Fuji Manufacturing Co., Ltd.

Company Profile

Blast abrasive

More than 400 varieties of abrasives. Our lineup of abrasives that vary widely in terms of hardness, grain size, shape, and other characteristics supports diverse processing with blast. We enjoy a high reputation not only for the quality of the materials, but also for homogeneity and durability as well.

Our lineup of various abrasives with grain sizes of 1 μm to 2,000 μm increases the possibilities of blasting even further.

Lineup of representative abrasives

Plastics-based. Low in hardness and suited for processing resin products.

Nylon Beads

Polyplus

Eco-Soft

Semi-hard type

Metal-based. An abrasive indispensable for alumite processing.

Reduced Iron Powder

Stainless Beads

Fuji Glass Beads

Special type

An elastic composite with abrasive grains kneaded in it. Only used for SIRIUS processing.

For WPC processing. Transforms surfaces for greater slidability.

SIRIUS Medium

Solid Lubricant

The highest-hardness abrasive. For special processing of sapphires, SiC monocrystals and other materials.

Superhard type

Ceramics-based. One of the representative abrasives and used widely in blasting for deburring, surface preparation and other purposes

Fuji Rundum A/WA

Fuji Rundum C

Fuji Superhard

Hard type

Metal-based. This abrasive is used most widely in blast and used in removing burrs and scales, and in shot peening.

SUS Round Cut Wire

Reduced Iron

Powder

Stainless Beads

Fuji Glass Beads

Soft type

Metal-based. An abrasive indispensable for alumite processing.

Reduced Iron Powder

Stainless Beads

SUS Round Cut Wire

Metal-based. Low in hardness. Therefore used in removing burrs and scales, among other uses.

Metal-based. Does not wear much and lasts long. Used in removing scales and for other applications.

Semi-hard type

Metal-based. An abrasive indispensable for alumite processing.

Reduced Iron Powder

Stainless Beads

SUS Round Cut Wire

Metal-based. Low in hardness and suited for processing resin products.

Nylon Beads

Polyplus

Eco-Soft

Plastics-based. Harder than nylon and used widely in deburring, cleaning and other applications.

Plant-based. Low in hardness and performs polishing without scratching the workpieces.

Water-soluble. Suited for processing operations that do not tolerate abrasive residues.

Ceramics-based. This abrasive does not break easily and wears little. Resistant to work powder and other contaminants, and maintains the quality of high-purity abrasives.
Manual machines for specific use

In all fields, in various industries
[Main corporate clients]


Metal products : NSK-Wamer K.K., JS Group Corporation, Chuo Spring Co., Ltd., Tocalo Co., Ltd., NHK Spring Co., Ltd


For the unlimited possibilities of blast, With professionals in their serious attitudes.

"Blast" is used in all fields ranging from aircraft, automobiles and IT products to wooden and glass artifacts, and has now become a technology indispensable in production scenes. At Fuji Manufacturing, we have been developing new high-value-added technologies one after another while responding to various customer needs as a pioneer in blast technology ever since the development of cabinet-type equipment in 1957 by asking ourselves: "Isn't it possible to do this and that?". These efforts have been supported by our engineers’ lively curiosity and serious attitude as professionals. Ideas that were previously just dreams have come true as products one by one. Behind all that, there must be our technology. As the members of Fuji Manufacturing, we will continue exploring the unlimited possibilities of blast technology as a pioneer and leader in that field, and delivering new technologies useful to various industries and society. We will make even more dreams come true in the future.
As a pioneer and the top-ranking manufacturer in blast processing, Fuji Manufacturing Co., Ltd. (hereafter referred to as "Fuji Manufacturing") has contributed significantly to the development of sandblasting technology and machinery. Founded in 1950 as a compressor manufacturer at Nishiichiinoe, Edogawa-ku, Tokyo, Fuji Manufacturing has since established itself as a leader in the sandblasting industry.

1950: Founded as a compressor manufacturer at Nishiichiinoe, Edogawa-ku, Tokyo.

1957: Manufactured and delivered Japan’s first unit (SF type) for a cabinet-type siphon blaster.

1959: Established "Fuji Manufacturing Incorporated." Capital: 500,000 yen.

1961: Successfully developed gravity-type sandblasters (SG type).

1970: Reorganized as "Fuji Manufacturing Co., Ltd."

1971: Standardized the names of its sandblasters as "Pneuma Blasters."

1977: Opened Nagoya Office.

1978: Moved head office/works to a newly built facility at the present location.

1985: Achieved a cumulative total of 10,000 sandblasters delivered.


1990: Increased capital to 120 million yen. Acquired patents for its surface heat-treatment process for metal products (WPC processing).

1993: Delivered the first blaster designed specifically for plasma display panels.

1996: Successfully developed SCM-type sandblasters for precision processing.

1997: Exceeded a cumulative total of 20,000 sandblasters delivered.

1998: Opened phase-1 building (with floor space of about 1,500m²) for the Ibaraki Works.


2001: Received a Technology Award from the Japanese Society of Tribologists for WPC processing of pistons used in automotive engines. Opened "Atelier Le Cher" glass artifact school.

2005: Opened second building (about 2,300m²) for the Ibaraki Works. Opened Osaka Office. Exceeded a cumulative total of 25,000 sandblasters delivered. Successfully developed "SIRIUS" processing: "polishing blast."

2006: Selected as one of "300 Energetic Small and Mid-size Manufacturers" by the Ministry of Economy, Trade and Industry.

2007: Refurbished head office/works (with total floor space of about 14,000m²). Launched Fuji Fine Tech Co., Ltd. (in charge of precision sandblasting on commission).

### Brief facts about Fuji Manufacturing

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>Founded as a compressor manufacturer.</td>
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<tr>
<td>1957</td>
<td>Manufactured the first siphon blaster.</td>
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<td>Established Fuji Manufacturing Incorporated.</td>
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<td>Acquired patents for foreign matter removal system.</td>
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### Companies


**Precision equipment:** Iwata Denko Co., Ltd., Olympus Corporation, Canon Group, Citizen Holdings Co., Ltd., Terumo Corporation, Nikon Corporation, Pentax Corporation, Hoya Corporation, Murakami Co., Ltd.

Our "pride" as a group of specialists and our "responsibility": The reasons we enjoy client confidence.

The greatest assets of Fuji Manufacturing are its enthusiastic passion for sandblasting, its core technology for circulating abrasives, leading-edge expertise, obsession with creative manufacturing, and abundant experience and track record. With our "pride" being a manufacturer specializing in sandblasting and our "responsibility," we respond to needs of various industry and come up with technologies for venturing into leading-edge fields. These are the reasons we enjoy client confidence.

**Track record**

Our track record of having delivered a cumulative total of about 30,000 units and our history dating back more than sixty years.

Our track record of having delivered a cumulative total of about 30,000 units for both the domestic and international markets, and our history dating back more than sixty years are signs of user confidence in us. Moreover, we have accumulated know-how in all kinds of blasting. We have also enjoyed many orders from top-ranking manufacturers in different fields. If you need sandblasting, your first choice should be Fuji Manufacturing.

**As a world-class leading**

**Achievement**

**Technology**

Our rich theories and accumulated technology in mechanisms for circulating abrasive.

Mechanisms for circulating abrasive that materialize the injection, collection and sorting of abrasive in an integral manner by using airflow power are the core technology for sandblasting. The injection rate and injection pressure are adjusted to achieve optimal processing capacity. And high-performance collection and sorting are used to maintain polishing quality and uniformity. Fuji Manufacturing has absolute self-confidence in this regard.
Sandblasting processes utilize more than 400 kinds of abrasives in combination with the injection system, injection pressure, injection rate, and various other conditions. The possibilities offered are indeed unlimited. Fuji Manufacturing continues conducting research on everything about sandblasting, ranging from the injection, collection and sorting of sandblast to abrasive, the processing itself, to the quality control of products to be worked and the equipment used. In addition to the formation and processing of partitions in plasma displays, WPC processing and SIRIUS processing, along with the development of hyper-nozzles with long slit and digital constant-rate injection systems, involve only a few of the patents owned by Fuji Manufacturing. Therefore, Fuji Manufacturing pursues “the right way” about blasting.

Capability to tackle the possibilities of blasting and meet various needs.

Fuji Manufacturing has constantly been working to fuse leading-edge technology with sandblasting technology by such means as: (1)WPC processing for the surface treatment of metal materials, (2) ultra-precision processing that now extends to the semiconductor and IT fields, and (3)SIRIUS processing that makes precision deburring and smoothing a reality.

Our capability to make varied proposals and our outstanding capability of creative development based on accumulated processing know-how can be called nothing but the best partner in sandblasting.

The greatest technical staff of all manufacturers specializing in sandblasting.

The technical staff of Fuji Manufacturing numbers about 70 members, with 50 working in design and about 20 in R&D (as of December 2007). This technical staff boasts its being among the largest of all companies in Japan.

This large staff obsessed with sandblasting is committed day and night to researching, developing and designing the latest and top-ranking sandblasting technologies, which are conversely simple and easy blasters. Responding to the diverse blast needs of users by using the most excellent and largest group of technical staff members... that is what Fuji Manufacturing does.
In various fields that get society moving.... Diverse blasting technologies are active in scenes close to you.

Blasting started with surface treatment. Today it has accomplished the addition of various functions, thereby seeing an increasingly wide range of applications. Our track record in the metal parts of automotive engines and the glass panels of plasma displays shows the possibilities of technical applications of blasting. We, the members of Fuji Manufacturing, will promote this evolution even further as a pioneer and the top-ranking manufacturer in blasting.

The fields of blast technology are expanding even further, including technical uses by new industries. "There will be always..."
Characteristics of sandblasting

Physical processing/dryprocess
The kind of sandblasting that uses collision with abrasive (a medium) is physical processing. It is applicable to various work materials. It is a dry process and can generally be called eco-friendly and inexpensive.

Air process that meets all shapes
Sandblasting that uses the injection of compressed air can accommodate small and large sizes, light to heavy weight, plane and corner parts, complex shapes and any other work shapes, thereby meeting all shapes. Some kinds of sandblasting equipment are even applicable indoors.

Nozzle process with high degrees of freedom
Sandblasting that uses a nozzle system allows easy configuration of nozzle distance, angle and direction, and the number of nozzles can be changed to a desired setting. Whether manual or automatic, this process provides high degrees of production freedom to meet the production needs of users. In combination with robots, this process can also realize high accuracy and motion speed.

Possibilities that increase in combination with abrasive (a medium)
Combinations with more than 400 kinds of abrasives (a medium) enable the generation of various worked surfaces for various materials. Those seemingly unlimited possibilities of processing will surely satisfy user requirements.

"Blasting"... Its principles are those of a sandstorm in the desert. It is said to have been inspired by such things as the various surface patterns caused by sand grains being blown across the desert. Given the simplicity of the principles, the process is also easy to apply. Moreover, the process is also characterized regardless of the material of the object being worked.

Fujifilm Manufacturing realizes various kinds of surface treatment that meet the needs of the times by using its expertise with high reliability to flexibly control the principles and the wide variety of abrasives.

technical applications beyond the domain of specific fields and something useful." That is blast technology.
An increasingly wide variation of sandblast technologies Applications are found in all fields and various industries.

"Further evolution of technology and pursuit of possibilities": This challenging spirit increases the uses of blast technology, which is used as a processing technology indispensable in scenes of creative manufacturing beyond the domain of a specific field or industry. We, the members of Fuji Manufacturing, will continue developing new technologies and promoting the use and application of blast technology to enrich society and home life as a leading company in sandblasting.

Advanced Sandblast Technology

**SIRIUS processing**

For “polishing” blast, microscopic deburring, thin film removal, and surface enhancement.

This is a new surface treatment method devised by fusing a newly developed elastic medium with outstanding blast technology. As the medium (an elastic body) slides and processes the surface to be worked, it achieves microscopic grinding. This process performs jet processing by using nozzles, and can even process complex shapes, as well as large and heavy workpieces, and allows processing positions to be set to any desired setting. This process is also adaptable to an automated work process and multiple jet nozzles.

**Uses**

- Enhancing the surfaces of molds
- Removing microscopic burns (of about 5μm) from tools and cutting tools
- Removing weld burns from stainless steel
- Pretreating and post-treating coating films
- Removing dross from laser-processed surfaces

**WPC processing**

Transforming the topmost surface for higher durability and slidability.

This advanced heat treatment method injects fine-powdered abrasive with grains less than 200μm in diameter and makes the texture of the topmost surfaces of metal products finer, thereby increasing hardness, toughness and residual compressive stress. In addition to making the various parts of cutting tools and molds more durable, this process prevents stress corrosion cracking and electrical friction, achieves tribological (lubrication) effects through microscopic bumps and dips, strengthens workpieces by room temperature diffusion and cementation, and provides various other functions stemming from surface transformation. Combined with shot peening, this process can also produce synergetic effects.

**Uses**

- Increasing the fatigue strength and durability of gears, shafts and various other metal parts
- Improving the functions of drills, end mills, and other tools and cutting tools
- Improving the slidability of engine parts and other metal products
- Increasing durability and drawability
Ultra-precision processing

For cutting and roughening hard and brittle materials at the micrometer level.

Vacuum deposition related processing

For cleaning deposited parts, jigs, electrodes and other parts.

In semiconductor and other leading-edge IT industries as well, sandblast is now an indispensable technology. Sandblast can perform through-hole processing, etching, groove making and other cutting operations in glass, silicon, ceramic, and other hard and brittle materials. With digital injection control, the process achieves high processing reproducibility and controls the processing level. Being a non-chemical dry process, this method is suited for a wide range of processing and patterning.

Uses
- Drilling, dicing, reclaiming and otherwise processing various types of wafer (Si, Pzt, crystal, quartz glass and ceramics), and other materials
- Erecting pins on board-fixing beds
- Processing the flow channels for micro-reactors

Sandblast is also effective in vacuum deposition, which is used in various fields including optical thin films, electrodes, semiconductor films and insulated films for displays, and food packing materials. In cleaning vacuum deposited jigs and similar fields, this process takes less time than manual work and securely removes dust, thereby maintaining the conditions for vacuum deposition.

Uses
- Pretreatment that increases the adhesiveness of deposited films
- Cleaning deposited films including jigs
This process is also adaptable to an allows processing positions to be set to even process complex shapes, as well processing by using nozzles, and can to be worked, it achieves microscopic technology. As the medium (an elastic medium with outstanding blast devised by fusing a newly developed film removal, and surface enhancement.

We, the members of Fuji Manufacturing, will continue the domain of a specific field or industry. Applications are found in all fields and various industries. We have been at the forefront of sandblasting for many years as a leading company in sandblasting. We continue to apply blast technology to enrich society and home life as a leading company in sandblasting.

Basic Sandblast Technology

**Deburring**
For finishing resin and die-cast products and parts made of aluminum, SUS and copper.

In machining pieces of metal, resin or other material and in making molded products, removing product burrs is indispensable to producing high-quality products. Blast-assisted deburring destroys burrs by using abrasive and blows them away with air. It is thus a rational processing method. The process is also effective for complex shapes, the insides of holes, other intersection burrs, and other hard-to-machine pieces.

**Surface preparation**
For pretreating all kinds of products.

Blasting the base surface on which to apply paint or adhesive increases the surface area, while causing the pure surface to emerge and roughening the interface. This then increases adhesiveness (anchor effect). Not only in painting and adhesion, this process is widely used in flame spray coating, Teflon, plating, CVD, PVD, and various other kinds of coating.
This process is also adaptable to an any desired setting. This process can also produce pieces by room temperature diffusion (for cutting and roughening hard and brittle materials at the micrometer level). For cutting and roughening hard and brittle materials, the process utilizes the full life of products whose response to metal fatigue is emphasized to extremes, thereby inhibiting fatigue destruction and stress corrosion cracking. In processing, the process facilitates adjustment of the injection rate and speed, and the setting of processing direction and angle. It also allows a particular range to be processed intensively. The process is used in automobiles, aircraft and many other kinds of transport equipment, and greatly contributes to increasing reliability and reducing weight. The process also complies with Nadcap®.

### Cleaning, collection, restoration, removal

For restoring metal functionality and collecting rare metals.

By removing scales, peeling paint films, removing sand from castings and otherwise, sandblasting is applicable to cleaning as well. The process performs processing much more quickly than manual work. It is rational and allows workers to return quickly to the production work that they were doing. It is also active in removing and collecting backing plates, thin metal films, IC chips and other parts made of precious metal and rare metal (such as Au, Pt, Ni, etc).

### Sculpture and artifacts

For design expression.

In making wood patterns appear, producing stone and glass sculptures, and in other fields, blast technology is also used in other fine arts and design fields, such as sculpture, artifacts, etc. Combined with various kinds of abrasive, the process enables a wide variety of expressions.

### Shot peening

For increasing the fatigue life of metal parts.

The process utilizes the full life of products whose response to metal fatigue is emphasized to extremes, thereby inhibiting fatigue destruction and stress corrosion cracking. In processing, the process facilitates adjustment of the injection rate and speed, and the setting of processing direction and angle. It also allows a particular range to be processed intensively.

### Mold-related

Producing even higher-quality molds by a 2-step process of cutting and grinding (MK processing).

This 2-step processing method cuts off burrs, white layers, hardened layers and other thermally affected zones, micro-cracks and other surface defects generated in mold manufacture, and also adds density and residual compressive stress to the surface texture. The process is also ideally suited for removing tool marks. This dramatically improves mold formability, durability and releasability.

### Pearskin processing

For the exterior designs of products.

Due to the diffuse reflection of light on fine bumps and dips, pearskin processing is a design process that gives a soft, austere and profound feel to metal surfaces. It is widely used in digital cameras, mobile phones, the interior and exterior of buildings, and other applications as well. The process is used not only for design purposes but also for hiding scratches, matt processing, and for otherwise producing functional surfaces as well.
Building blast machines, contract-processing of customer Products and providing supplies. Offering flexible user solutions to meet different needs and purposes.

Manufacturing blast systems

To manufacture high-quality systems.
Fuji Manufacturing's systems. Therein lies its consistent attitude of pursuing the best at all times. Not only providing the highest-level technology in injecting, sorting and collecting abrasive, but also in stably activating the equipment and detecting errors, and inspecting and maintaining processing specifications, we regard sandblasters as a system in a comprehensive manner, thereby offering high-grade devices.

The background that supports system manufacture

**Sample test**  
Product quality is demonstrated in the form of the real product. With micrometer-order measuring equipment, we meet advanced needs.

**Product factory**  
The factory is among the largest in terms of site area in Tokyo. With the latest manufacturing equipment and skilled staff, this production facility pursues quality.

**In-house manufacturing of the equipment manufacturing process**  
Advanced machine tools are introduced for sheet metal cutting, processing and assembly, thereby manufacturing products in the company's own factories.
We provide the blast systems best suited for user needs.
At Fuji Manufacturing, we base ourselves on providing our clients with consultations emphasizing “technology” and propose systems that will be the appropriate solution to specific business needs. Moreover, our manufacturing and inspection departments that embody those proposals have the largest scale and most advanced environment in Tokyo.

Consultations for clients are given by experts well-versed in technology and industrial information. Through consultation, we properly grasp client needs and propose the best solutions. Based on “technology,” we hold meetings on all matters including the minutest details and establish specifications based on a secure relationship of confidence.

Systems best suited for business are designed by our abundant data derived from our track record of about 30,000 units produced, which is among the industry’s highest level, along with an abundant and skilled staff of designers numbering more than 70. Moreover, in the course of design, we maintain close communication with our clients, thereby securely reflecting even the tiniest needs in drawings for the proposed system.

After the system is delivered, we do not let user business stagnate. To that end, we always have the basic consumables in stock. Moreover, to allow our clients to use the equipment for long periods, we provide rich support in all areas from inspection to overhaul.

High-quality systems born out of Tokyo’s largest-scale, most abundant facilities.

Drawings are sent online to the factories, where system manufacturing starts. The head office/factory is among Tokyo’s largest in both site area and space. The factory is also complete with laser processors and other latest equipment. Almost 100% of products are manufactured in-house, thereby manufacturing high-quality systems.
Blasting on commission

To meet testing and outsourcing needs.

Corporate needs for processing on commission are growing, including outsourcing needs for prototyping and test processing in scenes of developing new products, due to shortening the product lifecycle, and increasing investment efficiency.

At Fuji Manufacturing, we provide blast processing with high skills by using the latest blast equipment for workpieces of all shapes and materials, ranging from small to large quantities, light to heavy weight, ultra-small to small and large sizes, and for glass and ceramics to various metal parts.

Measurement/inspection system

Our industry No.1 measurement and inspection system supports advanced blast technology.

Advanced blast processing that gives new functions to workpieces is supported by our industry No.1 measurement and inspection system. Complete with optical, laser and electron microscopes, the facility can inspect surface shapes with magnification up to 90,000 times and also analyze the composition of blast-transformed surfaces on an elemental basis.

The factory also has hardness meters, friction and wear testers, slide testers and other well-furnished equipment for measurement and inspection indispensable to blast processing.

<table>
<thead>
<tr>
<th>Main measuring equipment</th>
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<tbody>
<tr>
<td>Grain size analyzer</td>
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<tr>
<td>Electronic scale</td>
</tr>
<tr>
<td>Laser microscope</td>
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<tr>
<td>Friction and wear tester</td>
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<tr>
<td>Microscopic hardness meter</td>
</tr>
<tr>
<td>Ultra-microscopic hardness meter</td>
</tr>
<tr>
<td>Precision grain size analyzer</td>
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<tr>
<td>Electron microscope</td>
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<tr>
<td>Energy dispersive composition analysis</td>
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<tr>
<td>Surface roughness meter</td>
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<tr>
<td>(Surfcom 1400)</td>
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<tr>
<td>Microscope</td>
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<td>EVA・RES (010)</td>
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### Blast abrasive

Our lineup of various abrasives with grain sizes of 1\(\mu m\) to 2,000\(\mu m\) increases the possibilities of blasting even further.

More than 400 varieties of abrasives. Our lineup of abrasives that vary widely in terms of hardness, grain size, shape, and other characteristics supports diverse processing with blast. We enjoy a high reputation not only for the quality of the materials, but also for homogeneity and durability as well.

#### Lineup of representative abrasives

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<tr>
<th>Type</th>
<th>Article</th>
<th>Shape</th>
<th>Main characteristics and uses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soft type</strong></td>
<td>Nylon Beads</td>
<td>Cylindrical</td>
<td>Plastics-based. Low in hardness and suited for processing resin products.</td>
</tr>
<tr>
<td></td>
<td>Polyplus</td>
<td>Polygonal</td>
<td>Plastics-based. Harder than nylon and used widely in deburring, cleaning and other applications.</td>
</tr>
<tr>
<td></td>
<td>Peach</td>
<td>Polygonal</td>
<td>Plant-based. Low in hardness and performs polishing without scratching the workpieces.</td>
</tr>
<tr>
<td></td>
<td>Eco-Soft</td>
<td>Polygonal</td>
<td>Water-soluble. Suited for processing operations that do not tolerate abrasive residues.</td>
</tr>
<tr>
<td></td>
<td>Stainless Beads</td>
<td>Spherical</td>
<td>Metal-based. Low in hardness. Therefore used in removing burrs and scales, among other uses.</td>
</tr>
<tr>
<td></td>
<td>SUS Round Cut Wire</td>
<td>Spherical</td>
<td>Metal-based. Does not wear much and lasts long. Used in removing scales and for other applications.</td>
</tr>
<tr>
<td></td>
<td>Fuji Glass Beads</td>
<td>Spherical</td>
<td>Metal-based. An abrasive indispensable for alumite processing.</td>
</tr>
<tr>
<td><strong>Hard type</strong></td>
<td>Steel Shot</td>
<td>Spherical</td>
<td>Metal-based. This abrasive is used most widely in blast and used in removing burrs and scales, and in shot peening.</td>
</tr>
<tr>
<td></td>
<td>Steal Beads</td>
<td>Spherical</td>
<td>Metal-based. Used in removing burrs and scales, and in shot peening and WPC processing as well.</td>
</tr>
<tr>
<td></td>
<td>Zircon Beads</td>
<td>Spherical</td>
<td>Ceramics-based. This abrasive does not break easily and wears little. Resistant to work powder and other contaminants, and maintains the quality of high-purity abrasives.</td>
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<td><strong>Superhard type</strong></td>
<td>Fuji Rundum A/WA</td>
<td>Polygonal</td>
<td>Ceramics-based. One of the representative abrasives and used widely in blasting for deburring, surface preparation and other purposes</td>
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<td>Fuji Rundum C</td>
<td>Polygonal</td>
<td>Ceramics-based. Harder than Fuji Rundum A/WA and used for high-hardness work.</td>
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<td></td>
<td>Fuji Superhard</td>
<td>Polygonal</td>
<td>The highest-hardness abrasive. For special processing of sapphires, SiC monocrystals and other materials.</td>
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<td><strong>Special type</strong></td>
<td>SIRIUS Medium</td>
<td>Special</td>
<td>An elastic composite with abrasive grains kneaded in it. Only used for SIRIUS processing.</td>
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<td></td>
<td>Solid Lubricant</td>
<td>Special</td>
<td>For WPC processing. Transforms surfaces for greater slidability.</td>
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</table>
Some examples of Pneuma-Blaster the No.1 share of the domestic market.

**Rotary table with open window machine**

Excellent in versatility, for continuous and batch process.

**Indexing rotary table machine (Planetary machine)**

Indexing table to equip satellite small tables to rotate small to medium size workpieces while blasting.

**Internal table machine**

Work pieces should be placed on a large table and blasted on their upper surface.

**Bouncing conveyor machine**

Workpiece can be blasted on its whole surface without being held. The machine is also good in in-line configuration thanks to horizontal conveyor.

**Conveyor machine**

With its universality, good for long and big workpiece. (Roller type or bar type conveyor)

**Cylinder processing machine**

We have a variety of product line to accommodate from small to big size cylindrical workpiece.
Some examples of Pneuma-Blaster the No.1 share of the domestic market.

<table>
<thead>
<tr>
<th>Machine Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi axis machine</td>
<td>Carriage type machine combined with multi axis (X,Z, θ 1, θ 2) to accommodate various kind of work pieces.</td>
</tr>
<tr>
<td>Robot machine</td>
<td>Carriage type machine combined with robot to accommodate work pieces with complicated shapes.</td>
</tr>
<tr>
<td>Rotary table with suction type machine</td>
<td>A thin substrate workpiece can be retained to the large table by suction and blasted with high speed spinning.</td>
</tr>
<tr>
<td>Wire processing machine</td>
<td>A production line machine to blast the whole surface of wire ranging from φ 1 up to φ 30.</td>
</tr>
<tr>
<td>In-line shot-peening machine</td>
<td>Widely used for parts for automobile(A/T) and aerospace(blades) industries.</td>
</tr>
<tr>
<td>Robot shot-peening machine</td>
<td>A dedicated machine for aerospace industries to combine robot system with computer monitor system to achieve various recipe driven process.</td>
</tr>
</tbody>
</table>
In all fields, in various industries and society. We will make even more dreams come true in the future.

For the unlimited possibilities of blast, technology indispensable in production scenes. At Fuji Manufacturing, we have, been developing new high-value-added technologies one by one. Behind all that, there must be our technology. As the members of our engineers' lively curiosity and serious attitude as professionals. Ideas that were ours: “Isn’t it possible to do this and that?” These efforts have been supported by customer needs as a pioneer in blast technology ever since the development of cabinet-type equipment in 1957 by asking ourselves: “Isn’t it possible to do this and that?”

Main corporate clients

Chemistry :
- Etsu Chemical Group, Sumitomo Chemical Co., Ltd.
- Nippon Steel Corporation, JFE Holdings, Inc., Sumitomo Spring Co., Ltd.,
- Chuo Spring Co., Ltd., Tocalo Co., Ltd., NHK
- NSK-Warner K.K., JS Group

Metal products :
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
- Tool Engineering, Ltd., Mitsubishi Heavy Industries, Ltd.,
- Nippon Piston Ring Co., Ltd., Brother Industries, Ltd., Hitachi
- Piston Ring Co., Ltd., NSK Ltd., Nabtesco Corporation,
- Tungaloy Corporation, Tsubakimoto Chain Co., Teikoku
- Komatsu Ltd., Sanden Corporation, ShinMaywa Industries,
- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited
- Furukawa Electric Co., Ltd., Mitsui Mining & Smelting Co.,
- Komatsu Ltd., Sanden Corporation, ShinMaywa Industries,
- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited

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- Komatsu Ltd., Sanden Corporation, ShinMaywa Industries,
- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited

Nonferrous metals :
- NSK-Warner K.K., JS Group
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
- Tool Engineering, Ltd., Mitsubishi Heavy Industries, Ltd.,
- Nippon Piston Ring Co., Ltd., Brother Industries, Ltd., Hitachi
- Piston Ring Co., Ltd., NSK Ltd., Nabtesco Corporation,
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- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited

Glass, ceramics :
- Asahi Glass Co., Ltd., Ishizuka Glass
- Furukawa Electric Co., Ltd., Mitsui Mining & Smelting Co.,
- Komatsu Ltd., Sanden Corporation, ShinMaywa Industries,
- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
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- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited

Rubber :
- Achilles Corporation, Sumitomo Rubber
- Industrial & Marine Rubber Products Co., Ltd., NGK Insulators, Ltd., NGK Spark Plug Co., Ltd.
- Co., Ltd., Noritake Co., Limited., Nippon Sheet Glass Co.,
- Ltd., Covalent Materials Corporation, Taiheiyo Cement
- Co., Ltd., Okamoto Glass Co., Ltd., Kyushu Refractories Co.,
- Koshuha Steel Co., Ltd., Hitachi Metals Group
- Metal Mining Co., Ltd., Daido Steel Co., Ltd., Nippon
- Steel Corporation, JFE Holdings, Inc., Sumitomo
- Spring Co., Ltd
- Chuo Spring Co., Ltd., Tocalo Co., Ltd., NHK
- NSK-Warner K.K., JS Group

Automotive :
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
- Tool Engineering, Ltd., Mitsubishi Heavy Industries, Ltd.,
- Nippon Piston Ring Co., Ltd., Brother Industries, Ltd., Hitachi
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- Tungaloy Corporation, Tsubakimoto Chain Co., Teikoku
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- Mitsubishi Materials Corporation, Ryobi Limited

Metal & Metals :
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
- Tool Engineering, Ltd., Mitsubishi Heavy Industries, Ltd.,
- Nippon Piston Ring Co., Ltd., Brother Industries, Ltd., Hitachi
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- Mitsubishi Materials Corporation, Ryobi Limited

Electronics :
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
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- Nippon Piston Ring Co., Ltd., Brother Industries, Ltd., Hitachi
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Machinery :
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
- Tool Engineering, Ltd., Mitsubishi Heavy Industries, Ltd.,
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- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited

Manual machines for specific use
- Minebea Co., Ltd., Riken Corporation, Ricoh Company, Ltd
- Tool Engineering, Ltd., Mitsubishi Heavy Industries, Ltd.,
- Nippon Piston Ring Co., Ltd., Brother Industries, Ltd., Hitachi
- Piston Ring Co., Ltd., NSK Ltd., Nabtesco Corporation,
- Tungaloy Corporation, Tsubakimoto Chain Co., Teikoku
- Komatsu Ltd., Sanden Corporation, ShinMaywa Industries,
- Corporation, EBARA Corporation, OSG Corporation,
- Electric Industries, Ltd., Tanaka Kikinzoku Kogyo K.K., Dowa
- Mitsubishi Materials Corporation, Ryobi Limited

High precision processing machine
- This machine conveys a large substrate workpiece in a vertical position and blast its both surfaces.

Roller conveyor machine (For large substrate)
- In line blast machine with process width of 3,000mm for large substrate workpiece of PDP, LCD etc.

Partition wall machine
- Space saving machine to blast the whole upper surface of a workpiece in a cabinet that is only a little bigger than the workpiece.

Maskless machine for thin film solar cell
- This machine can blast straight line on the workpiece without using masks and free from dust adhesion on the surface.

Manual blast chamber
- Machine for extra large workpiece. The operator would work in the chamber with protective cloths on. Optional low floor type machine achieves floor level of GL + 400mm. (no pit required)
We will design and manufacture tailor-made machines to meet customers’ requirements, in addition to standard product line of general-purpose machines.
Blast abrasive

More than 400 varieties of abrasives. Our lineup of abrasives that vary widely in terms of hardness, grain size, shape, and other characteristics supports diverse processing with blast. We enjoy a high reputation not only for the quality of the materials, but also for homogeneity and durability as well.

Our lineup of various abrasives with grain sizes of 1 µm to 2,000 µm increases the possibilities of blasting even further.

Lineup of representative abrasives

Plastics-based. Low in hardness and suited for processing resin products.
Nylon Beads
Polyplus
Eco-Soft

Soft type

Type Article Shape Main characteristics and uses
Nylon Beads Polyplus Cylindrical
Spherical
Polygonal

Plastics-based. Harder than nylon and used widely in deburring, cleaning and other applications.

Semi-hard type

Metal-based. An abrasive indispensable for alumite processing.
Reduction Iron Powder

Metal-based. Low in hardness. Therefore used in removing burrs and scales, among other uses.
Stainless Beads

Metal-based. Does not wear much and lasts long. Used in removing scales and for other applications.
SUS Round Cut Wire

Metal-based. An abrasive indispensable for alumite processing.
Fuji Glass Beads

Metal-based. Low in hardness and performs polishing without scratching the workpieces.

Spherical
Polygonal

Water-soluble. Suited for processing operations that do not tolerate abrasive residues.

Plant-based. Low in hardness and performs polishing without scratching the workpieces.

Reduced Iron Powder

Plastics-based. Harder than nylon and used widely in deburring, cleaning and other applications.

Hard type

Metal-based. This abrasive is used most widely in blast and used in removing burrs and scales, and in shot peening.
Steel Shot

Metal-based. Used in removing burrs and scales, and in shot peening and WPC processing as well.
Fuji Rundum A/WA

Ceramics-based. This abrasive does not break easily and wears little. Resistant to work powder and other contaminants, and maintains the quality of high-purity abrasives.
Fuji Superhard

Ceramics-based. Harder than Fuji Rundum A/WA and used for high-hardness work.
SIRIUS Medium

Solid Lubricant

Steel Beads

Zircon Beads

Steel Shot

SIRIUS Medium

Solid Lubricant

Steel Beads

Zircon Beads