

Eagle Industry Co., Ltd. Financial Results Briefing for Fiscal Year Ended March 31, 2019

May 13, 2019



1. Financial Results

(1) Results Overview for FY2018

(2) Forecast for FY2019

2. Business Unit Report

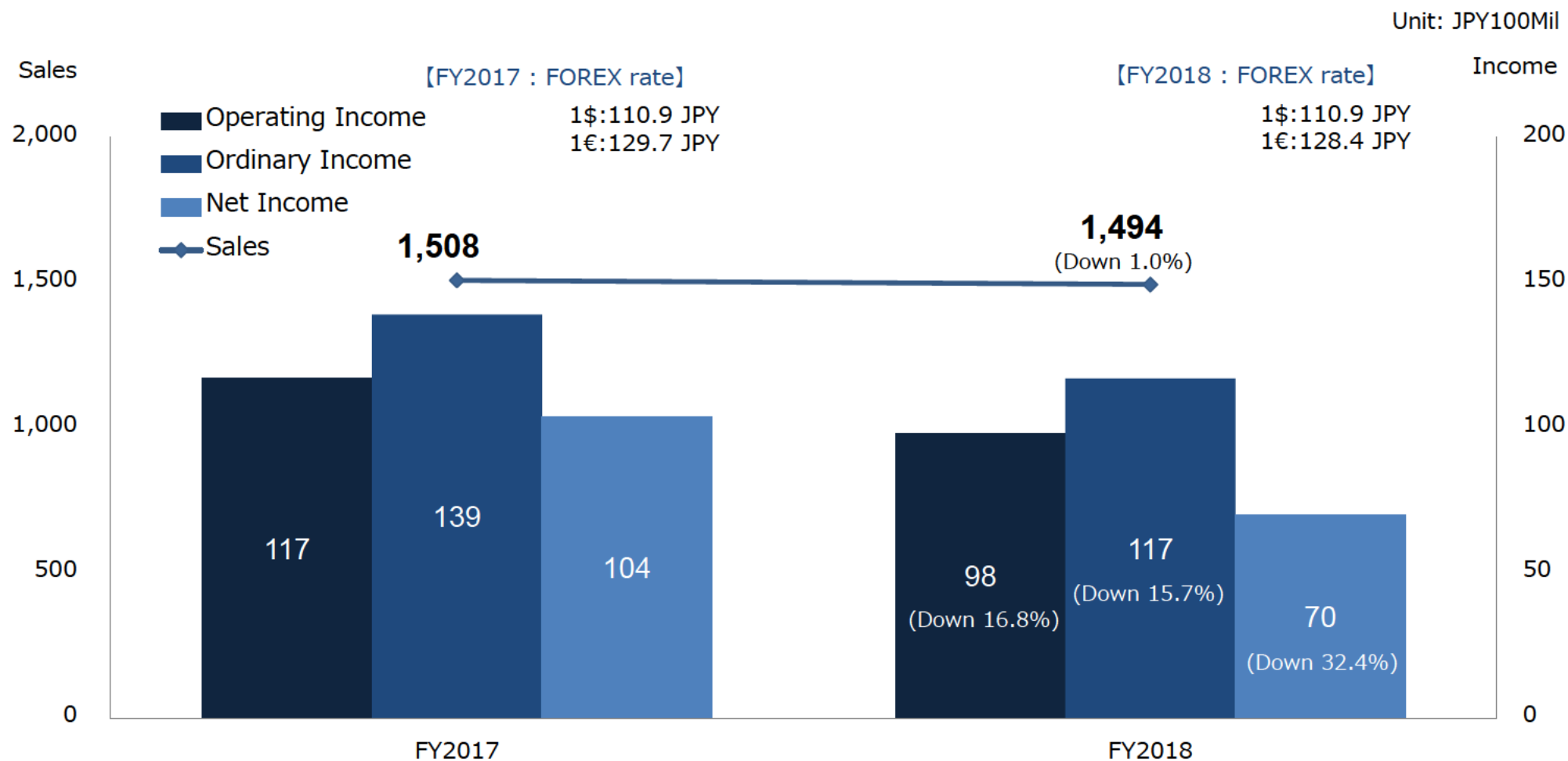
(1) Automobile and Construction Machinery

(2) General Industry

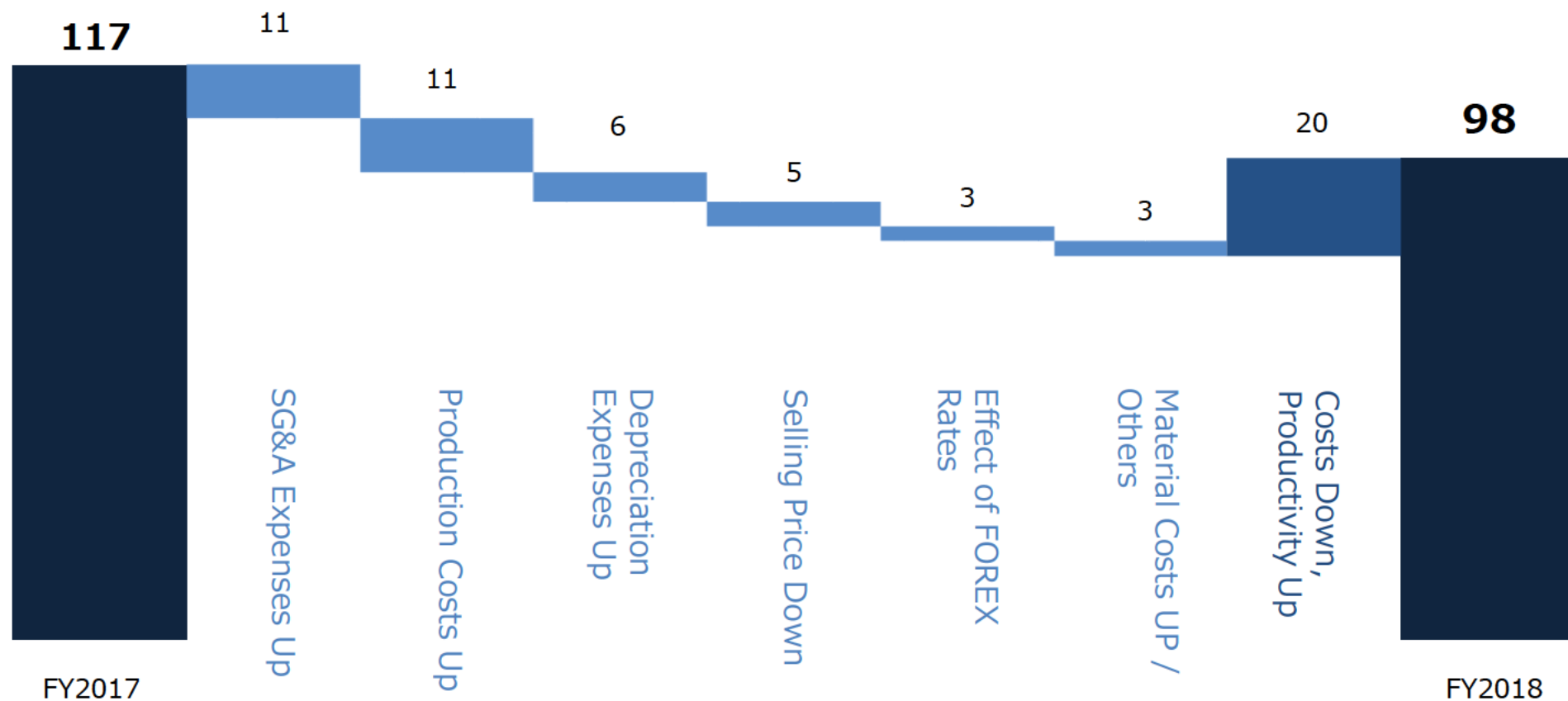
(3) Semiconductor Industry

(4) Marine

(5) Aerospace



Unit: JPY100Mil



Unit : JPY100Mil

		FY2017 Results	FY2018 Results	Increase/ Decrease	vs. FY2017
Automobile & Construction Machinery	Sales	992	953	▲39	96%
	Operating Income	66	44	▲22	67%
General Industry / Semiconductor	Sales	357	383	26	107%
	Operating Income	41	35	▲5	87%
Marine	Sales	105	98	▲7	93%
	Operating Income	10	13	3	125%
Aerospace	Sales	55	60	6	110%
	Operating Income	0	5	5	—
Total	Sales	1,508	1,494	▲15	99%
	Operating Income	117	98	▲20	83%

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(1) Automobile and Construction Machinery

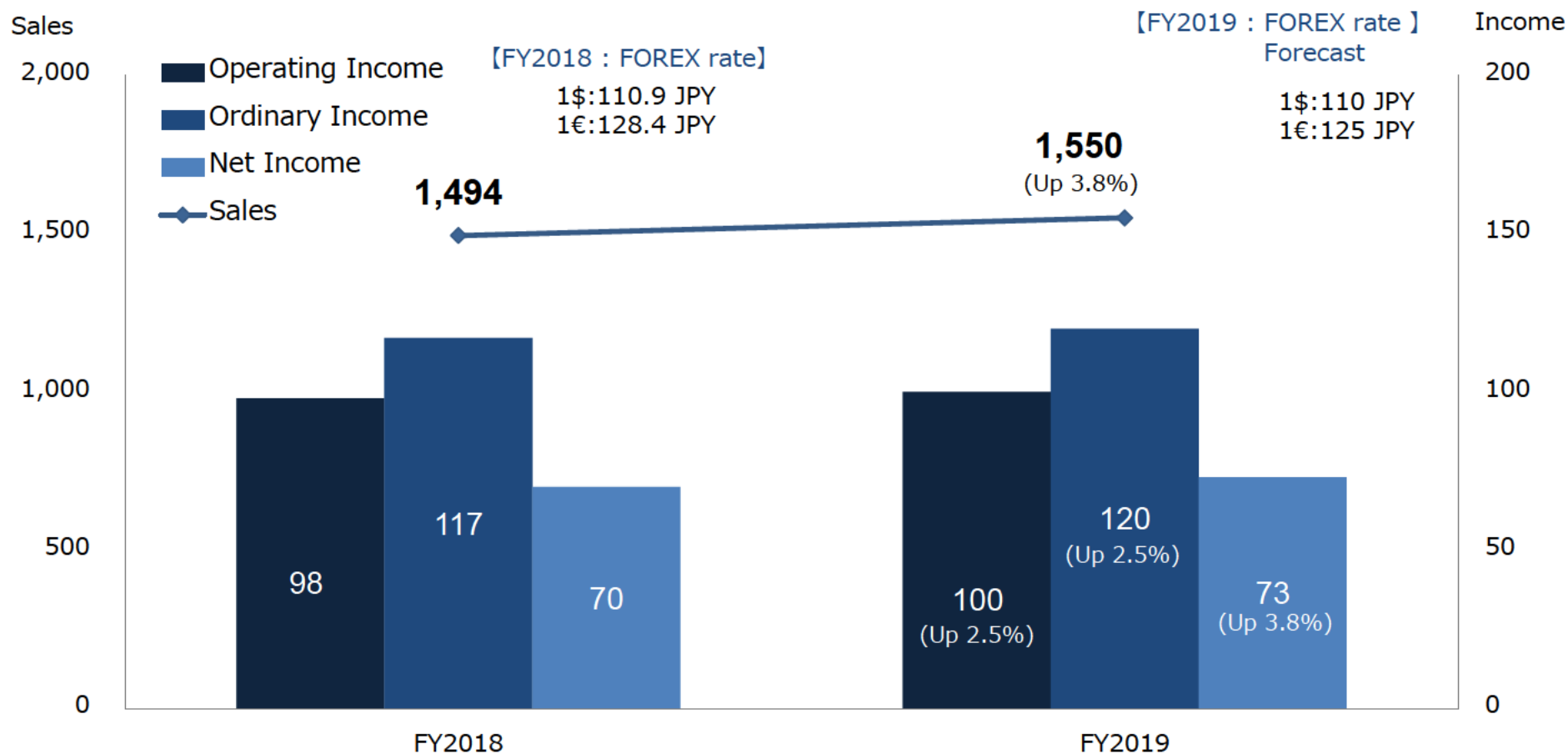
(2) General Industry

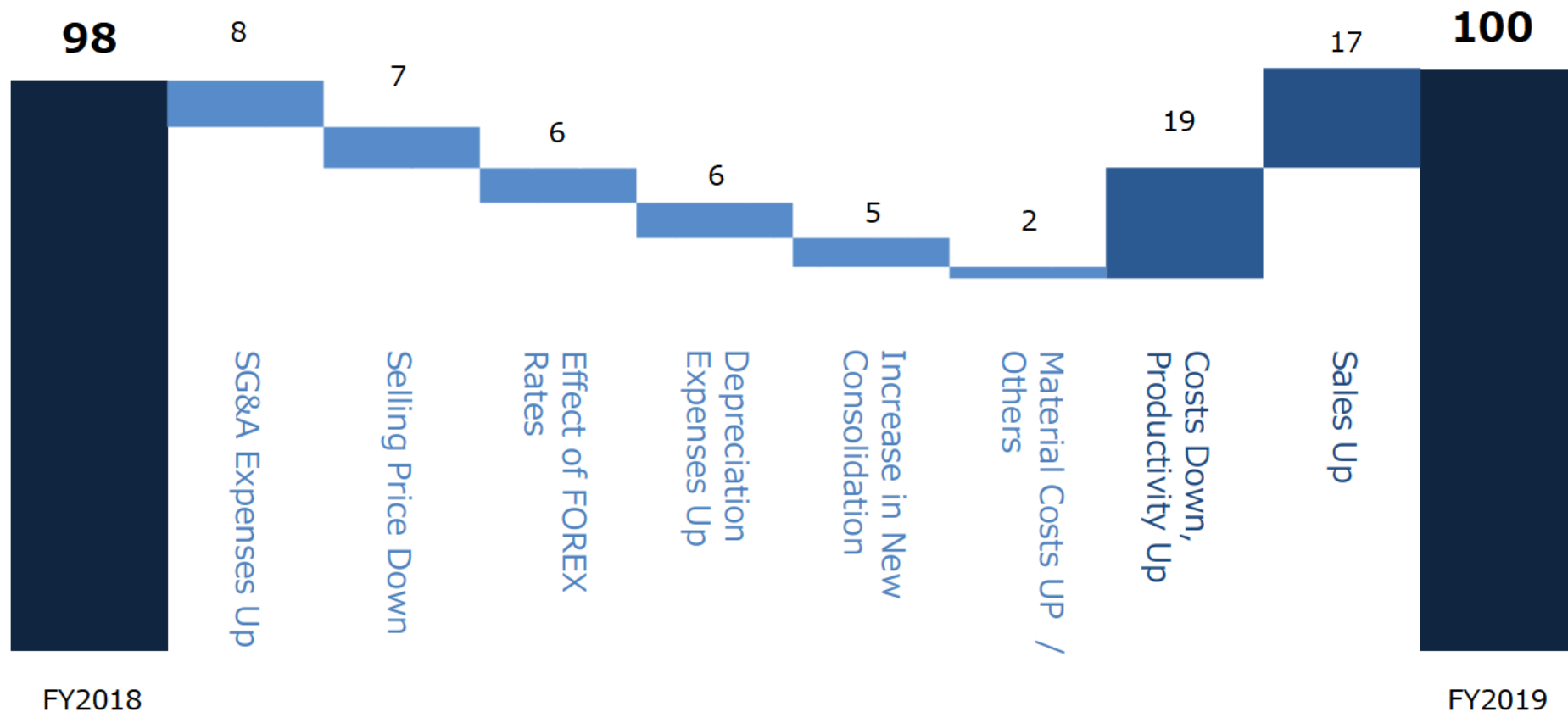
(3) Semiconductor Industry

(4) Marine

(5) Aerospace

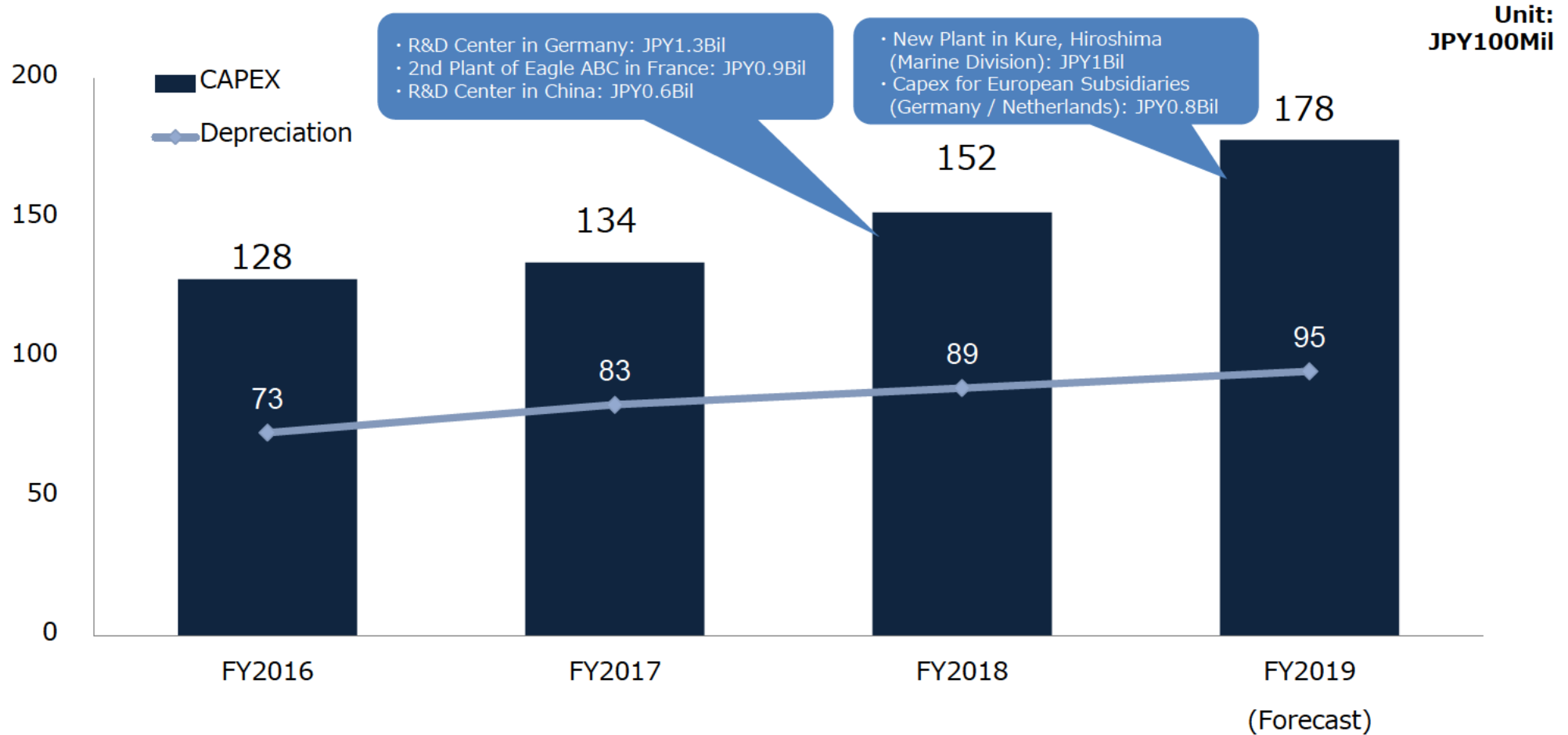
Unit : JPY100Mil





Unit : JPY100Mil

		FY2018 Results	FY2019 Forecast	Increase/ Decrease	vs. FY2018
Automobile & Construction Machinery	Sales	953	946	▲7	99%
	Operating Income	44	45	2	102%
General Industry	Sales	307	325	18	106%
	Operating Income	34	34	▲0	100%
Semiconductor	Sales	76	86	10	114%
	Operating Income	1	0	▲1	24%
Marine	Sales	98	117	19	120%
	Operating Income	13	15	2	116%
Aerospace	Sales	60	76	16	126%
	Operating Income	5	6	1	118%
Total	Sales	1,494	1,550	56	104%
	Operating Income	98	100	2	103%



	FY2016	FY2017	FY2018	FY2019 Forecast	Target
Dividend (Yen)	45	50	50	50	—
Dividend Ratio (%)	30.1	23.5	34.9	33.6	—
Equity Ratio (%)	42.2	47.2	47.4	47.9	50%
Earnings Per Share (EPS) (Yen)	149.46	212.56	143.35	148.72	—
ROE (%)	10.9	14.2	8.8	8.6	10%
ROA (%)	4.6	6.4	4.2	4.1	5%
ROIC (%)	6.0	6.9	5.4	5.2	10%

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	Water Pump Seal 	Car Air-Conditioner Seal 	AC Control Valve 	Solenoid Valve 	Solenoid 	Valve & Actuator 	Floating Seal 
☆ : Planned							
Japan	○	○	○	○	○		○
China	○	○	○	○			○
Korea	○	○					
Taiwan	○			○		○	
India	○						
Thailand	○	○		○		○	
Indonesia		☆					○
France			○		○		
Netherlands	○	○					
Hungary						○	
Mexico	☆	☆	○	○	○		

Expanded solenoid production due to the increase in demand for valve products in Europe and Americas

Increase in demand for valve products due to the shift from diesel to gasoline / increase of hybrid vehicle in Europe

France: Eagle ABC Technology (2nd Plant)

Hungary: Eagle Industry Hungary



CAPEX Amount: JPY0.9Bil
Production Item: Solenoid



CAPEX Amount: JPY1Bil
Production Item: Canister Purge Valve



Established R&D Center in China (Wuxi) and establishing in Germany (Heppenheim, to be completed in July), actively responding to Chinese and European market needs



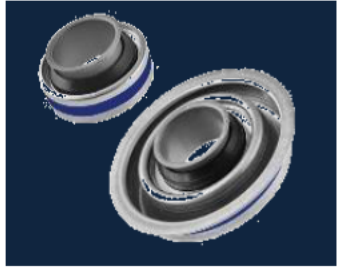
Expand Development Activities for Next Generation Vehicle Related Products

China (Wuxi)
Eagle Sealing R&D



Germany (Heppenheim)
Eagle Actuator Components





Lip Seal for
Electric Water Pump



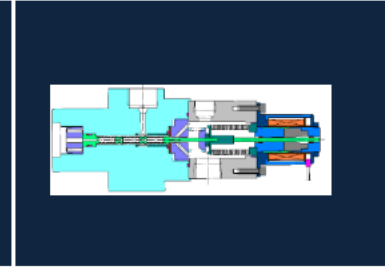
Mechanical Seal
for Motor Cooling



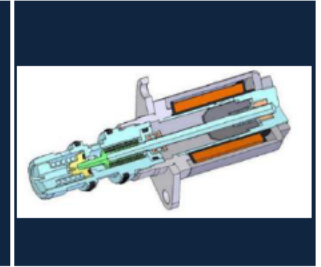
Mechanical Seal
for Reduction Gear



Mechanical Seal
for Air Compressor



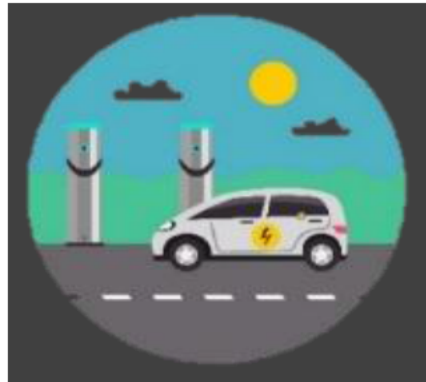
Integrated Hydrogen
Pressure Reduction Valve



Hydrogen Control
Valve



Plug-in Hybrid Vehicle



Battery Electric Vehicle

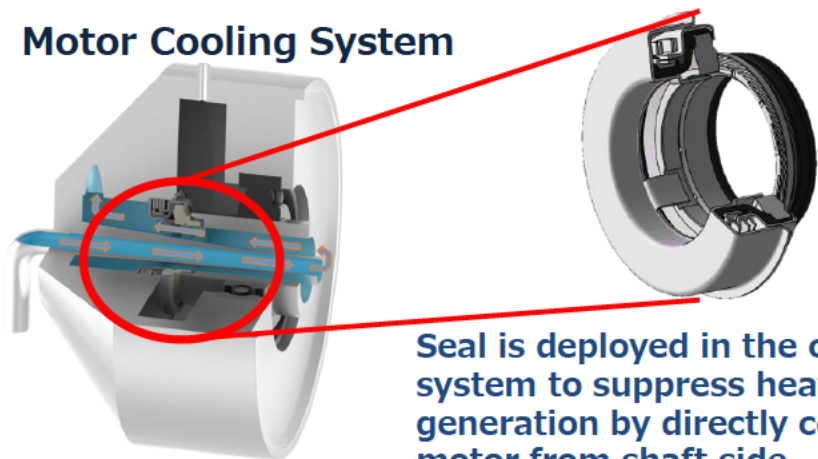


Fuel-Cell Vehicle

Promote product development such as Mechanical Seal for
Next Generation Mobility and Hydrogen Control Valve

Mechanical Seal for EV Motor Shaft Cooling

Motor Cooling System



Seal is deployed in the cooling system to suppress heat generation by directly cooling motor from shaft side.

Keywords in Motor Development

Higher Speed

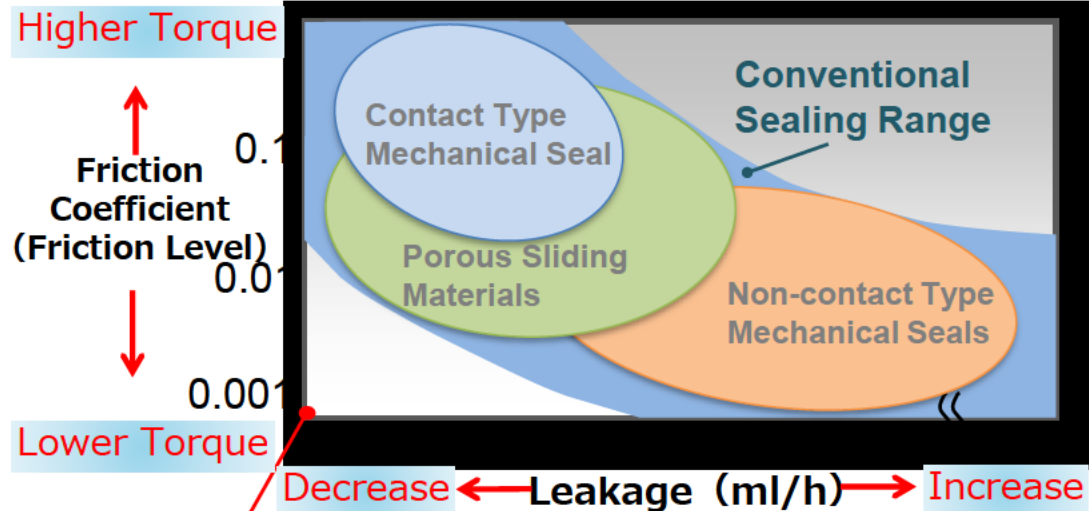
Higher Efficiency

Smaller Size

Year	2017	2018	2020	2024	2030
Rotating Speed (RPM)	10,000	15,000	18,000	24,000	30,000

EKK's Surface Texturing Technology

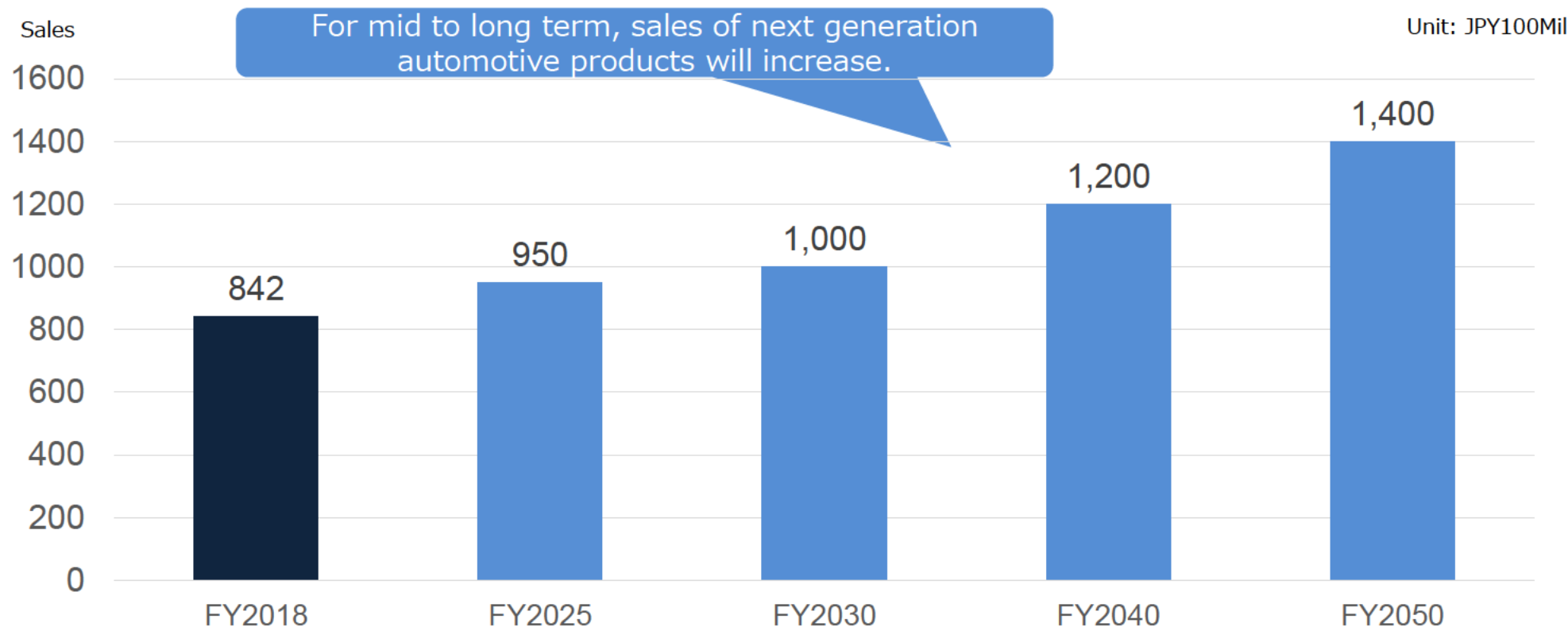
Correlation between Torque and Leakage



Target

Realizing Low Leakage Under Ultra-Low Torque Environment

Realize Motor's Higher Rotating Speed and Electricity Consumption Efficiency



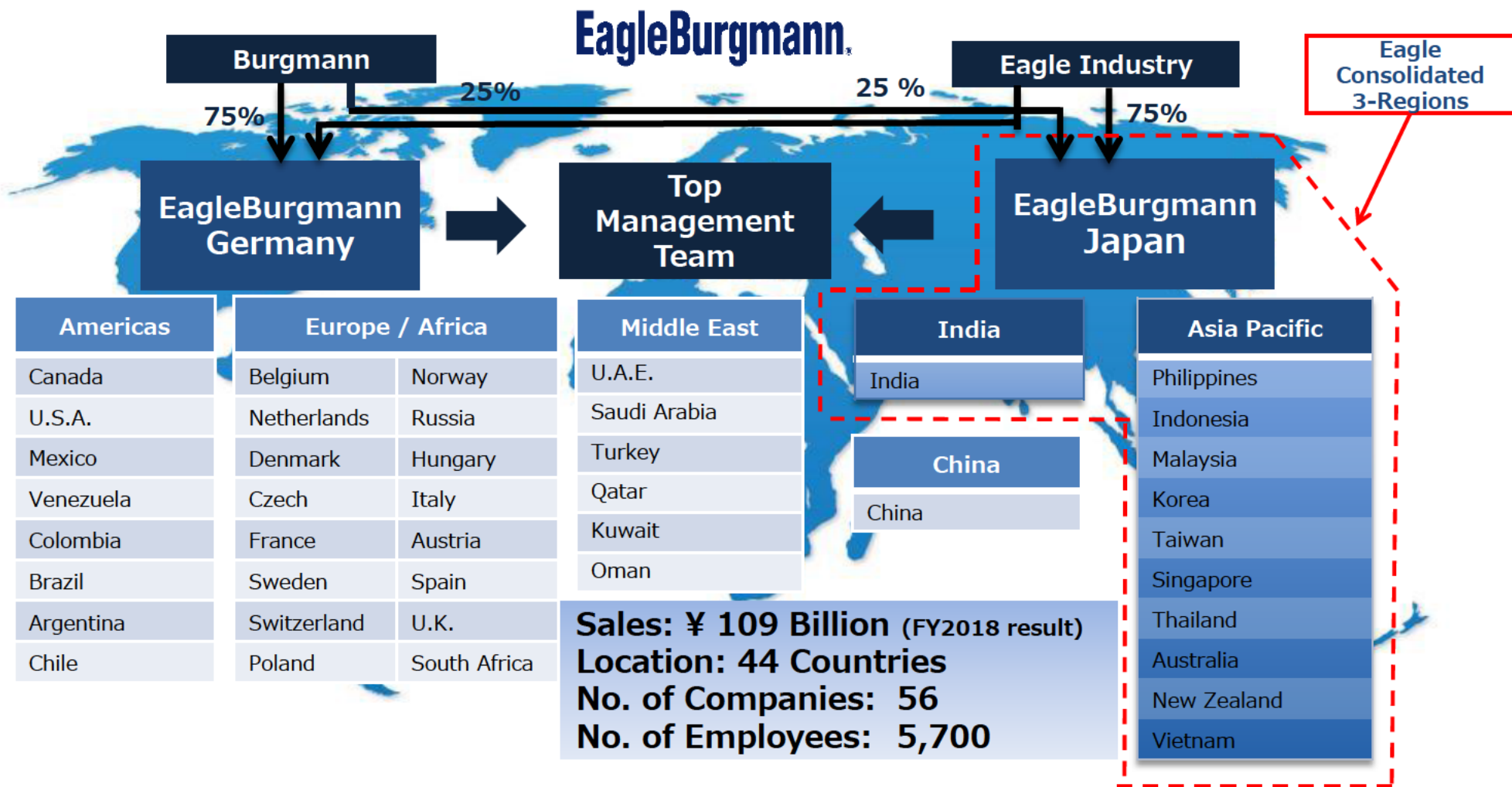
Pursue growth by offering products that foresee technological trends based on our policy of "Making unique and useful products backed by technology in a competitive manner and supplying them throughout the globe in a reasonable way."

1. Financial Results

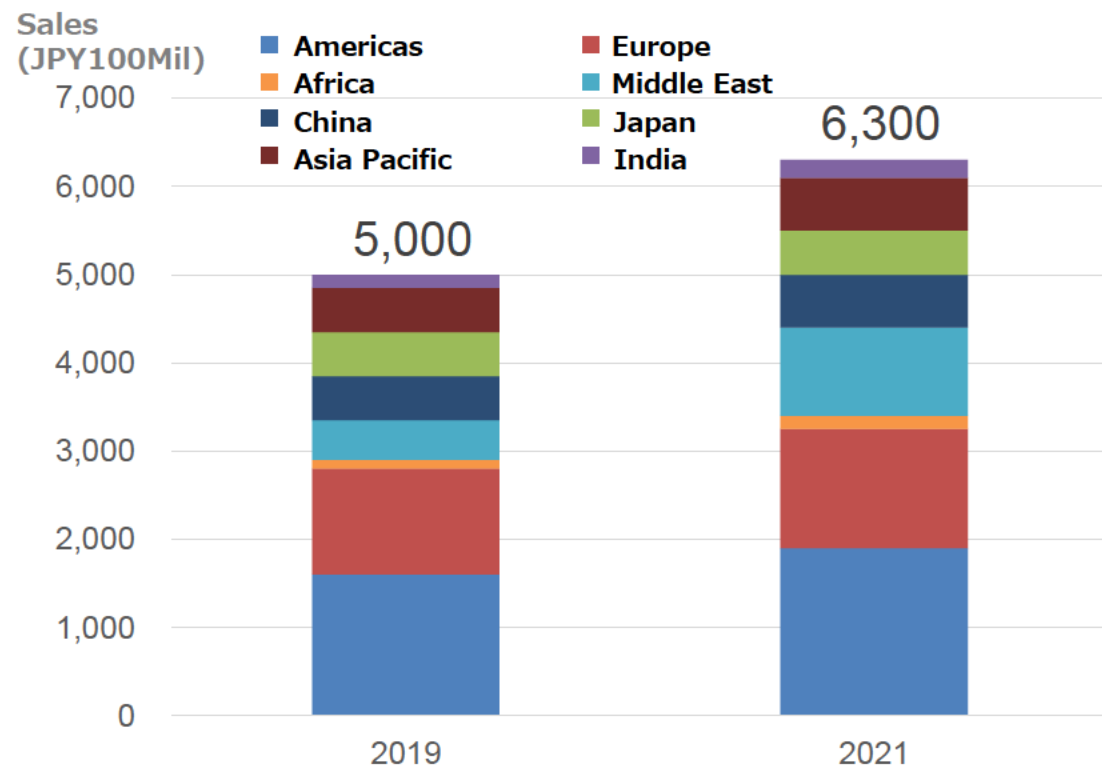
- (1) Results Overview for FY2018
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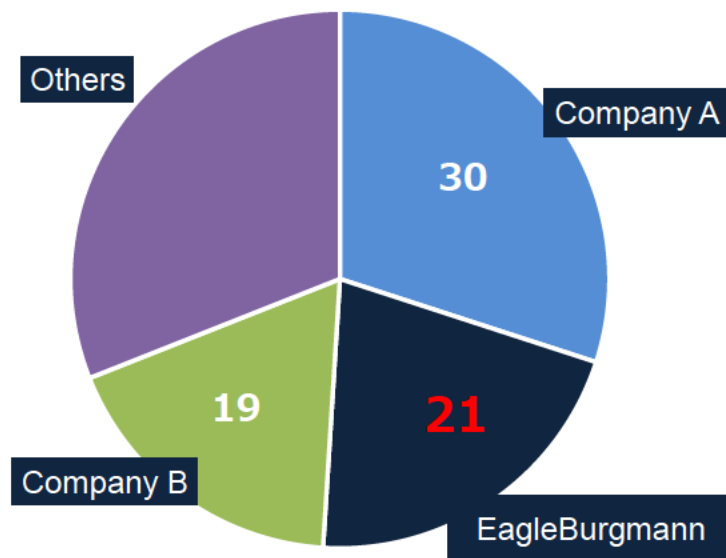
- (1) Automobile and Construction Machinery
- (2) General Industry
- (3) Semiconductor Industry
- (4) Marine
- (5) Aerospace



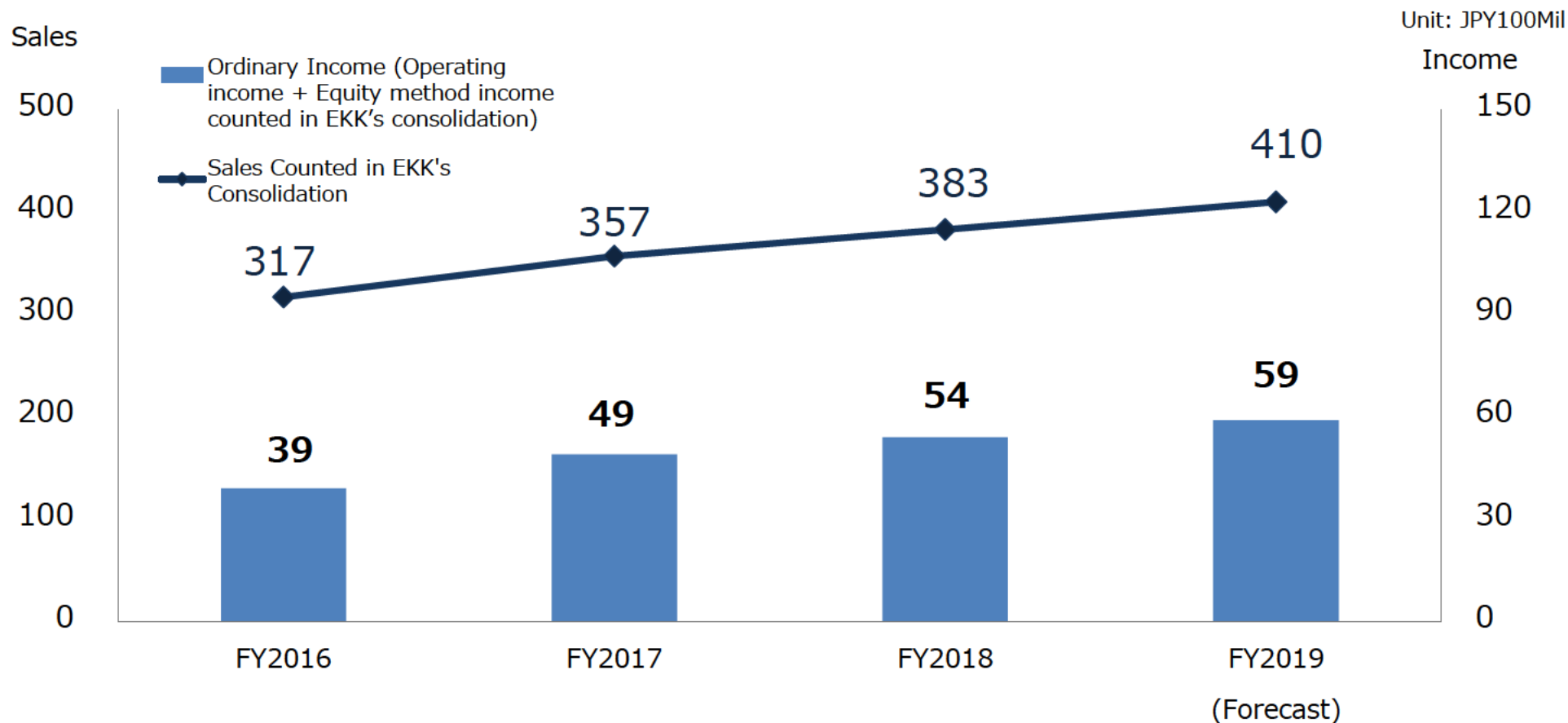
Market Size of Mechanical Seal for Refinery / Petrochemical Plant by Region



Market Share of Mechanical Seal for Refinery / Petrochemical Plant (%)



Petro-related plant construction market will keep growing due to increase in worldwide energy demand.



3 Regions (Japan, India and Asia Pacific) will remain solid in this term.

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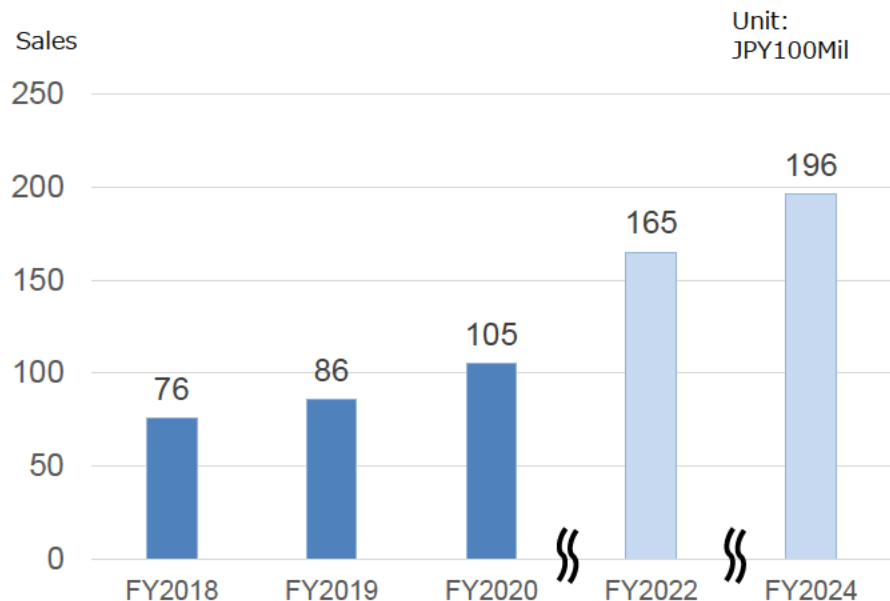
(2) General Industry

(3) **Semiconductor Industry**

(3) Marine

(4) Aerospace

Result and Forecast of Semiconductor Products



- Sales of semiconductor products are growing year by year due to the forecast of continuous growth in the semiconductor industry.
- “Semiconductor Industry” became an independent business unit from FY2019.
- EKK is the only manufacturer in the world that can produce Magnetic Fluid Seals, Bellows, Rotary Joints, and Elastomer Seals all in-house.
- We will keep developing new products and pursue stable growth of the business.

EKK Products for Semiconductor Industry

Magnetic Fluid Seal



Vacuum seal for semiconductor / FPD manufacturing equipment used in bearing for transferring robots

Welded Metal Bellows



Used in reciprocal part of semiconductor / LCD panel manufacturing equipment

Elastomer Seal

(Kalrez® / Superior)



Synthetic rubber that has elasticity, sealability, Teflon chemical resistance and thermal stability

Rotary Joint



Used in lapping equipment for semiconductor manufacturing processes such as CMP for wafer

NEK (Korea): Start Magnetic Fluid Seal Production



NEK's Company Profile

Capital	KRW3.75Bil (Approx. JPY370Mil)
Place	Haman, Gyeongsangnam, Korea
Area	Land: 20,500m ² Floor: 10,400m ²
Since	Dec. 1987

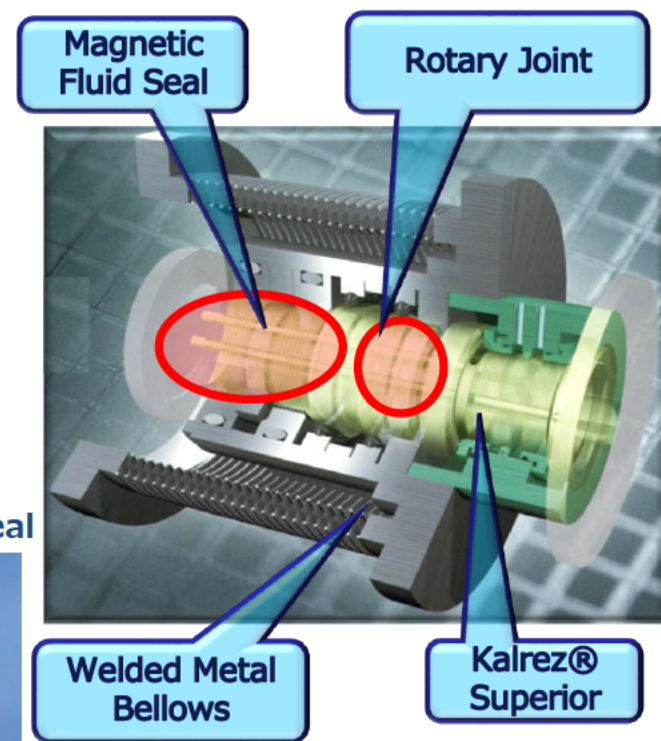
- Established new plant in NEK due to market expansion of semiconductor manufacturing equipment in Korea (FY2018, Invested JPY1.1Bil)
- Semiconductor Industry business unit is establishing global production in cooperation with Japan and Taiwan sites.

Magnetic Fluid Seal



Hybrid Seal

- Can meet increasingly advanced customers' needs from the design phase with all in-house production



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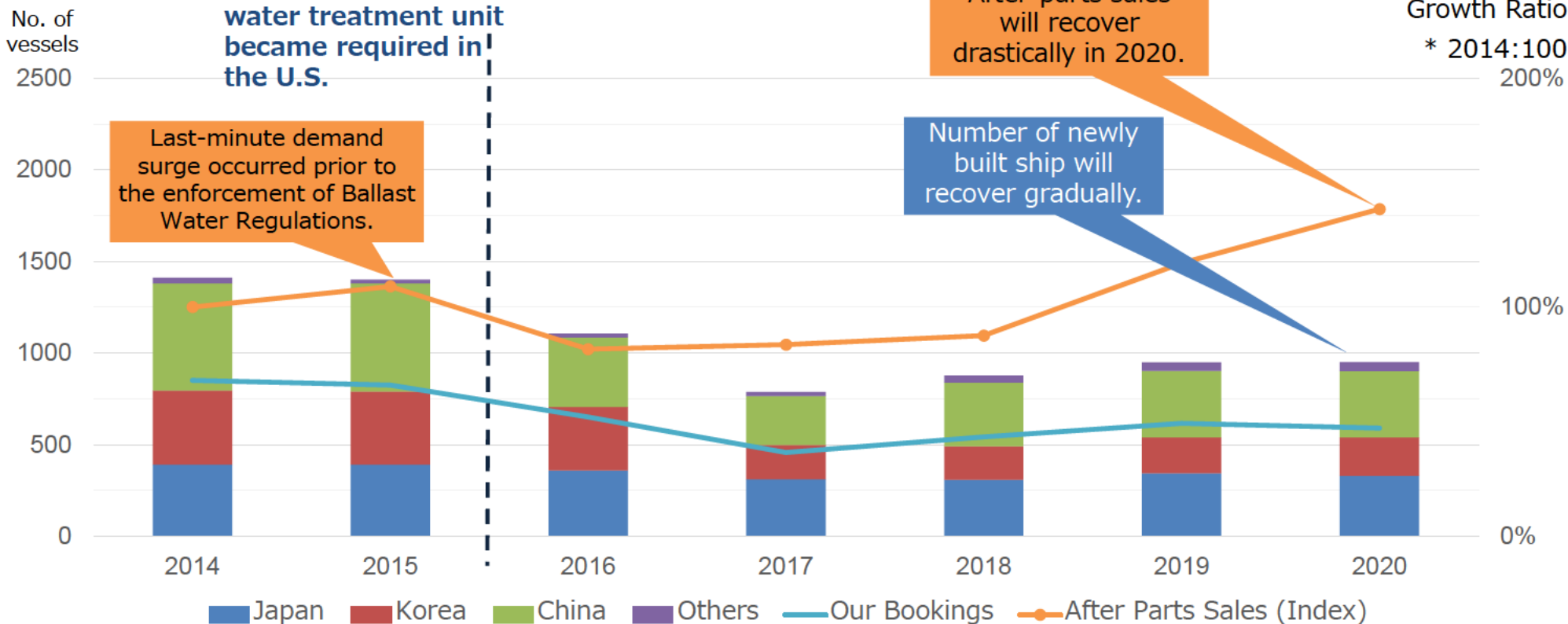
(3) Semiconductor Industry

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* Our own study

● Jan, 2016
Installation of ballast
water treatment unit
became required in
the U.S.



Sales for newly built ship: Bottomed out in 2017 and recover gradually
Sales for after-parts: Recover drastically in 2020

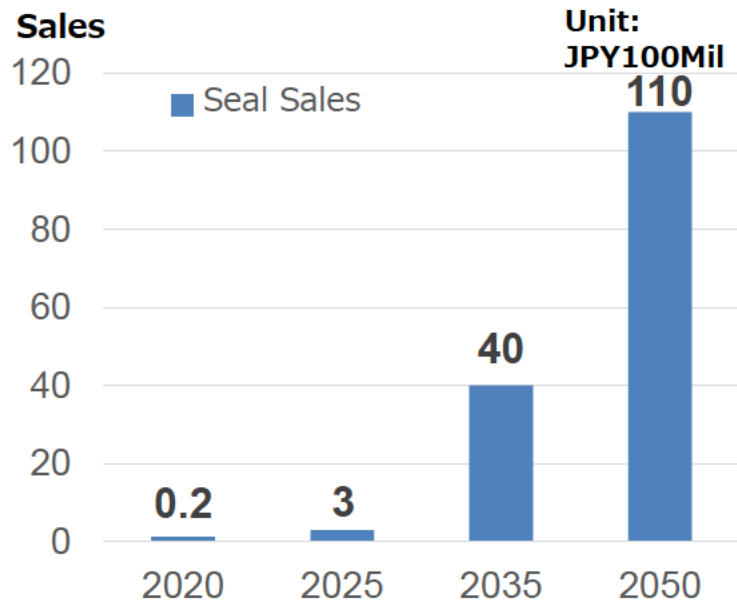
Global Equipment Capacity of Power Generation Using Maritime Renewable Energy Resources

2015: Approx. 0.53GW

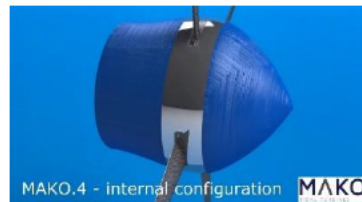


2050: Approx. 337GW (estimated)
(Same as Approx. 337 Nuclear Power Plant)

Estimated Mechanical Seal Demand for Marine Power Generation



Development of Mechanical Seal for Marine Power Generation



- Using Mechanical Seal with Surface Texturing Technology

Low torque/leakage capability improved performance and efficiency of power generation equipment by 1%.

Experiment Planned in Sentosa, Singapore

sentosa™ **MAKO ENERGY**

LAUNCH OF
MAKO TIDAL ENERGY DEMONSTRATION AT SENTOSA

BETWEEN

SENTOSA DEVELOPMENT

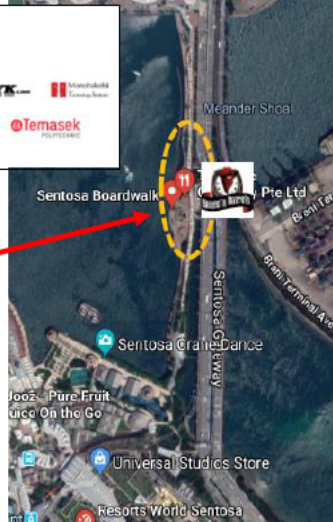
AND

MAKO ENERGY

June 28 2019 (To be held)



Place of
Marine Power
Generation
Turbine



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Mechanical Seals, Other Seals, Valves

Oct 29, 2018
**H-IIA Rocket No. 40 / Greenhouse
 Gases Observing Satellite**
 Launch Succeeded

H-3 Rocket/LE-9 Engine
 Participating Development
 Project Under Testing

LE-9 Mock Engine No.3
 Combustion Test



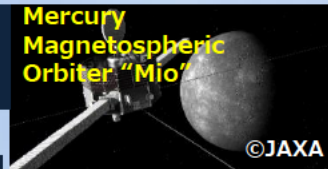
©JAXA

H-IIA Rocket
 No. 40
 ©JAXA



Sensors, Filters, Fuel Tanks, Valves

Oct 19, 2018
"Ariane 5" Rocket
Mercury Magnetospheric Orbiter "Mio"
 Launch Succeeded



©JAXA

Oct 29, 2018
**H-IIA Rocket No. 40 / Greenhouse
 Gases Observing Satellite**
 Launch Succeeded



©JAXA

**Epsilon Launch
 Vehicle No.4**



©JAXA

Jan 18, 2019
Epsilon Launch Vehicle No. 4
 Launch Succeeded

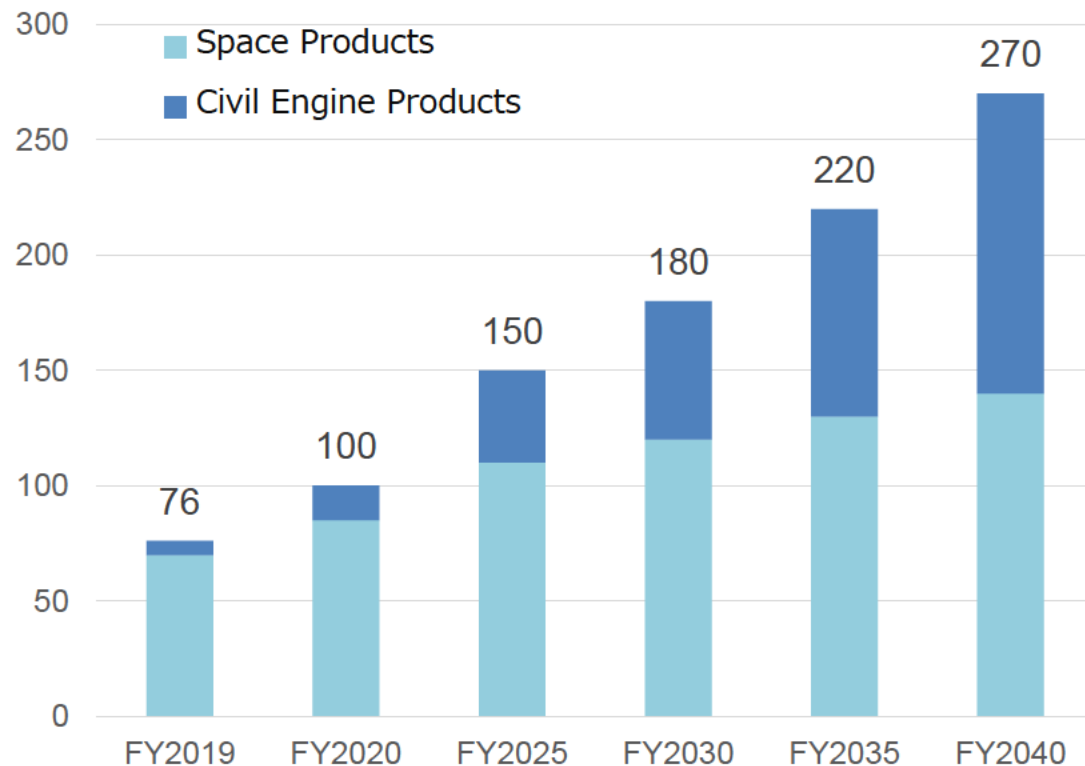
Feb 22, 2019
"Hayabusa-2"
 Touched Down to Ryugu



©JAXA

Long Term Sales Forecast of Aerospace Products

Sales
(JPY100Mil)



EKK's Engine Seal Products for Aircraft



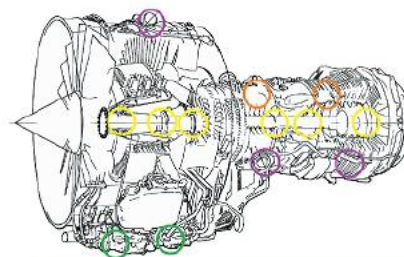
Face Type Seals for Main-Shafts



Segmented Seals for Main-Shafts



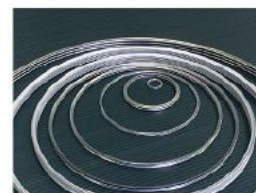
Brush Seals for Main-Shafts



ACTIFLEX[®] for Ducting Systems



Gearbox and Accessory Parts



ACTISEAL[®] Resilient Metallic Seals



Precision Parts

Fly Sky High !

