



Taisei Kogyo Co., Ltd.

URL: <https://www.aisei-kogyo.com>

Head Office and Plant

26-1 Ikeda-kitamachi, Neyagawa, Osaka 572-0073, Japan
TEL: +81-72-829-3588 FAX: +81-72-827-3390

Tokyo Sales Office

Gloria Hatsuho Machida 905, 3-18-27 Kamitsuruma-honcho, Minami Ward, Sagamihara City, Kanagawa Prefecture 252-0318, Japan
TEL: +81-3-3539-6061 FAX: +81-3-3539-6062

Research Lab

Creation-Core2107, 1-4-1 Aramoto-kita, Higashi-osaka city, Osaka 577-0011, Japan

European Representative Office

In der Spöck 12 (Im TPO) 77656 Offenburg, Germany
Tel.: +49-781-6301-4281 / +49-162-696-7837 (Mobile)

Thailand Plant

19/65 Moo10, T. Klong Nueng, A. Klong Luang, Pathumthani, 12120
TEL: +66-2520-3191 FAX: +66-2520-3193

Thailand Research Lab

INC2D-409, 141 Thailand Science Park, Paholyothin Rd., T. Klong Nueng, A. Klong Luang, Pathumthani, 12120

Membership

IVAM (International organization for micro technology) / Germany
JPMA (Japan Powder Metallurgy Association) / Japan
JSPM (Japan Society of Powder and Powder Metallurgy) / Japan

Metal Injection Moulding in high-precision manufacturing

Create the Future of Highly Functional Metal Components

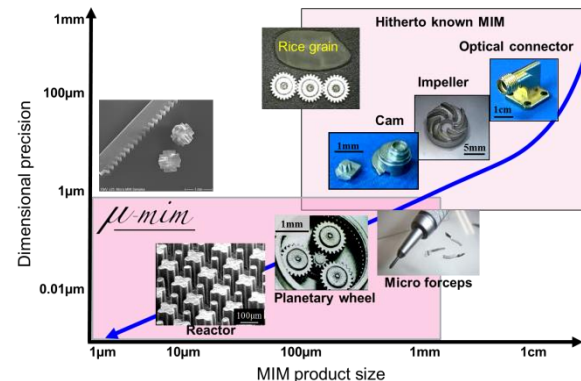


TAISEI KOGYO CO., LTD.

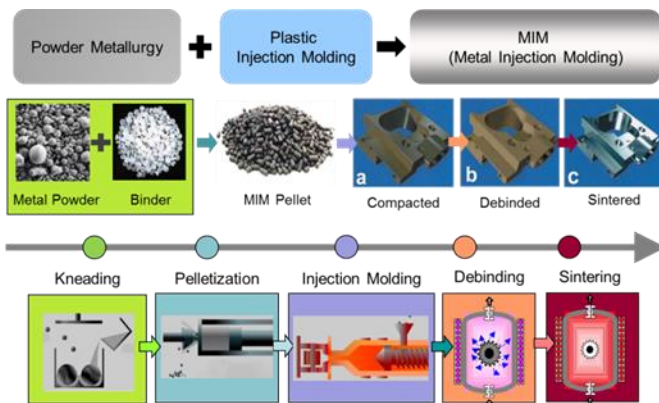
What is “*μ-mim*”? Smaller and more precise

Taisei Kogyo is the leading MIM manufacturer in Japan. Our MIM process is suitable for mass production of sophisticated profile components with tighter dimensional tolerances compared with conventional MIM.

We have established a manufacturing process for extremely small metal parts called “*μ*-MIM”. It is possible to design metal components with less than 0.2 mm thickness.



Process Our development leads simple process



MIM is a manufacturing process, which includes injection moulding and sintering. For injection moulding, the mixture of metal powder and polymer binder, called feedstock is used. MIM components have higher density than conventional powder metallurgy components. From our 40 years' experience of plastic injection moulding, we have developed our original binder system, which leads to higher cost efficiency and a wider range of materials selection.

Materials Smaller powder size and wider material selection

We have experiences including, but not limited to the following materials



Stainless steel, SCM, Magnetic alloy, Non-magnetic alloy
Titanium, Titanium alloy
Copper, Copper alloy
Nickel
Platinum, Platinum alloy, Gold alloy

Reliability Assurance & development from precise manufacturing



Quality assurance & Research equipment

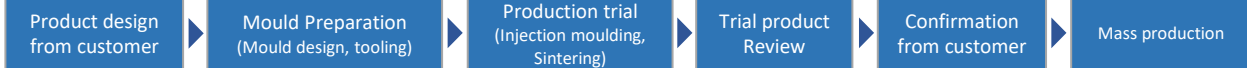
- Optical measurement (HEXAGON OPTIV-321GL, GOM ATOS)
- X-ray CT (Nikon)
- SEM/EDX (Hitachi High Technologies SU1510)
- Ion milling (Hitachi High Technologies E-3500)
- Optical/Laser microscopy
- Carbon combustion analyser (Horiba EMIA-221V2)
- TGA (Shimadzu TGA-51)
- Tensile testing machine (Shimadzu AG-100kN-Xplus)



Design/Support

Minimise your production leading time

Development flow



Our measurement and computer calculation system speed up the optimisation of mould design and process parameters



We support from your design consideration stage including VA, VE ideas sharing our MIM technical knowledge and experiences

Solutions Apply *μ*-MIM to realise your innovative ideas

Integration



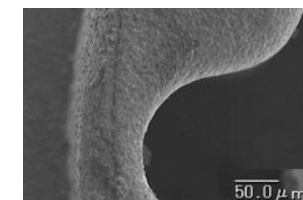
Reduce part number and assembly time while maintaining mechanical strength

Undercut



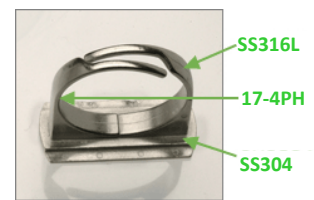
Mass production of hollow structure with undercut and curve

Ultra thin



Mass production of metal components with thin parts
Minimum thickness: 80 μm

Composite



Magnetic and non-magnetic materials are bonded without any additional post treatment



Applications Medical, Electronic, Automotive and other industries

Micro check valve



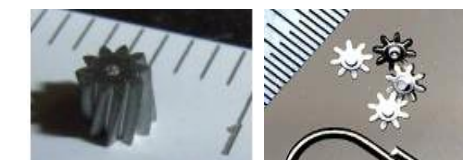
Length: 8.00 mm
Outer diameter: 2.25 mm
Inner diameter: 1.80 mm
Wall thickness: < 0.2 mm

Internal gear



Outer diameter: 2.2 mm
Inner diameter: 1.7 mm

Micro gear

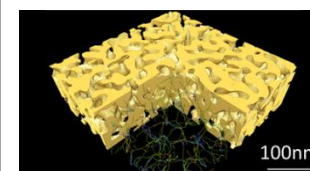


Micro nozzle



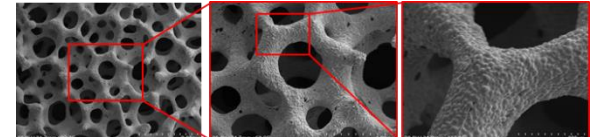
Porous Higher specific surface area, higher potentials

Nano-porous paper



This metal porous paper has large specific surface area as 100 m²/g

Titanium Foam



Our Titanium foam has open-cell structure with high strength-to-weight ratio and high compressibility