

YAMASHIN Paradigm Shift -Growing our business in the era of COVID-19

Launch of Healthcare Business, Full-Fledged Entry into Japanese Mask Market

YAMASHIN-FILTER CORP.
Financial Results for the Second Quarter of the Fiscal Year Ended March 2021

First Section of Tokyo Stock Exchange

**6240** 

November 20, 2020



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) Telecommuting now recommended

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 arrangements 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.

Non-essential conferences, meetings, trainings, events, dinners, etc. are prohibited. On-line meeting should be used.

Domestic and overseas business trips 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.

Cebu Factory Resumed operations, restored mass production

Saga Factory Commenced mass production of filter materials and masks

Suzhou Factory\* Normal operations

\*Manufacturing outsourced

Osaka factory (AQC)

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

Economic activity is resuming. Further growth in the construction machinery market is expected with

**Chinese** market

increasing government-led public investments.

The production plans of Chinese major clients continue

The production plans of Chinese major clients continue to expand.

**Japan/US/** While the outlook remains uncertain, production at **Europe/Asia** major clients is recovering, with economic activity

market resuming in stages.



### The market environment, our actions, and business results for FY2020 Q2

### Market Environment

- COVID-19 continues to spread. It remains uncertain when conditions will return entirely to normal. The construction machinery market is currently recovering against this backdrop.
- The demand for construction machinery in Japan, North America, Europe, and other Asian countries to decline.
- 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 significant growth in new machinery sales from the same quarter of the previous year. 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

For details on our initiatives, see page 3

Deliver on ESG initiatives while improving profitability

Financing project for sustainable business⇒ Businesses run with financing help to build sustainable societies

**Construction machinery filters**⇒Contribute to reduced industrial waste (CO<sub>2</sub>) and global environmental protection.

 Grow market shares in China and North America; increase profitability by expanding the high value-added filter product line.

**Air filters**⇒Contribute to reduced industrial waste (CO<sub>2</sub>) and reduced risk of health hazards.

Full-scale ramp-up of healthcare business⇒Contribute both to economic activity and reduced health risks.

Expand sales channels to online sales, drug stores and other outlets

- Expand sales channels to online sales, drug stores and other outlets
- Increase share of high performance mask market for general consumers.
- Work to expand lineups with dust masks for medical use and other applications by acquiring medical use certification.

Establish other elements of the business portfolio: Promote YAMASHIN Nano Filter™.

• Apparel: Contribute to improved animal welfare (specifically, eliminating use of down) through our materials.

### **Business results for FY2020 Q2**

- Consolidated net sales: 6,563 million yen, up 12.9% year on year
  - Sales of construction machinery filters fell to 4,887 million yen, down 15.9% year on year, due COVID-19
  - Sales of air filters stood firm at 1.288 million yen.
  - Healthcare sales contributing to results as new business: 386 million yen
- Operating income: Due to COVID-19-related temporary costs for air freight, business restructuring, and new mask business marketing, operating income fell to -50 million yen, down 438 million yen year on year.





### **Our initiatives for FY2020 ending March 2021**

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

Based on a corporate philosophy captured in the phrase Rokajini tsukafuru (contributing to society through filtration activities) and focusing on the three themes of Environment, Air, and Health, we're helping to create sustainable societies.

### **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** 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.

### Healthcaw2re

Work to increase shares of high performance mask market for general consumers; enter the market for medical use dust masks.

Contribute both to the resumption of economic activity and reductions in health risks by expanding sales channels to drug stores; expand product lineup by acquiring medical use certifications (N95, FFP, DS2).

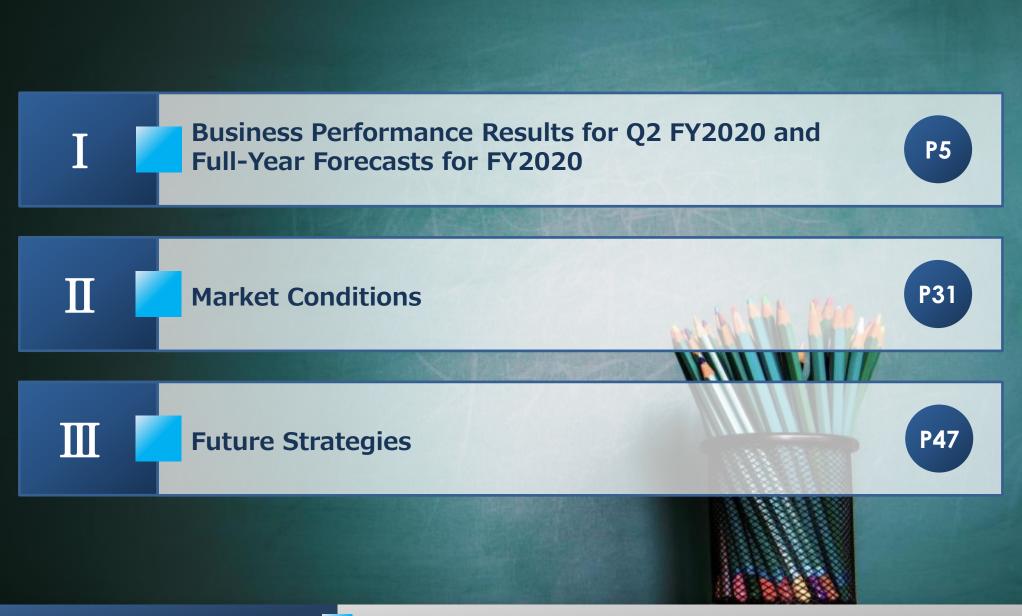
Establish other elements within the business portfolio: Promote YAMASHIN Nano Filter™.

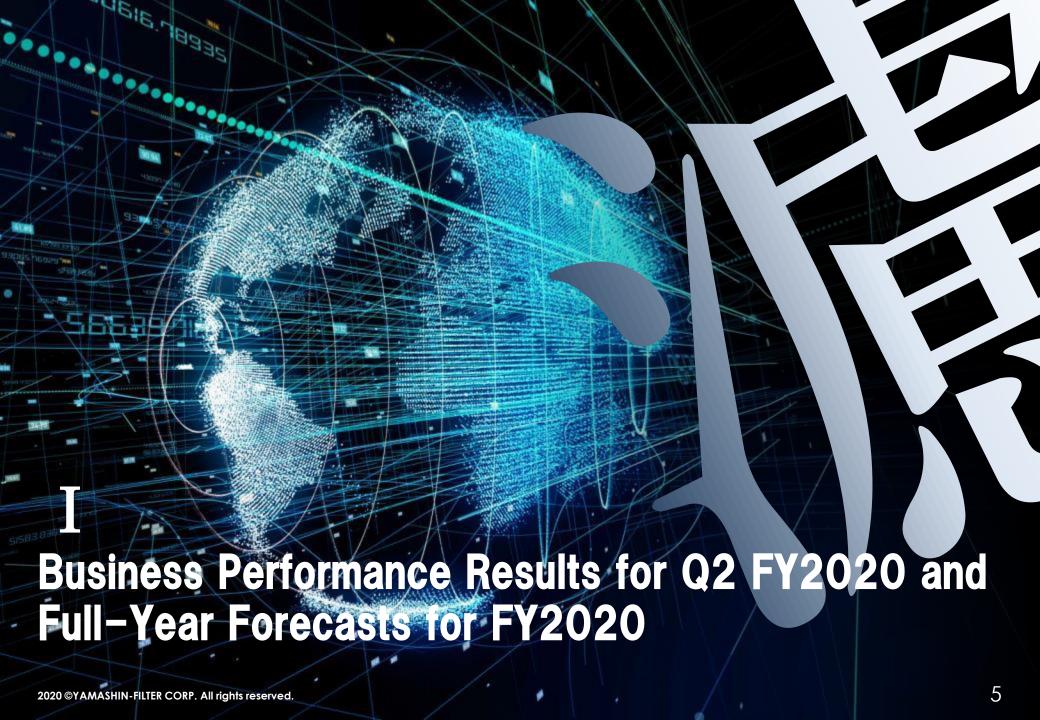
**Apparel business** Expand sales channels and supply products to major apparel manufacturers, both domestic and overseas.

Boost sales volumes while eliminating use of down for use in apparel.











**Q2 FY2020 Business Performance (July – September 2020)** 



		Q2 FY2019 Actual	Q2 FY2020 Actual	YoY	change	
		(million yen)	Amount	Amount	Amount	%
Net sales			3,071	3,705	633	20.6%
	Construction ma	chinery filters*	3,071	2,779	△291	△9.5%
	Air filters		0	624	624	-
	Healthcare		0	301	301	-
Operating	income		270	48	△222	△82.1%
	Construction ma	chinery filters*	588	322	△266	△45.2%
	Air filters		0	△7	△7	-
	Healthcare		0	69	69	-
	Corporate expe	enses*	△317	△336	△19	6.1%
	Operating i	ncome margin	8.8%	1.3%	<b>△7.5Pt</b>	
Ordinary p	orofit		187	41	△145	△77.9%
	Ordinary	profit margin	6.1%	1.1%	<b>△5.0Pt</b>	
Net incom	ie		125	△69	△195	△155.2%
	Net income margin		4.1%	-	-	
		USD	107.4	106.9	△0.5	△0.5%
Exchange	e rates (ave.)	EUR	119.3	121.3	2.0	1.7%

 $<sup>*&</sup>quot;Construction\ machinery\ filters"\ here\ includes\ industrial\ filters\ and\ process\ filters\ in\ addition\ to\ construction\ machinery\ filters.$ 

<sup>\*</sup>As of Q2 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.



	(million ven)		Q2 FY2020 Actual	YoY c	hange
	(million yen)	Amount	Amount	Amount	%
Construction machi	inery filters	2,704	2,495	△208	△7.7%
	Line parts	1,110	928	△182	△16.4%
	Service parts	1,593	1,567	△26	△1.6%
Industrial filters		122	126	3	3.0%
Process filters		244	157	△87	△35.6%
Air filters		0	624	624	-
Healthcare		0	301	301	-
Total	sales	3,071	3,705	633	20.6%

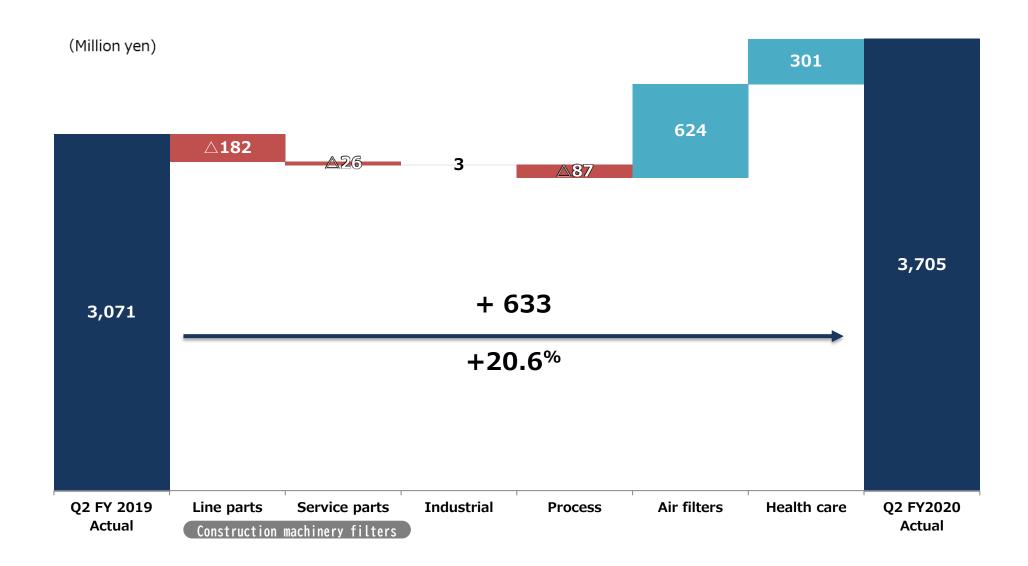


(Millian com)		Q2 FY20 Actua		Q2 FY2( Actua		YoY change		
(1	Million yen)	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)	
	onstruction achinery filters <sup>*</sup>	3,071	100.0%	2,779	75.1%	△291	△9.5%	
	Japan	1,463	47.7%	1,173	31.7%	△289	△19.8%	
	North America	732	23.8%	560	15.1%	△171	△23.5%	
	China	259	8.5%	351	9.5%	91	35.3%	
	Other Asian countries	350	11.4%	350	9.5%	0	△0.1%	
	Europe	263	8.6%	342	9.2%	79	30.1%	
	Others (Middle East, etc)	1	0.0%	0	0.0%	0	△39.0%	
Ai	r filters (Japan)	0	0.0%	624	16.8%	624	-	
Н	ealthcare (Japan)	0	0.0%	301	8.1%	301	-	
	Total sales	3,071	100.0%	3,705	100.0%	633	20.6%	

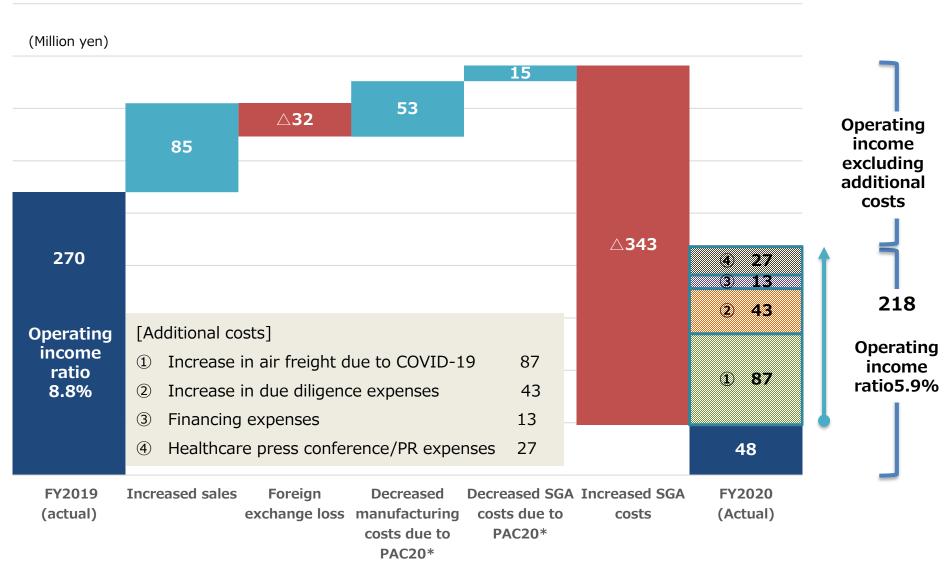
<sup>\*&</sup>quot;Construction machinery filters" here includes industrial filters and process filters in addition to construction machinery filters.

\*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









\*PAC (Promptly Activated Cost reduction) Company wide dost reduction project



### Q2 FY2020 Business Performance (April – September 2020)



	/h4:11:		Q2 FY2019 Actual	Q2 FY2020 Actual	Yo	Y change
	(Million yen)		Amount	Amount	Amount	%
Net sales	let sales		5,811	6,563	751	12.9%
	Construction r	machinery filters*	5,811	4,888	△922	△15.9%
	Air filters		0	1,288	1,288	-
	Healthcare		0	386	386	-
Operating in	ncome		388	△50	△438	-
	Construction machinery filters		994	427	△566	△57.0%
	Air filters		0	38	38	-
	Healthcare		0	106	106	-
	Corporate e	xpenses*	△ 605	△622	△16	2.8%
	Operating	income margin	6.7%	△0.8%	△ <b>7.4Pt</b>	
Ordinary pr	ofit		286	△60	△347	-
	Ordina	ry profit margin	4.9%	△0.9%	<b>△5.9Pt</b>	
Net income			187	△152	△339	-
	Net income margin		3.2%	△2.3%	<b>△5.5Pt</b>	
	USD		107.4	106.9	△0.5	△0.5%
Exchange r	rates (ave.)	EUR	119.3	121.3	2.0	1.7%

<sup>\*&</sup>quot;Construction machinery filters" here includes industrial filters and process filters in addition to construction machinery filters.

\*As of Q2 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.



	(Million von)		Q2 FY2020 Actual	YoY change Actual (Accumulated)		
(Million yen)		Amount	Amount	Amount	Ratio (%)	
Construction machi	nery filters	5,093	4,300	△793	△15.6%	
	Line parts	2,213	1,750	△463	△20.9%	
	Service parts	2,879	2,549	△329	△11.4%	
Industrial filters		254	237	△17	△6.7%	
Process filters		464	351	△112	△24.3	
Air filters		0	1,288	1,288	-	
Healthcare		0	386	386	-	
Total	sales	5,811	6,563	751	12.9%	

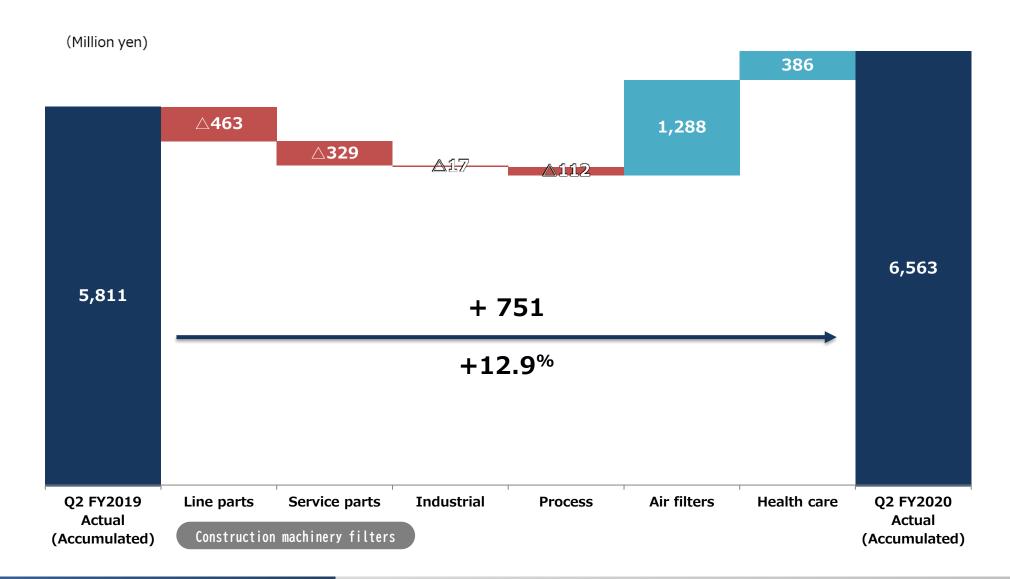


	Q2 FY20 Actual (Accun		Q2 FY20 Actual (Accur		YoY cha	nge
	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Construction machinery filters*	5,811	100.0%	4,888	74.5%	△922	△15.9%
Japan	2,821	47.5%	2,174	33.1%	△646	△22.9%
North America	1,195	16.3%	855	13.0%	△339	△28.4%
China	588	13.1%	676	10.3%	87	14.9%
Other Asian countries	676	12.6%	624	9.5%	△51	△7.6%
Europe	527	10.5%	555	8.5%	28	5.4%
Others (Middle East, etc)	2	0.0%	1	0.0%	△1	△47.2%
Air filters (Japan)	-	-	1,288	19.6%	1,288	-
Healthcare (Japan)	-	_	386	5.9%	386	-
Total sales*	5,811	100.0%	6,563	100.0%	751	12.9%

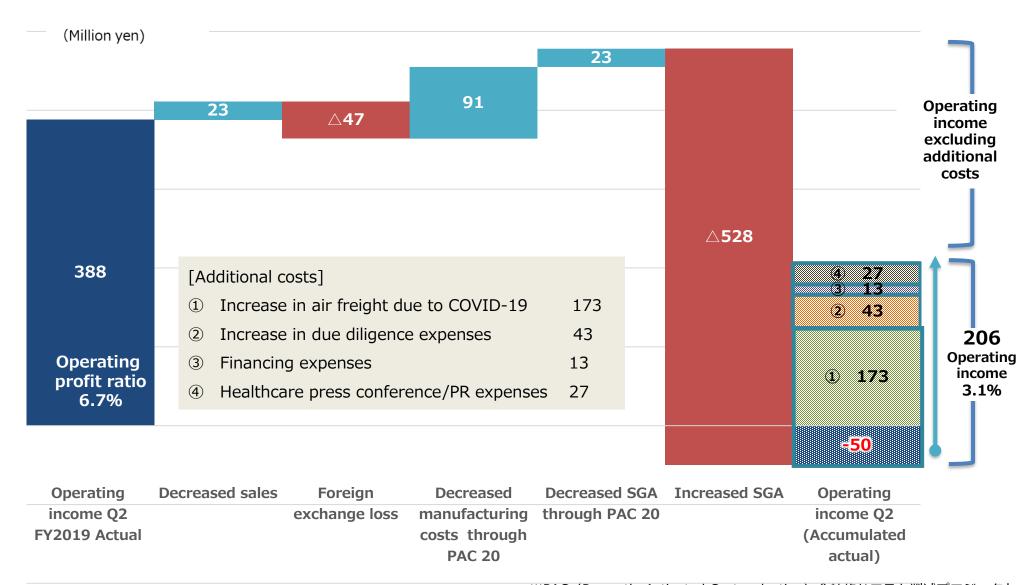
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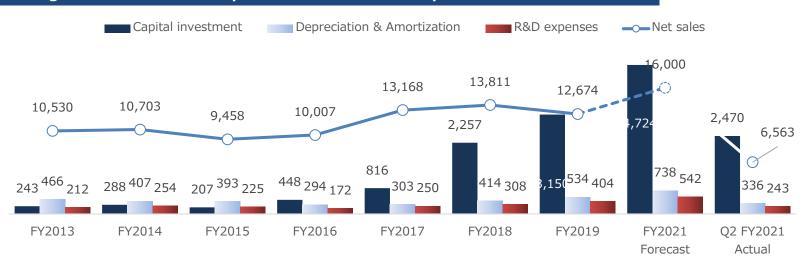
※PAC (Promptly Activated Cost reduction) 全社的なコスト削減プロジェクト

### **Capital Investment, Depreciation & Amortization, and R&D Expenses**



	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	Q2 FY2020 (Accumulated)
(million yen)	Actual	Forecast	Actual						
Net sales	10,530	10,703	9,458	10,007	13,168	13,811	12,674	16,000	6,563
Capital investment	243	288	207	448	816	2,257	3,150	4,724	2,470
Composition ratio	2.3%	2.7%	2.2%	4.5%	6.2%	16.3%	24.9%	29.5%	37.6%
Depreciation & Amortization	466	407	393	294	303	414	534	738	336
Composition ratio	4.4%	3.8%	4.2%	2.9%	2.3%	3.0%	4.2%	4.6%	5.1%
R&D expenses	212	254	225	172	250	308	404	542	243
Composition ratio	2.0%	2.4%	2.4%	1.7%	1.9%	2.2%	3.2%	3.4%	3.7%

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



~2020年3月期 2021年3月期



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)









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).

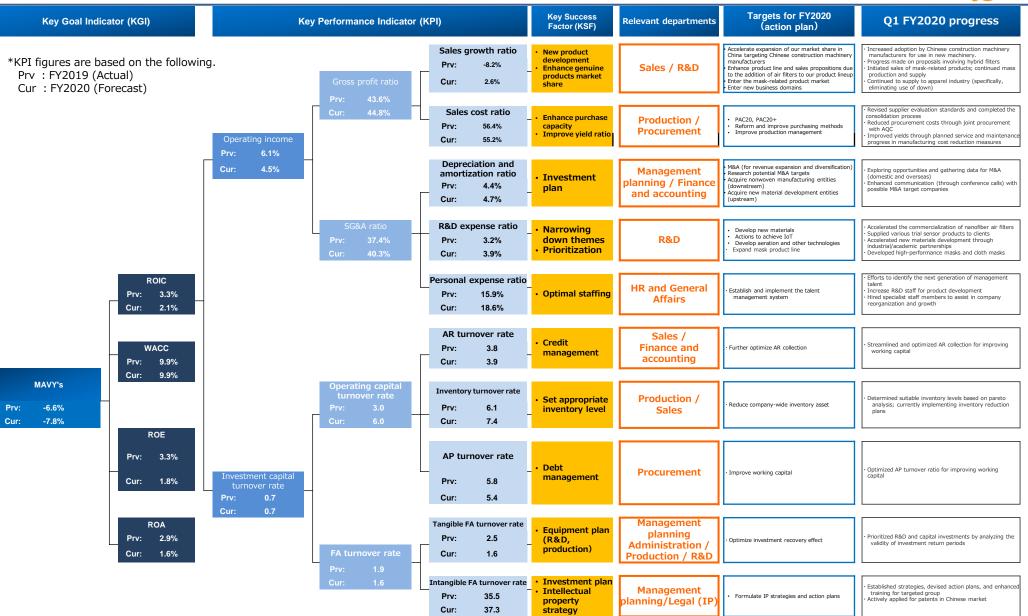


**Assign KPIs to relevant** departments who are responsible for target setting and implementing actions for achieving the targets in a company-wide coordinated effort.



### **MAVYS: The Big Picture and the Department**







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

PAC20









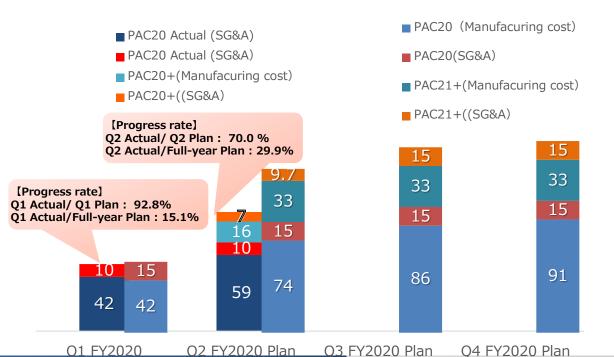
Cost of raw materials decreased, through the optimization of the supply chain, the improvement of manufacturing processes, etc.

We will implement further cost reductions (PAC20+) to achieve improved profitability.

PAC20 (initial plan) and PAC20+ (additional) vs Actual Progress

**Annual Reduction Target** 

(Million yen)



	Manu- facturing cost	SG&A	Total
PAC20	293	61	355
PAC20+	100	40	140
Total	393	101	495

2



## **Full-year Forecasts for FY2020**



# Construction machinery filters (Existing business line)

- As countries resume economic activity, production activities by major clients are ramping back up. Demand for our products is expected to recover. Forecasts for net sales remain unchanged.
- Profits have been low due to temporary costs related to COVID-19, including air freight, business restructuring costs, and marketing costs for the new mask business; thus, performance forecasts have been revised.

### Air filters (Existing business line)

> Taking into account declining orders due to COVID-19 and other trends in 2Q FY2020, performance forecasts remain unchanged.

### Healthcare business (New business line)

➤ Performance forecasts have been revised upward due to the expected start of full-fledged supply of the Zexeed high performance mask from November 2020 to nationwide drug stores, convenience stores, and other retail outlets.

### 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.



(M	illion yen)		FY2019 Actual	FY2020 Forecast revised Aug 4	FY2020 Forecast revised Nov. 4	Difference	
<b></b>	,		Amount	Amount	Amount	Amount	
Net sales	Net sales		12,674	15,000	16,000	1,000	
	Construction machinery filters*		11,296	10,000	10,000	0	
	Air filters		1,377	3,000	3,000	0	
	Healthcare		-	2,000	3,000	1,000	
Operating	income		777	1,230	1,300	70	
	Construction machinery filters*		1,894	1,583	1,353	△230	
	Air filters		122	290	290	0	
	Healthcare		-	640	910	270	
	Corporate 6	expenses*	△1,240	△1,283	△1,253	30	
	Operating	income margin	6.1%	8.2%	8.1%	<b>∆0.1Pt</b>	
Ordinary	profit		603	1,200	1,280	80	
	Ordinar	y profit margin	4.8%	8.0%	8.0%	-	
Net incom	ne		608	790	1,350	560	
	Net income margin		4.8%	5.3%	8.4%	3.1Pt	
Exchai	nge rates	USD	108.8	108.0	108.0	0	
	ive.)	EUR	120.83	121.0	121.0	0	

<sup>\*&</sup>quot;Construction machinery filters" includes industrial filters and process filters, in addition to construction machinery filters.

\*As of Q2 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.





			9 Actual		Forecast d Aug 4	FY2020 Forecast Revised Nov. 4		Difference	
(Million yen)		Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio
Construction mach	ninery filters	9,866	77.8%	8,673	57.8%	8,673	54.2%	0	0%
	Line parts	4,129	32.6%	3,665	24.4%	3,665	22.9%	0	0%
	Service parts	5,737	45.3%	5,008	33.4%	5,008	31.3%	0	0%
Industrial filters		492	3.9%	420	2.8%	420	2.6%	0	0%
Process filters		937	7.4%	905	6.0%	905	5.7%	0	0%
Total of existing	ng businesses	11,296	89.1%	10,000	66.7%	10,000	62.5%	0	0%
Air filters		1,377	10.9%	3,000	20.0%	3,000	18.8%	0	0%
Healthcare		0	0.0%	2,000	13.3%	3,000	18.8%	1,000	50.0%
Total	sales	12,674	100.0%	15,000	100.0%	16,000	100.0%	1,000	6.7%



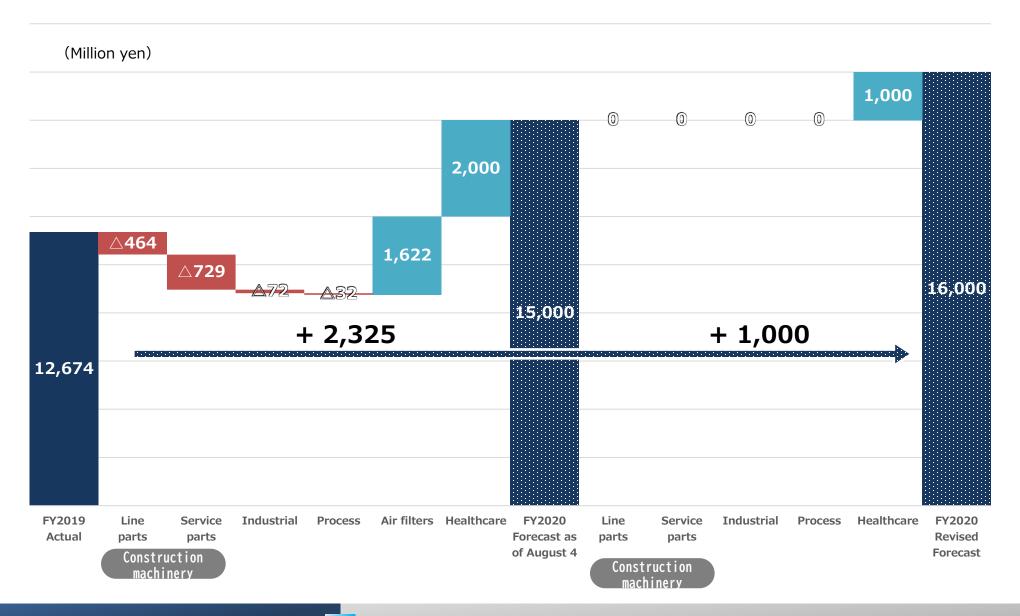
	FY2019	Actual		Forecast d Aug 4		Forecast ised	Difference	
(Million yen)	Amount	Composition ratio	Amount	Composition ratio	Amount	Composition ratio	Amount	%
Construction machinery filters*	11,296	89.1%	10,000	66.7%	10,000	62.6%	0	0%
Japan	5,420	42.8%	4,587	30.6%	4,587	28.8%	0	0%
North America	2,313	18.3%	2,081	13.9%	2,081	13.0%	0	0%
China	1,173	9.3%	1,212	8.1%	1,212	7.6%	0	0%
Other Asian countries	1,319	10.4%	1,250	8.3%	1,250	7.8%	0	0%
Europe	1,065	8.4%	845	5.6%	845	5.3%	0	0%
Construction machinery filters	4	0.0%	23	0.2%	23	0.1%	0	0%
Air filters (Japan)	1,377	10.9%	3,000	20.0%	3,000	18.7%	0	0%
Healthcare (Japan)	0	0.0%	2,000	13.3%	3,000	18.7%	1,000	50.0%
Total sales*	12,674	100.0%	15,000	100.0%	16,000	100.0%	1,000	6.7%

<sup>\* &</sup>quot;Construction machinery filters" includes industrial filters and process filters, in addition to construction machinery filters.

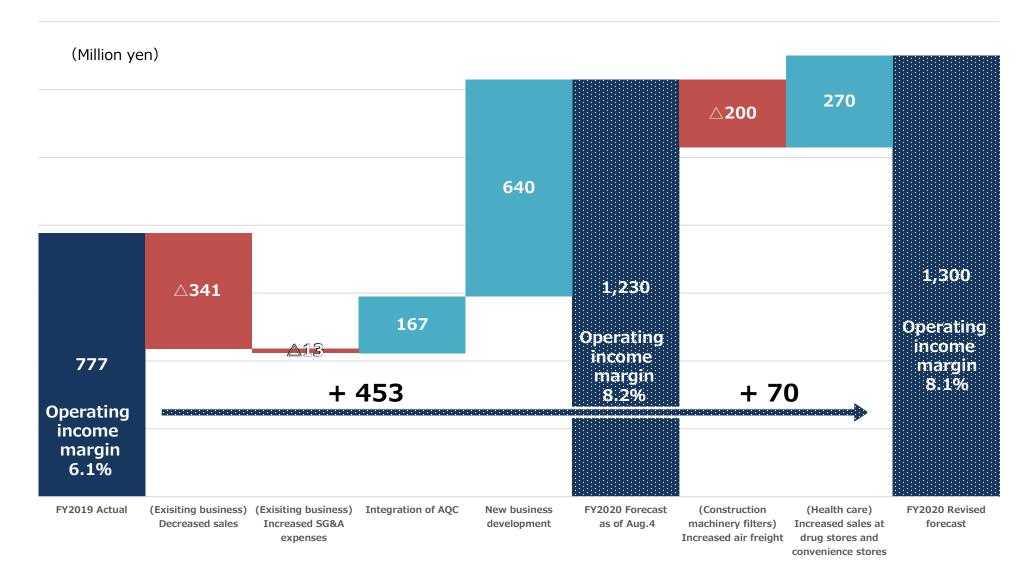
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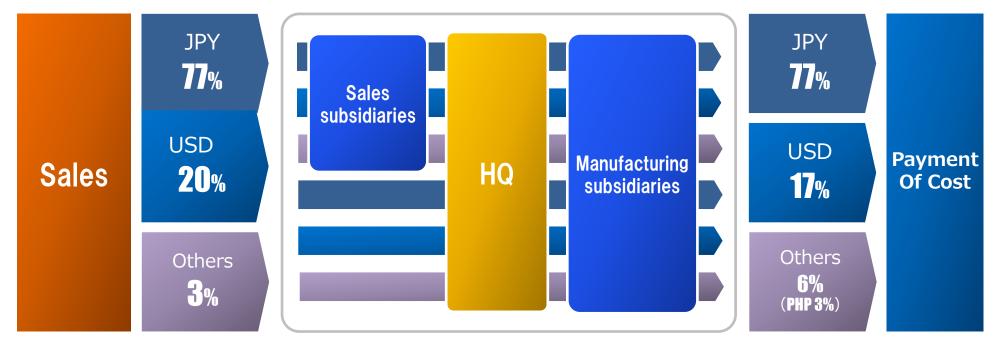








Operational hedge "marry and netting" was continuously conducted, achieving a foreign exchange sensitivity of 0.7%.



80% of transaction currency is JPY.

Operational hedge "marry and netting" was conducted for USD

1-yen appreciation of the yen would increase operating income about 0 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
Dividend per share	3.6yen*1	6.0yen	6.0yen	6.0yen
DOE*2	1.9%	2.4%	2.3%	2.0%
Total return ratio	21.6%	31.9%	72.3%	38.0%

<sup>\*1.</sup> 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.

<sup>\*2.</sup> DOE (Dividend on equity) = (Annual dividend  $\div$  Shareholders' equity)  $\times$  100 = (ROE  $\times$  Dividend payout ratio)

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





"Conditions in the Construction Machinery Market"



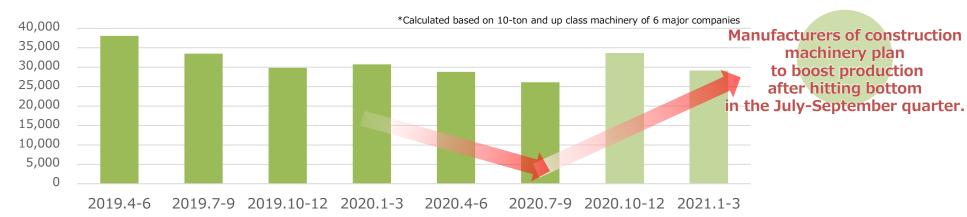
- Indications emerged in 2Q FY2020 of the resumption of economic activity in various countries after stagnating due to COVID 19. However, construction machinery demand decreased in the Japan/US/Europe/Asia market; the outlook remains unclear. Demand is expected to recover as economic activity resumes.
- In China, the world's largest construction machinery market, demand for construction machinery is expected to grow, due to planned large-scale public works investment led by the government.

planned large-scale public works investment led by the government.			
	2020/3 Q4	2021/3 Q1	Future outlook
China	<ul> <li>Implementation of large-scale government -led public works investments</li> <li>Positive new machinery sales year on year</li> </ul>	<ul> <li>Measures taken to promote large-scale government-led public works investments</li> <li>Major growth in new machinery sales year on year</li> </ul>	Large-scale government-led public works investment is expected to continue.  New machinery demand is expected to increase in response to Tier 4 environmental regulations.
South- eastern Asia	The demand for construction machinery dropped due to the suspension of economic activities.	Demand for construction machinery declined due to anti-government demonstrations and stagnating economic activity.	The outlook remains uncertain but demand is expected to recover thanks to infrastructure construction demand, etc.
North America	While economic activity resumed gradually, demand for construction machinery declined.	Economic activity resumed gradually. Demand for construction machinery also showed signs of recovery.	The outlook remains uncertain, but demand is expected to recover.
Japan	While economic activity resumed gradually, demand for construction machinery declined.	Economic activity resumed gradually. Demand for construction machinery also showed signs of recovery.	The outlook remains uncertain, but demand is expected to recover.
Europe	While economic activity resumed gradually, demand for construction machinery declined.	Economic activity resumed; demand for construction machinery also began recovering. However, there are fears of another lockdown caused by the second wave of COVID-19.	The outlook remains uncertain, but demand is expected to recover.

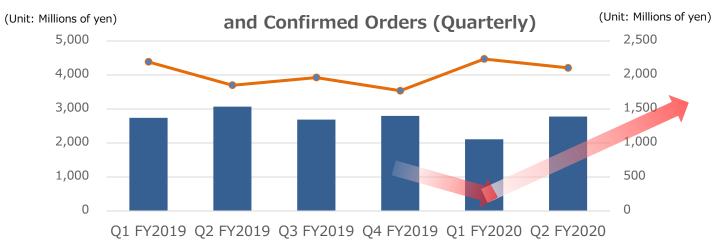


### **Total Production and Plans of**





### **YAMASHIN** Construction Machinery Filter Sales



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.

### To increase share

filter material

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

Leveraging resin nanofiber filter materials

Higher precision

**Longer life (replace after 3,000 hours)** 

Higher functionality

Trend toward more compact construction machinery Increased fuel economy

Help to prevent global warming.
Reduce
Environmental impact.

Reduce used filter volumes.

Reduce waste volumes Filtering precision 0.5-20µm Filtering precision 0.5-20µm Thickness 0.5-0.8mm

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

ir

Patent pending

(IC tag reader incorporating integrated differential pressure sensor)

**Dual-function sensor** 

[IC tag reader]

**FILTER SAVER** 

[Differential pressure sensor]

Identifies the use of genuine products.

Predictive monitoring of filter lifespan

SWIFTROCK \*SWIFT Real time Oil Checker (Contamination level sensor)

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.

Help cut costs for construction machinery manufacturers and users.

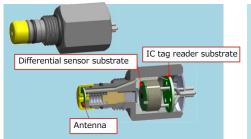
Eliminate use of third-party products/increase sales of genuine YAMASHIN products.





#### 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-

Improves grasp of order planning requirements.

Ensures users are supplied genuine parts

effectiveness 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 Light**

### (Contamination level sensor)





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			
01	Reduce initial costs.		
02	Countermeasure to air bubbles		
03	Accommodates flow level fluctuations		
04	Accommodates flow level fluctuations		
05	Heat resistant		
06	Constant real-time monitoring		

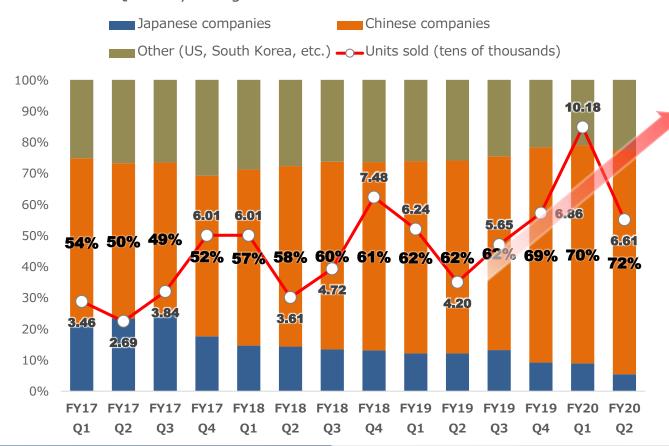


#### **Construction Machinery Market (China)**



- Continued strong demand for construction machinery in China underpinned by large-scale public investment
- Continuing market share growth in Chinese construction machinery manufacturers: more than 70%
- Expected further growth in new machinery demand due to Tier 4 environmental regulations

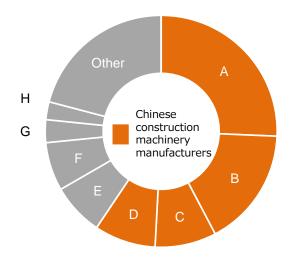
Quarterly change in Units Sold and Share in Chinese Market



Focusing on proposals to Chinese construction machinery manufacturers

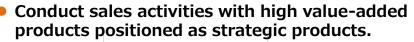
Working to rapidly increase our market share

Share of Major Construction Machinery Manufacturers in Chinese Market (September 30, 2020)









Cooperate with partners with strengths in the area of construction machinery.

regulation Supply **Further share** Progress as \*Our share means, the ratio of Chinese Target adoption of Sept. 2020 growth, adoption of our hydraulic product anufacturers Our share return filters of all the Chinese sales growth 118 32 construction manufacturers' sales 100 46 current excavator models (the 100 ⇒ 100 100 Tier 3 models) 100 89 112 Our share\* in Chinese billion yen 33 37  $\Rightarrow$ manufacturers is growing steadily. 30 Line FY19 Q4 share: 9% → FY20 Q2 share\*: **42%**  $\rightarrow$  FY20 target share: 62%25 3.3 billion yen 0.8 12 **FY19** FY20 20 **FY20 FY21** FY22-FY23

**Line parts** 

<Growth plan>

**Service parts (Supply parts)** 

**Expected** 

enactment

of Tier 4

environmenta

#### 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

#### Development of sales strategy leveraging our brand

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

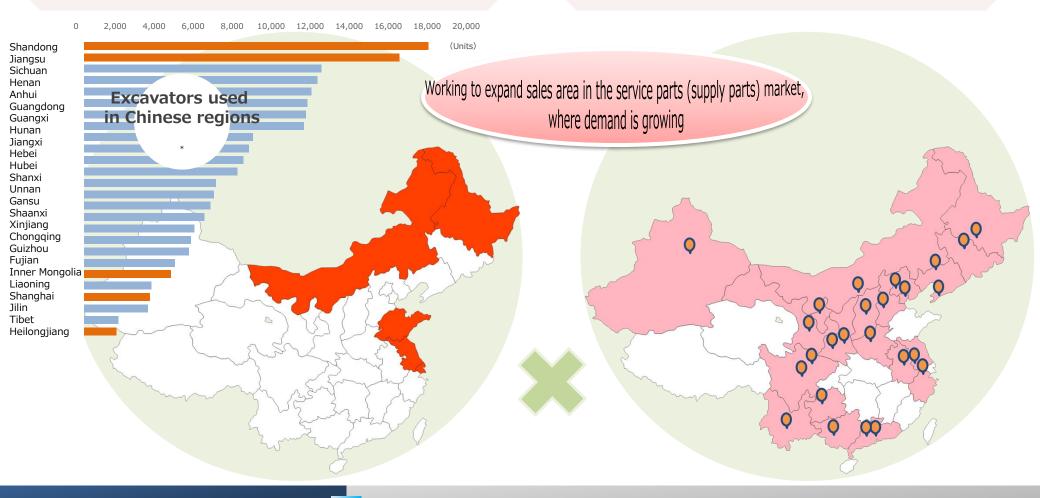


#### **Development of distributor channel**

Partners that cover regions with extensive excavator ownership selected as partners

**Development of parts trading company channel** 

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





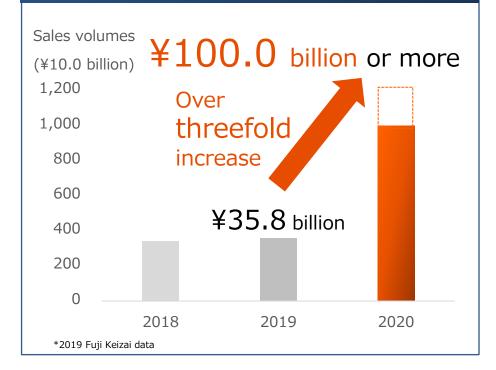
## "Conditions in the Mask Market"



#### **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.

#### Trends in (nonwoven) mask market for general consumers



#### YAMASHIN's Initiatives This Term

## Commercialized mask using synthetic polymer nanofibers YAMASHIN Nano Filter™

- Launched online sales of high performance YAMASHIN masks and mask inner sheets
- Launched sales of YAMASHIN masks, including the world's first premium mask for general consumers with performance equivalent to medical use masks
- Full-fledged supply to drug stores and other outlets



#### **Future Targets and Strategies**

#### Our target:

50% of domestic mask market (Sales of ¥50.0 billion)

Medium-term (FY2023) target

#### **Strategy:**

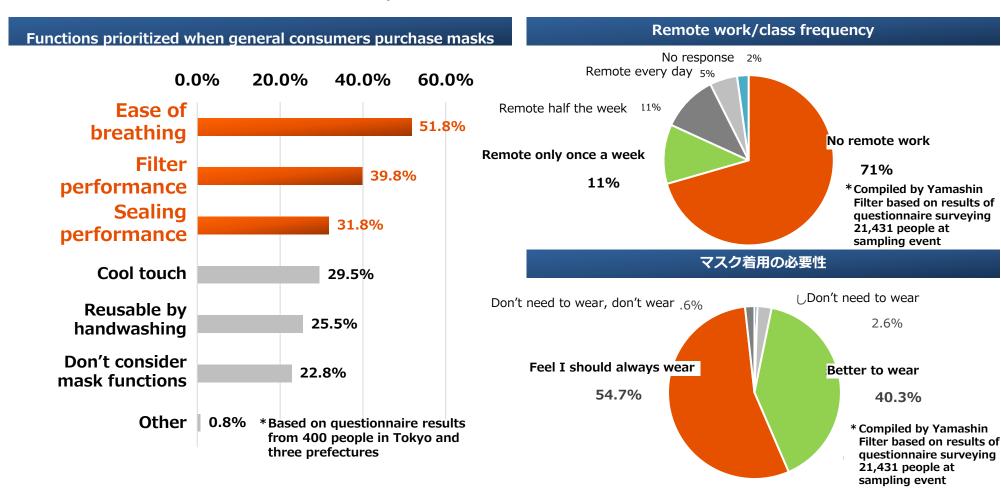
- Acquire leading share of domestic high performance mask market
- Enter medical use dust mask market

#### **Tactics:**

- Expand high performance mask lineup for general consumers; expand sales channels to drug stores, convenience stores; establish presence on major online retail sites).
- Acquire certification for medical use (expected in April 2021).

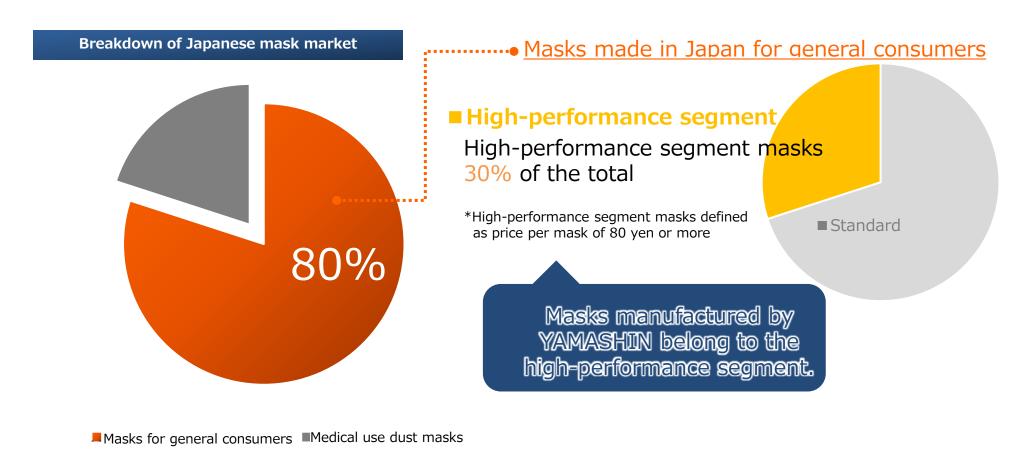


Buyers are increasingly prioritizing mask performance when making purchasing decisions; there still remains a widespread need to wear masks for work and school, etc.





Emergence of new growth market due to changing consumer need: high-performance masks for general consumers



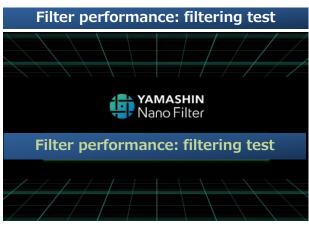


Zexeed flagship model uses YAMASHIN NANO FILTER™ and unique 3D form to achieve outstanding performance and overwhelming product differentiation.



#### Zexeed





https://youtu.be/WH64FEN\_Xv4



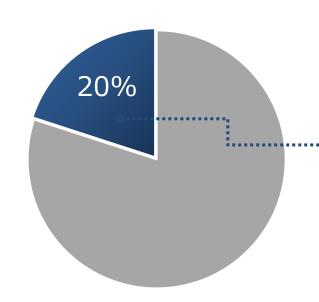
https://youtu.be/3xSkN6\_x7hg

Click on the images to jump to video pages.



Leveraging products offering high sealing performance and ease of breathing even when worn for extended periods, YAMASHIN will begin marketing medical use dust masks from January 2021.

#### 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\*).

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

(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



General supervision:
Professor Kazunari Onishi
Graduate School of Public
Health, St. Luke's
International University

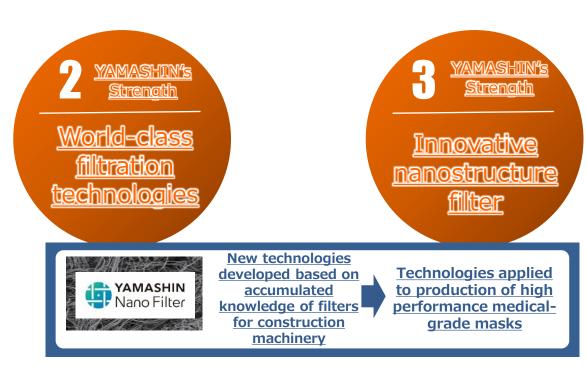


Leveraging filtration technologies developed and refined for construction machinery by Yamashin to target 50% share of Japanese mask market and sales of ¥50.0 billion by fiscal 2023.





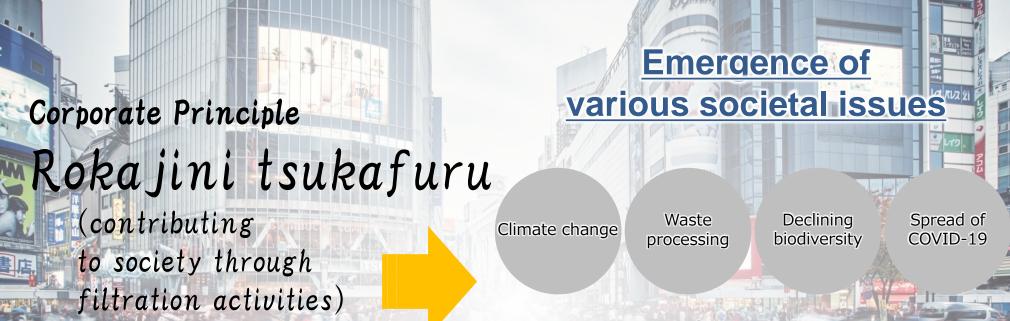
Expand lineup high performance masks for general consumers; acquire certification for medical use, expand sales channels (drug stores, convenience stores, Amazon, Rakuten, etc.)



# Targeting 50% of domestic mask market and sales of ¥50.0 billion by FY2023







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 changeWaste processing
  - Declining biodiversity
- Spread of infectious disease











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 environmentallyfriendly 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



Innovative technologies developed from a focus on construction machinery filters

### Capacity for innovation and creativity

Business model Technological capabilities related to realization

#### Technological mastery

Proprietary development/ production

Product research oriented



• Social capital (strong trust among customers)

Corporate governance

#### **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 panofibers



Reducing waste by extending filter life through nanofiber technologies



Increased share 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

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





## Working to Reduce CO<sub>2</sub> by Approx. 25,000 Tons through the project.

#### **Impacts Created by Sustainability Project**

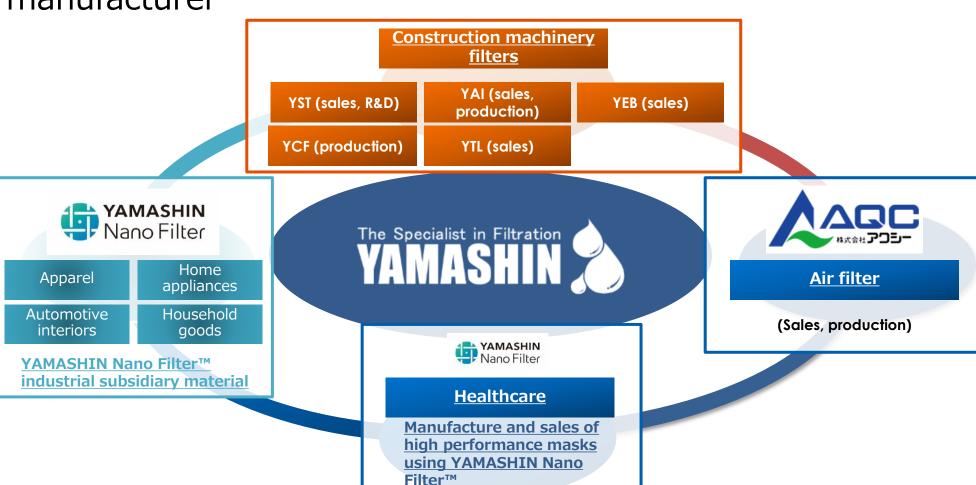
Project outputs
Purchasing electricity from renewable energy
Purchasing solar power systems
Augmentation_of production facilities for YAMASHIN Nano Filter™
Introducing recycling facilities for YAMASHIN Nano Filter™
Augmentation of manufacturing machinery for masks for general consumers
Augmentation of manufacturing machinery for medical use masks
R&D on YAMASHIN Nano Filter™ technology

, , , , , , , , , , , , , , , , , , , ,						
Outcomes						
YAMASHIN	Increased share of renewable energy in electric power					
Users (construction machinery)	Reduced waste from longer life hydraulic filters for construction machinery					
Manufacturers (apparel, bedding)	Reduced use of natural down through use of synthetic down					
Users (agriculture)	Reduced fuel consumption through high-insulation agricultural sheets					
Users (e.g., construction machinery)	Reduced waste from various filters					
Users (general consumers)	Increased production of masks for general consumers					
Users (medical professionals)	Increased production of masks for medical use					
Users (general consumers)	Spread and expansion of fuel cells from separator development					
Manufacturers and users	Achieving even higher performance for YAMASHIN Nano Filter™ (finer, added features)					

Impact				
	Impact indicator (annual)			
Renewable energy	632t CO <sub>2</sub>			
Reduced waste for helping to reduce pollution	4,000 tons			
Reduced natural down for protecting land and sea life diversity	23 tons			
Energy efficiency	24,440t co <sub>2</sub>			
Pollution prevention and control	(Qualitative assessments)			
Help consumers to access to necessary services to the extent possible	230 million masks			
Help consumers to access to necessary services to the extent possible	(Qualitative assessment)			
Clean transport	(Qualitative assessments)			
Broad social/environmental implications				



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









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



#### 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 CO<sub>2</sub> 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

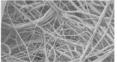
- Nanostructure traps viruses.
- Minor decline in performance, even with long-term use
- Construction of safe and secure domestic production and supply system

### <u>Filtration theory applied</u> <u>for new YAMASHIN mask standard</u>



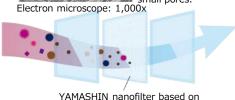
Zexeed next-generation
mask with premium
performance released to
address three factors: high
filter performance, secure
sealing, and air permeability
(for ease of breathing)

#### YAMASHIN Filter Mask/Filter Sheets



nanofibers

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



**Entry model** 

Sales launched at nationwide drug stores on September 4



#### Flagship model

Began taking presale orders on online retail sites on September 1







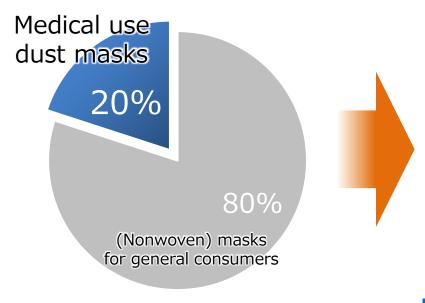


Plans to acquire certification for medical use dust mask.

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

Development policy going forward:

Expand lineup



- (Nonwoven) masks for general consumers
- Medical use dust masks

## Further plans to acquire certification for high performance masks needed at medical facilities, etc. (certifications in Japan, US, Europe\*)

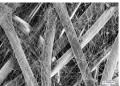
In the market for general consumers, we will differentiate our products by utilizing proprietary technologies and unique pleated mask shapes as we continue to develop higher performance masks.

- (1) Filter performance (equivalent to N95)
- (2) Leakage amount (equivalent to N95)
- (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)

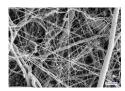
#### Nano fiber filter by Electrospinning method



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. Estimated per year average growth rate

The air filter market is expected to keep growing.

of the air filter market

## Contributions we can make Standard Nano Filter





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 Impact indicator (annual) Yamashin Increased share of renewable energy in electric power Renewable energy **632** tCO2 Introducing solar power systems Reduced waste from longer life hydraulic filters for 4,000 tons (construction construction machinery Manufacturers Augmentation of production facilities Protecting land and sea life (apparel, bedding) **23** tons for nanofibers down Users Reduced fuel consumption through high-insulation 24,440 tCO2 **Energy efficiency** (agriculture) agricultural sheets Users (e.g. Introducing recycling facilities (Qualitative construction machinery) Reduced waste from various filters for nanofibers assessments) Augmentation of manufacturing machinery Users (genera consumers) 230 million masks Increased production of masks for general consumers for masks for general consumers (Qualitative Augmentation of manufacturing Users (medical professionals) Increased production of masks for medical use machinery for medical use masks Spread and expansion of fuel cells from separator (Qualitative Users (general Clean transport R&D on YAMASHIN Nano Filter™ development assessments) technology Achieving even higher performance for nanofibers Broad social/environmental Manufacturers

(finer\_added features)

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

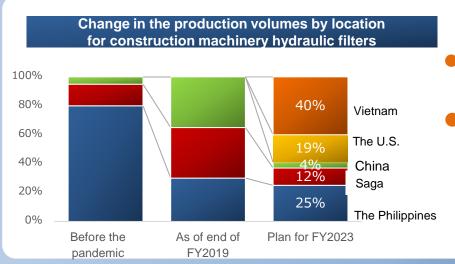
## Points of improvement/focus going forward

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





Impact on production structure



- The lockdown affected the production in the Philippines.
- Accordingly, a production quota is allocated 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.

For finance, we signed a loan agreement (for 4 billion yen) in Feb. 2020.





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.

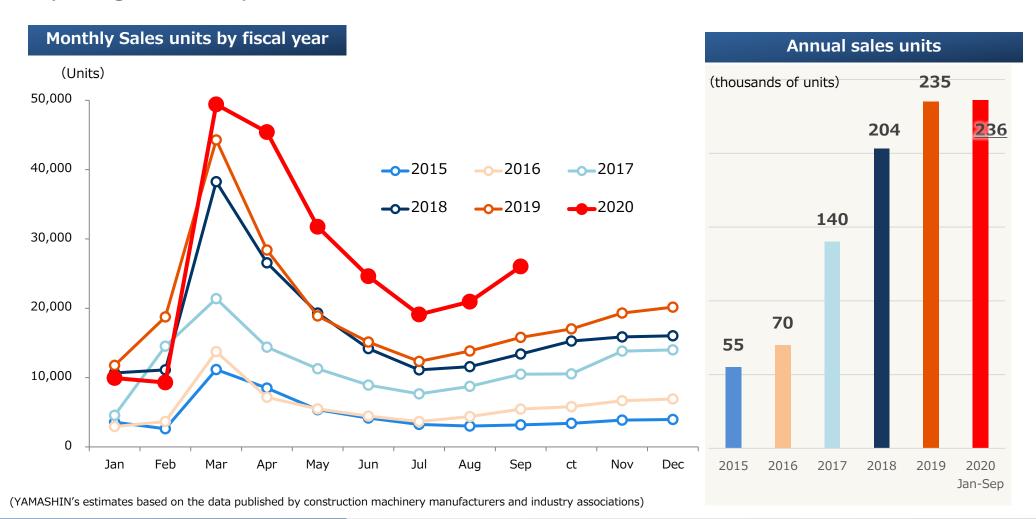
New business is expected to make significant contributions to both sales and profits.

YAMASHIN Nano Filters will drive growth, with use for diverse applications.





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

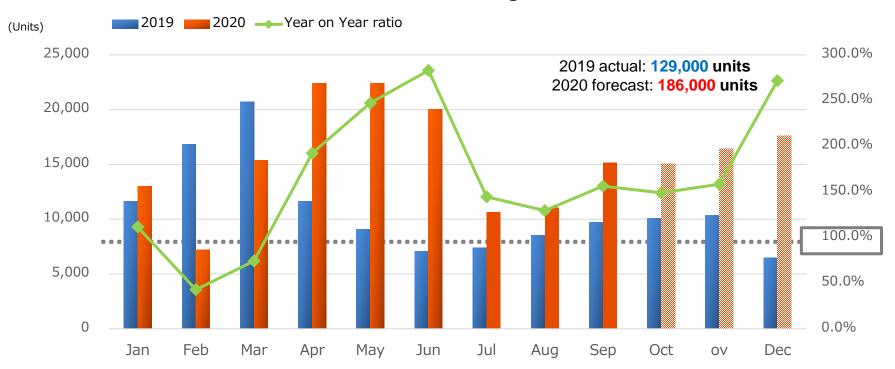




Chinese construction machinery manufacturers expected to increase production in 2020.

Trend of production plans of leading Chinese construction machinery manufacturers

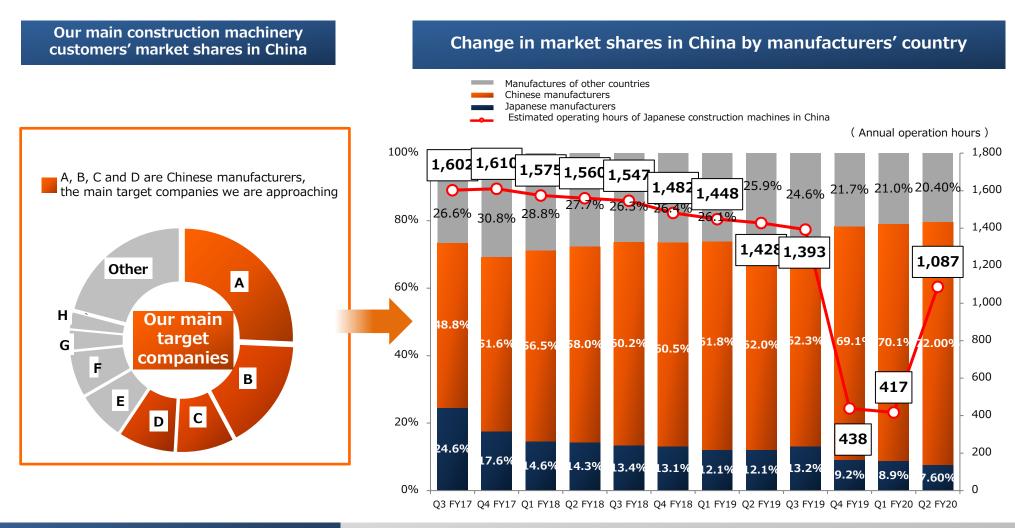
- Production was delayed than planned, due to the extension of the Chinese New Year holidays and the spread of the COVID-19.
- In 2020, the production output of Chinese manufacturers is estimated to grow +43.9% from 2019.



(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.





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.

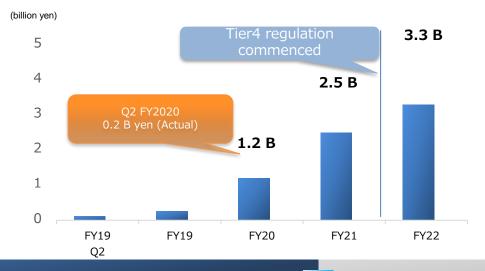
- Significant expansion of after-sales market following an increase in the cumulative number of new machines sold
- Increased need for global suppliers as Chinese construction machinery manufacturers are entering overseas market

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

Add more product lines and improve pricing strategy

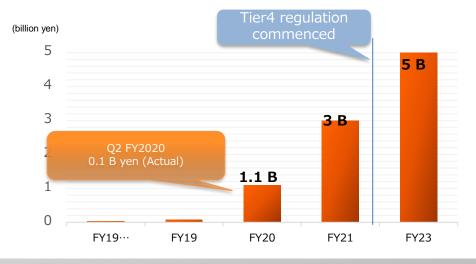
•Supply products with high value(longer life-span and IoT)

•Deploy pricing strategies to sell more existing products



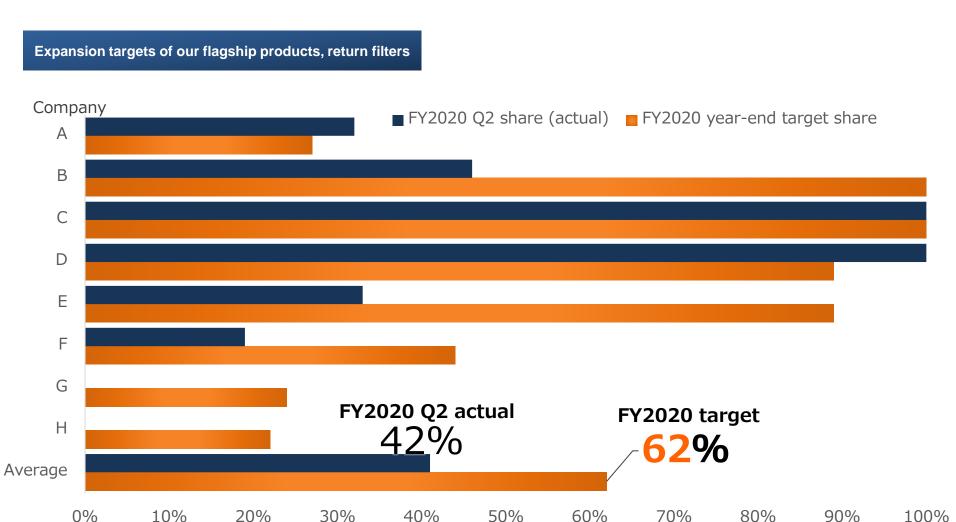
### Plan for expanding sales of service parts (replacement parts)

**Deploy market 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.





Alliance with sales partners who are experienced in the construction machinery field has been established.

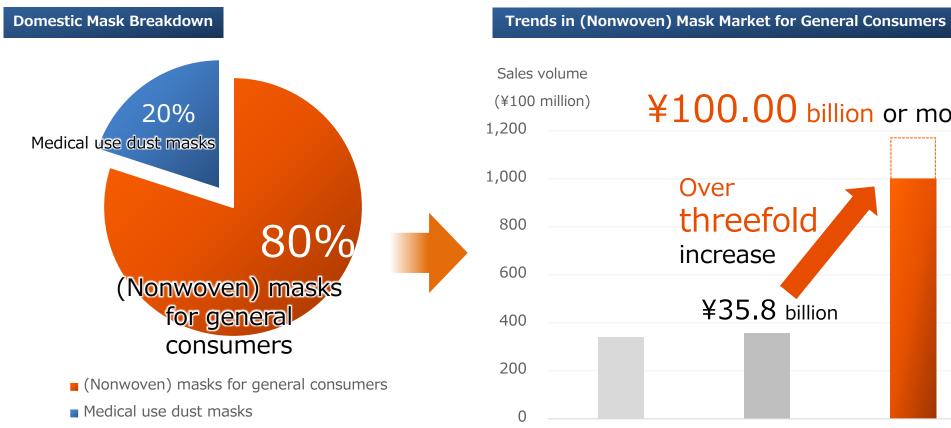
We will together start selling and distributing service parts from June.





- Covering 16 out of 34 administrative regions
- No. of sales partners: 20
  - We plan to add new sales partners and continue expanding the coverage of our sales area.







2018

2019

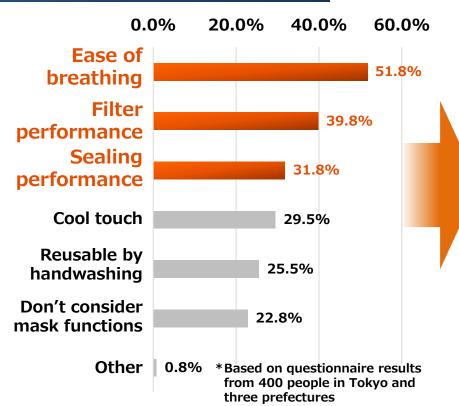
2020

<sup>\*2019</sup> Fuji Keizai data 2020 Nikkei newspaper information (statement from chairman of Mask Industry Association)



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

## Functions prioritized by general consumers when purchasing masks



### High performance masks developed by YAMASHIN as 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 more than 60 years as a dedicated manufacturer of construction machinery filters, YAMASHIN has refined its filtration technologies and accumulated know-how.

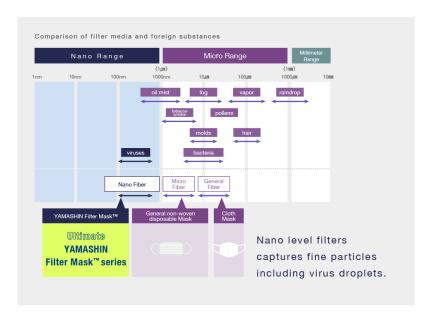
YAMASHIN Nano Filter™, created by a mass production technology developed through our expertise, traps foreign substances within the small pores of extremely fine fibers. The material maintains its characteristics for long-term high performance, making the technology ideal for and easily applicable to masks.



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

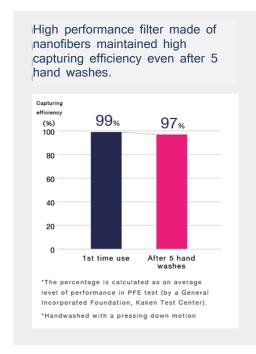
#### High filtration performance

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)

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

<sup>\*</sup>The test was conducted by the Kaken Test Center

<sup>\*</sup>General non-woven masks are for comparison purposes only.



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

#### Masks for general consumers



YAMASHIN Filter Sheet<sup>™</sup> 30 pieces in a pack JPY 980 (tax excluded)

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



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

High performance filter mask, reusable after handwashing

#### **Z**exeed<sup>TM</sup>



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

Medical grade filter is used (equivalent toN95 mask).
The unique 3D pleated mask provides secure sealing and ease of breathing in addition to high filtration performance.

#### Masks for medical use

#### Medicalead.6240





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

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

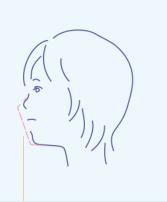


## Unique three-dimensional pleated shape achieves secure fit and sealing and ease of breathing for extended use.

#### 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 MEDICALEAD-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



There isn't sufficient room around

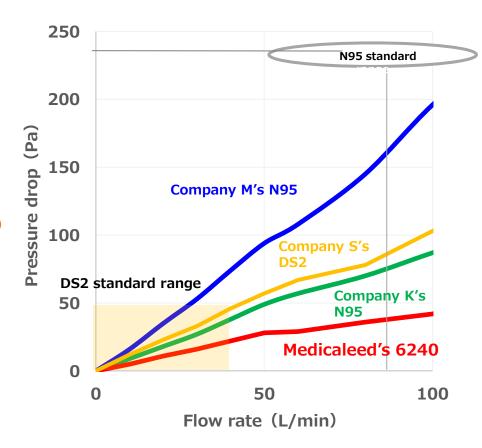
the mouth, often creating a stuffy

sensation for the user.

#### Medicalead's.6240

Surface area of 590cm
(Double the entry model)

The unique three-dimensional pleated shape provides sufficient space for ease of breathing.





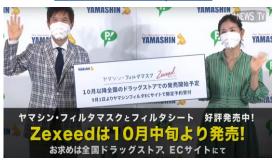
Ultimate YAMASHIN Filter Mask: Zexeed







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



Collaborative nanofiber mask campaign with Keikyu Corp.



#### 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





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 April 2020, the group started to sell filter masks and mask inner sheets and added a new Healthcare segment to our business.

Field	Products	Product image	Composition ratio (As of March 2021)
Hydraulic filters for construction machinery	A construction machinery filter is used to filter the fluid used in the hydraulic circuits central to the operation of construction machinery. <b>Applications:</b> Various types of construction machinery		
Hydraulic filters for various industrial fields	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. <b>Applications:</b> machine tools, refrigerating compressors, agricultural machinery, vessels, railway vehicles, airplanes, and helicopters.		
Filters for process lines	A process filter is used for filtration and separation in processes for manufacturing customer products <b>Applications:</b> Production lines for electronic parts, precision parts, liquid crystal displays, and food.		
Air filters	Air filters used for dust removal and medium-to-high performance air filters  Applications: general buildings, hotels and factories.		
Healthcare	High performance masks and replacement inner sheets that apply high filtration performance, sealing performance, and air permeability, all characteristics of synthetic polymer nanofiber <b>Applications:</b> For general consumers in Japan and around the world	ACTION AND ACTION ACTION AND ACTION ACTION AND ACTION ACTION AND ACTION A	



YAMASHIN provides an extensive product line of filters essential

to operating construction machinery.

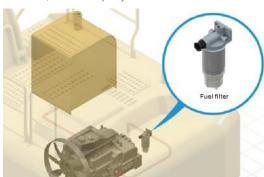


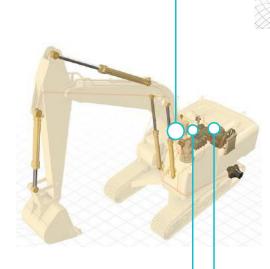
#### For hydraulic systems

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..



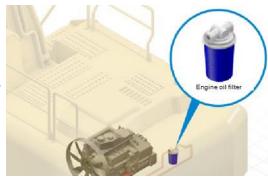


#### For transmissions

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.

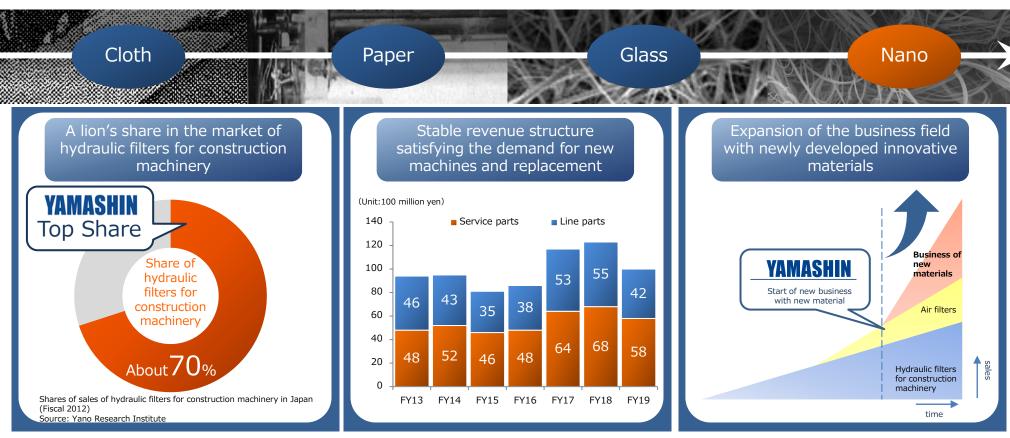
#### For engine oil

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.



- 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".

Sales format, Regional trends, and Cost reduction measures

# Sales format

Filters for construction machinery are all sold to construction machinery makers (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			
MAVYS	ROIC - WACC			
ROIC	NOPAT ÷ Capital investment			
Rate of return on capital investment	(Ordinary income + Interests paid) ÷ Capital investment			
Turnover rate of working capital	Net sales ÷ (Accounts receivable + Inventory asset - Accounts payable)			
Turnover rate of fixed assets	Net sales ÷ Fixed assets			
Turnover rate of accounts receivable	Net sales ÷ Accounts receivable			
Turnover rate of inventory asset	Net sales ÷ Inventory asset			
Turnover rate of accounts payable	Sales cost ÷ Accounts payable			
Turnover rate of tangible fixed assets	Net sales ÷ Tangible fixed assets			
Turnover rate of intangible fixed assets	Net sales ÷ Intangible fixed assets			

<sup>\*</sup>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 enhance our presence in the markets for process/industrial filters
- 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

Overcome these issues to evolve into a comprehensive filter manufacturer

#### THREAT

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

**STRATEGY** 

**MATRIX** 

new material

New business line to grow

**Air filters** 

Business area for further growth

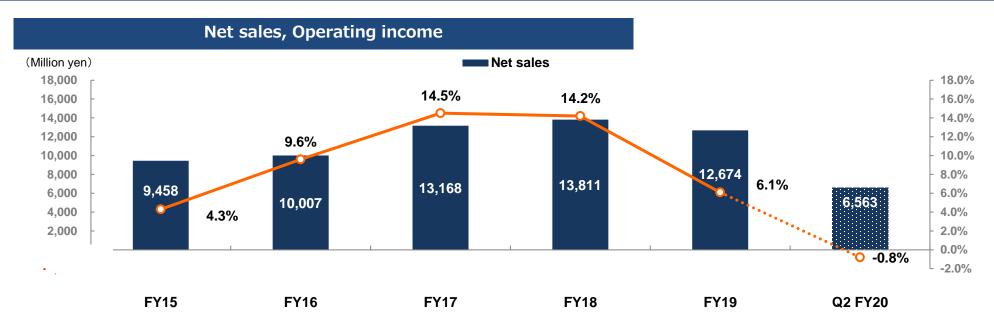
Core business (stretch)

Filters for construction machinery

Core business (stable)

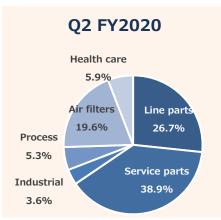




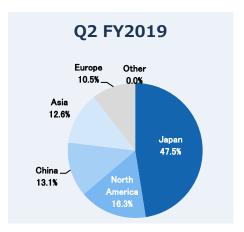


### Sales by product category





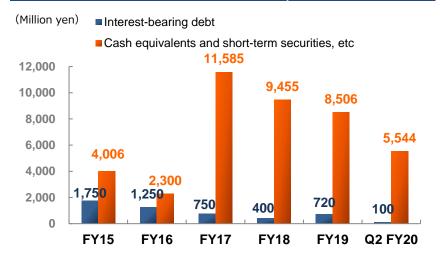
# Sales by region

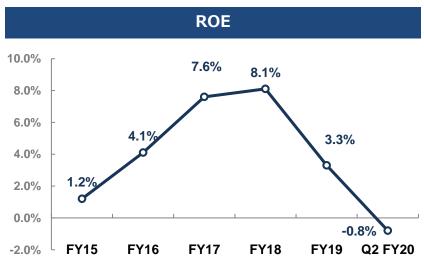






# Interest-bearing debt, Cash equivalents, Short-term securities, etc.

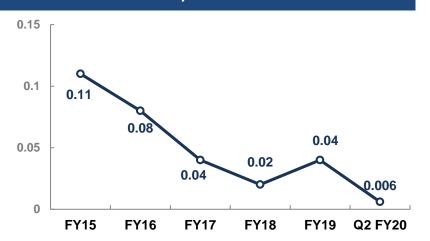




## Shareholders' equity ratio



## D/E ratio



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





(Million yen)		Q2 FY2019	Q2 FY2020	Change in amount	Change in ratio	
Current assets		16,175	11,930	△4,245	△26.2%	
	Cash and deposits	10,103	5,544	△4,559	△45.1%	
	Notes and accounts receivable-trade	3,657	3,662	4	0.1%	
	Merchandise and finished goods, Raw materials and Supplies	2,167	2,280	112	5.2%	
	Other	246	442	196	80.0%	
Fi	xed assets	4,926	9,876	4,950	100.5%	
	Tangible fixed assets	4,156	8,833	4,677	112.5%	
	Intangible fixed assets	340	331	△8	△2.6%	
	Investments and other	429	711	282	65.7%	
То	otal assets	21,101	21,806	705	3.3%	

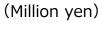
		Q2 FY2019	Q2 FY2020	Change in amount	Change in ratio
	urrent abilities	2,475	3,303	827	33.4%
	Notes and accounts payable-trade	1,324	1,549	224	16.9%
	Short-term loans payable, Current portion of long term loans payable and corporate bonds	200	100	△100	△50.0%
	Other	950	1,653	703	74.0%
	xed abilities	627	586	△40	△6.5%
	Corporate bonds	100	0	△100	△100.0 %
	Net defined benefits Liability	224	206	△17	△8.0%
	Other	302	379	77	25.6%
	otal net ssets	17,998	17,917	△81	△0.5%
Total of liabilities and net assets		21,101	21,806	705	3.3%

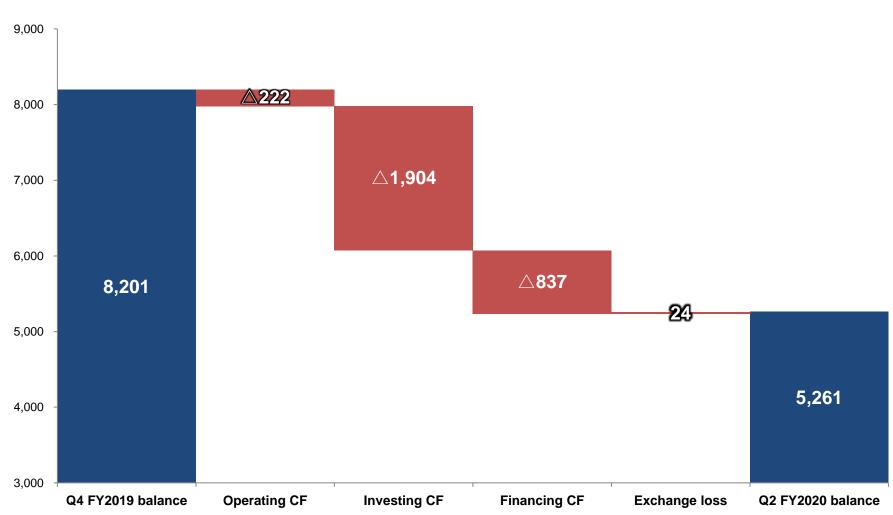
<sup>\*</sup> Shareholders' equity ratio

85.4%

84.4%





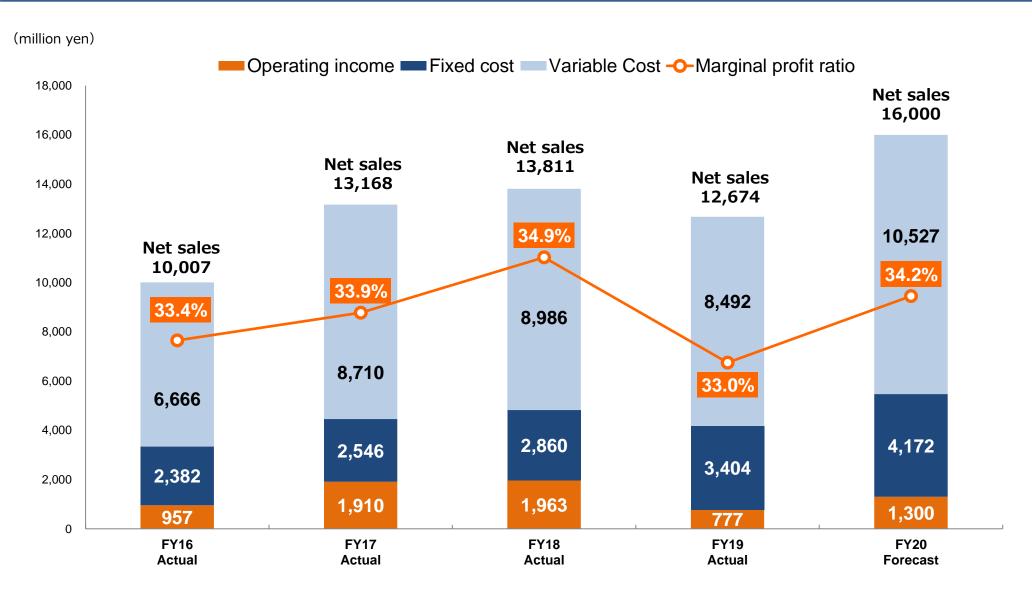




(million yen)

	Incoming		Outgoing		Net	Average	In case of yen appreciation (10%)		In case of yen depreciation (10%)			
Currency	Amount by currency	Composi- tion ratio	Amount by currency	Composi- tion ratio	Amount by currency	rate during the term (JPY)	If yen is appreciated ▲10% (JPY)	Difference	Affected amount (QTD)	If yen is depreciated +10% (JPY)	Difference	Affected amount (QTD)
JPY	¥7,000.0	77%	¥9,500.0	77%	¥-2,500.0	-	-	-	-	-	-	-
USD	\$17.2	20%	\$19.8	17%	-\$2.6	¥106.9	¥96.23	¥-10.69	¥27.80	¥117.61	¥10.69	¥-27.80
EUR	€ 1.6	2%	€ 1.4	1%	€ 0.2	¥121.3	¥109.17	¥-12.1	¥-2.43	¥133.43	¥12.13	¥2.43
РНР	PP0.0	0%	PP227.9	4%	PP-227.9	¥2.2	¥1.94	¥-0.2	¥49.23	¥2.38	¥0.22	¥-49.23
ТНВ	<b>₿34.00</b>	1%	<b>817.20</b>	0%	<b>₿16.80</b>	¥3.4	¥3.04	¥-0.3	¥-5.68	¥3.72	¥0.34	¥5.68
Total	-	100%	-	100%	-	-	-	-	¥68.92	-	-	¥-68.92







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この資料に関するお問い合わせは ヤマシンフィルタ株式会社 広報・IR担当まで

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