

## **Nanotect (Super-hard CNT-resin** composite coating technology)





## Key features of the product

- 1. Rust and corrosion prevention
- 2. Abrasion resistance
- 3. Thin and super-hard

We have established composite technology for uniformly dispersing carbon nanotubes (CNT) in resin coating by applying chemical treatment to the surface of insoluble CNT material. With this technology, we have developed a resin coating that produces a film of extremely high strength, hardness, abrasion resistance, toughness, and lubricity with rust prevention property.

### Solutions for our clients

We consider the development of resources and energy in deep undergrounds and seabeds a promising market. Even under mechanically severe conditions of use in which fastening is repeated at limit loads, the strong Nanotect films do not exfoliate and protect parts while maintaining good corrosion resistance. We are not only entrusted with processing using Nanotect products, but also intend to market them as coating fluids.

TAKENAKA SEISAKUSHO CO., LTD.

http://www.takenaka-mfg.co.jp/ English

ISO 9001

6-4-35, Hishie, Higashiosaka City, Osaka





## **Screws for MDF** (Medium density fiberboard)





### Key features of the product

- 1. Makes MDF hard to break.
- 2. High pull-out strength
- 3. Good execution (Can be easily screwed in and out.)

We have developed screws for MDF (medium density fiberboard) at the request of carpenters from engineering firms. MDF are extensively used for window frames and furniture, but when commercial fine threaded screw are screwed into it, cracks occur and pull-out strength decreases. Our screws have a drill point and easily channel out cutting dust when drilling holes.

### Solutions for our clients

The assumed customers are housing construction firms that use MDF for window frames and furniture manufacturers that produce beds, etc. Our screws are suitable for craftsmen who are forced to repeat work with conventional threads because they cause cracks in MDF, resulting in poor appearance and insufficient strength. With our screws, however, users do not need to prepare holes using a drill, etc. to prevent cracks. Although the screws are patent-pending hit products, they are priced almost the same as fine thread screw.

KM Seiko Co., Ltd.

http://www.kmseiko.co.jp/ Englis 1-10-16, Yoshitahonmachi, Higashiosaka City, Osaka

ISO 9001 ISO 14001

## SDC plasma surface-hardening process





### **Key features of the product**

- 1. Hardens the surfaces of titanium metal, stainless steel, etc. without damaging mechanical properties.
- 2. Hardened layer does not exfoliate.
- 3. Can be used in environments that do not tolerate impurities.

The hardening process is special technology for reforming the texture of titanium metal and stainless steel by infiltrating carbon and nitrogen into their surface. It is different from coating different material onto metal surfaces like plating.

### Solutions for our clients

Titanium and stainless steel are essential in the world of modern product-making. Our SDC plasma surface-hardening process (plasma carburizing and plasma nitriding) is extensively used as measures against sliding, seizing and wearing of rotating and sliding parts of such metals. The process causes little change to dimensions and surface roughness, and requires little finishing after treatment. It is also possible to enhance functions by composite treatment with plating and hard thin film (PVD, CVD, etc.)

SDC TANAKA Inc.

http://www.sdc-tanaka.co.jp English 1-10-6, Tedukayamanaka, Sumiyoshi-ku, Osaka City, Osaka ISO 9001

OJI

## **High-strength and** heat-resistant magnesium alloy screws



### Mary features of the product

- 1. High strength (More than 120% of conventional ratio)
- 2. Superior creep resistance
- 3. Bolt loosening-resistant properties

To expand the industrial use of lightweight, strong magnesium alloy parts, we have led the world in developing magnesium-based high-strength and heat-resistant magnesium alloy screws. The screws have solved the problems of electric corrosion in joining, as well as the problems of joining and looseness caused by thermal stress, and are applicable in environmental temperature up to 100° C.

### Solutions for our clients

The developed screws are the lightest among metal screws in actual use. The use of magnesium allow screws have two advantages.

1) Lighter weight screws The magnesium alloy screws have a weight of about a guarter of standard iron and stainless-steel, and thus contribute to further weight reductions of automobiles and mobile devices.

2) Solving the problems of joining of magnesium parts When joining magnesium parts by screw, it is necessary to take electric corrosion, thermal stress and bolt loosening into consideration when designing parts. The use of magnesium alloy screws can solve such joining problems.

Maruemu Works

http://www.maruemu.co.jp/ English 4-7-12. Nozaki, Daito City, Osaka

ISO 9001 ISO 14001



## Large machined nuts





### **Key features of the product**

- 1. The maximum size is 150 millimeters in inside diameter.
- 2. Handle all steel materials including iron, stainless-steel, and brass.
- 3. Handle all the processes to finishing. Special processing is possible.

We manufacture large machined nuts used for building ships and bridges. We started machining nuts of 80 millimeters in inside diameter and, after repeated development, are now capable of making nuts of 150 millimeters in inside diameter. Our machined nuts were recognized as one of the top brand products in Higashiosaka. The machined nuts were used for the Seto-ohashi Bridge, Akashi-Kaikyo Bridge, Kansai International Airport, nuclear power plants, etc.

### Solutions for our clients

We can provide large machined nuts required for bridge piers and water gates of dams. We manufacture machined nuts completely in-house via integrated processes from the procurement of steel materials to cutting, drilling, threading, processing, and finishing/ Our products are made to specification and we prepare manufacturing instructions and QC operation sheets. We specialize in manufacturing a wide variety of products in small quantities and receive orders for build-to-order manufacture of even one unit. We manufacture special nuts made of special steel to meet all kind of requests. Our products are handmade by craftsmen certified as advanced experienced technicians.

**FUJISEISAKUSHO** 

http://www.fujiseisakusho.com/ English 6-4-28, Hishie, Higashiosaka City, Osaka

ISO 9001

## **Superfine precision locknuts**





### Key features of the product

- 1. Can adjust balance.
- 2. Can adjust deflection.
- 3. Contribute to making shafts guiet.

We are the only company that standardizes and markets superfine precision locknuts. In particular, precision locknuts are one of the important parts used for the main shafts of high-speed rotary regions; their precision affects the processing accuracy of the machine. Our superfine precision locknuts guarantee a squareness of 0.002 mm, deflection of 0.002 mm, parallelism of 0.002 mm, and concentricity of 0.005 mm.

#### Solutions for our clients

The assumed customers are mainly from the machine tools industry and makers of peripherals for machine tools. Since we standardize superfine precision locknuts and provide them to customers, they can obtain high quality precision locknuts with just a single order sheet. Thus, the customers can reduce costs and simplify delivery management.

GLOBAL PARTS CORP.

http://www.ipros.jp/company/detail/2030369/ 2-6-15, Morikawachihigashi, Higashiosaka City, Osaka

ISO 9001 ISO 14001



# High functions steel wires for cold heading





### Key features of the product

- 1. High strength and improved workability
- 2. High strength eliminates the need for heat treatment.
- 3. Improved magnetic properties and workability

Through a tie-up with steelmakers, we can develop and select steel grades according to request. And, we can propose more attractive products based on the long-cultivated technology of making steel wires for cold heading, production process design that makes use of parts processing technology and know-how developed in cold forging conducted within our own company.

### **Solutions for our clients**

We can propose products according to customer requests, using characteristic materials such as ultrafinegrained steel that has contradicting features of high strength and high toughness with miniaturized grain sizes and can eliminate the need for heat treatment (thermal refining), materials that can contribute to weight reductions by strengthening including steel for high-strength bolts of good lagging destruction resistance, steel for tapping screws that can accommodate High-strongth auto motive steel sheet and soft magnetic steel of good magnetic properties, which has been actually used as electromagnetic parts for automobiles. Moreover, we can provide cold forged parts from slag to net shape.

OSAKA SEIKO LTD.

http://www.osaka-seiko.jp English 5-7-59, Nakaishikiri-cho, Higashiosaka City, Osaka

ISO 9001 ISO 14001



## **High-precision polished steel bars**





### Key features of the product

- 1. World's top-class dimensional accuracy and straightness
- 2. Reduced residual stress that prevents deformation after processing
- 3. Providing the highest quality products through the industry's top quick delivery system

Steel bars for office equipment require particularly high precision. We have realized a roundness that is close to zero and micron-order straightness. Customers can enjoy total cost merits from an improvement in yield. Moreover, our high-precision steel bars help to improve the availability of automated lines.

### Solutions for our clients

We are a secondary processing maker specialized in steel bars. The assumed customers are all kinds of metal processing industries that handle shaft and spindle processing, and tools and parts manufacturing. We can provide high-precision free-cut steel bars that help reduce customer costs and deformed bars of various cross-sectional shapes via a quick delivery system. Moreover, we develop and manufacture a variety of polished steel bars according to customer needs. We offer consulting on materials that are hard to process.

Kinomoto Shinsen Co., LTD.

http://www.kinomoto.co.jp English 2-56, Yayoi-cho, Higashiosaka City, Osaka

ISO 9001

Good planning capability One-of-a-kind technology Made in Japan Trial production possible Mass-production possible

CONTACT: Osaka Core Manufacturing Technology Network (Detailed information: P13) E-mail: monob2b@mydome.jp



## Thin metal bellows







### Key features of the product

- 1. Superior elastic properties and low spring constant
- 2. Can be molded to be requested inside and outside diameters.
- 3. Multilayer structure that makes bellows for high pressure

Using our proprietary processing technology, we process thin metal of 0.1 to 0.4 mm in thickness to produce oneto four-layered bellows of good flexibility and long service-life. The bellows have a low spring constant and good pressure resistance, and can be used under various conditions from ultra-high vacuums to high pressures and from extremely low temperatures to high temperatures, hence they are used for purposes related to space development.

#### Solutions for our clients

Since the size of the bellows can be freely selected, they can be used for valves and double pipes for liquid hydrogen and oxygen, which have only a limited space for placing bellows.

Although our standard bellows are made of SUS316L, we can produce bellows of special materials such as hastelloy, titanium, inconel, monel, nickel, etc., starting from only one unit orders of a requested size and deliver them quickly without charging for molding costs. Therefore, we have received orders from research institutes of universities and private companies.

Mitsumoto rasenkan Kogyo Co., Ltd.

http://www.mitsumoto-bellows.co.jp/ English 1-2-37, Nagata, Jyoto-ku, Osaka City, Osaka







## Hydraulic chuck super slim type







### **Key features of the product**

- 1. Slim design that prevents interference with workpieces
- 2. Hydraulic method enables appropriate chucking of cutting tools.
- 3. Easy clamping/unclamping operations with just one T wrench

The high-precision holder has a runout accuracy within 3  $\mu$  m, and allows users to easily clamp and unclamp the cutting tool with just one T wrench. The slimmer design compared with conventional hydraulic chucks minimizes the interference with workpieces and figs, making the chuck ideal for 5-axis machining and finishing of molds. The clamping diameter is  $\varphi$  4 to  $\varphi$  12, and the maximum speed is 35,000 min<sup>-1</sup>. The interface features simultaneous dual contact between the (BIG-PLUS BBT30/40/50 holder) and HSK-A63.

### **Solutions for our clients**

In 5-axis machining and mold processing, shrink fitting holders with a slim shape are often used. However, in terms of the time required for clamping/unclamping the cutting tool, safety, operability, and rigidity, our hydraulic chucks with a slim shape are better finishing holders. The chucks are suitable for cutting tools used in machining processes of finishing end mills, burninshing drills/reamers, etc. We are confident that we can largely contribute to all kinds of industries concerned with precision, such as the aircraft, automobile, and high-precision mold industry.

BIG DAISHOWA SEIKI CO., LTD.

http://www.big-daishowa.com English /中文 3-3-39, Nishiishikiri-cho, Higashiosaka City, Osaka

ISO 9001



**Pinnacle Die** 

## **Key features of the product**



2. Can accept orders for diversified products.

(Etching cutting dies for seals, labels, and films)

3. Can accept orders for quick delivery.

The etching cutting die is made from a steel plate that is etched and sharpened on a NC processing machine. It is widely used for blanking seal, labels, electronic parts such as LCD optical films, pressure sensitive adhesive sheets, double-stick tapes, and window frames.

### Solutions for our clients

"The flexible Pinnacle Die" can produce various shapes. "The flexible Pinnacle Die" with sharpened edge is highly rated by many people in the blanking industry as capable of quality cutting and blanking. Through active technical tie-ups and business alliances with overseas companies, we have enhanced our quality and technology from a global perspective to meet customer requests for low-volume orders, diversified products and quick delivery.

TSUKATANI HAMONO MFG CO., LTD.

http://www.tsukatani-hamono.co.jp/ English

5-30, Kusune-cho, Yao City, Osaka



## **SOUL Design-Chucks for Car parts**







### **Key features of the product**

- 1. Rich experience in clamping difficult-to-clamp workpieces
- 2. Ensure reliable quick delivery.
- 3. Worldwide after-sales care

Since their commercialization in 1969, our design chucks have been highly evaluated for optimal design, high-quality manufacturing, quick delivery, and long-term after-sales care for all chucking needs of car parts, and have the top delivery results and repertory in Japan.

### Solutions for our clients

Our design-chucks are custom-made and designed for mass-produced workpieces for which generalpurpose chucks are not suitable. In particular, the first production of new model cars cannot tolerate any delays and mistakes. Our products have been evaluated for design owing to the best clamping mechanism for the conditions of use of workpieces, quick delivery and reliable response to troubles. We have numerous examples of success in research and development with customers as to irregular-shaped and thin-walled workpieces that are difficult to handle. Moreover, we have developed worldwide aftersales care for overseas-delivered products, jointly with overseas partners.

TEIKOKU CHUCK CO., LTD.

http://www.teikoku-chuck.com English /中文 2-1-50, Kitakyuhoji, Yao City, Osaka

ISO 9001



## **Ball bearing units**





## **Key features of the product**

- 1. High load bearing and high accuracy
- 2. Rational, self-aligning optimal fit
- 3. High sealing performance

FYH ball bearing units are manufactured to exact standards, comprising grease sealed deep groove ball bearings and housings in various forms. FYH ball bearing units can be installed directly on the body of machines and systems using several bolts. Self-aligning units allow for easy installation and are supplied with grease nipples in order to facilitate quick and convenient re-lubrication.

### Solutions for our clients

In addition to standard products, we manufacture pillow blocks that can withstand rigorous environment via heat resistance, corrosion resistance, and dust prevention. Moreover, to meet increasingly diversified user needs, we also manufacture a variety of units such as small and light units (clean series), a stainlesssteel series, and a ceramic series.

Nippon Pillow Block Co., Ltd.

http://www.fyhbearings.com/ English /中文 2306, Hirao, Mihara-ku, Sakai City, Osaka

ISO 9001 ISO 14001

## R1B1 cordless riveters







### Key features of the product

- 1. Environment-friendly (Energy-saving)
- 2. Good operability
- 3. New design

With the introduction of lithium ion batteries and the high-efficiency power transmission method, the cordless riveter makes it possible to set the number of rivets about 4.7 times more than conventional products. Moreover, since the proprietary motor layout makes the body compact and the center of gravity is placed around the grip, the operability has been improved as users can hold the riveter without being overly conscious of holding it.

#### Solutions for our clients

Solutions for our clients

Reflecting the recent electricity situation, demand in riveter markets has shifted from air tools that use a high energy consuming compressor to cordless tools that consume less energy. Conventional cordless riveters did not have enough riveting power and speed to substitute for pneumatic riveters. However, the R1B1 cordless riveter released this time can solve the problem and give higher performance in terms of speed and power because of its long stroke and improvement of power transmission, so that the R1B1 successfully reduces electricity consumption less than 1/30 of pneumatic tools.

High-purity integrated gas system (IGS) © 0 1

3. Smaller footprint - about one-third the size of comparable systems

1. Excellent reliability based on the W-Seal method

With Fujikin's revolutionary W-Seal, gas system components can be top-mounted, allowing easy

installation and removal, reducing maintenance time to about one-fifth that of other systems and increasing miniaturization, standardization and reliability. As a result, Fujikin's revolutionary gas system,

the IGS, won the Excellence Award of the 1st Monozukuri Nippon Grand Awards and was commended by

Fujikin produced Japan's first valves for space rockets in 1976. We manufacture not only specialized valve

machinery but also ultra-precise fluid control systems. With improved basic technology as well as a gas-

flow design based on the W-Seal, the IGS can help reduce the size of the overall system, so that the layout area can be shrunk to about one-third the size of conventional gas panels. With its high reliability and low

LOBTEX Co., Ltd.

http://www.lobtex.co.jp English 12-8, Shijyo-cho, Higashiosaka City, Osaka

Key features of the product

2. Dead space free

for semiconductor manufacturing

ISO 9001 ISO 14001



## **Gas cylinders**





### **Key features of the product**

- 1. Spring function maintained by filling with nitrogen gas
- 2. No pipework required
- 3. Energy-saving

Our gas cylinders have spring functions based on gas compression, to promote energy-saving and spacesaving. Because the gas cylinders can be used on their own, no pipework is required. Unlike hydraulic and pneumatic cylinders, the gas cylinders require no energy sources and thus can save on energy.

### **Solutions for our clients**

Because they are filled with nitrogen gas, our gas cylinders require no power sources, and, therefore, demonstrate a huge energy-saving effect and eco-friendliness. Our gas cylinders are balance cylinders designed for machine tools in the general industrial machinery industry and come in variations of rod diameters from 16  $\varphi$  to  $\varphi$  80 (8 kinds) and loads from 1.4 to 59.9KN. Since they are gas cylinders, measures have been taken to prevent the infiltration of cutting oil and cutting powder, the bearings have been strengthened for eccentric load, and corrosion resistance has been upgraded by a special surface treatment of rods. Because accessories are available for installation in machinery and equipment, as well as filling kits, our gas cylinders can be used in various fields.

HORIUCHI MASHINERY CO., LTD.

http://www.horiuchi.co.jp English /中文/Indonesian 1-37, Oimatsu-cho, Sakai-ku, Sakai City, Osaka

ISO 9001

**Fujikin Incorporated** 

http://www-ng.fujikin.co.jp English

maintenance, the IGS will play a key role in semiconductor manufacturing.

the Prime Minister. The IGS succeeds in providing the lowest costs and highest reliability.

Kitahankyu Bldg., 1-4-8, Shibata, Kita-ku, Osaka City, Osaka

ISO 9001 ISO 14001



## **Aluminum-alloy connecting rods**





## **Key features of the product**

- 1. Contribute to lighter weight products.
- 2. Stable supply of high quality, high precision parts
- 3. Contribute to low vibration and low noise.

Connecting rods, which are used for internal combustion engines and compressors, convert rotational motion into reciprocating motion (or reversely). Although iron materials account for more than 90% of the connecting rods currently seen on the market, we have specialized in aluminum connecting rods in order to reduce product weight.

#### Solutions for our clients

For makers of general-purpose engines, marine engines, reciprocating compressors and industrial pumps, we can make proposals by taking advantage of the extensive know-how we have cultivated as a aluminum connecting rod specialist. We can solve customer problems ranging from OCD (quality, cost and delivery) to reductions in procurement, use of special aluminum alloys, and manufacturing by lot from trial manufacture to commercial production. We can also help customers by supporting design and procurement of formed and fabricated materials and peripheral parts.

NIPPON WICO CO., LTD.

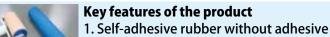
http://www.wico.jp English 3-6-2, Shoji, Ikuno-ku, Osaka City, Osaka ISO 9001



## 'Clean Dash Roller and Sheet" dust removing sticky rollers







2. Eliminating static electricity

3. Semi-permanent adhesiveness

The Clean Dash Roller is a dust removing rubber roller with semi-permanent adhesiveness. Unlike silicon sticky rollers, because the Clean Dash compound has adhesive power as its nature, the roller removes the dust on the product without worries about the adverse effects from possible extraction of adhesive or silicon oil to products.

### Solutions for our clients

This product offers the best solution for every customer who has a problem with dust. The product is used in a number of different industries including printing, film manufacturer, paper mill, electric industry and so forth. Its flexibility enables the roller to be used on the concavo-convex surface and cut groove after slitting process. And due to its high chemical resistance you can use the roller repeatedly only by cleaning the roller with special solvent. We can design roller or sheet to meet your needs, and we can also offer you the suitable product.

TECHNO ROLL CO., LTD.

http://www.technoroll.co.jp/ English 3-4-5, Techno-Stage, Izumi City, Osaka

ISO 9001 ISO 14001



## Float type level switches





### **Key features of the product**

- 1. Compact, durable, relatively inexpensive
- 2. Diverse lineups for various kinds of liquids
- 3. Not only standard products but also OEM products are available

We manufacture products from various kinds of materials that can be used with all kinds of liquids including polypropylene, nylon, NBR, and stainless steel. All our level switches are compact and can detect liquid in small tanks and narrow places. We provide a variety of level switches made from stainless steel, including models with good heat resistance or pressure resistance.

### Solutions for our clients

Since the start of production in the early 1980s, we have achieved results over about 30 years. On top of marketing in Japan, we directly export the level switches to about 30 countries in Europe, North America and Asia. We can accept small lot orders starting from 10 units. In addition to customers that actually use the level switches, we also market the products to trading companies and others in the same trade. We can manufacture not only standard products but also special order products such as oil level sensors and oil-water interfacial sensors.

RIKO CO., LTD.

http://www.riko.co.jp/ English

2-2-52, Nakano-cho-Higashi, Tondabayashi City, Osaka



## **Custom-made industrial brushes** (Can be produced from one unit.)





## Key features of the product

- 1. Cleaning brushes for products and conveyers
- 2. Grinding and polishing brushes for metal component finishing
- 3. Sealing brushes made of dense bristles

We produce custom-made industrial brushes starting from just one lot. We have an advantage in crosstrained workers who enable quick delivery of high quality products. Since we have a wide range of bristle materials including plastic, abrasive grain-containing nylon, high-temperature resin, metal, and animals and plants, we can provide brushes that can be applied to various kinds of manufacturing facilities.

### Solutions for our clients

- (1) Cleaning brush for conveyors. The constantly rotating brush prevents dirt from adhering to the
- (2) Brush for deburring and polishing surfaces of automotive metal components. Appropriate brushes can be selected from a wide range of bristle materials such as metal and abrasive grain-containing nylon.
- (3) Brush for blocking the sliding area inside of machining centers. Owing to our proprietary brush forming technology, the brush can be installed in complicated locations of machine tools.

Kyoushin Giken Co., Ltd.

http://brushvillage.jp English 5-6-3, Shinomiya, Kadoma City, Osaka

ISO 9001

ISO 9001

# **Plastic nippers**





### **Key features of the product**

- 1. Sharpness and durability based on craftsman technology
- 2. Precision cutting parts based on state-of-the-art polishing technology
- 3. Ensuring good condition of the cutting plane

Since the nippers enable sharp cutting and leave the cutting plane in good condition, burrs from resin molding can be easily cut with good workability. The nippers also maintain good durability over time. Owing to craftsman technology we have accumulated over more than 85 years and cutting-edge technology, the nippers have won the overwhelming support of factory workers and professional craftsmen.

### Solutions for our clients

The nippers can be used in resin molding, light electrical product, and harness plants. Because the nippers have excellent sharpness, good workability, and sound durability, they can be used over a long period of time. Since the blade is polished using our proprietary cutting-edge polishing technology, the nippers have little variation in quality and cause little friction when cutting materials. With our nippers, users can cut material with 20 to 30% less force than other nippers.

FUJIYA CO., LTD.

http://www.fujiya-kk.com/ English 2-6-32, Matsubara, Higashiosaka City, Osaka

ISO 9001

## Ozone generators for comfortable and improved working environments





## Key features of the product

- 1. Effective for decolorization and fat splitting
- 2. Effective for deodorization

Key features of the product

2. Can be repeatedly used.

3. Simple workability

retightened many times, they help reduce management expenses.

3. Effective for sterilization and keeping food fresh

With its an oxidizing power second only to fluorine, ozone can produce the effect of sterilization, deodorization, decolorization, and water purification.

These ozone generators can generate ozone in gas, mist and bubble water respectively and help improve the environment depending on where and how they are used.

### Solutions for our clients

The ozone generators can be used for deodorization in supermarkets, restaurants, and hotels and deodorization of cigarette smoke and toilets, disinfection of kitchens and stockyards, disinfection of food by washing with ozone water, and keeping food fresh. In pet shops, they can be used for preventing disease by disinfecting and deodorizing excretory substances. In general plants, they can be used for fat splitting of wastewater and deodorization of the putrid odor of cutting fluid used for machine tools. As for water tanks that contain live fish, they can be used to prevent the generation of slime. In ponds, they can be used for cleanup and removal and blue-green algae. In general households, they can be used to remove odors, keep vegetables fresh, and remove black mold from bathtubs and bathrooms. Moreover, the ozone generators can produce deodorizing effects in garbage pickup areas and waste treatment plants.

Rex Industries Co., Ltd.

**Hardlock nuts** 

http://www.rexind.co.jp English /中文/Italian 1-9-3, Hishiyahigashi, Higashiosaka City, Osaka

1. Do not loosen under vibrations and impacts.

The world's only locking nuts made with the "wedge principle." With their locking effect, the hardlock nuts

have demonstrated high safety and stable economical efficiency in all kinds of fields including railroad

The assumed customers are companies that should prevent accidents involving human lives caused by

loosened bolts and nuts, and that want to reduce maintenance costs for joining parts. Moreover, we also

have wheelchair and baby carriage makers as customers, which use our hardlock nuts in order to give

added value to their products. By using our products, these customers can prevent possible damage

caused by loosened nuts and resulting accidents. Moreover, because the hardlock nuts do not need to be

vehicles and tracks, high-rise buildings and bridges, expressways and industrial machinery.

ISO 9001 ISO 14001



## **Eco-die-casting**







### **Key features of the product**

- 1. Can handle small lots starting from 30 units.
- 2. Mold costs are halved compared with conventional methods.
- 3. Mold precision is equal to conventional methods.

Our eco-die-casting system divides molds into a base (common) part and cavity (product) part. Customers bear only the cost for the cavity part, while we bear the cost for the base part. Therefore, mold costs can be halved compared with conventional methods, and customers can make molds at low costs.

### Solutions for our clients

Because our eco-die-casting system enables easy mold replacement, it makes small-lot production starting from 30 units possible. Although the costs borne by customers can be halved compared with conventional methods, mold life and precision are equal to conventional die-cast molds, as we can deliver high quality products. Since we have a production plant in China, we can respond to customer demands for cost reductions and provide high quality products through a complete inspection system. In addition, we have more than 100 overseas subcontractors and can meet diversified customer needs.

TAIYOPARTS CO., Ltd.

http://www.taiyoparts.co.jp/ English 1-23, Yashimokita, Kita-ku, Sakai City, Osaka

ISO 9001 ISO 14001

http://www.hardlock.co.jp/index.php English

HARDLOCK Industry Co., Ltd.

**Solutions for our clients** 

1-6-24, Kawamata, Higashiosaka City, Osaka

ISO 9001



## **Eaglestar knob bolts**





### Key features of the product

- 1. Limited production of diversified products
- 2. Diversified kinds of collars and designs
- 3. Made of high-performance ASA resin

We are the only Japanese company that can produce design-conscious knob bolts in 21 different designs and 6 different colors. Based on cassette molding technology that enables limited production of diversified products, we can produce on-demand products starting from small lots.

#### Solutions for our clients

Because users can open and close the knob bolts without using tools, the bolts are used in all kinds of industries. On the other hand, many conventional products are made in black and dark colors as industrial products, and only round, triangular and chrysanthemum-shape types are available. The assumed customers are companies who make products with elaborate designs and companies who seek products with a bright and cheerful image for health appliances, and welfare, medical and children's products. Our products have been welcomed by users, who commented that they "have succeeded in increasing the visual completeness of products."

Mitsuboshi C. I. Co., LTD.

http://www.mitsu-boshi.co.jp English 2-15-12, Takaidamotomachi, Higashiosaka City, Osaka ISO 9001

# nuts, collars, spacers, washers



## **Key features of the product**

- 1. Specialized in producing lightweight and compact irregular-shaped parts
  - 2. High processing accuracy and high quality based on cold heading molding
- 3. Trial manufacture possible using molds made on our own

Because of our pursuit of technology as a parts-former, we can flexibly meet customer requests for quality, cost and delivery date using an integrated cold heading system comprised of trial manufacture, moldmaking and commercial production. Since we can make high-precision molds ourselves, we can produce high quality products starting from small lots.

### Solutions for our clients

We have delivered diverse products such as joining parts, including collars and spacers used for seat belts and intake manifolds of automobiles, hub nuts for anchoring tire wheels of agricultural and construction machines, special nuts for anchoring bicycle brakes, and special nuts used for medical, health and nursing care beds. We can make products for all industrial fields that need safe, secure and high-precision coldheaded parts for joining.

MATSUDA CO., LTD.

http://www.matsuda-fastener.co.jp English 2-4-19, Shigitahigashi, Jyoto-ku, Osaka City, Osaka

ISO 9001 ISO 14001



## TOYO Nkflash TB-50





## Key features of the product

- 1. Contributes to local disaster prevention.
- 2. Shows consideration for the environment.
- 3. Provides brightness with security.

TOYO NKflash TB-50 is a private self-powered-type of streetlight that requires no external electricity because it uses photovoltaic power generation as the power source. The totally waterproof 50W-LED light has 4000 luminas but is eye-friendly and has a long service-life. It can serve as a beacon to ensure safety in case of a disaster.

### Solutions for our clients

Since TOYO NKflash TB-50 is a private streetlight that runs on photovoltaic power and has a long servicelife of 40000 hours, it greatly contributes to cost reduction. When installed in parks and other largearea facilities, even if a power failure occurs due to a disaster, photovoltaic power generation ensures illumination and helps turn would-be dark places into evacuation sites that ensure the security and safety of people. When installed on roads, the lights act as safety measures to help prevent traffic accidents and injuries.

TOYO. ss. co., LTD.

http://toyoss.net English

1-6, Taimahigashi-cho, Neyagawa City, Osaka



# **Contact probes (Spring probes)**





### **Key features of the product**

- 1. Lineup of several thousand kinds
- 2. Customization to meet needs
- 3. High durability and quality

We have manufactured contact probes used for inspecting printed circuit boards and semiconductors for about 40 years. Using our microfabrication technology, we provide a wide range of products from standard products to customized probes that meet customer needs.

### Solutions for our clients

We have manufactured probes via an integrated in-house production system for about 40 years. Through technological capabilities, experience, and product lineups we have developed, we provide optimal probes to customers. In meeting recent customer needs for ultra-narrow pitches of not more than 0.3 mm, non-magnetism, high frequency, and high endurance, we have provided high quality products at reasonable prices via quick deliveries. Moreover, we have established technology for cutting pins as thin as human hair.

KITA MANUFACTURING CO., LTD.

http://www.kita-mfg.com English / 中文/ 한국어 4-27, Rinkuminamihama, Sennan City, Osaka

ISO 9001

# World's smallest-diameter stainless steel wire rope







### Key features of the product

- 1. Single wire drawing of 9  $\mu$  (smallest diameter) possible
- 2.  $81\mu$ -diameter steel wire ropes by twisting 49 strands of  $9\mu$ -diameter wire
- 3. Integrated production processes in-house

Our stainless steel single wires of 9  $\mu$  in diameter and wire ropes of 81  $\mu$  in diameter have made it possible to produce products that have unprecedented features. As a new material that has both features of stainless steel and flexibility like silk, steel wire ropes, as thick as hair, inspiring high expectations in the fields of medical treatment and cutting-edge processing.

### Solutions for our clients

We manufacture products through integrated production processes comprised of wire drawing, twisting, resin coating and end processing. Moreover, regarding thinning technology, we have succeeded in mass-producing stainless steel wires of  $9\mu$  in diameter, which is unprecedented in the world. Because we have enabled the drawing of wires of unprecedented small diameter, it has expanded possibilities in the field of cutting-edge medical treatment. Such wires have made it possible to conduct treatment of sites that conventional products cannot reach (with secured strength and the use of metallic characteristics). Moreover, we also specialize in the processing of various types of metals other than stainless steel, as well as nonferrous metals. Therefore, we can meet the needs of companies that use thin line materials, by helping with various types of trial manufacture and design.

Osaka Coat Rope Co., Ltd.

http://www.ocr.co.jp/ English 3-5-22, Techno-Stage, Izumi City, Osaka

ISO 9001

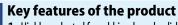


## **GF** wheel (polishing wheel shows high cutting power)









- 1. Highly evaluated for rubbing-based polishing as opposed to conventional beating-based polishing
- 2. Flexibility that grinding wheels that whetstones do not have
- 3. Long service-life and high cutting power

The GF wheels are high density abrasive cloth wheels (patented) that have been developed based on our proprietary technology. Unlike general flap wheels that beat flaps onto workpieces, the GF wheels can efficiently polish workpieces using their ideal polishing method of rubbing. The high density flaps produce excellent cutting power.

### Solutions for our clients

The GF wheels demonstrate their power when polishing seamless pipes made by metalworking, particularly those made of special alloys. Users that use grinding wheels for centerless polishing always have flexibility problems, but those problems can be eliminated if the GF wheels are used. Moreover, the GF wheels have more advantages than grinding wheels, such as a lighter weight, easiness to handle, high safety and resistance to cracking. In addition, the GF wheels can be customized by trimming and changing the hardness to customer requests. By using these products, customers can shorten polishing processes and reduce machining time.

Three-F Giken Co., Ltd.

http://www.tfq.co.jp/ English 1-3-11, Kishiwada, Kadoma City, Osaka

ISO 9001



## **Abrasive belt**







### **Key features of the product**

- 1. High grinding force
- 2. Long service-life
- 3. Stably polished surfaces

The belts demonstrate superior grinding performance and can be used from rough grinding to precision final polishing. In particular, the belts are used for polishing surfaces of special steels including stainless steel and titanium, and circuit boards. To meet all kinds of customer demands, we produce products from small lots with belt widths ranging from 6 to 1,650 mm.

### **Solutions for our clients**

Our products have been mainly delivered to and favored by steelmakers, stainless-steel makers, and semiconductor manufacturers. The stainless steel made in Japan is of the world's top level. The precision of Japanese stainless steel is quaranteed by thorough polishing work, and, therefore, grinding belts are indispensable for making stainless steel. To enhance stability and improve quality, we make full use the latest computer-controlled automatic abrasive coating line and meet customer demand including that for cost reductions.

Nagatsuka Abrasive Mfg. Co., Ltd.

http://www.crownab.com English 1-5-37, Rokumanji-cho, Higashiosaka City, Osaka

ISO 14001

ISO 9001



## **Graphite-molded packings** for high temperature and high pressure



### Key features of the product

- 1. Good heat resistance
- 2. High stress-relaxation rat
- 3. Good sealing properties

Our graphite packings are self-lubricating, smoothly fit insertion parts, and have barrier properties against fluid. Since the packings have good heat resistance, they demonstrate sealing properties even under the rigorous conditions of high temperature and high pressure. Therefore, they can be used in a wide scope of fields ranging from high-temperature oil and gas to high-pressure steam and low-temperature fluids.

### Solutions for our clients

We manufacture graphite-molded packings for high temperature and high pressure, using graphite that is rarely handled by companies in the packing industry in Japan. The assumed customers are the pump and valve manufacturing industry and plants, including thermal power plants. Since we compress graphite into the molds by controlling compaction according to density, we can manufacture packings of uniform expansibility in various minor diameters, major diameters, and tapers in accordance with customer requests. We have various sizes of molds that speed up the manufacturing process until the completion of products. We can meet customer demand for making even one prototype.

DIGIC Co., Ltd.

http://www.digic.org English 1-209, Takefuchi-higashi, Yao City, Osaka



## **Difficult-to-process wire products** (Wire clamps, etc.)





### **Key features of the product**

- 1. Can process difficult-to-process stainless steel wire and hard steel wire.
- 2. Can process materials in more than 25 processes without using molds.
- 3. Precision parts that have been delivered to automakers

We have delivered 20 kinds of wire clamps (difficult-to-process wire products) to Japanese automakers, who have highly evaluated our products. We have actually produced these products for seven years, and have facilities for commercial production and the technology for making precision parts.

### Solutions for our clients

Our products have met the needs of automakers by satisfying rigorous conditions placed on precision, which other companies have had difficulty in achieving. By promoting the replacement of plate-like parts made by press-working with wire processed products that do not require molds, we have helped automakers achieve their aim of weight reductions and cost reductions. (These products are called "wire clamps.")

EIKO GIKEN CO., LTD.

http://www.eiko-sp.co.jp English 188-8, Mitsushima, Kadoma City, Osaka

ISO 9001

## Various types of metal springs (Wire sizes of 0.02 to 20mm)





### Key features of the product

- 1. Can produce various types of springs.
- 2. Advanced quality assurance system in place
- 3. Advanced spring processing technology

Main customers: Defense Agency (Submarines, rockets, F-2 and F-15, etc.) Aircrafts (Boeing 767, 777, 787 and Airbus A-380)

Automobiles (Important safety parts such as clutches and brakes, and seat parts) Electrical equipment (Component parts of laser printers and digital cameras)

### Solutions for our clients

Since the founding of the company, we have manufactured and marketed a variety of metal components centering on various types of springs. Particularly, regarding springs that we have manufactured since the founding, we will maintain and provide long-cultivated technologies and quality levels based on rigorous standards. We have obtained JISO9100 certification, which serves as the quality standard in aerospace fields.

Sankvo Seiki Industry Co., Ltd.

http://www.sankyo-seiki.co.jp/ English 3-19-75, Kamishiniyo, Higashiyodogawa-ku, Osaka City, Osaka ISO 9001 ISO 14001



## Neii-saurus





### **Key features of the product**

- 1. It can grab and turn stripped screws.
- 2. It can easily remove even rusted screws.
- 3. It can be also applied to low-profile dome "Truss" head screws.

Although horizontal serration is applied to the jaws of ordinary pliers, this tool has both vertical and horizontal serrations and tilt angled jaws inside that create extremely high friction force to the periphery of screw head. Owing to this design, stripped screws can be easily removed without slip.

### Solutions for our clients

When there is a stripped screw that you cannot remove with a screwdriver, even if you try to remove it by grabbing the head of screw with pincers or pliers, you cannot turn it well because the head is hard to grab or becomes slippery. The Neji-saurus will contribute to industrial fields by promoting efficiency in automobile, motorcycle and mechanical maintenance work, as well as help general households with disassembly and recycling of electric appliances and furniture. And, it can contribute to resource-saving and energy-saving as countermeasures to global environmental problems. Because troubles concerning screws occur all over the world, we are convinced that we can help customers in Japan and overseas.

**ENGINEER INC.** 

http://www.engineer.jp/ English /中文/ 한국어 2-8-9 Higashi-Imazato, Higashinari-ku, Osaka City, Osaka

ISO 9001 ISO 14001



## **Automobile interior and exterior resin parts**





## Key features of the product

- 1. Weight reductions (Thin wall, foaming)
- 2. Low cost (Self-manufacture of molds and equipment)
- 3. Quick delivery (Including decorating technology)

As Tear 1 of automakers, we produce resin parts such as interiors, exteriors and instrument panels through an integrated system of development, design, mold-making, molding, painting, and assembly. We have received technology prizes and quality prizes from Toyota Motor Corporation, Daihatsu Motor Co., Ltd.,

### Solutions for our clients

We are a general resin molding manufacturer that has established an integrated system from moldmaking to resin molding. As an example of quick delivery, we once made molds and prepared for production only in three days. We have decorating technologies such as molded-in metallic coloring, inmold decorating, film-inserting, and painting. We also produce functional parts through precision insert molding. Since all the processes of resin molding are performed in an integrated in-house system, we can reduce costs and shorten delivery time.

KAWAMURA-KAKO CO., LTD.

http://www.kawamura-kako.co.jp/ English 2-8-35, Minamiminohara, Ibaraki City, Osaka

ISO 9001 ISO 14001



## Lead-free solder "SN100C"





### Key features of the product

- 1. High-reliability product
- 2. Earth-friendly, environment-responsive product
- 3. Uniquely developed patented product

The "SN100C" is a revolutionary lead-free solder made of tin, copper, nickel and germanium. Its superior features have been evaluated ever since it was marketed, and with the start of its use by a major consumer electronics maker, we have expanded sales to the world. At present, this product is widely used for various types of consumer electronics, mobile phones, acoustic equipment, and automobiles.

### Solutions for our clients

The "SN100C" realizes a highly reliable joint through a "nickel effect" in which a very small amount of added nickel forms a stable alloy layer in the joint. This product is safe for miniaturized circuit joints of downsized electronic equipment as well as high-stress infrastructure fields. With its reliability being proven in tests by NASA, the product has helped to make electronic equipment lead-free and improve their reliability. We have developed various kinds of product variations for a wide range of applications. We also provide a line of halogen-free products.

NIHON SUPERIOR CO., LTD.

http://www.nihonsuperior.co.jp English /中文 NS Bldg., 1-16-15 Esaka-cho, Suita City, Osaka

ISO 9001 ISO 14001



## "IR sheathed wire" rust-free wire rod





### **Key features of the product**

- 1. High durability owing to complete adhesion
- 2. Uses high-strength core material for lighter weight
- 3. Eco-friendly and excellent workability

This covered wire had a service-life of at least 30 years, which was verified by a public testing institution. As a pioneer in IR sheathing, this wire has been used at various construction sites for steel wire caging and mating for revetments and embankments under the jurisdiction of the national government, falling object prevention fences and entrance prevention fences of expressway companies, prevention nets for falling stone of local governments, and fences surrounding ports.

### Solutions for our clients

We produce materials for public engineering works and sell them to building materials makers, processors and trading companies. The features of "IR sheathed wire" are as follows.

- (1) Using actual data on various kinds of wire used in various locations, we have conducted tests to verify performance as sought by customers and compiled a database.
- (2) We can provide the mechanical design for the service-life sought by customers.

Key features of the product

2. Circularity: 5/1000

- (3) With the use of high-strength core material and highly-functional resin, we can produce products that are light and highly durable and workable, and help reduce total costs.
- (4) Even in the rigorous environment of salt areas and sulfur hot springs where rust and corrosion are easy to occur, our product is safe for construction because of its high durability and lightweight.

(Ultrathin milled products made by NC lathe)

3. Surface roughness: Not more than 0.8

indicates, we have high technological capabilities and know-how as a company producing one-of-a-kind products.

high precision metal processing technology, we can meet customer needs for difficult processing.

1. Thickness at inside and outside diameter: 0.1mm

We have succeeded in cutting SUS304 and AL2017 to a thickness of 0.1 mm in inside and outside diameters, and lengths

of 30 mm, which is considered almost impossible by NC lathe processing. We have the technology of expert workmen that

other companies cannot imitate. Moreover, as our development of support software for the education of cutting technology

Since the founding of the company, we have continued studying machining, and have established a

system in which skilled engineers are in charge of the processes from cutting to surface finishing, cleaning,

and inspection, and deliver complete finished products. Making use of the advantage that we have our

own factory, we can deliver low cost, high quality products in rapid response. Based on our prominent

TOWARON Co., Ltd.

Collars

http://www.towaron.co.jp/ English 2-6-13 Chikkoshinmachi, Nishi-ku, Sakai City, Osaka ISO 9001

GO



# **Finished Bore Sprocket**





### **Key features of the product**

- 1. Quick delivery of finished-bore products
- 2. Realize low cost by mass-production
- 3. More than 4,000 kinds of products

Although sprocket wheels have been marketed for a long time, we have added new values to this product. Generally, the gear has to be additionally processed each time for the mating shaft, but to eliminate this processing, we have calculated the size of highly used shafts when making this product. We have an inventory of products of all sizes.

### **Solutions for our clients**

Drastic savings can be made with natural resources and energy by keeping an inventory of finished products that consume unprofitable logistics costs, and their machining cost and dates.

Statistical tools and systematic bulk production enable production at a very low cost. Our finished bore sprocket is widely used for power transmissions in various devices. This product is often used in devices with a drive shaft and is highly appreciated by users. For products that are not in inventory, we made it possible to manufacture them at a low cost and deliver them guickly as a semi F series.

Katayama Chain Co., Ltd.

http://www.kana.co.jp English 2-3-43, Honjyonishi, Higashiosaka City, Osaka

ISO 9001

DAIKOUSEIKI CO., LTD.

Solutions for our clients

http://daikou-sk.jp English

6-11-21, Hommachi, Yao City, Osaka







### Key features of the product

- 1. Can make products of various sizes.
- 2. Can deliver quality-controlled products starting from small lots.
- 3. Can make high precision products.

We can make fine-tuned proposals in response to requests for collar thickness. Our advantage is that we can lower the sampling errors that occur when header technology is used. Because we can make collar products by cutting, etc., we can deliver products starting from small lots. Using technological capabilities of skilled craftsman, we can make multifaceted proposals to meet customer needs.

### Solutions for our clients

We have made and marketed special screws used for automobiles, motorcycles and farm equipment. The assumed customers are a wide range of industries including automobile and motorcycle-related companies and construction companies. We can provide a line of products that exceed 1,000 kinds. Because customers can consult with our sales staff and persons in charge of production at the same time, we not only can quickly answer questions concerning product manufacture but also field consult requests on commercial production systems and quick delivery, which are indispensable to improve costperformance.

SATOU-NEJI SEISAKUSYO Co., LTD.

http://www.satou-neji.com English 4-86, Ohtashinmachi, Yao City, Osaka

ISO 9001



# Flat springs







## Key features of the product

- 1. Flat springs can reduce costs.
- 2. Flat springs can securely attach products.
- 3. Can propose various flat spring shapes.

A refrigerator manufacture used to use aluminum extruded products for the cover that attaches external point-of-purchase advertising but had problems of bad installation and high costs. When we proposed using flat panels instead of aluminum extruded products, the refrigerator manufacture found the panels fit and installed well, succeeding in largely reducing costs.

### Solutions for our clients

We are engaged in design, manufacture, commercial production of difficult-to-process flat springs and press molds made of special steel, etc.

If customers have troubles fitting and attaching products, we can make proposals starting from the shape of flat springs. Moreover, we can propose materials and conduct trial manufacture to mold-making and commercial production (assembly). In particular, if customers have troubles such that flat springs lack load and are easily broken, we can propose solutions based on our extensive experiences and know-how.

Showa Spring Co., Ltd.

http://www.showasp.jp/ English 1-8-30, Wakamatsu-cho-higashi, Tondabayashi City, Osaka ISO 9001 ISO 14001











## **Hydraulic valves**







### Key features of the product

- 1. Self-locking nut
- 2. Made entirely of metal. Good heat and cold resistance.
- 3. Reusable

The U-nut introduced a "metal ring locking function" for the first time as a locking nut. With the passage of half a century since its development, the U-nut is currently used in various fields for parts that must never loosen, including railways, motorbikes, steel structures such as roads and bridges, and industrial machinery.

### Solutions for our clients

A lot of bolts and nuts are used for fastening parts. As a measure for preventing screws from coming loose, either a (1) "spring washer plus general nut" or (2) "W nut" is commonly used. However, the "U-nut" demonstrates a higher locking effect than these other methods and can solve various looseness problems all by itself. Moreover, users can fasten the "U-nut" using commercial spanners without requiring special tools.

Fuji Seimitsu Co., Ltd.

http://www.fun.co.jp English 3-14-15, Tokura, Toyonaka City, Osaka

ISO 9001 ISO 14001



## Key features of the product

- 1. Miniature, water-proof solenoid valves
- 2. Non-leak check valves that leak no drops
- 3. Provide custom-made products based on solenoid valves and non-leak check valves.

1. Miniature electromagnetic (solenoid) switch valves Although the valve is compact with minimal protuberance when attached (L54 x W34 x H42.2 mm), the valve ensures a waterproofing property equivalent to IP67. 2. Non-leak check valves Compared with conventional valves that have a pressure drop of 0 MPa, we have developed non-leak valves that do not leak a single drop.

### Solutions for our clients

We design and produce hydraulic valves mainly for forklift manufacturers. We provide custom-made products based on solenoid valves and non-leak check valves in response to customer demand. We develop valves that can improve safety and human operability, including "solenoids for enhanced safety when the operator is absent" that comply with ISO3691-1, "lock cylinders" that prevent tilting and overturning of forklifts, and "rotary valves" for rotary attachments such as those for handling paper rolls.

Mutsumi Industry Co., Ltd.

http://www.mtmk.co.jp English

2-28, Yaogikita, Yao City, Osaka



## 'EC Cleaner Series" of light colored, antistatic sticky rubber rollers for dust removal







## Key features of the product

- 1. Reduces static problems.
- 2. Removes dust and contamination without damaging the workpiece.
- 3. Can fit into bumpy surfaces of workpieces.

The EC Cleaner is a light colored sticky roller with antistatic property and no conductive carbon black. It is used for removing dust and contamination from workpieces. The EC Cleaner Series has five standard types of stickiness. Also, there is the bleedless type that minimizes extraction from the rubber surface.

### Solutions for our clients

Production processes in various industries are demanding increasingly higher quality and quality stability in products. One of the reasons is that manufacturers have problems with dust and contamination. To meet such needs, Katsura Roller Mfg. has developed a material with antistatic and bleedless properties. Other than the "EC Cleaner Series," we provide various types of cleaner rollers of good performance that are designed for use with specific base materials and production processes.

Katsura Roller Mfg. Co., Ltd.

http://www.katsura-roller.co.jp/ English /中文 5-3-13, Nakagawa, Ikuno-ku, Osaka City, Osaka

ISO 9001 ISO 14001

## SP rubber (Greaseless rubber)





### Key features of the product

- 1. Greaseless but can improve assembly processes.
- 2. Effective in preventing adhesion
- 3. Users can expect a reduction in total cost.

SP rubber is our proprietary rubber material. It has self-lubricating property through a combination of base material, such as NBR and EPDM, and a skid. The skid oozes out on the surface and makes it smooth.

### Solutions for our clients

When rubber products such as O-rings are attached to and built in resin and metal, it used to be necessary to apply silicon grease or oil to make the skidding better. With the use of this SP rubber, however, users can eliminate the silicon grease and thus can reduce costs. The SP rubber also has the effect of preventing adherence between the rubber and material. The SP rubber is used by industries where working with water, air pressure, and pipe fittings.

We propose using the product mainly as sealing material.

TAKAISHI INDUSTRY Co., Ltd.

http://www.takaishi-ind.co.jp English 3-18. Aruiihara-cho, Ibaraki City, Osaka

ISO 9001



## Design and manufacture using special welding technology





### **Key features of the product**

- 1. Pure titanium processed and welded products
- 2. Copper and other metal welded products
- 3. Cooling parts using special welding technology

We design and manufacture products by applying special welding technology. "Burner nozzles" made from this technology are highly rated by customers. Regarding titanium welded products, we can perform special "Ti-Pd (titanium-palladium)" welding immediately upon request, as we constantly stock welding rods.

### **Solutions for our clients**

Since we design and manufacture products by applying special welding technology, our products are beneficial to customers who have problems of leaks from thin-walled pipes and their short service-life. Especially, to customers who want to reduce expensive welding cost of titanium products, our low cost and high-grade titanium welding should be attractive.

TATSUMI INDUSTRY Inc.

http://www.tatsumi-cast.co.jp/ English

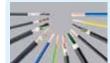
48, Saho, Ibaraki City, Osaka

Good planning capability One-of-a-kind technology Made in Japan Trial production possible Mass-production possible



# High-performance robot cable, EXT-Type II





### Key features of the product

- 1. The special conductor exhibits high bend performance.
- 2. The lubricating sheath reduces friction with the outside.
- 3. The flexibility make installation easy.

The cables exhibits high movement and bend performance because special stranded annealed copper enables high level bending and the stress is relaxed and reduced by the combination of a skidding insulation material and flexible lubricating sheath. Our in-house test data shows that the cable withstood doubled-over bending more than 20 million times.

### Solutions for our clients

The robot cable, EXT-Type II, which is our main product, supports a long service-life of movable parts of FA robots with its high bend performance. In addition to bend performance, the cables delivers high resistance to environmental elements such as heat and oil. Even for fixed wiring parts, the cables demonstrate similar performance and thus meet various needs in the FA industry. As we pursue "customer-oriented business," we can provide custom-made products to meet customer demand.

http://taiyocable.com/ English **Taiyo Cabletec Corporation** 3-3-20, Umeda, Kita-ku, Osaka City, Osaka

ISO 9001 ISO 14001



## **Cold forging**





### Key features of the product

- 1. Can process all metal products.
- 2. Handles prototypes and mass-produced products.
- 3. Specializes in making custom-made tools from the planning stage

We are engaged in product-making centered on cold forging through a network of more than 60 subcontractors. When making custom-made tools, we place importance on talking with customers in order to give a shape to customer demands. We offer not only planning and design but also trial manufacture and manufacturing.

### Solutions for our clients

We have made work tools (socket wrenches) and custom-made (special order) tools for many years. The assumed customers are the auto industry and various types of processing industries, and corporate departments responsible for developing new products. In particular, we provide work tools used under special environments in which commercialized products cannot be used, by giving a shape to customer demands. Based on the concept that "we make sure to find answers to any kind of requests," we always make full use of our network of subcontractors so that customers are satisfied.

KANSAI CROWN Co., Ltd.

http://www.kankura.co.jp/ English 1-54, Akebono-cho, Yao City, Osaka

ISO 9001





# **Metal cutting work**







### **Key features of the product**

- 1. Can handle all kinds of metals.
- 2. From small lot to mass-production
- 3. Integrated production system from processing to assembly

We can apply our metal cutting technology to all kinds of materials regardless of quality, method, field, and industry. Through an integrated in-house manufacturing system that runs 24 hours a day, we can meet a wide range of needs for small lot, prototype and commercial production.

### Solutions for our clients

We have sequentially developed our technology for new fields from water heater parts to automotive parts, aircraft parts, hydraulic pressure parts for construction equipment, and household electric appliance parts. We have cut many kinds of metals including brass, aluminum, stainless steel, and molybdenum. As a manufacturer that meets a wide range of customer needs, we have developed high processing technology and rigorous control system from our experience. We are dedicated to cost reduction through an integrated production system and the introduction of machines for unmanned operations.

SANKYO MFG CO., LTD.

http://www.sankyo-mfg.co.jp/ English / Vietnam 2-6-37, Kounoike-Cho, Higashiosaka City, Osaka

ISO 9001



## **Metal high-precision machining**





### **Key features of the product**

- 🜉 1. High-precision processing of aluminum, stainless-steel, and iron
  - 2. From trial manufacture to molds and finished products
  - 3. High-precision processing of difficult-to-cut materials

We machine a wide range of materials including special steel, using machining centers and NC lathes at our plants. We take on the challenges of machining difficult-to-cut materials every day and deal with any kind of material upon request. Moreover, we can design casts from molds through a network of numerous subcontracted casting factories, perform high-precision machining at our plants and deliver products to customers.

### Solutions for our clients

We have manufactured various products in the fields of industrial equipment (industrial robot parts and industrial optical instruments) and medical equipment. Moreover, since we design and manufacture laborsaying machines on our own, we have the know-how of various manufacturing methods. Regardless of the type of industry, if customers have any problems concerning manufacturing method or precision. we can be consulted to find a solution.

TechnoTaiyo CO., LTD.

http://www.techno-t.co.jp/ English 1-153, Ishihara-cho, Higashi-ku, Sakai City, Osaka



## **Stainless-steel special flanges**





### **Key features of the product**

- 1. High-quality, low-cost flanges
- 2. Custom-made limited production of diversified products
- Can handle difficult-to-cut materials.

We manufacture small-diameter to large-diameter flanges entirely in-house. We mainly process various difficult-to-cut materials such as stainless-steel, hastelloy, stellite, and monel. We can provide low-cost products by taking the yield of materials into consideration. We enhance quality in the manufacturing process by performing in-process and pre-shipment inspections and keeping all kinds of inspection records.

### Solutions for our clients

We have manufactured flanges and other peripheral parts used for plant facilities. The assumed customers are companies that install facilities such as lithium batteries, flowmeters, ships, nuclear power generation, wind power generation, and aseismic base isolation. We can manufacture products upon customer request for spot production, commercial production or custom-made production. We perform build-toorder manufacturing and processing using a plethora of integrated in-house facilities. Therefore, we can flexibly deal with customer requests for quick delivery and low cost. Although we mainly handle stainlesssteel, we can also deal with a wide range of metals including difficult-to-cut materials.

Nakamura Iron Co., Ltd.

http://www.nakamura-tk.co.jp/ English 4-9-11, Mokuzaidohri, Mihara-ku, Sakai City, Osaka

ISO 9001 ISO 14001