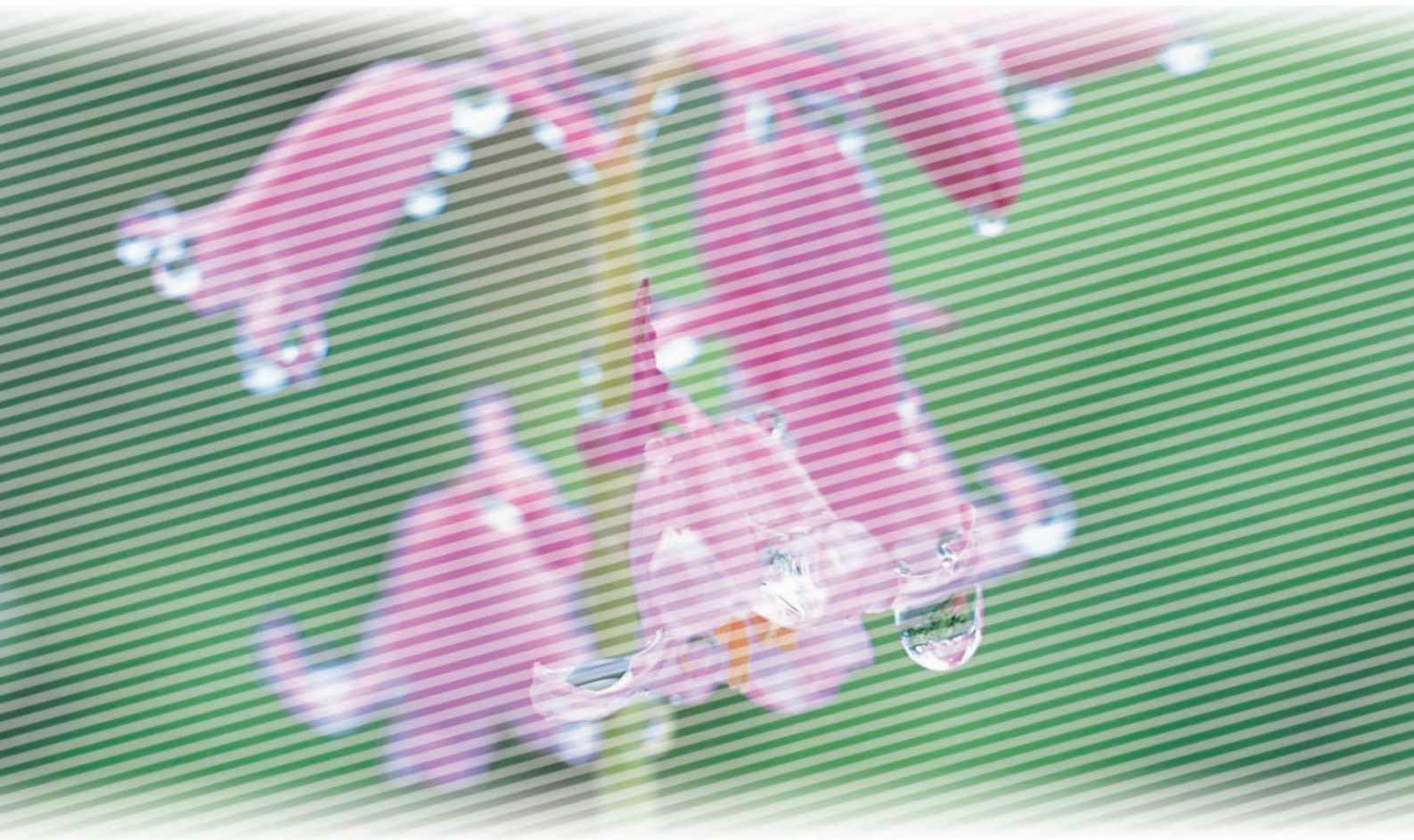


TERUMO ENVIRONMENTAL REPORT 2002



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## Environmental protection as our responsibility to society

Last year Terumo celebrated 80 years of the company's corporate philosophy of "Contributing to society through healthcare." As we aim to become a global corporation of the 21<sup>st</sup> century, we took this opportunity to unveil our new corporate vision: "Terumo's unique technology makes medical treatment kinder and gentler."

The practice of medicine, helping people to maintain or restore their health, is a valued service. And as a company working in the healthcare sector, we have a vital interest in protecting the environment, the essential basis for living healthy lives.

Terumo's corporate activities are founded upon consuming natural resources and processing them into products, activity that places a substantial load on the environment. Society recognizes the usefulness of the products and services we supply, but will only accept our company when the value of our output outweighs the associated environmental impact.

It is therefore imperative that Terumo disclose the environmental impact for which we are accountable, impact that we must endeavor to minimize. The company sees its current environmental initiatives as one aspect of our responsibility to society, but one that is essential for our survival into the future.

For example, Terumo uses large quantities of PVC in its medical products. While on the one hand, its superior qualities make PVC an optimum material for such application, the plasticizer within it can leach out, harming patients. We are seriously addressing this issue by developing and introducing substitute products, and consider this be a major obligation to society.

As a leading company in the medical industry, we are firmly committed to fulfilling our responsibilities. I trust that this report will provide an insight into Terumo's initiatives and commitment to the future .



Takashi Wachi  
President and C.E.O.  
Terumo Corporation

A handwritten signature in black ink, appearing to read "T. Wachi", with a horizontal line underneath the name.

## Basic principles of environmental management

### Corporate Philosophy

#### 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.

#### 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.

#### Safety and Reliability

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

#### 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.

#### 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.

### 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.**

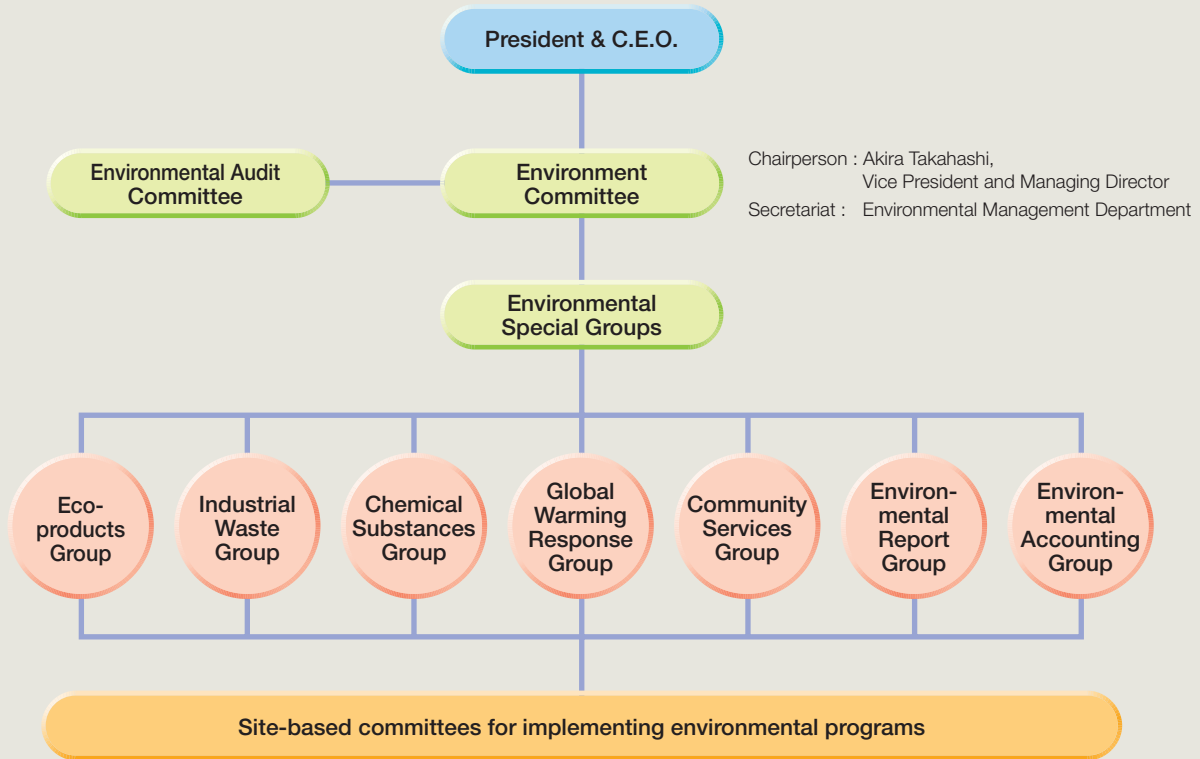
**To protect and audit its environmental protection activities, Terumo has established an environmental management system.**

**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

Company-wide organization for implementing environmental programs



### Environment Committee

The Environment Committee is responsible for setting the voluntary objectives of the Terumo Group in regard to environmental protection, monitoring progress, and generally overseeing environmental programs across the whole company. Formed in January 2000, the committee consists of representatives from all of Terumo’s domestic business groups. At present, the committee’s efforts are focused on promoting environmental awareness on our home ground, but future activities will extend to the entire Terumo Group.

### Environmental Special Groups

The environmental special groups are charged with promoting and carrying out practical improvements in regard to specific issues. Each special group consists of site-based experts in the relevant fields. The environmental special groups formulate action plans for each site based upon policy determined by the Environment Committee, and reports performance results to promote information sharing. The activities of these working groups are supervised by the Environmental Management Department, which periodically reports to the Environment Committee for evaluation and review.

### Environmental Audit Committee

Terumo factories and the Research and Development Center are setting up environmental management systems that comply with international standards. Site-specific environmental audits are important to ensure the effective operation of environmental management systems and improve environmental performance.

The Environmental Audit Committee is comprised of representatives from each site, including head office and sales divisions. 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.



## Internal environmental auditing

In FY2000, Terumo established an Environmental Audit Committee, separate from the existing framework for promoting improved environmental performance. The aim of the move was accurate assessment of environmental performance and higher environmental conservation technology standards, with a focus on progressive improvement and advancement of Terumo's environmental activities. The committee conducts ongoing internal environmental audits of each Terumo site, reviewing compliance with environment-related laws and regulations, environmental management systems, and achievement of voluntary objectives.

Results are summarized into audit reports that cover an evaluation of performance, issues that need to be addressed, and proposals and initiatives for further improvement, which are then submitted to the person in charge of the audited site. Recommendations include requests for specific plans for improvement on items designated as important or urgent, which are then followed up at regular intervals to monitor improvement.

### Training of Internal Environmental Auditors

Internal environmental auditors attend training courses run by outside organizations. The performance of our internal environmental auditors is improved through in-house seminars, and by using actual internal environmental audits as training opportunities for learning appropriate auditing skills.

As of FY2001, twenty-one internal environmental auditors have been registered with the Environmental Audit Committee.



In-house seminar for internal auditors

### Compliance with Environment-related Laws and Regulations

Each Terumo site is inspected by a team of independent auditors, who examine environmental performance and the management and maintenance of environment-related facilities, to ensure that the conformity and legal compliance of operations at each site.

### Environmental Management Systems Audit

Independent audits, aimed at building practicable and effective environmental management systems, ensure general conformity of environmental management systems at each site to ISO 14001 standards. These audits also provide a forum for sharing expertise between sites.

### Audit of Achievement of Voluntary Objectives

This audit examines the achievement of self-imposed targets related to each site's environmental impact, development of eco-products, prevention of environmental pollution, and efficient use of energy. The audit also looks at the originality and efficacy of measures and the degree of company-wide participation involved in achieving these objectives.



Audit in progress (Kofu area)

## 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 operation bases in Japan  
Applicable period : April 1, 2001 to March 31, 2002

(Unit : Yen millions)

Costs of environmental protection				Economic benefits	
Category	Principal initiatives	Investment	Expenditure		
(1) On-site costs		427	1,205	894	
Breakdown	(1)-1 Pollution prevention	Wastewater treatment and solvent recovery plants	(169)	(316)	(30)
	(1)-2 Protection of the global environment	Energy-saving facilities	(107)	(380)	(357)
	(1)-3 Resource recycling	Waste treatment and recycling expenses	(152)	(510)	(508)
(2) Upstream and downstream costs	Eco-product manufacturing facilities	0	171	0	
(3) Management program costs	Environmental management-related expenditure	0	46	0	
(4) R&D costs	R&D expenditure for environmental load reduction of Terumo products	0	67	0	
(5) Community services costs	Maintaining and establishing urban green belts	0	110	0	
(6) Environmental damage costs		0	0	0	
	<b>Total</b>	<b>427</b>	<b>1,599</b>	<b>894</b>	

Note : Totals may vary slightly due to rounding off of figures.

Investment : Amounts committed to anti-pollution and energy-saving equipment, local greening programs, etc. during FY2001

Expenditure : Depreciation expenses and operation and maintenance expenses related to anti-pollution and energy-saving equipment, 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.)

(Unit : Yen millions)

Category	Amount
Total investment during the applicable period	7,550
Total R&D costs during the applicable period	7,638
Sale of marketable goods associated with item (1)-3 above	11
Sales of marketable goods associated with item (2) above	0

### Benefits of environmental protection (actual FY2001 results)

Category	Environmental load	Percentage change year-on-year
Waste volume for final disposal (all plants)	751 tons	-27.7%
Energy consumption (crude oil equivalent) (unit basis *1 ; relative to FY1990)	66,346 kL (87.70%)	-0.9%
CO <sub>2</sub> emissions (absolute volume) (unit basis *2)	122,837 tons 90.2 tons/¥100 million	0.4% -1.5%
Chemical substances (volume handled)	Dichloromethane	148 tons 5.0%
	Toluene	11 tons -12.7%
	Tetra hydrofuran	16 tons -5.9%
Water consumption	3,800,000 m <sup>3</sup>	-3.5%

\*1 Unit basis = energy consumption divided by product sales

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

## Summary of environmental activities in FY2001

The following summarizes the practical efforts undertaken by Terumo to fulfill the voluntary objectives established in our environmental policy.

Policy	Primary focus
<p>Terumo has resolved to self-monitor all its activities in order to maintain its standing as an active supporter of environmental protection.</p>	Environmental impact assessment of our business activities
	Eco-product development
	Pollution prevention
	Efficient energy and resource utilization
	Waste reduction
<p>Terumo will follow international environmental protection laws, regulations and agreements.</p>	<p>Respect for the spirit of the Kyoto Protocol Response to amended Japanese laws</p>
<p>To protect and audit its environmental protection activities, Terumo has established an environmental management system.</p>	<p>Establishment of environmental management systems</p>
<p>As a member of the global community, Terumo will support environmental protection activities.</p>	<p>Encouragement of volunteer-based activities</p>
<p>To increase awareness of environmental issues within the company, Terumo will conduct in-house activities and educational seminars for employees.</p>	<p>Efforts in environmental communication</p>



Voluntary objectives	Achievements in FY2000	Page
<ul style="list-style-type: none"> <li>By FY2001, complete a quantitative assessment of the environmental impacts of development, production, and sales activities.</li> </ul>	<ul style="list-style-type: none"> <li>Database established for recording the quantities of materials used in containers and packaging.</li> </ul>	—
<ul style="list-style-type: none"> <li>Reduce usage of natural rubber and PVC, materials that carry a heavy environmental load.</li> <li>Reduce garbage volumes by using simpler packaging.</li> <li>Promote R&amp;D to design products that can be easily handled and sorted for recycling.</li> </ul>	<ul style="list-style-type: none"> <li>Non-PVC infusion sets for pediatric use introduced.</li> <li>Non-PVC urinary drainage bags launched.</li> <li>Labeling to identify component materials of medical electronic equipment further developed and expanded.</li> <li>Substance labeling for identification in accordance with the Law for Promotion of Effective Utilization of Resources further developed and expanded.</li> </ul>	P8
<ul style="list-style-type: none"> <li>Reduce FY2001 dichloromethane emissions by at least 60% from FY1996 levels.</li> <li>Reduce tetrahydrofuran (THF) emissions to no more than 10 tons at all sites in FY2001.</li> </ul>	<ul style="list-style-type: none"> <li>FY2001 dichloromethane emissions reduced by 63% from FY1996 levels (as planned).</li> <li>THF emissions at all sites reduced to 10 tons or less (as planned).</li> <li>All PCB-containing equipment in use transferred to storage.</li> </ul>	P14
<ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> emissions by 15% from FY1990 levels by FY2010.</li> </ul>	<ul style="list-style-type: none"> <li>FY2001 CO<sub>2</sub> emissions per unit of energy consumption reduced 89.6% from FY1990 levels (down 10.4%).</li> </ul>	P10
<ul style="list-style-type: none"> <li>Reduce the amount of waste for final disposal generated at production plants in Japan by 70% in FY2005 relative to FY1996 levels.</li> </ul>	<ul style="list-style-type: none"> <li>Amount of waste for final disposal from factories in Japan reduced by 76% from FY1996 levels.</li> </ul>	P12
<ul style="list-style-type: none"> <li>Same as CO<sub>2</sub> emissions target above.</li> </ul>	—	—
<ul style="list-style-type: none"> <li>By FY2001, ensure that the environmental management systems at Terumo factories and research centers substantially conform to international standards.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental management systems generally compliant with ISO14001 standards established at the Kofu Factory, Fujinomiya Factory, Ashitaka Factory and the Shonan Center.</li> </ul>	P4
<ul style="list-style-type: none"> <li>Extend volunteer programs to other business sites.</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of support for volunteer activities, including participation in the “Clean Fuji” campaign (general Mt. Fuji clean-up).</li> </ul>	P17
<ul style="list-style-type: none"> <li>Publish an environmental report.</li> <li>Implement Environmental Month initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>Terumo Environmental Report 2001 published.</li> <li>Environmental reporting sessions hosted.</li> </ul>	P16

### Safety and Eco-design Considerations

Because the medical equipment and supplies that we manufacture are potentially hazardous to human health, safety and the prevention of medical misadventure have always been paramount in the development of Terumo products. Today, minimizing environmental impact when medical products reach the end of their life cycle and become waste has become an equally important concern. In continuing to develop new products, we will make every effort to observe the following guidelines :

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).
4. Do not combine heterogeneous materials (plastics and metals, for example) in ways that make the materials difficult to separate.
5. Reduce waste volumes.

### Eliminating PVC and Plasticizer Considerations

#### (1) Characteristics of PVC medical supplies

PVC is generally formed by mixing PVC resin and the plasticizer DEHP with other additives. Inexpensive, easily molded, and readily modified to a wide range of different properties through alteration of its chemical composition, PVC offers excellent characteristics not found in other materials. These are important benefits in manufacturing medical supplies where safety and peace of mind are paramount, and certain items cannot be made without the use of PVC.

#### (2) Environmental effects of PVC and plasticizer DEHP considerations

The disadvantage of PVC is that it produces higher concentrations of dioxins than polypropylene and other materials when incinerated in an inappropriate manner. DEHP, a plasticizer used to soften PVC previously thought to have relatively low toxicity, has also come into question recently for suspected reproductive toxicity. This is because of abnormalities found in the reproductive systems of animals that had been exposed to large quantities of DEHP.

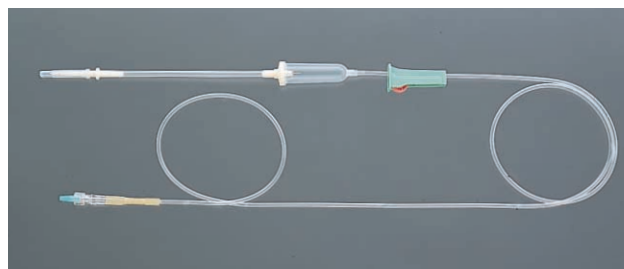
#### (3) Terumo's stance on PVC

We are replacing the PVC used in our products and packaging with other materials wherever possible. Emergency medical supplies and products where use of non-PVC substitutes is technically feasible are being given priority as we develop substitute materials. For medical equipment that cannot be manufactured without PVC, we are working on replacement of the plasticizer DEHP. In our search for a replacement for DEHP, we are looking for a chemical that will offer enhanced safety overall, and are engaged in reproductive toxicity tests and other safety tests to determine the optimum replacement.

#### (4) Progress in eliminating PVC

##### ● Non-PVC infusion sets

Terumo's drive toward eliminating PVC began in 1981 when we switched from PVC to ethylene-vinyl acetate copolymer (EVA) for the manufacture of infusion bags. In 1991, we began selling infusion sets made of polybutadiene. In April 2001, we introduced children's infusion sets made of polybutadiene.



Polybutadiene-based infusion set



PVC-free product mark displayed on packaging

● Japan's first non-PVC peritoneal dialysis (CAPD) bags  
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%.



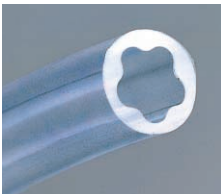
Non-PVC CAPD bag

### ●Non-PVC urinary drainage bags

In April 2002, Terumo began selling urinary drainage bags manufactured with ethylene-vinyl acetate copolymer (EVA) instead of PVC. The inner surface of the bag's tubing, formerly cylindrical, is now star-shaped, to keep the tubing open even when twisted or bent.



Non-PVC urinary drainage bag



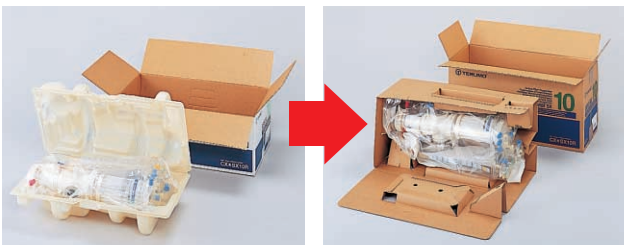
Cross-section of tubing

## Recyclable Packaging Initiative

### ●From plastic to cardboard

Plastic packing material used to pack oxygenators has been replaced with the more readily recyclable corrugated cardboard.

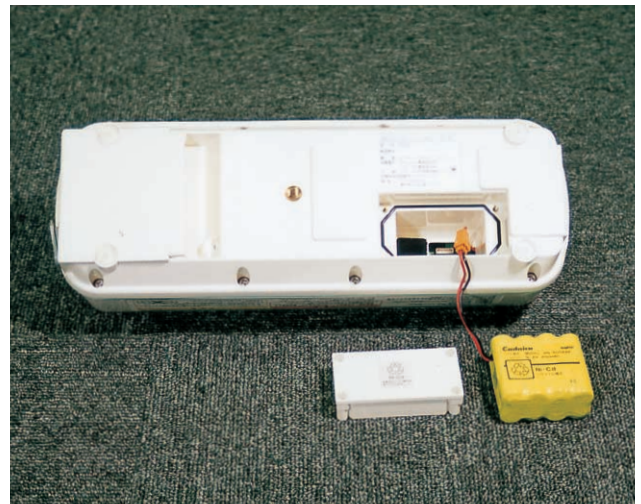
This change has significantly reduced the amount of waste generated.



Change to corrugated cardboard packaging (packing material)

## 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 simple battery exchange. The company has also joined the Battery Recycling Center of Japan (JBRC), and is endeavoring to recycle rechargeable batteries based on the Law for Promotion of Effective Utilization of Resources.



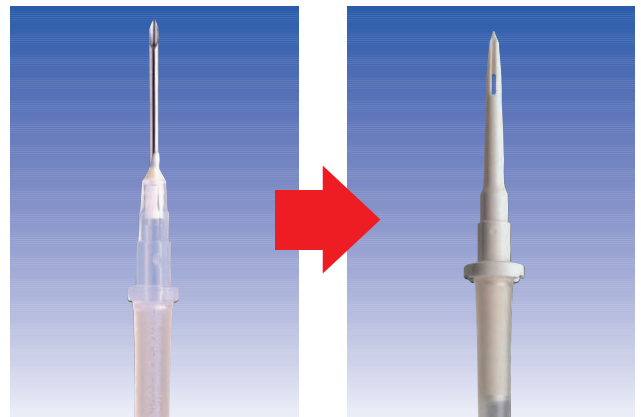
Syringe pump

## Easier Waste Disposal

### ●Infusion sets

#### Phase-out of metallic spikes

We have completed the changeover of the spikes used to connect infusion lines to containers of fluid for intravenous therapy, from metallic to plastic, as the standard specification for this product. This innovation will facilitate hospital waste disposal, permitting the spikes to be left inserted in the infusion bags and disposed of as general industrial waste.



Plastic spike used in infusion sets

## Preventing global warming

We have established carbon dioxide emission targets as part of our efforts to prevent global warming.

### Target for reducing carbon dioxide emissions

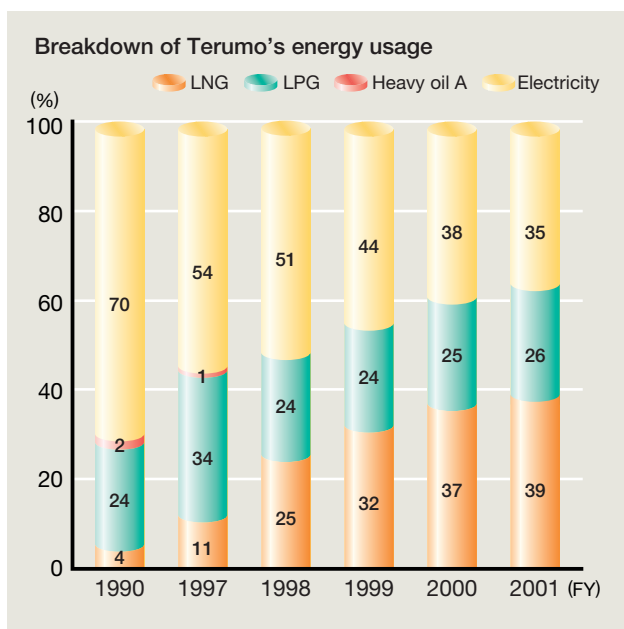
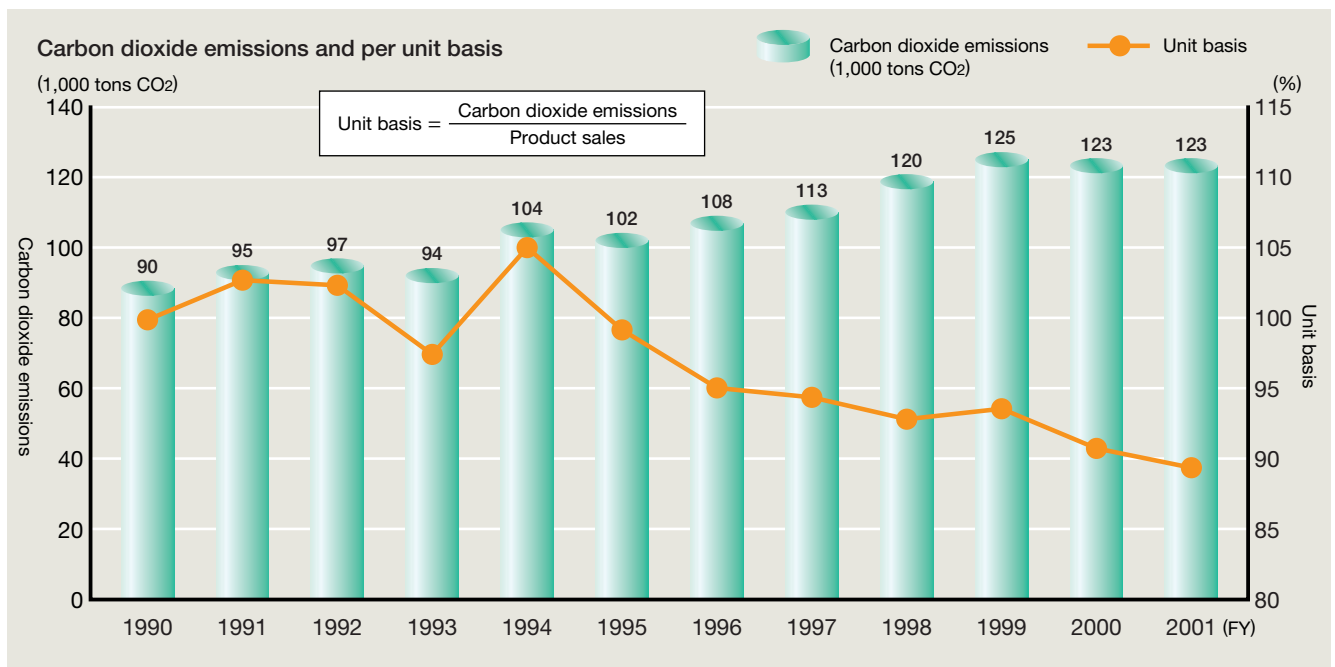
By 2010, reduce carbon dioxide emissions per unit basis by 15% relative to FY1990 levels.

## Safety and Eco-design Considerations

Liquefied petroleum gas (LPG) generates less carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and sulfur oxides (SO<sub>x</sub>) than heavy oil. In 1970, Terumo first began using LPG to fuel the glass fusion furnaces used for making clinical glass thermometers.

Today, we are in the process of replacing LPG with liquefied

natural gas (LNG) which generates even less CO<sub>2</sub>. Since FY1998, we have phased out heavy oil A entirely. As a result, the proportion of LNG to other forms of energy used in product manufacture has risen to 39%. Carbon dioxide emissions have been reduced to 90% of FY1990 levels on a per unit basis.



Cogeneration facility at the Ashtaka Factory

## Accumulating Steam

In 2000, a steam accumulator was installed at the Fujinomiya Factory to facilitate effective use of steam generated by the co-generation system.

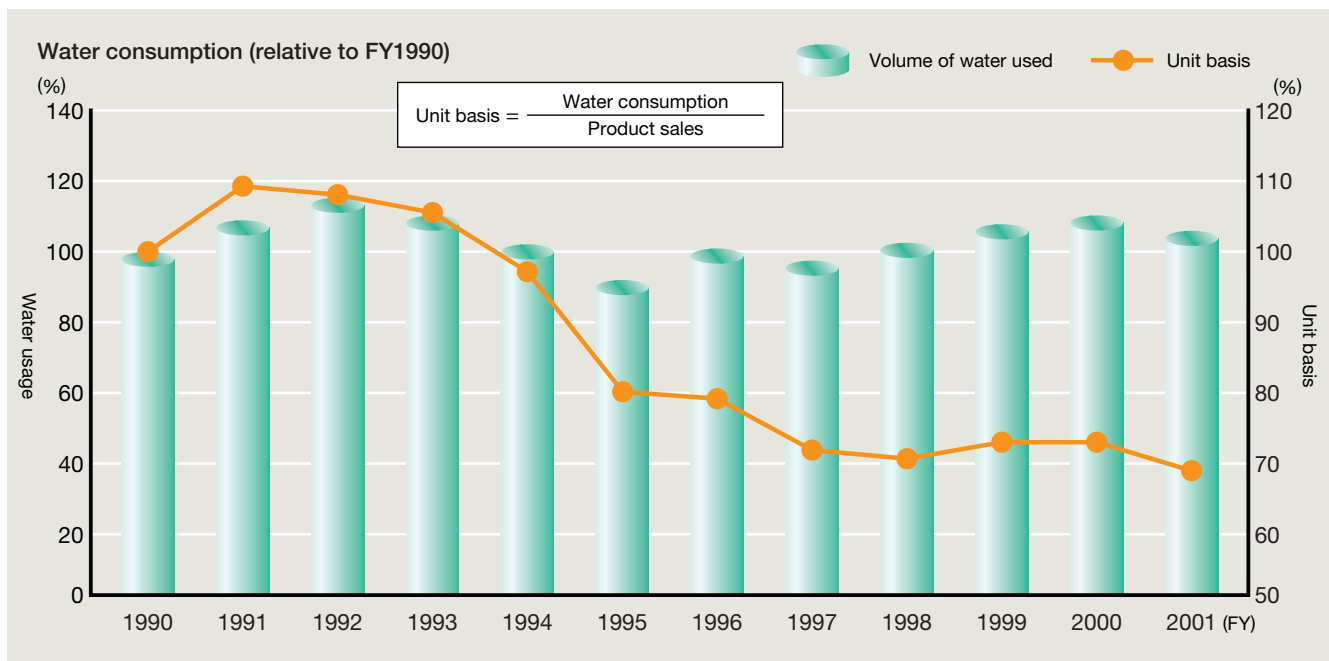


Steam accumulator at the Fujinomiya Factory (center back)

## 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.

In keeping with expanded production, water usage had been increasing since FY1997. Our efforts, however, bore results in FY2001, when water consumption began to decline.





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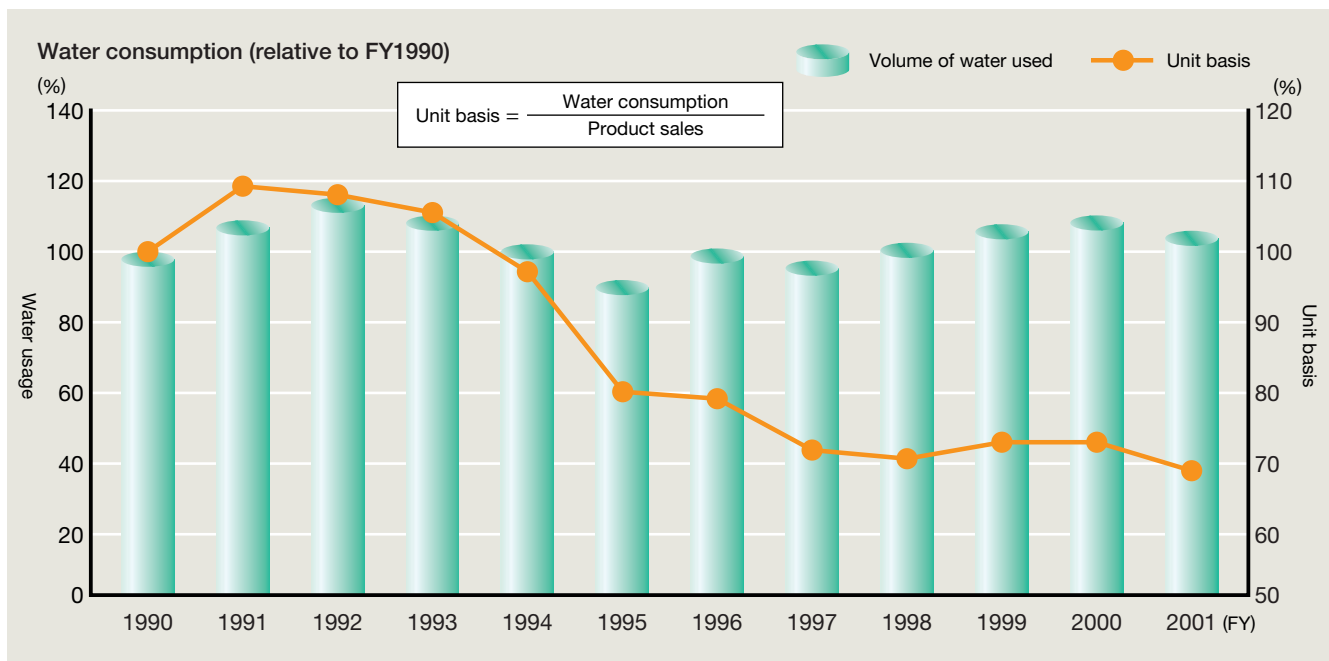


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## Waste reduction

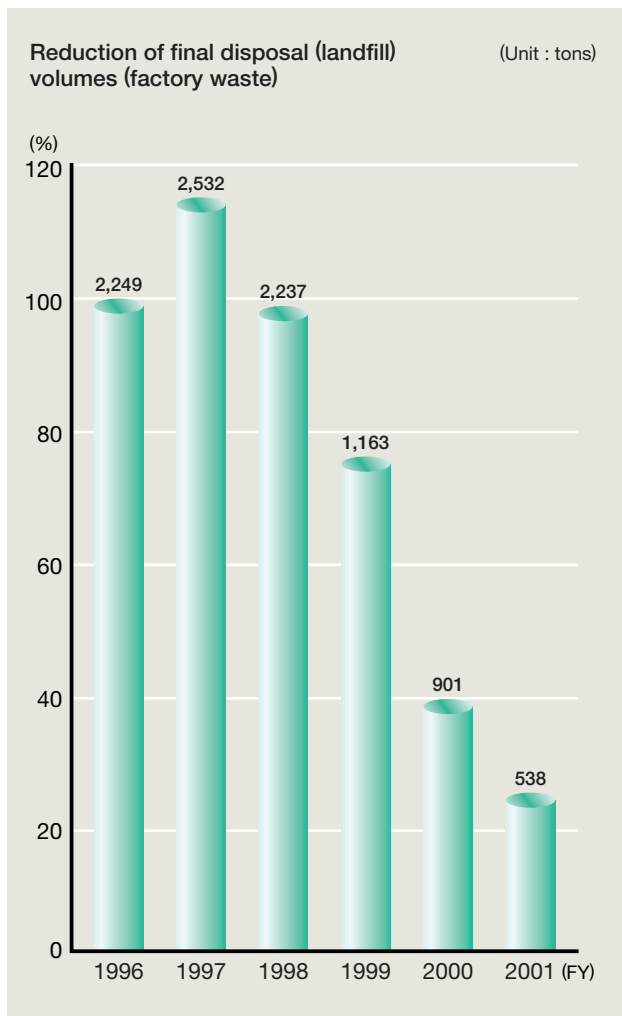
Practical measures are underway to reduce and recycle the various types of waste generated through manufacturing processes and business activities.

### Target for reducing waste for final disposal

Reduce the volume of factory waste for final disposal by 70% in FY2005 relative to FY1996 levels. (Target achieved)

Through a variety of recycling initiatives, we succeeded in increasing the ratio of resource reuse\* at Terumo factories to 85% in FY2001, up from 35% in FY1996. Our recycling program reduced FY2001 waste volumes for final disposal by 76% from FY1996 levels.

\*Volume of recycled waste/volume of generated waste (after dehydration)

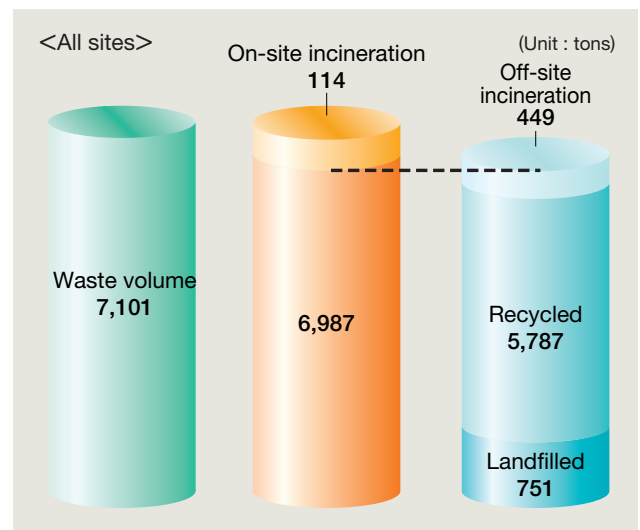


### Incinerators Discontinued

Recycling programs at the Kofu and Ashitaka Factories have reduced the volume of waste incinerated on-site, and use of incinerators at both plants has been discontinued. The incinerators are scheduled for dismantlement during FY2002. A small incinerator at the Fujinomiya Factory is the only one currently in use at a Terumo site.

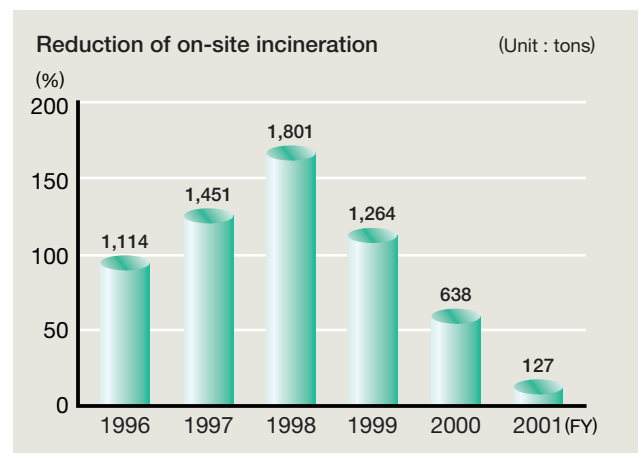
### Breakdown of Waste Treatment and Disposal in FY2001 (all sites)

In FY2001, a total of 7,101 tons of waste was produced at Terumo sites (head office, factories, and the Research and Development Center). The total volume of waste transported off site, including combustion residue from on-site burning, amounted to 6,987 tons, of which 449 tons were incinerated by waste contractors, 5,787 tons were recycled, and 751 tons went to landfill.



### Reducing On-site Incineration

In FY2001, the volume of waste incinerated at Terumo sites was reduced by 89% from FY1996. We will continue to reduce on-site burning substantially in the coming years.



## Recycling Initiatives

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 waste plastic on-site, we have adopted the following waste reduction initiatives.

### (1) Recycling plastic materials \*1

Polypropylene generated at the Kofu Factory during the manufacture of disposable syringes is recycled by re-molding it into daily use household goods. PVC generated in the manufacture of infusion sets is separated and recycled into products such as vinyl hosing.



Tray (left) and hosing (right) recycled from waste plastic

\*1 Recycling of materials : Waste plastic is re-heated and re-molded for recycling.

### (2) Recycling organic sludge into fertilizer

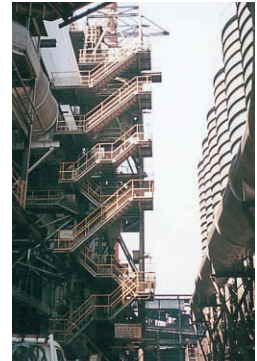
Organic sludge generated by wastewater disposal facilities at the Kofu, Fujinomiya and Ashitaka Factories is dehydrated and then processed into organic fertilizer by fertilizer manufacturers for agricultural use.



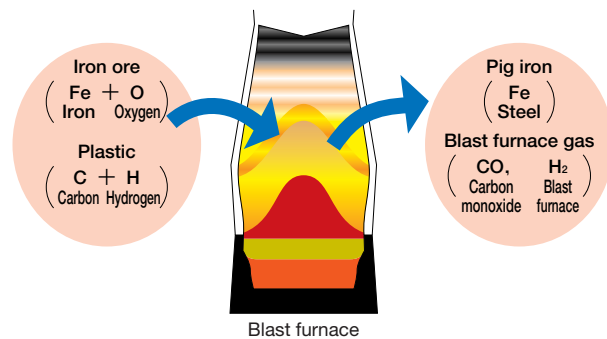
Fertilizer manufactured from organic sludge from the Fujinomiya Factory

### (3) Waste plastic burned as blast furnace fuel

Using waste plastic at steelworks as a reductant in place of coke reduces the amount of carbon dioxide gas generated, and generates no dioxins. Since 1998, waste plastic produced at the Kofu Factory other than PVC generated by the infusion set manufacturing process has been recycled into blast furnace fuel, and waste plastic from the manufacture of IV bags at the Fujinomiya Factory has been similarly recycled since 1999.



Facility for recycling waste plastic into blast furnace fuel (NKK)



### (4) Thermal recycling \*2

Waste vacuum blood collection tubes containing serum separator cannot be crushed and separated, as the serum separator adheres to the crusher blades. Instead, these vacuum blood collection tubes are thermally recycled as fuel for cement kilns. Cement is burned at high temperatures of 1,400°C and above, alleviating any concern of dioxin generation.



Cement kiln

\*2 Thermal recycling: Burning of waste plastic for use as fuel.

### (5) Recycling in the office

We have upgraded office equipment and use double-sided photocopying in our efforts to reduce paper consumption. We have also positioned recycling boxes throughout our offices for the sorting and disposal of waste paper, bottles, cans, PET bottles, compostable waste and non-burnable waste.

## Chemical substances management

Terumo is making every effort to reduce emission levels and to recover and recycle chemical substances. We are monitoring emission and transfer volumes of voluntarily controlled substances in addition to those designated in the Pollutant Release and Transfer Register (PRTR)\*.

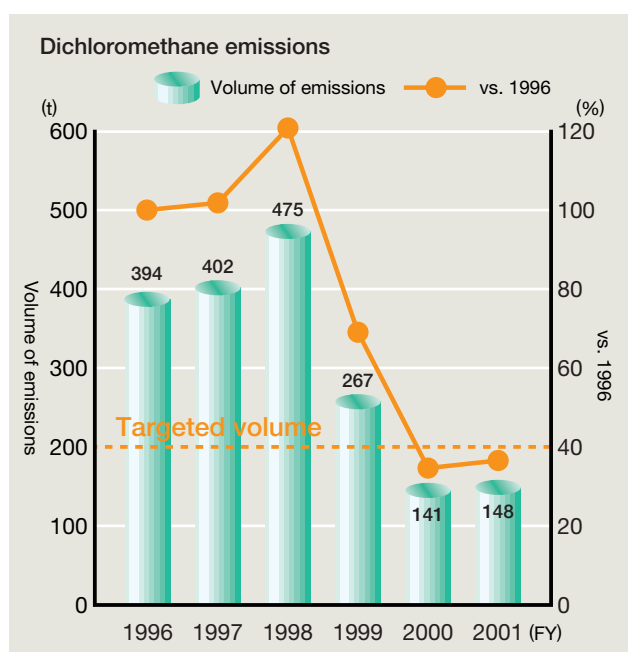
\* Pollutant Release and Transfer Register (PRTR)

A system that requires the types and quantities of pollutants and chemical substances handled by business premises to be itemized and reported to the authorities, and the information to be disclosed to the general public (under the Law Concerning the Reporting of the Release into the Environment of Specific Chemical Substances and Promoting Improvements in their Management).

### Target for reducing chemical substance emissions

- Reduce dichloromethane emissions by at least 60% in FY2001 relative to FY1996. (Target achieved)
- Reduce tetrahydrofuran (THF) emissions to no more than 10 tons at all sites in FY2001. (Target achieved)

Targets for reduction of dichloromethane and THF emissions were achieved, and our efforts will now focus on reducing the volume of these substances used in our operations.



To further reduce emissions of dichloromethane at our Ashitaka Factory in FY2001, we installed a recovery facility using activated carbon to adsorb the gas remaining when dichloromethane is recovered by deep-freeze compression.



Dichloromethane recovery facility (Ashitaka Factory)

### Quantities of chemical substances handled by Terumo (FY2001)

Chemical substance	Volume (tons)	Kofu	Ashi-taka	Fuji-nomiya	R&D	Total
Ethylene oxide gas (EOG)	Qty. handled	21	37	11	0	69
	Emission vol.	2	3	5	0	10
	Transfer vol.	0	0	0	0	0
Dichloromethane	Qty. handled	140	132	0	0	272
	Emission vol.	78	70	0	0	148
	Transfer vol.	15	62	0	0	77
HCFC-141b	Qty. handled	26	0	14	0	40
	Emission vol.	19	0	13	0	32
	Transfer vol.	0	0	0	0	0
HCFC-225	Qty. handled	0	72	3	0	75
	Emission vol.	0	66	1	0	67
	Transfer vol.	0	7	2	0	9
DEHP*1	Qty. handled	616	103	720	0	1,439
	Emission vol.	0	0	0	0	0
	Transfer vol.	18	0	220	0	238
Toluene	Qty. handled	13	0	1	4	18
	Emission vol.	10	0	1	0	11
	Transfer vol.	2	0	0	2	4
DBP*2	Qty. handled	0	48	0	0	48
	Emission vol.	0	0	0	0	0
	Transfer vol.	0	48	0	0	48
THF*3	Qty. handled	0	19	8	0	27
	Emission vol.	0	9	7	0	16
	Transfer vol.	0	10	1	0	11
DEHA*4	Qty. handled	4	0	0	0	4
	Emission vol.	0	0	0	0	0
	Transfer vol.	4	0	0	0	4
Hydrogen fluoride	Qty. handled	0	3	0	0	3
	Emission vol.	0	1	0	0	1
	Transfer vol.	0	2	0	0	2

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

\*2 DBP : Di-(n-butyl) phthalate

\*3 THF : Tetrahydrofuran

\*4 DEHA : Di-(2-ethylhexyl) adipate

## Preventing soil contamination, negative feedback

### Management of PCBs

All equipment containing PCBs is consolidated at two locations, the Fujinomiya Factory and the Ashitaka Factory. As at the end of March 2001, no PCB-containing equipment was in use at Terumo, and all such equipment was stored within stainless steel receptacles.

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

Note : Our FY2001 Environmental Report indicates more PCB-containing devices than given above. This is because particulars of such equipment in use cannot be formally confirmed, and so all equipment with any possibility of containing PCBs was included in the previous report. Since found to contain no PCBs, some of these have been eliminated from the statistics, and are therefore excluded from the above table.

### Management of Ethylene Oxide Gas

Ethylene oxide gas (EOG) has been named as a Class II Designated Chemical Substance as stipulated in laws relating to the management of hazardous chemical substances, and has been added to our list of substances for special monitoring. Terumo ensured that all sites satisfy all legal requirements, with auditing conducted by the Environmental Audit Committee.



Audit by members of the Environmental Audit Committee

### Environmental Protection of Soil, Groundwater

Contamination of soil and groundwater has become a focus of concern in recent years, particularly groundwater contamination with volatile organic compounds. As well as associated environmental protection, public health and subsurface ecosystem issues, such contamination poses a risk for the company in terms of the cost of eliminating such contamination and its enormous influence on real estate values.

In the past, Terumo sites and facilities have cooperated individually to address protection of the soil and groundwater environment. In January 2002, we initiated a company-wide program, centrally managed by the Environmental Management Department, which began to compile a history of the main sites, as well as conducting soil contamination surveys at factories that use volatile organic compounds. Terumo advocates transparency in all surveys and monitoring in accordance with the PRTR system, and encourages prompt response to any case of contamination that may be discovered.

### Non-compliance with Shizuoka Prefecture Guidelines

Before completion of consultations in accordance with Shizuoka Prefecture industrial waste disposal guidelines, Terumo contracted a waste disposal company in Fujinomiya City, Shizuoka Prefecture, to crush waste plastics from the Kofu Factory for recycling. In July 2001, Terumo received a directive warning against this practice from the Fuji Health Center in Shizuoka Prefecture. Terumo has pledged not to permit such a situation to arise again.



## Education programs, environmental performance awards, external activities

### Environmental Protection Seminar for Middle-level Management

On December 18, 2001, at the Ashitaka Factory, an external speaker was invited to give a seminar on environmental protection to middle-level management, including factory managers.



Environmental protection seminar

### Environmental Reporting Sessions

Sessions on environmental reporting were held at the major Terumo sites as an Environment Month initiative. These sessions are being continued as a means of reporting regularly to staff on the company's environmental activities.



Environmental reporting sessions

### Environmental Performance Awards

#### Environmental Contribution Award

Environmental Management Committee, Ashitaka Factory  
Improvement in waste recycling ratio and energy conservation (FY2000)

Environmental Management Committee, Shonan Center  
For a 727 kL reduction in energy consumption (FY2000)

### External Activities

On June 22, 2001 Keisuke Nakahashi spoke at the Medical Waste Research Institute's 20<sup>th</sup> seminar on the theme "Waste disposal in the home care environment."

### Industry Activities

Member, Environment, Health and Safety Committee, Japan Medical Devices Manufacturers Association

## Service to the community

As part of Terumo's service to the community, we participate in local environmental initiatives in the neighborhoods where we work.

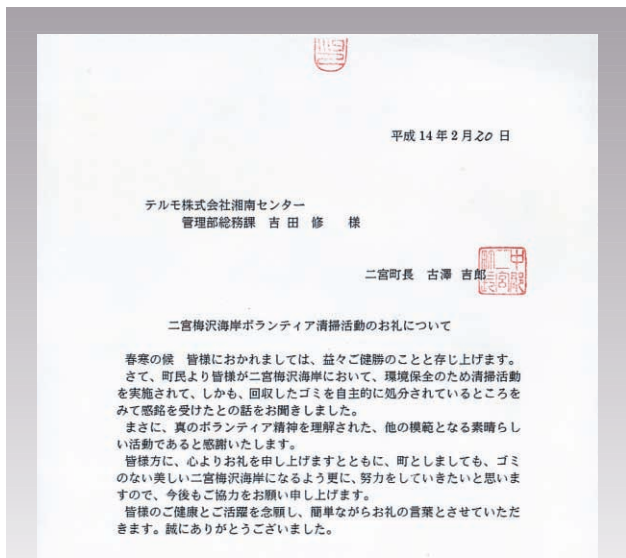
### "Mt. Fuji Clean Strategy 2001" (Mt. Fuji General Clean-up)

Mt. Fuji is a familiar landmark to Terumo, which has factories dotted around the base of the majestic mountain. On August 19, 2001, we conducted a clean-up at Mt. Fuji of the Fujinomiya route, under the name "Mt. Fuji Clean Strategy." Around 80 Terumo employees participated, working up a healthy sweat in the course of their clean-up activities between the fifth and seventh stations.



### Ninomiya Coastal Clean-up (Shonan Center)

Since 2000, Terumo's Shonan Center has conducted a coastal clean-up at the nearby Ninomiya coast at the close of the swimming season. On November 3, 2001, around 40 employees and their families gathered to clean up the area and enjoy an afternoon of recreational activities, including a barbecue. The group later received a letter of thanks from the Ninomiya town manager.



Letter of appreciation from Ninomiya

### Fujinomiya City Citizens Environment Patrol (Fujinomiya Factory)

On June 16, 2001, as part of the June National Environment Month, a Citizens Environment Patrol of around 20 local citizens visited the Fujinomiya Factory, for what has become a regular event on the Fujinomiya City calendar. Air pollution was the theme for this year's Environment Patrol, and patrol members had researched air pollutants at the Fujinomiya City Hall prior to their visit.

Upon their arrival at the factory, participants were given an outline of Terumo's company-wide environmental initiatives by the Environmental Management Department, and then proceeded to view facilities relating to the theme, including the site's co-generation facilities, boiler facilities and the central monitoring room.



### Elementary School Environment Club Students Visit Kofu Factory

On November 8, 2001, students from the Environment Club at nearby Ryuo Elementary School toured environment-related facilities at the Kofu Factory. Questions fired by the keen group of students as they toured the vast factory site touched on sorting waste for recycling and the co-generation facilities.

### Head Office Neighborhood Clean-ups

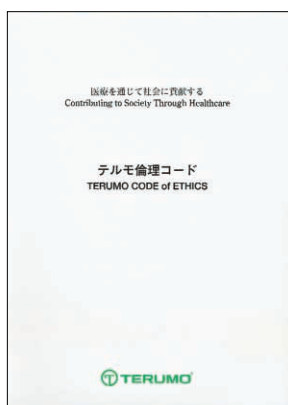
Arakawa Clean Aid (October 21)  
Tamagawa Clean Strategy (November 11)

### Clean-up Activities Around Terumo Sites

Fujinomiya Factory (June 14, 15)

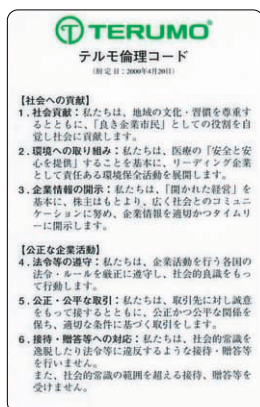
## Formulation and Distribution of the Terumo Code of Conduct

In order to survive, companies must conduct their activities in a manner deemed by the international community to be transparent, just and fair. Terumo's Corporate Philosophy Statement already expressed a basic philosophy emphasizing ethical conduct as a good corporate citizen, but Terumo established its Code of Conduct in April 2000 as a more comprehensive response to society's demands of large corporations.



The Terumo Code of Conduct

One version of the Terumo Code of Conduct has been produced for domestic use, while an English-language version has also been produced for Terumo's overseas bases, tailored to suit local needs. A pamphlet size as well as a pocket-sized booklet of the Code of Conduct has been distributed to all Terumo employees.



Pocket-sized Code of Conduct

The Code of Conduct stipulates specific guidelines for the behavior of Terumo employees, who are responsible for conducting themselves accordingly. An ethics helpline was established at the same time that the guidelines were established, which fields calls from employees on issues of ethics and ethical conduct.

## Promoting Corporate Ethics

### (1) Terumo Corporate Ethics Committee

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 consists of 14 Corporate Ethics Committee members from various divisions within the company (as of July 2002) who meet quarterly. In addition to creating a framework for the company's corporate ethics and compliance and various educational activities, the committee also acts to resolve specific issues as they arise.



Terumo Corporate Ethics Committee

### (2) Establishment of Ethics Working Group

The Ethics Working Group was set up in March 2002, as a subordinate office to the Terumo Corporate Ethics Committee, in the interests of a more full-scale promotion of the company's code of conduct.

The activities of the Ethics Working Group have only just begun, but in the future the group will be expected to report on various proposals for promoting the Terumo Code of Conduct within the company.

## Promoting the Terumo Code of Conduct

### (1) Education and training

All staff participate in training on corporate ethics. Every year, seminars explaining the spirit of the Terumo Code of Conduct are held for new graduate employees, while newly-appointed middle-level management training includes case studies on corporate ethics.

### (2) Ethics web page established

The "Ethics Line" web site was set up on the company's intranet July 2001. Ethics-related content introduced on the site and updated each month includes educational articles, book reviews and case studies.



Ethics Line web site

## Service to the Community Provision of Emergency Relief

### Emergency medical support for Peru earthquake (through Terumo Medical Corporation in North America)

Terumo sent the equivalent of around 2.8 million yen worth of medical supplies, including 80,000 syringes, as aid for the earthquake that occurred in Peru on June 23, 2001 (June 24 Japan time). The donation was presented in collaboration with a local representative to Roman Catholic churches in Arequipa, Peru's second-largest city.



## A history of caring for the environment

1972	A facility for treating mercury-contaminated wastewater was installed at the Ashitaka Factory.
1975	A wastewater treatment plant was installed at the Fujinomiya Factory, and subsequently at the Ashitaka Factory (1980).
1976	Acid-based surface treatment of needle hubs (base portion of needle) was abolished in favor of plasma treatment which generates no acid waste fluid. The 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 the boiler fuel used at the Fujinomiya Factory.
1980	Thermoplastic elastomer replaced rubber as the material for syringe gaskets, thereby eliminating SOx emissions at incineration.
1981	Intravenous solution containers (TERUPAK) made of non-PVC materials were introduced. Ethylene vinyl acetate (EVA) was chosen because it produces no noxious gases when incinerated.
1982	Trichloroethylene (TCE) was completely phased out ahead of its designation as a controlled carcinogen.
1983	Gamma irradiation, which produces no gas emissions, was introduced as the sterilization method used at the Kofu Factory.
1984	Terumo's 70-year history of mercury thermometer manufacturing ended in favor of eliminating mercury-containing instruments. Non-mercury digital thermometers were launched on the market in 1983.
1989	Glass vacuum blood tubes were replaced by plastic products made of a polyester material that can be safely incinerated.
1991	Non-PVC infusion sets went on the market. For the tubing, polybutadiene was chosen 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	Urethral balloon catheters made of natural rubber ceased production. Balloon catheters made of thermoplastic elastomers, which produce no SOx when incinerated, were launched on the market.
1996	Controlled ozone-depleting CFCs ceased to be used in manufacturing processes at the Kofu Factory (and subsequently at other factories). Infusion sets with a new type of plastic spike began production. The use of non-metallic spikes facilitates sorting and incineration of hospital waste.
1997	<b>Terumo's Environmental Affairs Office was established.</b> A co-generation 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 produces lower CO <sub>2</sub> emissions.
1998	More compact, lightweight syringes were introduced, reducing the waste volume of discarded syringes by approx. 25%. Corporate offices began switching to recycled paper for photocopying purposes.
1999	<b>Terumo's Environmental Policy was formulated.</b> An environmentally friendly co-generation power plant started operation at the Fujinomiya Factory. Corporate offices began switching to recycled paper for printing of catalogs and design change notifications. Non-PVC materials were introduced for manufacturing CAPD bags for home use. The switch to polypropylene, which emits no noxious gases when incinerated, resulted in 40% waste reduction.
2000	<b>The Terumo Environment Committee was initiated.</b> A co-generation 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 were completely phased out. Terumo Environmental Report 2000 was published.
2001	Operation of incinerators at Kofu and Ashitaka Factories discontinued. Use of PCB-containing equipment abolished, all transferred to storage. Infusion sets for children manufactured from non-PVC materials introduced. Around 80 employees and their families participated in a general clean-up at Mt. Fuji.



## Company profile

**Company Name :** Terumo Corporation

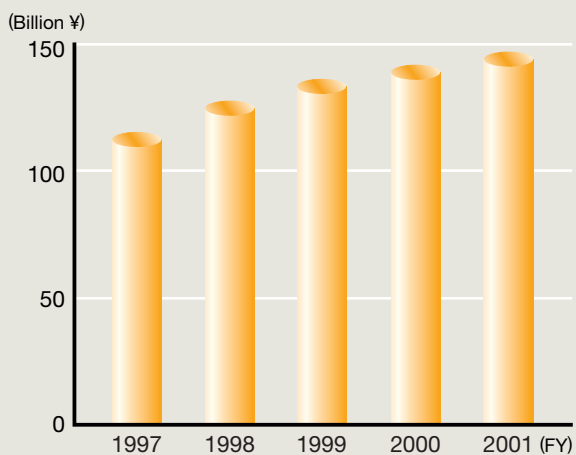
**Head Office :** 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072, Japan  
Tel : +81-3-3374-8111 URL : <http://www.terumo.com/>

**Date of Establishment :** September 17, 1921

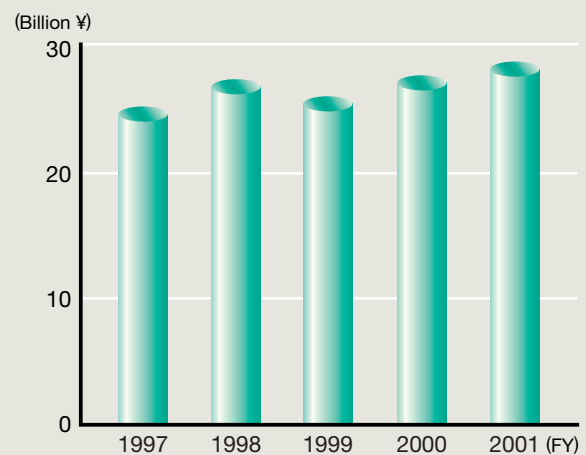
**Representative :** Takashi Wachi, President & C.E.O.

**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.

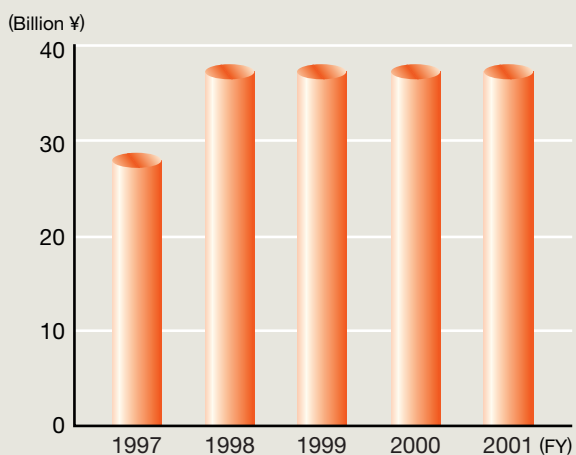
### Net Sales



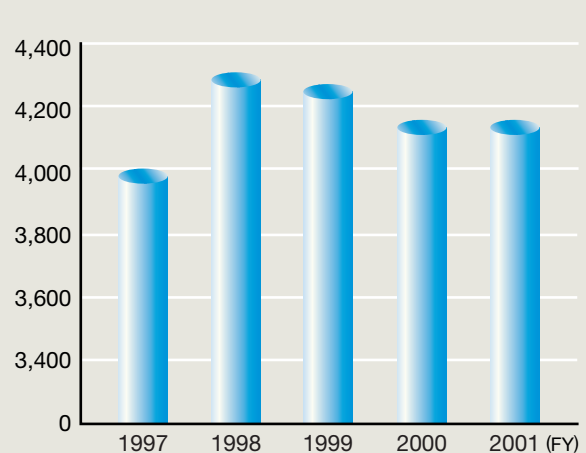
### Operating Income



### Paid-in Capital



### Number of Employees



### Domestic offices/factories

**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



[www.terumo.com](http://www.terumo.com)

## Terumo Corporation

44-1, 2-chome, Hatagaya, Shibuya-ku,  
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