Prototype metal stamping

**By greatly reducing the lead-time and costs until production,
you can commercialize your products way ahead of the competition!**

Bring products to market faster!

Reduced lead-time for prototype manufacturing!

Reduced development costs!

Excellent quality for development reliability!

Prototype manufacturer "Saijo INX" solve your problems
of processes from develoment to prototyping!!

SAIJO

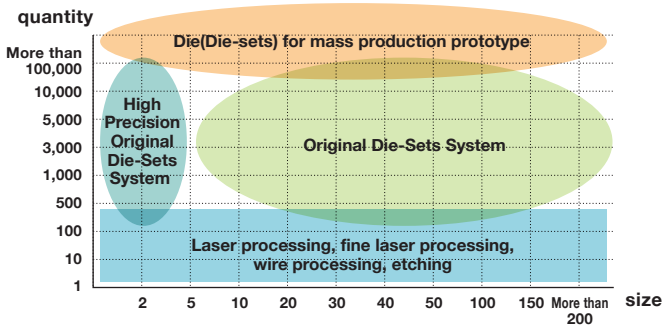
ENGver.

Advantage

The fruition of shorten the delivery time to 1/4 & reduce the cost to 1/3.

Original Die-Sets System

Our proprietary “Original Die-Sets System” incorporates only the bare minimum functions required for production, enabling manufacture of prototypes such as electrical and electronic components (connectors, switches, relays, motors), communication devices (optical transmission), medical examination and treatment devices, in-vehicle components (power modules, car navigation), energy related components, and fins (for heat exchangers, oil coolers, EGR coolers) etc., in short delivery times and at low cost, contributing to the increased competitiveness of our customers.



Technological Innovation

We developed high precision die-sets system that is the handfeed simple progressive die. This system can make products of same quality as mass production, moreover contribute to development reliability of customers.

Share of Date & Know-How

We normalized the design and manufacturing process. We greatly contribute to shorten L/T, because we simplify the thinking process and establish the optimum design and manufacturing process.

○Properly using the method according to the step from 1 piece prototype to mass produced prototype.

Devlopment Support
(Design～Concept & Proposal)

We support your design, drawing, method development, development design, commissioned projects and evaluation by using 3D model and simulation with simple illustration and information of spec and function what you need.

	Processing metal parts	Molding	Assembly
Initial Prototype Confirmation of shapes (Manufacturing 1 to 10 pieces)	No die-sets Standard die-sets	Cutting & Bonding Stereolithography (NetWork)	Simple jig & hand finishing
Improved Prototype Confirmation of dimensional tolerance (Manufacturing hundreds pieces)	Processing with simple die-sets	Casting Aluminum mold (NetWork)	Simple die-sets for assembly (Single die)
Mass Produced Prototype Sales promotion sample (Manufacturing thousands pieces)	Simple die-sets Simple progressive die-sets	Molding by quenching metal mold	Semiautomatic machine

○Various System & Facilities

Quick Delivery Prototyping
(e.g. after the order in 3 days)

- Providing high-volume prototypes on quick delivery.
- Manufacturing products by only 3D date.

We adopt Solid Works.The avairable form is IGES, STEP & Parasolid

System

- 35 staffs
- three Factory Chain workshops

High-Volume Prototyping
(e.g. 1,200pieces)

- Optimum for sales promotion samples
- Optimum for production until the mass production.

Facilities

Saijo group has

- 53 press brakes
- 20 wire EDMs
- 3 microscopic laser processors
- 5 Injection molding machines

Prototyping with Original Die-Sets

- Same precision & method as mass production
- Available for blanking, bending, drawing & etc.

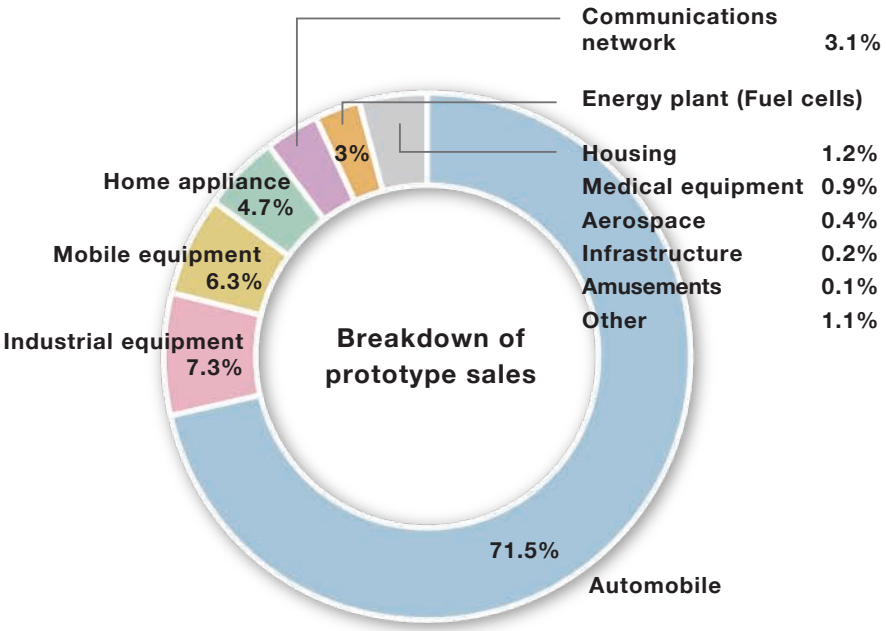
Technology know-how

- Manufacturing 300 simple die-sets per month
- Menu products
- Development of method & system

Development Support Process of Prototyping

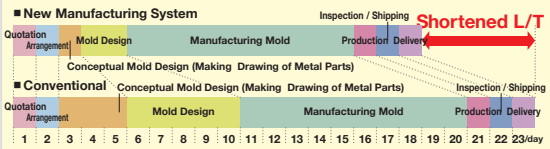
Prototyping result : more than 400 parts per month

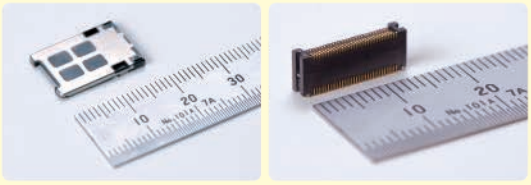
We "Saijo INX" was established in 1950 and has been manufacturing more than 400 prototypes per month as innovation partner of thin sheet metal processing. We produce various prototypes that are high precision and moderate price with enough experience and knowledge. Moreover we provide the prototypes which is the same quality as mass production on quick delivery by using our original die-sets system. Recently we also have been involved in so many development projects of components relating to the environment and the energy saving such as fuel cells, offshore generation, heat exchanger, and EV/HV. So we can bring up problems that may occur at the time of mass production at prototype stage, and solve it immidiately.



Prototype ~Metal/Resin Sets~

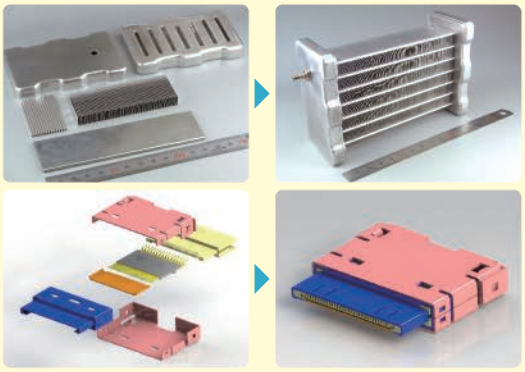
Our integrated manufacturing process enables us to provide everything from the design of injection molding dies through to manufacturing and molding, insert molding, and assembly processing with metal parts.





Prototype ~Assembly~

Avairable for various kinds of assembly such as assembly of plural parts (metal & mold parts), using cutting parts and rubber.

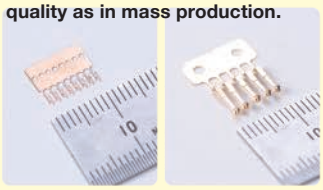


Prototype ~Precision Drawing~

Circular drawing, Square drawing, Complex shape drawing, Deep drawing, Drawing+Ironing

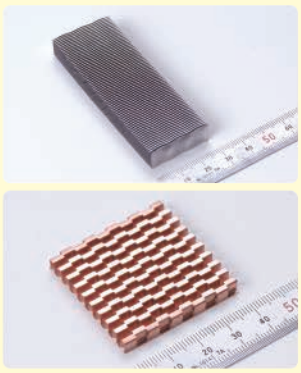
Prototype ~Microscopic Thin Sheet Metal Prototype (Less than 2mm square parts)~

Conventionally, a metal die-sets that is the same type as the mass production die-sets is manufactured when manufacturing microscopic/superfine prototypes. However, at Saijo INX, we have established new manufacturing technology for manufacturing prototypes that maintains the same level of quality as in mass production.



Prototype ~Fin~

Corrugated fin, Offset fin, Inner fin, Louver fin, Waving fin, Slit fin.



Prototype ~Round Bus Bar~

It is avairable for improving the space efficiency of products and attaching the insulation properties (insulating layer, surface treatment, thermal expansion tube, molding and etc.).

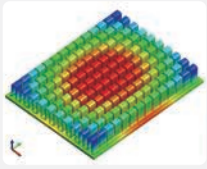
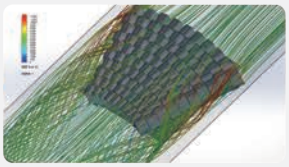
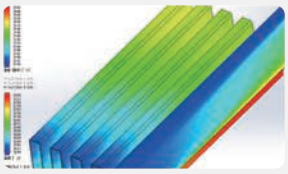
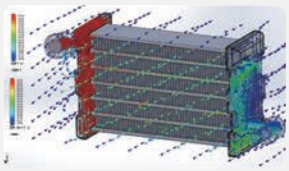
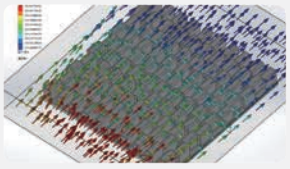
Prototype ~Thin Sheet Metal Parts~

We make up products immidiately, as soon as we get the drawing from customers.

Development

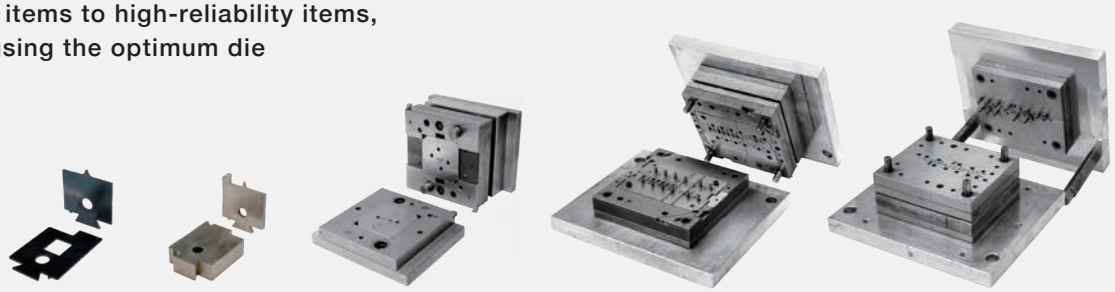
Development Support of Thin Sheet Metal Fin from Development & Design to Prototyping.

As for analysis technology such like thermal fluid analysis, heat conduction analysis, stress analysis with using analysis tool,we simulate the products (design) at the conceptual stage and evaluate the characteristics of products and the directivity of improvement performance. Therefore, you can shoten the development cycle and reduce the development cost.

A variety of production methods to match the needs

From simple items to high-reliability items,
production using the optimum die

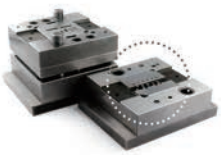


One-off die ⟷ Progressive die

One piece or more	Product volume	10,000 pieces or more
One day or more	Number of production days	Two weeks or more
±0.1mm or more	Dimensional accuracy	±0.02mm or more
Initial (development) prototype	Improved prototype	Mass produced prototype

Standardization from process design to production

Process design → Die design → Die parts processing → Die assembly → Production → Inspection before shipping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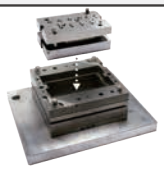
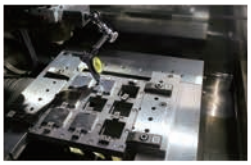
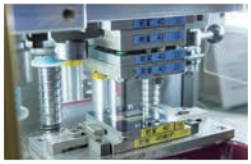

Just insert into the cassette


Each prototype is inspected individually


Utilization of the design database


Processing with dedicated jig and tools


Can be fitted to the equipment immediately

Facilities

For Prototyping	36kinds	Qty:128

Microscopic Laser Processor
Profile Grinder
Wire EDM
High-Precision Wire EDM
Shot Blast
Small Hole Drilling EDM
AC Servo Brake
3D Printer
AC Servo Press
Hydraulic Press Brake
Desk Top Laser Welder etc
NC Grinder
Surface Grinder
Profire Projector
Electric furnace etc


For Molding	10kinds	Qty:12

Hydraulic Servo Type Injection Molding Machine
Vertical Injection Molding Machine
Mold Temperature Controller
Linear-Motor-Drive
High-Speed Die-Sinker EDM
Vertical Machining Center
3D CAD for Molds
3D CAM for Molds
Swing Type Sprue Picker
Hungry Feeder
Dehumidifier


For Die-Sets	8kinds	Qty:12

NC Milling Cutter
Surface Grinder
Forming Surface Grinder
CNC Surface Grinder
Dresser for formed grinding machine
Forming Grinder
Lathe
Drilling Machine


For Measuring	8kinds	Qty:12

High Accuracy Optical & Measurement Microscope
3D CNC CMM
Measuring Microscope
Image Dimention Measuring Instrument
CNC Vision
Vision Measuring Machine
Profile Projector
Digital Microscope


Development Type Maker
~Supporting The World's Development~

Company Profile

Corporate Name	SAIJOINX Co., Ltd.
Locations	5 Nishikotobuki-cho, Saiin, Ukyo-ku, Kyoto, Japan
Contact us	E-mail info@saijoinx.co.jp TEL +81-75-312-8590 Corporate website URL http://www.saijoinx.com/en/ Service website URL http://www.prototype-metal-stamping.com/
Primary Business	Precise Metal Stamping & Insert Molding for Prototypes
ISO Standard	ISO9001 ISO14001
Main Customers	Omron Group Companies / Fujitsu Group / Murata Mfg.Co.,Ltd. / Sumitomo Electric Industries, Ltd. / Kyocera Group / Panasonic Electric Group Companies / J.S.T. Mfg. Co.,Ltd. / NIDEC Group / DENSO Group

- **Available Analysis Technology**
  We can handle thermal fluid analysis, heat conduction analysis, stress analysis and etc.
- **Avairable Metal Materials**
  We can handle a wide range of metallic materials including SUS, iron, aluminum, phosphor bronze, brass, copper, copper alloy and silver nickel. Please contact us if you have any specific material requirements.
- **Avairable Molding Materials**
  We can handle a wide range of molding materials including super engineering plastics (LCP, PPS), engineering plastics (POM, various types of PA, PC, PBT), and general plastics (ABS).
  We handle approximately 100 types (including different grades) of molding materials per year.
- **Avairable Surface Finishing**
  Plating: Au, Sn, Ni, Cu, Ag, etc. Please inform us if you require various types of hoop plating or rack plating.
  In addition to plating, we can also provide paint finishes, cation electrodeposition coating, anodized aluminum processing, heat treatment and barreling.
- **limitations on The Thickness of The Sheet Metal**
  The standard is T=0.05 to 3.0mm.
- **Limitations on The Product Size**
  Metal :Consider sizes within 300mm square as a general limit . Any sizes larger than this can be manufactured.
  Mold :We have 100ton injection molding machine. Any sizes larger than this can be manufactured
- **Avairable File Formats**
  STEP / IGES / Parasolid / Auto CAD / JPEG / PNG / PDF / Mirosoft Word / Microsoft Excel
- **Specification of 3D Printer**
  It is for confirmation of design model. This machine is ink jet type that can be made high definition modeling.
  Modeling size: X270 x Y165 x Z180(mm)
  Material: Semitransparent acryl type (ultraviolet curing plastic)
  Laminating pitch: 29μm (you can also choose 16μm or 32μm)
  *we cannot guarantee the dimension of products.

- **I want to know quickly whether it can or cannot be done!**
- **I want a company to make a prototype for us within a tight deadline that a different company wouldn't do!**
- **I want a company to make a prototype to a tight deadline, under a tight budget, and to high accuracy!**

To solve any of these problems, simply send us your "drawings/data" and tell us your preferred "deadline, quantity and budget", and one of our experienced engineers will reply to you within 6 hours as to whether your request is possible or not.

E-mail info@saijoinx.co.jp
TEL +81-75-312-8590

Kyoto Japan

Inquiries must be received between 9:00am to 5:00pm on weekdays (Japan time).