



Total support from design to prototype production, mass production, material development assistance, and development of environmentally- friendly production systems as well as achieving production efficiency for metal parts production.



Kitamura Faucet Co., Ltd. supports a wide range of needs of our clients from bronze and brass casting and forging, cutting of Stainless Steel and other metals, surface processing, including plating and sandblasting, as well as OEM supply of products such as faucet brackets.

Our factory is located in Japan, and we aim to support and expand our business and Japanese quality to clients all around the world.

Company Profile

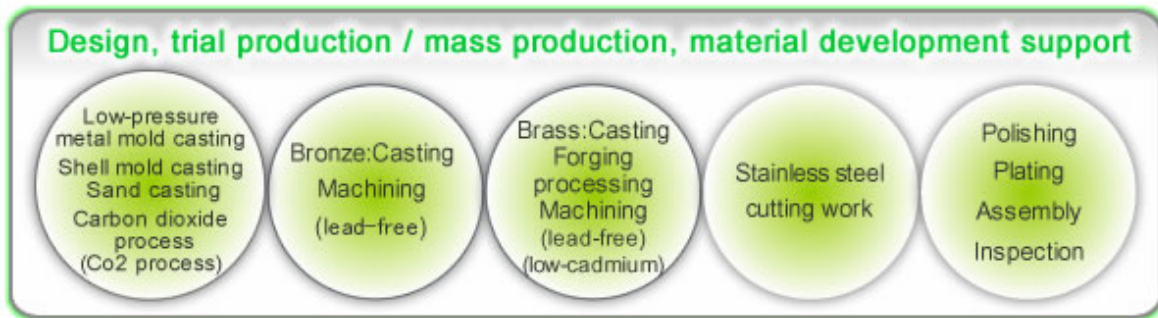


Company Overview

Name	KITAMURA FAUCET CO.,LTD
President	Tokuhiro Kitamura
Location	5523-3, Aza Ikenoue, Shimouchi, Seki-City, Gifu 501-3217, JAPAN
Tel	+81(575)23-7820 (head office)
Founded	October, 1990
Paid-in capital	90,000,000 JPY
Site area	7590㎡
Floor space	3300㎡
Business Activities	<ol style="list-style-type: none">1. Manufacturing and sales of metallic parts (copper alloys and Stainless Steel)2. Manufacturing and sales of copper alloy castings<ul style="list-style-type: none">• Materials<ul style="list-style-type: none">• Bronze casting products (including lead-free materials)• Brass casting products (including lead-free and low-cadmium materials)• Design and development of copper alloy castings• Test production of copper alloy castings• Support for development of copper alloy materials3. Contracting for machining copper alloy castings/forgings, etc.4. Design, manufacturing and sales of faucet brackets (OEM)<ul style="list-style-type: none">• Product assembly• Brazing5. Surface treatment, including buffing, polishing, and plating6. Design/development and manufacturing/sales of production equipment and jigs/tools

Our Business

We comprehensively support our clients Eimproved efficiency and response to the environment



With our capable personnel and a variety of company-owned production equipment, we work in design, from trial to mass production in a consistent manner to **support your improved efficiency**. We will provide great benefit by proposing and performing efficient manufacturing suitable for contracted products.

As for copper alloy, **we can provide you with assistance from the development of alloy materials to comprehensively support manufacturing**.

We will:

- Select and develop efficient materials tailored to products and use;
- Select and propose an efficient production method suitable for the use and shape of products;
- Reduce energy consumption in the production process;
- Reduce waste generated in the production process;
- Respond to environmental concerns by reviewing production methods; and,
- Advance delivery dates and reduce costs.

Casting Department

1. Contracting for manufacturing copper alloy castings
2. Design and development of copper alloy castings and trial production of copper alloy castings
3. Support for development of copper alloy materials

- We will ask you to utilize our equipment and knowlege after concluding necessary contracts in accordance with the development details.

Machining Department

1. Contracting for cutting and other works for various types of metal
Materials available for machining:

- Brass and Bronze
 - Casting materials
 - Forging materials
 - Bar materials
- Stainless Steel
 - Bar materials
- Other Alloy

Jigs,Tools,and Trial Production Department

1. Design and manufacturing of jigs for sales
2. Contracting for trial production
3. Design and manufacturing of in-house jigs and tools

Surface Treatment Department (including buffing)

1. Contracting for surface treatment for metals (including buffing and plating)

- Materials available of buffing:
 - Brass and Bronze Alloy
 - Stainless Steel
 - Other Alloy
- Other types of surface treatment available (subcontract factories):
 - Plate processing
 - Ion plating
 - NPB processing
 - Blast processing

Assembly and Inspection Department (including brazing and soldering)

1. Contracting for assembly and inspection of components

- Faucet brackets assembly
- Procurement and assembly of other items
- Brazing and soldering metallic parts
- Final inspection of product performances

Supply of parts and products

1. Import and sale of die-casting products.

- Aluminum Die Casting products
- Zinc Die Casting products

2. Import and sale of Lost Wax products.

- Stainless Steel Lost Wax products

Environmental Efforts

Production Using New Environmentally-Friendly Materials (Lead-Free Materials and Low-Cadmium Materials)



There has been a worldwide push toward reviewing previous standards regarding the management and use of substances that may harm humans and the global environment. These include environmental regulations on drinking water such as WHO's revised drinking water Quality standards, [California State Bill AB1953](#), the [ROHS](#), and [ELV](#) which began in Europe. There have also been restrictions on lead and cadmium contained in our products and materials.

We respond quickly to production with materials according to our customer's requirements through our continuous research activities, including production tests

with various lead-free copper alloys and low-cadmium brass.

We are also pleased to assist in production using new environmentally-friendly materials in cooperation with alloy manufacturers.

We respond quickly to production with lead-free/low-cadmium materials

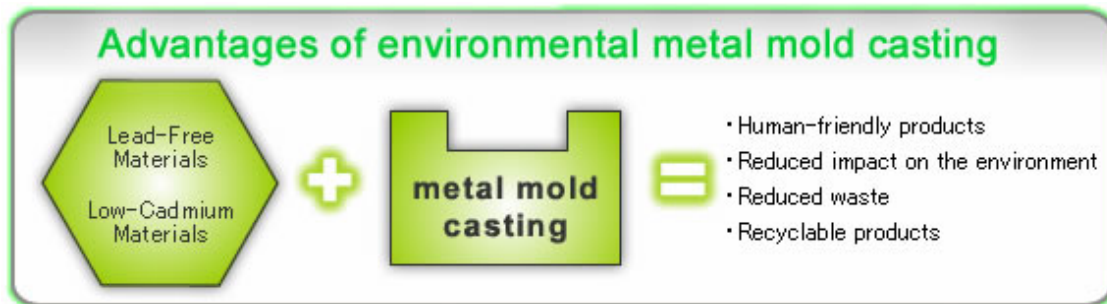


We are one of the first companies to have responded to production requirements for human-friendly and environmentally-friendly [lead-free/low-cadmium/low-lead materials](#). We fulfill your needs by solving various problems, including production system improvement and material development.

Total support from material development assistance to mass production, to develop environmentally-friendly production systems

Consistent production system from product design, trial production to mass production to improve efficiency **in an environmentally-friendly way.**

- Efficient material selection and development tailored to products and their application (selection of environmentally-friendly materials)
- Selection and proposal of efficient production methods suitable for product application or shape (selection of an environmentally focused production method, proposal of efficient usage of materials, etc.)
- Reduced energy consumption in the production process (reduced CO2 emission)
- Reduced waste generated in the production process
- Environmental efforts through reviewing production methods



We are one of the first companies to have responded to production requirements for **human-friendly and environmentally-friendly lead-free or low-cadmium materials.** We fulfill your needs by solving various problems, including production system improvement and material development.

Material Development

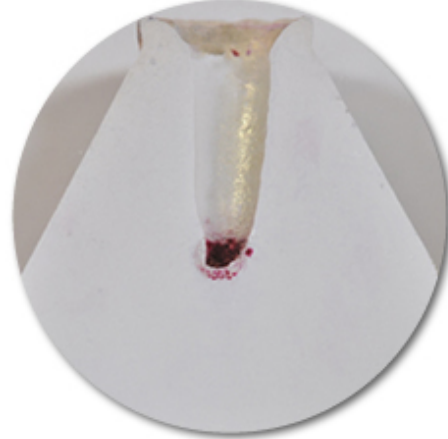
We aim to advance material development support and manufacturing using new and environmentally-friendly materials

Based on our extensive experience, we support production trials using environmentally- friendly materials, including lead-free and low-cadmium materials, which is considered an urgent matter around the globe, as well as casting trials using metal mold casting of new materials.

(ex.)Teeter mold test in ECO BRASS



(ex.)Test to check molten metal flow in ECO BRASS



We provide casting trials for various compositions and shapes, as well as various processing trials and technical guidance

※ A non-disclosure agreement must be signed for material development assistance.

- Support for development of new materials
 - Technical guidance and support as cast metal manufacturer
 - Casting trials with specified compositions and conditions
 - Trials with metal mold casting or other casting processes
 - Investigation of changes in material properties due to changes in casting form
- Production testing using new materials
 - Technical guidance and support as cast metal manufacturer
 - Casting trials toward mass production
 - Experiments using metal mold casting and other casting processes

Visit to leading manufacturer of faucets, plumbing pipes, and joints as an advisor



We have been invited to the factories and production facilities of a major foreign manufacturer of faucets, plumbing pipes, and joints as advisors, and provided technical advice on casting of ECOBRASS.

Transitioning to environmentally-friendly materials, such as lead-free materials, has become an urgent issue worldwide. We have proposed measures to deal with the problems encountered during production and different methods.

Equipment features

The feature of equipment composition

We have achieved excellent results in producing Stainless Steel cut parts, copper alloy parts, and copper alloy castings.

We launched our business as a faucet bracket manufacturer.

Since the Company's foundation, we have been capable of design and development of plumbing products and parts mainly with copper alloy, and have a manufacturing equipment system that allows integrated production from casting to finishing products (plating excluded).

Our business has recently extended to Stainless Steel parts as well as copper alloy castings beyond faucet brackets to further improve our production capacity.

In recent years, we have strived for production using environmentally-friendly materials (e.g., lead-free bronze, lead-free brass, low-cadmium brass) , and provided well-developed manufacturing equipment to supply products and parts that satisfy the requirements set by the RoHS Directive, ELV Directive, and California State Law AB1953, and to respond to the various needs of our customers.

Equipment Details

- Casting Department (including Core Casting Department)
- Machining Department

Examples of Processed Products and Finished Products

Castings (bronze or brass)

Permanent mold casting: faucet bracket body

Our capability for creating a thicker chill layer on a casting product allows the body to be made thinner by cutting or other means, while maintaining pressure-proof performance or other properties in subsequent processes, which results in a lightweight product.

Only core sand is used, which reduces waste sand to be discharged.

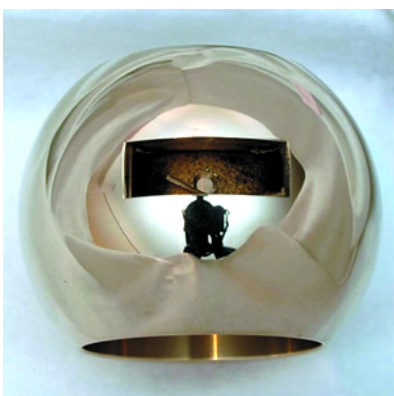
Our work involving cutting, surface treatment with buffing or plating, and assembly with other parts rather than supplying casting material allows us to supply products of quality, minimizing our clients' Eloss.



Casting weight	Approx. 1600 g
Front (silvery object in the photo)	
Materials	Brass and Bronze Lead free Brass and Bronze
Process	Cutting work Buffing finish Nickel chrome plating
Back (golden object in the photo)	
Materials	Lead-free casting Dezincification resistant brass Low-cadmium brass General brass also available
Process	Cutting work to finish

Ball for ball valve made by environmentally-friendly materials

We respond to production with Eco-brass / various environmentally-friendly materials.



Product size	Φ 102mm t=2.5mm
Materials	Eco-brass
Process	low-pressure permanent mold casting

Bronze casting by shell molding

This process has **better dimensional accuracy** than general sand casting, and allows design to take thickness into consideration to save weight.



Casting weight	Approx. 500 g
Product size	Approx. \varnothing 45 mm Overall length: 110 mm
Materials	Brass and Bronze Lead free Brass and Bronze Phosphor Bronze High-strength brass Dezincification resistant brass

Lead-free bronze casting (production with environmentally-friendly materials)

We are one of the first companies to test productivity with environmentally-friendly materials to organize our production.



Materials	Brass and Bronze Lead free Brass and Bronze
Other types of processing available	
<ul style="list-style-type: none">• Cutting work by machine• Polishing processing including buffing	

Product features

- The difference in thickness is relatively large in the as-cast state (thickness of 3.5 mm to 20 mm).
- All outer circles maintain their pressure-proof performance after cutting work, which solves the problem of defects, such as pores or pinholes generated in producing castings.

Stainless Steel cutting work

A single process despite their complicated shape

Cutting work utilizing a combined machine processes the material to finished products within a single process despite their complicated shape. This method achieves more efficient and stable processing than dividing the processes into several different machines.

In addition, we have a processed/finished product aligner to prevent scratches and dents. This custom developed equipment minimizes distortions and scratches generated in the production process, allowing us to **supply processed products of higher quality.**



Example of Stainless Steel cutting work

Details	6 pierced holes around the edge: $\phi 2.0$ mm Piercing a workpiece of 30 mm in overall length 6 cross holes from side mirrored bore
Materials	Stainless Steel
Material size	Workpiece of $\phi 30$ mm, 30 mm in overall length
Machine used	2 combined CNC lathes with 2 spindles and 2 saddles (bar type)

We support cutting work for complex shapes

We support cutting work for **complex shapes**, such as lost wax castings. By selecting appropriate jigs and processing methods, we are able to provide processing with high accuracy even for complex shapes.



Lost-wax products cutting work

Materials	Stainless Steel Lost Wax(SCS13)
Machine used	Machining center NC Lathe

Use of the NC lathe and machining center

The use of various equipment and the machining center improves productivity while maintaining processing accuracy.

This allows a smooth transition from trial production through commercialization to mass production.



Material

Brass and Bronze
Lead free Brass and Bronze

Material size

Continuous cutting from $\phi 32$ mm x L 3000 mm

Finished product size

$\phi E1$ mm, 40 mm in overall length

Details of processed product

The lateral hole is a complicated oval in shape.
2 holes on the edge face are eccentric:

- one is for a bottom attached M3 screw
- the other is the pierced step hole

Equipment features

- Equipped with a Y-axis in addition to the C-axis.
- The bar type can process a product as large as $\phi E1$ mm.
- The chucker type can process a product up to $\phi E50$ mm.

Products can be fully processed within only a single process using the combined CNC lathe with 2 spindles and 2 saddles (bar type) equipped with the Y-axis.

This example chooses process division as it achieves more efficient processing in this particular case.

Processing

(up to approx. 50000 units can be produced monthly)

Primary process

Processing with NC lathe

Secondary process

Machining center

Details of processing

Step cylinder

Spots processed

2 holes including the lateral hole on the side and the eccentric hole on the edge face

A revolving chuck is used for the machining center to finish the process in a single chucking

Brass forging processing

Design, processing, surface treatment, etc., of forgings

We can design, cut with a machine, polish, etc., brass forgings on our own. We complete the forging process at a subcontract factory.

Brass forgings using brass (dezincification-resistant; samples in the photo consist of a lead-free material)



Material	Forging-finished material (left in the photo)
Processing	Machining-finished (center in the photo)
Surface treatment	Nickel-chrome plating after mirrored finish on the surface by polishing (right in the photo)

Surface treatment

General polishing and plating



Front right: Before processing

Cast brass casting by permanent mold casting
Cutting work completed

Back left: After processing

Polished and plated product
(Nickel-chrome plating after polishing)

Works efficiently assigned to both craftsmen and machines reduce costs and time while maintaining the quality of the finished products.

- Complicated shapes can be achieved manually by craftsmen.
- Simple shapes are made through automatic polishing.
- We polish products after cutting work by machine if required by some product uses or conditions.
- We entrust plating to 5 subcontract factories so that we can respond to various needs.

Plating by masking

Both products are identical.

We can plate the necessary parts of a product by masking. **We use the method most suitable for the shape of each product.*



Surface treatment with different colors



Material	Lead-free brass forging
Back right	General nickel-chrome plating
Front left	Gold-colored plating (Ion plating, etc.)
Process	Surface treatment, such as polishing and plating after cutting work

In addition to nickel-chrome plating, we can offer some different proposals on surface treatment, including ion plating, to suit your budget.

Expressing various colors, ion plating achieves the designer's request as well as quality products.

Other types of processing, including copper plating, are also available.

Supply of parts and products

Parts such as lost wax/die cast products are produced by subcontracting companies. We perform processing, inspection, and assembly to support and supply a wider range of products.

Lost Wax product/Die Casting product



Stainless Steel Lost Wax product



Zinc Die Casting product