Securities ID code:6859

ESPEC CORP.

Results Briefings for Fiscal 2017 Ended March 2018

May 23, 2018

www.espec.co.jp

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Company Profile

Industry-leading manufacturer of environmental test chambers

Name	ESPEC CORP.
Head Office	3-5-6, Tenjinbashi, Kita-ku, Osaka
Represented By	Masaaki Ishida
Established	July 25,1947
Incorporated	January 13,1954
Paid-up Capital	¥6,895Million
Shares Issued	23,781,394 Shares
Employees	1,488 (consolidated)
Main Business	Manufacture and Sales of Environmental Test Chambers, Energy Device Equipment, Semiconductor Equipment and Plant Factory. After-sales Service, Commissioned Tests and others.

Head office

Share of Environmental Test Chambers: Over 30% worldwide, Over 60% domestic (As of March 31, 2018)

Global Network

Consolidated Subsidiaries
10 companies
(Global 7 companies,
Domestic 3 companies)

Global Network
45 countries
33 companies

Business Facilities in Japan : 25
Domestic Agencies in Japan : 46

EUROPE

△ESPEC EUROPE GmbH
△ESPEC IKLIM KABINLERI
SATIS VE MUHENDISLIK
LIMITED SIRKETI

U.S.A.

●ESPEC NORTH AMERICA, INC

ASIA

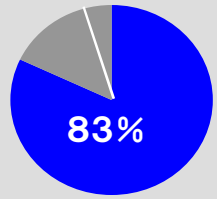
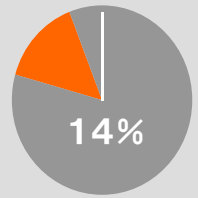
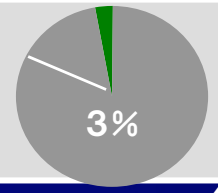
●SHANGHAI ESPEC ENVIRONMENTAL
EQUIPMENT CORP.
●ESPEC ENVIRONMENTAL EQUIPMENT
(SHANGHAI) CO., LTD.
●ESPEC TEST EQUIPMENT (GUANGDONG) CO., LTD.
●ESPEC TEST TECHNOLOGY (SHANGHAI) CO., LTD.
●ESPEC (CHINA) LIMITED
●ESPEC KOREA CORP.
△ ESPEC ENGINEERING(THAILAND)CO.,LTD

JAPAN

ESPEC CORP.
●ESPEC TEST SYSTEM CORP.
●ESPEC KYUSHU CORP.
●ESPEC MIC CORP.
△ MIC FARM OHGUCHI CORP.

●: Consolidated Subsidiaries
△: Non-consolidated Subsidiaries

Summary of ESPEC Business (Per Market / Use)

		Main Products	Market	Use	Sales composition (FY2017)
Equipment Business	Environmental Test Chambers	•Temperature & humidity chamber •Thermal shock chamber •Bench-top type temperature & humidity chamber •HAST chamber •Walk-in type temperature & humidity chamber •Combined temperature & humidity chamber •FPD equipment	•Electronic component and equipment market •Automobile market •Semiconductor market •Medicine, Cosmetics, Foods market •LCD and Organic Electro-Luminescence market	•For R & D •For credibility and evaluation •For production and inspection	
	Energy Device Equipment	•Charge-discharge Cycle Evaluation Equipment •LIB safety evaluation system •Fuel cells evaluation system	•Next generation automobile •Secondary batteries •Fuel cells	•For R & D •For credibility and evaluation •Safety evaluation •For production	
	Semiconductor Equipment	•Burn-in system •Semiconductor evaluation system •Instrumentation system	•Semiconductor market •Automobile market	•For production and inspection •For development and evaluation	
Service Business	After-sales Service and Engineering	•After-sales service •Construction around equipment	•Electronic component and equipment market •Automobile market •Semiconductor market	—	
	Commissioned Tests and Facility Rentals	•Commissioned test •Resale • Equipment rental •Calibration		•For R & D •For credibility and evaluation	
Other Business	The forest wetland and greening Business	Reforestation (Tree planting), Waterfront biotope restoration, urban greening			
	New Business	Plant factory, developing and creating new businesses as a major source of profit			

【Equipment Business】TOPICS

(in July 2017 and March 2018)

ESPEC launches sales of low-GWP refrigerant products, the first chambers in Japan to be compliant with European F-gas Regulation*

- Environmental test chambers will be regulated from 2020
  Similar regulations will start in Japan from 2025
- We will use a refrigerant with far lower GWP than the F-gas regulation (Regulations restrict GWP at 2,500, we will use refrigerant with GWP of 1,397)
- ESPEC plans to complete 3 core products by fiscal 2018, and all products by fiscal 2020

* European F-gas Regulation
In Europe, the greenhouse gas HFC (hydrofluorocarbon), PFC (perfluorocarbon), and SF6 (sulfur hexafluoride) are called F gases. Regulations have been put in place to curb the discharge of these gases into the atmosphere.
Under the F-gas Regulation, environmental testing equipment is classified as stationary refrigeration equipment, and sales of products that use refrigerant with GWP of 2,500 or above will be banned in Europe from 2020.

Thermal Shock Chambers **TSA** series(water cooled)
(July 2017)

Environmental Stress Chamber **AR** series
Rapid-Rate Temperature Cycle Type (March 2018)

【Equipment Business】TOPICS：Examples of Products Delivered

（March 2018）

Environmental test equipment installed at Saitama Industrial Technology Center
Supporting development in advanced industry fields such as medical devices and robotics

■Saitama Industrial Technology Center（SAITEC、Saitama Prefecture Kawaguchi-shi）

＜ Products Delivered ＞

Weather Simulation Chamber

Temperature range
:-40℃～+120℃
Humidity range：10～95%rh
（at+10℃～+80℃）

Altitude Temperature & Humidity Chamber
Temperature range
:-30℃～+100℃
Humidity range :20～98%rh
Vacuum range：101.3 ～ 10.7kPa

Temperature & Humidity Chamber
Temperature range
: -20℃～+120℃
Humidity range: 5～95%rh

Financial Result for the Fiscal 2017
Ended March 31, 2018

Review of the Fiscal 2017

External Environment

- Foreign exchange (U.S. dollar/yen) is at $1 to ¥104~114
- Acceleration of EV conversion in line with strengthening of environmental regulations
  China: NEV regulations introduce in 2019
  U.S.: Strengthen ZEV regulations from 2018 (10 states)
  Europe: World's strictest CO_2 emissions regulations
  (To be reduced to 95g/km by 2021, and further reduced by 30% by 2030)
- Accelerated development of autonomous driving technology
- Accelerated Development of cutting-edge technologies such as IoT and AI
- Activated investments in overseas commissioned testing institutions

Developments within ESPEC

- Effectively started a "ONE ESPEC Structure" in the Chinese market
- Expanded product line for Europe
  ①Made compliant with IEC and automotive standards
  ②Made compliant with European F-gas Regulation
- Created synergies with QUALMARK CORPORATION
  (ESPEC NORTH AMERICA, INC. conducted an absorption-type merger in January 2018)
- Profitability improvement activities for customized products

First-half results were higher than the initial target, so the Company announced the upward revision of financial forecasts for the first half and full year in October 2017, along with its dividend forecast

Financial Highlights

Sales and profit both increased year on year and exceeded the revised plan in FY2017

	Year on Year	Against the revised plan
■Orders-Received	○ The Equipment Business increased expectations both in Japan and overseas (especially environment test chambers)	○ Investments continued to increase, against initial plan, exceeding expectations both in Japan and overseas
■Net sales	○ The Equipment Business increased expectations both in Japan and overseas (especially environment test chambers)	○ Increased against initial plan because orders received exceeded expectations both in Japan and overseas
■Operating income	○ Increased due to the higher net sales and improvement in the cost of sales ratio	○ Increased against initial plan due to the higher net sales and improvement in the cost of sales ratio
■Ordinary income, Net income*	○ Increased due to the increase in operating income and the decrease in foreign exchange losses	○ Increased due to the increase in operating income

*Profit attributable to owners of parent

■Looking at dividends per share, the interim dividend was set at ¥20, up ¥5 from the initially planned forecast while the year-end dividend is forecast at ¥38 per share, up ¥3 from the initially planned forecast; accordingly, the annual dividend is forecast at ¥58 per share.
(Including a commemorative dividend of ¥2 to mark ESPEC's 70th anniversary)

Summary of Profits and Losses

(millions of yen)

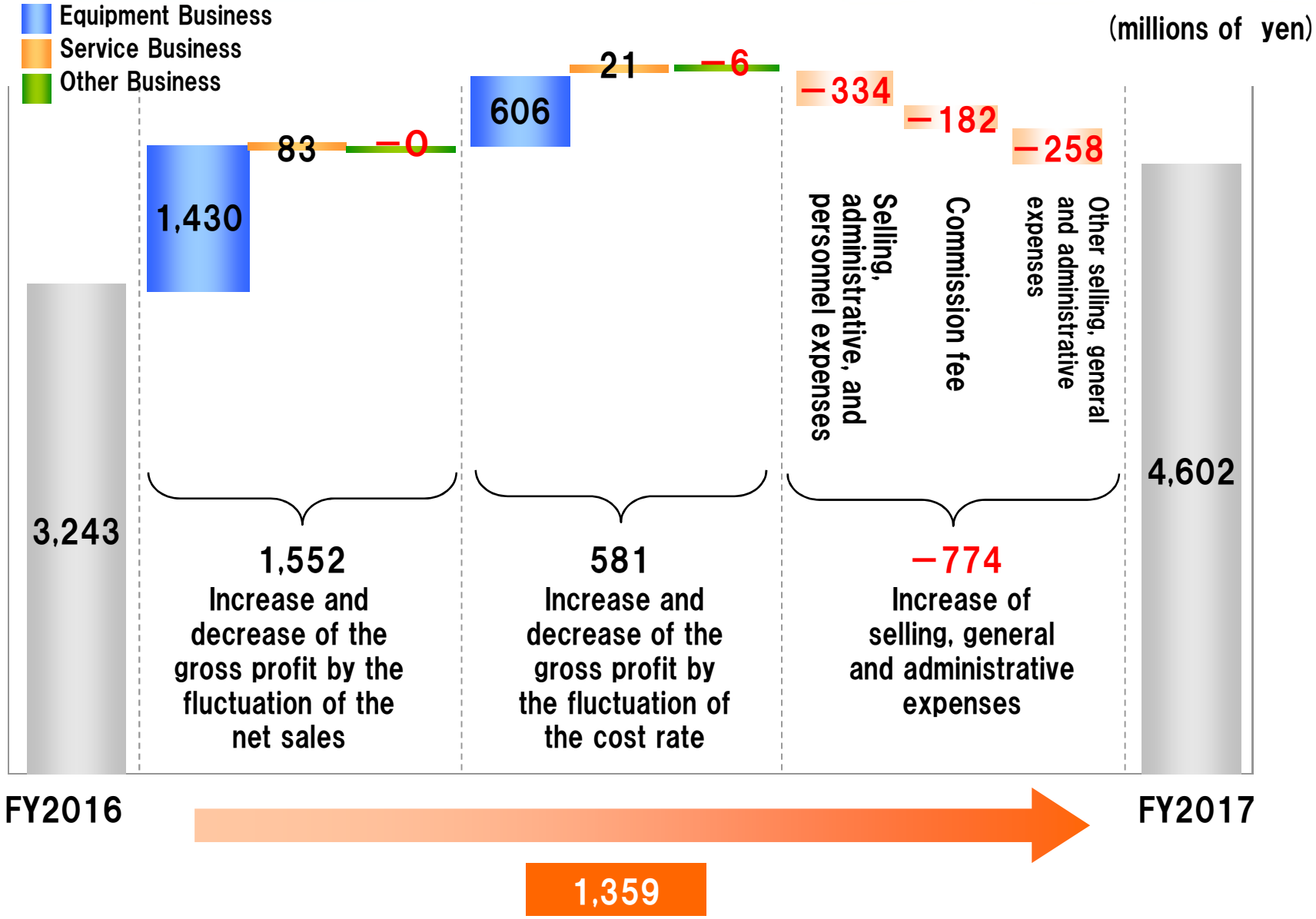
	FY 2016	FY 2017 Revised Plan	FY 2017	Year on Year	Against the revised plan
Orders-Received	40, 289	44, 000	44, 775	11. 1%	1. 8%
Net sales	39, 507	44, 000	44, 069	11. 5%	0. 2%
Cost of Net Sales (Cost of sales ratio)	26, 059 (66. 0%)	28, 497 (64. 7%)	28, 487 (64. 6%)	9. 3%	−0. 0%
Gross profit	13, 447	15, 503	15, 581	15. 9%	0. 5%
SG & A	10, 204	11, 103	10, 979	7. 6%	−1. 1%
Operating income	3, 243	4, 400	4, 602	41. 9%	4. 6%
Ordinary income	3, 171	4, 500	4, 746	49. 7%	5. 5%
Profit attributable to owners of parent	2, 233	3, 200	3, 308	48. 2%	3. 4%

Performance by Segment

(millions of yen)

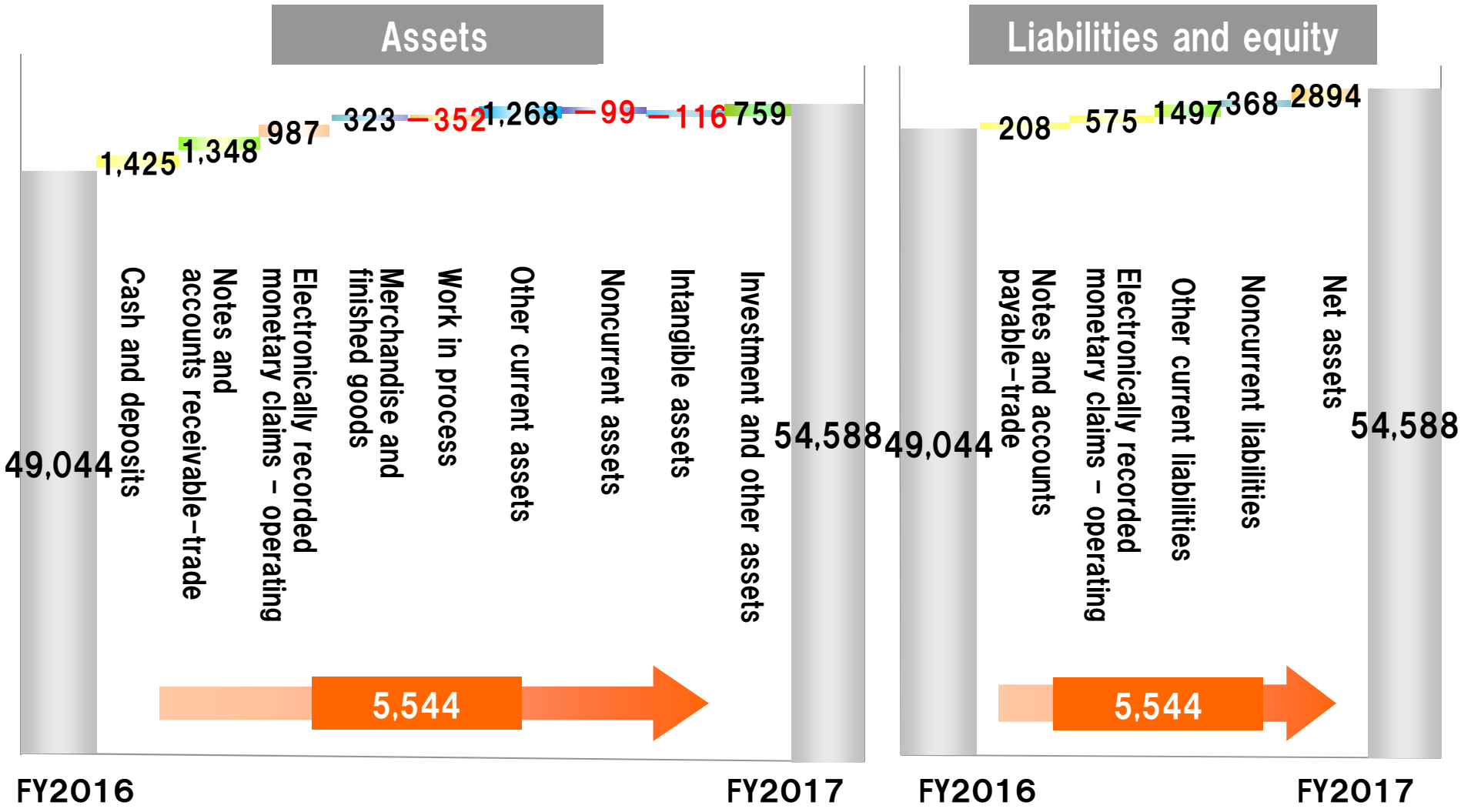
Segment		FY 2016	FY 2017 Revised Plan	FY 2017	Year on Year	Against the revised plan
Equipment Business	Orders-Received	33,124	36,800	37,076	11.9%	0.8%
	Net Sales	32,334	36,800	36,602	13.2%	−0.5%
	Operating Income	2,630	3,800	4,092	55.6%	7.7%
Service Business	Orders-Received	6,096	6,200	6,488	6.4%	4.6%
	Net Sales	6,065	6,200	6,292	3.7%	1.5%
	Operating Income	594	600	524	−11.7%	−12.6%
Other Business	Orders-Received	1,331	1,300	1,416	6.4%	8.9%
	Net Sales	1,378	1,300	1,375	−0.2%	5.8%
	Operating Income	18	0	−15	−	−
Elimination	Orders-Received	−264	−300	−206	−	−
	Net Sales	−270	−300	−201	−	−
	Operating Income	0	0	0	−	−
Total	Orders-Received	40,289	44,000	44,775	11.1%	1.8%
	Net Sales	39,507	44,000	44,069	11.5%	0.2%
	Operating Income	3,243	4,400	4,602	41.9%	4.6%

Analysis of Operating Income Increase and Decrease Factor

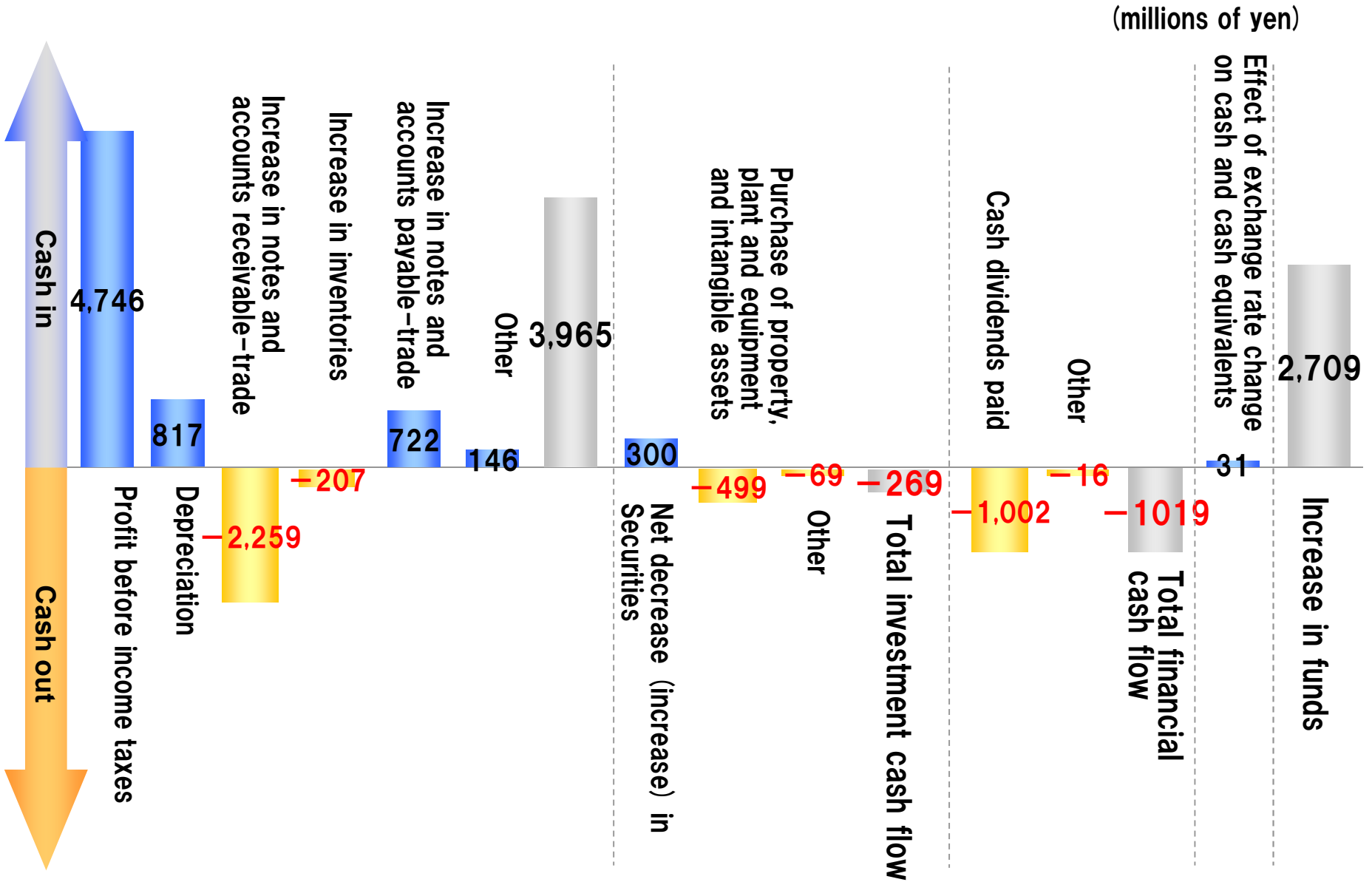


Statement of Assets and Liabilities

(millions of yen)



Statement of Cash Flow



Analysis per Segment for the Fiscal 2017 Ended March 31, 2018

Equipment Business

Environmental Test Chambers

- Both orders-received and net sales increased year on year
  Orders-received exceeded the previous year, including at overseas subsidiaries, especially because of increases of standardized products both in Japan and for exports

  Net sales exceeded the previous year, including at overseas subsidiaries, especially because of increases of standardized products both in Japan and for exports

- Orders-received exceeded the revised plans, while net sales were about the same as the plans

Energy Device Equipment

- Orders-received were lower than the previous year and the revised plan, while net sales were higher

  Orders-received decreased from the previous year because a bulk order was received for fuel cell evaluation systems

  Net sales increased because of the recording of sales for certain orders outstanding as of the previous fiscal year-end

Semiconductor Equipment

- Orders-received increased year on year, but net sales declined, running in line with the revised plan
- Orders from smartphone and automotive-related manufacturers were firm

Equipment Business

(millions of yen)

	FY 2016	FY 2017 Revised Plan	FY 2017	Year on Year	Against the revised plan
Orders-Received	33, 124	36, 800	37, 076	11. 9%	0. 8%
Net Sales	32, 334	36, 800	36, 602	13. 2%	−0. 5%
Operating Income [Profit ratio (%)]	2, 630 [8. 1%]	3, 800 [10. 3%]	4, 092 [11. 2%]	55. 6%	7. 7%

Service Business

(millions of yen)

	FY 2016	FY 2017 Revised Plan	FY 2017	Year on Year	Against the revised plan
Orders-Received	6,096	6,200	6,488	6.4%	4.6%
Net Sales	6,065	6,200	6,292	3.7%	1.5%
Operating Income [Profit ratio (%)]	594 [9.8%]	600 [9.7%]	524 [8.3%]	−11.7%	−12.6%

After-sales Service and Engineering

- No significant increase or decrease year on year or against the revised plans

Commissioned Tests and Facility Rentals

- Both orders-received and sales were higher year on year and exceeded the revised plan
- Test consulting performed strongly, especially in the automobile markets, such as the Battery Safety Certification Center

Other Business

(millions of yen)

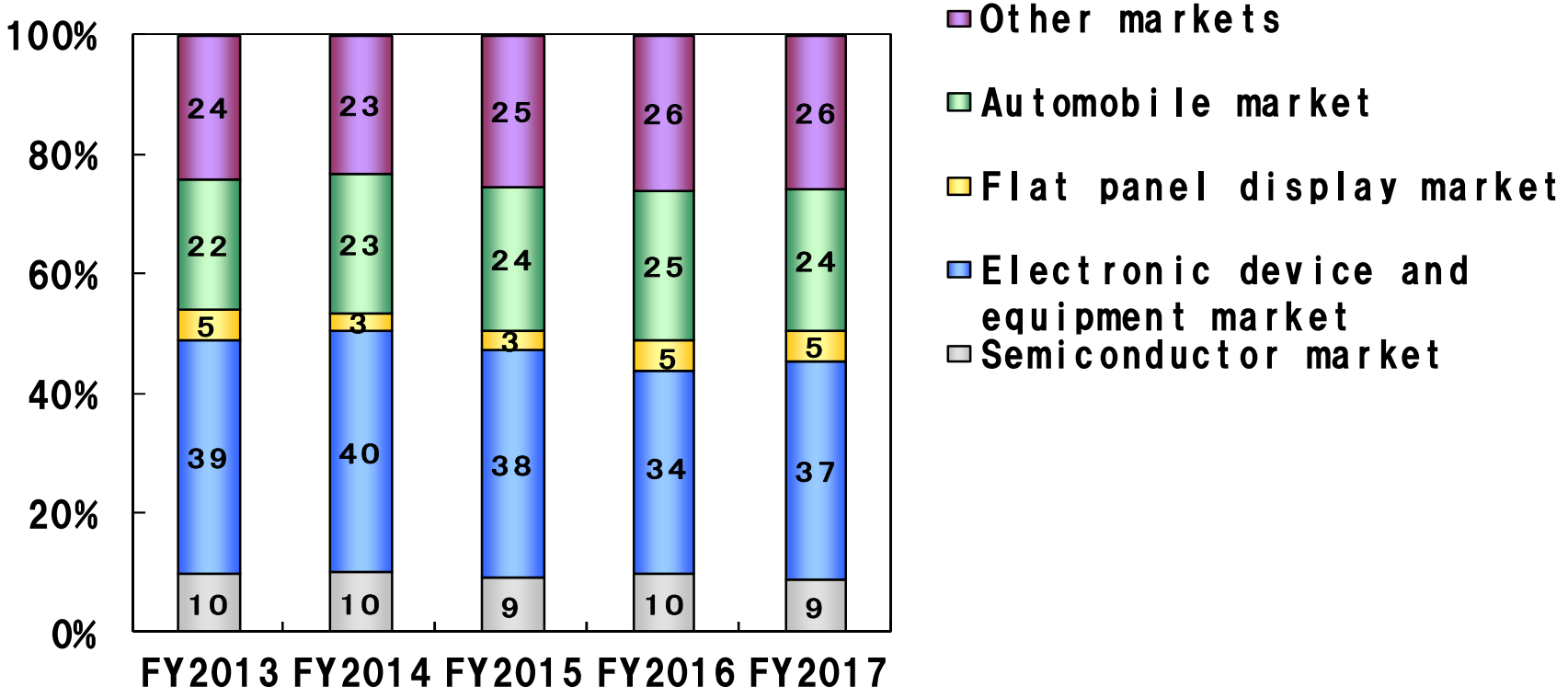
	FY 2016	FY 2017 (Revised Plan)	FY 2017	Year on Year	Against the revised plan
Orders-Received	1, 331	1, 300	1, 416	6. 4%	8. 9%
Net Sales	1, 378	1, 300	1, 375	−0. 2%	5. 8%
Operating Income [Profit ratio (%)]	18 [1. 3%]	0 [0. 0%]	−15 [−1. 1%]	−	−

The forest wetland and greening Business, Plant Factory

- The plant factory business performed strongly year on year. Although orders received were higher, net sales were about the same
- The segment recorded an operating loss due to higher SG&A expenses associated with market development

Breakdown of Sales by Market

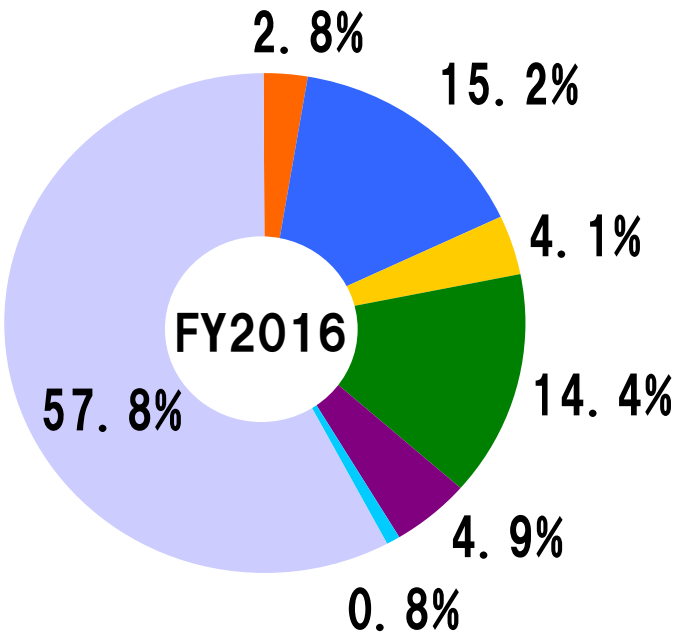
Non-consolidated (Equipment business)



Sales by Region

FY 2016

Overseas sales ratio: 42.2%

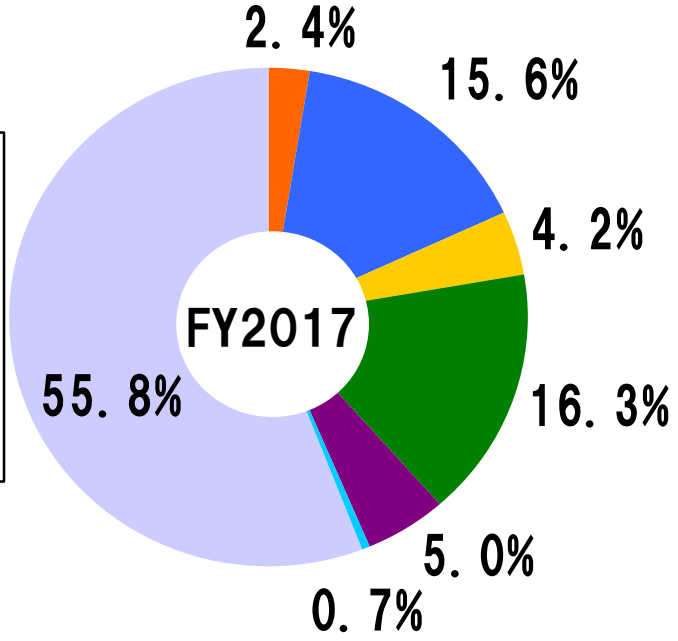


Total: 39,507million yen

(Overseas sales: 16,663 million yen)

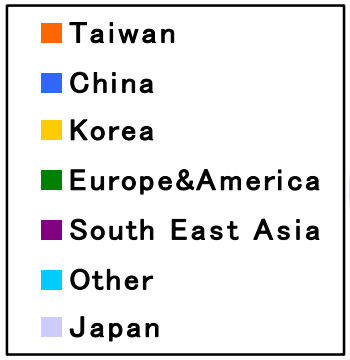
FY 2017

Overseas sales ratio: 44.2%



Total: 44,069million yen

(Overseas sales: 19,488million yen)



Management Plan
for the Fiscal Ending March 31, 2019

FY 2018 Awareness of the Environment

Equipment Business	Environmental Test Chambers	◎	Strong investment sentiment in the automobile market, both in Japan and overseas based on ongoing computerization, use of electronic components and development of automated driving.
		◎	Investments continued to be made in the IoT market in Japan and overseas, amid continuing technological innovation.
	Energy Device Equipment	○	Active investment in automotive rechargeable batteries, particularly in China
	Semiconductor Equipment	○	Firm demand for semiconductors centered on the automotive sector and IoT market.
Service Business	Semiconductor Equipment, Commissioned Tests and Facility Rentals	○	Demand in the after-sales service and engineering field should remain about the same as last year. Firm demand for commissioned tests centered on the automobile market.
Other Business	The forest wetland and greening Business, Plant factory	△	No significant changes in the forest wetland and greening and the plant factory businesses

Making All Overseas Subsidiaries Share the Same Fiscal Year-End

From fiscal 2018, the fiscal years of overseas consolidated subsidiaries (previously December) will be made the same as the fiscal years for consolidated subsidiaries in Japan (March). To accommodate this change, the overseas consolidated subsidiaries will record a 15-month period of financial results for fiscal 2018.

■Period for fiscal 2018 financial results

- Consolidated subsidiaries in Japan※1: April 2018 to March 2019 (12 months)
- Overseas consolidated subsidiaries※2: January 2018 to March 2019 (15 months)

	January～March 2017	April～June 2017	July～September 2017	October～December 2017	January～March 2018
FY2017 (Ended March 2018)		Consolidated subsidiaries in Japan			
	Overseas consolidated subsidiaries				

	January～March 2018	April～June 2018	July～September 2018	October～December 2018	January～March 2019
FY2018 (Ended March 2019)		Consolidated subsidiaries in Japan			
	Overseas consolidated subsidiaries				

	January～March 2019	April～June 2019	July～September 2019	October～December 2019	January～March 2020
FY2019 (Ended March 2020)		Consolidated subsidiaries in Japan			
		Overseas consolidated subsidiaries			

※1 ESPEC CORP.,ESPEC TEST SYSTEM CORP.,ESPEC KYUSHU CORP.,ESPEC MIC CORP.

※2 ESPEC NORTH AMERICA, INC.,SHANGHAI ESPEC ENVIRONMENTAL EQUIPMENT CORP.,ESPEC ENVIRONMENTAL EQUIPMENT (SHANGHAI) CO., LTD., ESPEC TEST EQUIPMENT (GUANGDONG) CO., LTD.,ESPEC TEST TECHNOLOGY (SHANGHAI) CO., LTD.,ESPEC (CHINA)LIMITED,ESPEC KOREA CORP.

FY 2018 Assumed exchange rate

■Assumed exchange rate

	FY 2016	FY 2017		FY 2018
	Results	First half Results	Results	Assumed
US$(yen)	108.81	112.34	112.17	110.00

Reference. FY 2018 Exchange rate sensitivity

(for every appreciation of ¥1 against the U.S. dollar)

Net Sales　　A decrease of ¥131 million
Operating Income　　A decrease of ¥22 million

Business Plan for the Fiscal Ending March 31, 2019

(millions of yen)

	FY 2017	FY 2018				
	Results	Plan			Reference: Plan for 12-month financial results period for overseas consolidated subsidiaries	
		First half	Second half	Full Year	Full Year	Year on Year (%)
Orders-received	44,775	23,000	25,500	48,500	46,000	2.7%
Net sales	44,069	20,500	27,500	48,000	45,500	3.2%
Gross profit [Profit ratio (%)]	15,581 [35.4%]	7,240 [35.3%]	9,490 [34.5%]	16,730 [34.9%]	15,940 [35.0%]	2.3%
Operating income (loss) [Profit ratio (%)]	4,602 [10.4%]	1,800 [8.8%]	3,000 [10.9%]	4,800 [10.0%]	4,700 [10.3%]	2.1%
Ordinary income (loss) [Profit ratio (%)]	4,746 [10.8%]	1,850 [9.0%]	3,050 [11.1%]	4,900 [10.2%]	4,800 [10.5%]	1.1%
Profit attributable to owners of parent [Profit ratio (%)]	3,308 [7.5%]	1,300 [6.3%]	2,250 [8.2%]	3,550 [7.4%]	3,500 [7.7%]	5.8%
Capital expenditures	748	480	1,240	1,720	1,690	125.8%
Depreciation expenses	811	422	543	965	905	11.5%
R&D expenditures	1,023	690	480	1,170	1,160	13.3%
Profit Per Share (yen)	144.76	56.87	98.44	155.31	153.12	5.7%

Equipment Business

(millions of yen)

	FY 2017	FY 2018				
	Results	Plan			Reference: Plan for 12-month financial results period for overseas consolidated subsidiaries	
		First half	Second half	Full Year	Full Year	Year on Year (%)
Orders-received	37,076	19,400	21,250	40,650	38,200	3.0%
Net sales	36,602	17,200	23,050	40,250	37,800	3.3%
Operating income [Profit ratio (%)]	4,092 [11.2%]	1,700 [9.9%]	2,550 [11.1%]	4,250 [10.6%]	4,150 [11.0%]	1.4%

Service Business

(millions of yen)

	FY 2017	FY 2018				
	Results	Plan			Reference: Plan for 12-month financial results period for overseas consolidated subsidiaries	
		First half	Second half	Full Year	Full Year	Year on Year (%)
Orders-received	6,488	3,100	3,550	6,650	6,600	1.7%
Net sales	6,292	2,900	3,650	6,550	6,500	3.3%
Operating income [Profit ratio (%)]	524 [8.3%]	150 [5.2%]	400 [11.0%]	550 [8.4%]	550 [8.5%]	5.0%

Other Business

(millions of yen)

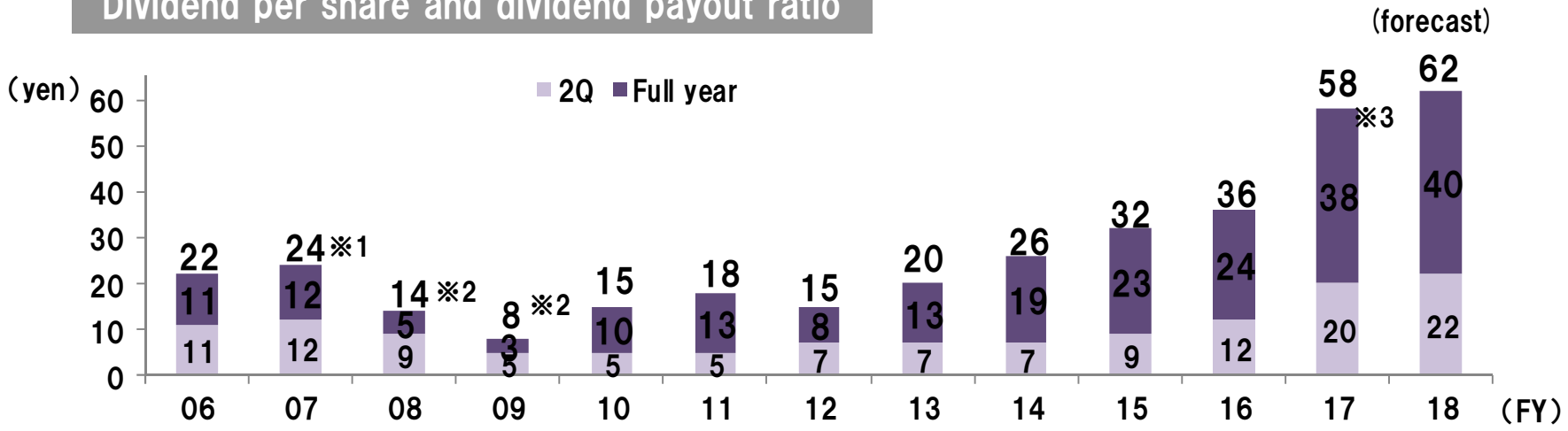
	FY 2017	FY 2018				
	Results	Plan			Reference: Plan for 12-month financial results period for overseas consolidated subsidiaries	
		First half	Second half	Full Year	Full Year	Year on Year (%)
Orders-received	1,416	600	800	1,400	1,400	−1.1%
Net sales	1,375	500	900	1,400	1,400	1.8%
Operating income [Profit ratio (%)]	−15 [−1.1%]	−50 [−10.0%]	50 [5.6%]	0 [0.0%]	0 [0.0%]	—

Dividends

Dividend policy

Recognizing that passing on profits to our shareholders is a key priority and that raising corporate value on a lasting basis is fundamental to raising shareholder value, dividends are decided taking into account sustainability and the dividend payout ratio.

Dividend per share and dividend payout ratio



Dividend payout ratio

06	07	08	09	10	11	12	13	14	15	16	17	18
21%	47%	—	—	21%	22%	29%	30%	29%	31%	37%	40%	40%

※1.The dividend per share for FY2007 included a commemorative dividend of ¥2 per share to mark the Company's 60th founding anniversary.
※2.Dividends were implemented in FY2008 and FY2009, despite posting a net loss.
※3.The dividend per share for FY2017 includes a commemorative dividend of ¥2 per share to mark the Company's 70th founding anniversary (an interim dividend of ¥1 per share and a year-end dividend of ¥1 per share).

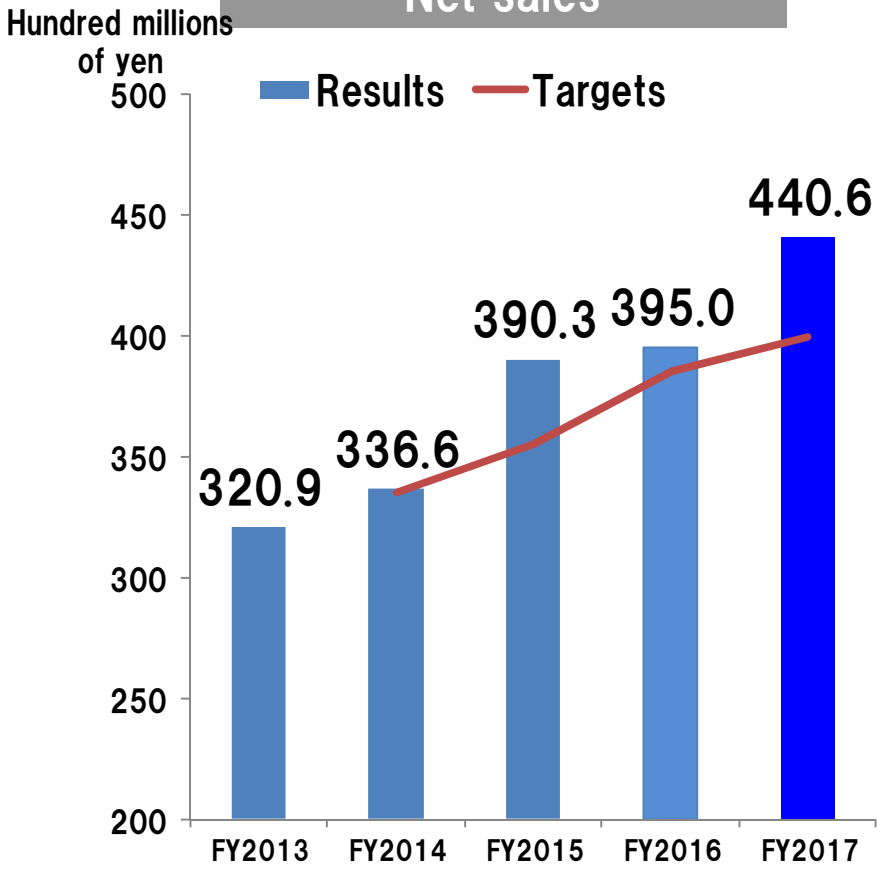
Medium-Term Management Plan
“Progressive Plan 2021”
(FY 2018 to FY 2021)

Review of Medium-Term Management Plan “Progressive Plan 2017” ①

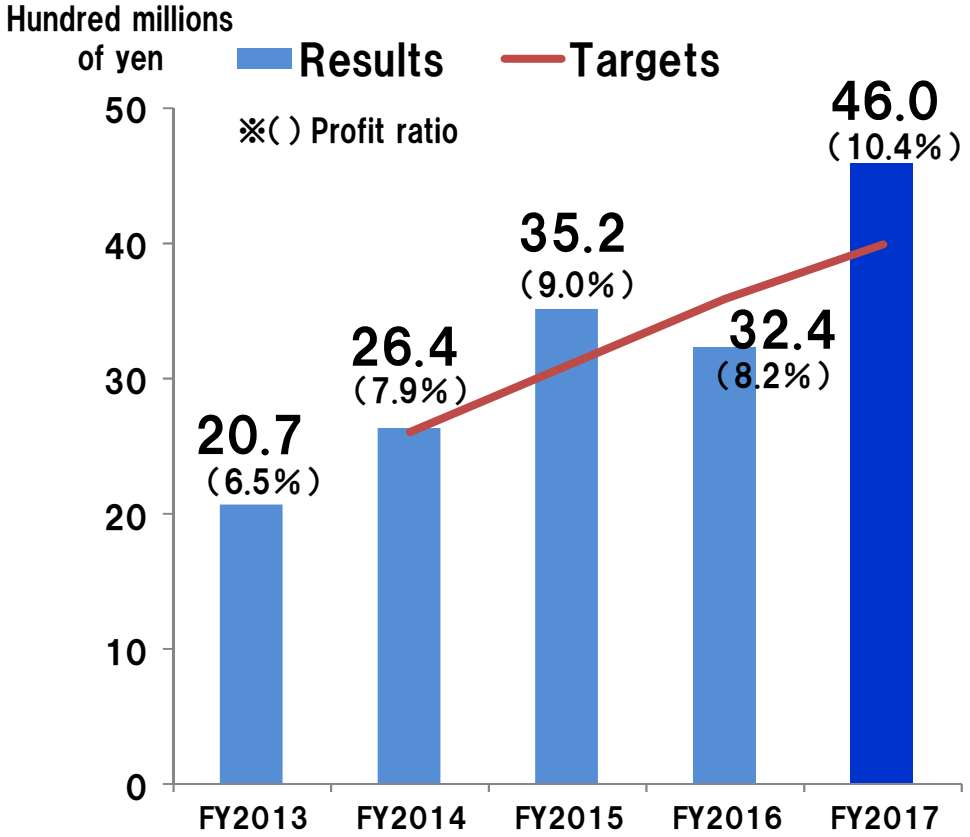
Results：Net sales ¥44,069 million, Operating income ¥4,602 million, and an operating income ratio 10.4%

plan ：Net sales of over ¥40,000 million, operating income of ¥4,000 million or more, and an operating income ratio of at least 10%

Net sales



Operating income

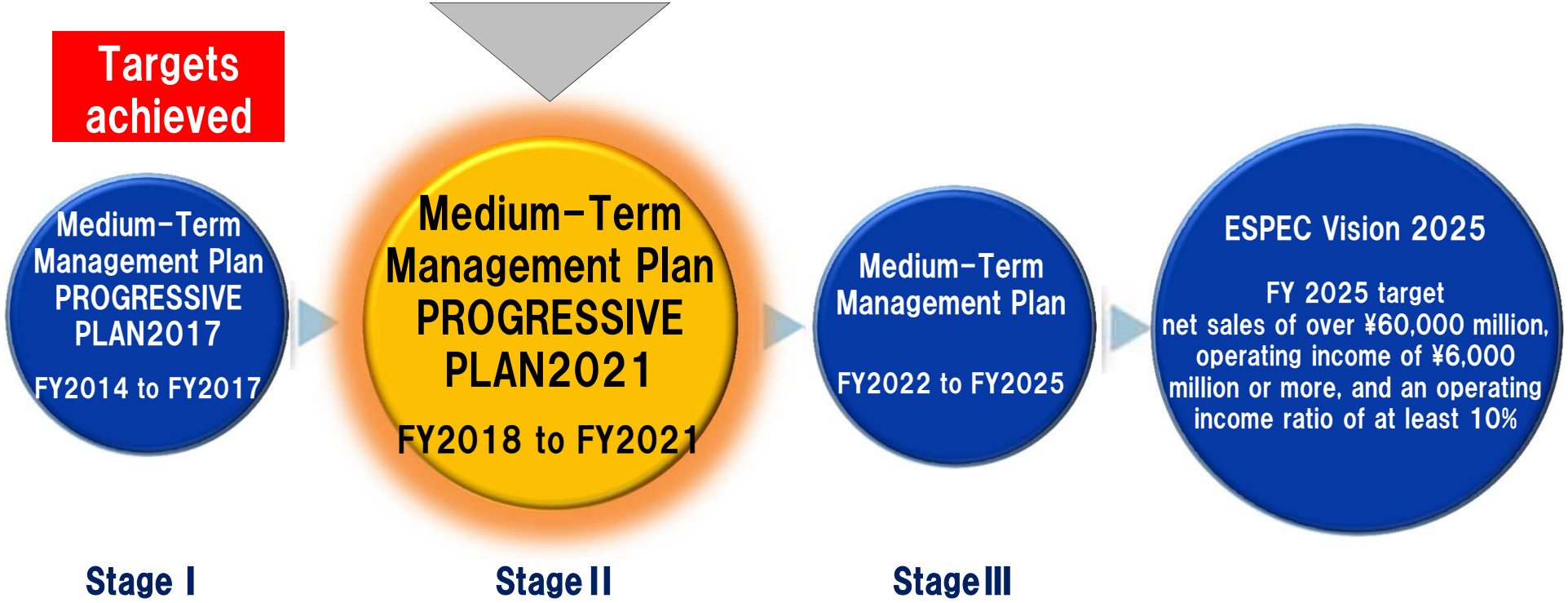


Review of Medium-Term Management Plan “Progressive Plan 2017” ②

Three directions for growth		Results	Issues to be addressed
1	Strengthen Group alliances to increase sales in growing countries and regions	•Expanded earnings by rebuilding the China business under the ONE ESPEC system •Strengthened sales and after-sales service functions in the ASEAN region by establishing a subsidiary in Thailand •Launched new products for the European market	•Further expand business in the Chinese market •Expand business in Europe and ASEAN
2	Expand business domains targeting growing and strategic markets	•Established a certification business model by developing the Battery Safety Certification Center •Acquired QUALMARK CORPORATION (U.S.) and created synergies	•Create new businesses in the lifestyle market and others •Rebuild the energy device business
3	Take the lead in the domestic environmental testing business	•Expanded sales in the automotive market •Differentiated products by offering five-year warranties •Expanded sales of customized products and improved earnings •Launched sales of low-GWP refrigerant products	•Further differentiate by creating new products and services

ESPEC Vision 2025 Stage II

Stable sustainable growth through strategic investment and steady improvement of quality



Medium-Term Management Plan “Progressive Plan 2021” composition

Basic Policy

—Stable sustainable growth through strategic investment and steady “improvement of quality”—

- Promotion of globalization targeting growth areas and improvement of customization capabilities
- Lessening of fluctuations in business performance and development of businesses in new fields to achieve next-generation growth

Medium-Term Management Targets

Medium-Term Management Strategy

■Business strategy in the Equipment Business segment
■Business strategy in the Service Business segment
■Global strategy
■Strengthen management foundation and promote ESG

■Investment plan
■Shareholder returns

Main Targets

Automotive market

Development of automated driving and electrification along with globalization of automobile suppliers has increased demand for environmental testing, such as testing standards and safety testing

<Automated driving> Semiconductors, sensors, telecommunications equipment, etc.

<Electrification> Batteries, motors, inverters, etc.

IoT-related market

The spread of IoT devices has increased demand for environmental testing of semiconductors, sensors, and telecommunications equipment that use new technologies

<Mobile devices, automobiles, home appliances, robots, etc.> Semiconductors, sensors, telecommunications equipment, data storage, etc.

Medium-term management targets

(millions of yen)

	FY 2017 Results	FY 2021 Targets	Rate of change
Orders-received	44, 069	Over 52, 000	18. 0%
Net sales	4, 602	Over 5, 200	13. 0%
Operating income [Profit ratio (%)]	10. 4%	Over 10. 0%	—
ROE(%)	8. 6%	Over 8. 5%	—
Overseas sales ratio	44. 2%	50%	—
Exchange rate US$(yen)	112	110(forecast)	—

Medium-term management targets／ per Segment

(millions of yen)

	Segment	FY 2017 Results	FY 2021 Targets	Rate of change
Net sales	Equipment Business	36, 602	43, 000	17. 5%
	Service Business	6, 292	7, 700	22. 4%
	Other Business	1, 375	1, 600	16. 3%
	Elimination	−201	−300	—
	Total	44, 069	52, 000	18. 0%
Operating income [Profit ratio (%)]	Equipment Business	4, 092 [11. 2%]	4, 470 [10. 4%]	9. 2%
	Service Business	524 [8. 3%]	700 [9. 1%]	33. 4%
	Other Business	−15 [−1. 1%]	30 [1. 9%]	—
	Elimination	0	0	—
	Total	4, 602 [10. 4%]	5, 200 [10. 0%]	13. 0%

Business strategy and medium-term management targets in the Equipment Business segment

Business strategy

1. Expand revenues by strengthening customization capabilities that target automobile and IoT fields
2. Respond to diversifying and increasingly sophisticated test needs by expanding environmental factor technology
3. Develop businesses in new fields

(millions of yen)

Medium-term management targets

	FY 2017 Results	FY 2021 Targets	Rate of change
Net sales	36,602	43,000	17.5%
Operating income [Profit ratio (%)]	4,092 [11.2%]	4,470 [10.4%]	9.2%

Business strategy and medium-term management targets in the Service Business segment

Business strategy

Develop a service menu that anticipates the potential needs of customers and expand the test consulting business

(millions of yen)

Medium-term management targets

	FY 2017 Results	FY 2021 Targets	Rate of change
Net sales	6, 292	7, 700	22. 4%
Operating income [Profit ratio (%)]	524 [8. 3%]	700 [9. 1%]	33. 4%

Global strategy and medium-term management targets

Global strategy

1 Develop global marketing with Europe and the ASEAN region (including India) as core expansion areas and continue expansion in China and Korea

2 Build an optimal worldwide manufacturing system

	FY 2017 Results	FY 2021 Targets
Overseas sales ratio	44.2%	50.0%

(millions of yen)

	FY 2017 Results	FY 2021 Targets
China	6,863	7,900
Korea	1,861	2,300
Europe	1,910	2,500
ASEAN(including India)	2,318	3,200

Strengthen management foundation and promote ESG

Under the corporate philosophy, THE ESPEC MIND, the Company is aiming for sustainable growth

E（Environmental）

①7th Mid-term Plan on the Environment
②Contribute to reducing the environmental load through products
③Promote biodiversity and natural environment preservation activities

S（Social）

①Support human resource development and growth
②Promote diversity
③Contribution to society through Public Trust

G（Governance）

①Further reforms in line with the Corporate Governance Code
②Strengthen Group company governance to assist medium- to long-term growth
③Strengthen stakeholder communication

E(Environmental)

①7th Mid-term Plan on the Environment

- Promote environmental management in line with the ESPEC Environmental Basic Policies and the Mid-term Plan on the Environment

②Contribute to reducing the environmental load through products

- Sell energy-saving products and low-GWP refrigerant products

③Promote biodiversity and natural environment preservation activities

- Forest preservation activity「 Kehara Forest Creation Program」
- ESPEC Green School

＊ To date, the Company has been ranked around 100 in the Nikkei Environmental Management Survey

S(Social)

①Support human resource development and growth

- Enhance the global trainee and executive training programs and other self-development programs such as language learning

②Promote diversity

- Promote women's advancement
- Promote employment of senior employees

③Contribution to society through Public Trust

- Public Trust「 ESPEC Foundation for Earth Environmental Research and Technologies」

G(Governance)

①Further reforms in line with the Corporate Governance Code

- Enhance the effectiveness of the Board of Directors
- Enhance training for newly appointed directors

②Strengthen Group company governance to assist medium-to long-term growth

- Share and ensure penetration of the corporate philosophy
- Adopt the International Financial Reporting Standards (IFRS)

③Strengthen stakeholder communication

- Strengthen communication between management and employees

Investment plan

(millions of yen)

	FY2014 to FY2017	FY2018 to FY2021	Rate of change
Strategic investment	4, 000	6, 600	65. 0%
Ordinary investment	2, 400	2, 400	0. 0%
Total	6, 400	9, 000	40. 6%
R&D expenditures	4, 000	5, 000	25. 0%

Main investments: Expansion of plants and testing facilities,
building a new R&D wing, M&As, etc.
R&D: Development of new products and environmental factor technology

Dividends

■Dividend policy

Recognizing that passing on profits to our shareholders is a key priority and that raising corporate value on a lasting basis is fundamental to raising shareholder value, dividends are decided taking into account sustainability and the dividend payout ratio.

■Conduct stable dividend payments based on a dividend payout ratio of 40%

Quality is more than a word

ESPEC

These materials contain forward-looking statements, including the Company's present plans and forecasts of performance, that reflect the Company's plans and forecasts based on the information presently available. These forward-looking statements are not guarantees of future performance, and plans, forecasts, and performance are subject to change depending on future conditions and various other factors.

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Reference

History of Environmental Test

What is Environmental Test

Test to analyze and evaluate effects of environmental factors such as temperature, humidity, pressure, and light on various industrial products like electronic components in order to ensure product quality.

<1950s>
The environmental test was JIS-standardized in Japan for consumer products.

<1970s-1990s>
"Reliability" and "quality control" became important issues in product development. Demand increased dramatically due to a rapid shift toward computerization and the use of electronic components.

<Today>
Demand is expanding in the energy field, and the development field of automobiles' electrification and automated driving functions.

1961 Japan's First Environmental Test Chamber

【 Low temperature & humidity chamber "Lucifer" 】

Over 60% domestic

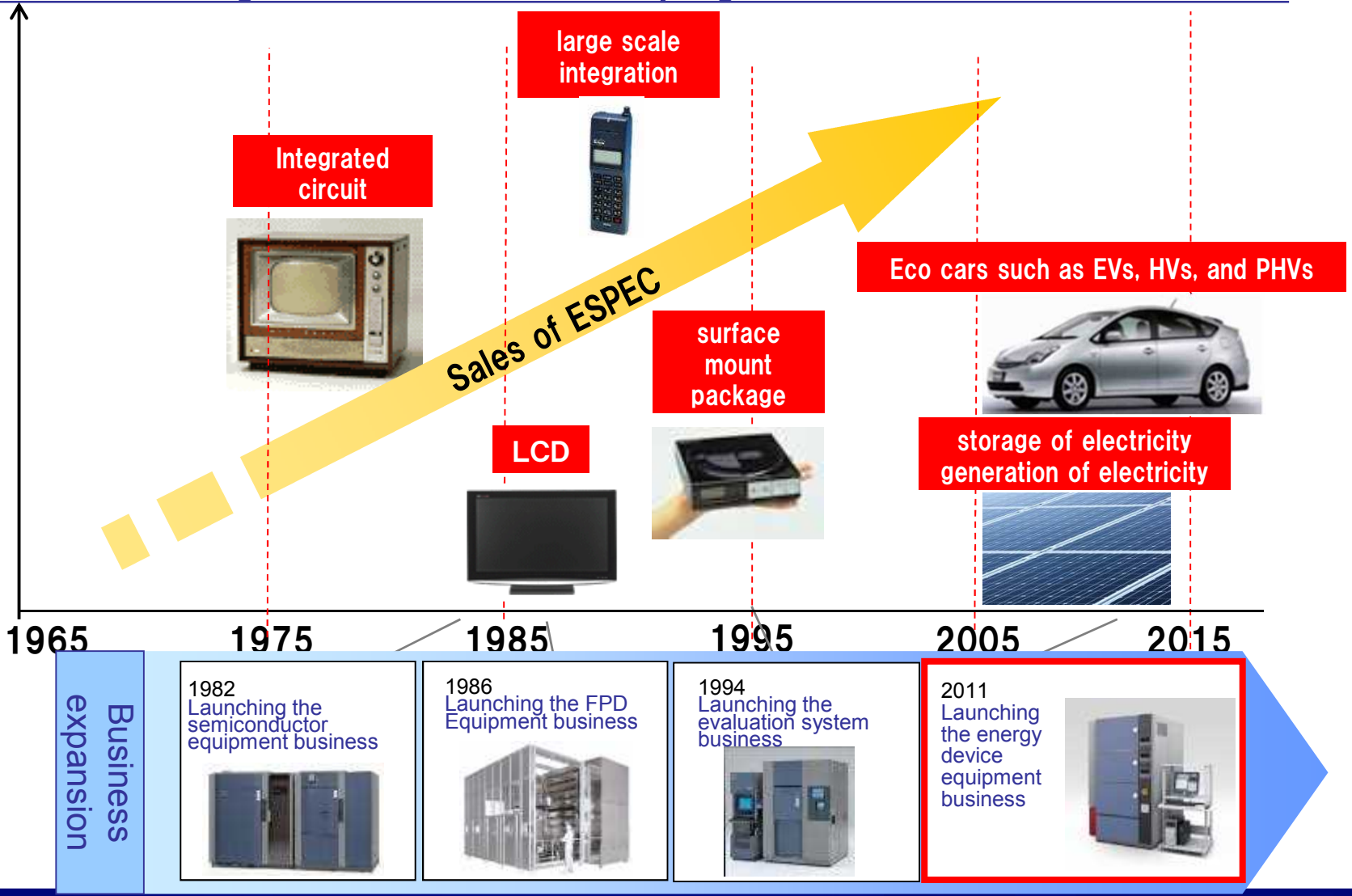
Over 30% worldwide

To Worldwide Market Share No.1

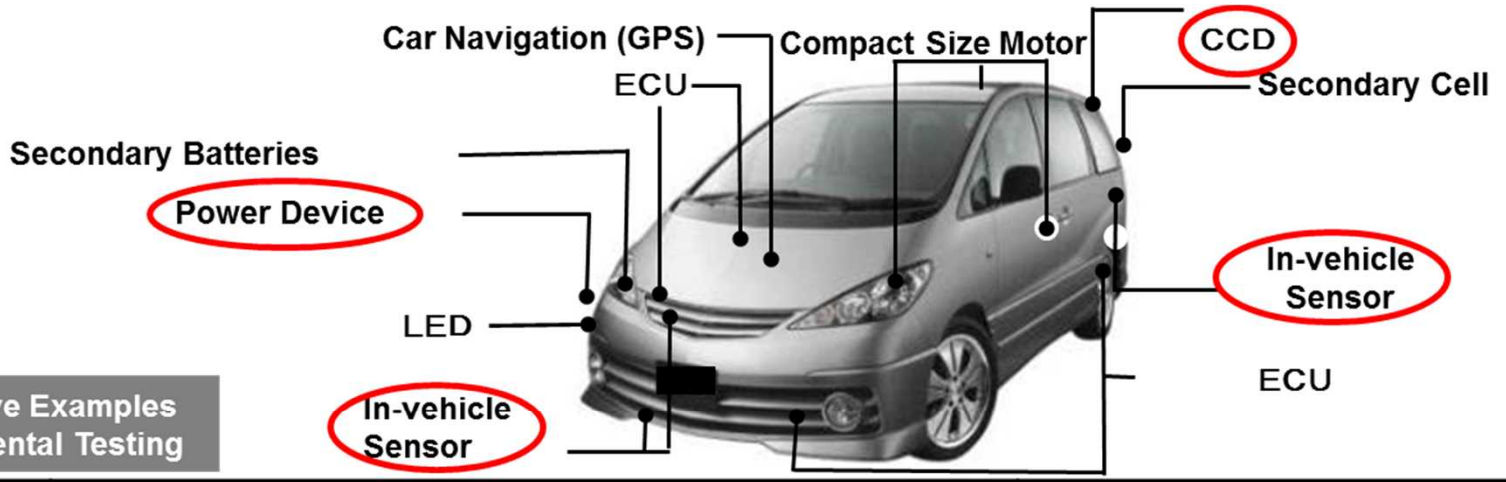
【 Temperature & Humidity Chamber】 "Platinous J series"

Transition in Business

Expanding business based on the “environmental creation technology” refined during the course of developing environmental test chambers



[Equipment Business] Usage Case with Environmental Test Chambers



Representative Examples for Environmental Testing

Device	Process/Test Condition		Our Products
【Power Device】 	Inspection	■Thermal shock test: −40℃⇔+125℃	Thermal shock chamber
		■High temperature exposure: +175℃、+85℃	(Compact size) Oven
		■Burn-in test	Burn-in chamber
【In-vehicle Sensor】 	Inspection	■Temperature cycle test of printed circuit board: −40℃⇔+110℃	Temperature & humidity chamber (Platinous) /Oven
		■ Temperature characteristic test after soldering: Linear change between -30℃ and +85℃	Burn-in chamber, Rapid-rate thermal cycle chamber
	Evaluation	■ Thermal shock test : −30℃⇔RT⇔+80℃、−55℃⇔+155℃	Thermal shock chamber
【CCD／CMOS】 	Production	■ Diffusion Test: +150℃	Compact size Oven
		■ Drying after cleaning: +85℃	Clean Oven
	Evaluation	■Screening: +85℃	Temperature chamber (Platinous)／Burn-in chamber
	Inspection	■Temperature and humidity test: +85℃／+85%rh、+60℃／90%rh	Temperature & humidity chamber (Platinous)
		■Acceleration test: +120℃／100%rh	HAST chamber
		■ Thermal shock test : −40℃⇔+125℃、−20℃⇔+85℃	Thermal shock chamber

[Equipment Business] Main New Products

Release Date	Name of product	Features
Mar.2018	Environmental Stress Chamber AR Series Rapid-Rate Temperature Cycle Type	・Second F-gas Regulation-compliant low-GWP refrigerant (R449) environmental testing chamber
Feb.2018	Environmental Stress Chamber AR Series Standard Type	・Added four models with new 220 L and 390 L chambers (with and without humidity control), bringing the total lineup to 12 models
Dec.2017	Faster Temperature (&Humility) Chamber SM Series	・Achieved temperature change of 5°C/min with 1,800 L capacity ・Made networking functions a standard feature
Nov.2017	Highly Accelerated Stress Test System (HAST)	・Added a new controller for improved operability and visibility ・Added new functions using networks
Jul.2017	Thermal Shock Chamber TSA series	・the first chambers in Japan to be compliant with European F-gas Regulation
Nov.2016	High-Power Temperature & Humidity Chamber AR Series Rapid temperature change type	・Compatible with IEC standards and automobile-related standards ・Achieves rapid temperature change rate of up to 18° C/min
Jun.2016	IPX9K-compatible testing equipment (High-pressure steam cleaning injection)	・Evaluates the impact of high-pressure steam on electronic devices during cleaning of automobiles; meets ISO standards
Jun.2016	Siloxane endurance testing equipment	・Evaluates the impact on electronic devices of siloxane contained in resins and other materials, mainly in automobiles
Apr.2016	Added new functions to Online Core, a communications network product	・Central management system for equipment and peripheral devices (monitoring of operating condition, schedule management, etc.)
Sep.2015	Constant-Temperature Bath for Combined Testing Equipment	・Material evaluation testing of mainly plastics, rubbers, and fibers

[Equipment Business] :Examples of Products Delivered

(Delivered in March 2016)

■Smart System Research Facility, Fukushima Renewable Energy Institute, AIST (Koriyama city, Fukushima)

Product delivered:
Large walk-in type temperature & humidity chamber

Uses:
Performance and safety evaluation for large power conditioners for solar power generation
Supports heat generation loads of 100 kw and large weights (21 tons)

Large walk-in type temperature & humidity chamber

■National Laboratory for advanced energy storage technologies (NLAB), National Institute of Technology and Evaluation (Nanko, Osaka City)

Product delivered:
1.Walk-in type temperature & humidity chamber for charge-discharge testing
2.External short-circuit testing equipment (energy devices equipment)

Uses:
1.Evaluate the performance of storage batteries by repeatedly charging and discharging them
2.Evaluate safety by confirming that storage batteries will not catch fire or rupture if they short circuit

Walk-in type temperature & humidity chamber for charge-discharge testing

[Equipment Business] :Examples of Products Delivered

(Delivered in February 2016)

■Sangenjaya Campus, College of Sports Sciences, Nihon University (Newly established in April 2016)

Products delivered:
Hypoxic training room, Hypoxic swimming pool chamber

Uses:
Improve cardiovascular and respiratory performance, as well as athletic ability, through training under hypoxic conditions
Research into athlete development and effective training methods

Hypoxic training room

Hypoxic swimming pool chamber

[Equipment Business] Usage Case with Energy Device Equipment

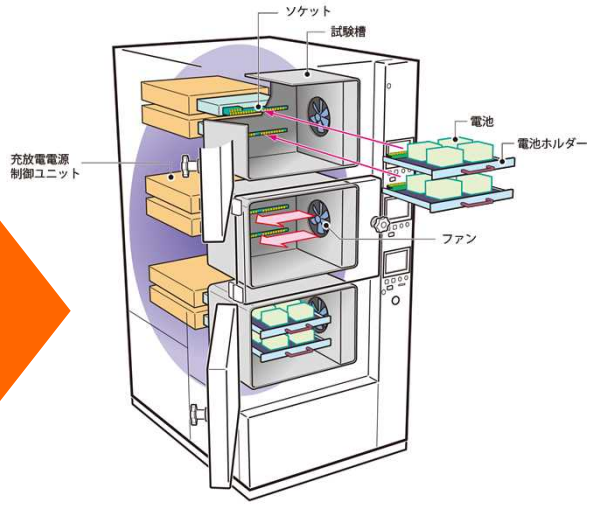
Charge-discharge Cycle Evaluation Equipment

Equipment for ensuring the reliability and safety of lithium-ion secondary batteries for next-generation vehicles (e.g., hybrid and electric vehicles)

Charge-discharge Cycle Evaluation Equipment

Secondary Batteries

Charge-discharge cycle load



Checking the charge-discharge characteristics of secondary batteries

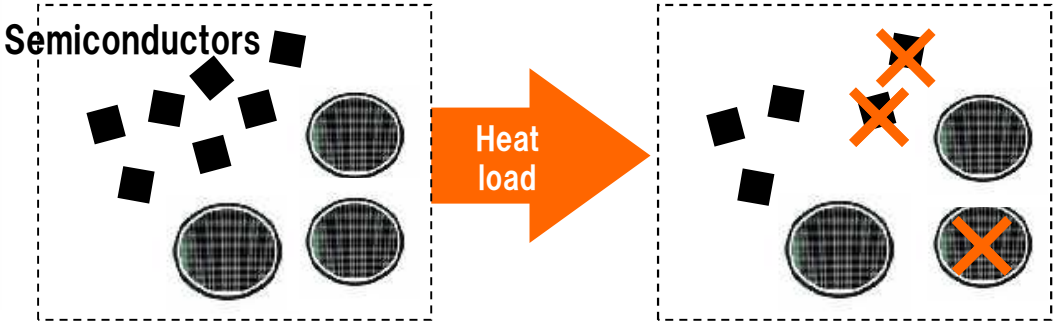
Evaluating the performance and life of secondary batteries

[Equipment Business] Usage Case with Semiconductor Equipment

Screening

Eliminate defective products to maintain initial-period quality at the final inspection stage of semiconductor device manufacturing

Burn-in chamber



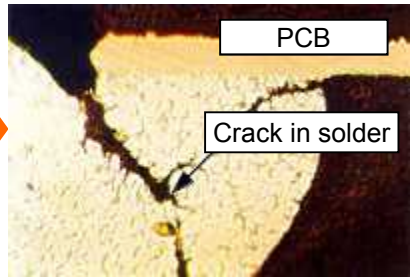
Elimination of latent early failures

Reliability Evaluation

Used to evaluate basic failure patterns to ensure reliability in the development of new technologies

Conductor resistance evaluation system

Example of defect in soldered joint



Electrical evaluation of reliability of joints in electronic parts

[Service Business]

After-sales Service and Engineering

Preventive maintenance of products, maintenance service, and the upgrading/improvement and installation/relocation of products

■ Speedy response via one of the most extensive networks in Japan

■ Launching new services by utilizing the network function mounted in the equipment

Commissioned Tests and Facility Rentals

Commissioning of testing, analysis, and evaluation; consulting; equipment rental; sales of used products; calibration of test equipment, etc.

■ The company has four commissioned test centers in Japan,two commissioned test centers in China.
(In Japan, Utsunomiya, Toyota, Kariya and Kobe. In China , Shanghai , Suzhou)

・These centers are IECQ-approved independent testing laboratories that meet ISO/IEC17025 standards.

・The centers are also recognized as official calibration facilities under the Japan Calibration Service System (JCSS).

■ Opened the world's first Battery Safety Certification Center.
(in September 2015)

・ Providing a one-stop service for testing and certification application services compliant with United Nations regulations on the safety of automotive rechargeable batteries.

・ Entered into business alliance with TÜV SÜD Japan Ltd., a third-party certification agency (in October 2014)

Battery Safety Certification Center
(in Utsunomiya Technocomplex)

[Service Business] New Services Using Networks

Industry's first new services using networks
「ESPEC ONLINE SERIES」

＊Services started in November 2013

■ESPEC online support

Trouble notification and recovery service enabling peace of mind when using the Company's products

■ESPEC OnlineCore

A centralized management system enabling operators to monitor the operation status of multiple networked environmental testing chambers at a glance

■ESPEC OnlineConverter

A network adapter for LAN connection of non-network ready environmental testing chambers
Enables remote monitoring and operation of networked environmental testing chambers

[Service Business] Battery Safety Certification Center

ESPEC provides commissioned tests and certification application services compliant with United Nations regulations at the world's first Battery Safety Certification Center

Providing a one-stop service to support the implementation of 9 safety tests and applications for certification by certification agencies, as stipulated by UN ECE R100-2. Part II*, a United Nations regulation.

(The facility was opened within the Utsunomiya Technocomplex in September 2015.)

*Entered into force in July 2016

Battery Safety Certification Center
(in Utsunomiya Technocomplex)

Crush Testing Equipment
(No. 1 Safety Test Room)

No. 2 Safety Test Room

[Other Business] Environmental Engineering Business

Environmental Engineering Business

■Reforestation (Tree planting)

Recovery of local forest by selecting species and planting out seedlings using potential natural vegetation data.

■Waterfront biotope restoration

Reconstruction of natural environment, development of vegetative revetments, and water quality improvement using aquatic plants.

■Urban greening

Provision of roof and wall greening systems that use moss to effectively alleviate heat island effect.

Plant factory

Provision of various cultivation environments employing advanced environmental control technologies to control light, temperature, humidity, carbon dioxide, etc.

Container plant factory

Phyto-toron

[Other Business] : Examples of Products Delivered

■Arid Land Research Center, Tottori University

(Delivered in March 2016)

Products delivered:

Experimental System for Analyzing Responses of Dryland plants to Climate Changes (2 units)
(Simulates the climates of arid lands, including high temperature, low humidity, strong sunlight, and high winds)

Uses:

Plant cultivation experiments and experiments to develop efficient water-usage technologies in arid lands, research to solve issues facing arid lands

Experimental System for Analyzing Responses of Dryland plants to Climate Changes

Experiment in progress

[Other Business] Plant factory

Produced a high value-added vegetables using deep-seawater

Established in March 2016 near Haneda Airport at a plant factory*,
Production and sales of vegetables high in minerals
with the use of deep sea water.

* Joint research with DHC Corporation and Kyoto University

Interior of the plant factory and Factory-produced vegetables"mineraleaf"

Initiatives tackling environmental problems

Forest preservation activity - Kehara Forest Creation Program

In March 2018, designated as an affiliated business of the Japan Committee for United Nations Decade on Biodiversity
Since 2007, the Company's employee volunteers have increased to over 1,000 participants

ESPEC Foundation for Global Environment Research and Technology (Charitable Trust)

Provides funding support every year for research, technology development on global environmental conservation. Established in 1997 on the 50th anniversary of ESPEC

ESPEC Midori-no-gakko schools

Human resources certification, etc. based on Act on the Promotion of Environmental Conservation Activities through Environmental Education
Seminars and events are held throughout Japan to train leaders who will think about the global environment

- Achieved 71th place in the Nikkei Environmental Management Survey
- Environmental Communication Award Won the Excellence Award for 2 consecutive years

＊Sponsored by the Ministry of the Environment,

To a company where employees can be more active

Initiatives to promote women's success

From the Ministry of Health, Labor and Welfare:
The Company received the "Kurumin" certification, which is granted to companies that support child-rearing. And the highest ranking of the certification mark "Eruboshi" based on the Act on Promotion of Women's Participation and Advancement in the Workplace.

The female leadership development program

Employee Education System Enhancement

- Implement a Global Trainee Program aimed at developing human resources who are capable of working in international settings
- Enhance the education program to support management executive education and self-development
- Promote work style reforms

On-site training in the Global Trainee Program (U.S.)