill our corporate responsibilities to the community, but will also become an increasingly important management activity from the point of view of a source of information about the company. We will implement new initiatives from FY2003 as we aim for even higher quality activities, to include the following:

1. Examine new objectives in accordance with international global warming prevention policies.
2. Strengthen promotion of independent environmental protection activities by site-based committees for implementing environmental programs.



Akira Takahashi  
Chairperson, Environment Committee  
Vice President and Managing Director

Policy	Primary focus	Voluntary Objectives (medium-term targets)	Achievements in FY2002	FY2002 Evaluation	New Initiatives from FY2003	Page
Establish voluntary objectives for environmental protection activities	Environmental impact assessment of our business activities	Complete a quantitative assessment of the environmental impacts of development, production, and sales activities.	Environmental impact assessment of important environmental implications of factory and research center activities completed.	Achieved	Continue to assess environmental impact of important environmental implications of factory and research center activities.	P9
	Eco-product development	Reduce usage of natural rubber and PVC <sup>*3</sup> , materials that have a heavy environmental impact. Reduce garbage volumes by simplifying packaging. Promote R&D to design products that can be easily handled and sorted for recycling.	PVC products using TOTM( tri( 2-ethylhexyl )trimellitate ) developed. Revised oxygen concentrator packaging developed	Achieved	Develop digital blood pressure monitor with non-PVC arm band. Research reusable packaging for transporting equipment for repair.	P13 P14
	Pollution prevention	Reduce dichloromethane emissions by at least 60% from FY1996 levels. Reduce THF <sup>*2</sup> emissions to no more than 10 tons at all sites.	FY2002 dichloromethane emissions reduced by 67% from FY1996 levels( as planned )	Achieved	Set new medium-term targets for reducing dichloromethane emissions ( to a maximum 99 tons by FY2005 )	P15
			THF emissions at all sites maintained at 10 tons or less ( as planned )	Achieved	Cease disclosing voluntary objectives for THF emissions ( but continue to disclose actual amounts )	P15
	Efficient energy and resource utilization	Reduce CO <sub>2</sub> emissions per unit bases by 15% from FY1990 levels by FY2010. Maintain use of water at FY1990 levels.	FY2002 CO <sub>2</sub> emissions per unit of energy consumption down 89.0% from FY1990 levels( an 11.0% reduction ) Water use maintained at FY1990 levels.	Achieved Achieved	Reduce CO <sub>2</sub> emissions per unit of energy consumption by 15% relative to FY1990 levels by FY2010. Continue to set voluntary targets. Maintain water use at FY1990 levels.	P10 P11
Waste reduction	Reduce the amount of waste for final disposal generated at production plants in Japan by 70% in FY2005 relative to FY1996 levels.	Amount of waste for final disposal from production plants in Japan down 80% from FY1996 levels( as planned )	Achieved	Set new medium-term objectives for the amount of waste for final disposal. ( Reduce waste for final disposal from sites in Japan by 80% from FY1996 levels by FY2005 ( excluding sales ) )	P11	
Abide by international environmental protection laws, regulations and agreements.	Adherence to environmental laws and ordinances	Abide by all laws, ordinances and agreements concerning environmental protection.	No fines, penalties, litigation etc. related to environmental protection.	Achieved	Abide by laws, ordinances and agreements etc. related to environmental protection.	P16
Use an established environmental management system to implement and audit environmental protection activities.	Establishment of environmental management systems	Ensure that environmental management systems at Terumo factories and research centers in Japan generally conform to international standards ( ISO14001 ).	Environmental management systems generally compliant with ISO14001 standards established at factories and research centers in Japan.	Achieved	Continue internal environmental audits of factories and research centers in Japan.	P4 P7
			Internal audits generally conforming to ISO14001 standards conducted on environmental management systems of factories and research centers in Japan.	Achieved		
Provide support for environmental protection activities as a member of the global community	Encouragement of volunteer-based activities	Encourage volunteer-based activities.	Expansion of support for volunteer activities, including participation in communal Mt. Fuji clean-up( Shizuoka, Yamanashi ) Arakawa Clean Aid, Tamagawa Clean Strategy ( Tokyo )and Ninomiya Coastal Clean-up( Kanagawa )	Achieved	Expand support for volunteer activities, including participation in tree planting at Mt. Fuji.	P18
Conduct in-house public relations activities and training seminars to improve employee awareness of environmental protection.	Efforts in environmental communication	Publish FY2002 <i>Environmental Report</i> . Implement Environment Month initiatives.	<i>Terumo Environmental Report 2002</i> published.	Achieved	Publish and expand scope of <i>Terumo Environmental Report</i> for FY2003.	P18
			Environmental reporting sessions hosted.	Achieved	Implement Environment Month initiatives.	P7

\*1 DEHP : Di-(2-ethylhexyl )phthalate  
\*2 THF : Tetrahydrofuran

\*3 PVC : Poly(vinyl chloride )

# Environmental Management Education Programs, Internal Environmental Auditing

Terumo established an Environmental Audit Committee with the combined goals of improving company-wide environmental awareness, building and developing a system for education of employees about the environment, and effectively reducing environmental impact. Our ongoing internal environmental audits are aimed at promoting even better environmental protection activities.

## Environmental Education Programs

At Terumo, new employees undertake our environmental education program, which includes training sessions about our *Environmental Report* and seminars on protecting the environment. Training is not only in-house; we also extend the skills of our internal auditors by sending them to external educational facilities to undertake courses to qualify them as internal environmental auditors and ISO14001 environmental standard inspectors.

## Environmental Protection Seminar for Administrative Staff

On December 9, 2002, a group of administrative staff involved with environmental protection visited Ricoh Co., Ltd. to inspect the company's environmental protection measures, where they observed Ricoh's leading edge activities in this area.



Environmental protection seminar

## Implementation of Internal Environmental Audits

### Implementation of Internal Environmental Audits

Since FY1999, Terumo has been building a company-wide environmental management system to improve the impact we have on the environment. Internal environmental auditors play a vital role in improving both this system and our environmental performance.

In FY2000, Terumo established an Environmental Audit Committee to function independently of the existing framework for promoting improved environmental performance to conduct ongoing internal environmental audits, a move that has served to improve the effectiveness of our environmental protection activities.

Twenty-one internal environmental auditors currently audit divisions external to their own on the themes of compliance with environment-related laws and regulations, environmental management systems and achievement of voluntary objectives.

## Environmental Report Training Session

Sessions explaining the *Environmental Report* were held at each site as part of our Environment Month program.



Environmental Report training session

## In-House Training for Internal Environmental Auditors

From November 2 to 3, 2002, a two-day in-house training seminar was held at the Kofu Factory aimed at improved the auditing skills of our internal environmental auditors.



In-house training for internal environmental auditors

### Environmental education and training programs

Type of training	Content	No. of participants (cumulative)
Orientation for new employees	General environment	73
Training for new/transferred employees	General environment	56
Environmental Report training	General environment	796
Environmental protection seminar (visit to Ricoh Co. Ltd.)	General environment	20
In-house training for internal environmental auditors	Environmental auditing	16
Course for training internal environmental auditors( external )	Environmental auditing	6
Course for training ISO14001 environmental standard inspectors	Environmental auditing	4

## Results of Internal Environmental Audits

### Audit implementation sites

Head Office  
Terumo Research & Development Center  
Fujinomiya Factory  
Ashitaka Factory  
Kofu Factory

### Overview of audit results

Although there were some minor cases of non-compliance, no site committed a major violation of environment-related laws or regulations.

Environmental management systems at some sites are still lacking in some areas, however all have begun to build effective management systems commensurate with their capabilities.

All sites succeeded in moving steadily toward the achievement of their respective voluntary objectives.



Internal audit at Ashitaka Factory( documentation audit )



Internal audit at Ashitaka Factory( on-site audit )

# Environmental Accounting

Environmental investment and related expenses and resultant benefits were assessed with a view to aiding management decision making and raising environmental awareness among employees.

Scope of assessment: Major operations bases in Japan  
Applicable period: April 1, 2002 to March 31, 2003

(Unit: Yen millions)

Costs of environmental protection				Economic benefit	
Category	Principal initiatives	Investment	Expenditure		
(1) On-site costs		176	1,463	1,037	
Breakdown	(1)-1 Pollution prevention	Wastewater treatment and solvent recovery plants	72	397	114
	(1)-2 Protection of the global environment	Energy-saving facilities	58	473	427
	(1)-3 Resource recycling	Waste treatment and recycling expenses	46	593	496
(2) Upstream and downstream costs	Eco-product manufacturing facilities	6	132	-	
(3) Management program costs	Environmental management-related expenditure	0	57	-	
(4) R&D costs	R&D expenditure for reducing environmental impact of Terumo products	0	5	-	
(5) Community services costs	Establishing and maintaining green belts	26	109	-	
(6) Environmental damage costs		0	0	-	
Total		208	1,766	1,037	

Investment: Amounts committed to anti-pollution and energy-saving equipment, local greening programs etc. in FY2002.

Expenditure: Depreciation expenses and operation and maintenance expenses related to anti-pollution and energy-saving equipment etc., eco-product development expenses, waste disposal expenses, recycling expenses, green belt maintenance expenses, environmental education expenses, etc.( Costs for environmental protection are differentially totaled including prorated allocations for both investments and expenditures. )

Economic benefits: Reduced costs from lower energy consumption, reduced raw material expenses, profit from sale of recycled marketable goods, etc.( Figures based on estimated contribution to sales( expected benefits )are not included. )

### Total investment and R&D costs for the applicable period

(Unit: Yen millions)

Item	Total
Total investment for the applicable period	6,611
Total R&D expenditure for the applicable period	9,899

### Economic benefits associated with environmental protection

(Unit: Yen millions)

Item	Total
Sale of PVC, dichloromethane etc.	12

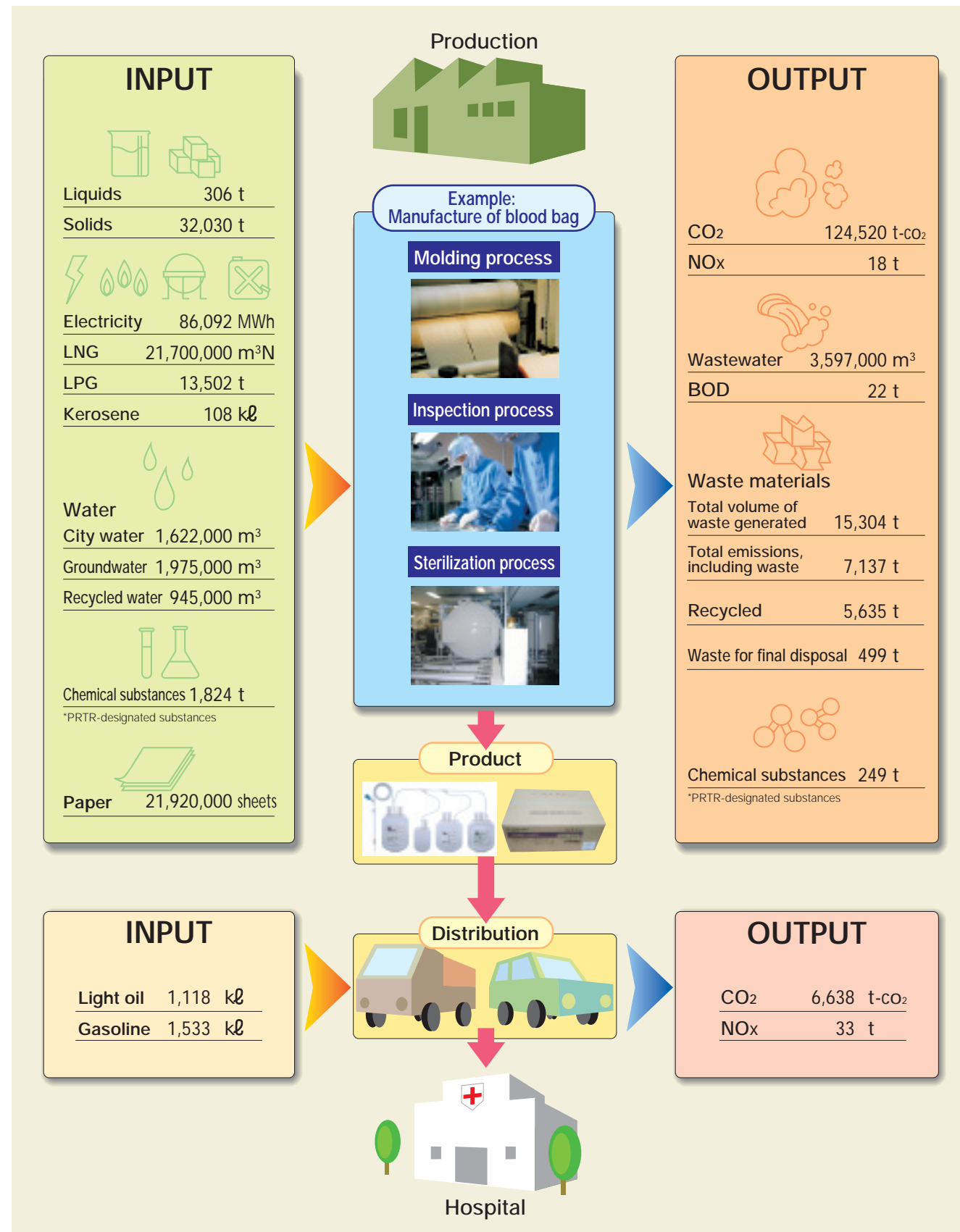
### Benefits of environmental protection( FY2002 environmental load )

	FY2002	Vs. previous year	
Amount of waste for final disposal	499t	33.6%	
Energy consumption( energy conversion ) ( Unit basis <sup>*1</sup> , compared to FY1990 )	2,419,911GJ ( 15.9% )	0.1%	
CO <sub>2</sub> emissions ( absolute value ) ( Unit basis <sup>*2</sup> )	124,520t-CO <sub>2</sub> ( 1,387t/¥100M <sup>*3</sup> )	0.1% ( 3.2% )	
Chemical substances (emissions)	Dichloromethane	131t	11.5%
	Toluene	9t	18.2%
	Tetrahydrofuran	16t	0.0%
Water	3,597,000m <sup>3</sup>	5.3%	

\*1 Unit basis = energy consumption divided by product sales  
\*2 Unit basis = CO<sub>2</sub> emissions divided by product sales

indicates decrease vs. previous year  
\*3 M : million

The following flowchart illustrates Terumo's business activities. We carefully examine how our input, including energy and raw materials, compares to our output, in the form of CO<sub>2</sub>, wastewater and waste products, during the manufacturing process, and use these calculations as indicators to aid in our endeavors to reduce environmental impact.



\* Waste CO<sub>2</sub> and NOx volumes generated in the production process were calculated using the coefficients given in the Ministry for the Environment's "Environmental activities evaluation program (December 2002)".

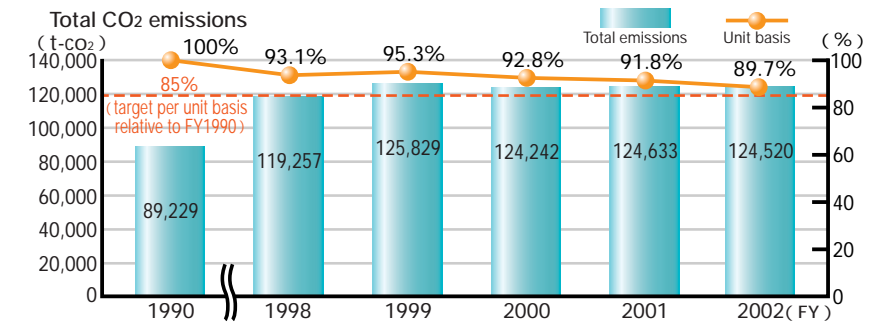
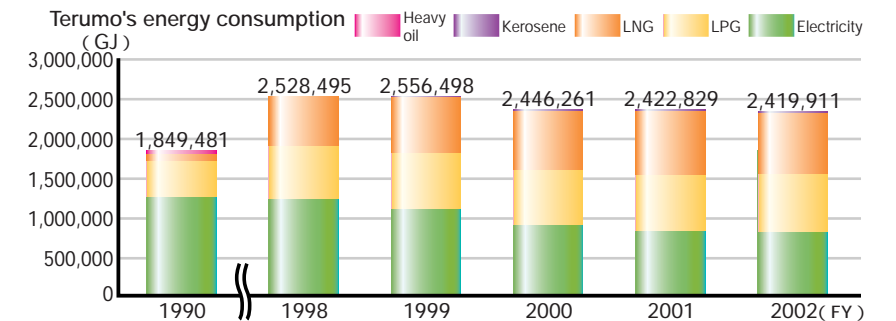
Carbon dioxide emissions produced when energy is consumed have a major impact on global warming. At Terumo, we are striving to prevent global warming by curbing CO<sub>2</sub> emissions in line with established carbon dioxide emission targets, and by introducing gas cogeneration systems.

**Global Warming**

We are continuing our efforts to reduce carbon dioxide emissions and energy consumption (converted to joules) relative to product sales on a per unit basis. Replacing LPG with liquefied natural gas (LNG) at the Kofu Factory as set out in our FY2003 plan has made our FY2010 target for CO<sub>2</sub> emissions achievable. We currently use 35.0% electricity, 28.0% LPG, 36.9% LNG, and 0.1% kerosene in our production processes.

The Law Relating to Rationalization of Energy Use (revised February 2003) was used to convert energy to calorific values. The Law Concerning the Promotion of Measures to Prevent Global Warming (updated December 2002) was referred to for conversion coefficients for CO<sub>2</sub> emissions to calculate calorific values and carbon dioxide emissions.

**Target for reducing CO<sub>2</sub> emissions**  
 Reduce CO<sub>2</sub> emissions per unit basis by 15% from FY1990 levels by FY2010.



**Gas Cogeneration Systems**

**Background**

A cogeneration system captures the energy of coolants and waste gas generated in the electricity generation process, and simultaneously uses that energy in the form of hot water and steam. The hot water can be used for hot water supply or heating, and the steam can be used for air conditioning or as a source of heat for the factory.

**Benefits**

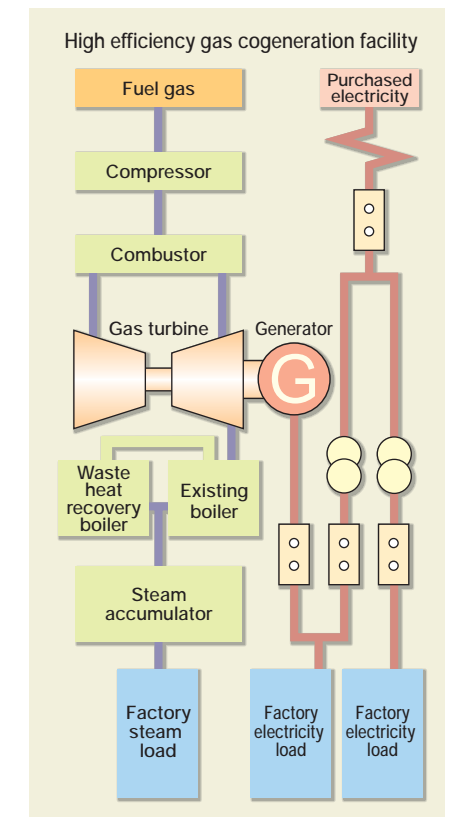
Electrical power is generated wherever it is required, so these systems eliminate losses associated with electricity transmission. In addition, the effective recovery and reuse of waste heat generated in traditional methods of electricity generation results in extremely high final energy use efficiency of 70-80%. As well as helping to cut the purchase of electricity at peak rates, these small-scale localized power sources, installed wherever they are required, can also serve as independent power sources in times of emergency. Gas cogeneration also reduces CO<sub>2</sub> emissions and eliminates SO<sub>x</sub> and other waste.



Gas cogeneration facility at Ashtaka Factory



Gas turbine



# Environmental Performance Reducing Water Consumption and Waste

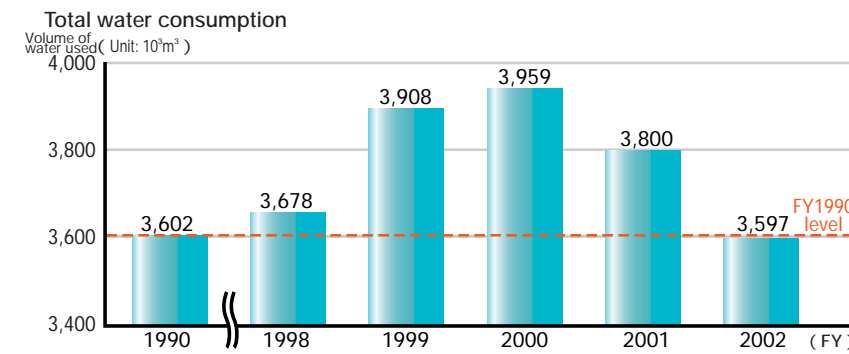
Terumo continues to curtail water consumption at our factories and to reduce and recycle waste produced by our business activities. In recent years, as a result of these efforts, we have achieved targets for both water consumption and the volume of waste for final disposal, and our waste recycling rate is also improving.

## Reducing Water Consumption

### Reducing Water Consumption

Flowmeters have been installed on water supply lines at all Terumo factories in Japan as part of a detailed survey of production lines in our endeavor to reduce water consumption. Facilities for re-using coolant used in high-pressure steam sterilizers have been introduced to effectively reduce water consumption. In keeping with expanded production, water usage had been increasing since FY1997, however, our conservation efforts began to bear fruit with a turnaround in FY2001, when water consumption began to decline. In FY2002 consumption had fallen to around FY1990 levels.

**Target for reduced water consumption**  
Maintain water consumption at FY1990 levels.

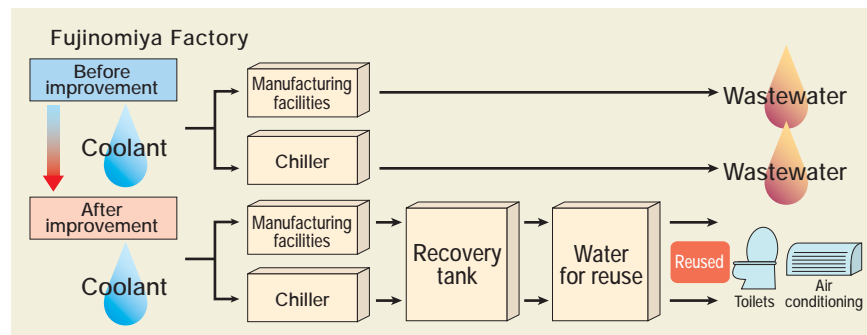


### Reduced Water Consumption at the Fujinomiya Factory

A working group comprised of water use specialists from processing, production and environmental sections was established at the Fujinomiya Factory under the auspices of the site-based committee for implementing environmental programs. The group is working to promote the 4 R's of water conservation (reduce, replace, reuse and recycle). In FY2002 the factory used 1,732,000m<sup>3</sup> of water, achieving their voluntary site target, which is to reduce consumption to FY1990 levels (1,750,000m<sup>3</sup>). On a per unit basis, this represented a reduction in water use to 55% of FY1990 levels.

Site water consumption in FY2002 (Unit: '000m<sup>3</sup>)

Site	Consumption
Kofu	936
Fujinomiya	1,732
Ashitaka	787
Shonan	127
Head office	15

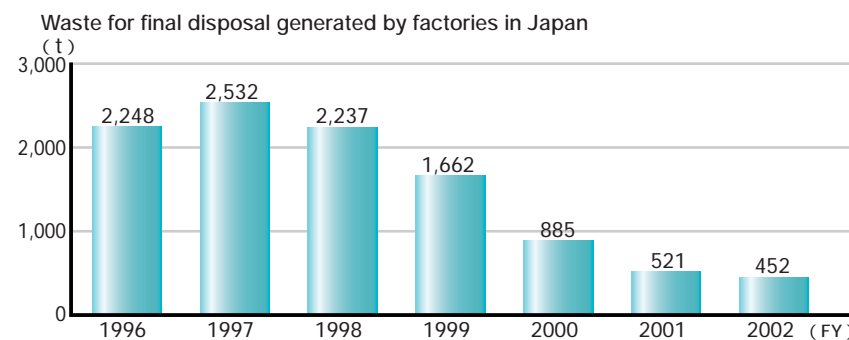


## Reducing Waste for Final Disposal

At Terumo we are endeavoring to reduce and recycle the various types of waste generated during the manufacturing process and in our business activities. Our waste reduction and reuse efforts include a voluntary objective to reduce the amount of waste for final disposal generated at production plants in Japan by 70% in FY2005 relative to FY1996 levels. The volume of waste for final disposal in FY2002 was reduced to 80% of FY1996 levels, achieving targets for the second successive year.

\*A new target will be established for waste for final disposal by FY2005.

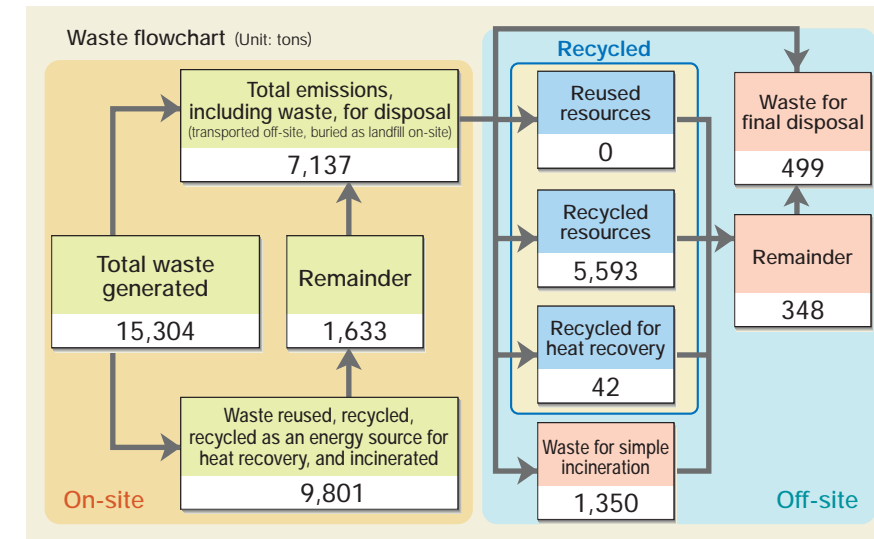
**Target for reduced waste for final disposal\***  
Reduce the amount of waste for final disposal generated at production plants in Japan by 70% in FY2005 relative to FY1996 levels.



# Waste Reduction

The flowchart below is based on the Ministry for the Environment's Environmental Performance Indicators for Business (FY2002 ed.) Recycled waste belongs to

one of three categories: recyclable resources that are reused, recyclable resources that are recycled, and recyclable resources used for heat recovery.



## Waste Management

A checklist has been devised for on-site inspection of external waste disposal contractors to confirm that contractors collect, transport and dispose of waste according to plan, to ensure that waste is disposed of appropriately and to avert any risk of illegal dumping. In FY2002, we conducted 49 on-site inspections of external contractors.



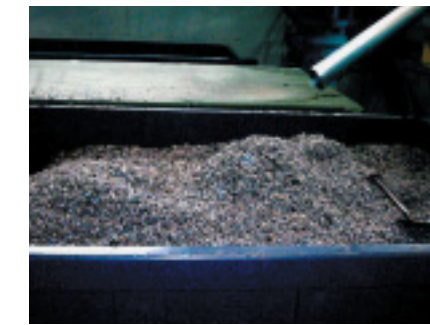
On-site inspection at intermediate treatment facility

## Promoting Recycling

### Principal Recycling Activities

Terumo uses plastic in its manufacture of medical devices and pharmaceuticals, but for safety reasons does not recycle waste plastic generated at Terumo factories in the manufacture of these products. In place of reusing and recycling on-site, we have adopted the following waste reduction initiatives.

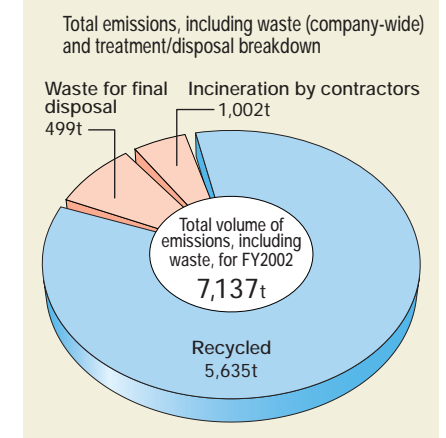
- Recycling plastic materials**  
Polypropylene generated at the Kofu Factory is recycled by remolding it into daily use household goods. PVC is separated and recycled into products such as vinyl hosing.
- Recycling organic sludge into fertilizer**  
Organic sludge generated by wastewater disposal facilities at the Kofu, Fujinomiya and Ashitaka Factories is dehydrated and then processed into organic fertilizer by fertilizer manufacturers for agricultural use.
- Waste plastic burned as blast furnace fuel**  
Waste plastic other than PVC generated at the Kofu, Fujinomiya and Ashitaka Factories is recycled into blast furnace fuel.



Solid fuel made from waste plastic

### Company-wide Breakdown of Waste Treatment and Disposal

In FY2002, a total of 7,137 tons of waste was produced at Terumo sites (head office, factories, and the Research and Development Center). Waste was transported off-site for treatment and disposal, of which 1,002 tons was combustion residue from on-site burning, 5,635 tons was recycled, and 499 tons went to landfill.

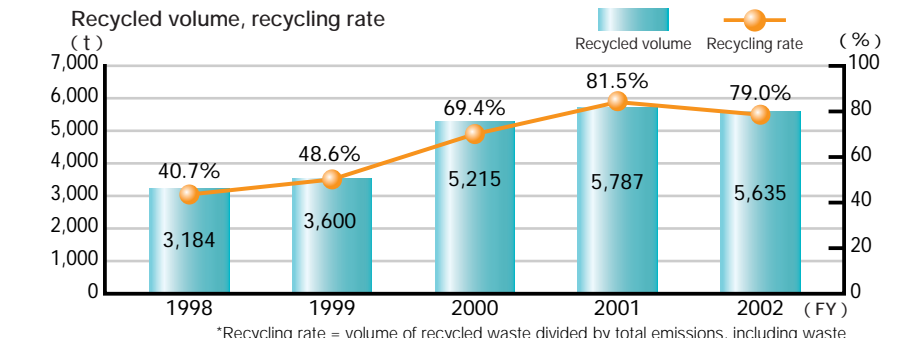


### Thermal recycling, solid fuel

Waste vacuum blood collection tubes containing serum separator cannot be crushed and separated, and so they are recycled as fuel for cement kilns. Waste plastic containing foreign substances is recycled into solid fuel and used as fuel for electricity generation.

### Recycling in the office

We have upgraded office equipment and make it a practice to use double-sided photocopying in our efforts to reduce paper consumption. We also encourage recycling by positioning recycling boxes throughout our offices for the sorting and collection of waste.



\*Recycling rate = volume of recycled waste divided by total emissions, including waste

Safety is the highest priority in the design of Terumo medical products and equipment, but due consideration is also given to reducing environmental impact. At Terumo, we endeavor to develop products that are benevolent to medical staff and patients, as well the global environment, while simultaneously catering to community needs.

**Safety and Eco-Design**

Because the medical equipment and supplies that we manufacture directly affect human health, safety and effectiveness have always been paramount in the design of Terumo products. Today, minimizing environmental impact when medical products reach the end of their life cycle and become waste, as well as safety in handling that waste, have also become important concerns.

At Terumo, we make every effort to adhere to the following guidelines when developing new products to ensure that the materials we use are safe, and to reduce their impact on the environment. We constantly review these guidelines to ensure that they meet community needs.

- ① Do not use noxious elements (mercury, etc.)
- ② Do not use halogenated compounds such as PVC.
- ③ Do not use the plasticizer di-(2-ethylhexyl) phthalate (DEHP), which tends to leach.
- ④ Avoid use of different materials in the same product (e.g. plastic and metal)
- ⑤ Reduce waste volume and weight.



PVC-free product mark displayed on packaging

**Japan's First PVC-free CAPD\* Bag**

Peritoneal dialysis machines enable patients to receive dialysis therapy at home. In 1999, Terumo became the first company in Japan to switch from PVC to polypropylene in the manufacture of continuous ambulatory peritoneal dialysis (CAPD) bags. As well as introducing a different material, we made the film thinner and eliminated the outer packaging over the drainage bag, reducing the weight of the discarded product by 40%.



Non-PVC CAPD bag

\* CAPD : Continuous ambulatory peritoneal dialysis

**Eliminating PVC and Plasticizer Considerations**

**Characteristics of PVC**

PVC has numerous excellent characteristics not possessed by other materials. It is highly flexible, has strong adhesive properties, and its flexibility is easily controlled by varying its chemical composition. These features have made PVC extremely important as a material for use in medical supplies for which safety and reliability are imperative. There are many items of medical equipment that cannot be produced with any other materials.

PVC is generally formed by mixing PVC resin with a plasticizer, and this plasticizer has known to leach out, depending on how the products are used.



IV set using plasticizer substitute TOTM

**Plasticizer Substitute TOTM**

Terumo has been working on replacing the use of plasticizer DEHP, which can leach out of PVC products, and has adopted TOTM (tri-(2-ethylhexyl) trimellitate) which has low propensity to leach, as a

substitute. We are expanding our range of products containing PVC made with TOTM, giving priority to those products that tend to leach higher amounts of plasticizer, and products for children.

**Topics Comment from a hospital that has adopted TOTM IV sets**

"As soon as Materials Division at the Yamagata University Hospital received safety information put out by the Ministry of Health, Labor and Welfare about leaching of plasticizer DEHP, the Hospital Pharmacy Department immediately took up the issue through a close exchange of information with the Ministry.

"The hospital then heard about Terumo's IV sets made with a non-leaching plasticizer, and when we discovered that they could be used in the same way as the IV sets we had already been using, we decided to adopt the Terumo product. When staff used the new product in the clinical setting and realized that there was no difference from using the traditional sets containing DEHP, they felt confident about using the substitute product."



Ritsuko Hayashi  
 Head, Materials Division  
 Yamagata University Hospital

**Topics Environmental hormones project**

"The environmental hormones project was begun in the spring of 2001, with the main aim of researching substitutes for DEHP, a plasticizer used in products made from PVC resin, and developing new products. The project involves the Research and Development Center, the factories, and the site-based committees for implementing environmental programs. As the products are developed, head office and the sales division are brought in, making this the first project at Terumo in which all divisions across the company are involved in the development and commercialization of materials.

"With the project, multiple factories and business divisions look at the commercialization of products in parallel, and clarifying the roles played by each has helped to streamline development. In November 2002, Terumo launched the first non-PVC IV set using plasticizer substitute TOTM, and we are steadily expanding its application."



Kenji Ishikawa  
 Environmental Hormones Project Leader  
 Research Technology Division, Kofu Factory

**Easier Waste Disposal**

Blood sugar measuring devices prick the finger to draw blood, and then a sample is inserted into the device to measure the glucose (blood sugar) level. Problems can arise with the handling of the needle, known as a lancet needle, due to patient concern about injuring themselves when disposing of the needle, as well as the risk of injury from a sharp, bloodied item when waste is collected.

To overcome this problem, Terumo has designed its blood glucose monitoring device so that the needle is not exposed, either before or after use or when disposed.



Lancet needle device for measuring blood glucose



Lancet needles in protective shields

**Topics Comment from the developer**

"A lancet needle used in a blood glucose monitoring device looks simple from the outside, but inside it is a very complex molded item. Each needle must be molded with precision at mass production, and a long period of research was required to be able to ensure that the needle is concealed.

"The needle also has to be firmly fixed in its casing to ensure that it is again properly concealed after use. However, this requires a certain amount of strength to affix the needle, which can make the device difficult to use. A lot of work went into balancing proper functions with ease of use."



Masafumi Takemoto  
 Product Development Division  
 Kofu Factory

**Move to Recycle Rechargeable Batteries**

Terumo is promoting the recycling of rechargeable batteries for electronic blood pressure machines, infusion pumps and other devices by re-designing them for simpler battery exchange. The company has also joined the Battery Recycling Center of Japan (JBRC) and is working to recycle rechargeable batteries based on the Law for Promotion of Effective Utilization of Resources.

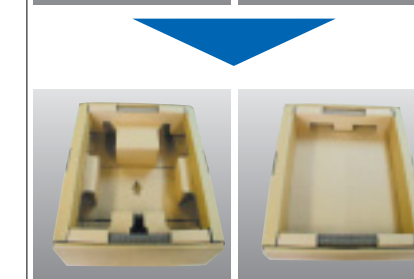
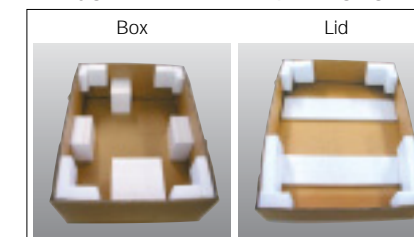


Removal of syringe pump rechargeable batteries

**Reducing Environmental Impact of Packaging**

To reduce environmental load, we have abolished the use of polystyrene foam and metallic clasps used in our boxes, replacing them with recyclable corrugated cardboard.

**Oxygen concentrator packaging**



New package



Each Terumo factory thoroughly assesses and manages emission and transfer volumes of chemical substances, which are controlled, reduced and recycled based on voluntary objectives for reducing chemical substance emissions.

## Reduction of PRTR-Designated Substance Emissions

### Reclamation of Dichloromethane

In addition to a gas recovery facility that uses deep-freeze compression to recover dichloromethane in gas generated during washing and drying, to further curb dichloromethane emissions at our Ashitaka Factory we also installed a gas recovery facility that uses activated carbon to recover dichloromethane in air emissions from washing and drying equipment, detergent tanks, distillation and dehydration equipment.



Dichloromethane recovery facility (Ashitaka Factory)

### Use of Benzene and Chloroform Abolished

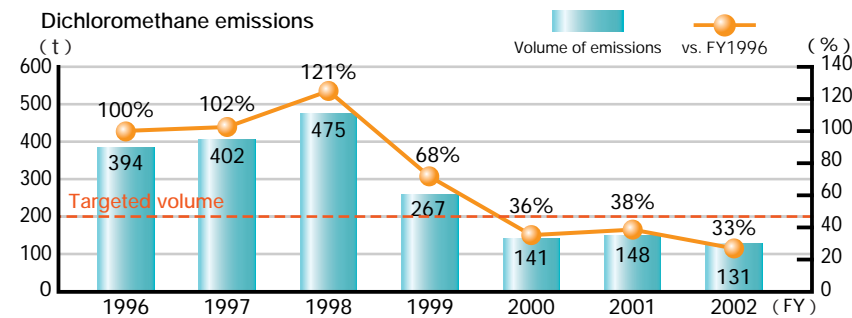
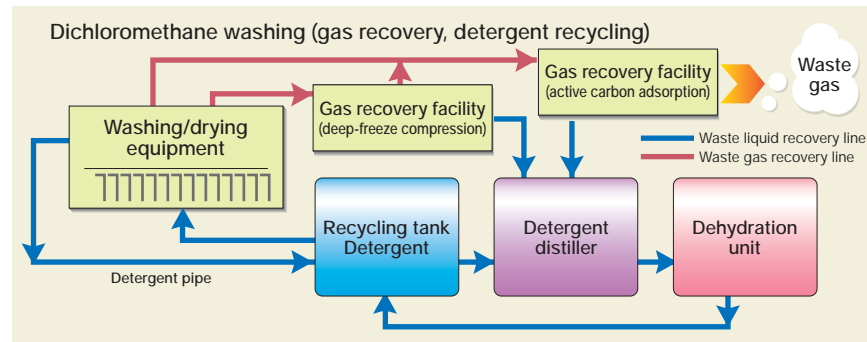
Benzene and chloroform have been named as Class I Designated Chemical Substances under the PRTR Law\*. At the Kofu Factory, we have been using small amounts of these chemical substances as solvents in urine testing solutions, but after investigating various substitute solvents, succeeded in abolishing their use in FY2002.

\*PRTR (Pollutant Release and Transfer Register Law): A law concerning the reporting of the release into the environment of specific chemical substances and promoting improvements in their management (Chemical Substances Management Promotion Law)



Urine testing kit that uses no benzene or chloroform in the manufacturing process

Target for reducing chemical substances emissions  
Reduce dichloromethane emissions by at least 60% in FY2001 relative to FY1996  
Reduce tetrahydrofuran emissions to no more than 10 tons at all sites



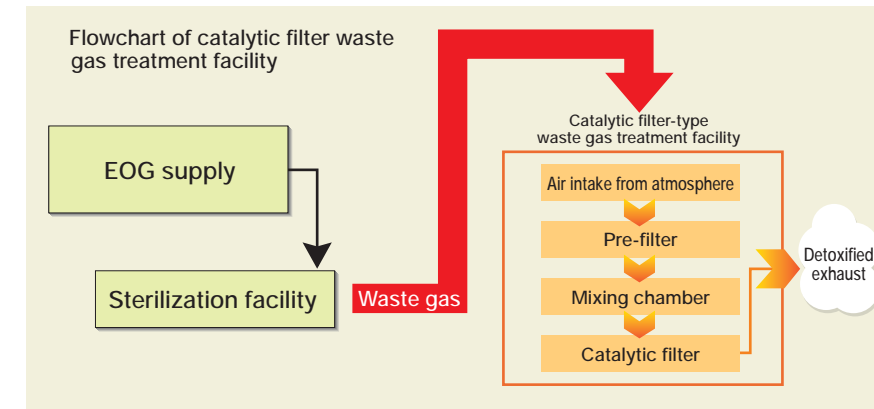
### PRTR-designated substances handled by Terumo (FY2002)

Chemical substance	Volume (t)	Kofu	Ashitaka	Fujinomiya	Shonan	Total
Ethylene oxide gas (EOG)	Qty. handled	20	34	10	0	65
	Emission vol.	2	3	3	0	8
	Transfer vol.	0	0	0	0	0
Dichloromethane	Qty. handled	131	65	0	0	196
	Emission vol.	61	70	0	0	131
	Transfer vol.	0	25	0	0	25
1,1-dichloro-1-fluorethane (HCFC-141b)	Qty. handled	26	0	19	0	45
	Emission vol.	18	0	18	0	36
	Transfer vol.	0	0	1	0	1
Di-chloro-penta-fluoro-carbon (HCFC-225)	Qty. handled	0	49	4	0	53
	Emission vol.	0	46	2	0	48
	Transfer vol.	0	3	2	0	5
Di-(2-ethylhexyl) phthalate (DEHP)	Qty. handled	637	68	662	0	1,367
	Emission vol.	0	0	0	0	0
	Transfer vol.	14	0	136	0	150
Toluene	Qty. handled	12	0	1	4	17
	Emission vol.	8	0	1	0	9
	Transfer vol.	4	0	0	2	7
Di-(n-butyl) phthalate (DBP)	Qty. handled	0	49	0	0	49
	Emission vol.	0	0	0	0	0
	Transfer vol.	0	49	0	0	49
Tetrahydrofuran (THF)	Qty. handled	0	15	9	0	24
	Emission vol.	0	8	8	0	16
	Transfer vol.	0	7	1	0	8
Di-(2-ethylhexyl) adipate (DEHA)	Qty. handled	4	0	0	0	4
	Emission vol.	0	0	0	0	0
	Transfer vol.	0	0	0	0	0
Hydrogen fluoride	Qty. handled	0	4	0	0	4
	Emission vol.	0	1	0	0	1
	Transfer vol.	0	0	0	0	0

## Sterilizing Gas Treatment System

Emissions of EOG, used in the sterilization process, are transferred to a waste gas incineration facility (Kofu Factory, Ashitaka Factory) or alternatively to a gas

treatment facility that uses a catalytic filter system (Fujinomiya) for detoxification prior to discharge.



Incineration-type waste gas treatment facility (Ashitaka Factory)



Catalytic filter-type waste gas treatment facility (Fujinomiya Factory)

## Environmental Risk Management

### Preventing Contamination of Soil, Groundwater

In FY2002, an internal inspection of the Kofu and Ashitaka Factories was held in accordance with Article 2 of the Soil Contamination Control Law governing registered factories where harmful substances are used. The inspection found no contamination at the Ashitaka Factory, and no observation well was installed at the factory as there is no plan to use harmful substances at the factory in future. However, as the use of harmful substances will continue at the Kofu Factory, observation wells were installed in six locations at the factory for monitoring of such substances. We also are instigating measures at the Kofu Factory to keep the use of harmful substances to a minimum.



Observation well (Kofu Factory)



Retaining wall built to prevent leaks of chemical substances (Kofu Factory)

### Compliance with Environmental Laws and Ordinances

No cases of fines, penalties or litigation relating to environmental protection occurred in FY2002.

### Emergency Response Measures

Terumo has devised an emergency response system to respond to any environmental impact that may result from an accident. In particular, our factories in Japan are situated in an area covered by strong earthquake disaster countermeasures, and we run training aimed at preventing or mitigating any damage that may arise from the occurrence of an earthquake.

### Disaster Drills

Type of drill	Details	Participation (cumulative)	Remarks
General disaster prevention drill	Evacuation drills	2,867	Head office, all factories, research center
Fire extinguisher, fire hydrant drill	Training to extinguish fires using fire extinguishers and fire hydrants	1,083	All factories, research center
Emergency contact drill	Training in use of emergency contact networks	499	All factories
Emergency training drills	Earthquake simulators, training in smoky conditions	101	Fujinomiya and Ashitaka Factories
Air tank, escape chute drills	Training in use of air tanks, escape chutes	71	All factories

Terumo promotes understanding of environmental protection by encouraging employees to gain qualifications, and actively tackles environmental risk management with initiatives such as the removal of on-site incinerators. We are also expanding green procurement based on established guidelines for office supplies and fixtures and fittings for use in the manufacturing process and offices.

**Legal Environment-Related Qualifications**

Terumo encourages employees to acquire environment-related qualifications. As at FY2002, a cumulative total of 501 employees hold such qualifications.

**Individuals with legal environment-related qualifications**

Name of qualification	Factories	Research center	Head office/sales	Total
Boiler technician	50	1	1	52
Electrical licensed engineer	7	1	0	8
Energy manager	9	0	0	9
Environmental certified measurer	2	0	1	3
Working environment measurer	2	1	0	3
Pollution control manager	33	6	1	40
Technical supervisor of waste disposal facility	7	0	0	7
Hazardous substances handler	116	22	0	138
Toxic and reactive substances handling manager	5	4	2	11
Organic solvents work manager	167	12	1	180
Work manager for specified chemical substances etc.	39	7	4	50

**Incinerators Abolished**

Industrial waste incinerated on-site was reduced to 127 tons in FY2001 after peaking at 1,801 tons in FY1998. In response to community demands for countermeasures to deal with dioxins generated by the incineration process, on-site incineration was abolished in FY2002 and incinerators were fully dismantled and



Incinerator being removed (transporting waste gas treatment facility)

removed. The dismantling and removal operation was conducted with due care to prevent the scattering of dioxins and protect the health of workers.



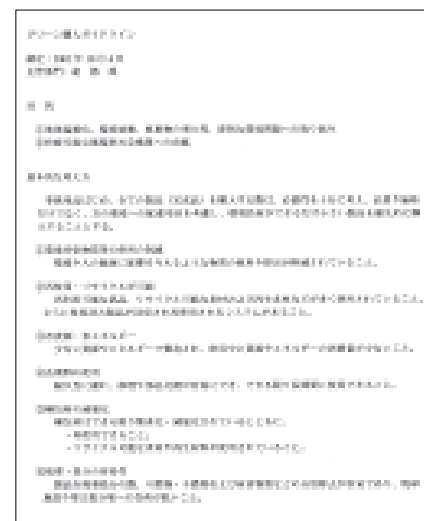
Incinerator being removed (removal of base)

**Management of PCBs**

All equipment containing PCBs (polychlorinated biphenyls) held on-site, including transformers and fluorescent lamp ballasts, has been removed in accordance with the Law Concerning Special Measures Against PCBs and the Waste Management and Public Cleansing Law. The waste has been consolidated at two storage locations, the Fujinomiya Factory and the Ashitaka Factory. In addition, The Japan Electrical Manufacturers Association continues to conduct relevant checks of equipment that may be exposed to traces of PCBs during the manufacturing process.

**Number of items in storage containing PCBs**

Storage site	In storage		
	Fluorescent lamp ballasts	Condensers	High-voltage reactors
Fujinomiya Factory	459	23	0
Ashitaka Factory	419	17	2



Green procurement guidelines

**Green Procurement and Purchasing**

Terumo's green procurement accords with established guidelines for office supplies and other equipment used in manufacturing and administration.

In FY2002, we conducted a survey of our clients on their use of harmful chemical

substances (Surveys were sent to 160 companies, with 86 valid responses received.) The survey results will assist us in creating guidelines for future surveys and green procurement.

**Sample questions from client survey about products ordered by Terumo.**

- Do they contain 0.1% or more of Specific Class I Designated Chemical Substances under the PRTR Law?
- Do they contain 1.0% or more of Class I Designated Chemical Substances under the PRTR Law?
- What are your views on product packaging type/material/weight?

Terumo publishes a range of communication tools, including the *Terumo Environmental Report*. We also present internal awards for environmental activities, hold clean-ups of site neighborhoods and organize other volunteer activities, as we work to extend our communications over a wide area, both inside and outside the company.

**Communication Tools**

The *Terumo Environmental Report* has been published annually since FY2000. We also introduce our environmental initiatives through our annual report, internal newsletters and websites.



Environment initiatives : <http://www.terumo.co.jp/environment/index.html>  
 IR information : <http://www.terumo.co.jp/ir/index.html>

**Internal Communication**

**Environment Awards**

Terumo has an established an internal award system for environmental measures and activities that achieve outstanding results.



Fujinomiya Factory water use reduction project team members



Members of Ashitaka and Suruga site-based committees for implementing environmental programs

Award year	Name of award	Award group and project	Name of award	Award group and project
FY1999	Environmental Contribution Award	Industrial Waste Group (waste reduction)	Environmental Endeavor Award	Ashitaka Factory (achievement of FY2000 target through energy saving activities)
FY2000	Environmental Contribution award	Ashitaka Factory Environment Promotion Committee (improvement in waste recycling ratio and energy saving)	Environmental Endeavor Award	Shonan Center Environment Promotion Committee (72kl reduction in energy consumption)
FY2001	President's Award	Fujinomiya Factory Production, 2nd Division (reduced water consumption by the division)	Division Manager's Award	Kofu East Factory Protection Section (promotion of environment-related activities in Kofu)
FY2002	President's Award	Environmental hormones project (promotion of product strategy using non-DEHP (TOTM) products)	Division Manager's Award	Fujinomiya Factory Production Divisions 1 & 2 (reduction in water consumption project) (reduced water consumption at Fujinomiya Factory)
			Division Manager's Award	Ashitaka and Suruga Environment Promotion Committees (promotion of environmental measures at Ashitaka and Suruga)

**External Communication**

**Local Area Clean-Ups**

Regular clean-up activities are hosted in Terumo site neighborhoods.  
 Head Office: Tamagawa Clean Strategy (November 10)  
 Shonan Center: Ninomiya Coastal Clean-up (November 10)  
 Kofu Factory: Joei River Clean-up (May 30)  
 Ashitaka/Suruga Factories: 6 times per year



Local clean-up (Ashitaka Factory)

**Mt. Fuji Clean-up Events**

Terumo participated in two communal clean-ups at Mt. Fuji during 2002, one on August 10 on the Fuji-Yoshida trail, (Yamanashi Prefecture) and the other on August 18 on the Fujinomiya trail (Shizuoka Prefecture). Around 130 Terumo employees took part in these events.



Mt. Fuji clean-up event (Fuji-Yoshida trail)



Mt. Fuji clean-up event (Fujinomiya trail)

Based on our corporate philosophy of "contributing to society through healthcare", Terumo is keenly aware of our responsibility to society to ensure a stable supply of safe and valued products and services to health care institutions around the globe.

## The Terumo Code of Conduct

Our corporate philosophy of "contributing to society through healthcare" has been with us ever since our beginnings. In recent years, this philosophy has been encapsulated in an easy-to-understand "Corporate Philosophy Statement", emphasizing the value we place on ethical conduct as a good corporate citizen.

Based on this philosophy, in April 2000 Terumo established its Code of Conduct, stipulating specific guidelines for the behavior of Terumo employees, as a more comprehensive response to society's demands of large corporations.

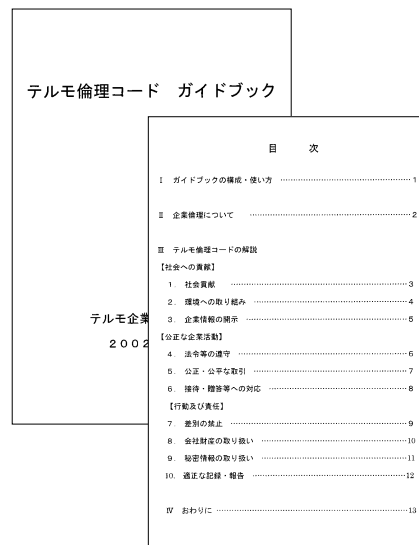
The *Terumo Code of Conduct* applies across the entire Terumo group, both in Japan and internationally. In addition to a Japanese language version, an English language version has also been produced for Terumo's overseas bases. Tailored to suit local needs, the *Terumo Code of Conduct* has been distributed to all Terumo group company employees. ( )



Pocket-sized *Terumo Code of Conduct* (front and back)

In addition to its ten behavioral guidelines, the *Terumo Code of Conduct* also clearly states that even if corporate profit is involved, any suspicious behavior running counter to the Code of Conduct shall not be tolerated. This statement brings home to employees the importance of corporate ethics.

In FY2002 we produced the *Terumo Code of Conduct Guidelines*, aimed at deepening understanding about the *Terumo Code of Conduct*, using examples to explain simply about the spirit of the code. The *Terumo Code of Conduct Guidelines* can be accessed on Terumo's intranet, and employees can refer to it whenever they wish.



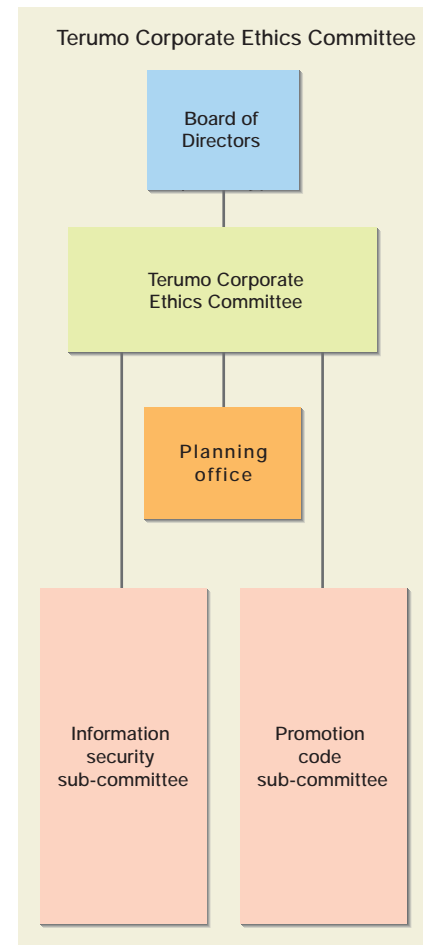
*Terumo Code of Conduct Guidelines*

## Promoting Corporate Ethics

Terumo has appointed the company vice-president as Compliance Officer in a measure aimed at firmly establishing the company's code of conduct within the organization. The Compliance Officer was also made a committee member of the Terumo Corporate Ethics Committee, established in July 2001.

The Terumo Corporate Ethics Committee has conducted various activities concerned with promoting ethics and compliance, and in FY2003 it was elevated from its position as an advisory body for management meetings to an independent body concerned with governance. A number of management level staff were added to the Terumo Corporate Ethics Committee, and a total of 13 committee members are set to embark on a new round of activities.

The concept behind the new Terumo Corporate Ethics Committee is to facilitate the development of an ethical mindset on the part of employees (individual level) and the creation of a framework, or climate, for ethics and compliance (organizational level)



## Education and Training Programs

Education and training are essential for establishing corporate ethics and compliance as an integral part of the Terumo culture. The structure outlined below is used in the implementation of training in corporate ethics at Terumo.

### (1) New graduate employees

New graduate employees are given basic training on the company philosophy and the *Terumo Code of Conduct* as it relates to them.

### (2) Training of newly-appointed "associate leaders"

Corporate ethics training is provided for newly-promoted "associate leaders" (at management level) as part of their training for their new role.

Case studies from the Terumo experience are used in training to foster a sense of ethics. Training for newly appointed "associate leaders" emphasizes the importance of daily management practices in promoting corporate ethics.

### (3) Medical Representative (MR) training

Terumo's corporate ethics is included in the ongoing training for Terumo's medical representatives (medical information officers). Terumo MRs are provided with the corporate ethics knowledge they need

to carry out their promotional activities, with training focusing mainly on the contents of the *Terumo Code of Conduct*, and laws and rules with which they are required to comply.

### (4) Corporate ethics training for the whole company.

Corporate ethics training was held for all employees for the first time. Under the company-wide corporate ethics training program, members of the Ethics Working Group selected by the Terumo Corporate Ethics Committee, provided ethics training to the heads of each division, who are given the title of "coach". These "coaches" then train the members of their own divisions, passing along their new knowledge. Training consists of basic information about corporate ethics conveyed through a general explanation about the topic, using case studies to foster a sense of ethical corporate behavior.



MR training



Corporate ethics training for all employees

## Corporate Ethics Award

In FY2003, Terumo was the recipient of the Corporate Ethics Award, one of Asahi Shimbun Foundation's 2003 awards for corporate contributions to society. These awards are made to leading companies annually based on a survey of companies' contributions to society.

The Terumo award was based on an overall evaluation of the series of initiatives we have implemented to promote corporate ethics, consisting of, in addition to the



Presentation of the Corporate Ethics Award on July 8, 2002

*Terumo Code of Conduct* adopted as stated in the corporate philosophy, which makes corporate ethics the top priority, the establishment of a Corporate Ethics Committee, corporate ethics training, a corporate ethics hotline, and our external reports on corporate ethics activities.



2003 awards for corporate contribution to society



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## Corporate Ethics Hotline

Based on the slogans, "pulling together to make Terumo a better company", and "working to improve openness in internal communication", in January 2003 we established a Corporate Ethics Hotline. The hotline is a system whereby employees can query any employee or contract staff behavior that they think runs counter to the spirit of the *Terumo Code of Conduct*. In addition to five consultants nominated as Ethics Hotline staff members, callers can also direct anonymous casual inquiries to Terumo company lawyers. The first consideration of consultants is the need to safeguard the privacy of callers and refrain from using any information gained through

the service to harm any individual's interests.



Terumo intranet screen (Corporate Ethics Hotline)

# Initiatives at Overseas Sites

Terumo's work in environmental protection is not confined to Japan, but is also actively implemented at overseas bases in Europe and North America. Here we introduce a snapshot of these multi-faceted activities, which include reducing consumption of energy and water resources, chemical substances control and promotion of waste recycling.

## Terumo Medical Corporation Terumo Cardiovascular Systems, Corp. (Maryland, USA)



No. of employees: 535  
Land area: 361,461m<sup>2</sup>



Elwood Bannon  
Manager of Facilities Engineering

### Environmental Protection Activities in FY2002

#### Reduced Energy and Water Consumption

During FY2002, to reduce the amount of water we use, we installed automatic faucets and flush valves. We anticipate that these measures will enable us to reduce water consumption by an annual 10%. Beginning in FY2003, we plan to install meters for monitoring electricity consumption and water supplied to cooling towers.

#### Chemical Substances Measures

Both companies are working to reduce emissions of HCFCs and VOCs\*, and a switch on some of Terumo Medical's production lines to heptane has facilitated the complete abolition of the use of HCFC-141b, resulting in a 94% reduction in VOCs. The amount of isopropyl alcohol (IPA) used in the manufacturing process has also been reduced to cut VOC emissions. Other initiatives we've implemented include establishing a database for the management of chemical substance use.

\*VOC: Volatile organic compound

#### Waste Countermeasures

Batteries from forklifts and AGV, plastic components, corrugated cardboard, paper, computer components and fluorescent lamps are all recycled.

## Terumo Europe N.V.



No. of employees: 578  
Land area: 105,683m<sup>2</sup>



Jos Vastmans  
Terumo Europe Plant Manager

### Environmental Protection Activities in FY2002

#### Reduced Energy and Water Consumption

We monitored our water consumption during FY2002. As an energy saving measure, we introduced a free cooling system and energy-saving motors. We also plan to implement energy monitoring in FY2003 and, keeping the cost aspect in perspective, conduct effective monitoring of electricity and gas consumption by environmentally friendly facilities.

#### Chemical Substances Measures

By using dichloromethane substitutes, we have completely abolished the use of HCFC-141b and trichloroethylene. We are replacing transformers containing PBC's to transformers without any PBC's.

#### Waste Countermeasures

Waste generated in the manufacturing process was carefully sorted, and recycling promoted. We also sorted office waste, including cans, paper and hazardous items.



Dichloromethane recovery facility

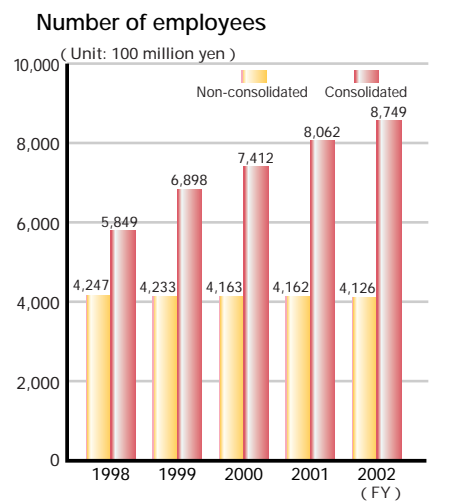
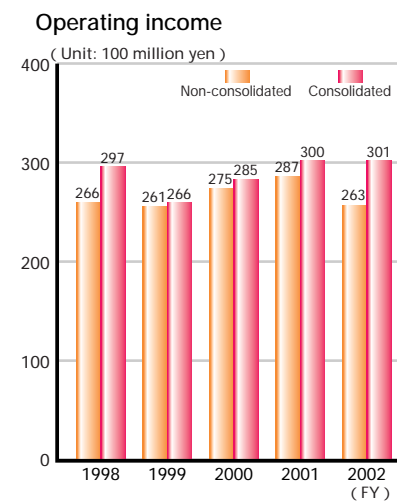
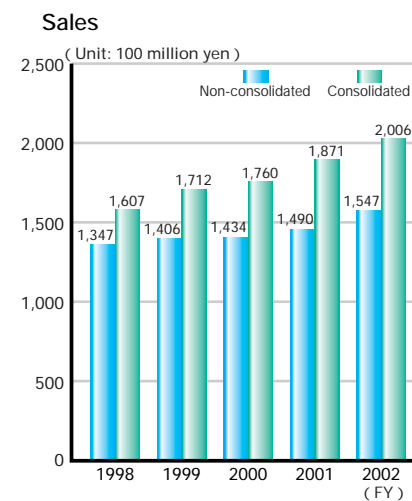
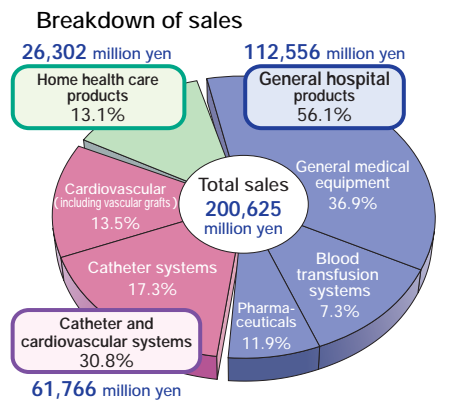
### Environmental performance data

	Terumo Medical Terumo Cardiovascular Systems	Terumo Cardiovascular Systems	Terumo Cardiovascular Systems	Terumo Europe	Vascutek	Terumo Philippines	Terumo Medical Products	Terumo Penpol	
	Maryland, USA	Michigan, USA	California, USA	Belgium	Glasgow, U.K.	Philippines	Hangzhou, China	India	
Energy	Electricity	42,597 MWh	5,209 MWh	1,699 MWh	37,609 MWh	1,902 MWh	3,628 MWh	10,456 MWh	1,855 MWh
	Gas	776,844 m <sup>3</sup>	385,404 m <sup>3</sup>	57,766 m <sup>3</sup>	73,292 GJ	5,940 GJ		70 t	
	Water	50,320 m <sup>3</sup>	18,600 m <sup>3</sup>	5,097 m <sup>3</sup>	79,490 m <sup>3</sup>	14,458 m <sup>3</sup>	20,907 m <sup>3</sup>	196,983 m <sup>3</sup>	32,087 m <sup>3</sup>
Waste (general/industrial)	Waste	732 t		131 m <sup>3</sup>	1,265 t	1,578 m <sup>3</sup>	238 t	50 t	
	Hazardous waste	74 t		5 t	178 t	7 t	5 t	9 t	
	Recycled vol	207 t		5 t			1 kℓ	24 t	

# Company Profile

## Company Profile

Company Name: Terumo Corporation  
Date of Establishment: September 17, 1921  
Representative: Takashi Wachi, President & C.E.O.  
Head Office: 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072, Japan  
Capital: 38,716 million yen  
Sales: 200,625 million yen (154,749 million yen non-consolidated)  
No. of Employees: 8,749 (4,126 non-consolidated)  
Main Business: Manufacture and sales of medical products and equipment, including pharmaceuticals, nutritional food supplements, blood bags, disposable medical instruments, artificial organs, medical electronic equipment, and digital thermometers.



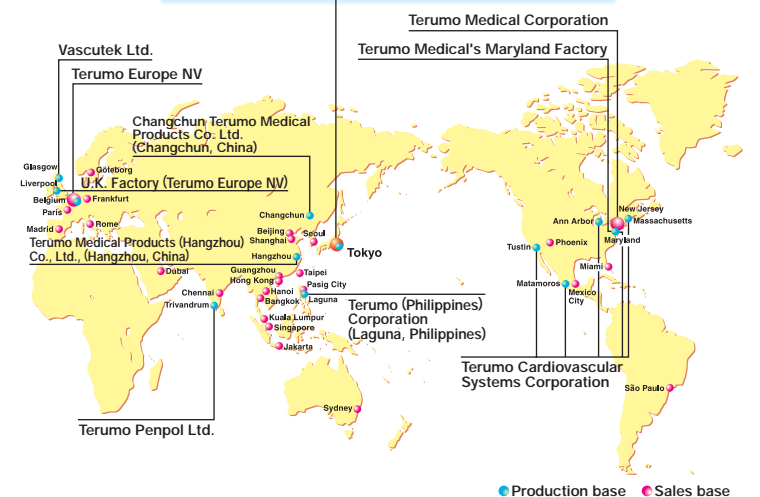
## Factories/Offices in Japan

Head Office : 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo  
Terumo Research & Development Center : 1500 Inokuchi Nakai-machi Ashigarakami-gun, Kanagawa Prefecture  
Fujinomiya Factory : 818 Misonotaira, Fujinomiya City, Shizuoka Prefecture  
Ashitaka Factory : 150 Maimaiki-cho, Fujinomiya City, Shizuoka Prefecture  
Kofu Factory : 1727-1 Tsukiji Arai, Showa-cho, Nakakoma-gun, Yamanashi Prefecture



## International Offices

Terumo Medical Corporation (Maryland & New Jersey, U.S.A.)  
Terumo Europe NV (Brabant, Belgium; Merseyside, U.K.)  
Terumo Cardiovascular Systems Corporation (Michigan, California, Maryland, Massachusetts, U.S.A.; Tamaulipas, Mexico)  
Vascutek LTD (Glasgow, U.K.)  
Terumo Medical Products (Hangzhou) Co., Ltd., (Hangzhou, China)  
Changchun Terumo Medical Products Co. Ltd. (Changchun, China)  
Terumo (Philippines) Corporation (Laguna, Philippines)  
Terumo (Philippines) Corporation (Laguna, Philippines)  
Terumo Penpol Ltd (Kerala, India)





[www.terumo.co.jp](http://www.terumo.co.jp)

## Terumo Corporation

44-1, 2-chome, Hatagaya, Shibuya-ku,  
Tokyo 151-0072, Japan

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For further information, please contact :

Environmental Affairs Office, Terumo Corporation,

Tel : +81-3-3374-8191

Fax : +81-3-3374-8015

E-mail : [Kankyou@terumo.co.jp](mailto:Kankyou@terumo.co.jp)

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**30%**  
Minimum

SA-COC-1196

At least 30% of the fibre used in the manufacturing process of this product comes from well-managed forest independently certified according to the rules of the Forest Stewardship Council.

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