

Research Proposal

[2023 version of Roller and Roller-related Market Forecast]

"Comprehensive Analysis of the Parts Industry As It Enters an Era of Rising Prices"

=Detailed survey of production trends in rollers, belts, blades, and other functional parts =



(from the 2022 report)



April 2023
Data Supply Inc.

<Overview>

I. Theme

"Comprehensive Analysis of the Parts Industry As It Enters an Era of Rising Prices"

=Detailed survey of production trends in rollers, belts, blades, and other functional parts=

II. Abstract

The office equipment industry has suffered from a slump in production activity due to intermittent parts shortages and lockdowns of manufacturing bases since COVID-19, but the disrupted production is currently on its way to recovery. As stranded container logistics is now mostly cleared, **manufacturers are now shifting their attention to future sales demand.**

Recent production demand for hardware machines and consumables have reportedly been sluggish since the beginning of the new year probably because **manufacturers and distributors have reached a point in the supply chain where they have built up a certain level of inventory and are now working to optimize the inventory levels.** However, there are growing concerns that the market itself is shrinking, as demand for remote workers has been filled and investment priorities for office equipment are pushed back due to the economic downturn in Europe and the United States.

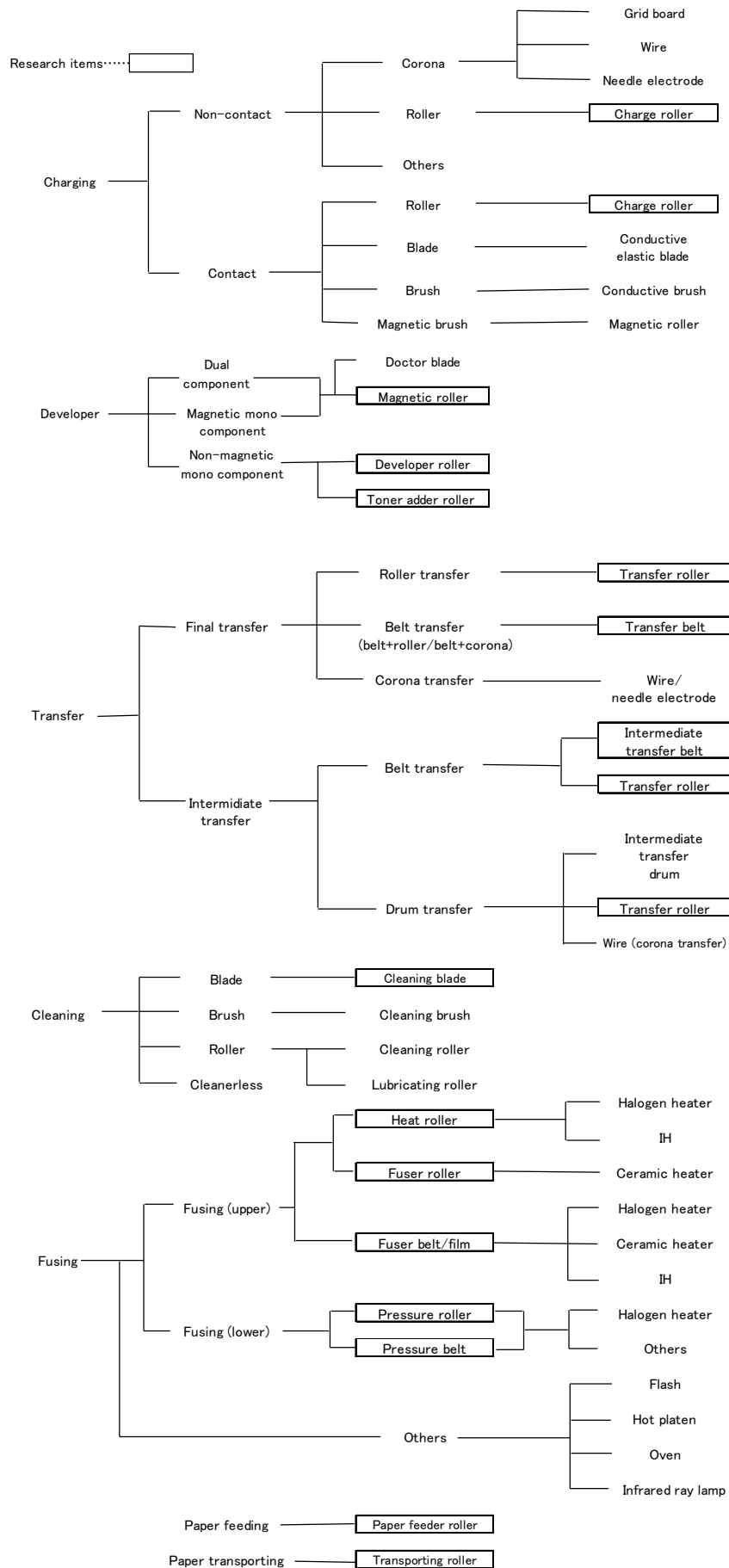
The next few years will be a critical time for manufacturers of rollers and belts for office equipment. The slump in office printing volume has made it quite difficult for roller and belt production to recover to pre-pandemic levels. In addition, rising production costs due to high energy and raw material prices have made it difficult for many suppliers to remain profitable. **Suppliers continue to request price increases in order to maintain their business, and hardware manufacturers have no choice but to accept these requests to some level.** Cost fluctuation factors, including foreign exchange rates, are changing daily, and both suppliers and hardware manufacturers are trying to settle for appropriate prices.

Among suppliers, **pressure to reorganize their roller/belt business is increasing year by year,** especially among large companies. Depending on future demand trends, it is quite possible that some companies will choose to restructure their business, following Kaneka (which exited the business in 2021) and Bridgestone (which sold the business in 2022). If manufacturers want to survive in the industry, it will become more important than ever to establish a business structure that ensures profits (sales through reasonable prices, consolidation of production bases, adoption of automated systems, and depreciation of existing facilities).

The latest report surveys and analyzes the current landscape and future strategies of domestic and overseas specialized manufacturers and in-house producers by process component, such as charging, development, transfer, fusing, cleaning, and paper feeding/transporting. This is the 18th publication of the Roller and Roller-related Component Market Forecast, in which we will continue to **survey and analyze future trends in the industry from a professional and objective standpoint without being limited to a generalized viewpoint.** We hope that this report will be of help to those involved in the industry working to develop their future strategies.

III. Items and Makers

1. Items



2. Makers

2-1. Roller specialist makers

Japanese makers **(29)** / South Korean makers **(9)** / Chinese makers **(48)** / Hong-Kong makers **(1)** / Taiwanese makers **(2)** / others **(7)** / In-house makers **(6)** **(102 makers in total)**

2-2. Hardware machine makers **(major 15 makers)**

MFP makers / Printer makers

IV. Target Years and Research Methodology

1. Target years

From 2020 to 2026

2. Research methodology

- 1) On-site and in-person interviews with target makers (including web surveys)
- 2) Analysis and review of open literatures, materials, statistics, and other sources
- 3) Analysis of Data Supply's own proprietary database

V. Research Form, Research Period, and Others

1. Research form: Multi-client study

2. Research period: March and April 2023

3. Publication date: **The English version will be published upon request.**

(Japanese version will be published on April 25, 2023)

4. Report format: A4 size (PDF format)

5. Price: **\$5,000-**

6. Researchers

Mr. Yukio YAMAMOTO, Mr. Kosuke YOSHIDA, and Mr. Masafumi HARIU

Phone: +81-3-3831-9201

Fax: +81-3-3831-9204

E-mail: <yamamoto@datasupply.jp> <yoshida@datasupply.jp> <hariu@datasupply.jp>

Homepage: <http://www.datasupply.jp>

7. How to purchase:

Please contact the researchers above or Data Supply Inc. at <infods@datasupply.jp>

VI. Items to Be Covered

VI-1. Comprehensive Analysis

1. Market trend by component

- 1-1. Shipment volume/shipment value by maker (specialist and in-house) (2020-2026)
- 1-2. Market trend by application (monochrome PPC/printer and color PPC/printer) and by size (A3/A4) (2022/2026)
- 1-3. Market trend by material
Shipment volume/shipment value
- 1-4. Technological and material trend by component
- 1-5. Component suppliers for production printers and wide-format printers
- 1-6. Price trend/product life cycle
- 1-7. Supply destinations
- 1-8. Production bases by component and maker
- 1-9. Sales classification of electrophotographic rollers and other rollers (inkjet/ATM, etc.)

2. Rollers and roller-related component makers

3. The number of components used in a hardware machine

4. Makers' latest trend by process (monochrome machine/color machine)

Charging/exposure/developer/transfer/fuser/cleaning

5. Shipment volume of hardware machines by maker (2022)

- 1) Copiers (monochrome/color)
 - (1) Hardware machine with dual component developer
 - (2) Hardware machine with magnetic mono component developer
- 2) Laser/LED printers (monochrome/color)
 - (1) Hardware machine with dual component developer
 - (2) Hardware machine with non-magnetic mono component developer
 - (3) Hardware machine with magnetic mono component developer
- 3) Production printers (monochrome/color)
 - (1) Hardware machine with dual component developer
 - (2) Hardware machine with non-magnetic mono component developer
- 4) Fax
 - (1) Hardware machine with dual component developer
 - (2) Hardware machine with non-magnetic mono component developer
 - (3) Hardware machine with magnetic mono component developer

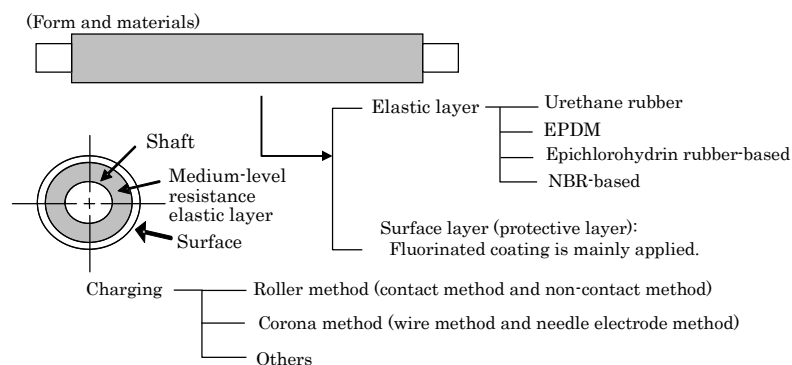
6. Hardware machine makers' and component makers' production bases in China and Southeast Asia (listed)

VI-2. Component Market

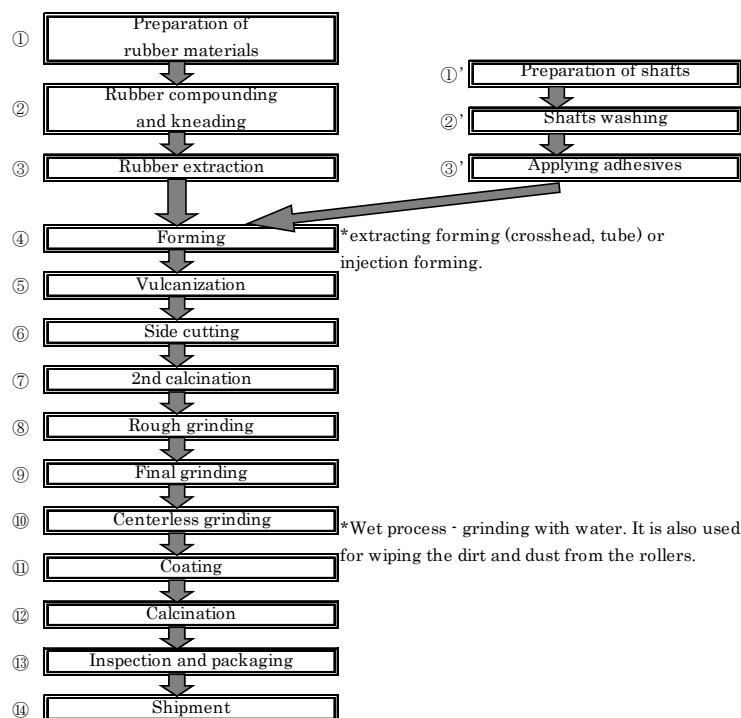
[1] Charge roller market (7 specialist makers, 2 in-house makers, and a dozen others)

- 2021 shipment volume was up 3.9% year on year.
- Materials are mostly epichlorohydrin rubber-based and EPDM-based with some urethane rubber-based.
- Maintaining of chargeability, release properties of the toner, and cost reduction are the key factors.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) EPDM 2) Epichlorohydrin rubber-based 3) Urethane rubber 4) NBR-based/ 7. Trend of charge roller's technology and materials 1) Layer structure 2) Control method of electric resistance 3) Future trend of materials/ 8. Price trend, life cycle, and manufacturing method of charge rollers/ 9. Supply destinations of charge rollers (Japan and overseas)/ 10. Trend of charge roller's production bases (Japan and overseas)



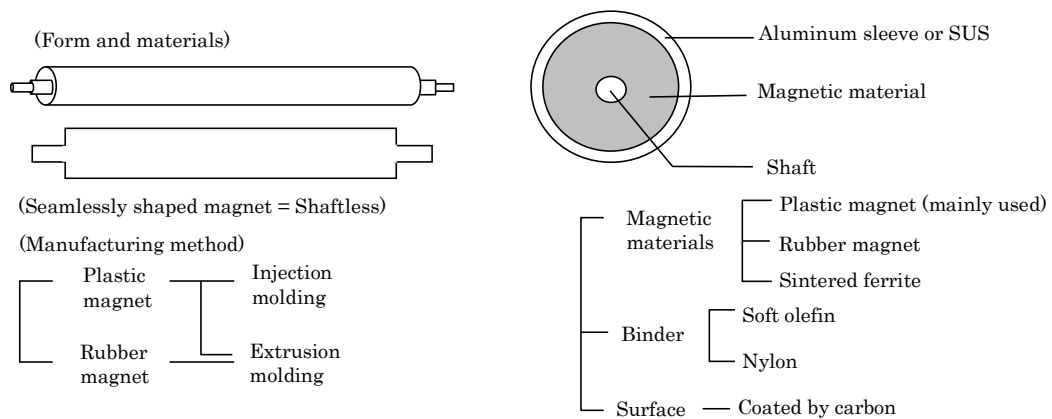
Manufacturing process of the charge roller



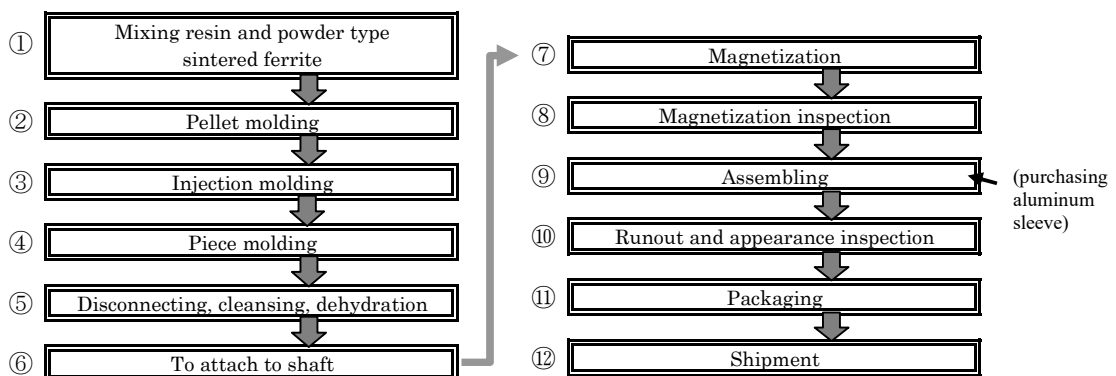
[2] Magnetic roller market (5 specialist makers, 4 in-house makers, and a dozen others)

- **2021 shipment volume was up 5.2% year on year.**
 - Market restructuring (withdrawal from business and sale of business) is active.
 - Plastic magnet is mainly used. Materials for plastic and rubber magnets are mixed and used together.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Plastic magnet 2) Rubber magnet 3) Sintered ferrite 4) Combined types/ 7. Trend of magnetic roller's technology and materials 1) Magnetic materials 2) Binder 3) Sleeves 4) Future trend of materials/ 8. Price trend and manufacturing method of magnetic rollers/ 9. Supply destinations of magnetic rollers (Japan and overseas)/ 10. Trend of magnetic roller's production bases (Japan and overseas)



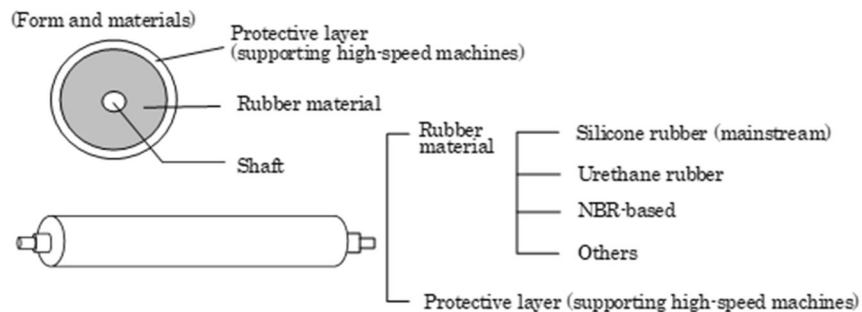
Manufacturing process of the magnetic developer roller (shaft attaching type)



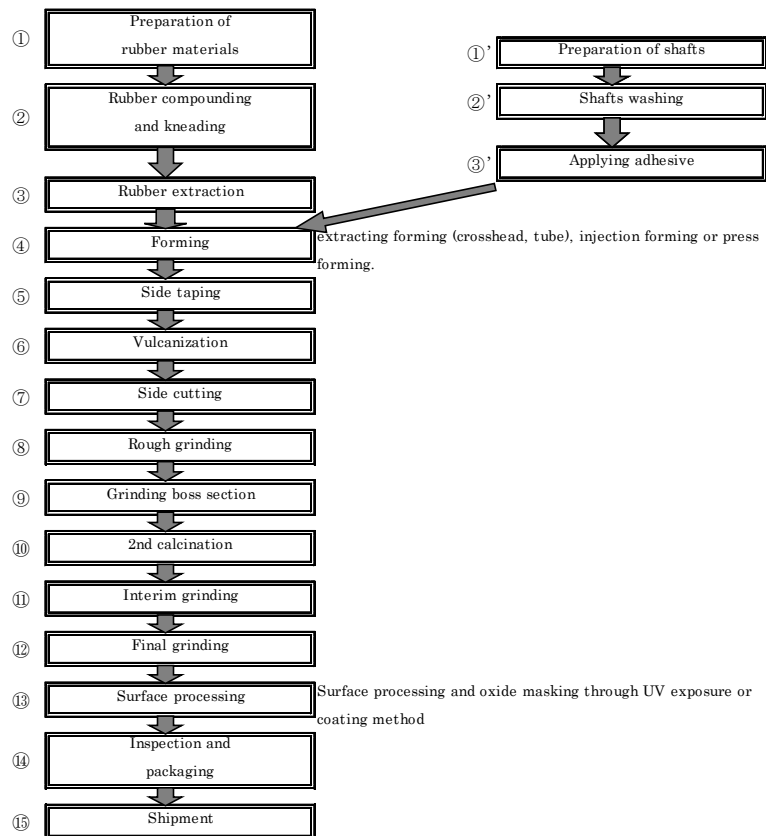
[3] Developer roller market (12 specialist makers, 1 in-house maker, and several others)

- 2021 shipment volume was up 7.2% year on year.
 - Surface material is mostly silicone rubber. Use of urethane rubber for high-speed machines is on the rise. NBR-based material is also used.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Silicone rubber 2) Urethane rubber 3) NBR-based/ 7. Trend of developer roller's technology and materials 1) Support for high-speed printing 2) Future trend of materials/ 8. Price trend, life cycle, and manufacturing method of developer rollers/ 9. Supply destinations of developer rollers (Japan and overseas)/ 10. Trend of developer roller's production bases (Japan and overseas)



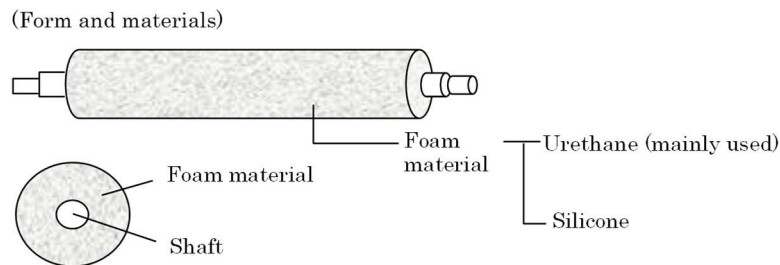
Manufacturing process of the developer roller



[4] Toner adder roller market (9 specialist makers, 1 in-house maker, and more than 10 others)

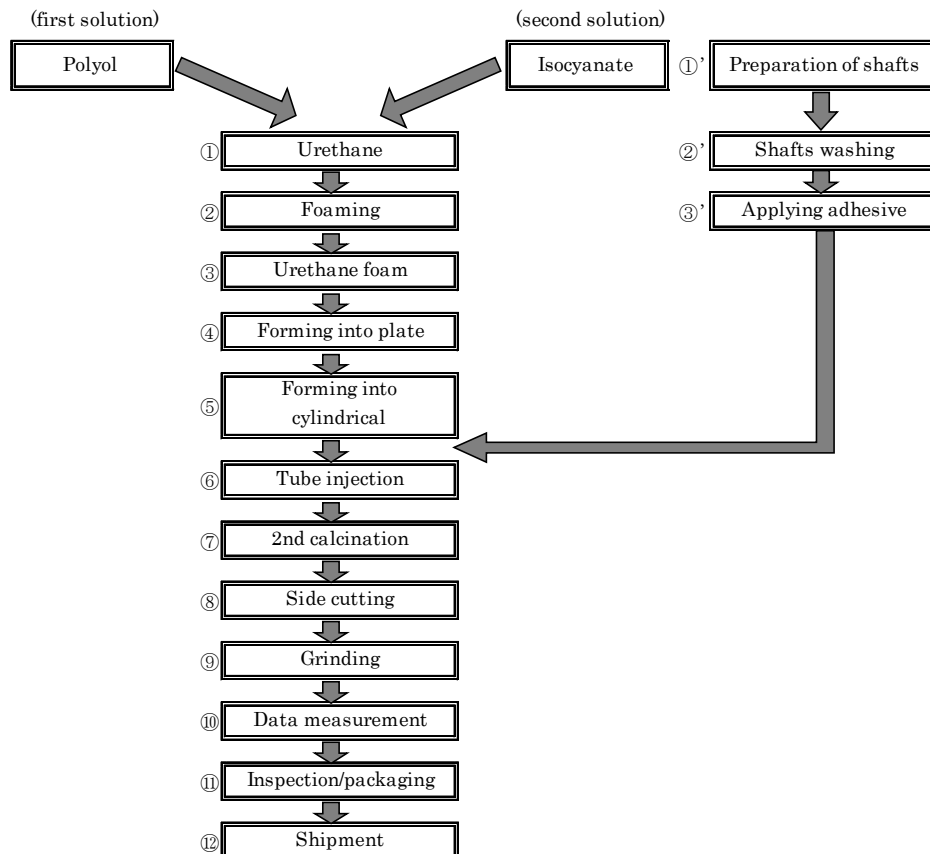
- 2021 shipment volume was down 5.3% year on year.
- Urethane foam is mostly used.
- Both PFA tube and PFA coating are used for a surface layer.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Urethane form 2) Silicone form/ 7. Trend of toner adder roller's technology and materials 1) Support for high-speed printing 2) Future trend of materials/ 8. Price trend and life cycle of toner adder rollers/ 9. Supply destinations of toner adder rollers (Japan and overseas)/ 10. Trend of toner adder roller's production bases (Japan and overseas)



*It is used for printers running a non-magnetic mono-component system.

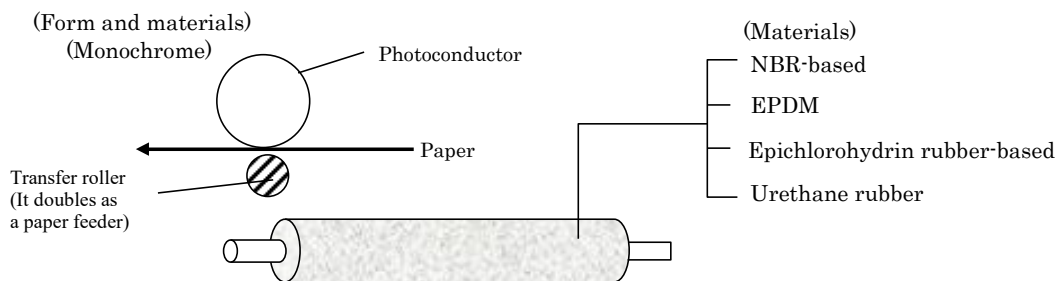
Manufacturing process of the toner adder roller (urethane foam)



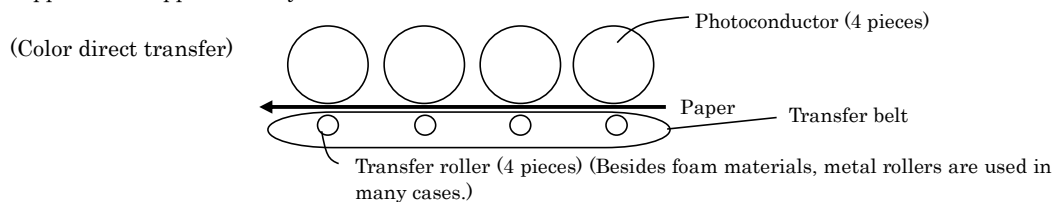
[5] Transfer roller market (12 specialist makers, 1 in-house maker, and a dozen others)
(including the first and second transfer)

- 2021 shipment volume was down 2.1% year on year.
- NBR-based material is mainly used, and epichlorohydrin rubber follows. Others include urethane rubber and EPDM.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) NBR-based 2) Epichlorohydrin rubber-based 3) Urethane rubber 4) EPDM/ 7. Trend of transfer roller's technology and materials/ 8. Price trend, life cycle, and manufacturing method of transfer rollers (first transfer/second transfer)/ 9. Supply destinations of transfer rollers (Japan and overseas)/ 10. Trend of transfer roller's production bases (Japan and overseas)



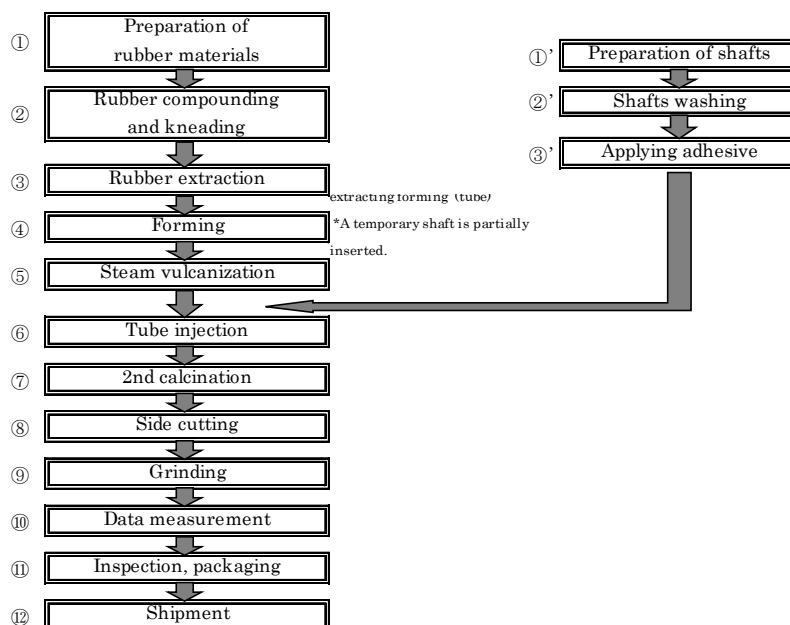
(Application) Applied widely. Foam materials are used.



(Application)

- OKI Data's color LED printer "COREFIDO C650dnw" (A4; 35ppm in color and monochrome)
- Brother's monochrome MFP "MFC-L2690DW" (A4; 26ppm)

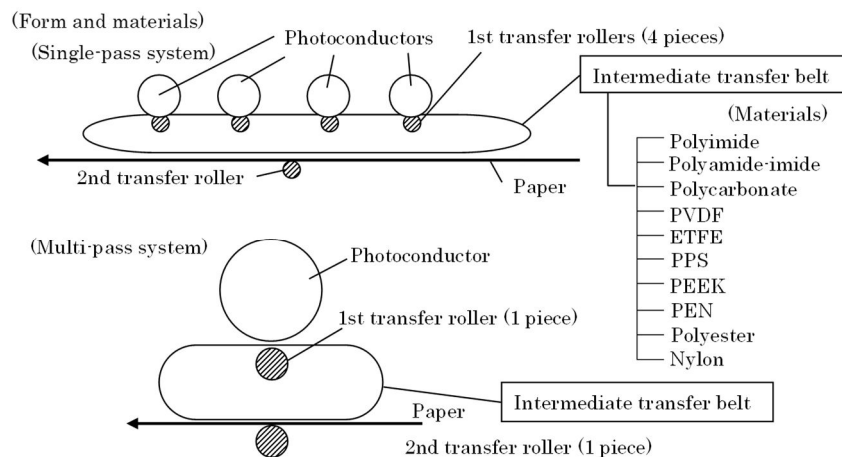
Manufacturing process of the transfer roller



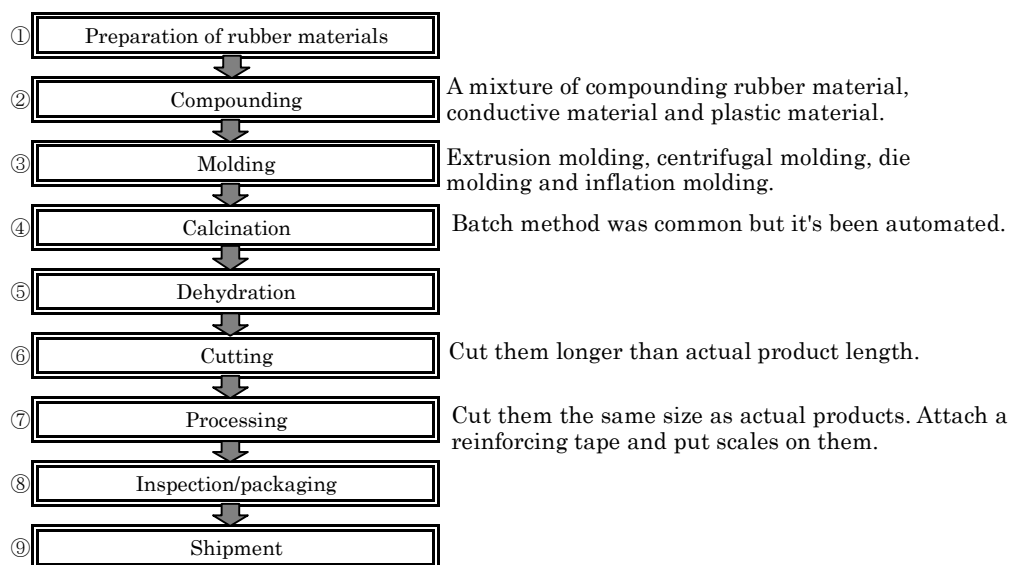
[6] Intermediate transfer belt market (7 specialist makers and 4 in-house makers)

- 2021 shipment volume was down 2.3% year on year.
 - PI and PAI are mainly used for copiers and high-speed printers, whereas PEN and PET among others are used for low-speed machines.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Polyimide 2) Polyamide-imide 3) Polycarbonate 4) ETFE 5) PPS 6) PVDF 7) PEEK 8) Polyester 9) Others/ 7. Trend of intermediate transfer belt's technology and materials 1) Base materials 2) Surface materials 3) Future trend of materials/ 8. Price trend, life cycle, and manufacturing method of intermediate transfer belts/ 9. Supply destinations of intermediate transfer belts (Japan and overseas)/ 10. Trend of intermediate transfer belt's production bases (Japan and overseas)



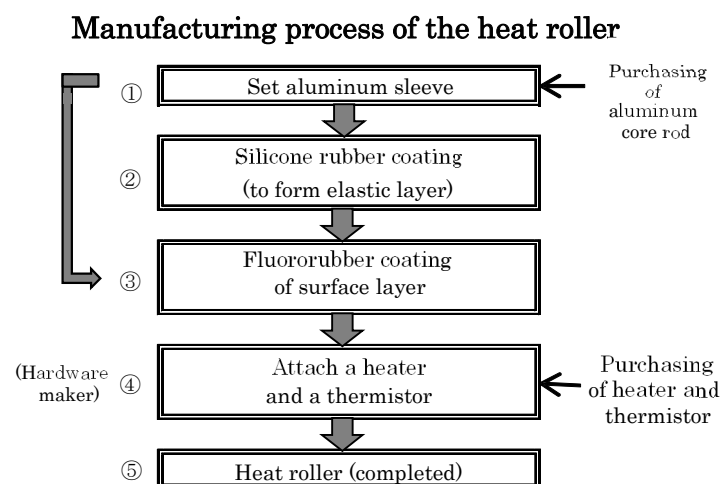
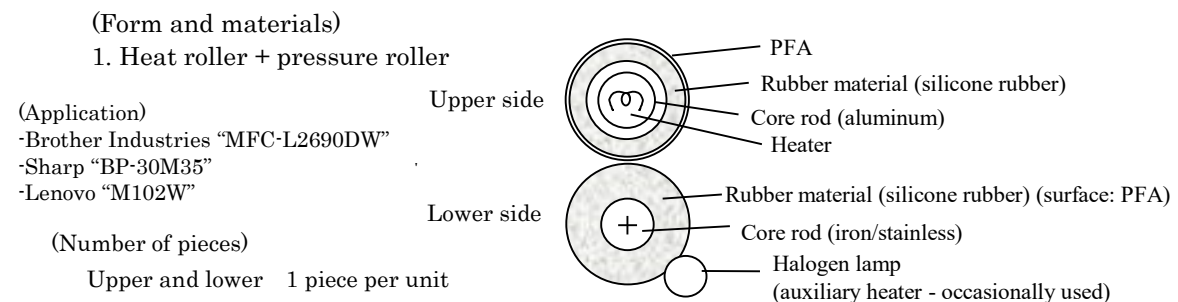
Manufacturing process of the intermediate transfer belt



[7] Heat roller market (7 specialist makers, 1 in-house maker, and more than 20 others)

- **2021 shipment volume was up 6.7% year on year.**
 - Demand decline ended for Chinese manufacturers.
 - There are two types of heat rollers: one is a soft roller using fluorinated silicon rubber, and the other is a hard roller using a silicone rubber layer on a core rod.

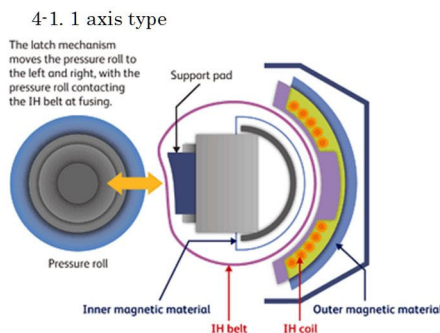
1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Hard rollers (PFA/PTFE) 2) Soft rollers (silicone rubber+PFA)/ 7. Trend of heat roller's technology and materials 1) Sleeves 2) Surface materials 3) Support for soft rollers used for color machines 4) Support for belt fusing 5) Future trend of materials/ 8. Price trend and life cycle of heat rollers/ 9. Supply destinations of heat rollers (Japan and overseas)/ 10. Trend of heat roller's production bases (Japan and overseas)



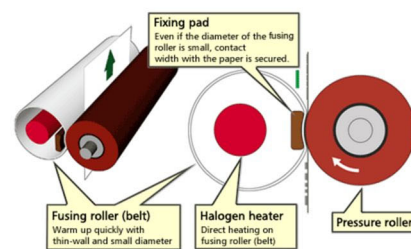
[8] Fuser belt (film) market (8 specialist makers, 3 in-house makers, and a dozen others)

- 2021 shipment volume was up 2.7% year on year.
 - Polyimide is the mainly used material. Others are nickel and SUS.

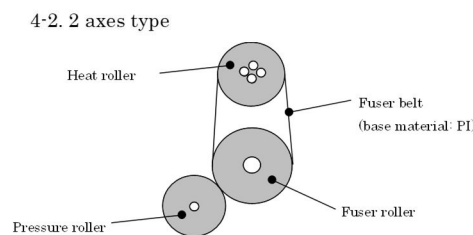
1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Polyimide 2) Nickel 3) SUS 4) Others/ 7. Trend of technology and materials 1) Base materials 2) Surface treatment 3) Support for color machines 4) Future trend of materials/ 8. Price trend and life cycle of fuser belts/ 9. Supply destinations of fuser belts (Japan and overseas)/ 10. Trend of fuser belt's production bases (Japan and overseas)



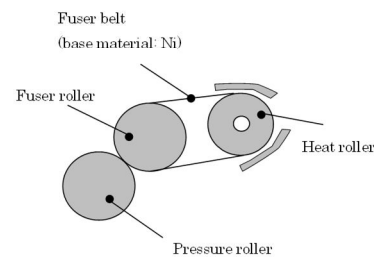
Fujifilm BI "Apeos C7070"



Ricoh "ROCOH IM C6000"

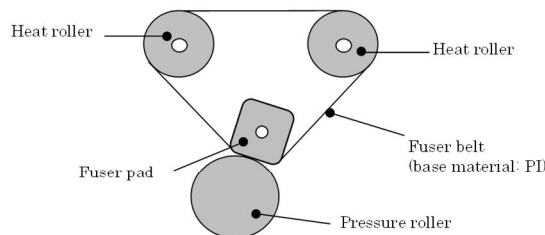


Konica Minolta "Accurio Press C3080"



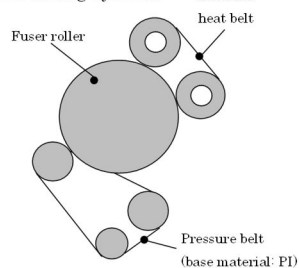
Ricoh "RICOH Pro C7210"

4-3. 3 axes type

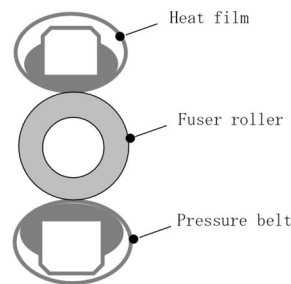


Fujifilm BI "Versant 3100"

5. Other fusing systems



Canon "imagePRESS C10000VP" (first fusing station)



Canon "LBP664Cx"

[9] Pressure roller/belt market (13 specialist makers, 1 in-house makers, and a dozen others)

- 2021 shipment volume of pressure rollers was up 6.3% year on year.
- Products are made of silicone rubber processed with PFA tubes. There's a small number of products equipped with heaters.
- 2021 shipment volume of pressure belts was down 3.8% year on year.
- Polyimide is mainly used, while PEEK is also used. Surface is coated with fluorinated resin.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Silicone rubber+PFA/ Others (pressure rollers) 2) Polyimide (pressure belts)/ 7. Trend of technology and materials of pressure rollers 1) Layer structure 2) Support for heater-equipped machines 3) Future trend of materials/ 8. Trend of technology and materials of pressure belts 1) Base materials 2) Surface materials 3) Future trend of materials/ 9. Price trend, life cycle, and manufacturing method of pressure rollers and belts/ 10. Supply destinations of pressure rollers and belts (Japan and overseas)/ 12. Trend of pressure roller and belt's production bases (Japan and overseas)

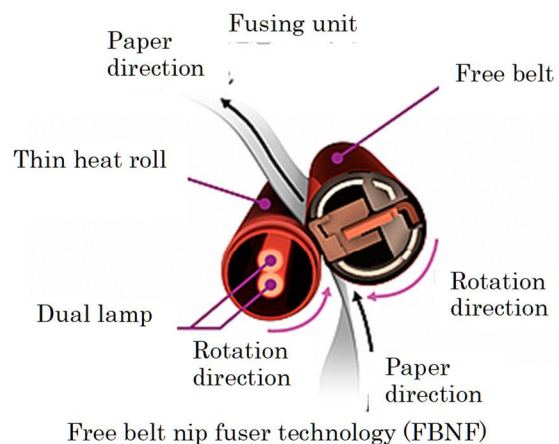
2. Heat roller + pressure belt

(Application)

- Fujifilm BI "DocuPrint C3550 d"
- OKI Data "C332dnw"
- Konica Minolta "bizhub 4750i"

(Number of pieces)

Upper and lower 1 piece per unit



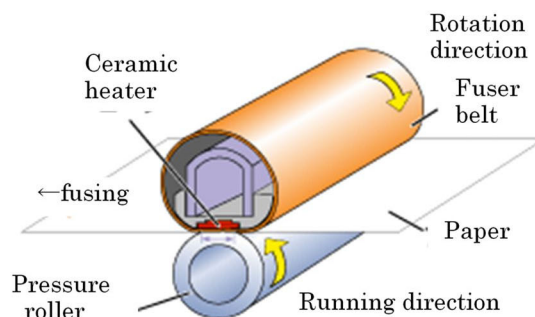
3. Fuser film + pressure roller

(Application)

- HP "HP LaserJet M209dwe"
- Canon "i-SENSYS MF832Cdw"
- Lexmark "MB3442i"

(Number of pieces)

Upper and lower 1 piece per unit

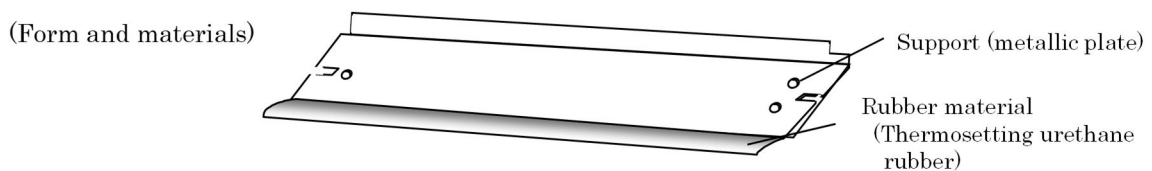


[10] Cleaning blade market (7 specialist makers, 1 in-house maker, and a dozen others)

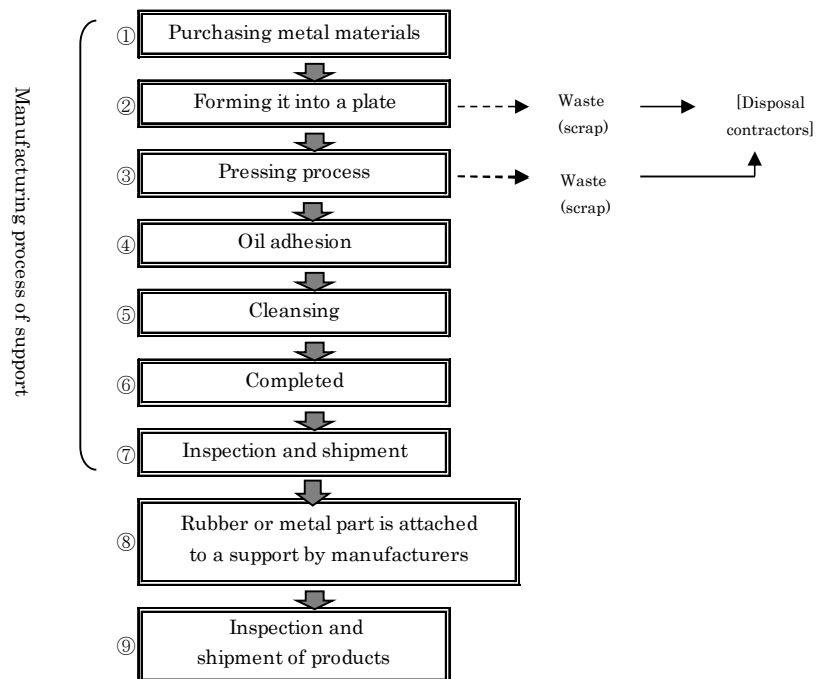
- 2021 shipment volume was up 7.3% year on year.
 - The material used is polyurethane rubber.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) Polyurethane rubber/ 7. Trend of technology and materials of cleaning blades 1) Metallic plates 2) Blade edge materials 3) Support for chemically prepared toner 4) Future trend of materials/ 8. Price trend, life cycle, and manufacturing method of cleaning blades/ 9. Supply destinations of cleaning blades (Japan and overseas)/ 10. Trend of cleaning blade's production bases (Japan and overseas)

It is an elastic blade used for cleaning in electrophotographic processes. Urethane rubber is often used due to its strength. A cleaning blade usually contacts a photoconductor rotating at a clockwise direction. There's a type that has a rubber molded blade attached to the edge of a metal support.



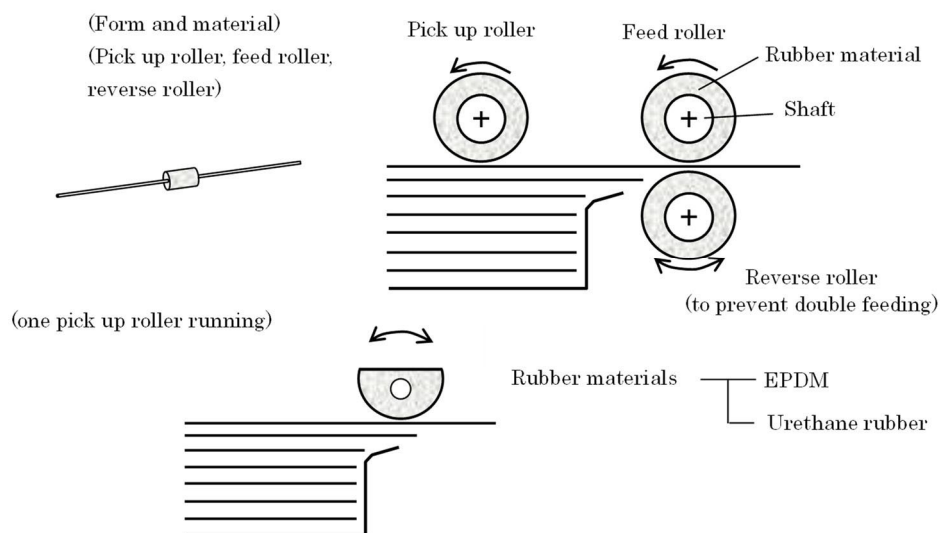
Manufacturing process of the cleaning blade



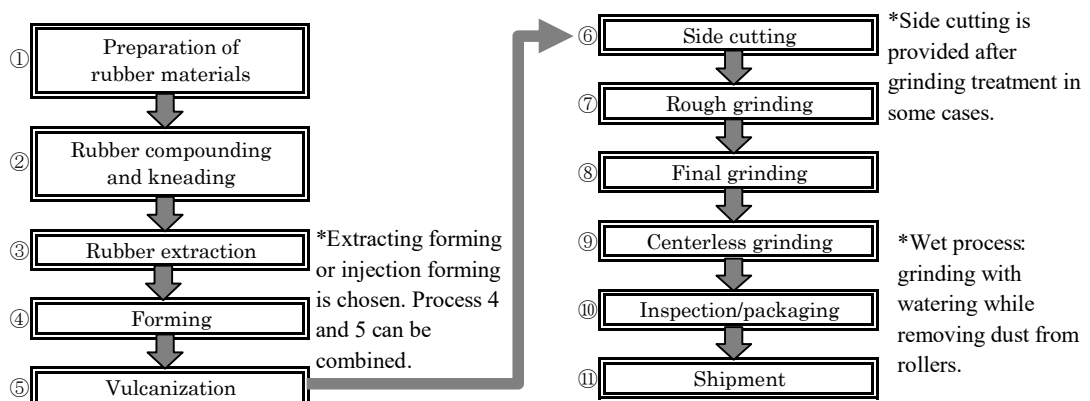
[11] Paper feeder roller market (8 specialist makers and 5 others)

- 2021 shipment volume was up 9.3% year on year.
 - The main material is EPDM. The secondary material is urethane rubber.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) EPDM 2) Urethane rubber/ 7. Trend of paper feeder roller's technology and materials 8. Price trend, life cycle, and manufacturing method of paper feeder rollers/ 9. Supply destinations of paper feeder rollers (Japan and overseas)/ 10. Trend of paper feeder roller's production bases (Japan and overseas)



Manufacturing process of the paper feeder roller

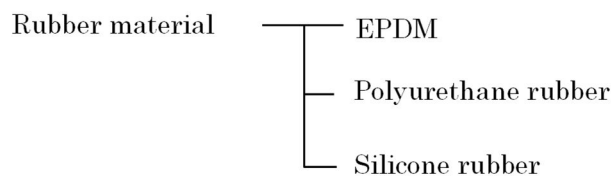
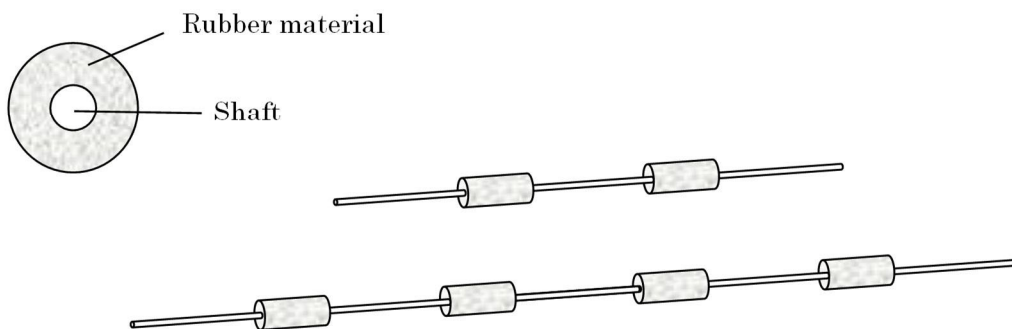


[12] Transporting roller market (9 specialist makers and 5 others)

- 2021 shipment volume was up 5.9% year on year.
- Low-priced products by Asian makers have increased slightly.
- EPDM is dominant because of its cost advantages.

1. Component structure (illustration)/ 2. Manufacturing process (illustration)/ 3. Changes in shipment volume and shipment value by maker (2020-2026) 1) Genuine component market 2) Third-party component market/ 4. Changes in shipment volume and shipment value (2020-2026) by application (monochrome and color) and by size (A4/A3)/ 5. Shipment trend for production printers (volume and value)/ 6. Changes in shipment volume and shipment value by material (2020-2026) 1) EPDM 2) Silicone rubber 3) Polyurethane rubber/ 7. Trend of transporting roller's technology and materials 1) Support for high-speed printing 2) Future trend of materials/ 8. Price trend, life cycle, and manufacturing method of transporting rollers/ 9. Supply destinations of transporting rollers (Japan and overseas)/ 10. Trend of transporting roller's production bases (Japan and overseas)

(Form and material)



VI-3. Individual Makers (specialist makers/in-house makers)

Major makers

(Japanese specialist makers)

Archem (formerly Bridgestone) / I.S.T / Arai Seisakusho / Inoac Corporation / NOK/Synztec / Kinjo Rubber / Kinyosha / Gunze / Showa Cable Systems / Shin-Etsu Polymer / Sumitomo Rubber Industries / Sumitomo Electric Industries / Sumitomo Riko / TDK / Toho Rubber / Nissei Electric / Nitta Chemical Industrial Products / NEOMAX Engineering / Bando Chemical Industries / Fukoku / Proterial (formerly Hitachi Metals) / Meiji Rubber & Chemical / Yamauchi / Others

(In-house makers)

Canon / Ricoh / Fujifilm Business Innovation / Konica Minolta / Toshiba TEC / Kyocera Document Solutions

(Overseas specialist makers)

Ah-Sung Chemical (South Korea) / Foshan Ascend Precision Accessories (China) / Galaxia Device (South Korea) / Jahwa Electronics (South Korea) / Sang-A Frontec (South Korea) / Shenzhen Fancy Creation Industrial (China) / Shenzhen LEPUTAI Technology (China) / Taejin Precision (South Korea)

1. Market trend by component (2020-2026)

(1) Shipment volume (genuine and third-party products) (2) Shipment value

①Charge roller ②Magnetic roller ③Developer roller ④Toner adder roller ⑤Transfer roller ⑥Intermediate transfer belt ⑦Fusing system (heat roller/fuser belt) ⑧Pressure system (pressure roller/pressure belt) ⑨Cleaning blade ⑩Paper feeder roller ⑪Transporting roller ⑫Others (PFA tube, cleaning web, fuser roller, etc.)

2. Market trend by application (2022/2026)

(1) Monochrome PPC (MFP) (2) Color PPC (MFP) (3) Monochrome printer (MFP) (4) Color printer (MFP)

3. Market trend by size (2022/2026)

(1) A4 (2) A3 (3) Others

①Charge roller ②Magnetic roller ③Developer roller ④Toner adder roller ⑤Transfer roller ⑥Intermediate transfer belt ⑦Fusing system (heat roller/fuser belt) ⑧Pressure system (pressure roller/pressure belt) ⑨Cleaning blade ⑩Paper feeder roller ⑪Transporting roller

4. Market trend by material (2022/2026)

①Charge roller ②Magnetic roller ③Developer roller ④Toner adder roller ⑤Transfer roller ⑥Intermediate transfer belt ⑦Fusing system (heat roller/fuser belt) ⑧Pressure system (pressure roller/pressure belt) ⑨Cleaning blade ⑩Paper feeder roller ⑪Transporting roller

5. Shipment trend for production printers (volume and value)/Material trend

6. Technology and material trend by component

7. Support for component module production

8. Production bases by component

Japan / China / South Korea / Malaysia / Vietnam / Thailand / Philippines

9. Major supply destinations

Canon / Ricoh / Fujifilm Business Innovation / Konica Minolta / Sharp / Kyocera Document Solutions / Toshiba TEC / HP (HP Printing Korea) / Brother Industries / OKI / Muratec / Lexmark / Others

10. Sales classification of electrophotographic rollers and other rollers (inkjet/ATM, etc.)

Sample Page

*The actual report has numbers and comments inserted.

[6] Shenzhen Fancy Creation Industrial (China)
1. Overall
1) Changes in shipment volume and value (2019-2025)

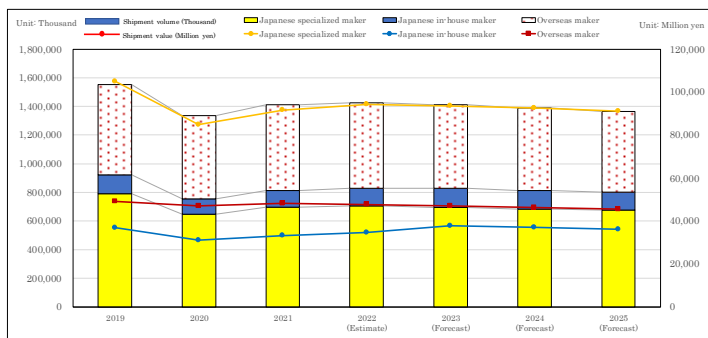
		Year	2019	2020	2021	2022 (Estimate)	2023 (Forecast)	2024 (Forecast)	2025 (Forecast)
Shipment volume (Unit: Thousand)	Toner Adder Roller								
	Heat Roller								
	Pressure Roller								
	Cleaning Blade								
	Transporting Roller								
	%								
Shipment value (Unit: Million yen)	Toner Adder Roller								
	Heat Roller								
	Pressure Roller								
	Cleaning Blade								
	Transporting Roller								
	Others								

1. Shipment volume (2019-2025)

		Year	2019	2020	2021	2022 (Estimate)	2023 (Forecast)	2024 (Forecast)	2025 (Forecast)
Maker	NOK/Synztec	%							
	Sumitomo Riko	%							
	Bridgestone	%							
	Sub total of individual data	%							
	*Canon	%							

A. Comprehensive Analysis
A-1. Overall market trend by functional component
1. Shipment trend by Japanese and overseas maker (2019-2025)

		Year	2019	2020	2021	2022 (Estimate)	2023 (Forecast)	2024 (Forecast)	2025 (Forecast)
Shipment volume (Thousand)	Specialized maker	%							
	In-house maker	%							
	Total of Japanese makers	%							
	Total of overseas makers	%							
	Total	%							
	%								
Shipment value (Million yen)	Specialized maker	%							
	In-house maker	%							
	Total of Japanese makers	%							
	Total of overseas makers	%							
	Total	%							
	%								



In 2021, total shipment volume of functional components was 1,410,124,000 units, or 105.7% of the previous year, and the shipment value was 172,996 billion yen, or 106.1% of the previous year.
The ratio of Japanese and overseas manufacturers regarding the shipment volume was 57.8% for the former (specialized manufacturers: 49.4% and in-house manufacturers: 8.4%) and 42.2% for the latter. As for the shipment value, the former was 72.1% (specialized manufacturers: 55.0% and in-house manufacturers: 19.2%) and the latter was 27.9%.
The year saw a jump in each item from the sharp decline in the previous year caused by the coronavirus pandemic, but the growth rate was more moderate than expected due to stagnant production of hardware machines caused by shortages of semiconductors and other components. Although there are expectations for a significant increase from 2022 due to increasing demand for telework and other factors, the growth rate could be lower than expected as shortage of parts and materials continues and there is an increasingly grim outlook for the MFP and printer markets. The market will not likely return to the pre-pandemic level in the foreseeable future.
As the copier/printer market matures faster, parts suppliers are increasingly restructuring their operations (specifically, selling or downsizing their businesses). Several manufacturers have already withdrawn from the market, and similar moves are expected to continue. Manufacturers are clearly focusing on profitability in their continued business, and it is highly likely that hardware makers will no longer be able to exert one-way pressure to lower prices. It will be important to develop procurement strategies that lead to establishing a relationship of coexistence and mutual prosperity with suppliers that have superior technological capabilities and reliability.

*Starting with this report, "Others" (cleaning rollers, drive rollers, brushes, pads, etc.) has been added for their shipment volume and value survey. Please note that the total figures are thus different from the previous year's report.

due by application and material

used for charging, but from an environmental perspective, more manufacturers are switching to corona method. As for copier manufacturers, Canon, Ricoh, Fujifilm Business Innovation and Sharp apply both methods, while Toshiba TEC only use the corona method. Ricoh uses the corona method, but the roller method is the mainstream among

Sumitomo Riko was the top manufacturer, followed by NOK and Bridgestone. NOK is recovering significantly from the previous year. Although the recovery is uncertain, Ricoh's printing market is maturing fast and is likely to decline in the medium to long

Sumitomo Riko was the top manufacturer, followed by NOK and Bridgestone. NOK is recovering significantly from the previous year. Although the recovery is uncertain, Ricoh's printing market is maturing fast and is likely to decline in the medium to long

Sumitomo Riko was the top manufacturer, followed by NOK and Bridgestone. NOK is recovering significantly from the previous year. Although the recovery is uncertain, Ricoh's printing market is maturing fast and is likely to decline in the medium to long

Sumitomo Riko was the top manufacturer, followed by NOK and Bridgestone. NOK is recovering significantly from the previous year. Although the recovery is uncertain, Ricoh's printing market is maturing fast and is likely to decline in the medium to long

Sumitomo Riko was the top manufacturer, followed by NOK and Bridgestone. NOK is recovering significantly from the previous year. Although the recovery is uncertain, Ricoh's printing market is maturing fast and is likely to decline in the medium to long

Sumitomo Riko was the top manufacturer, followed by NOK and Bridgestone. NOK is recovering significantly from the previous year. Although the recovery is uncertain, Ricoh's printing market is maturing fast and is likely to decline in the medium to long

*** Back numbers of Roller and Roller-related Market Forecast ***

Published Date	Title	Price	Total pages
2008.4	"Future Trend in Competitiveness of the Market"	\$4,400	679
2012.6	"Outlook of the industry"	\$5,000	655
2015.7	"The Future of the Roller and Roller-Related Component Industry that Requires Intelligence in Marketing Technologies"	\$4,000	683
2016.7	"The Reorganization of Hardware Machine Manufacturers Signals a New Phase for the Roller Component Industry"	\$4,000	687
2017.8	"The Roller-related Parts Industry Converts to Modular Production"	\$4,000	626
2018.8	"Restructuring or Withdrawal? Makers at a Crossroads in the Roller-related Component Industry"	\$4,000	653
2019.8	"The Roller-related Component Industry in Dire Need of Strategic Transformation Plan"	\$4,000	657
2020.11	"The Future of the Component Industry Depending on the Underlying Technology"	\$4,000	651
2021	"The Future of the Roller-related Component Industry: Cost and Quality as the Lifeline" (Available upon request)	\$5,000	630
2022.7	"Comprehensive Analysis of the Component Industry Aiming to Establish a Relationship of Coexistence and Mutual Prosperity"	\$5,000	393