

# YAMASHIN Paradigm Shift

**Early Sales Recovery in Construction Machinery Business**  
**Healthcare Business Addressing Challenges in Penetrating the Expanding Market**

**YAMASHIN-FILTER CORP.**  
**Financial Results for the Third Quarter of the**  
**Fiscal Year 2020 (April 2020 to March 2021)**

February 4, 2021

## The market environment, our actions, and business results for FY2020 Q3

### Market Environment

- COVID-19 continues to spread. It remains uncertain when conditions will return entirely to normal. The major construction machinery market is currently recovering against this backdrop.
- The demand for construction machinery in Japan, North America, and Europe have recovered, while Southeast Asia is delayed in recovery.
- In China, the world's largest construction machinery market, **the growing market share of Chinese construction machinery manufacturers** and implementation of financial incentives and other economic stimulus measures by the government has led to hit a record high worldwide in new machinery sales. Chinese manufacturers are expanding their market share. Moving forward, demand for new machinery is expected to increase, driven by increased government-led public investment and companies preparing for the fourth phase of environmental regulations.
- Even with the resumption of economic activity in various countries, based on forecasts for the second and third waves of the pandemic, we anticipate an **opportunity to expand our air filter and healthcare business lines.**



### Company Actions

- ◆ **Construction machinery filters**  
⇒ Contribute to reduced industrial waste (CO2) and global environmental protection
- ◆ **Air filters**  
⇒ Contribute to reduced industrial waste (CO2) and reduced risk of health hazards
- ◆ **Full-scale ramp-up of healthcare business**  
⇒ Contribute both to **economic activity** and reduced health risks
- ◆ **Establish other elements of the business portfolio**

Promote “YAMASHIN NANO FILTER™”

Details are on page 3.

### Business results for FY2020 Q3

- **Consolidated net sales: 10,394 million yen, up 13.2% year on year**
  - Sales of filters for construction machinery **decreased by 8.9% year on year to 7,742 million yen** due to lower sales in the first half despite recoveries in each market
  - Sales of air filters stood firm at **1,957 million yen**
  - **Healthcare sales as a new business at 694 million yen**
- Operating income: Due to COVID-19-related temporary costs for transportation costs, business restructuring, and new mask business marketing, operating income **fell to -146 million yen, down 746 million yen year on year**

## Company Initiatives (details)

- Launch healthcare business and fully enter the Japanese mask market to meet COVID-19-related demand.
- Deliver on ESG while expanding our business portfolio and maximizing profitability
- With “Contributing to Society through Filtration Activities” as our corporate philosophy, we contribute to the creation of a sustainable society based on the themes of the environment, air, and health

### Construction machinery business

**Expand lineup of high value-added filter products that leverage new materials and IoT technologies**  
Develop filter products with long-life nanofiber filters and aeration and sensor technologies

**Expand the share in the North American market**

In addition to return filters, our company’s flagship products, progress is being made on new proposals for adoption of our filters for fuel and transmissions.

**Raise rate of adoption by Chinese construction machinery manufacturers and enter service parts (service parts) market**

We’re currently making progress in concluding contracts for the adoption of our products by Chinese construction machinery manufacturers. With government-led public works investments moving forward and the development of new models that comply with fourth-phase environmental regulations, we will seek to further improve adoption rates, increase our aftermarket share, and boost sales volumes.

**Boost sales volumes and profitability by providing high value-added products while helping to reduce industrial waste and environmental impact.**

### Air Filter Business

**Develop HEPA, ULPA filters**

Progressing with development of low-cost HEPA and ULPA filters with low pressure drop and high capturing rates

**Develop nanofiber air filters**

Develop nanofiber air filters Progressing with development of nanofiber air filters with low pressure loss and high capture rates for office buildings, factories, railroad cars, home appliances and other applications

**Improve profitability by increasing product added-value while also helping to reduce electricity consumption and reduce the risk of health hazards.**

### Healthcare

**Work to increase shares of general use masks; enter the market for medical use masks**

**Expand sales channels to e-commerce sites and drugstores, and increase market share by introducing products with differentiable features in the general use mask market.**

**Expand market share by expanding product lineup through acquisition of medical certifications (N95, FFP, DS2), contributing to both resumption of economic activities and reduction of health risks.**

### Establish other elements within the business portfolio: Promote \*YAMASHIN NANO FILTER™\*

**Expansion of market area as apparel & industrial subsidiary materials**

Enhancing and strengthening the mass production line to produce YAMASHIN NANO FILTER™ for various industrial sub-materials.

**YAMASHIN is striving to achieve reasonable business continuity and improved work-life balance for employees while prioritizing the health and safety of business partners, shareholders, employees and their families with an eye on the post-pandemic world.**

## Working arrangements: Continuing telecommuting, implementing work style reforms

**Employees who show symptoms or have had contact with a confirmed case are prohibited from going to the office and are to follow medical advice. Through this we secure employees' health and safety.**

### ① Work system at overseas subsidiaries

Telecommuting is recommended for headquarters (Naka-ku, Yokohama-shi), the Yokohama Development Center (Isogo-ku, Yokohama-shi), the Yokosuka Media Lab (Yokosuka-shi), and AQC (Osaka-shi and Chuo-ku, Tokyo).

\* Guidance for telecommuting changed from mandatory to recommended as of June 1.

### ② Implementation of staggered commuting

To avoid crowded trains, employees' commuting hours are being staggered. Additionally, teams will work in shifts to avoid crowding at offices.

### ③ Flexible working arrangements at overseas affiliates

Adoption of flexible working following infection prevention measures based on each government's directions

### ④ Other

Hand sanitizers are placed at the entrance of every facility of our corporate group in order to ensure thorough disinfection.

On-line meeting should be used for conferences and meetings.

Nonessential business trips both domestic and overseas are prohibited.

## Production system

Based on our BCP, production output has been adjusted at each facility (Cebu, Saga, Osaka, and Suzhou\* ) and an alternate production/supply system has been established.

<b>Cebu Factory</b>	Resumed operations, restored mass production
<b>Saga Factory</b>	Commenced mass production of filter materials and masks
<b>Suzhou Factory</b>	Normal operations
<small>*manufacturing outsourced</small>	
<b>Osaka Factory (AQC)</b>	Relocated headquarters factory, strengthened production capacity, commenced mask mass production

## Impact on business performance

Countries are seeking ways both to resume economic activity and to prevent the spread of the virus. The outlook remains uncertain; against this backdrop, the construction machinery market is recovering.

### Trends in the construction machinery market

#### Chinese market

Economic activity is resuming. Further growth in the construction machinery market is expected with increasing government-led public investments.

[The production plans of Chinese major clients continue to expand.](#)

#### Japan/US/Europe/Asia market

While the outlook remains uncertain, production at major clients is recovering, with economic activity resuming in stages.



**I**

**Business Performance Results for Q3 FY2020 and Full-Year Forecasts  
for FY2020**

**P5**

**II**

**Market Conditions**

**P3  
1**





**I BUSINESS PERFORMANCE RESULTS FOR  
Q3 FY2020 AND FULL-YEAR FORECASTS  
FOR FY2020**



# Q3 FY2020 Business Performance (Oct - Dec 2020)

		FY2019 Q3 Actual	FY2020 Q3 Actual	YoY change	
		Amount	Amount	Amount	%
<b>Net sales</b>		3,374	3,831	456	13.5%
	Construction machinery filters*	2,686	2,853	166	6.2%
	Air filters	687	669	△18	△2.6%
	Healthcare	0	308	308	-
<b>Operating income</b>		212	△ 96	△308	△145.5%
	Construction machinery filters*	409	370	△38	△9.4%
	Air filters	69	△1	△70	△101.7%
	Healthcare	0	△124	△124	-
	Corporate expenses*	△ 266	△341	△74	28.1%
<b>Operating income margin</b>		<b>6.3%</b>	<b>△ 2.5%</b>	<b>△8.8Pt</b>	
	Ordinary profit	214	△ 72	△287	△133.9%
<b>Ordinary profit margin</b>		<b>6.4%</b>	<b>△ 1.9%</b>	<b>△8.2Pt</b>	
	Net income	158	536	378	239.3%
<b>Net income margin</b>		<b>4.7%</b>	<b>14.0%</b>	<b>9.3Pt</b>	
Exchange rates (ave.)	USD	108.8	106.1	△2.7	△2.5%
	EUR	120.3	122.4	2.1	1.7%

\*"Construction machinery filters" here includes industrial filters and process filters in addition to construction machinery filters.

As of Q3 FY2020, the Company has changed how it allocates corporate expenses, with the goal of more accurately representing segment results and corporate expenses. Specifically, the head office's general and administrative expenses and other corporate expenses not attributable to individual business segments are no longer allocated to specific segments.



Unit: million yen

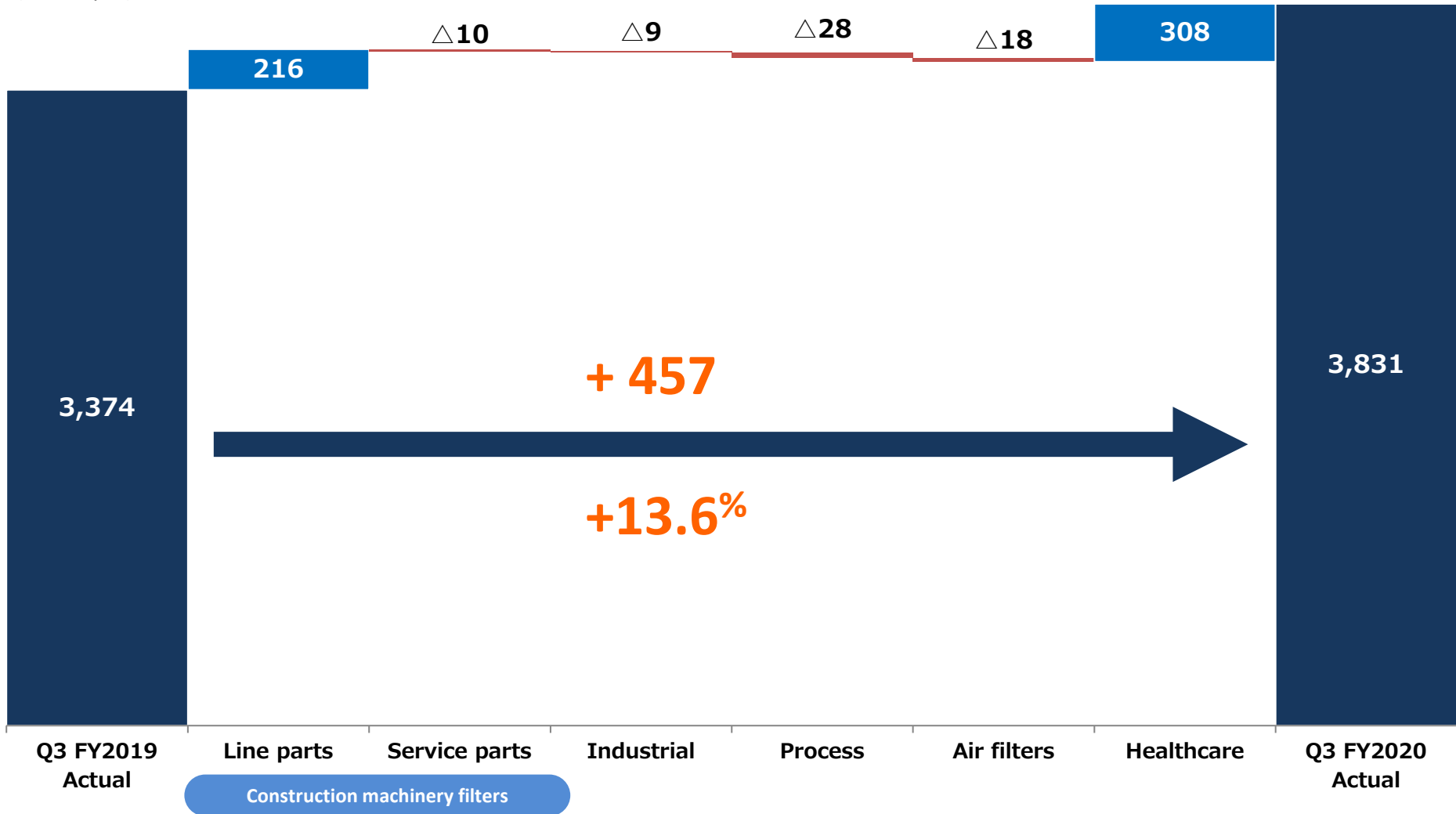
	FY2019 Q3 Actual	FY2020 Q3 Actual	YoY change	
	Amount	Amount	Amount	%
<b>Construction machinery filters</b>	2,336	2,541	205	8.8%
Line parts	910	1,127	216	23.8%
Service parts	1,425	1,414	△10	△0.8%
<b>Industrial filters</b>	115	105	△9	△8.4%
<b>Process filters</b>	235	206	△28	△12.0%
<b>Air filters</b>	687	669	△18	△2.6%
<b>Healthcare</b>	0	308	308	-
<b>Total sales</b>	3,374	3,831	457	13.6%

	FY2019 Q3 Actual		FY2020 Q3 Actual		YoY change	
	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
<b>Construction machinery filters*</b>	2,686	79.6%	2,854	74.5%	167	6.2%
Japan	1,230	36.5%	1,330	34.7%	99	8.1%
North America	591	17.5%	507	13.2%	△83	△14.2%
China	289	8.6%	454	11.9%	164	56.8%
Other Asian countries	311	9.2%	252	6.6%	△59	△19.1%
Europe	261	7.8%	309	8.1%	47	18.0%
Others (Middle East, etc)	1	0.0%	0	0.0%	0	△13.7%
<b>Air filters (Japan)</b>	687	20.4%	669	17.5%	△18	△2.6%
<b>Healthcare (Japan)</b>	-	-	308	8.0%	308	-
<b>Total sales</b>	3,374	100.0%	3,831	100.0%	457	13.6%

\* "Construction machinery filters" here includes industrial filters and process filters in addition to construction machinery filters.

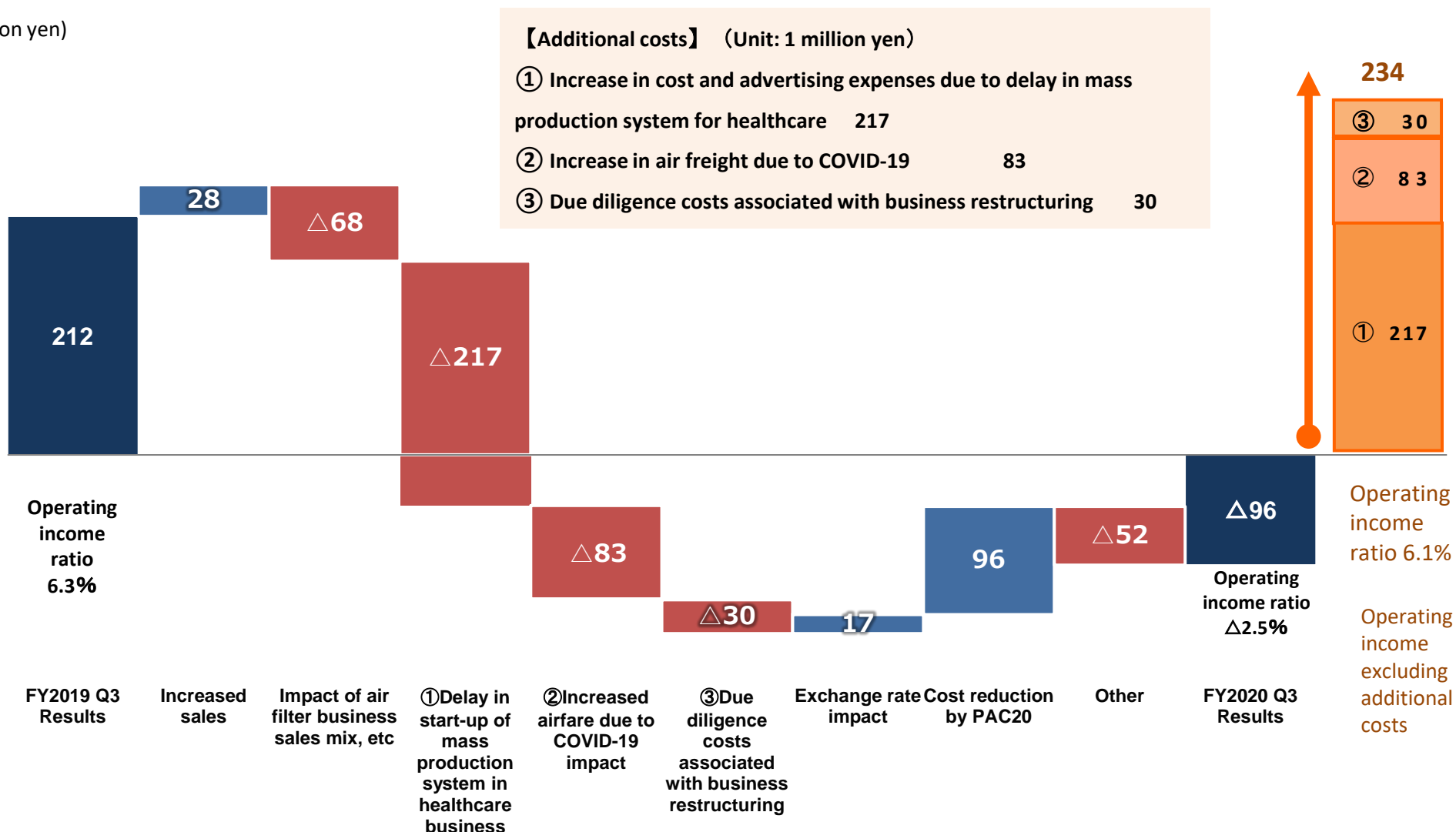
\* The amounts of sales by region here are calculated based on the locations of corporations to which invoices are sent. So actual regional market trends may be different from the numbers shown above.

(million yen)



# YoY Comparison of Oct-Dec Operating Income

(million yen)



※PAC (Promptly Activated Cost reduction) company wide cost reduction project



# Q3 FY2020 Business Performance (Apr– Dec 2020)

# YTD (2020 Apr–Dec) Business Performance

	FY2019 Q3 Actual		FY2020 Q3 Actual		YoY change	
	Amount	Amount	Amount	Amount	Amount	%
<b>Net sales</b>	9,186	10,394	1,208	13.2%		
Construction machinery filters*	8,498	7,742	△756	△8.9%		
Air filters	687	1,957	1,269	184.6%		
Healthcare	0	694	694	-		
<b>Operating income</b>	600	△146	△746	△124.3%		
Construction machinery filters	1,403	798	△605	△43.1%		
Air filters	69	37	△31	△45.6%		
Healthcare	0	△18	△18	-		
Corporate expenses	△ 872	△963	△91	10.4%		
<b>Operating income margin</b>	<b>6.5%</b>	<b>△1.4%</b>	<b>△7.9Pt</b>			
Ordinary profit	501	△133	△635	△126.6%		
<b>Ordinary profit margin</b>	<b>5.5%</b>	<b>△1.3%</b>	<b>△6.7Pt</b>			
Net income	345	384	39	11.3%		
<b>Net income margin</b>	<b>3.8%</b>	<b>3.7%</b>	<b>△0.1Pt</b>			
Exchange rate (ave.)	USD	108.8	106.1	△2.7	△2.5%	
	EUR	120.3	122.4	2.1	1.7%	

\* "Construction machinery filters" here includes industrial filters and process filters in addition to construction machinery filters.

\* As of Q2 FY2021, the Company has changed how it allocates corporate expenses, with the goal of more accurately representing segment results and corporate expenses. Specifically, the head office's general and administrative expenses and other corporate expenses not attributable to individual business segments are no longer allocated to specific segments.

# YTD (2020 Apr–Dec) Sales by Product Category

Unit: million yen

	FY2019 Q3 Actual	FY2020 Q3 Actual	YoY change	
	Amount	Amount	Amount	Ratio (%)
<b>Construction machinery filters</b>	7,429	6,841	△588	△7.9%
Line parts	3,124	2,877	△247	△7.9%
Service parts	4,304	3,964	△340	△7.9%
<b>Industrial filters</b>	370	342	△28	△7.6%
<b>Process filters</b>	699	558	△141	△20.2%
<b>Air filters</b>	687	1,957	1,270	184.9%
<b>Healthcare</b>	0	694	694	-
<b>Total sales</b>	9,186	10,394	1,208	13.2%

# YTD (2020 Apr–Dec) Sales by Region

Unit: million yen

	FY2019 Q3 Actual		FY2020 Q3 Actual		YoY change	
	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
<b>Construction machinery filters*</b>	8,498	92.5%	7,742	74.5%	△756	△8.9%
Japan	4,052	44.1%	3,503	33.7%	△549	△13.5%
North America	1,787	19.5%	1,363	13.1%	△424	△23.7%
China	878	9.6%	1,131	10.9%	253	28.8%
Other Asian countries	987	10.8%	876	8.4%	△111	△11.2%
Europe	789	8.6%	864	8.3%	75	9.5%
Others (Middle East, etc)	3	0.0%	2	0.0%	△1	△33.3%
<b>Air filters (Japan)</b>	687	7.5%	1,957	18.8%	1,270	184.9%
<b>Healthcare (Japan)</b>	-	0.0%	694	6.7%	694	-
<b>Total sales</b>	9,186	100.0%	10,394	100.0%	1,208	13.2%

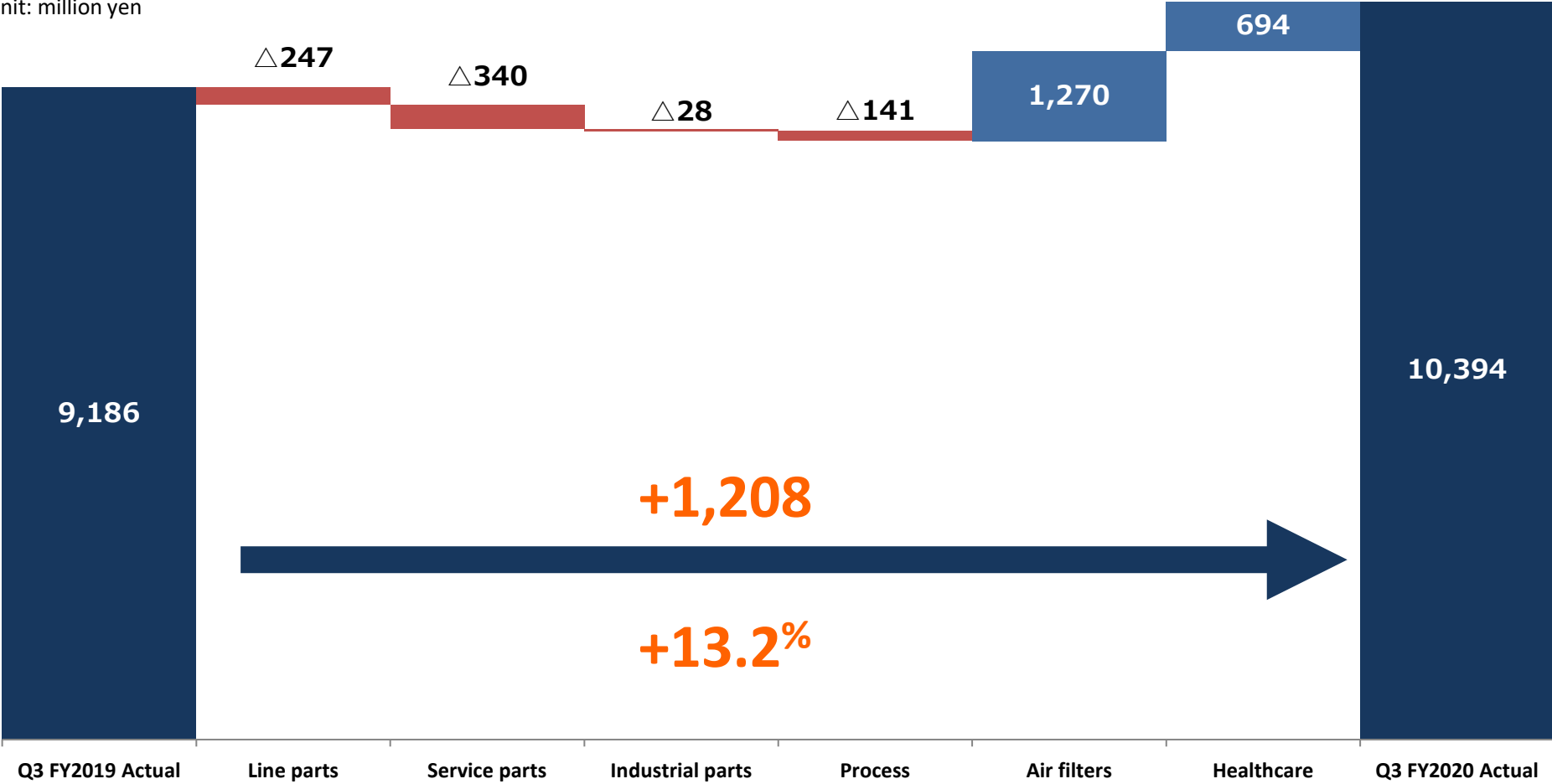
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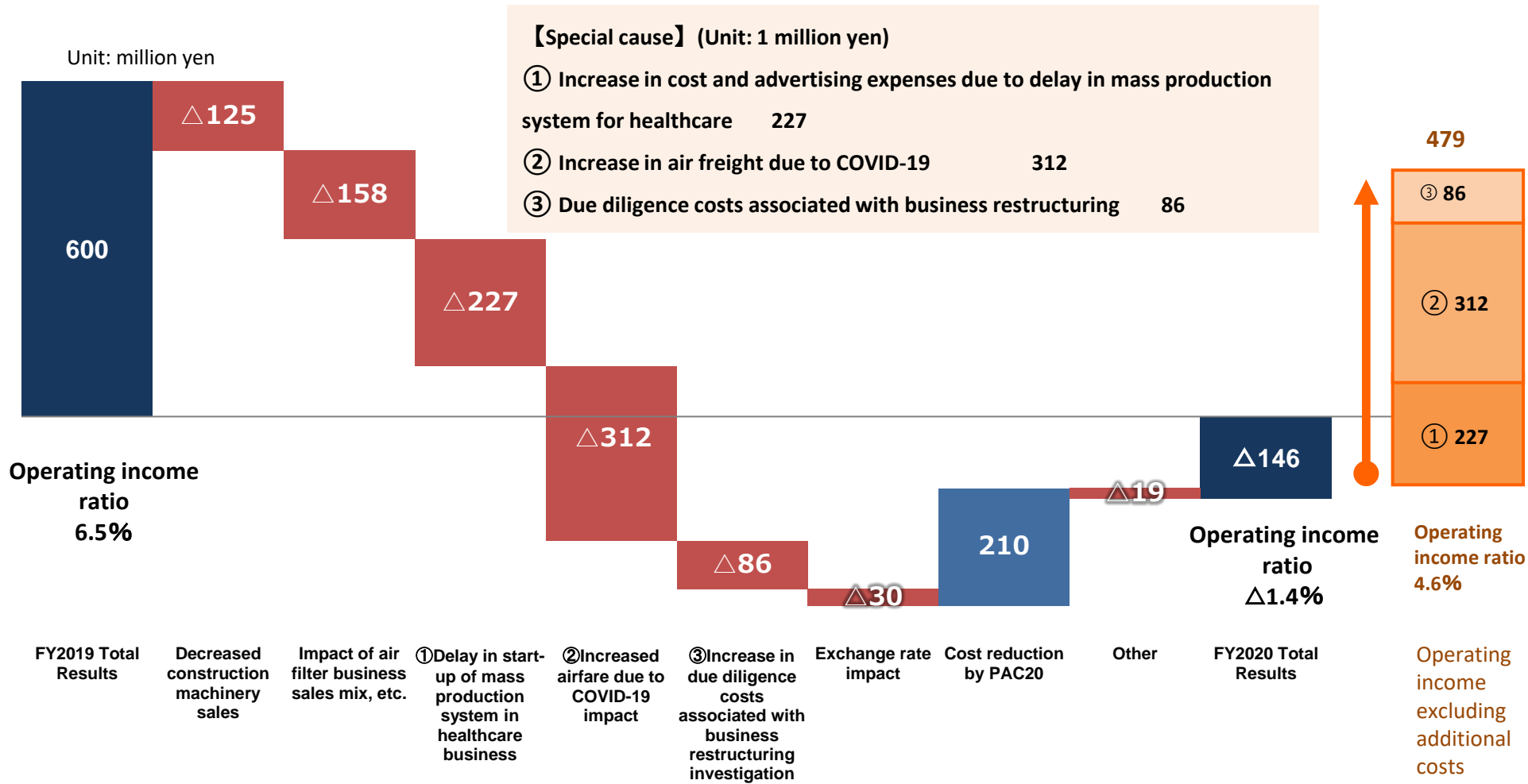
# YoY Comparison of Apr–Dec Sales

Unit: million yen



Construction machinery filters

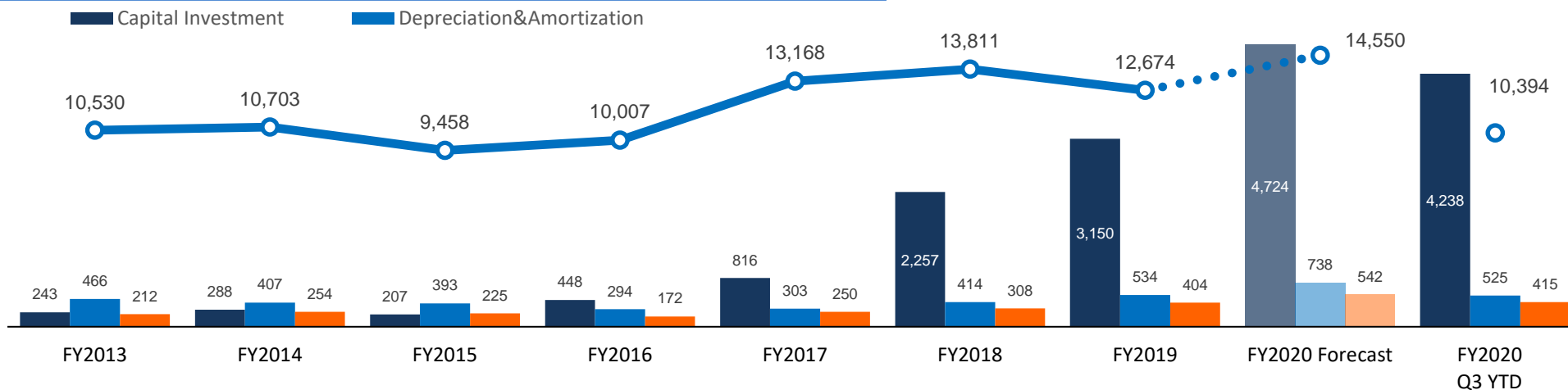
# YoY Comparison of Apr–Dec Operating Income



※PAC (Promptly Activated Cost reduction) Company-wide cost reduction project

Unit: million yen	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	3Q FY2020
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Actual
<b>Net sales</b>	10,530	10,703	9,458	10,007	13,168	13,811	12,674	14,550	10,394
Capital investment	243	288	207	448	816	2,257	3,150	4,724	4,238
Composition ratio	2.3%	2.7%	2.2%	4.5%	6.2%	16.3%	24.9%	32.5%	40.8%
Depreciation & Amortization	466	407	393	294	303	414	534	738	525
Composition ratio	4.4%	3.8%	4.2%	2.9%	2.3%	3.0%	4.2%	5.1%	5.1%
R&D expenses	212	254	225	172	250	308	404	542	415
Composition ratio	2.0%	2.4%	2.4%	1.7%	1.9%	2.2%	3.2%	3.7%	4.0%

## Change in net sales and capital investment and depreciation & amortization



Until FY 2019

FY 2020

Target figures are set at each department (administrative and other operation departments) to achieve the overall company target for MAVYS.

## What is MAVYS? (ROIC – WACC)

**M**aximizing  
**A**dded  
**V**alue of  
**Y**amashin Filter  
**S**pread

The key goal indicator (KGI), based on which each relevant department sets its KPI and KSF, and works on measures to attain targets, with the goal of maximizing return on invested capital.

Meet the expectations of stakeholders by improving MAVYS (key goal indicator).

Assign KPIs to relevant departments who are responsible for target setting and implementing actions for achieving the targets in a company-wide coordinated effort.



# MAVYS: The Big Picture and the Department

Key Goal Indicator (KGI)	Key Performance Indicator (KPI)	Key Success Factor(KSF)	Relevant departments	Targets for Q3 FY2021 (action plan)	Q3 FY2021 progress				
<b>MAVY's</b> Prv: -6.6% Cur: -10.6%	<b>Operating income</b> Prv: 6.1% Cur: 0.3%	<b>Gross profit ratio</b> Prv: 43.6% Cur: 39.8%	<b>Sales growth ratio</b> Prv: -8.2% Cur: 14.8%	<b>New product development</b> Enhance genuine products market share	<b>Sales / R&amp;D</b>	<ul style="list-style-type: none"> <li>Accelerate expansion of our market share in China targeting Chinese construction machinery manufacturers</li> <li>Enhance product line and sales propositions due to the addition of air filters to our product lineup</li> <li>Enter the mask-related product market</li> <li>Enter new business domains</li> </ul>	<ul style="list-style-type: none"> <li>Increased adoption by Chinese construction machinery manufacturers for use in new machinery.</li> <li>Progress made on proposals involving hybrid filters</li> <li>Initiated sales of mask-related products; continued mass production and supply, and progress in efforts to acquire medical-use certification</li> </ul>		
			<b>Cost to sales ratio</b> Prv: 56.4% Cur: 60.2%	<b>Enhance purchase capacity</b> Improve yield ratio	<b>Production / Procurement</b>	<ul style="list-style-type: none"> <li>PAC20, PAC20+</li> <li>Reform and improve purchasing methods</li> <li>Improve production management</li> </ul>	<ul style="list-style-type: none"> <li>Revised supplier evaluation standards and completed the consolidation process</li> <li>Reduced procurement costs through joint procurement with AQC</li> <li>Improved yields through planned service and maintenance, progress in manufacturing cost reduction measures</li> </ul>		
			<b>Depreciation cost ratio</b> Prv: 4.4% Cur: 5.0%	<b>Investment plan</b>	<b>Management planning / Finance and accounting</b>	<ul style="list-style-type: none"> <li>M&amp;A (for revenue expansion and diversification)                             <ul style="list-style-type: none"> <li>Research potential M&amp;A targets</li> <li>Acquire nonwoven manufacturing entities (downstream)</li> <li>Acquire new material development entities (upstream)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Exploring opportunities and gathering data for M&amp;A (domestic and overseas)</li> <li>Enhanced communication (through conference calls) with possible M&amp;A target companies</li> </ul>		
			<b>SG&amp;A ratio</b> Prv: 37.4% Cur: 39.5%	<b>R&amp;D cost ratio</b> Prv: 3.2% Cur: 3.9%	<b>Narrowing down themes</b> Prioritization	<b>R&amp;D</b>	<ul style="list-style-type: none"> <li>Develop new materials</li> <li>Actions to achieve IoT</li> <li>Develop aeration and other technologies</li> <li>Expand mask product line</li> </ul>	<ul style="list-style-type: none"> <li>Accelerated the commercialization of nanofiber air filters</li> <li>Supplied various trial sensor products to clients</li> <li>Accelerated new materials development through industrial/academic partnerships</li> <li>Developed high-performance masks and cloth masks</li> <li>Effort made to obtain medical certification</li> </ul>	
			<b>Personnel cost ratio</b> Prv: 15.9% Cur: 16.2%	<b>Optimal staffing</b>	<b>HR and General Affairs</b>	<ul style="list-style-type: none"> <li>Establish and implement the talent management system</li> </ul>	<ul style="list-style-type: none"> <li>Efforts to identify the next generation of management talent</li> <li>Increased R&amp;D staff for product development</li> <li>Hired specialist staff members to assist in company reorganization and growth</li> </ul>		
			<b>Accounts receivable turnover rate</b> Prv: 3.8 Cur: 4.5	<b>Credit management</b>	<b>Sales / Finance and accounting</b>	<ul style="list-style-type: none"> <li>Further optimize AR collection</li> </ul>	<ul style="list-style-type: none"> <li>Streamlined and optimized AR collection for improving working capital</li> </ul>		
			<b>Operating capital turnover rate</b> Prv: 3.0 Cur: 6.7	<b>Inventory turnover rate</b> Prv: 6.1 Cur: 8.2	<b>Set appropriate inventory level</b>	<b>Production / sales</b>	<ul style="list-style-type: none"> <li>Reduce company-wide inventory asset</li> </ul>	<ul style="list-style-type: none"> <li>Determined suitable inventory levels based on pareto analysis; currently implementing inventory reduction plans</li> </ul>	
			<b>Investment capital turnover rate</b> Prv: 0.7 Cur: 0.7	<b>Accounts payable turnover rate</b> Prv: 5.8 Cur: 6.3	<b>Debt management</b>	<b>Procurement</b>	<ul style="list-style-type: none"> <li>Improve working capital</li> </ul>	<ul style="list-style-type: none"> <li>Optimized AP turnover ratio for improving working capital</li> </ul>	
			<b>ROIC</b> Prv: 3.3% Cur: -0.7%	<b>FA turnover rate</b> Prv: 1.9 Cur: 1.4	<b>Tangible fixed asset turnover rate</b> Prv: 2.5 Cur: 1.5	<b>Equipment plan (R&amp;D, production)</b>	<b>Management planning Administration / Production / R&amp;D</b>	<ul style="list-style-type: none"> <li>Optimize investment recovery effect</li> </ul>	<ul style="list-style-type: none"> <li>Prioritized R&amp;D and capital investments by analyzing the validity of investment return period</li> </ul>
			<b>WACC</b> Prv: 9.9% Cur: 9.9%	<b>Intangible fixed asset turnover rate</b> Prv: 35.5 Cur: 43.7	<b>Investment plan</b>	<b>Management planning</b>	<ul style="list-style-type: none"> <li>Formulate IP strategies and action plans</li> </ul>	<ul style="list-style-type: none"> <li>Established strategies, devised action plans, and enhanced training for targeted group</li> <li>Actively applied for patents in Chinese market</li> </ul>	
<b>ROE</b> Prv: 3.3% Cur: 2.5%									
<b>ROA</b> Prv: 2.9% Cur: 2.2%									

\*KPI figures are based on the following.  
 Prv : FY2019 (Actual)  
 Cur : FY2020 (Forecast)

Implement comprehensive improvements in production technology, operation management and systems to strengthen the profit structure.

**PAC20**



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ost reduction

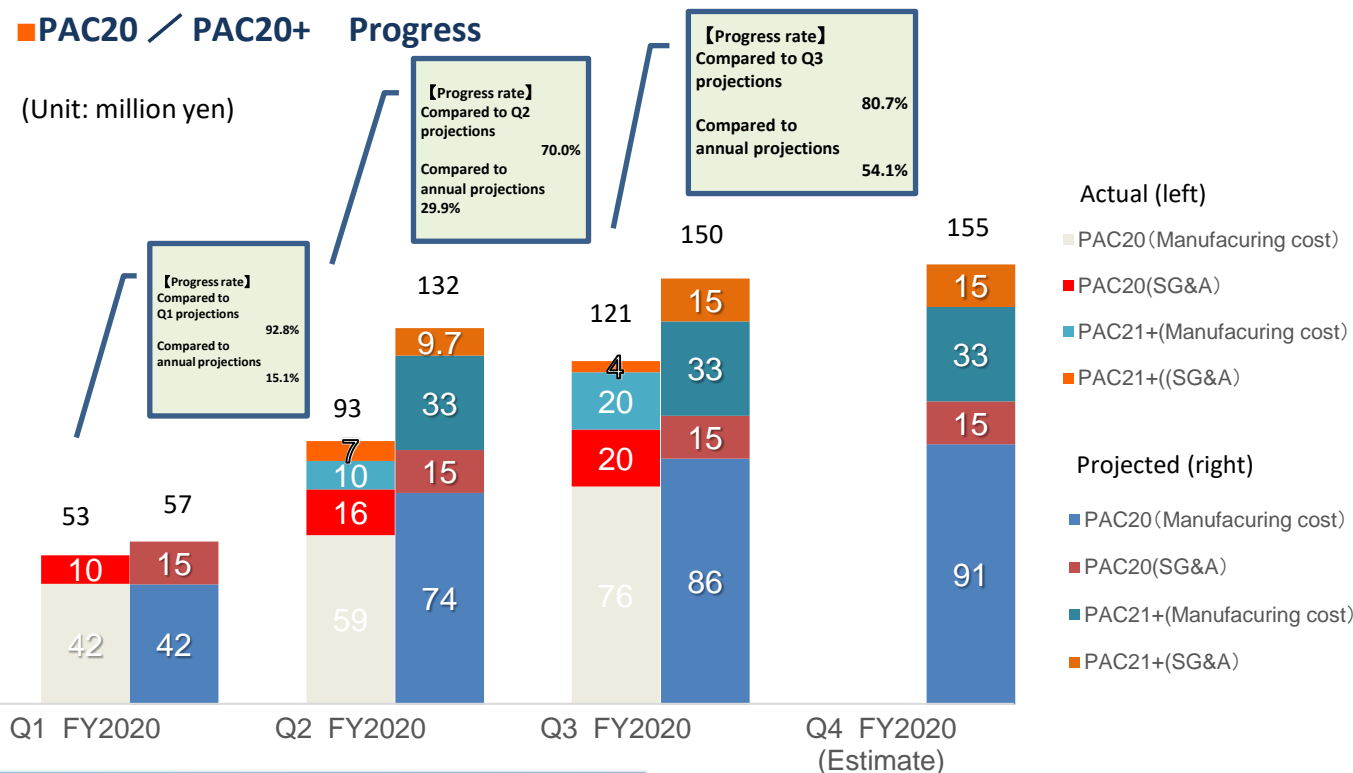
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By reviewing the supply chain and continuing to improve the manufacturing process,  
We will implement further cost reductions (PAC20+) to achieve improved profitability

■ PAC20 / PAC20+ Progress

(Unit: million yen)



■ Annual Reduction Target

Unit: million yen	Manufacturing cost	SG&A	Total
PAC20	293	61	355
PAC20+	100	40	140
<b>Total</b>	<b>393</b>	<b>101</b>	<b>495</b>

■ Q1-3 total reduction amount and progress rate

Unit: million yen	Manufacturing cost	SG&A	Total
PAC20	177	47	225
PAC20+	31	11	43
<b>Total</b>	<b>209</b>	<b>58</b>	<b>268</b>
<b>Progress rate</b>	<b>53.2%</b>	<b>57.4%</b>	<b>54.1%</b>

# Full-year Forecasts for FY2020

## Construction machinery filters (Existing business line)

- Recovery in the supply parts business due to increased operating hours of construction machinery resulting from the resumption of economic activities in various countries, and significant improvement in new vehicle production activities of major customers.
- This has resulted in a solid recovery in demand for our products. Sales forecasts are expected to increase.
- Earnings forecasts were adjusted due to weak profits resulting from soaring transportation costs caused by the global container shortage and the continued accrual of air freight costs related to material procurement and delivery to customers.

## Air filters (Existing business line)

- Due to the decrease in demand for filter replacements caused by the decline in the utilization rate of office buildings and the decrease in the number of railroad operations during the COVID-19 pandemic, we expect a decrease in income and profits, and have revised our business forecasts.

## Healthcare business (New business line)

- Due to the significant delay in the supply of the world's first three-dimensional nanofiber materials used for masks for supply to the drugstore market, etc. due to the time required to establish a mass production system for the material, and due to not being able to sufficiently reduce the cost, we have revised our business forecasts.

## Risk management

- In order to maintain the health and safety of employees, we have adjusted working arrangements to suit each location (through instigating telecommuting and staggered commuting).
- As a BCP, production and supply systems are being decentralized

Unit: million yen

		FY2019 Actual	FY2020 Forecasted Revised Aug4	FY2020 Forecasted Revised Nov4	FY2020 Forecasted Current revision	Difference
		Amount	Amount	Amount	Amount	Amount
<b>Net sales</b>		12,674	15,000	16,000	14,550	△1,450
	Construction machinery filters*	11,296	10,000	10,000	10,950	950
	Air filters	1,377	3,000	3,000	2,600	△400
	Healthcare	-	2,000	3,000	1,000	△2,000
<b>Operating income</b>		777	1,230	1,300	40	△1,260
	Construction machinery filters*	1,894	1,583	1,353	1,310	△43
	Air filters	122	290	290	50	△240
	Healthcare	-	640	910	△40	△950
	Corporate expenses	△1,240	△1,283	△1,253	△1,280	△27
<b>Operating income margin</b>		<b>6.1%</b>	<b>8.2%</b>	<b>8.1%</b>	<b>0.3%</b>	<b>△7.8Pt</b>
	Ordinary profit	603	1,200	1,280	60	△1,220
<b>Ordinary profit margin</b>		<b>4.8%</b>	<b>8.0%</b>	<b>8.0%</b>	<b>0.4%</b>	<b>△7.6Pt</b>
	Net income	608	790	1,350	500	△850
<b>Net income margin</b>		<b>4.8%</b>	<b>5.3%</b>	<b>8.4%</b>	<b>3.4%</b>	<b>△5.0Pt</b>
Exchange rate (JPY)	USD	108.8	108.0	108.0	108.0	-
	EUR	120.83	121.0	121.0	121.0	-

\*Construction machinery filters” includes industrial filters and process filters, in addition to construction machinery filters.

In order to identify the business performance and corporate expenses of each segment more accurately, we have switched to a method of not allocating to a specified segment corporate expenses which do not belong to a specific segment of the Company, such as general and administrative expenses of the administrative division of the head office, from the Q2 of FY2020.

# Sales Forecast by Segment (Product Category)

Unit: million yen

	FY2019 Actual		FY2020 Forecasted Revised 8/4/2020		FY2020 Forecasted Revised 11/4/2020		FY2020 Forecasted Current revision		Difference	
	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio
<b>Construction machinery filters</b>	9,866	77.8%	8,673	57.8%	8,673	54.2%	9,704	66.7%	1,031	11.9%
Line parts	4,129	32.6%	3,665	24.4%	3,665	22.9%	4,197	28.9%	532	14.5%
Service parts	5,737	45.3%	5,008	33.4%	5,008	31.3%	5,506	37.8%	498	10.0%
<b>Industrial filters</b>	492	3.9%	420	2.8%	420	2.6%	462	3.2%	41	9.8%
<b>Process filters</b>	937	7.4%	905	6.0%	905	5.7%	783	5.4%	△122	△13.5%
<b>Total of existing businesses</b>	11,296	89.1%	10,000	66.7%	10,000	62.5%	10,950	75.3%	950	9.5%
<b>Air filters</b>	1,377	10.9%	3,000	20.0%	3,000	18.8%	2,600	17.9%	△400	△13.3%
<b>Healthcare</b>	0	0.0%	2,000	13.3%	3,000	18.8%	1,000	6.9%	△2,000	△66.7%
<b>Total sales</b>	12,674	100.0%	15,000	100.0%	16,000	100.0%	14,550	100.0%	△1,450	△9.1%

# Sales Forecast by Segment (Region)

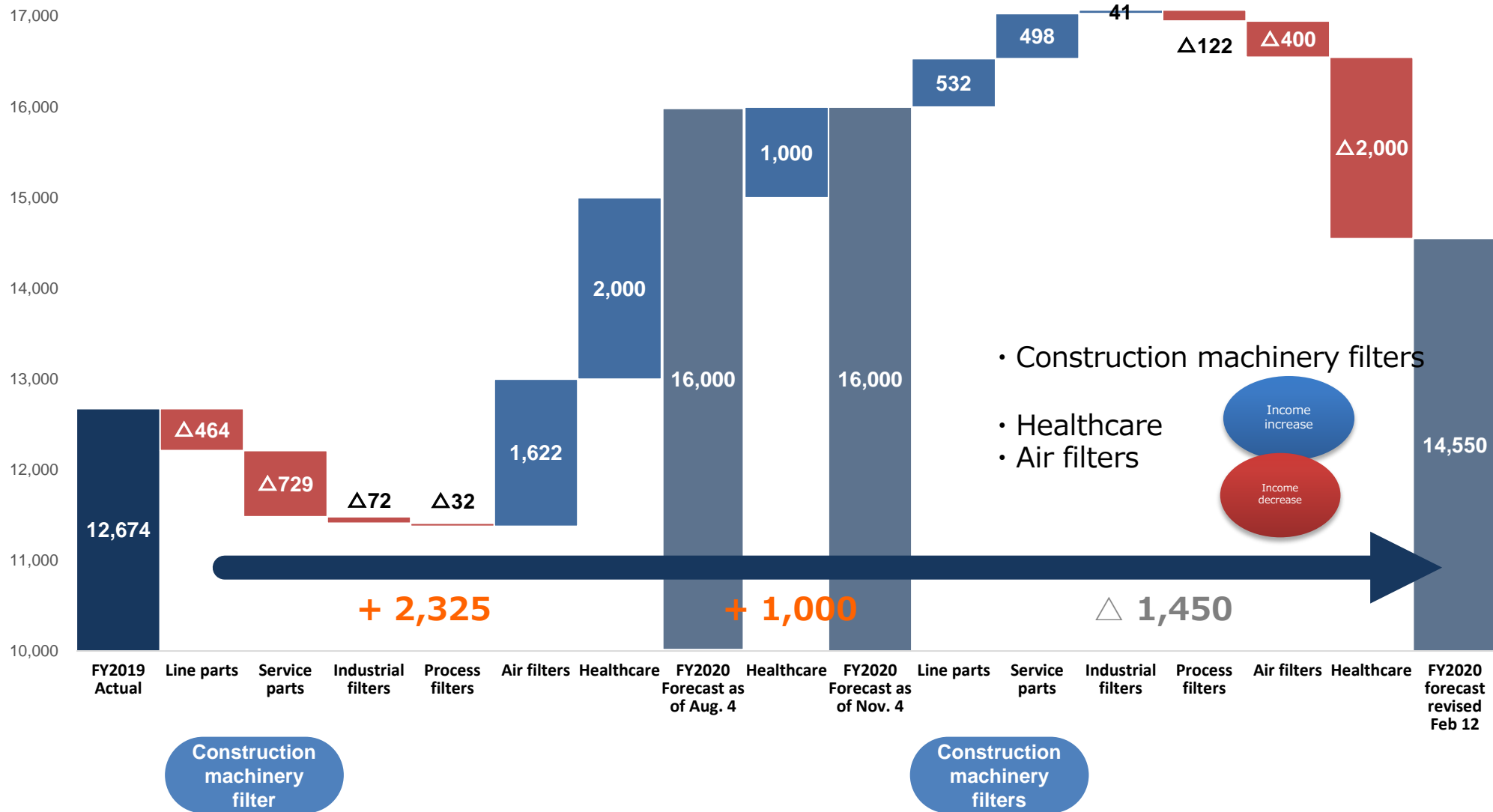
Unit: million yen	FY2019 Actual		FY2020 Forecasted Revised 8/4/2020		FY2020 Forecasted Revised 11/4/2020		FY2020 Forecasted Current revision		Difference	
	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio
<b>Construction machinery filters*</b>	11,296	89.1%	10,000	66.7%	10,000	68.7%	10,950	75.3%	950	9.5%
Japan	5,420	42.8%	4,587	30.6%	4,587	31.5%	4,860	33.4%	273	6.0%
North America	2,313	18.3%	2,081	13.9%	2,081	14.3%	2,112	14.5%	31	1.5%
China	1,173	9.3%	1,212	8.1%	1,212	8.3%	1,576	10.8%	364	30.1%
Other Asian countries	1,319	10.4%	1,250	8.3%	1,250	8.6%	1,257	8.6%	7	0.6%
Europe	1,065	8.4%	845	5.6%	845	5.8%	1,139	7.8%	294	34.8%
Others (Middle East, etc.)	4	0.0%	23	0.2%	23	0.2%	2	0.0%	△21	△91.2%
<b>Air filters (Japan)</b>	1,377	10.9%	3,000	20.0%	3,000	20.6%	2,600	17.9%	△400	△13.3%
<b>Healthcare (Japan)</b>	0	0.0%	2,000	13.3%	3,000	20.6%	1,000	6.9%	△2,000	△66.7%
<b>Total sales*</b>	12,674	100.0%	15,000	100.0%	16,000	110.0%	14,550	100.0%	△1,450	△9.1%

\* "Construction machinery filters" includes industrial filters and process filters, in addition to construction machinery filters.

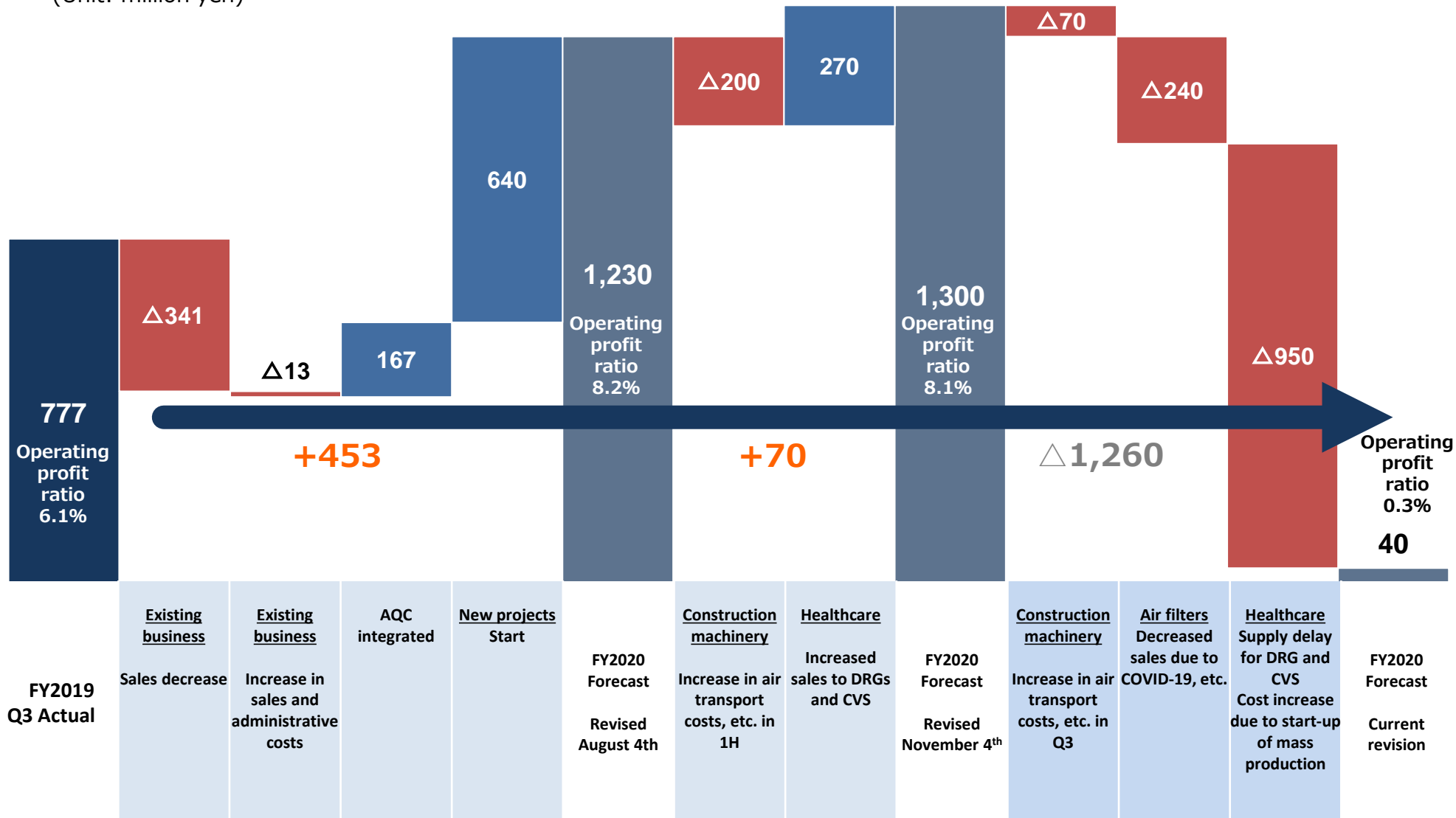
\* The amounts of sales by region here are calculated based on the locations of corporations to which invoices are sent. So actual regional market trends may be different from the numbers shown above.



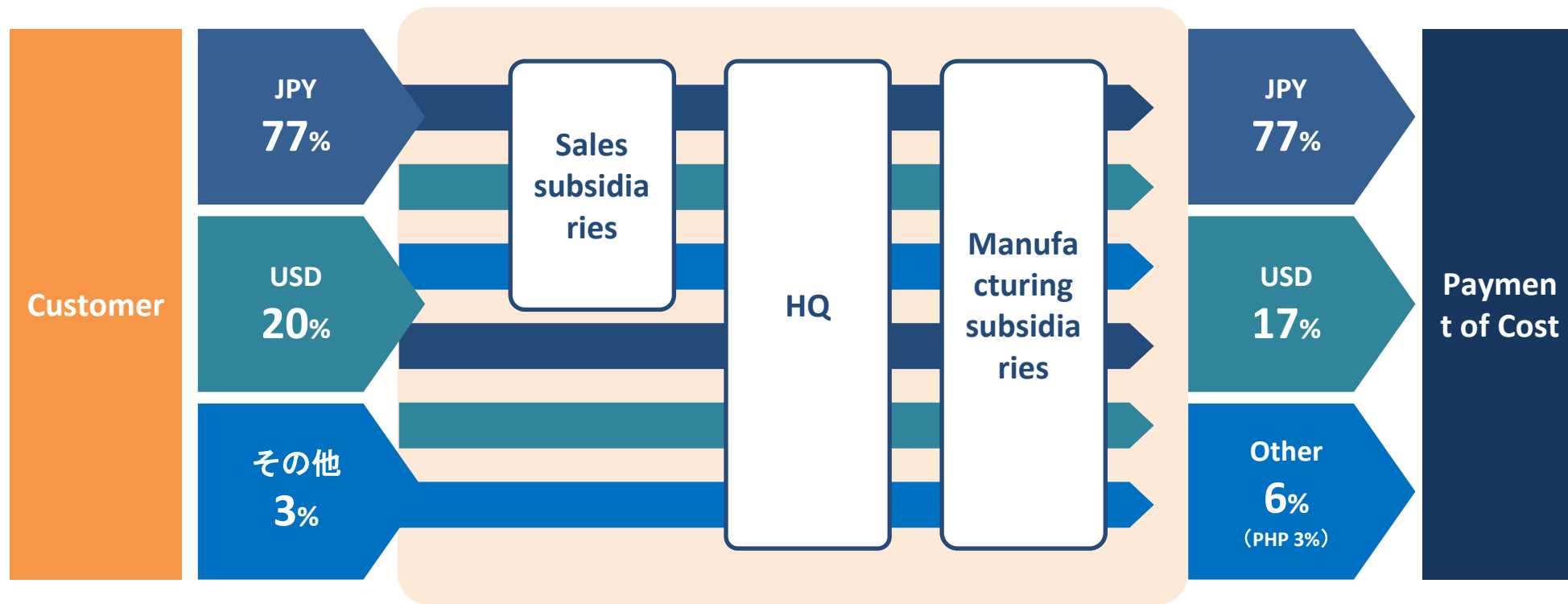
(Unit: million yen)



(Unit: million yen)



Operational hedge “marry and netting” was successfully conducted.



80% of transaction currency is JPY.

Operational hedge “marry and netting” was successfully conducted for USD.

- 1-yen appreciation of the yen would increase operating income about 3 million yen.

The annual dividend, including the interim dividend of 3.0 yen and the year-end dividend of 3.0 yen, will remain unchanged at 6.0 yen per share.

	FY2017	FY2018	FY2019	FY2020 Forecast
<b>Dividend per share</b>	3.6 yen <sup>※1</sup>	6.0 yen	6.0 yen	6.0 yen
<b>DOE<sup>*2</sup></b>	1.9%	2.4%	2.3%	2.2%
<b>Total return ratio<sup>*3</sup></b>	21.6%	31.9%	72.3%	93.6%

\*1. The Company conducted a 5-for-1 stock split that became effective on December 1, 2017, and the dividend for FY2017 is calculated based on the stock split.

\*2. DOE (Dividend on equity) = (Annual dividend ÷ Shareholders' equity) × 100 = (ROE × Dividend payout ratio)

\*3 Total return ratio = (Total dividend + Treasury stock acquired + Shareholder benefit) ÷ Net income



市場

## II MARKET CONDITIONS

# Conditions in the Construction Machinery Market

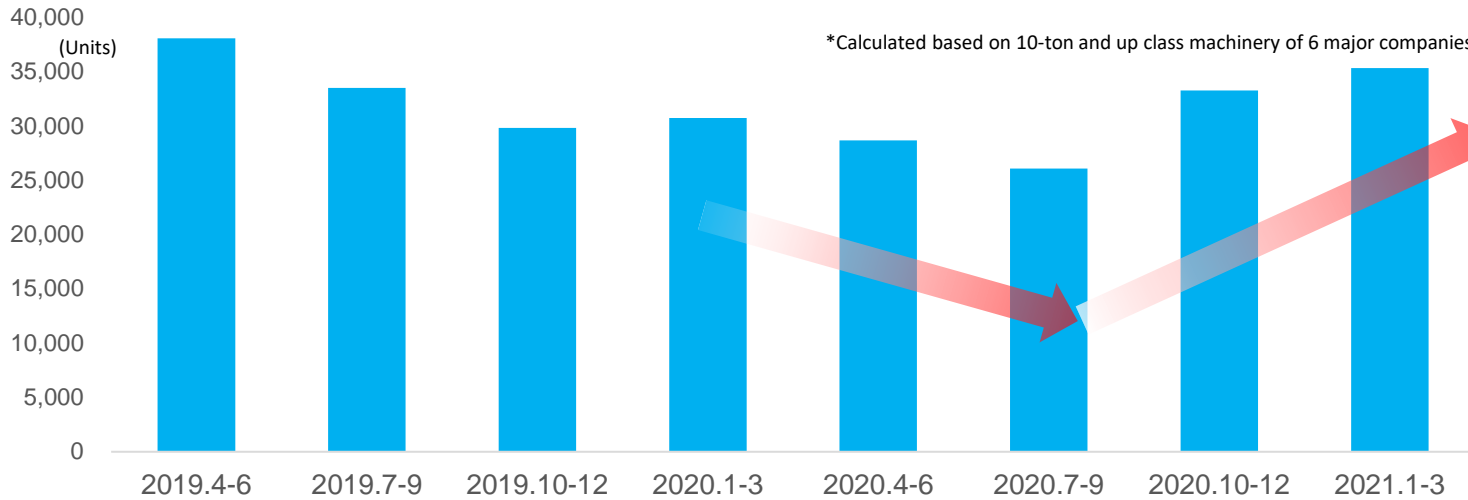


- Indications emerged in Q3 FY2020 of the resumption of economic activity in various countries after stagnating due to COVID-19. However, construction machinery demand decreased in the Japan/US/Europe/Asia market; the outlook remains unclear. Demand is expected to recover as economic activity resumes.
- In the Chinese market, the world's largest construction machinery market, demand for construction machinery is expected to increase due to plans for large-scale public works investment led by the government.

	Q2 FY2020	Q3 FY2020	Future forecasts
China	Implementation of large-scale government-led public works investment promotions Significant increases in new machinery sales year on year	Significant increase in demand for new vehicles due to the effects of government-led investment and consumption stimulus measures aimed at increasing industry subsidies	Demand is expected to increase due to an increase in public works projects to expand domestic demand and rush demand for Tier 4 compliance scheduled for FY2022 and beyond.
Southeast Asia	Anti-government protests and stagnant economic activity have reduced demand for construction machinery	Uncertainty about the future remains and the market is bearish.	Outlook remains uncertain due to sluggish demand for resources and other factors, and is expected to remain bearish.
North America	Economic activity is gradually resuming, and demand for construction machinery is recovering	Production activity, which had been stagnant, is recovering to the same level as the previous year, although the effects of the third COVID-19 wave linger.	Demand recovery is expected.
Japan	Economic activity is gradually resuming, and demand for construction machinery is recovering	Demand for construction machinery is recovering although the effects of the third COVID-19 wave linger.	Demand recovery is expected.
Europe	Economic activity has resumed, and demand for construction equipment is also recovering and there are concerns that the second wave of COVID-19 will cause another lockdown	Production activity, which had been stagnant, is recovering to the same level as the previous year, although the effects of the third COVID-19 wave linger.	Demand recovery is expected.

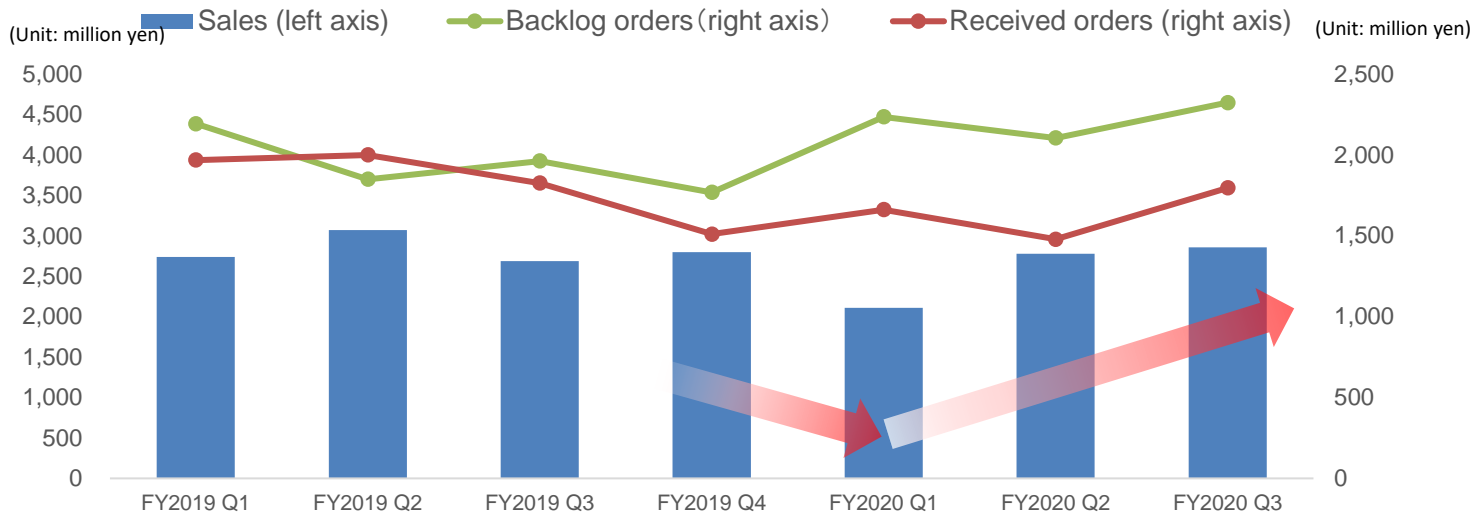


### Total Production and Production Plans of Major Construction Machinery Manufacturers(Quarterly)



Manufacturers of construction machinery plan to boost production after hitting bottom in the July-September quarter.

### YAMASHIN Construction Machinery Filter Sales and Confirmed Orders (Quarterly)



Recovering production at major customers  
↓  
Expected demand recovery for YAMASHIN products

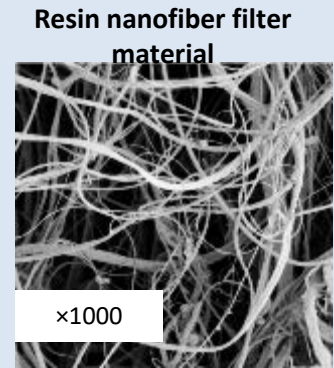
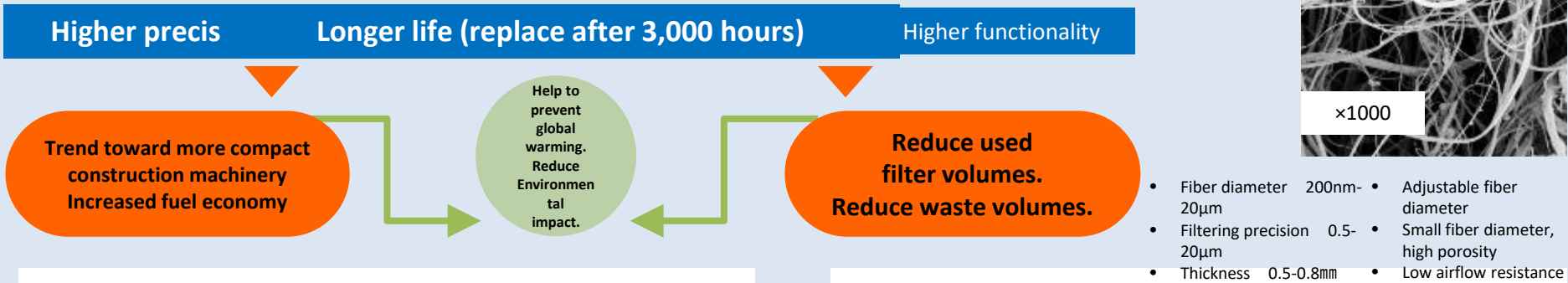
**Position high value-added filter products** (long-life, IoT) as strategic products; expand product lineup; pursue sales activities



Increasing market share to the level of practical application in the next few years

Develop proprietary filter materials to target demand created by construction machinery upgrades and provide optimal filter performance.

## Leveraging resin nanofiber fiber materials



- Fiber diameter 200nm-20µm
- Filtering precision 0.5-20µm
- Thickness 0.5-0.8mm
- Adjustable fiber diameter
- Small fiber diameter, high porosity
- Low airflow resistance

**FILTER SAVER**  
(IC tag reader incorporating integrated differential pressure sensor)

Patent pending

**Dual-function sensor**

<b>【IC tag reader】</b> Identifies the use of genuine products	<b>【Differential pressure sensor】</b> Predictive monitoring of filter lifespan
--	---

**SWIFTROCK (contamination level sensor)**  
※SWIFT Real time Oil Checker

- Sensor that identifies the concentrations of particles in hydraulic fluid
- Works with various types of fluid.
- Detects contamination levels in hydraulic fluid in real time; constantly monitors construction machinery status to enable failure forecasts

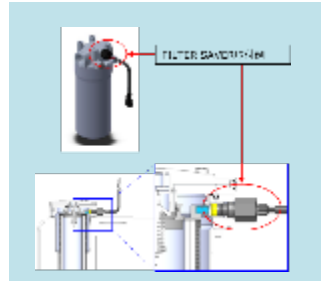
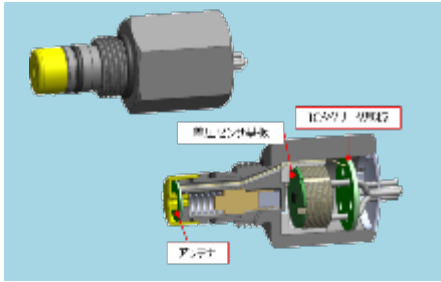
Testing using filter products is underway in collaboration with clients.

Help cut costs for construction machinery manufacturers and users.

Eliminate use of third-party products/increase sales of genuine YAMASHIN products.

## FILTER SAVER™

( IC tag reader incorporating integrated differential pressure sensor )



### User Benefits

**Integrated sensors and real-time monitoring reduces user burdens, boosts satisfaction.**

#### Overwhelming assurance

- Makes the most of machine asset value.
- Reduces risk of machine failure.
- Cuts costs by switching from scheduled periodic replacement to replacement as needed

### Distributor Benefits

**Making filter status clearly visible makes distributor activities more efficient.**

#### Increased efficiency Improved cost-effectiveness

- Improves grasp of order planning requirements.
- Ensures users are supplied genuine parts
- Increases efficiency of sale rep activities.

### Increases efficiency of sale rep activities.

**Integrated sensors meet a wide range of needs, from user service improvements to parts management.**

#### Higher quality

- Monitors status in real time.
- Improves precision of distributor activity management.
- Monitors for use of unauthorized third-party products.

## SWIFTROCK™

(contamination level sensor)



Standard



Light

Contamination monitoring specifically targets solid particles like wear debris, the most common cause of failure in hydraulic lubricators, while disregarding air bubbles in the lubricant. As a strong partner in the age of IoT, SWIFTROCK Light detects abnormal wear debris and where it originates to maintain reliable operations and productivity.

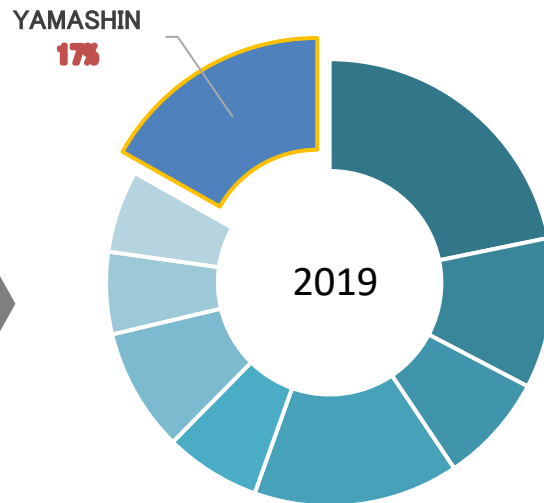
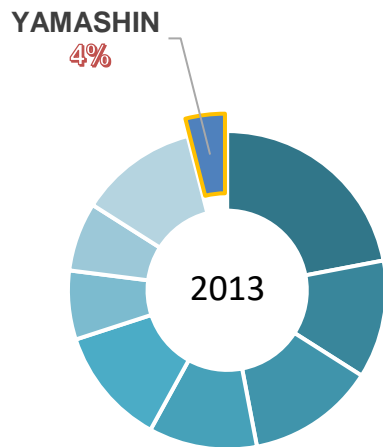
### Six Strengths

<b>01</b> Reduce initial costs	<b>02</b> Countermeasure to air bubbles	<b>03</b> Accommodates flow level fluctuations
<b>04</b> High pressure resistance	<b>05</b> Heat resistant	<b>06</b> Constant real-time monitoring

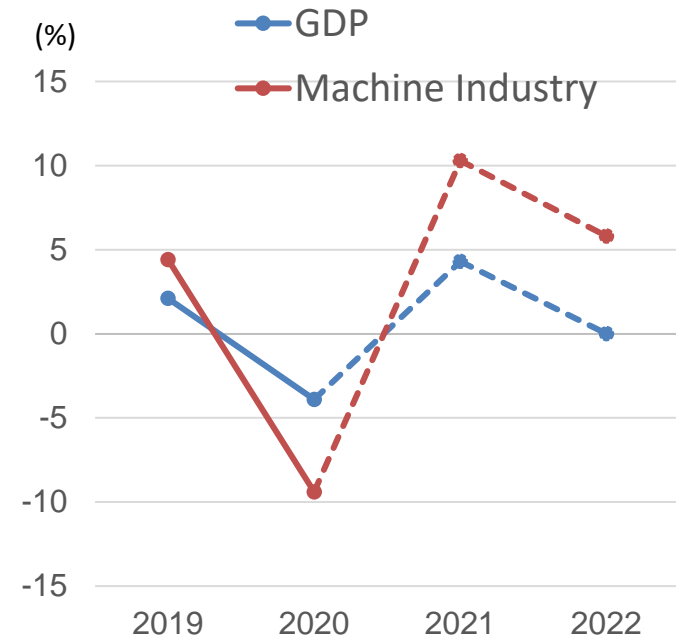
U.S. Economic Indicators	2018 Avg.	2019 Avg.	JAN. 2020	JAN. 2021	CHANGE 1 YEAR
PMI (Purchasing Managers' Index)	56.30	56.10	47.80	60.70	+26%
Housing Starts (Number of residences starting construction in the US)	1.22 Million	1.18	1.37 Million	1.54 Million	+12%
Met + Mat Index Metals and Minerals Price Index	75.39	88.57	76.22	90.28	+18%

## Expanding our share of the world's largest construction equipment manufacturers

- Company A
- Company B
- Company C
- Company D
- Company E
- Company F
- Company G
- Others
- YAMASHIN



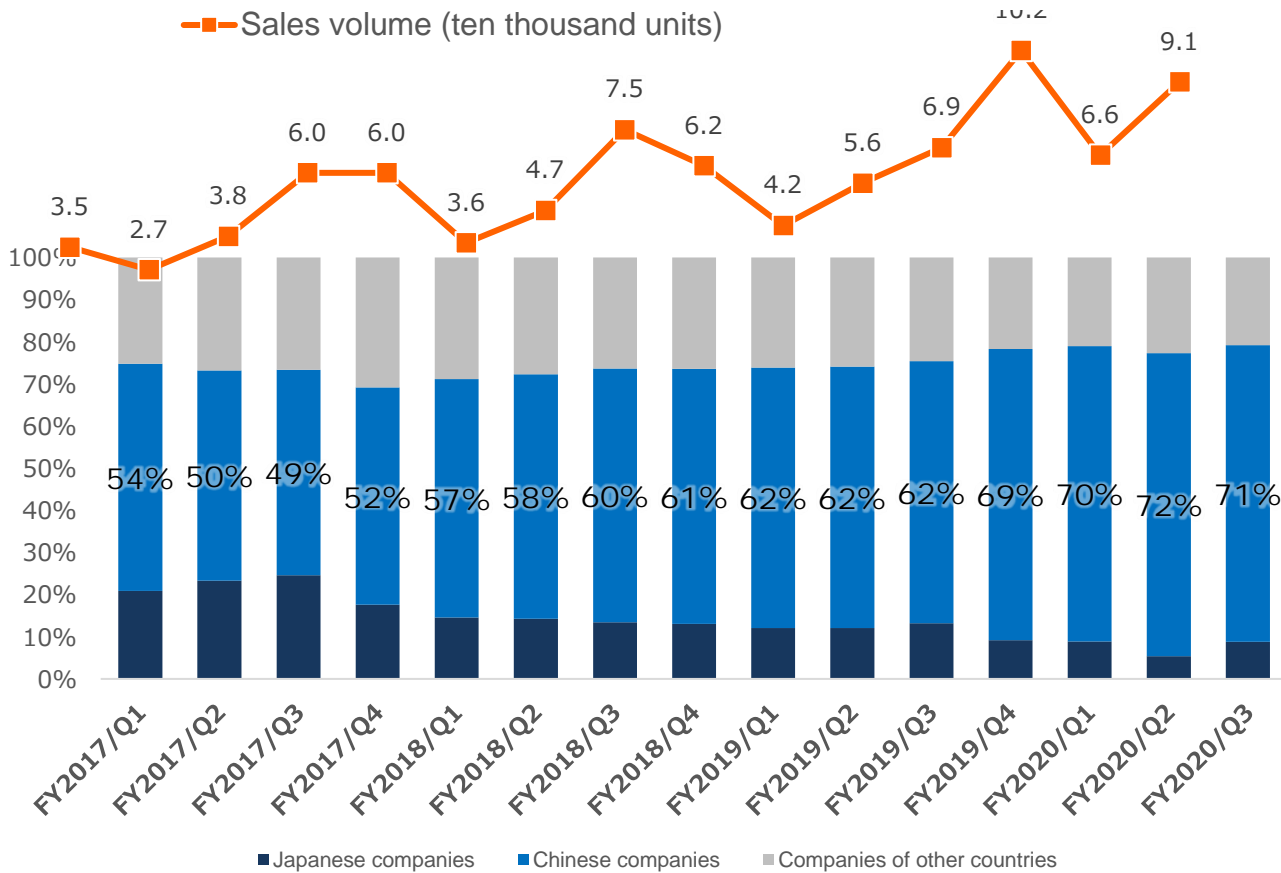
## NORTH AMERICA CONSTRUCTION MACHINERY DEMAND



- Strong demand for construction machinery in China continued due to the support of large-scale public investment
- Continuing market share growth of Chinese construction machinery manufacturers: more than 70%
- Expected further growth in new machinery demand due to Tier 4 environmental regulations

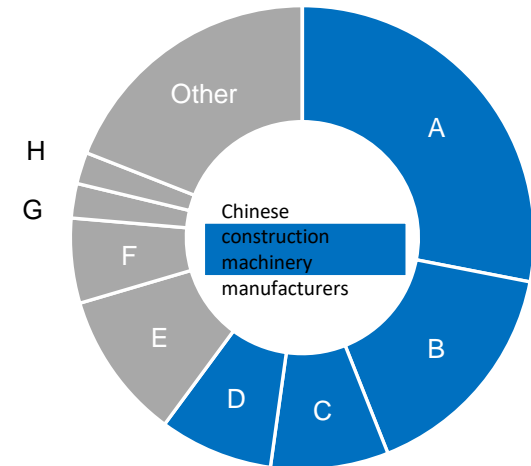
Focusing on proposals to Chinese construction machinery manufacturers Working to rapidly increase our market share

## Sales volume and share in Chinese market (Quarterly trends)



## Share of Major Construction Machinery Manufacturers in Chinese Market

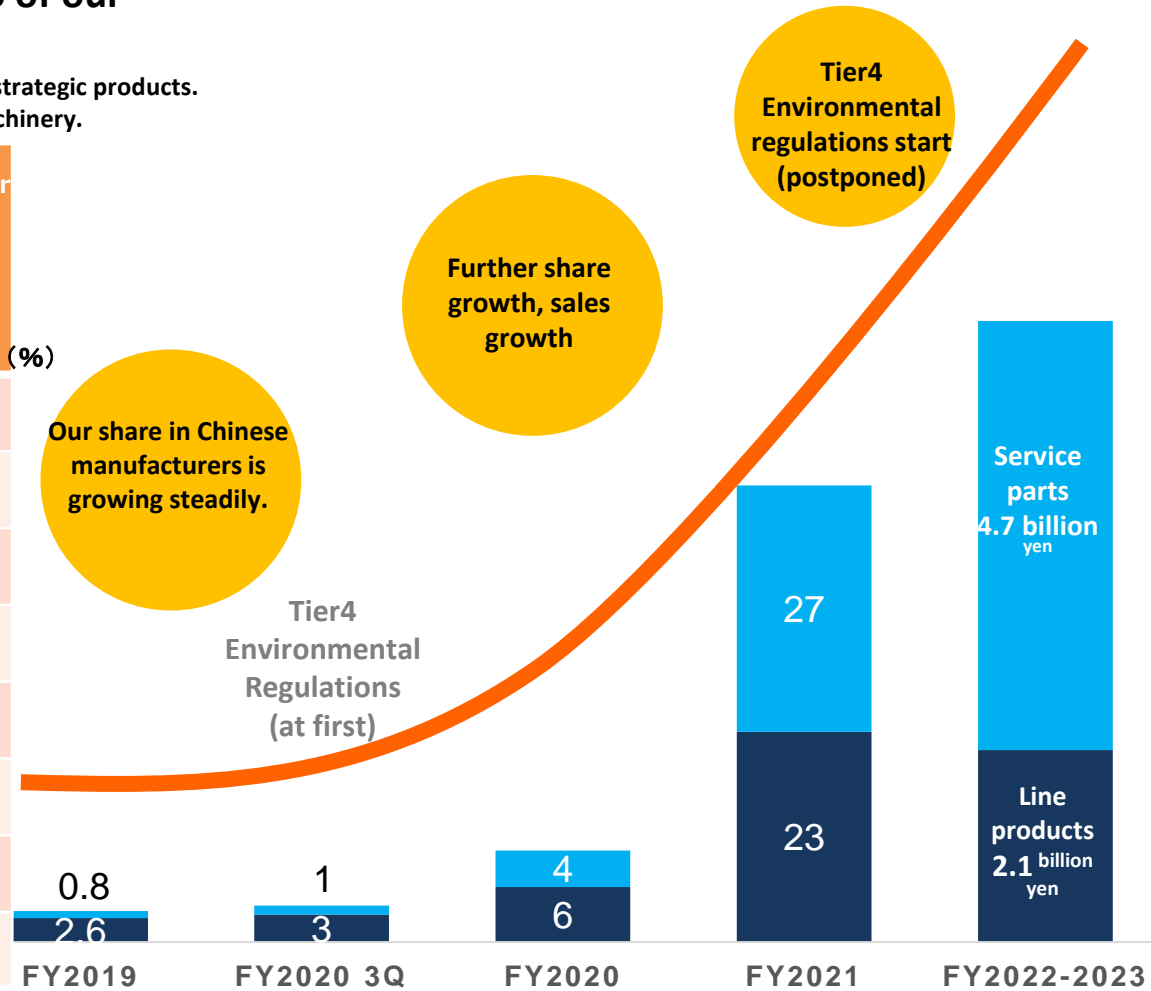
(2020 End of December)



## Strengthen initiatives to increase adoption ratio of our filters for new construction machinery.

- Conduct sales activities with high value-added products positioned as strategic products.
- Cooperate with partners with strengths in the area of construction machinery.

Chinese manufacturers	Our share as of FY2019	Our share as of December 2019 Adoption rate based [Order rate based]	Our target share in FY2020 Adoption rate based [Order rate based]	Progress rate as of December 2020 Adoption rate based [Order rate based] (%)
a	0	⇒ 66 [1]	⇒ 66 [5]	100 [20]
b	0	⇒ 100 [45]	⇒ 100 [50]	100 [90]
c	25	⇒ 100 [50]	⇒ 100 [60]	100 [83]
d	0	⇒ 100 [71]	⇒ 100 [80]	100 [88]
e	20	⇒ 100 [7]	⇒ 100 [20]	100 [35]
f	0	⇒ 39 [38]	⇒ 44 [40]	88 [95]
g	24	⇒ 5 [5]	⇒ 24 [10]	20 [50]
h	0	⇒ 30 [0]	⇒ 22 [5]	136 [0]
<b>Avg</b>	<b>9%</b>	⇒ <b>67%</b> [27%]	⇒ <b>70%</b> [34%]	<b>93%</b> [79%]



### Product lineup expansion and pricing strategy

- Supply of high value-added products (long life, IoT)
- Development of pricing strategy to expand sales of existing products

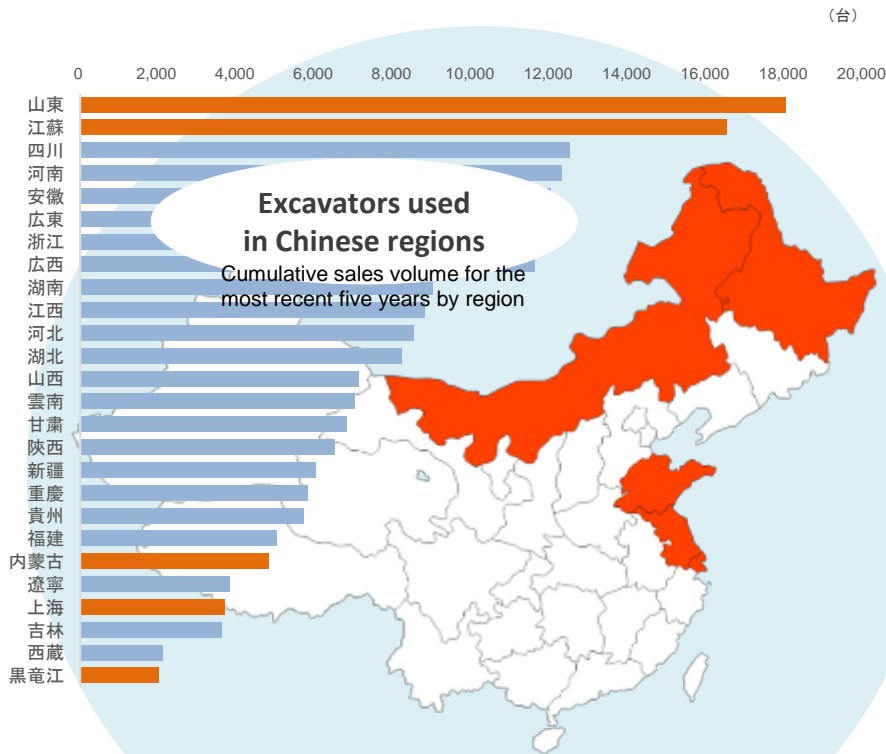
### Growth plan

### Development of sales strategy leveraging our brand

- Direct transactions with distribution agents after expiration of construction machinery manufacturers' warranty period

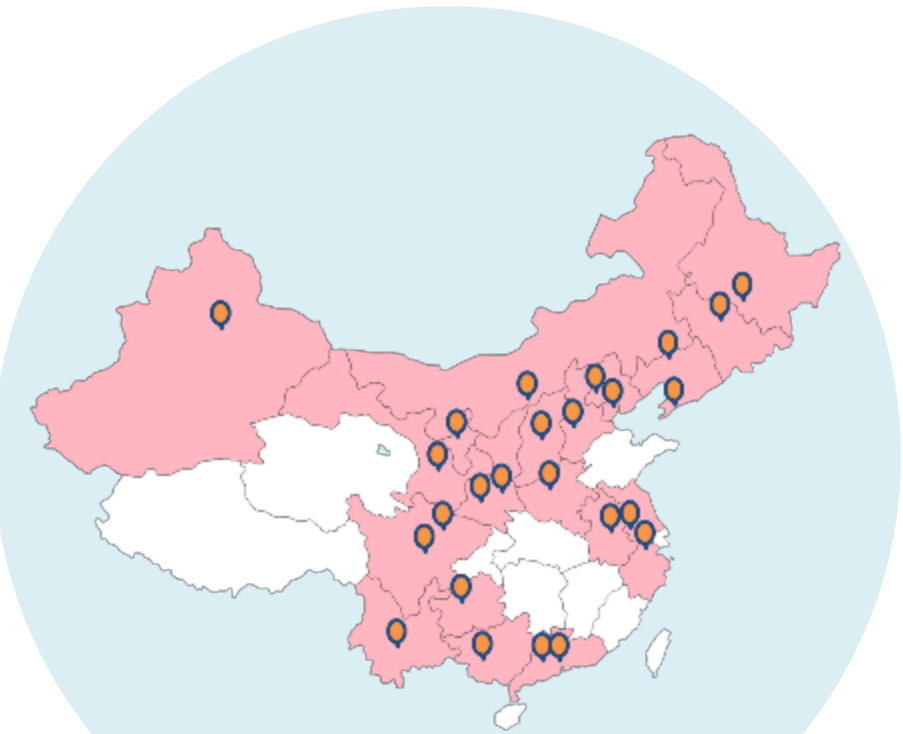
**Development of distributor channel**

Partners that cover regions with extensive excavator ownership are selected as partners



**Development of parts trading company channel**

A Chinese parts trading companies with networks of 25 distributors selected as partners



**Expanding sales area to meet growing demand for supplies.**



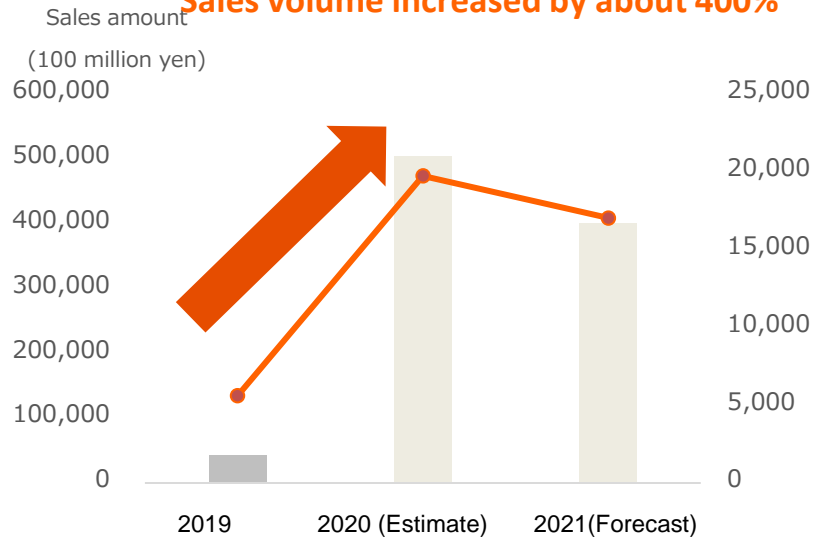
# Conditions in the Mask Market

## Business Conditions

- Consistent growth in mask demand due to COVID-19
- As there is no prospects for containing the virus in the immediate future, we now have the **opportunity to expand business in the air filter and healthcare fields.**

### Mask market trends for general-use non-woven masks

**Sales amount increased more than tenfold.**  
**Sales volume increased by about 400%**



Source : Fuji Keizai Sep 2020

## YAMASHIN's Initiatives This Tperm

### Commercialized mask using synthetic polymer Nanofiber non-woven material, YAMASHIN NANO FILTER™

- Launched online sales of high performance YAMASHIN masks and mask inner sheets
- Zexeed, a mask for general consumers with the same functionality as those for medical use, started being supplied to drugstores and e-commerce sites.
- Ultimate YAMASHIN Filter Mask series won the Nikkei Business Daily Award in the 2020 Nikkei Superior Products and Services Awards for Excellence.

## Future Targets and Tactics

### Our target :

**Domestic mask market: Approx. 10% (sales: 50 billion yen)**

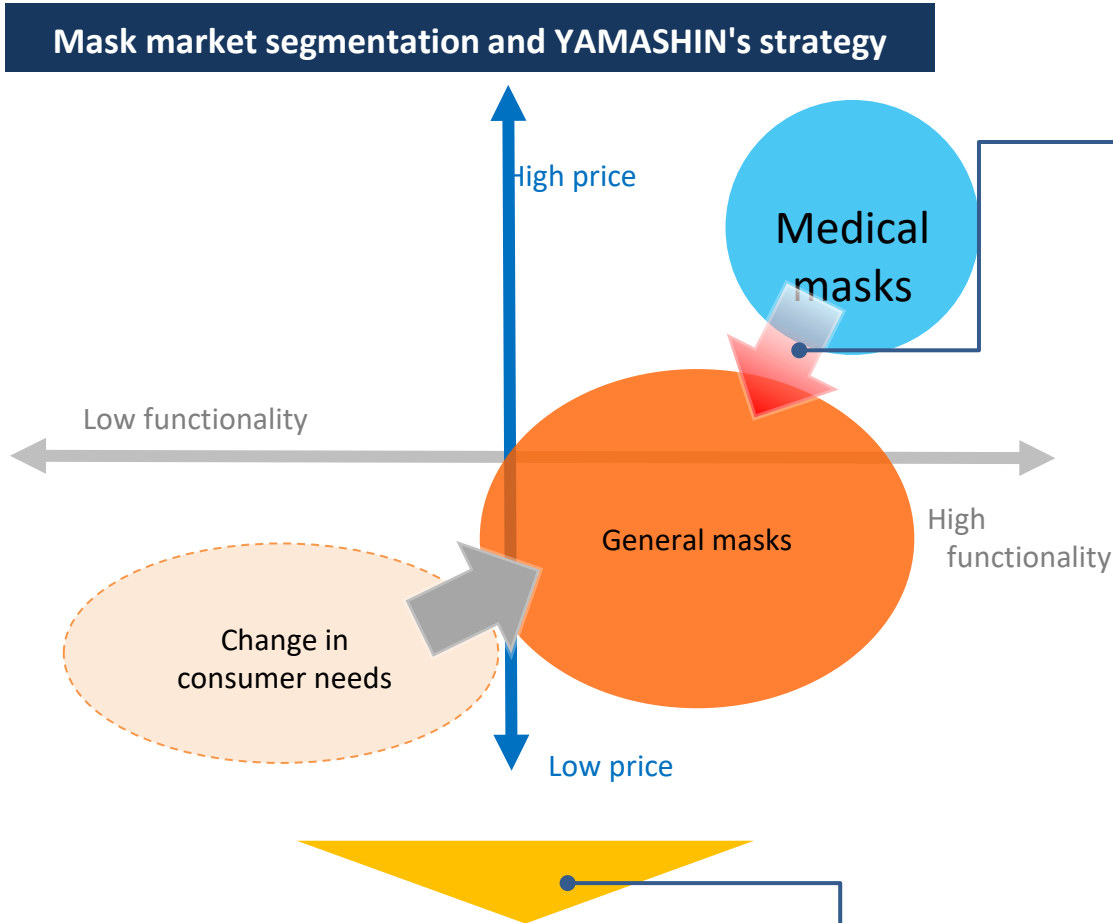
### Medium-term (FY2023) targets :

**Top share of domestic high-performance mask market**

**Entry into the medical dust mask market**

### Tactics :

- Expanding the lineup and sales channels of high-function general-use masks (supplying to drug stores and major e-commerce sites, etc.)
- Acquiring of medical certification (scheduled for 2021)



## YAMASHIN's strategies

Utilizing expertise acquired through experience with medical masks and our brand power, we will further expand general mask market.

## YAMASHIN's strengths

High quality production based on 70 years of experience is our commitment.

- 1 Constructing a safe and secure domestic production and supply system
- 2 World-class filtration technology
- 3 Innovative nanostructured filters



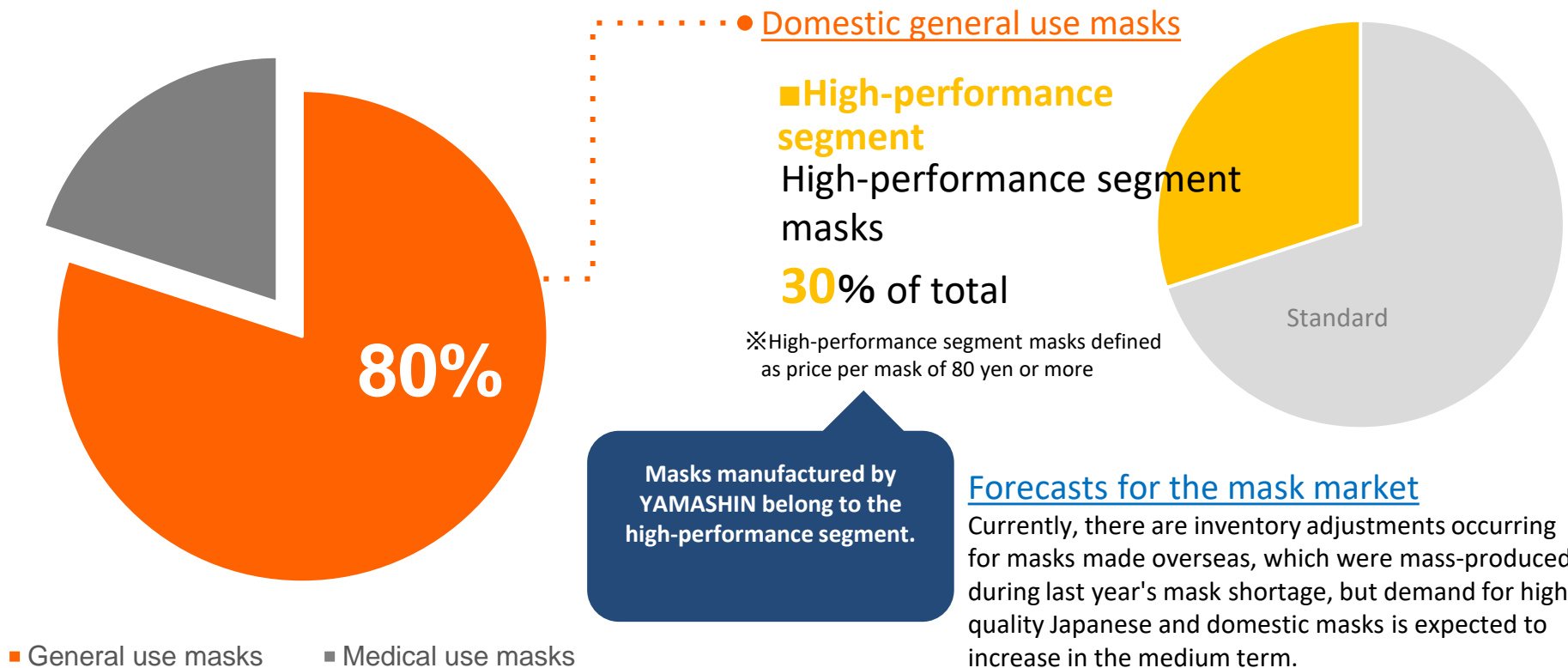
## Tactics to expand sales channels

To produce high-function masks for general use, expand product lineup, acquire certification for medical use, expand sales channels (drugstores, convenience stores, Amazon, Rakuten, etc.)

**Targeting 10% of domestic mask market and sales of ¥50.0 billion by FY2023**

## Emergence of new growth market due to changing consumer needs: high-performance masks for general use

### Breakdown of Japanese mask market



## Expansion of sales channels for the standard model of the Ultimate YAMASHIN Filter Mask Series Promoting production efficiency of the flagship model Zexeed

### YAMASHIN's strategies

With the aim of **acquiring certification for high performance masks** required in medical and other settings, we will strengthen our brand power **by providing the market with general use masks that boast the same high filtration performance as that of medical grade masks.**

### Differentiation from other general use masks

- (1) Filter performance comparable to that of medical use masks  
**Equivalent to or better than N95 standard**
- (2) Small leakage amount (**excellent fit and sealing**),  
**Equivalent to N95 standard**
- (3) Ease of breathing and comfort



Ultimate YAMASHIN Filter Mask



Zexeed

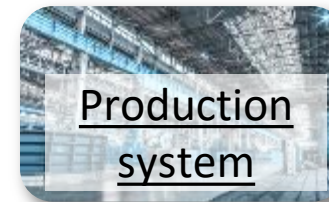


Expanding the network to drugstores and convenience stores in cooperation with vendors



**Goal: to be completed by the end of this fiscal year**

In addition to the general supply network, we will strengthen our products' presence on e-commerce sites.



Enhancing and strengthening of production line



**Goal: to be completed by the end of this fiscal year**

Revision of production lines and promotion of efficiency improvement

## Ultimate YAMASHIN Filter Mask series won the Nikkei Business Daily Award in the 2020 Nikkei Superior Products and Services Awards for Excellence



30 pieces

**980** yen (tax excl.)

High-performance inner sheets  
For cloth masks and non-woven masks



5 masks

**750** yen (tax excl.)

Use of high performance filter  
Washable and reusable



3 masks

**750** yen (tax excl.)

Medical level (N95 mask) filter  
is used



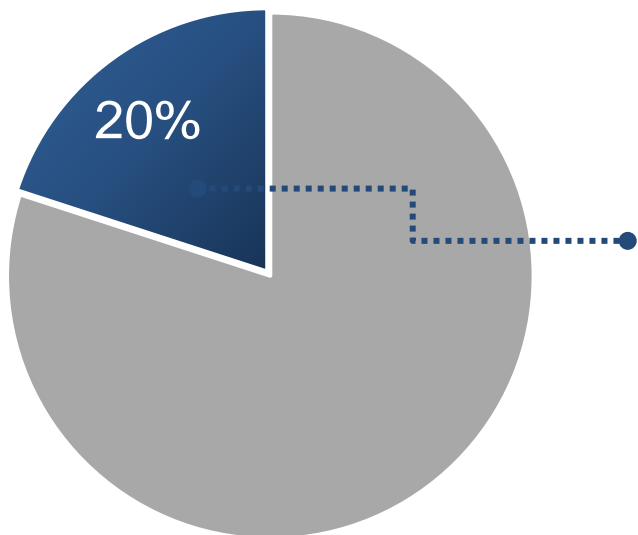
### Nikkei Superior Products and Services Awards for Excellence

The award is presented by Nikkei Shimbun to products and services that were particularly outstanding that year.

This year was the 39th time the award was given.

With its high airtightness and ease of breathing even when worn for long periods of time, it is scheduled to receive DS2 certification this fiscal year.

Breakdown of Japanese mask market



■ Masks for general consumers ■ Medical use dust masks

## 【Release of medical use mask (MEDICALEAD-6240)】

Leveraging proprietary technologies and distinctive shape to achieve market differentiation, this mask meets the high performance standards of medical professionals and demanding applications; scheduled to acquire certification in January 2021 (certifications in Japan, U.S., and Europe\*).

- (1) High filter performance (equivalent to N95)
  - (2) Secure fit and sealing (Leakage amount to equivalent to N95)
  - (3) Ease of breathing
- Dominant differentiation in all three



## Overwhelming differentiation

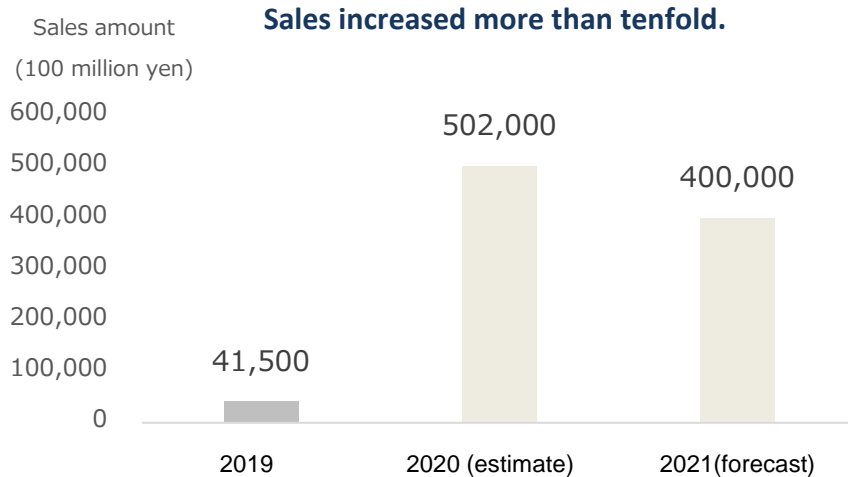
\*National testing standard in Japan (DS), NIOSH standard in US (N95), EN standard in Europe (FFP)

## 【New contracts with partners for medical distribution】

The shape of the mask is differentiated utilizing our unique technology, and we plan to obtain certification for even higher performance masks required in medical settings, etc. (certification in Japan, the U.S., and Europe\*)

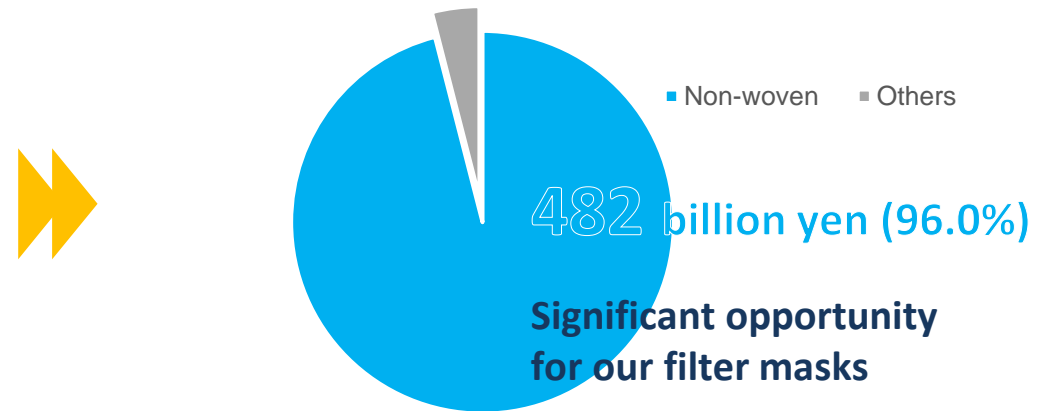


## Market size for general use non-woven fabric masks

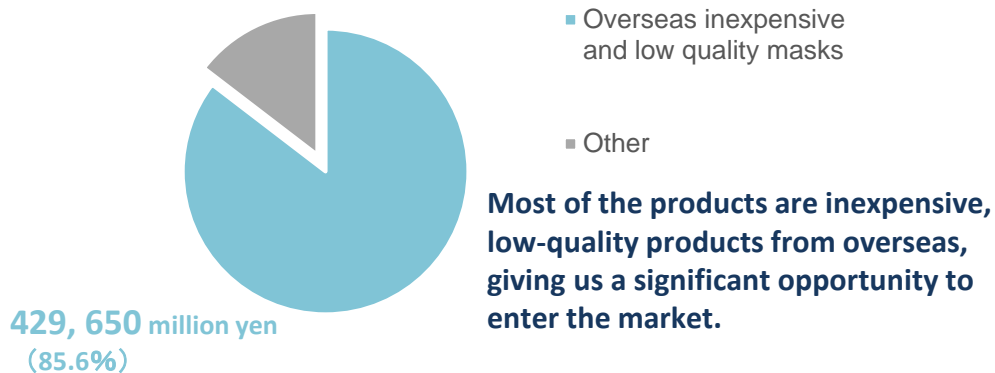


\*Japanese household hygiene products market survey in September 2020, Fuji Economic Data

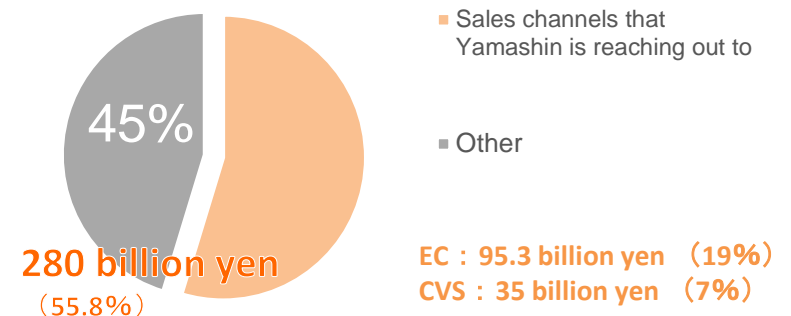
## Product breakdown of general use non-woven fabric masks



## Competing general use non-woven fabric masks

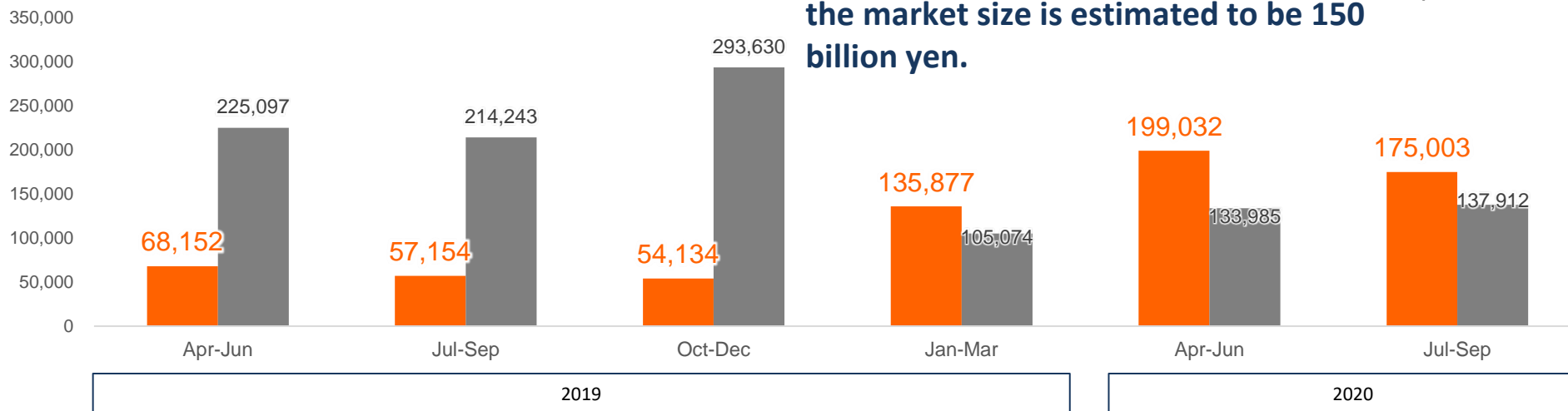


## Sales channels



## Production volume of medical masks (domestic and imported)

(Unit: 1,000 pieces)



Estimated production of 1.5 billion medical masks:  
Assuming 100 yen per mask,  
the market size is estimated to be 150 billion yen.

※Japan Hygiene Products Industry Association

■ Produced in...  
■ Imported

### FY2020 First Half Actual

- Compared to the sharp growth of general masks, medical masks have only grown by about 10% since last year.
- This area has always had a high import rate, but the COVID-19 pandemic caused a major delay in imports.
- The number of domestically produced masks increased, but this was offset by a decrease in imports, resulting in an overall increase of about 10%.
- Masks were also in short supply, and it was only in the September-December 2020 period that demand began to be met.

### FY2020 Second Half Forecasts

- We expect 400-500 million masks for the October-December and January-March periods, and around 1.15 billion units for the full year.
- We expect a slight increase from last year's results of 1.15 billion masks.
- As masks made in China do not have a good reputation in medical settings, the ratio of masks made overseas will not return to the previous level, and the shift to domestic production is expected to continue.
- Among medical masks, domestic demand for N95 grade infection control masks is about 15 million masks per month.

### FY2021 Forecasts

- At present, the price of medical masks is beginning to fall, and supply is being met to some extent.
- Capital investment by manufacturers to increase production will peak out in FY2021.
- Depending on how much the situation with COVID-19 settles down, we expect the same level of performance in FY2021 as in the second half of 2020.

# 総

REFERENCE MATERIALS

## ① YAMASHIN'S INITIATIVES



We aim to create the demand for our products, by developing environmentally friendly products using our proprietary technologies including the nano material

**To increase our share in the construction machinery market**

Decrease machinery failures and lengthen the lifespans of construction machinery by adding values to our products



**Reduction in environmental impact**

**Useful life increases 3 times**

**Hybrid filter**  
Glass fiber × nanofiber

**Failure prediction with IoT**

**Cleanliness level sensor**

- Measurement of oil and water cleanliness levels
- Low costs
- Compact design

**Lifespan sensor**

To monitor how much filters are clogged in a stepwise manner

**In the Chinese market, we will acquire new clients by providing solutions to address environmental issues**



**To help reduce CO2 emissions with high-quality filters**

**To further meet the demand for new machinery in preparation for the Tier 4 environmental regulations**



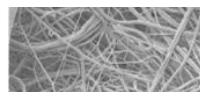


Began manufacturing and sales of high performance medical-grade masks, the development of which could only be achieved by YAMASHIN as a comprehensive filter manufacturer.

### Three Features of YAMASHIN Masks

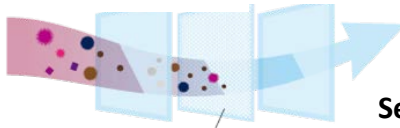
1. Nanostructure traps viruses.
2. Minor decline in performance, even with long-term use
3. Development of safe and secure domestic production and supply system

YAMASHIN Filter Mask/Filter Sheets



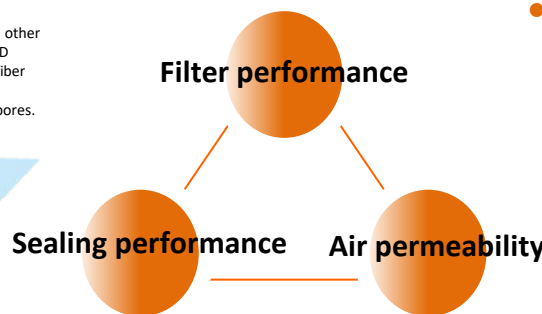
Electron microscope: 1,000x

Traps viruses and other particles with a 3D multi-layer nanofiber filter featuring extremely small pores.



YAMASHIN nanofilter based on nanofibers

### Filtration theory applied for new YAMASHIN mask standard



- Zexeed next-generation mask with premium performance released to address three factors: high filter performance, excellent fit and sealing, and high air permeability (ease of breathing)

#### Entry model

Sales launched at nationwide drug stores on September 4, 2020



#### Flagship model

Began taking presale orders on online retail sites on September 1, 2020

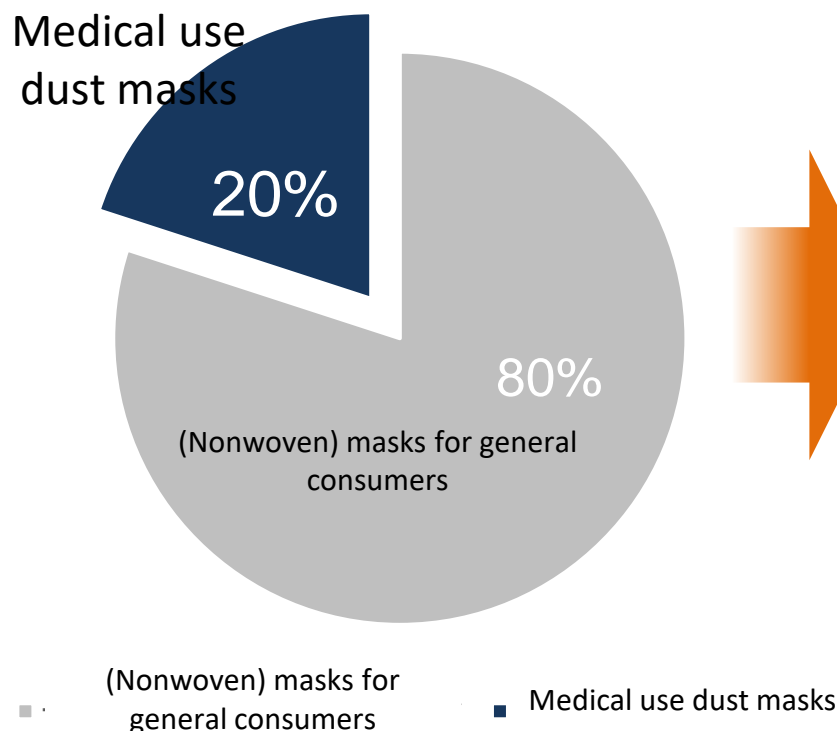




**Plans to acquire certification for medical use dust mask.**

**Will work to increase shares in this segment and continue development.**

**Development policy going forward:  
Expand lineup**



Further plans to acquire certification for high performance masks needed at medical facilities, etc. (certifications in Japan, US, and Europe\*)  
In the market for general consumers, we will differentiate our products by utilizing proprietary technologies and unique pleated mask shapes as we continue to develop higher performance masks.

- ① High filter performance (Highest N95 standard value)
- ② Excellent fit and sealing (Reduced leakage of less than 1 %)
- ③ Ease of breathing

**In these aspects, achieve overwhelming differentiation surpassing competitors.**

\*National testing standard in Japan (DS), NIOSH standard in US (N95), EN standard in Europe (FFP)

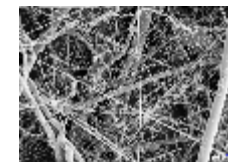
**Nano fiber filter by Electrospinning method**



Characteristics:  
Very thin, planer, uniform fibers

\* Captured with electron microscope (2,000x)

**YAMASHIN NANO FILTER**



**YAMASHIN's proprietary patented technology**  
Characteristics: 3D, multi-layer fiber mix



To help prevent atmospheric pollution by entering and growing the air filter business and using our filtration technologies to reduce emissions and gases.

## Business environment

There is a risk of worsening atmospheric pollution, caused by the economic growth in emerging countries.

The air filter market is expected to keep growing.

Estimated per year average growth rate  
of the air filter market

**3.5%** (until 2050)

## Contributions we can make

As a manufacturer specializing in filters, we help to reduce health hazards by supplying highly functional air filters.

We could help to curtail maintenance costs by extending the life-span of each product.





# Pursuing equity finance sustainability project to help solve environmental and societal problems

Procured ¥11.0 billion through equity financing to facilitate both sustained, medium-term business growth, and active ESG initiatives

## Impacts of Sustainability Project

Product outputs	Outcomes	Impact	Impact indicator (annual)
Purchasing electricity from renewable energy Introducing solar power systems	Yamashin Increased share of renewable energy in electric power	Renewable energy	632 tCO <sub>2</sub>
Augmentation of production facilities for nanofibers	Users (construction machinery) Reduced waste from longer life hydraulic filters for construction machinery	Pollution prevention and control	4,000 tons
	Manufacturers (apparel, bedding) Reduced use of natural down through use of synthetic down	Protecting land and sea life diversity	23 tons
Introducing recycling facilities for nanofibers	Users (agriculture) Reduced fuel consumption through high-insulation agricultural sheets	Energy efficiency	24,440 tCO <sub>2</sub>
	Users (e.g., construction machinery) Reduced waste from various filters	Pollution prevention and control	(Qualitative assessments)
Augmentation of manufacturing machinery for masks for general consumers	Users (general consumers) Increased production of masks for general consumers	Access to necessary services to the extent possible	230 million masks
Augmentation of manufacturing machinery for medical use masks	Users (medical professionals) Increased production of masks for medical use	Access to necessary services to the extent possible	(Qualitative assessments)
R&D on YAMASHIN NANO FILTER™ technology	Users (general consumers) Spread and expansion of fuel cells for separator development	Clean transport	(Qualitative assessments)
	Manufacturers and users Achieving even higher performance for nanofibers (finer, added features)	Broad social/environmental implications	

## Second-party opinion on selection grounds

- Continuing contribution to the environmental compatibility, etc. of construction machinery through provision of filters to construction machinery based on development of technology and materials
- Led the way in conducting work style reforms like zero overtime for all employees

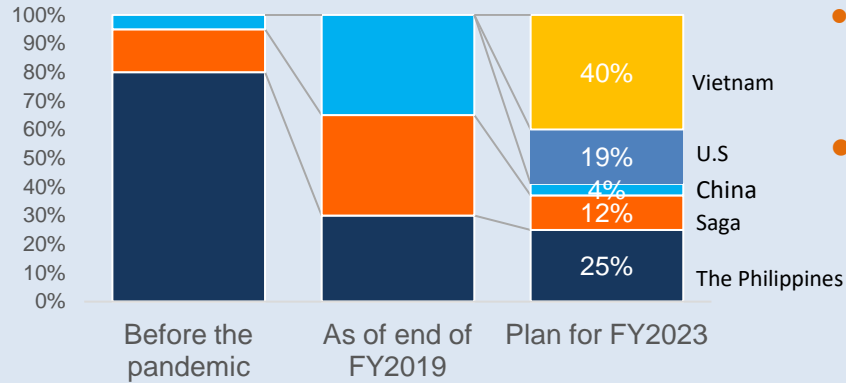
## Points of improvement/focus going forward

- Promotion of ESG initiatives on the value chain, including promotion of CSR procurement, and disclosure of ESG information

Source: Compiled by The Japan Research Institute: *Second Party Opinion*  
 URL : [http://www.Yamashin-filter.co.jp/ja/news/news\\_20200908\\_001/main/00/link/SecondPartyOpinion.pdf](http://www.Yamashin-filter.co.jp/ja/news/news_20200908_001/main/00/link/SecondPartyOpinion.pdf)

## Impact on production structure

Change in the production volumes by location for construction machinery hydraulic filters

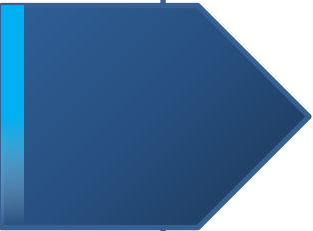


- The lockdown affected the production in the Philippines.
- **Accordingly, a production quota is reallocated to each of the other production sites, to maintain stable supply.**

## Review and restructuring of production system



YAMASHIN is restructuring its production system as part of our BCP to achieve stable, efficient production. For that end, a new factory will be built in Vietnam in 2021.



We hold a world-leading share in the construction machinery filter market.

Due to an uptake in infrastructure investment in several markets and our strong position in after-sales market, we expect sustained growth in our construction machinery filter business.

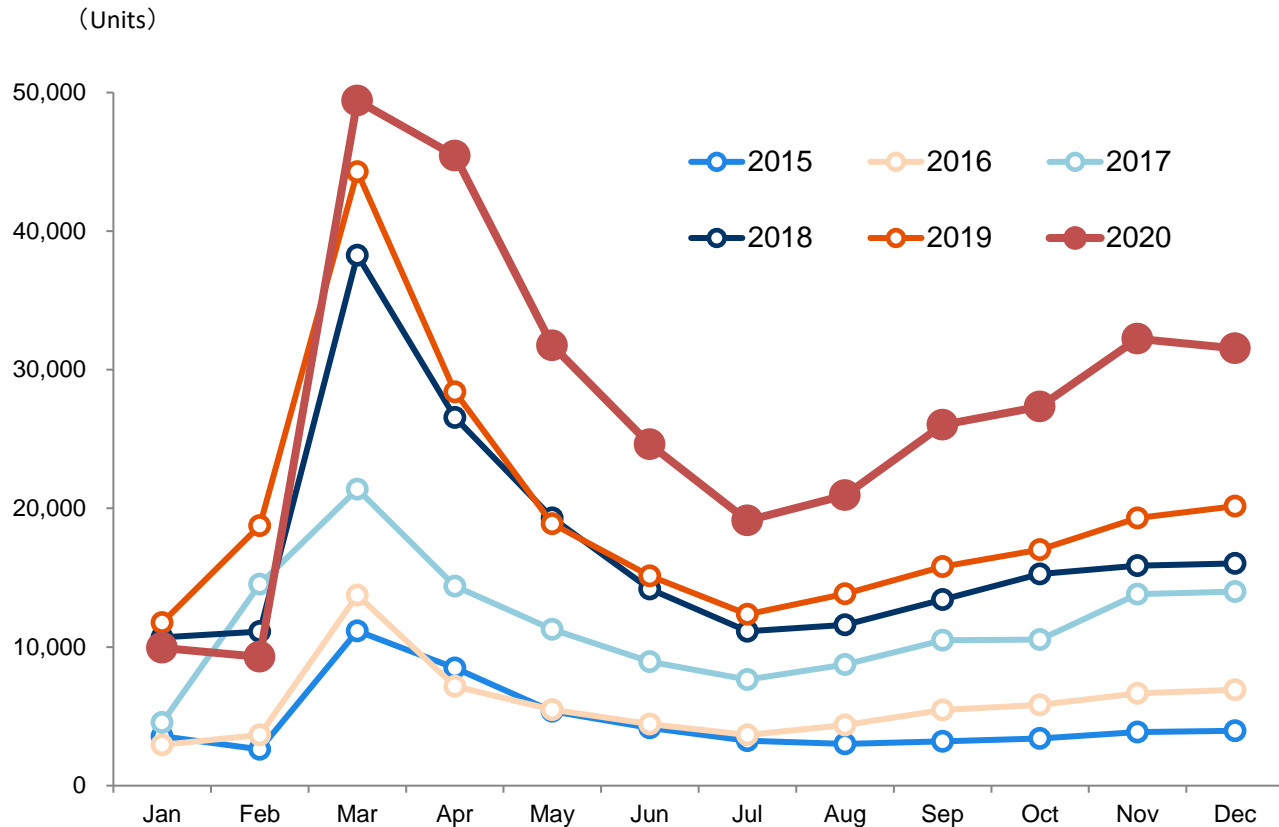


New business is expected to make significant contributions to both sales and profits.

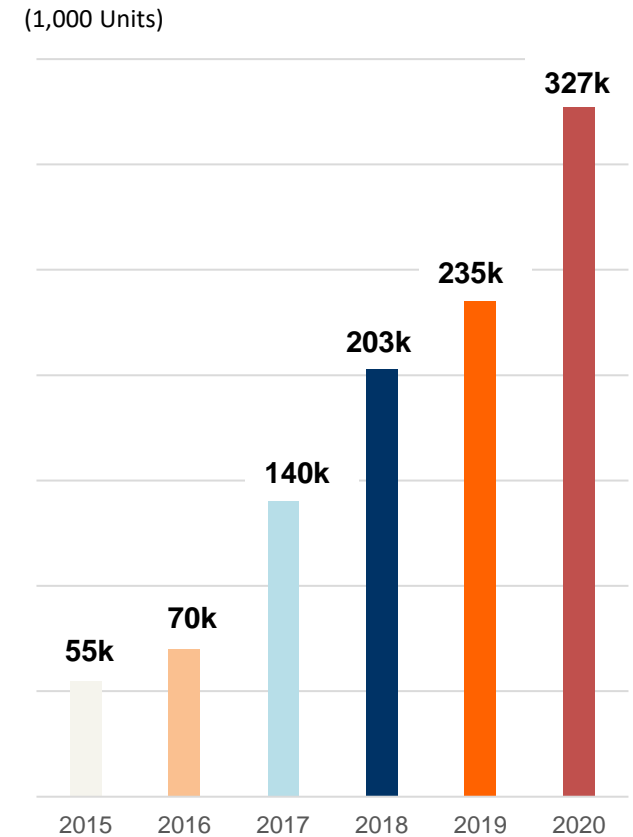
**YAMASHIN NANO FILTERS** will drive growth, with use for diverse applications.

# Strong demand for construction machinery in China underpinned by large-scale public investment

Monthly sales units by fiscal year



Annual sales units

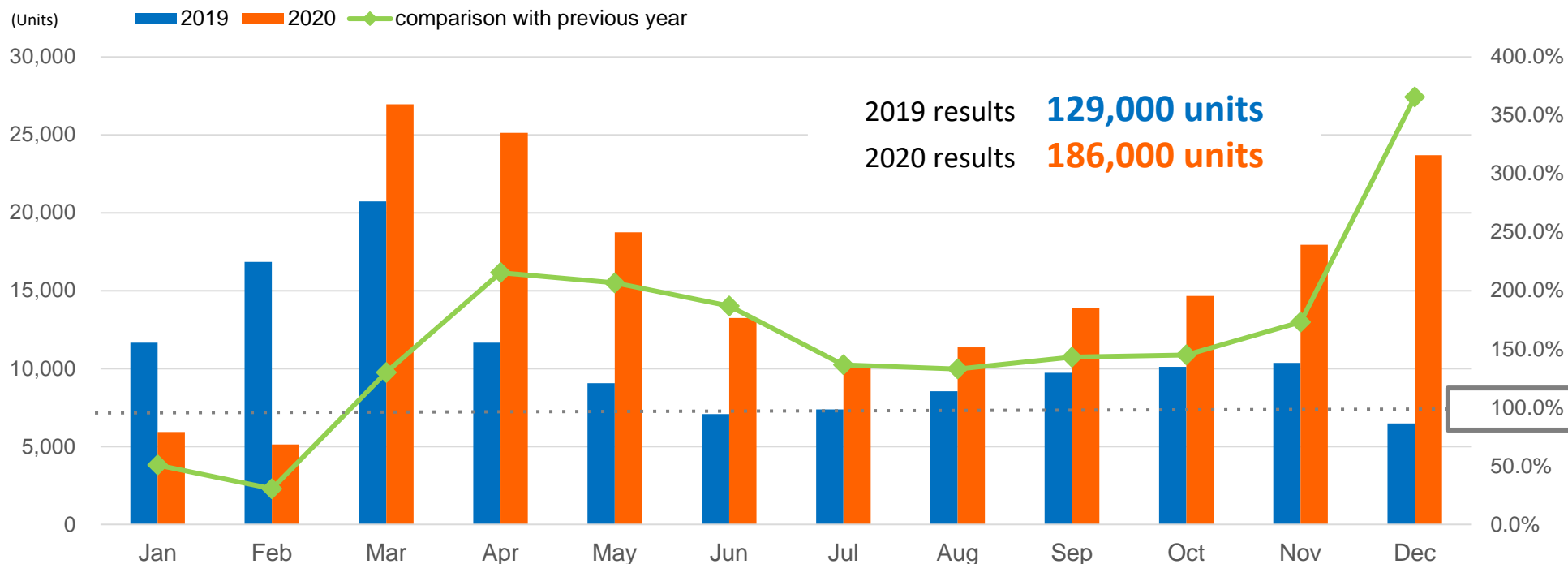


(YAMASHIN's estimates based on the data published by construction machinery manufacturers and industry associations)

## Chinese construction machinery manufacturers increased production in 2020.

In 2020, the production output of Chinese manufacturers grew +44.2% from 2019, although production was delayed than planned, due to the extension of the Chinese New Year holidays and the spread of the COVID-19.

### Production trend of leading Chinese construction machinery manufacturers



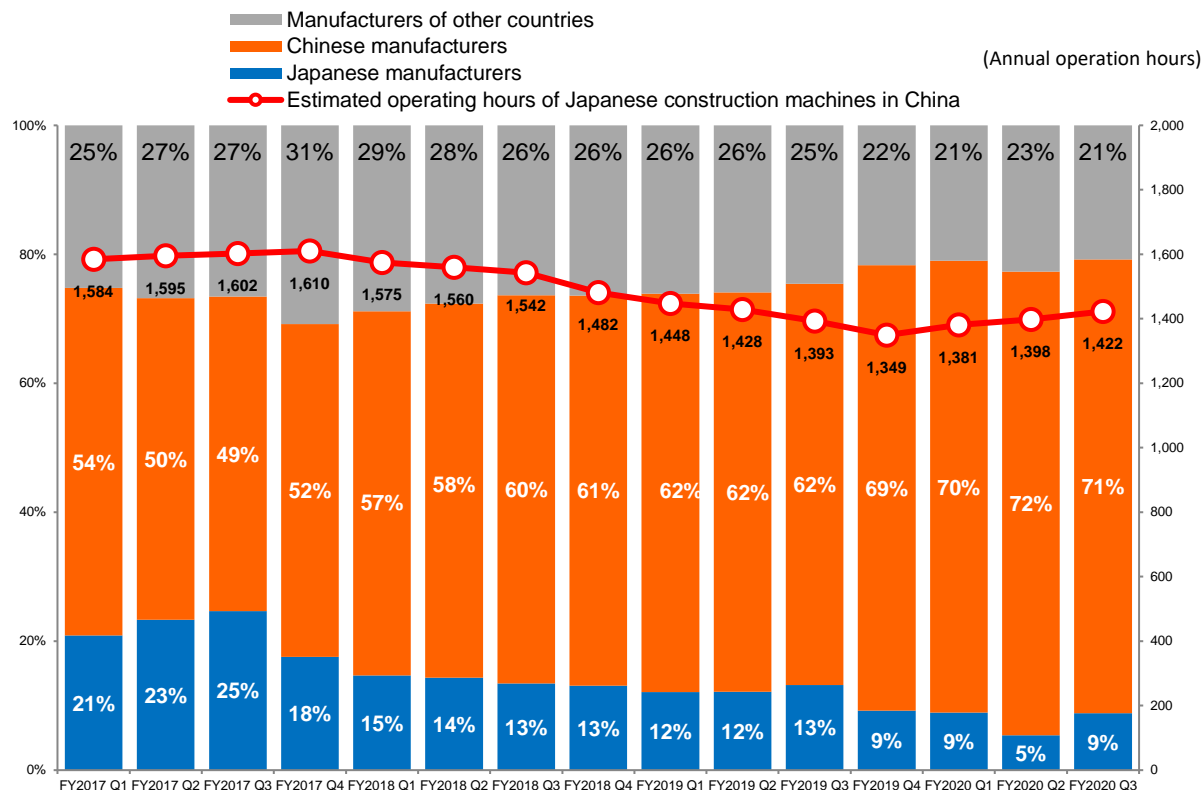
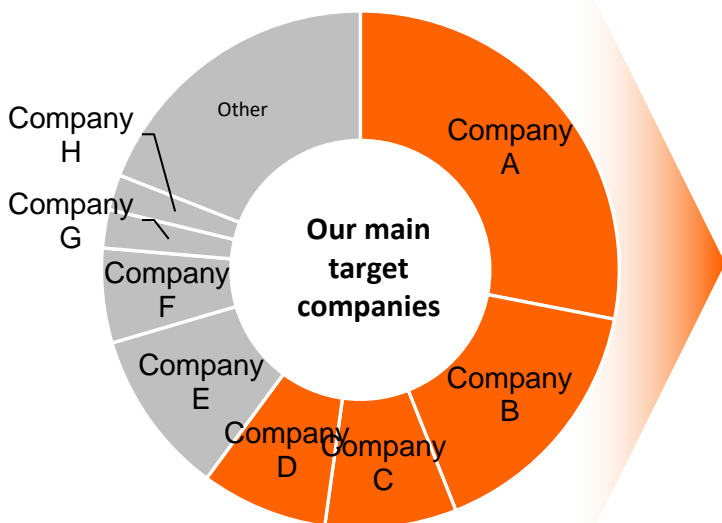
(YAMASHIN's estimates based on the data published by construction machinery manufacturers and industry associations)

# Construction machinery operating hours declined substantially due to the extension of the Chinese New Year holidays and COVID-19.

Our main construction machinery customers' market shares in China

Change in market shares in China by manufacturers' country

**A, B, C and D are Chinese manufacturers, the main target companies we are approaching**



## Increase proposals to Chinese construction machinery manufacturers to grow our market share.

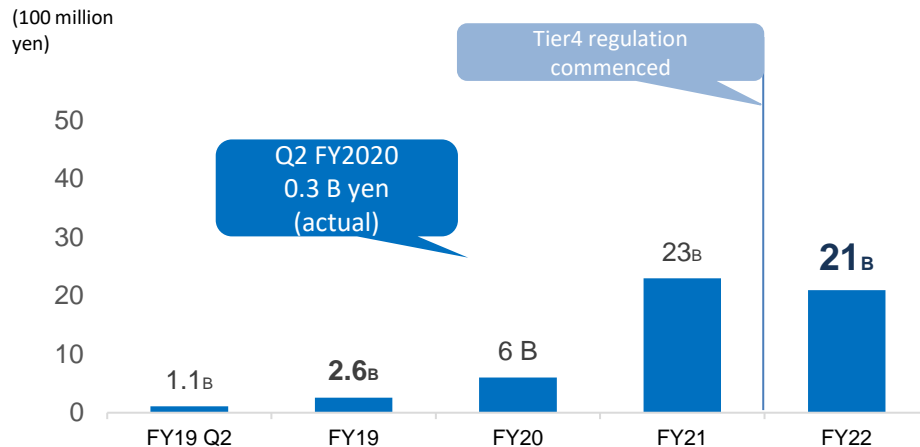
### Market environment

- Trend continues on expanding infrastructure investment by the Chinese government.
- Increased need for our proprietary technologies in conjunction with 4th-phase environmental regulations
- Priorities of end users are changing from price to quality.
- Significant expansion of after-sales market following an increase in the cumulative number of new machines sold
- Increased need for global suppliers as Chinese construction machinery manufacturers are entering overseas market

#### Plan for expanding sales of line parts (for new machines)

##### Add more product lines and improve pricing strategy

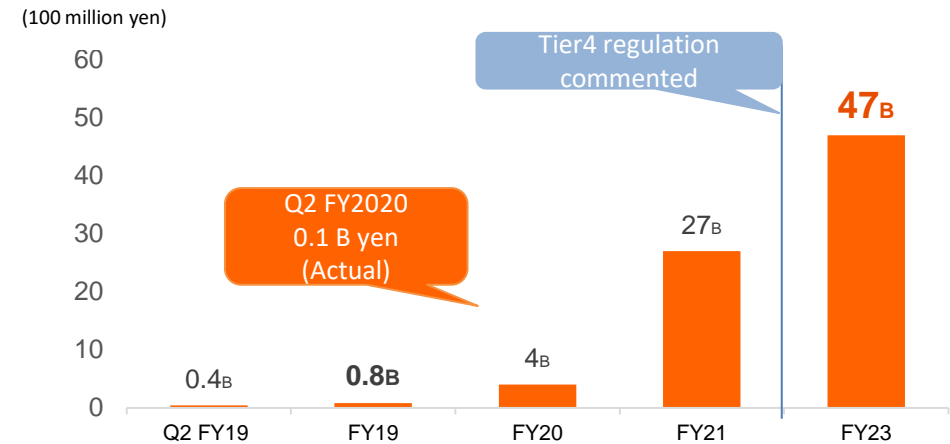
- Supply products with high value(longer life-span and IoT)
- Deploy pricing strategies to sell more existing products



#### Plan for expanding sales of service parts (replacement parts)

##### Deploy marketing strategies taking advantage of our brand value

- After the construction machinery manufacturers' warranty periods end, we will directly trade with agencies.

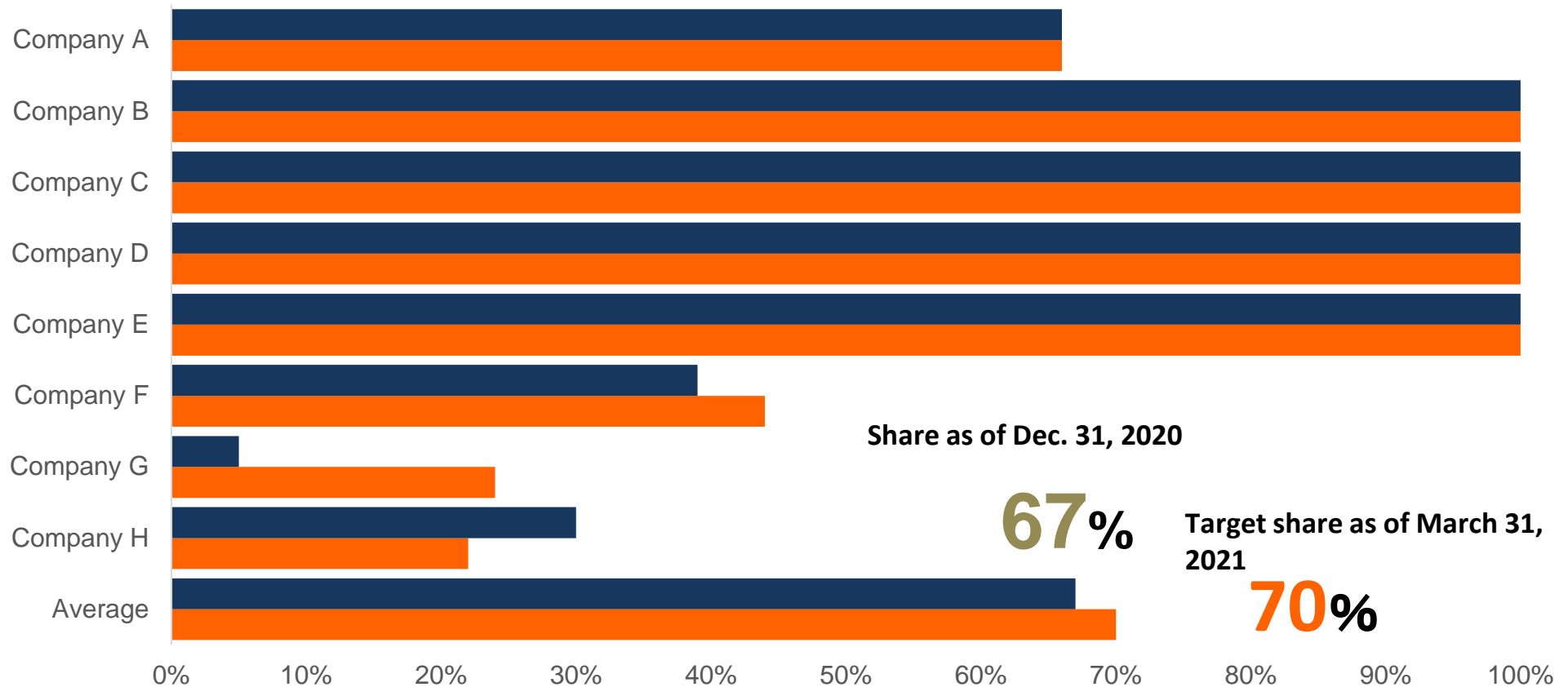




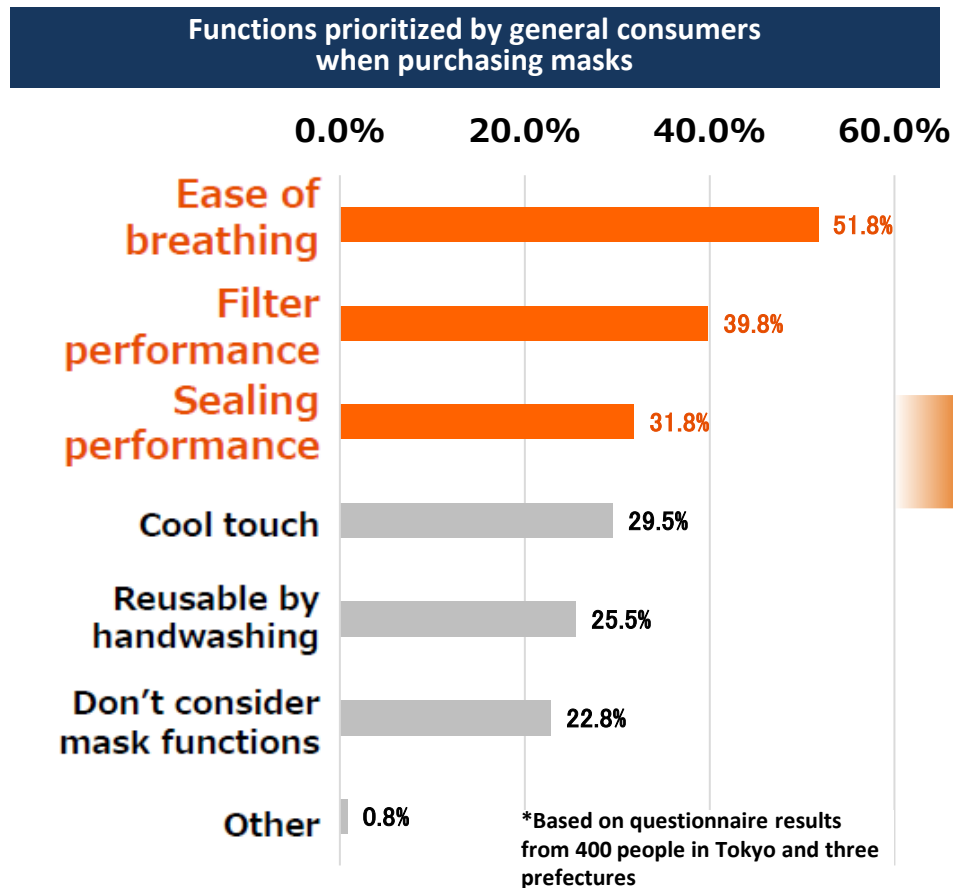
**YAMASHIN will conduct marketing and sales activities for our flagship return filters, focusing on our high value-added products (as strategic products), in Chinese and other Asian markets.**

**Expansion targets of our flagship products, return filters**

■ FY2020 Q2 share (actual)    ■ FY2020 year-end target share



# There is a high correlation between the knowhow required for mask filters and that of construction machinery filters.



## High performance masks developed by YAMASHIN, a comprehensive filter manufacturer



Application of **modified melt-blown manufacturing method**, a mass production technology cultivated for construction machinery filters

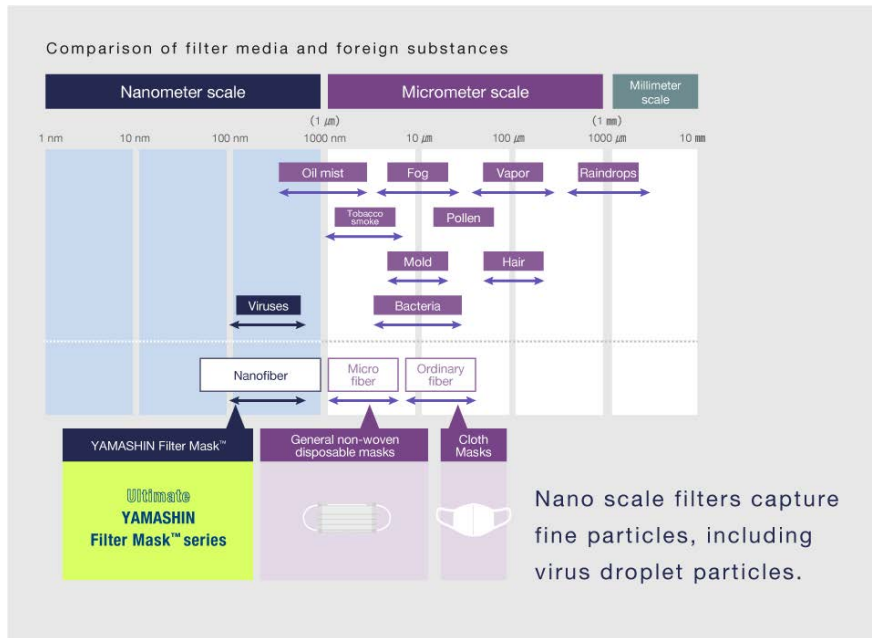
- Nanostructure traps viruses.
- Minor decline in performance, even with long-term use

For about 70 years as a dedicated manufacturer of construction machinery filters, YAMASHIN has refined its filtration technologies and accumulated know-how. YAMASHIN NANO FILTER™, created by a mass production technology developed through our expertise traps foreign substances within the small pores between extremely fine fibers. When used for masks, long-term high performance is maintained because of its physical structure, making the technology ideal for and easily applicable to masks.

# Our masks made with YAMASHIN NANO FILTER™ sustains high filtration performance even after hand-washing.

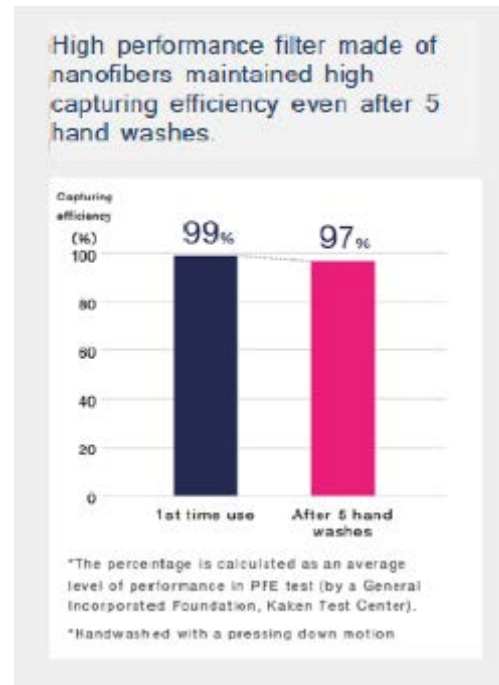
## High filtration performance

General non-woven masks rely on static electricity for capturing dust and airborne particles, whereas YAMASHIN masks capture fine particles by its physical structure, achieving high filtration performance for extended periods.



## Sustained performance

Our masks made with YAMASHIN NANO FILTER™ showed little degradation in filtration performance and maintained 97.6% filtration efficiency even after 5 hand washes



PFE test\*  
(Particle filtration efficiency test)

	Before	After
YAMASHIN Filter Mask	99.8%	97.6%
Zexeed	99.9%	98.9%
General non-woven masks*	99.0%	60.0%

\*The test was conducted by the Kaken Test Center  
\*General non-woven masks are for comparison purposes only.

Line-up of our mask products, all are made with YAMASHIN NANO FILTER™, our proprietary nanofiber filter (non-woven material of nanofibers intertwined three dimensionally).

Masks for general consumers

Masks for medical use



Zexeed .6240

**YAMASHIN Filter Sheet™**  
30 pieces in a pack  
JPY 980 (tax excluded)

**Standard model of YAMASHIN Filter Mask™ series**  
5 pieces in a pack  
JPY 980 (tax excluded)

**Premium model of YAMASHIN Filter Mask™ series**  
3 pieces in a pack  
JPY 750 (tax excluded)

**10 pieces in a pack**  
**JPY 3,000 (tax excluded)**

High performance mask inner sheet for use with cloth masks and general non-woven masks

High performance filter mask, reusable after handwashing

Medical grade filter is used (equivalent to N95 mask). The unique 3D pleated mask provides secure sealing and ease of breathing in addition to high filtration performance.

Plan to acquire DS2 standards. Will be available for sale in FY 2021

# Unique three-dimensional pleated shape achieves secure fit and sealing and ease of breathing for extended use.

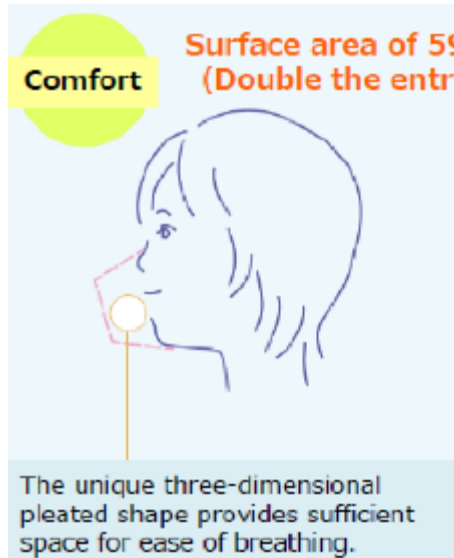
## Shape and design for comfort

General pleated non-woven masks don't provide sufficient room around the nose and mouth, and not easy to breathe in. Whereas

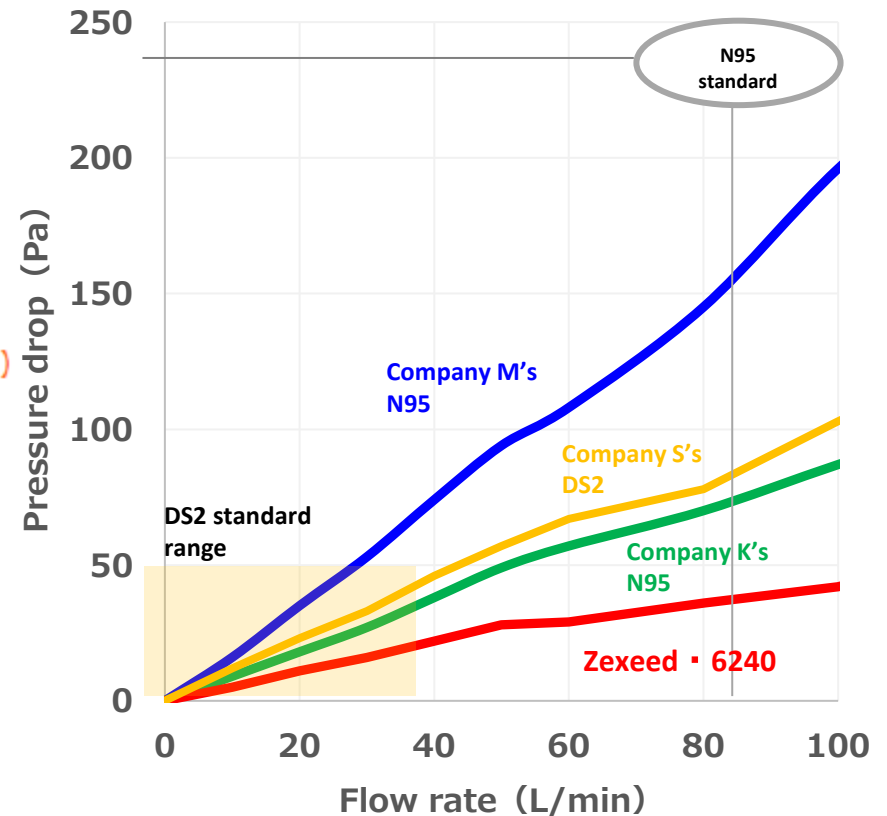
Zexeed.6240 has a **unique three-dimensional pleated shape**, which provides sufficient room around the mouth and increased filtration area, achieving easy breathing for comfort.

General non-woven masks

Zexeed.6240



Comparison Medical-use Masks



Zexeed  
Ultimate  
YAMASHIN  
Filter Mask:



Announcement of the new product, Zexeed, and joint strategy announcement with PIP Co., Ltd.



ヤマシンのフィルタマスクとフィルタシート 好評発売中!  
**Zexeedは10月中旬より発売!**  
お求めは全国ドラッグストア、ECサイトにて

Ultimate  
YAMASHIN  
Filter Mask



Collaborative nanofiber mask campaign with Sagami Railway Co., Ltd.



10/15 (Thur.): Ad campaign starts  
(1) Ad posters hung in train aisles  
\*All Sotetsu Line train cars  
(2) Instagram (3) Sounyan blog (4) Sotetsu website  
10/24 (Sat.): Mask sales launch  
Sales channels: Sotetsu merchandise stores, FamilyMart in train stations, etc.

Adoption of nanofiber masks by Central Japan Railway Company Club



Launched sales of mask with original design featuring the new JR Central N700S train model  
10/14 (Wed.): Launch of sales on JR Central's website  
10/16 (Fri.): Launch of store sales at kiosks of main JR Central Shinkansen stations, Nagoya Marriott Associa Hotel, etc.

**Aiming to establish YAMASHIN brand by raising awareness and promoting the brand image**










# 目次

REFERENCE MATERIALS

② BASIC COMPANY INFORMATION



YAMASHIN Group has manufactured filters for construction machinery (hydraulic), various industrial fields other than construction machinery (hydraulic), and manufacturing processes (water) by purchasing glass-fiber and non-woven fabrics to produce filter media (the key component of any filter), resin products and processed metal for filter components. From May 2020, the group started to sell filter masks and mask inner sheets and from July 2020, we added a new Healthcare segment to our business.

Filed	Products	Product image	Composition ratio (As of March 2021)
Hydraulic filters for construction machinery	<p>A construction machinery filter is used to filter the fluid running in the hydraulic components of construction machinery, which is the key to the operation of such machinery.</p> <p>Applications : Various types of construction machinery</p>		
Hydraulic filters for various industrial fields	<p>An industrial filter is a filter used for filtrating operating fluid and lubricants of hydraulic units applied in various industries other than the construction machinery industry.</p> <p>Applications : machine tools, refrigerating compressors, agricultural machinery, vessels, railway vehicles, airplanes, and helicopters</p>		
Filters for process lines	<p>A process filter is used for filtration and separation in processes for manufacturing customer products</p> <p>Applications : Production lines for electronic parts, precision parts, liquid crystal displays, and food.</p>		
Air filters	<p>Air filters used for dust removal and medium-to-high performance air filters</p> <p>Applications : general buildings, hotels and factories.</p>		
Healthcare	<p>High performance masks and replacement inner sheets that feature high filtration performance (one of the characteristics of our nanofiber filtration material), excellent sealing performance and high air permeability.</p> <p>Applications: For general consumers in Japan and around the world</p>		

# YAMASHIN provides an extensive product line of filters essential to operating construction machinery.

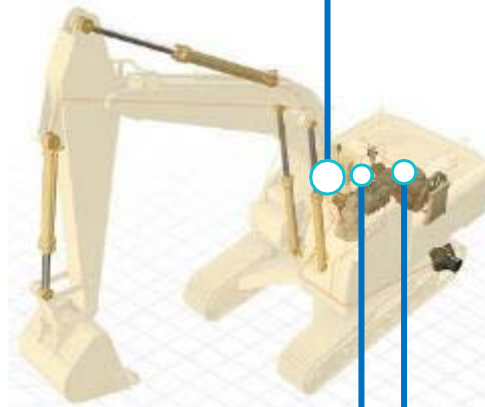
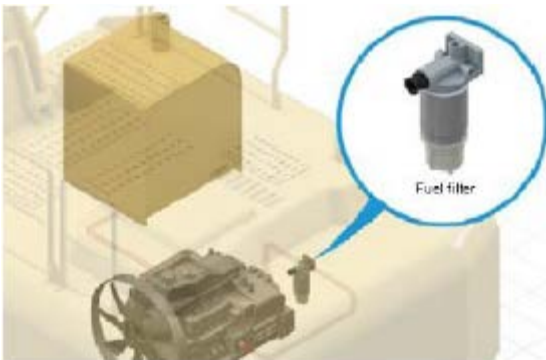


## For hydraulic systems

These filters are installed at several locations of each piece of construction machinery to protect hydraulic equipment, including cylinders. Some 70% of all malfunctions affecting construction machinery are believed to be caused by dust in oil, the presence of which leads to mechanical breakdowns. We provide filters ideal for every need based on the know-how cultivated since our founding.

## For fuel

Fuel filters remove particulates from diesel fuel. Increasingly stringent regulations worldwide have strengthened purity requirements for fuel. Demand for this filter is expected to grow, particularly in emerging nations, where fuel quality tends to be lower.



## For transmissions

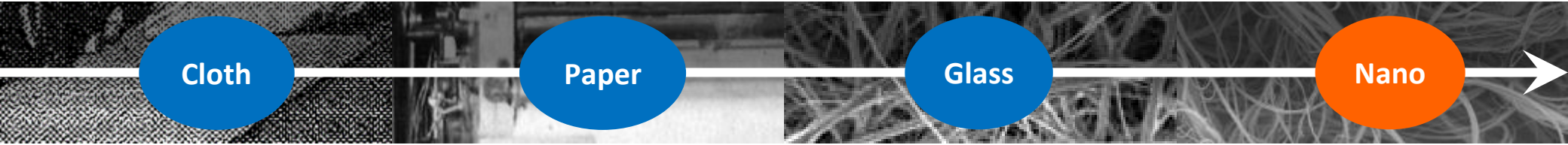
These filters are found in the transmissions of construction machinery. Transmissions are composed of multiple gears. Friction between these gears produces metal powder and particulates. Our company's filters employ proprietary filter elements and materials to remove these particulates and minimize equipment wear.

## For engine oil

These filters are in various construction machinery engines. Engines contain pistons and other components moving at high speed that generate power. The engine oil filter removes the metal powders and sludge (sediment), caused by abrasion, that accumulate in engine oil during power generation, mitigating the risk of damage and impaired performance.



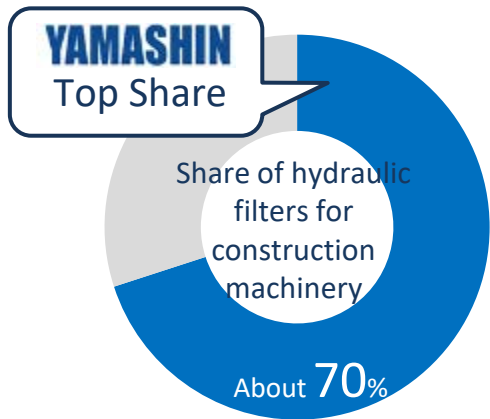
## Capability of researching and developing innovative filter media in line with the evolution of construction machinery.



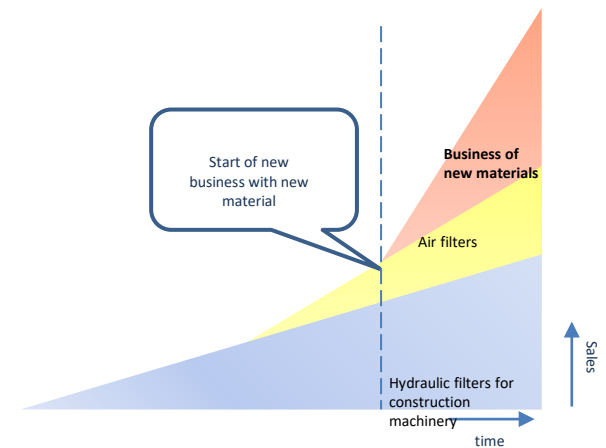
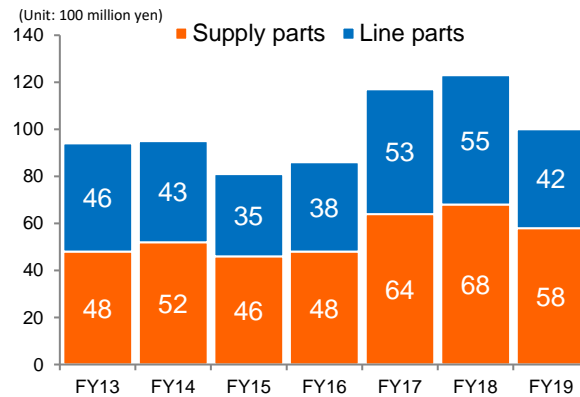
A lion's share in the market of hydraulic filters for construction machinery

Stable revenue structure satisfying the demand for new machines and replacement

Expansion of the business field with newly developed innovative materials



Shares of sales of hydraulic filters for construction machinery in Japan (Fiscal 2012)  
Source: Yano Research Institute



- Our company has contributed to the development of efficient infrastructure.
- As we handle high-quality products and have plenty of experience, many products have been adopted by leading construction machinery manufacturers in Japan, Europe, the U.S., and China, which operate business globally.

## Segments and KPI

- Filters for construction machinery are classified as “**line parts**” or “**service parts**” (**supply parts**)
- Line parts refer to filters installed in new construction machines. The primary indicator is “**the number of new construction machines in demand**”
- Service parts refer to replacement filters. The primary indicator is “**the number of units in operation**” × “**hours of operation**”.

## Business model, Regional trends, and Cost reduction measures

- **Business model**  
Hydraulic filters for construction machinery are all sold to construction machinery manufacturers (100%). In principle, we do not sell the products directly to end users.
- **Regional trends**  
Sales calculations are based on invoice destinations. Our data may differ from the actual regional market trends
- **PAC20 (Promptly Activated Cost reduction 2020)**  
Our company-wide cost reduction project

Term	Formula
MAVY's	ROIC - WACC
ROIC	$\text{NOPAT} \div \text{Capital investment}$
Rate of return on capital investment	$(\text{Ordinary income} + \text{Interests paid}) \div \text{Capital investment}$
Turnover rate of working capital	$\text{Net sales} \div (\text{Accounts receivable} + \text{Inventory asset} - \text{Accounts payable})$
Turnover rate of fixed assets	$\text{Net sales} \div \text{Fixed assets}$
Turnover rate of accounts receivable	$\text{Net sales} \div \text{Accounts receivable}$
Turnover rate of inventory asset	$\text{Net sales} \div \text{Inventory asset}$
Turnover rate of accounts payable	$\text{Sales cost} \div \text{Accounts payable}$
Turnover rate of tangible fixed assets	$\text{Net sales} \div \text{Tangible fixed assets}$
Turnover rate of intangible fixed assets	$\text{Net sales} \div \text{Intangible fixed assets}$
Key Goal Indicator(KGI)	Current year: Cumulative total + Budget, Previous year: Annual actual results
Key Performance Indicator (KPI)	Comparison of cumulative results

\* The figures in the balance sheet are the averages of the initial and term-end figures

### STRENGTH

- Overwhelming share of market for construction machinery filters
- **Continuing expansion of market share by utilizing new materials to enhance product performance**
- Advanced R&D capabilities
- Robust operation management based on PAC and MAVY's

### OPPORTUNITIES

- To increase our share in the growing Chinese market
- **To expand business portfolio and evolve into a "comprehensive multi-field filter manufacturer" (Main focus areas are air filters, YAMASHIN Nano Filter™ markets, and healthcare)**

### WEAKNESS

- About 70% of net sales are from construction machinery filters
- Concern over the shortage of human resources

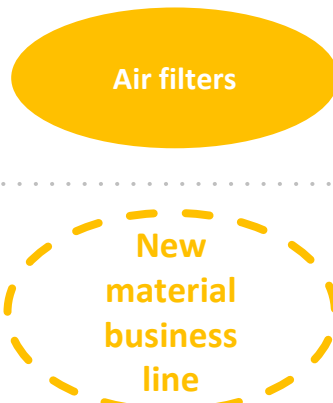
### THREAT

- Decrease in our market share, due to the proliferation of counterfeit filter products for construction machinery
- Changes in the construction machinery market in China
- Sluggish sales growth of process/industrial filters
- **Delays in commercialization of new material products**

Overcome these issues to evolve into a comprehensive filter manufacturer

Eliminate counterfeits by using the hither performance new material

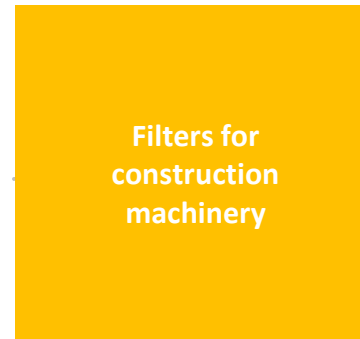
### New business line to grow



Business are for further growth



### Core business (stretch)



Core business (stable)



# 目次

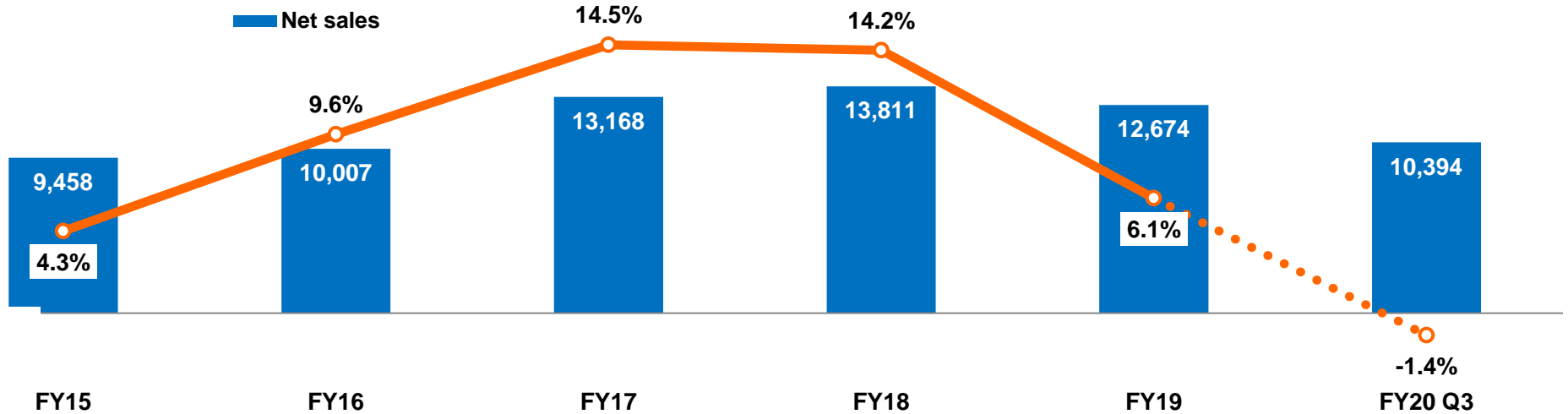
REFERENCE MATERIALS

## ③ FINANCIAL HIGHLIGHTS

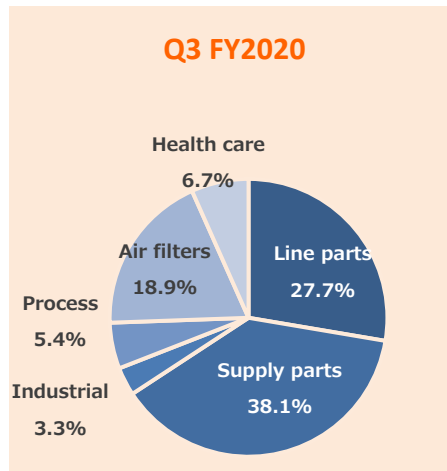
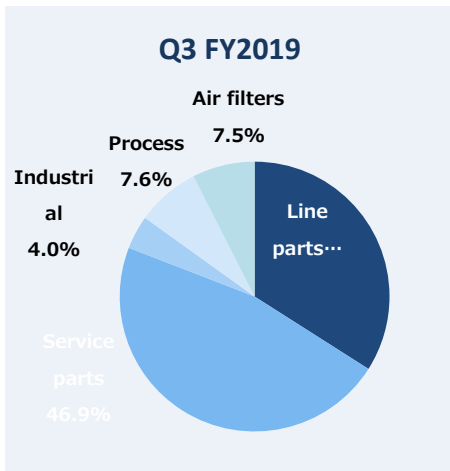


## Net sales, Operating income

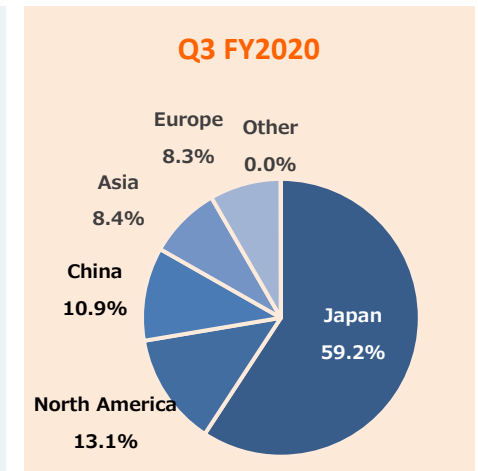
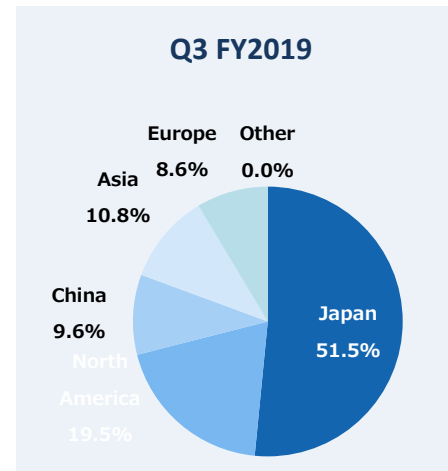
(Unit: million yen)



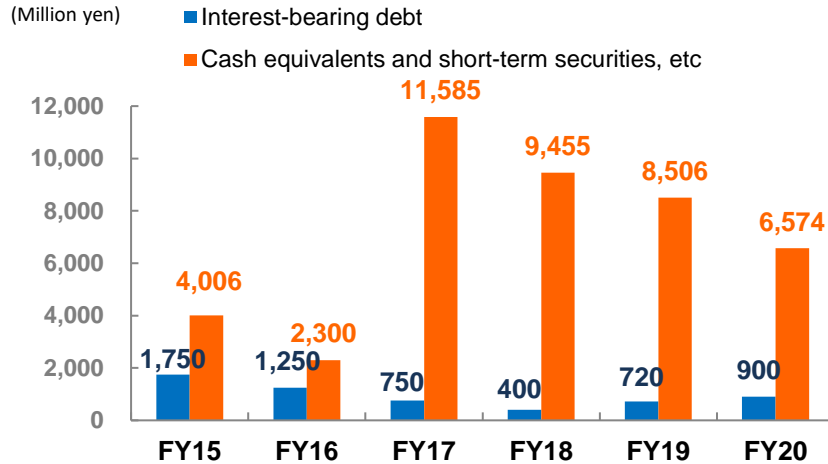
## Sales by product category



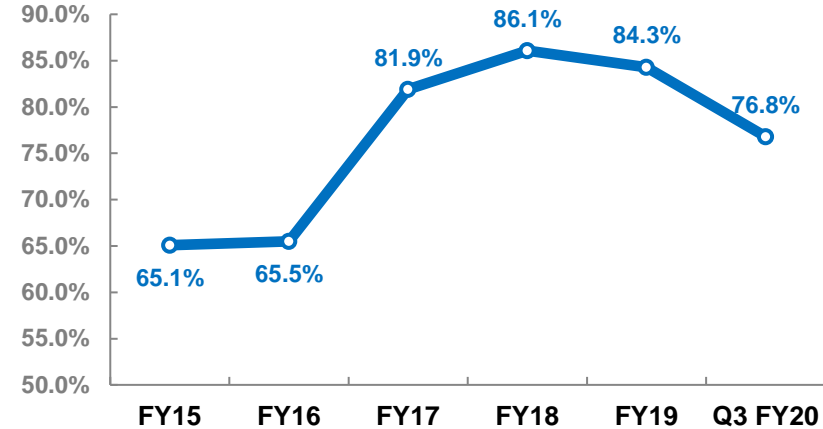
## Sales by region



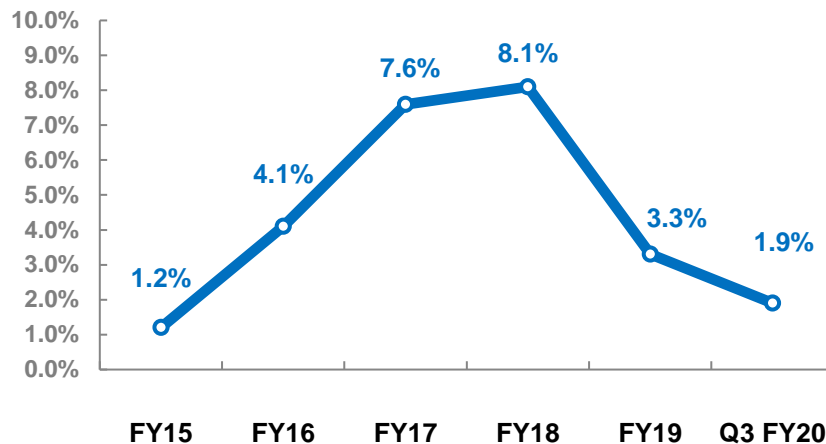
## Interest-bearing debt, Cash equivalents, Short-term securities, etc.



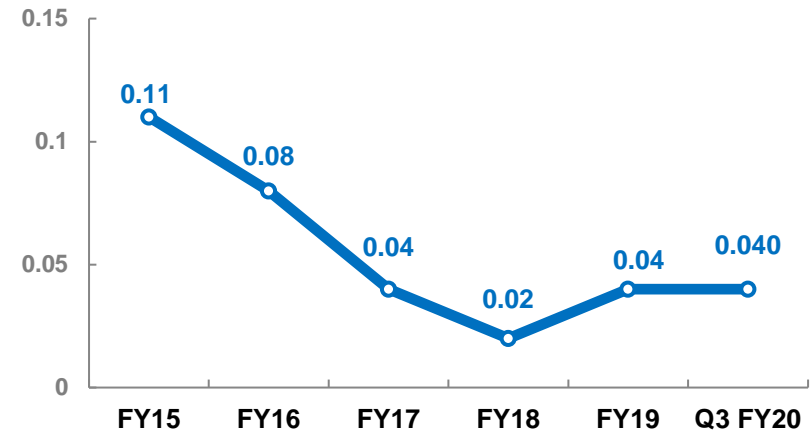
## Shareholders' equity ratio



## ROE



## D/E ratio



\* Calculated based on the assumption that the capital increase through third-party allotment in FY2017 was implemented from the previous fiscal year.

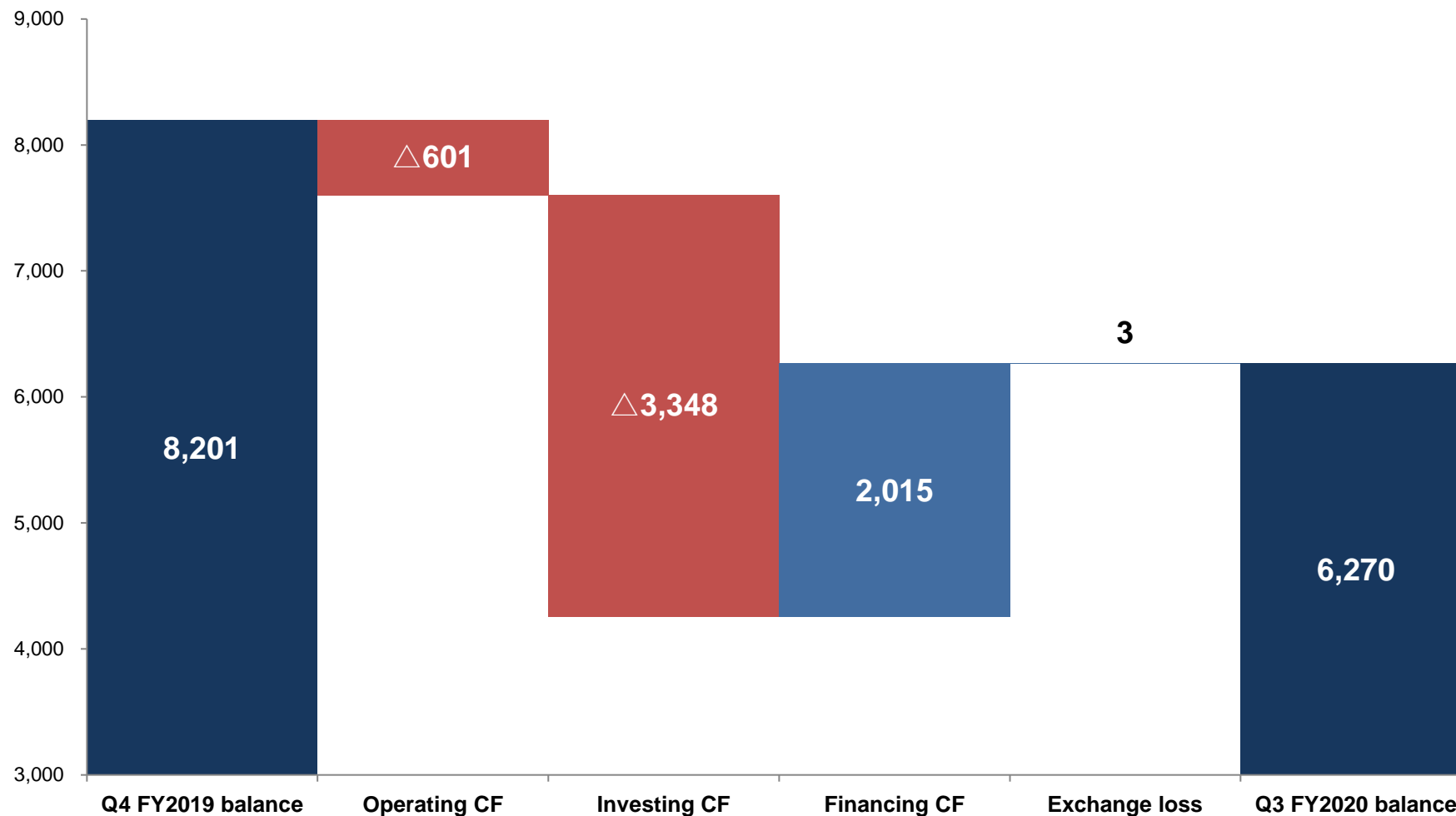
(million yen)

	FY2019 Q3	FY2020 Q3	Change in amount	Change in ratio
<b>Current assets</b>	16,332	13,854	△2,477	△15.2%
Cash and deposits	10,431	6,574	△3,856	△37.0%
Notes and accounts receivable-trade	3,557	4,072	514	14.5%
Merchandise and finished goods, Raw materials and Supplies	2,096	2,592	496	23.7%
Other	246	614	367	149.3%
<b>Fixed assets</b>	4,823	12,464	7,641	158.4%
Tangible fixed assets	4,051	10,364	6,312	155.8%
Intangible fixed assets	366	323	△42	△11.6%
Investments and other assets	405	1,776	1,370	337.9%
<b>Total assets</b>	21,155	26,319	5,163	24.4%

	FY2019 Q3	FY2020 Q3	Change in amount	Change in ratio
<b>Current liabilities</b>	2,509	4,697	2,188	87.2%
Notes and accounts payable-trade	1,479	2,519	1,039	70.3%
Corporate bonds payable within one year and short-term loans payable	200	299	99	50.0%
Other	830	1,879	1,049	126.4%
<b>Fixed liabilities</b>	644	1,384	740	114.8%
Corporate bonds and long-term debt	100	800	700	700.0%
Net defined benefits Liability	226	213	△12	△5.7%
Other	318	371	53	16.6%
<b>Total net assets</b>	18,001	20,236	2,235	12.4%
<b>Total of liabilities and net assets</b>	21,155	26,319	5,163	24.4%

\*Shareholders' equity ratio      85.1%      76.9%

(Million yen)



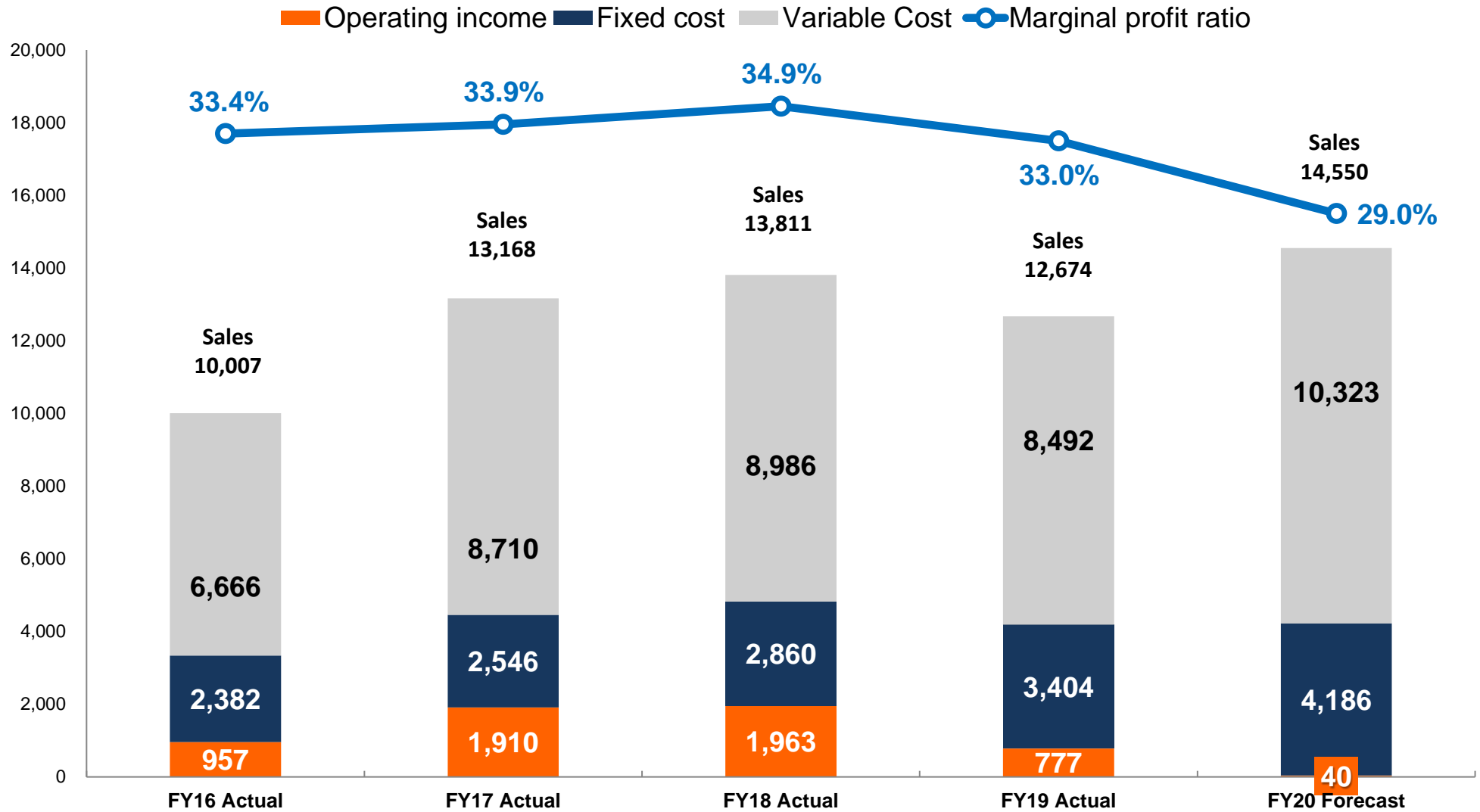
# Conditions of Operational Hedge – “Marry and Netting” and Foreign Exchange Sensitivity

(Unit: million yen)

Currency	Incoming		Outgoing		Net Amount by currency	Average rate during the term (JPY)	In case of yen appreciation (10%)			In case of yen depreciation (10%)		
	Amount by currency	Composi- tion ratio	Amount by currency	Composi- tion ratio			If yen is appreciated ▲10% (JPY)	Difference	Affected amount (QTD)	If yen is depreciated +10% (JPY)	Difference	Affected amount (QTD)
JPY	¥10,700.0	76%	¥10,800.0	71%	¥-100.0	-	-	-	-	-	-	-
USD	\$27.3	20%	\$30.6	21%	\$-3.3	¥106.1	¥95.51	¥-10.61	¥35.02	¥116.73	¥10.61	¥-35.02
EUR	€2.9	3%	€2.4	2%	€0.5	¥122.4	¥110.14	¥-12.2	¥-6.12	¥134.62	¥12.24	¥6.12
PHP	PP0.0	0%	PP350.9	5%	PP-350.9	¥2.2	¥1.94	¥-0.2	¥75.79	¥2.38	¥0.22	¥-75.79
THB	฿55.60	1%	฿25.50	1%	฿30.10	¥3.4	¥3.05	¥-0.3	¥-10.20	¥3.73	¥0.34	¥10.20
<b>Total</b>	-	<b>100%</b>	-	<b>100%</b>	-	-	-	-	<b>¥94.49</b>	-	-	<b>¥-94.49</b>

# Variation in Marginal Profit Ratio

(Unit: million yen)







REFERENCE MATERIALS

# ③ FUTURE STRATEGIES



Corporate Principle

## *Rokajini tsukafuru*

*(contributing to society through filtration activities)*

### Emergence of various societal issues

Climate change

Waste processing

Declining biodiversity

Spread of COVID-19

Realizing *Rokajini tsukafuru*

Working to solve societal problems through filter design and manufacture

**Corporate Principle**

Realizing **Rokajini tsukafuru**  
(contributing to society through filtration activities)

**Business Conditions**

**Societal issues**

- Climate change
- Waste processing
- Declining biodiversity
- Spread of infectious disease

**3 Themes of YAMASHIN Initiatives**



**Solving societal problems through filter design and manufacture**

**Business Model**

**Construction machinery filter business** *Line parts, service parts*

- Fully implement policy of selling supply products only to construction machinery manufacturers.
- Acquire leading share by providing reliable and high-quality products.
- Provide long-life and environmentally-friendly products
- Provide high value-added products via IoT management.

**Air filter business**

- Provide high performance filters that safeguard against health risks.

**Healthcare business**

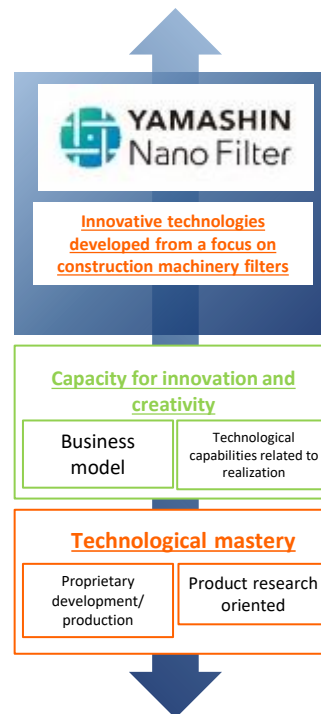
- Provide high performance mask equivalent to medical use products.

**YAMASHIN NANO FILTER™ industrial subsidiary material**

Non-financial capital supporting value creation

- Human capital (active promotion of exceptional personnel)
- Manufacturing capital (robust supply chain system)

**YAMASHIN's Strengths**



**Created Value**

Our goal:  
**To be a comprehensive Filter Manufacturer**

**Externally directed value**



Manufacturing masks that limit the spread of communicable and infectious diseases



Reducing use of heating fuel through high-insulation agricultural sheets based on nanofibers



Reducing waste by extending filter life through nanofiber technologies



Increased ratio of renewable energy in electricity use through electricity derived from renewable energy



Protecting waterfowl (sourced for down) by promoting alternatives to natural down through nanofiber manufacturing technologies

**Corporate governance**

Source: Compiled by The Japan Research Institute: **Second Party Opinion**

URL : [http://www.Yamashin-filter.co.jp/ja/news/news\\_20200908\\_001/main/00/link/SecondPartyOpinion.pdf](http://www.Yamashin-filter.co.jp/ja/news/news_20200908_001/main/00/link/SecondPartyOpinion.pdf)

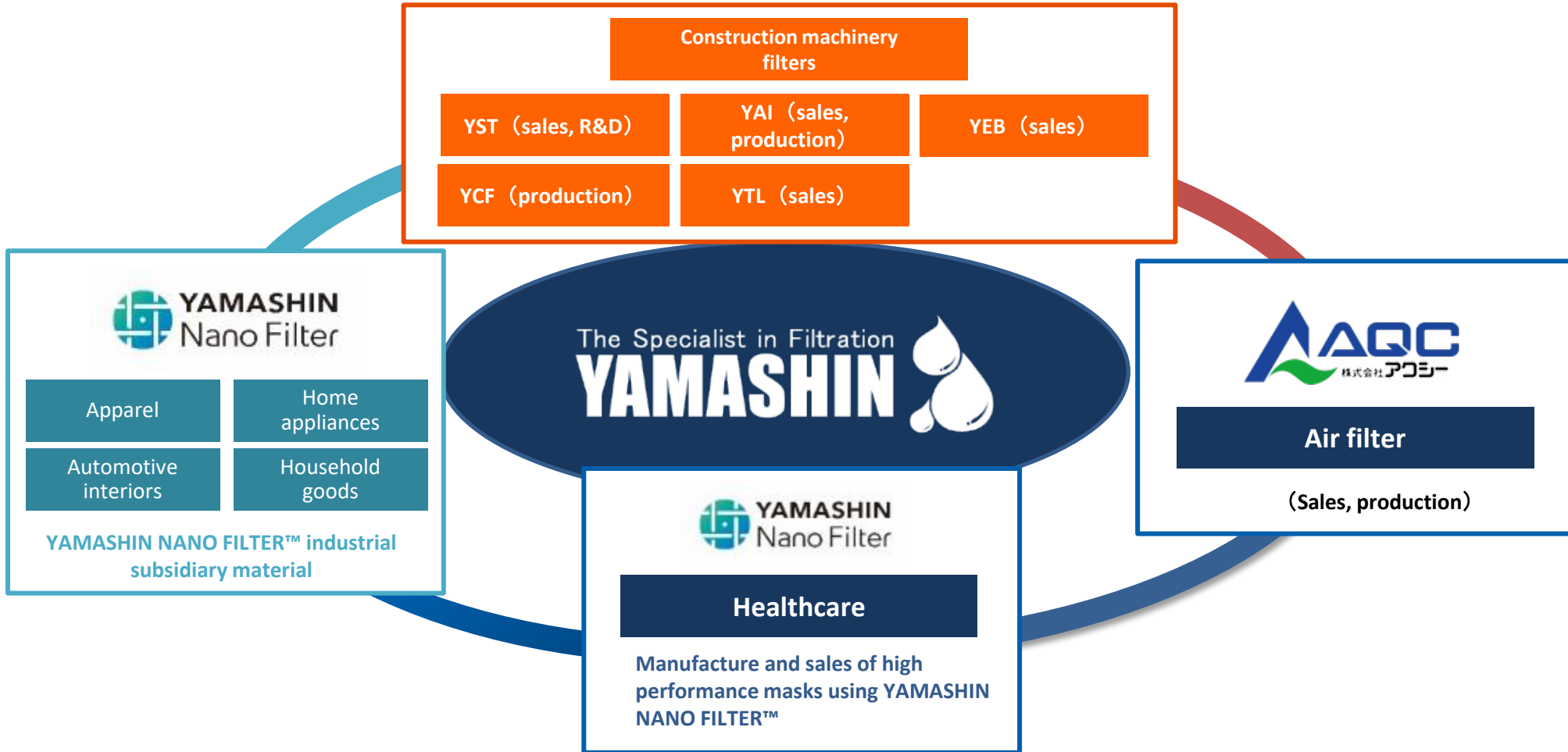
\*For specific reduction KPIs, refer to the reference materials.

Working to Reduce CO2 by Approx. 25,000 Tons through the project.

## Impacts Created by Sustainability Project

Project outputs	Outcomes		Impact	
				Impact indicator (annual)
Purchasing electricity from renewable energy	YAMASHIN	Increased share of renewable energy in electric power	<b>Renewable energy</b>	<b>632t CO<sub>2</sub></b>
Purchasing solar power systems				
<a href="#">Augmentation of production facilities for YAMASHIN NANO FILTER™</a>	Users (construction machinery)	Reduced waste from longer life hydraulic filters for construction machinery	Reduced waste for helping to reduce pollution	4,000 t
	Manufacturers (apparel, bedding)	Reduced use of natural down through use of synthetic down	Reduced natural down for protecting land and sea life diversity	23 t
	Users (agriculture)	Reduced fuel consumption through high-insulation agricultural sheets	<b>Energy efficiency</b>	<b>24,440t CO<sub>2</sub></b>
<a href="#">Introducing recycling facilities for YAMASHIN NANO FILTER™</a>	Users (e.g., construction machinery)	Reduced waste from various filters	Pollution prevention and control	(Qualitative assessments)
Augmentation of manufacturing machinery for masks for general consumers	Users (general consumers)	Increased production of masks for general consumers	Help consumers to access to necessary services to the extent possible	<b>230 million masks</b>
Augmentation of manufacturing machinery for medical use masks	Users (medical professionals)	Increased production of masks for medical use	Help consumers to access to necessary services to the extent possible	(Qualitative assessment)
<a href="#">R&amp;D on YAMASHIN NANO FILTER™ technology</a>	Users (general consumers)	Spread and expansion of fuel cells for separator development	Clean transport	(Qualitative assessment)
	Manufacturers and users	<a href="#">Achieving even higher performance of YAMASHIN NANO FILTER™ (finer, added features)</a>	Broad social/environmental implications	

# Accelerating the transition from dedicated manufacturer of construction machinery filters to comprehensive filter manufacturer







The forward-looking statements in this document, including the forecast of results of operations, are based on information currently available to YAMASHIN. Actual results may differ from these forecasts due to a variety of factors, including market trends and business conditions.

For inquiries regarding these materials, please contact our Public Relations & Investor Relations manager

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