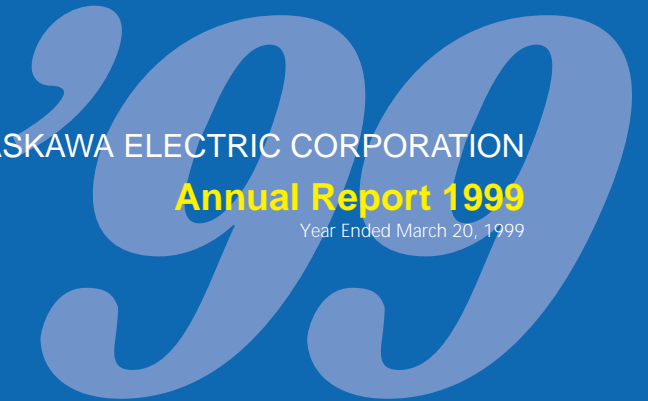




YASKAWA ELECTRIC CORPORATION  
**Annual Report 1999**  
Year Ended March 20, 1999



## Profile

Established in 1915, Yaskawa Electric Corporation has grown to become one of the world's leading manufacturers of a diverse lineup of mechatronics products, including MOTOMAN industrial robots, inverters, servos, and programmable and motion controllers for use in all types of highly advanced machinery. Yaskawa also manufactures and markets an array of systems products, including products for integrated manufacturing systems for factory automation. In addition, the Company offers various heavy electrical products, including induction motors, generators, switches, and breakers. In recent years, the Company has steadily expanded the scope of its overseas activities, which it carries out through an international network of offices, subsidiaries, and affiliates as well as in collaboration with local concerns.

## Consolidated Financial Highlights

YASKAWA Electric Corporation and Consolidated Subsidiaries Years ended March 20

	Millions of Yen (except per share amounts)			Thousands of U.S. Dollars (except per share amounts)
	1999	1998	1997	1999
Net sales	<b>¥227,457</b>	¥268,642	¥247,511	<b>\$1,934,984</b>
Ordinary income	<b>155</b>	11,415	6,213	<b>1,325</b>
Net income (loss) after taxes and minority interest	<b>(3,880)</b>	5,365	1,210	<b>(33,008)</b>
Total assets	<b>227,335</b>	252,355	238,717	<b>1,933,945</b>
Net income (loss) per 100 shares of common stock (yen and U.S. dollars)	<b>¥(1,672)</b>	¥2,312	¥522	<b>\$(14.22)</b>

Rate: ¥117.55=US\$1 (As of March 20, 1999)

## Contents

1 Sales by Product Group

2 To Our Shareholders

4 Highlights of the Year

6 Financial Review/  
Non-Consolidated Five-Year Summary

7 Major Consolidated Subsidiaries/  
Consolidated Five-Year Summary

8 Consolidated Balance Sheet

9 Consolidated Statement of Income/  
Consolidated Statement of Retained Earnings

## Industrial Electrical Control Systems

¥35.5 billion (15.6%)

- Electrical systems products for industrial plants
- Electrical systems products for utilities:  
Water-purification plants  
Sewage-treatment plants



These inverters control papermaking machines.



Central monitoring system for incinerating plant



## Mechatronics Components

¥99.4 billion (43.7%)

- Inverters
- AC/DC servomotors
- Servo controllers
- Motion controllers
- Programmable controllers
- Numerical controls
- Motors for machine tools



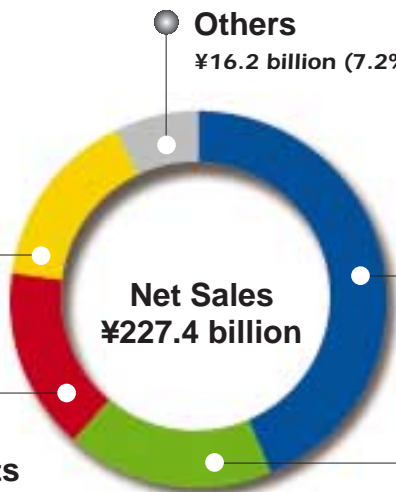
AC Servo Σ-II Series



Inverters

## Others

¥16.2 billion (7.2%)



## Industrial Electric Components

¥35.6 billion (15.7%)

- Induction motors
- Synchronous machines
- Generators
- DC machines
- VS motors
- Industrial drive systems
- LT switches and controls
- HT breakers and contactors
- Switchgear and control panels
- Pole-mounted SF<sub>6</sub> gas load breakers



New-type transfer equipment for clean rooms



Large inverter motor



Energy-saving VS-686SS5

## Mechatronics Systems

¥40.5 billion (17.8%)

- Industrial robots
- Supermechatronics products



Industrial robots: MOTOMAN

**D**uring fiscal 1999, ended March 20, 1999, consolidated net sales by Yaskawa Electric Corporation declined 15.3%, to ¥227.4 billion. Ordinary income plunged 98.6%, to ¥155 million, and the Company posted a net loss of ¥3.8 billion.

Regarding sales by product group, sales in Mechatronics Components declined 20.3%, to ¥99.4 billion. This decrease primarily reflected lower sales of AC servos due to worsening results in the semiconductor manufacturing equipment industry and the chip mounting equipment industry, which are principal users. Factors undermining sales of AC servos included the slowdown in the previously robust North American machine tools industry. Sales of inverters were adversely affected by a decline in private-sector capital investment.

Sales in Mechatronics Systems declined 11.5%, to ¥40.5 billion, due to deteriorating performances by our principal customers in the semiconductor manufacturing industry. This adversely affected sales of such supermechatronics products as transportation systems for use in superclean and vacuum environments. On the other hand, sales of industrial robots recorded smooth growth.

Sales in Industrial Electric Components fell 17.7%, to ¥35.6 billion. This fall mirrored the effects of a decline in private-sector capital investment and sluggishness in Asian economies.

Sales in Industrial Electrical Control Systems were down 8.9%, to ¥35.5 billion, owing to curtailments in capital expenditures in principal manufacturing industries.

Sales in others increased 3.3%, to ¥16.2 billion. This gain was supported by a favorable performance in information services, including application software and data processing.

During fiscal 1999, overseas sales amounted to ¥69.8 billion, or approximately 31% of net sales. As a result of the difficult conditions in the business environment, the Company has decided to forgo the payment of dividends.

To improve Yaskasa's business performance, in the midst of Project 2000 the Company is revising this plan and formulating an updated medium-term management plan that will guide its operations through fiscal 2003, while implementing four structural reforms aimed at transforming itself into a company with a high-profit structure.

## **Reform our business structure**

To more efficiently use our finite management resources, we will place greater emphasis on the selectiveness and concentration of management resources in new businesses. To this end, we plan to shift the allocation of our resources toward mechatronics, a highly profitable field, and raise our share of the global market for mechatronics products. At the same time, Yaskawa will strengthen its operations in unprofitable sectors by spinning off certain businesses as separate companies, reorganizing these businesses by downsizing, or retreating from unprofitable fields. Yaskawa plans to complete this reorganization by the end of fiscal 2000. Also, in reforming its business structure, Yaskawa will use its own independent capabilities and resources as it aggressively pursues strategic alliances.

## **Reform our corporate structure**

Amid the trend toward megacompetition and consolidated accounting, Yaskawa will progress with independent business activities and seek to maximize its value as a company by emphasizing thorough selectiveness and concentration by stepping up the reform of its corporate structure through such measures as setting up separate companies and reorganizing Group companies.

## **Reform our management structure**

To carry out structural reforms and realize a management structure capable of achieving high profits, Yaskawa is extensively reviewing its current management systems. In line with these efforts, in fiscal 2000 Yaskawa will complete an employee performance evaluation system and a new personnel system, which will serve as the foundation of its management structure.

## **Reform our financial structure**

By implementing the following strategies, Yaskawa aims to reduce interest-bearing debt.

- Sell idle assets, withdraw from unprofitable business relationships, and form joint businesses to carry out a sweeping review of our capital structure.
- Mobilize credits and emphasize cash management to reduce current assets.
- Eliminate and merge product lines as well as standardize and use common components to create value-added products.
- Raise the efficiency of operations using information technologies and reduce lead times.

Backed by its systems engineering capabilities and extensive product lineup, which represent areas of strength, Yaskawa will provide total optimal solutions in fields of automation in efforts to further improve clients' productivity and quality as it aims to be a "total solutions company."



A handwritten signature in black ink, appearing to read "Shinichi Hashimoto". The signature is fluid and cursive, written over a white background.

**Shinichi Hashimoto**  
President and Chief Executive Officer

June 1999



### Yaskawa Begins Sales of the MP900 Series of High-Speed Machine Controllers

Yaskawa has commenced sales of its MP900 series of high-speed machine controllers, which represent a solution for meeting the need for highly functional, high-performance, simplified, and compact general-use industrial machinery. This series can perform the high-speed calculations and commands necessary for machine control and can be used for multiple-axis, multiple-line operations. The MP900 series comprises three models, including the MP930, an all-in-one compact-type controller that is available from 2 axes to a maximum of 14 axes. Other models in the MP900 series include the MP920, a modular-type controller

that can be expanded from 4 axes to 224 axes and adapt to the system with which it is used. Rounding out the MP900 series is the MP910, which is used for personal computers. It responds from 2 axes to 28 axes. The MP900 series of controllers has a wide range of applications and an appropriate model can be easily selected to match a particular type of industrial machinery.

These controllers can also be used with the MECHATROLINK, a high-speed field network that enables the systemization of machinery through reduced wiring connections. The MP900 series can be used as an environmental tool for responding to Windows 95/NT.

### General-Use Inverter with Applications in Lightweight Machinery

The market for general-use inverters has expanded, from inverters for such traditional applications as raising productivity and responding to needs in energy reduction to inverters with such newer applications as lifestyle-related machinery and amusement equipment. In particular, the trends toward machine-type, variable-speed inverters and compact machinery are leading to an expansion in inverter applications, which is creating new markets.

To respond to these trends, Yaskawa offers its VS-606 V7 series, a compact, general-use, vector-controlled inverter that is targeted at the various needs for highly functional, high-speed inverter drives. Yaskawa also offers its small, easy-to-operate, general-use VS mini J7 series targeted at simple variable-speed applications.



VS-606 V7 series

## Total Production of MOTOMAN Robots Surpasses 50,000 Units

Yaskawa began the production of its MOTOMAN series of industrial robots in 1977 and in October 1998 became the first company in the industry to surpass cumulative production of 50,000 industrial robots. According to a recent user survey of industrial robot manufacturers, Yaskawa received the top evaluation in such categories as technological capabilities. As a leading manufacturer of industrial robots, Yaskawa is aggressively developing and introducing new products as well as cultivating new markets.

In fiscal 1999, Yaskawa introduced several new robots as successors to its previous line that were well acclaimed by users. Among its new robots is the UP series, the industry's first robots to feature high-speed, high-precision

movements and a simple independent articulated structure that improves movement range. Moreover, this series of robots enhances reliability and safety and can be installed in small spaces. Yaskawa also introduced the CR and CS series of clean robots, which attain class-1 level cleanliness and are used primarily for transportation between different manufacturing processes within highly clean environments in such fields as LCDs—a division expected to grow significantly in the future—as well as hard disk and semiconductor manufacturing related industries. Also among the new robots introduced by Yaskawa is the MOTOMAN-SR200 series, the industry's first robots that enable high-speed transportation of workpieces for press machinery at large-press processing lines in the automobile and other industries.



MOTOMAN-UP130



MOTOMAN-CS8

## A 300mm Wafer Vacuum Transfer System for Semiconductor Production Processes

Yaskawa has expanded its lineup of supermechatronics products to include actuators for use in such special environments as vacuum and clean room environments; high-vacuum motors; clean and vacuum robots; comprehensive robot systems; and semiconductor mechatronics systems. To respond to the trends toward large-circumference wafers and miniaturization

of semiconductors, Yaskawa is using its accumulated know-how and experience to develop new products and technologies to provide optimal products for use in the various stages of the semiconductor production process in anticipation of user needs.

As it strives toward the development of a totally automated transfer system, Yaskawa recently became the industry's first company to develop a 300mm wafer vacuum transfer system that enables smooth operations and high-speed, high-precision positioning.



## Financial Review

### Business Results

In the fiscal year ended March 20, 1999, Yaskawa recorded a 15.3% decrease in consolidated net sales, to ¥227.4 billion. By product group, sales in Mechatronics Components fell 20.3%, to ¥99.4 billion, accounting for 43.7% of net sales. This fall reflected a decrease in sales of AC servos as well as inverters in the domestic and overseas markets. Sales in Mechatronics Systems dropped 11.5%, to ¥40.5 billion, making up 17.8% of the Group's net sales. This was due to weaker demand for supermechatronics products for use in semiconductor production equipment. Sales in Industrial Electric Components decreased 17.7%, to ¥35.6 billion, which accounted for 15.7% of net sales. The decline in this category was due to sluggish capital investment in domestic manufacturing industries and the effects of economic turmoil in Asia. In Industrial Electrical Control Systems, sales fell 8.9%, to ¥35.5 billion, or 15.6% of net sales. This decrease was the result of slumping capital investment in domestic manufacturing industries. Sales in others amounted to ¥16.2 billion, making up 7.2% of net sales.

Cost of sales amounted to ¥166.0 billion and the cost of sales ratio was 73.0%, 1.4 percentage points higher than in the previous fiscal year. Selling, general & administrative (SG&A) expenses amounted to ¥60.8 billion. SG&A expenses as a percentage of net sales increased to 26.7%, from 23.4% in the previous fiscal year. Net operating income sank 95.5%, to ¥0.5 billion. Ordinary income plunged 98.6%, to ¥0.1 billion. Net loss after taxes and minority interest was ¥3.8 billion, compared

with net income after taxes and minority interest of ¥5.3 billion in the previous fiscal year.

On a non-consolidated basis, Yaskawa recorded net sales of ¥135.1 billion, a 13.1% decrease from the previous fiscal year. Cost of sales fell 7.8%, to ¥106.6 billion, and SG&A expenses were down 6.4%, to ¥33.0 billion. The cost of sales ratio increased 4.5 percentage points, to 78.9%. Net operating loss was ¥4.5 billion, compared with net operating income of ¥4.4 billion in the previous fiscal year, and ordinary loss was ¥1.7 billion, compared with ordinary income of ¥4.4 billion in the previous year. Net loss after taxes was ¥2.9 billion, compared with net income after taxes of ¥1.5 billion in the previous fiscal year.

### Financial Position

At fiscal year-end, consolidated total assets amounted to ¥227.3 billion, 9.9% lower than at the previous fiscal year-end. Working capital increased to ¥37.4 billion, from ¥20.2 billion, primarily reflecting the redemption of debentures due within one year in current liabilities. Fixed liabilities jumped to ¥59.0 billion, from ¥34.4 billion at the previous fiscal year-end. The current ratio improved to 1.3, from 1.1 at the end of the previous fiscal year. Total shareholders' equity amounted to ¥38.4 billion, down ¥5.1 billion from the previous fiscal year-end.

On a non-consolidated basis, total assets at fiscal year-end fell 11.6% from the previous fiscal year-end, to ¥149.0 billion. Total shareholders' equity amounted to ¥36.3 billion, 10.3% lower than at the previous fiscal year-end.

## Non-Consolidated Five-Year Summary

YASKAWA Electric Corporation Years ended March 20

	Millions of Yen (except per share amounts)					Thousands of U.S. Dollars (except per share amounts)
	1999	1998	1997	1996	1995	1999
Net sales	<b>¥135,165</b>	¥155,492	¥151,548	¥139,673	¥123,383	<b>\$1,149,859</b>
Cost of sales	<b>106,625</b>	115,702	113,215	103,670	93,555	<b>907,065</b>
Selling, general & administrative expenses	<b>33,069</b>	35,316	34,346	33,172	30,212	<b>281,323</b>
Net operating income (loss)	<b>(4,529)</b>	4,473	3,985	2,830	(384)	<b>(38,530)</b>
Ordinary income (loss)	<b>(1,700)</b>	4,420	4,181	2,127	514	<b>(14,463)</b>
Provision for taxes	<b>156</b>	1,837	2,235	1,278	108	<b>1,332</b>
Net income (loss) after taxes	<b>(2,964)</b>	1,590	1,283	358	120	<b>(25,217)</b>
Total assets	<b>¥149,026</b>	¥168,567	¥160,086	¥155,053	¥149,562	<b>\$1,267,767</b>
Total shareholders' equity	<b>36,348</b>	40,523	39,896	38,613	37,141	<b>309,220</b>
Net income (loss) per 100 shares of common stock (yen and U.S. dollars)	<b>¥(1,277)</b>	¥685	¥553	¥156	¥52	<b>\$(10.86)</b>
Cash dividends per 100 shares of common stock (yen and U.S. dollars)	—	500	400	—	—	—

Rate: ¥117.55=US\$1 (As of March 20, 1999)



## Major Consolidated Subsidiaries

(As of March 20, 1999)

Corporate Name	Head Office	Founded	Capital Millions of Yen (Thousands of US\$)	Number of Employees	President	Main Products & Businesses
Y-E Data Inc.	Tokyo, Japan	1973	5,008 (42,606)	186	Kensuke Tarumi	Floppy disk drives, printers, personal computers
YASKAWA & Company Ltd.	Tokyo, Japan	1960	100 (850)	184	Naoshi Yaskawa	Industrial robots, vibratory and pulverizing machinery, measuring equipment
YASKAWA Controls Co., Ltd.	Yukuhashi, Japan	1967	200 (1,701)	397	Masaki Komyama	Switches, controllers
YASKAWA Electric Engineering Corporation	Kitakyushu, Japan	1971	200 (1,701)	596	Katutoshi Koide	Testing, service, and maintenance of electrical equipment
Y-E DRIVE Corporation	Kitakyushu, Japan	1986	300 (2,552)	279	Takaharu Hisatsugu	Small induction motors and inverters
YASKAWA Plant Engineering Co., Ltd.	Tokyo, Japan	1969	130 (1,105)	309	Hirosuke Ohho	Plant engineering and construction
YASKAWA Information Systems Co., Ltd.	Kitakyushu, Japan	1978	200 (1,701)	525	Takashi Takahashi	Systems development, including application software and data processing
YASKAWA Logistec Corporation	Kitakyushu, Japan	1976	90 (765)	205	Hiroshi Tamura	Packing, materials handling, transportation, and sale of physical distribution products
YASKAWA Electric America, Inc.	Chicago, U.S.A.	1967	1,548 (13,172)	387	Norie Matsuno	Sale of electrical equipment
YASKAWA Electric Europe GmbH	Schwalbach, Germany	1980	329 (2,805)	98	Hiromitsu Terao	Sale of electrical equipment
YASKAWA Electric UK Ltd.	Scotland, U.K.	1991	574 (4,887)	93	Shuichi Mine	Inverters
MOTOMAN Inc.	Ohio, U.S.A.	1989	587 (5,000)	466	Craig Jennings	Industrial robots
MOTOMAN Robotics Europe AB	Torsas, Sweden	1984	174 (1,480)	210	Berndt Sigfridsson	Industrial robots
MOTOMAN Robotec GmbH	Allershausen, Germany	1984	115 (981)	120	Peter Ranke	Industrial robots

Rate: ¥117.55=US\$1 (As of March 20, 1999)

## Consolidated Five-Year Summary

YASKAWA Electric Corporation and Consolidated Subsidiaries Years ended March 20

	Millions of Yen (except per share amounts)					Thousands of U.S. Dollars (except per share amounts)
	1999	1998	1997	1996	1995	1999
Net sales	<b>¥227,457</b>	¥268,642	¥247,511	¥222,398	¥185,704	<b>\$1,934,984</b>
Cost of sales	<b>166,044</b>	192,412	180,455	162,472	143,365	<b>1,412,540</b>
Selling, general & administrative expenses	<b>60,817</b>	62,868	58,434	55,740	42,660	<b>517,372</b>
Net operating income (loss)	<b>596</b>	13,361	8,620	4,185	(321)	<b>5,070</b>
Ordinary income (loss)	<b>155</b>	11,415	6,213	1,729	(1,283)	<b>1,325</b>
Provision for taxes	<b>2,259</b>	4,460	4,069	2,632	591	<b>19,224</b>
Net income (loss) after taxes and minority interest	<b>(3,880)</b>	5,365	1,210	(2,245)	(1,815)	<b>(33,008)</b>
Total assets	<b>¥227,335</b>	¥252,355	¥238,717	¥230,579	¥207,683	<b>\$1,933,945</b>
Total shareholders' equity	<b>38,468</b>	43,641	39,310	38,071	38,167	<b>327,249</b>
Net income (loss) per 100 shares of common stock (yen and U.S. dollars)	<b>¥(1,672)</b>	¥2,312	¥522	¥(968)	¥(790)	<b>\$(14.22)</b>

Rate: ¥117.55=US\$1 (As of March 20, 1999)

# Consolidated Balance Sheet

YASKAWA Electric Corporation and Consolidated Subsidiaries March 20, 1999 and 1998

Assets	Millions of Yen		Thousands of U.S. Dollars
	1999	1998	1999
Current assets	<b>¥165,691</b>	¥192,689	<b>\$1,409,544</b>
Cash & deposits	<b>16,599</b>	19,923	<b>141,214</b>
Trade receivables	<b>74,735</b>	94,384	<b>635,772</b>
Inventories	<b>52,622</b>	56,438	<b>447,656</b>
Other current assets	<b>21,735</b>	21,942	<b>184,901</b>
Fixed assets	<b>61,055</b>	59,609	<b>519,403</b>
Tangible fixed assets	<b>42,878</b>	42,145	<b>364,771</b>
Intangible fixed assets	<b>654</b>	365	<b>5,564</b>
Investments & others	<b>17,522</b>	17,099	<b>149,068</b>
Deferred charges	—	—	—
Bond discounts & expenses	—	—	—
Consolidated adjustments account	<b>96</b>	55	<b>821</b>
Foreign currency translation adjustments	<b>490</b>	—	<b>4,176</b>
Total assets	<b>¥227,335</b>	¥252,355	<b>\$1,933,945</b>

Liabilities and Shareholders' Equity	Millions of Yen		Thousands of U.S. Dollars
	1999	1998	1999
Current liabilities	<b>¥128,249</b>	¥172,427	<b>\$1,091,024</b>
Trade payables	<b>39,146</b>	58,380	<b>333,017</b>
Short-term loans payable	<b>58,256</b>	55,704	<b>495,585</b>
Debentures due within one year	—	25,998	—
Other current liabilities	<b>30,847</b>	32,344	<b>262,422</b>
Fixed liabilities	<b>59,096</b>	34,416	<b>502,734</b>
Debentures	<b>10,000</b>	—	<b>85,070</b>
Other fixed liabilities	<b>49,096</b>	34,416	<b>417,664</b>
Foreign exchange adjustments account	—	132	—
Minority shareholders' equity in consolidated subsidiaries	<b>1,520</b>	1,737	<b>12,936</b>
Total liabilities	<b>188,867</b>	208,714	<b>1,606,695</b>
Capital stock	<b>15,540</b>	15,540	<b>132,206</b>
Capital in excess of par value	<b>14,749</b>	14,749	<b>125,478</b>
Legal reserve	<b>2,603</b>	2,481	<b>22,143</b>
Retained earnings	<b>5,574</b>	10,870	<b>47,423</b>
Less: Treasury stock	<b>(0)</b>	(1)	<b>(2)</b>
Total shareholders' equity	<b>38,468</b>	43,641	<b>327,249</b>
Total liabilities and shareholders' equity	<b>¥227,335</b>	¥252,355	<b>\$1,933,945</b>

Rate: ¥117.55=US\$1 (As of March 20, 1999)

## Consolidated Statement of Income

YASKAWA Electric Corporation and Consolidated Subsidiaries Years ended March 20, 1999 and 1998

	Millions of Yen		Thousands of U.S. Dollars
	1999	1998	1999
Net sales	<b>¥227,457</b>	¥268,642	<b>\$1,934,984</b>
Cost of sales	<b>166,044</b>	192,412	<b>1,412,540</b>
Selling, general & administrative expenses	<b>60,817</b>	62,868	<b>517,372</b>
Net operating income	<b>596</b>	13,361	<b>5,070</b>
Non-operating income & expenses			
Non-operating income	<b>3,275</b>	2,265	<b>27,867</b>
Non-operating expenses	<b>3,716</b>	4,211	<b>31,612</b>
Ordinary income	<b>155</b>	11,415	<b>1,325</b>
Extraordinary gains & losses			
Extraordinary gains	<b>90</b>	52	<b>772</b>
Extraordinary losses	<b>1,623</b>	1,577	<b>13,814</b>
Net income (loss) before taxes and minority interest	<b>(1,377)</b>	9,890	<b>(11,716)</b>
Provision for taxes	<b>2,259</b>	4,460	<b>19,224</b>
Minority gains	<b>354</b>	231	<b>3,012</b>
Consolidated adjustment account depreciation	<b>80</b>	62	<b>680</b>
Equity in earnings of unconsolidated subsidiaries and affiliates	<b>191</b>	228	<b>1,626</b>
Net income (loss) after taxes and minority interest	<b>¥ (3,880)</b>	¥ 5,365	<b>\$ (33,008)</b>

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## Consolidated Statement of Retained Earnings

YASKAWA Electric Corporation and Consolidated Subsidiaries Years ended March 20, 1999 and 1998

	Millions of Yen		Thousands of U.S. Dollars
	1999	1998	1999
Balance at beginning of period	<b>¥10,870</b>	¥ 6,636	<b>\$92,477</b>
Other appropriations of retained earnings	<b>1,404</b>	1,134	<b>11,950</b>
Net income (loss) after taxes and minority interest	<b>(3,880)</b>	5,365	<b>(33,008)</b>
Foreign currency translation adjustments	<b>(11)</b>	3	<b>(95)</b>
Balance at end of period	<b>¥ 5,574</b>	¥10,870	<b>\$47,423</b>

Rate: ¥117.55=US\$1 (As of March 20, 1999)

**YASKAWA ELECTRIC CORPORATION**

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