

Need a gear?
We make it.

The only one GEAR

High Precision Gears, Large Lot Support & Small Module Gears

NISSEI CORPORATION

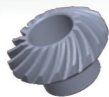
The only one GEAR

You can find our gears used by numerous well-known robot manufacturers!

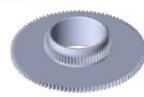
Robots work in various scenes and in various shapes. Gear products as their component parts need to be solve problems such as thin shape, lightweight, complex shapes, noiseless, small shapes, small modules, etc. NISSEI CORPORATION can support customers from design stage with abundant facilities and technical capabilities.



Hypoid Gear



Bevel Gear



Double Gear



Input Gear

Articulated robot axis 6

Spur Gear
Hypoid Gear
Bevel Gear

Articulated robot axis 5

Spur Gear
Hypoid Gear

Articulated robot axis 4

Spur Gear
Hypoid Gear

Articulated robot axis 3

Input Gear
Double Gear

Articulated robot axis 2

Input Gear
Double Gear

Articulated robot axis 1

Input Gear
Double Gear
Hypoid Gear

Small-diameter,
small-module
gears under
development.

A unique gear for field which requiring small shape and high performance.

In advanced industries such as the industrial robot sector, there is an increasing demand for smaller and high precision gears. We perform gear tooth grinding and heat treatment of gears to improve their precision, and we also handle large lots with our integrated production system from ordering right through to delivery. With our reliable skills and ability to respond to our customer's needs, we provide unique gears to our happy customers.

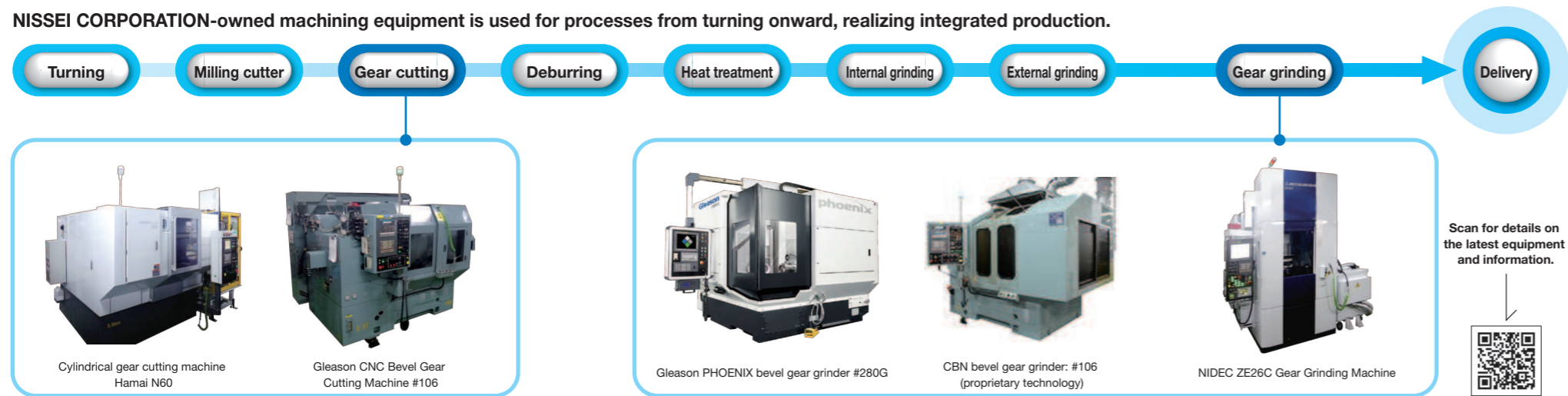


Integrated production system meets large lot production.

We have 150 or more gear cutting machines in total, serve for bespoke spur and bevel gears manufacturing. We also comply with JIS Class 0 precision. Our integrated production system, which includes heat treatment, starts from the design phase, and is capable of producing 500,000 pcs/month, making it one of the largest among OEM gear manufacturers. With our integrated production capabilities, we are capable of taking on modern challenges and meeting demands including small diameters, small modules, and challenging for complex shapes.



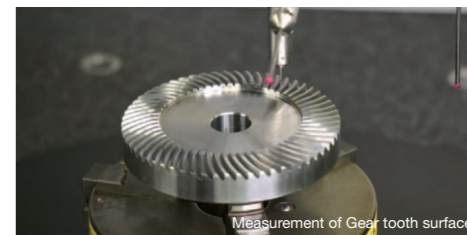
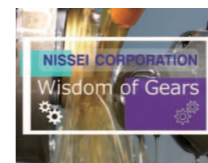
NISSEI CORPORATION-owned machining equipment is used for processes from turning onward, realizing integrated production.



New heat treatment plant

New heat treatment machining technology adopted (supports high-precision gear manufacture). 24-hour operation is possible with centralized control.

Video library for introducing gear production such as machining, inspection and more.



Scan here for Videos on our Web site "Wisdom of Gears".





We solve your problems.

Gear-related demands include thin walls, light weight, complex shapes, and quietness, as well as small-diameter and small-module gears.

NISSEI CORPORATION leverages its extensive range of equipment and technical strengths to support issues faced by our customers from the design level on.

1. Advanced technology and special equipment

.....▶ Versatile design and machining to accommodate broad range of applications

2. In-house facilities integrated production

.....▶ Large lot size and quality control

3. Dedicated support system to tackle issues

.....▶ One-stop support by engineers from a specialist gear manufacturer

Problem

01 Need thinner and lighter shape

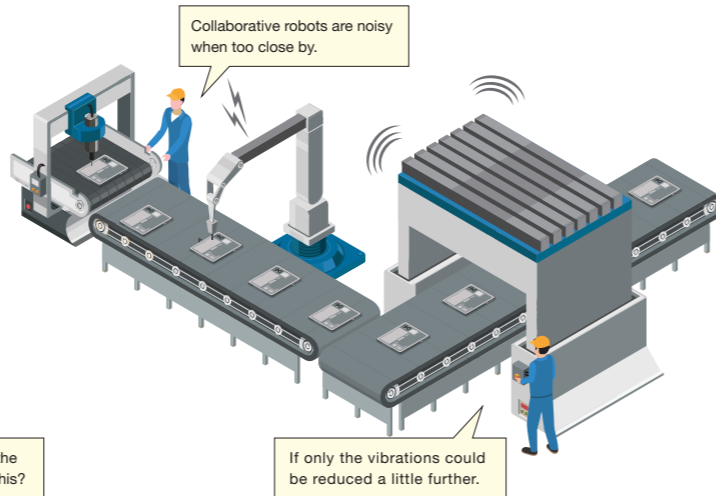


We've got thin-walled gears covered.

Various settings taking heat treatment strain calculations into account must be specified at the design stage for gears used for delicate movements such as those in the medical and semiconductor fields. NISSEI CORPORATION carries out heat treatment processes in-house (carburizing and quenching, controlled nitrocarburizing, etc.) and monitors strain to provide thin-walled gears via optimized processes.

Problem

02 Need lower noise and lower vibration



We can provide quieter and lower vibration gears.

We aim for low-vibration, low-noise gears by simulating optimum tooth contact and engagement curves at the design stage. We leverage our machining technology to ensure smooth gear movement by suppressing gear tooth profile errors and tooth surface roughness. This also improves the durability of the gears themselves.

Problem

03 I want gears that are more compact and realize high reduction ratio

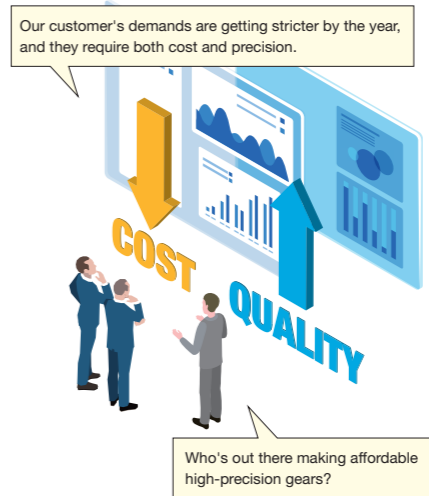


Our unique HRH gear is proposed.

To equip compact equipment with high reduction ratio compact gears, our unique HRH (High Ratio Hypoid) gear is the perfect solution. A high gear reduction ratio of 1:360 can be obtained, realizing compact designs.

Problem

04 I want high precision gears with smaller cost



Solutions for a diverse range of mass-production systems

NISSEI CORPORATION can also provide low-cost, high-precision gears through CBN gear grinding (proprietary technology) as well as grindstone gear grinding. We support a wide variety of mass-produced products with our extensive range of equipment (gear cutting/gear grinding equipment), enabling to tailor the proposal of solutions with excellent cost balance in a flexible way.

Problem

05 I want to place orders for large lot size



We have production capacity on the largest scale in Japan.

Maybe you receive large orders for the robots or machine tools you've developed, but your existing gear suppliers are unable to provide enough parts in time... Leave it to us, with equipment and production capacity on the largest scale in Japan.

Custom Gear Product List

Scan here for details on all NISSEI CORPORATION gears.



Bevel Gears



Spiral Bevel Gear

Gear size : Module 0.5 to 6
 External diameter : Up to about ϕ 300 mm
 Overall length : Up to about 300 mm
 Gear precision : JIS B1704 Grade 0 or higher

Product adoption examples

Robot, Electric grinder, Machine tool,
 String trimmer, Four-wheel buggy, etc.



Zerol Bevel Gear

Gear size : Module 0.5 to 6
 External diameter : Up to about ϕ 300 mm
 Overall length : Up to about 300 mm
 Gear precision : JIS B1704 Grade 0 or higher

Product adoption examples

Robot, Bevel gear cutting machine,
 Air tool, etc.



Hypoid Gear

Gear size : Module 0.5 to 6
 External diameter : Up to about ϕ 300 mm
 Overall length : Up to about 300 mm
 Gear precision : JIS B1704 Grade 0 or higher

Product adoption examples

Robot, Reducer,
 ATC for machine tools(Automatic tool changer),
 Four-wheel differential, etc.



HRH Gear

Gear size : Module 0.5 to 4
 External diameter : Up to about ϕ 250 mm
 Overall length : Up to about 300 mm
 Gear precision : JIS B1704 Grade 1 or higher

Product adoption examples

Robot, Door engine,
 Electric power steering (EPS),
 Index table, etc.

Cylindrical gears



Spur Gear

Gear size : Module 0.5 to 6
 External diameter : Up to about ϕ 300 mm
 Overall length : Up to about 600 mm
 Gear precision : JIS B1702 Grade 0 or higher

Product adoption examples

Robot, Power tools, Battery driver,
 Electric thread fastening runner, etc.



Helical Gear

Gear size : Module 0.5 to 6
 External diameter : Up to about ϕ 300 mm
 Overall length : Up to about 600 mm
 Gear precision : JIS B1702 Grade 0 or higher

Product adoption examples

Reducer, Power tools, Four-wheel transmission,
 Pipe cutter, etc.



Internal Gear

Gear size : Module 0.5 to 3
 External diameter : Up to about ϕ 300 mm
 Overall length : Up to about 200 mm
 Gear precision : JIS B1704 Grade 0 or higher

Product adoption examples

Air driver, Reducer, Power tools, etc.



Gears not listed on this page
 may also be available.
 Contact us for details.

Specialists provide solid support available.

Need a gear?
 We make it.

You can count on us for all your special gear and large lot requirements.

We meet the needs of these diversified times, such as demands for thin walls/lighter weight, high reduction ratio, high precision, support systems, unitization/assembly use and so on, with “total gear technology” and teamwork.

With “support with a human face” as our motto, inquiries are centrally controlled by our sales department, providing our customers with a one-stop gear solution consisting of manufacturing, quality assurance, shipping, and more.



Online meetings for customers in remote locations

Whenever necessary, NISSEI CORPORATION holds meetings with an online meeting system using Microsoft Teams.



Contacting with us? Scan here!



Flexible support for products sold as units in an assembled state

We can provide the units or assemblies you need by leveraging the technical knowledge of gears, die casting, and motor production we have cultivated over many years.

In particular, our proprietary HRH technology is capable of realizing high efficiency and saving space.

And with our CBN gear grinding technology, we provide low-cost gears while maintaining high precision.

NISSEI CORPORATION handles design and integrated production in-house, allowing us to respond flexibly to customers who have desire to procure "unitized or assembly" components.

Scan here for details on units and assemblies.

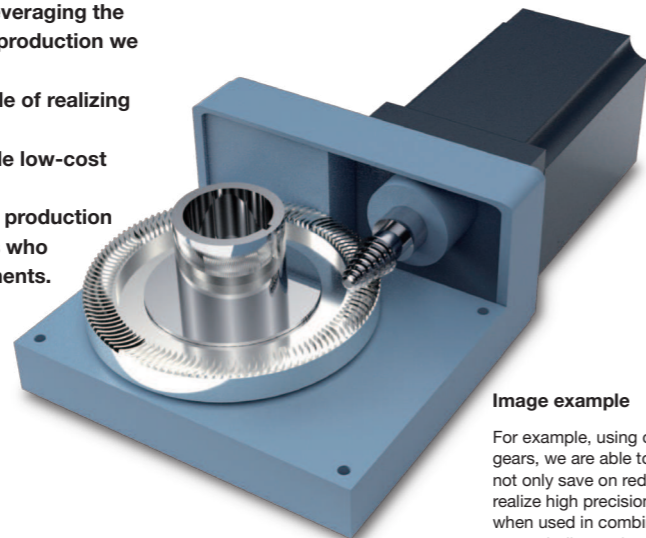
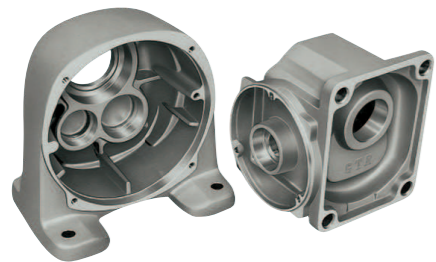
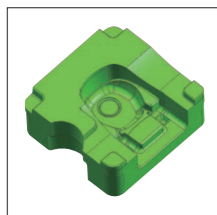


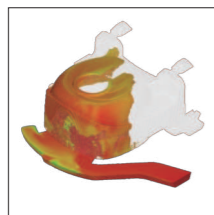
Image example

For example, using our proprietary HRH gears, we are able to deliver solutions that not only save on reducer space, but also realize high precision and cost reductions when used in combination with our CBN gear grinding technology.

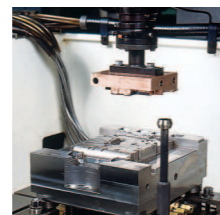
Leave all your mold design, mold manufacturing, and die casting to us. Through integrated production, we provide custom products promptly.



Mold design



Simulation



Mold manufacture



Die casting

HIGH STIFFNESS REDUCERS

DGS / DGH / DGF type

We can also provide High Stiffness Reducers + connected gear set.

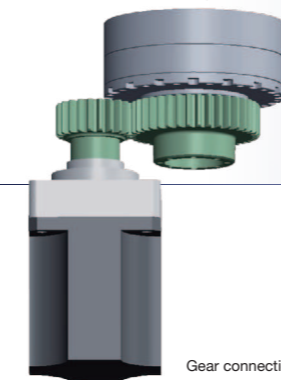
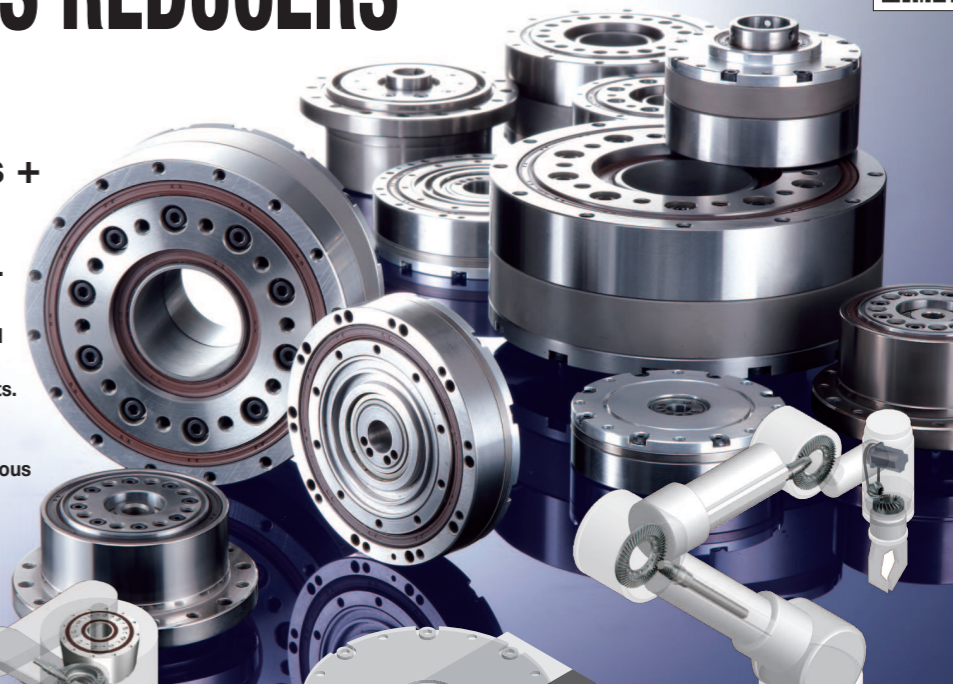
In multiple ways, High accuracy drive.

The High Stiffness Reducer has functionality which can meet the needs for increased productivity as well provides efficiency from every angle.

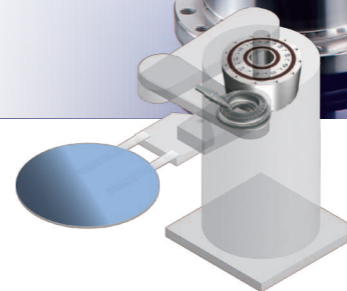
For Fast and Powerful industrial robots or FA products. Large hollow shaft enables great freedom in product design and composition.

We will provide greater performance than ever in various applications with High Stiffness Reducer.

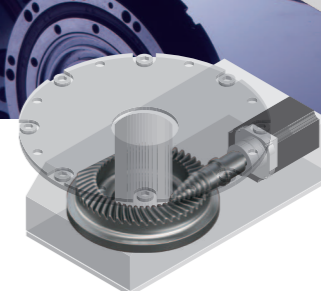
Scan here for details on High Stiffness Reducers.



Gear connection image



Wafer Handling robot

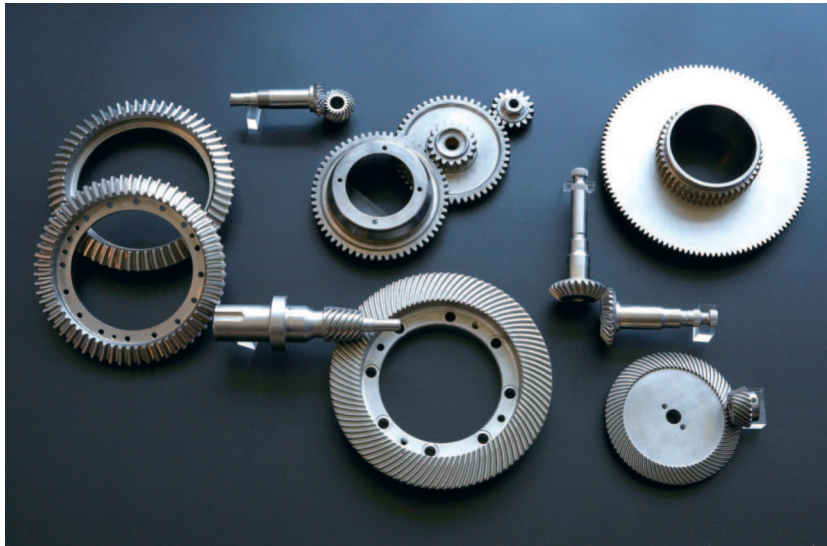


Positioner



Vertically articulated robot

**For precision gears, look no further than NISSEI CORPORATION.
Specialists provide solid support available.**



NISSEI CORPORATION

<https://www.nissei-gtr.global/en/gear/>

