

Introduction of Osaka regional leading companies with core manufacturing technology 2013 Introduction of Osaka regional leading companies with core manufacturing technology



### Greetings from the Governor

One of the world-class strengths of Japan is its power of "Monodzukuri" (Core manufacturing Technology). Osaka has a collection of Japan's leading and representative companies, including Panasonic Corporation, Sharp Corporation, Kubota Corporation and Daikin Industries, as well as many small and medium-sized businesses supporting them with their craftsmanship skills. In addition, the accumulation of abundant technologies and human resources supports the growth and development of cutting-edge fields, such as bio-technology and alternative energy.

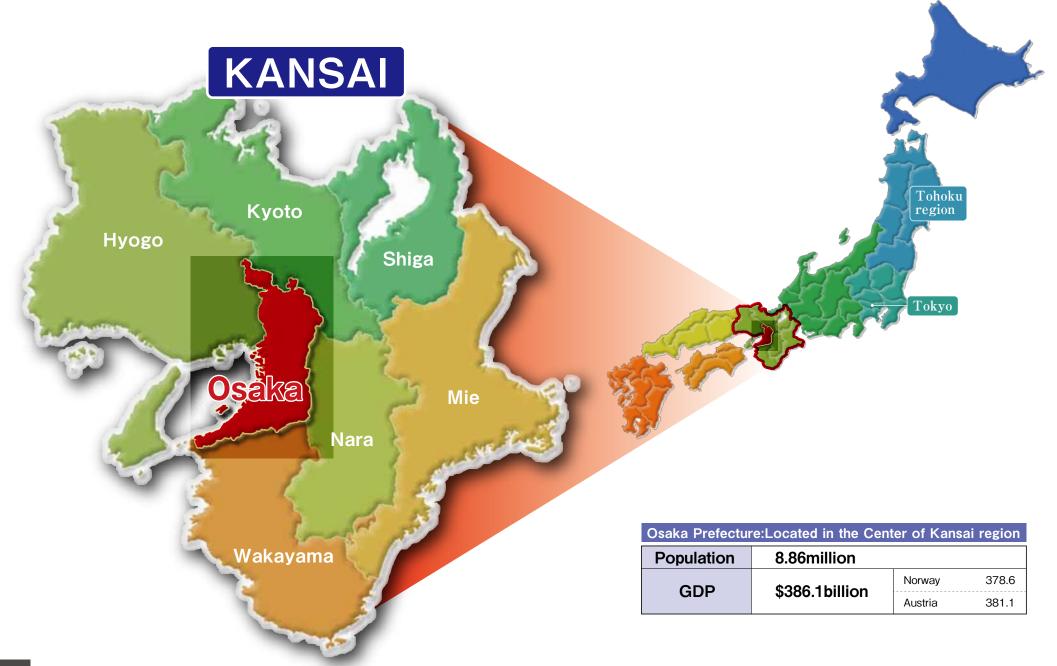
With this background and the potential of industries in Osaka, we have developed a system called Osaka Core manufacturing Technology Network to introduce "Monodzukuri" companies for free. It searches, finds and introduces a suitable company from over 50,000 companies in Osaka to fulfill your business needs, for example, ordering parts, processing requests or developing prototypes. The highly-sophisticated technology and processing skills will help your business grow.

Take this opportunity to use the power of Osaka's "Monodzukuri".

Ichiro Matsui Governor of Osaka

# World Class High-Tech Cluster, OSAKA





### **Osaka's Manufacturing Industry**

Strong
Manufacturing
<b>Industry Cluster</b>

No. of manufacturers 20,122 (No.1 in Japan ; 9.0% nationwide)

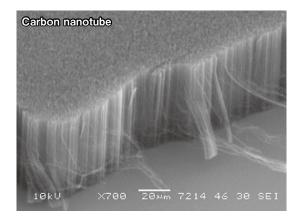
No. of employees 477,484 (No.2 in Japan ; 6.2% nationwide)

<b>SME<sup>*1</sup>Activity</b>	SME <sup>*1</sup> shipment value ¥11trillion (Sales of Honda ¥7.9trillion, Hitachi ¥9.7trillion, Panasonic ¥7.8trillion)
	<ul> <li>The percentage of SMEs<sup>*1</sup> in shipment value 61.9%</li> <li>(No.1 in Japan)</li> <li>*1 SME: Small and Medium Enterprises</li> </ul>

Complete Manufacturing a well clustered, broad-range of solid manufacturing skills

"Nothing can not be produced in OSAKA"

### World-Class Industries; The Pride of Osaka



### Nanotechnology

#### Osaka has a high concentration of key industries.

 Leading pioneer in nano-carbon technology, etc.
 Clusters of universities and R&D institutions
 ⇒Cutting-edge R&D of nanotechnology, optical technology, etc.

### Environment/New Energy

- Osaka is an urban area home to new energy industry
   Clusters of small and medium environment-related companies
  - $\Rightarrow$ Advanced technology for water treatment and waste disposal
- -Panel Bay

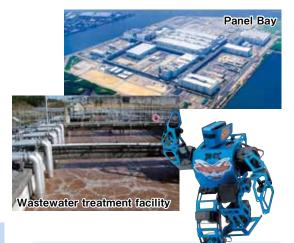
 $\Rightarrow A$  major production base for solar cells and liquid crystal displays

# Osaka is the home of "monodzukuri" (Core manufacturing Technology).

-Clusters of companies with the world's largest market share and companies making one-of-a-kind products

- -A "full-set" industrial structure
- $\Rightarrow$  Nothing cannot be made in Osaka!

Expansion into new areas of industry, taking advantage of its manufacturing technologies!



### Robot

- Osaka is a hub of R&D for next-generation robots
- -Clusters of consumer electronics and industrial robot manufacturers
- Clusters of universities and other R&D institutions



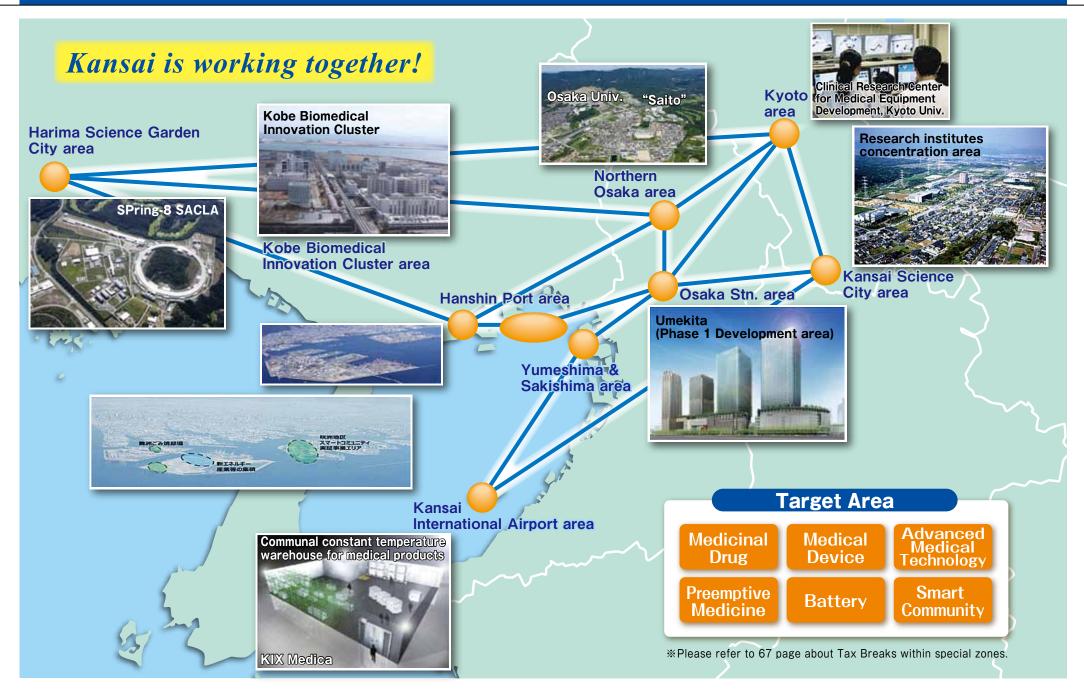
### Bio-Technology

- Osaka has a bio-medical cluster.
- -Saito Life Science Park was established as the hub of the northern Osaka bio-cluster
- $\Rightarrow$ A high concentration of excellent research institutes and bio-venture companies

-Clusters of pharmaceutical and related companies ⇒More than 300 pharmaceutical companies are concentrated in the "Pharmaceutical town" of Doshomachi.



### Kansai Innovation International Strategic Comprehensive Special zone



### **Tools for Foreign Companies and Osaka-based SMEs**





- ·International B2B support
- •Providing science-related consultations and joint research support

http://www.m-osaka.com/en/index.html



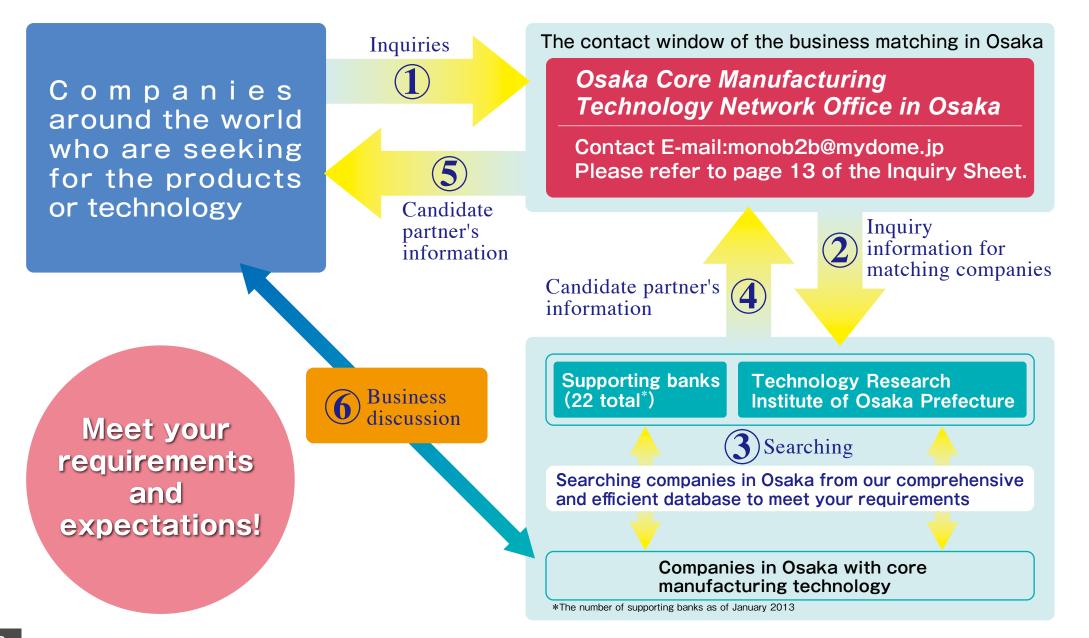
### Introduction of the Osaka Core Manufacturing Technology Network

Who are we?	Osaka Prefectural Government and collaborating banks
What is our objective?	To contribute on your business by utilizing the core manufacturing and high technology achievements in Osaka
Who can enjoy the benefit?	Companies around the world who are seeking for suppliers, outsourcing partners or development partners
What is the benefit?	We introduce preferable companies in Osaka (incl. surrounding area) with core manufacturing technology upon your inquiry with free of charge
What is the role of us?	We are the contact window of the business matching managed by Osaka Prefectural Government

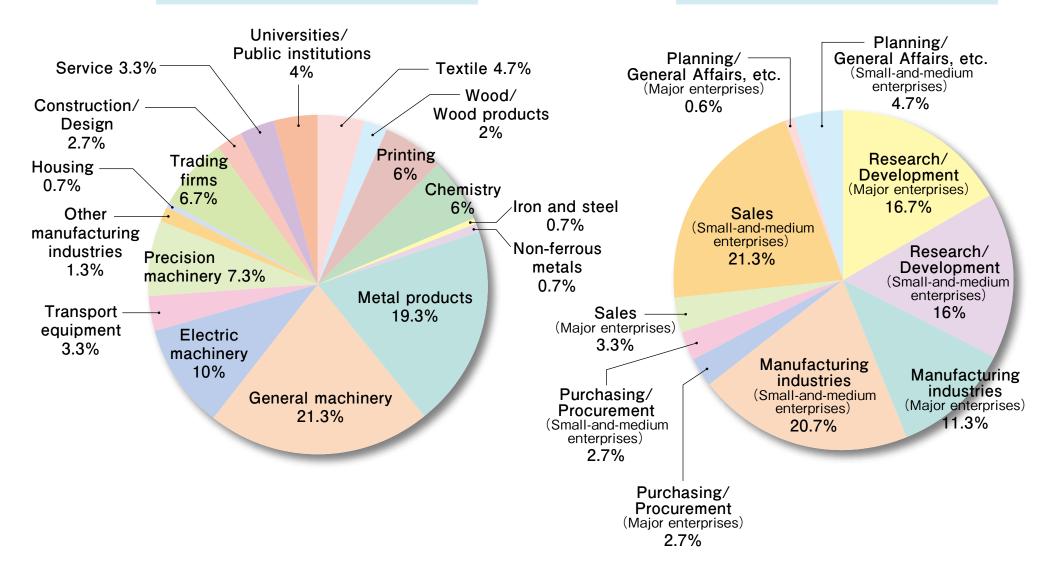
Osaka Prefectural Government and our partner banks jointly work to introduce skilled companies in Osaka to you. We believe companies in Osaka can contribute on your business!

### How to find your partner companies?

We will find your best partner companies in Osaka. We are looking forward to receiving your inquiries!



Who were our customers? (by industry) Who were our customers? (by section)



Q1. Can you manage any inquiries?	A1. No matter how difficult your inquiry is (high precision, difficult machining, small lots, etc.), we will provide our best solution to you.
<b>Q2. How much do you charge for commission?</b>	A2. Free of charge.
<b>Q3.</b> Do you handle the actual transactions including "buying" and "selling"	A3. We do not handle the actual transactions. Please discuss directly with the candidate partner companies based on our business matching. In case the candidate company does not have the experience of overseas business, "Osaka Foundation for Trade and Industry" will assist the company to manage it.
Q4. Do you accept inquiries in languages other than Japanese?	A4. All inquiries will be accepted by our contact window persons ("coordinators"), who have enough English skill, technical knowledge and business experience. They are to manage facilitating communication between you and Osaka companies. Please consult us regarding inquiries in languages other than English.
Q5. Do you accept our inquiry under the condition that you are not to disclose our company name to others?	A5. Yes, we accept such inquiries. You can select which information are to be disclosed/not disclosed when we search for your partners (please refer the inquiry sheet).

### **Contact us through** the following E-mail address!

### **Osaka Core Manufacturing Technology Network Office**

Zip 577-0011 1-4-1 Aramoto-Kita, Higashi-Osaka City, Osaka 2F, South Building, Creation Core Higashi-Osaka

> Please contact us by E-mail. E-mail:monob2b@mydome.jp

### Inquiry Sheet

To contact us about your inquiry, please download the "inquiry sheet" from the website below, fill it up and send it by e-mail. We will search for Osaka regional companies who can fulfill your requirement based on the "inquiry sheet".

### http://www.m-osaka.com/en/B2B/ E-mail:monob2b@mydome.jp

Inquiry Sheet Serial No INTERNAL USE ONLY Please fill out this form and email us at "monob2b@mvdome.ip" Inquiry Date (mm/dd/yyyy) Please fill out the details including Division, Department or Section Company Name Do you allow us to disclose this information to others when searching for your partners? (Yes/ No Position and Title Do you allow us to disclose this information to others when searching for your partners? (Yes/ No) First Last Name Do you allow us to disclose this information to others when searching for your partners? (Yes/No Address Mailing Address Postal Code Do you allow us to disclose this information to others when searching for your partners? ( Yes/ No Phone: Phone/Fax Fax: Do you allow us to disclose this information to others when searching for your partners? (Yes/No) E-mail Do you allow us to disclose this information to others when searching for your partners? (Yes/ No Company URL http:// Do you allow us to disclose this information to others when searching for your partners? (Yes/ No 1: Parts/Components 2: Manufacturing/Processing 3: Machinery/Devices/Equipment Product / Technology of Interest 4: Electronics □ 5: Optics G: Chemicals □ 7: Plastics \*Details of your inquiry or specific 8: Packing/Printing/Textiles products/technologies you are interested in. 9: Consumer Goods and Appliances Considering introduction to your company Nature of Inquin Just interested in Others (i.e. for research or investigation) □ Samples request □ Price/cost quotation □ Further Information Detailed information or brochures on products or technologies \*Please provide details below Details of Inquiry \*Please describe as specifically as possible. In case the space below is insufficient, please attach additional sheets including any pictures rawings or diagrams if necessary have detailed technical demands or specific requirements on the contract, please describe them as much as po Specific Description of Inquiry' Desired Response Date: (by) (mm/dd/yyyy) Contact Method □ As soon as the candidate partner(s) respond respectively □ Respond in summary by the designated date C Other

### Contents

Greetings from the Governor2
World Class High-Tech Cluster, OSAKA3
Introduction of the Osaka Core Manufacturing
Technology Network ······9

### Table of contents

### Parts & Materials

TAKENAKA SEISAKUSHO CO., LTD. ·····20
SDC TANAKA Inc
KM Seiko Co., Ltd
Maruemu Works20
FUJISEISAKUSHO·····21
GLOBAL PARTS CORP21
OSAKA SEIKO LTD21
Kinomoto Shinsen Co., LTD21
Mitsumoto rasenkan Kogyo Co., Ltd22
TSUKATANI HAMONO MFG CO., LTD. $\cdots$ 22
BIG DAISHOWA SEIKI CO., LTD22
TEIKOKU CHUCK CO., LTD. ······22
Nippon Pillow Block Co., Ltd23
LOBTEX Co., Ltd23
HORIUCHI MASHINERY CO., LTD23
Fujikin Incorporated23
NIPPON WICO CO., LTD24
TECHNO ROLL CO., LTD. ·····24
RIKO CO., LTD24
Kyoushin Giken Co., Ltd24
FUJIYA CO., LTD25
Rex Industries Co., Ltd25

TAIYOPARTS CO., Ltd.	
HARDLOCK Industry Co., Ltd.	·25
Mitsuboshi C. I. Co., LTD.	
MATSUDA CO., LTD	··26
TOYO. ss. co., LTD. ·····	··26
KITA MANUFACTURING CO., LTD.	··26
Osaka Coat Rope Co., Ltd	··27
Three-F Giken Co., Ltd.	
Nagatsuka Abrasive Mfg. Co., Ltd	··27
DIGIC Co., Ltd.	··27
EIKO GIKEN CO., LTD.	··28
Sankyo Seiki Industry Co., Ltd	··28
ENGINEER INC.	··28
KAWAMURA-KAKO CO., LTD	·28
NIHON SUPERIOR CO., LTD	
TOWARON Co., Ltd	··29
Katayama Chain Co., Ltd.	··29
DAIKOUSEIKI CO., LTD	·29
SATOU-NEJI SEISAKUSYO Co., LTD.····	
Showa Spring Co., Ltd.	·30
Fuji Seimitsu Co., Ltd	30
Mutsumi Industry Co., Ltd	·30
Katsura Roller Mfg. Co., Ltd	·31
TAKAISHI INDUSTRY Co., Ltd	·31
TATSUMI INDUSTRY Inc	·31
Taiyo Cabletec Corporation	··31
KANSAI CROWN Co., Ltd	·32
SANKYO MFG CO., LTD	·32
Techno Taiyo CO., LTD	·32
Nakamura Iron Co., Ltd.	·32

### Machining & Processing

Nakamura Choukou Co., Ltd	33
Nakano Manufacture Co., Ltd.	33
UEGAKI KINZOKU SEISAKUSYO CO., LTD. ·	
Nakata Co., Ltd	
YAMANAKA ENG CO., LTD	34
Hiraoka Hyper Tools, INC.	
MIKI SEISAKUSYO CO., LTD	34
Shin-Nihon Tech Inc.	34
AOKI Co., Ltd.	35
MARL KINZOKUSEISAKUSHO	35
Fuji Kinzoku Co., Ltd.	35
NSC Co., Ltd.	35
Taisei Kogyo Co., Ltd.	36
Sankiblast Co., Ltd.	
Nippon Fusso Co., Ltd.	36
Fuji Electronics Industry Co., Ltd	36
Osaka Yakin Kogyo Co., Ltd	37
MEISEI METAL INDUSTRIES Co., Ltd. ·	37
KONISHI METAL MOLD ENGINEERING LTD.	37
XEROM CO., LTD. ·····	
Yodogawa Works Ltd.	38
SAN-EI-SEISAKUSHO Co., Ltd	38
PIAS SALES CO., LTD	
IZUMO Co., Ltd. ·····	38
Maeda Metal Works, Co., Ltd	39
NISSIN SEIKOU CO., LTD	
IKK CORPORATION	
KINJO RUBBER CO., LTD	39

NODA DIE MARKER Co., Ltd40
DAITOH CHEMICAL CO., LTD40
HATTA KOGYO CO., LTD. ······40
HAYASHIDA SPECIAL STEEL Co., Ltd. ···40

### Machinery & Equipment

LASERCK CORPORATION	
ISEL CO., LTD.	
DAIKO TOOL MFG CO., LTD.	·41
TECHNO AOYAMA Inc.	·41
YAMAMOTO VINITA CO., LTD	·42
ITEC Co., Ltd.	·42
SAWA CORPORATION	·42
KANAE GIKEN CO., LTD.	·42
SHOWA DENKI CO., LTD	·43
New Medican Tech Corp.	·43
Osaka Seimitsu Kikai Co., Ltd	·43
CHUO ELECTRIC WORKS LTD	·43
BEAMSENSE Co., Ltd.	·44
YUTAKA CO., LTD	·44
MARUI&CO., LTD. ·····	·44
APOLLOWAVE Corporation	·44
OURSTEX CORPORATION	·45
HOKUYO AUTOMATIC CO., LTD	·45
SHIMONISHI SEISAKUSHO CO., LTD	·45
TAIYU CORPORATION	·45
NOMURA MACHINE TOOL WORKS, LTD	·46
SANO SHARYO SEISAKUSHO CO., LTD. ··	·46
Yoshiizumi Industry Corporation	·46
SHIMAKAWA-SEISAKUSHO Co., Ltd. ·····	·46

HYODA INSTRUMENTS CORPORATION ···47
Mitsuboshi Diamond Industrial Co., Ltd47
DAIDO MACHINERY CORPORATION ······47
DENSHI-GIHAN CO., LTD. ······47
Daido Industries INC48
Uchino Co., Ltd. ·····48
PRIMIX Corporation48
ISHIKOTEC CO., LTD. ······48
USUTANI DENSHI Co., Ltd49
FUJI TECHNO INDUSTRIES CORPORATION
Koei Spring Industry Co., Ltd49
Coaken Techno Co., Ltd49
MATSUMOTO MACHINE MFG. CO., LTD. ···50
YAMARI INDUSTRIES, LIMITED
Nishimura Machine Works Co., Ltd50
KANSAI AUTOMATION CO., Ltd50
UINICS CO., LTD51
Yamamoto Suiatu Kogyosho Co., Ltd51
Cyber Craft Co., Ltd51
Kansai Construction Survey Co., Ltd51
MIKITA MACHINERY Co., Ltd52

### Electronics & Optics

JAPAN REMOTE CONTROL CO., LTD	52
Vstone Co., Ltd	52
MURAKAMI ELECTRIC IND. CO., LTD	52
YASHIMA DENGYO CO., LTD	53
Nalux Co., Ltd.	53
ISUZU GLASS CO., LTD	53
KIKUCHI PRECISION OPTICS CO., LTD	53

### TSURUGA ELECTRIC CORPORATION ....54

### Chemicals & Resins

Kisan Kinzoku Chemicals Co., Ltd54
SATO SPECIAL OIL CO., LTD54
NAKAYAMA INDUSTRY CO., LTD54
SHARP CHEMICAL IND. CO., LTD55
Utsumi Recycle Systems Inc55
Asahi Chemical Co., Ltd55
KEIWA Incorporated55
ZEROONE PRODUCTS CO., LTD56
DAIKEN CHEMICAL CO., LTD56
DAIHACHI CHEMICAL INDUSTRY CO., LTD. ···56
Mikuni Pharmaceutical Industrial Co., Ltd56
Shimada Kasei Corp., Ltd57
Ibaraki Industrial Corporation57
Kansai Catalyst Co., Ltd57
KOTANI CHEMICAL INDUSTRY CO., LTD. ··· 57
SUMIRON Co., Ltd58

### Packaging, Printing & Textiles

Paper World Corp58
Sanyo Paper Co., Ltd58
Marui Textile Machinery Co., Ltd58
HIROSE MFG. CO., LTD59
TANAKA PAPER TUBE CO., LTD59
Masspack Co., Ltd59
ADCOAT CO., LTD59

### 🔚 Life-Related,Etc.

YAMAMOTO CORPORATION	60
CATEYE CO., LTD.	
YAMAMOTO KOGAKU CO., LTD	
SEAHONENCE Inc.	
Koeisha & Co., Ltd.	
Saraya Co., Ltd.	
NKC Co., Ltd.	
Morita Aluminum Industry, Inc.	
UNION CORPORATION	
KOYO ENGINEERING CO., LTD	
RIKEN KAGAKU KOGYO CO., LTD	
TAKEYAMA RECORDER WORKSHOP	
Tanio Co., Ltd	63
NIMBARI KOUSAKUSYO CO., LTD	63
ACTEC CO., LTD. ·····	
Whitemax Co., Ltd.	63
KAMEMIZU CHEM. IND. CO., LTD	64
MORIMOTO PHARMA CO., LTD	64
KIRARA, INC. ·····	64
KYOBOSHI CO., LTD	…64
TAKASHIMA Inc.	
Sanyo Co., Ltd.	…65
ASAHI electrochemical Co., Ltd	…65
KUMAGAI Electric Co., LTD	…65

### Alphabetal Index

A	ACTEC CO., LTD63
	ADCOAT CO., LTD59
	AOKI Co., Ltd
	APOLLOWAVE Corporation44
	Asahi Chemical Co., Ltd55
	ASAHI electrochemical Co., Ltd65

B BEAMSENSE Co., Ltd. .....44 BIG DAISHOWA SEIKI CO., LTD. .....22

- C CATEYE CO., LTD. ......60 CHUO ELECTRIC WORKS LTD. .....43 Coaken Techno Co., Ltd. .....49 Cyber Craft Co., Ltd. .....51
- - EIKO GIKEN CO., LTD. ······28 ENGINEER INC. ····28

F	Fuji Electronics Industry Co., Ltd36
	Fujikin Incorporated23
	Fuji Kinzoku Co., Ltd35
	Fuji Seimitsu Co., Ltd
	FUJISEISAKUSHO21
	FUJI TECHNO INDUSTRIES CORPORATION ···49
	FUJIYA CO., LTD25

G GLOBAL PARTS CORP. .....21

H HARDLOCK Industry Co., Ltd. .....25 HATTA KOGYO CO., LTD. .....40 HAYASHIDA SPECIAL STEEL Co., Ltd. ...40 Hiraoka Hyper Tools, INC. .....34 HIROSE MFG. CO., LTD. .....59 HOKUYO AUTOMATIC CO., LTD. ....45 HORIUCHI MASHINERY CO., LTD. ...23 HYODA INSTRUMENTS CORPORATION ...47

Ibaraki Industrial Corporation57
IKK CORPORATION
ISEL CO., LTD41
ISHIKOTEC CO., LTD. ·····48
ISUZU GLASS CO., LTD53
ITEC Co., Ltd42
IZUMO Co., Ltd

JAPAN REMOTE CONTROL CO., LTD. ....52

KAMEMIZU CHEM. IND. CO., LTD. ···64
KANAE GIKEN CO., LTD42
KANSAI AUTOMATION CO., Ltd50
Kansai Catalyst Co., Ltd57
Kansai Construction Survey Co., Ltd 51
KANSAI CROWN Co., Ltd32
Katayama Chain Co., Ltd29
Katsura Roller Mfg. Co., Ltd31
KAWAMURA-KAKO CO., LTD28
KEIWA Incorporated55
KIKUCHI PRECISION OPTICS CO., LTD. ···53
KINJO RUBBER CO., LTD
Kinomoto Shinsen Co., LTD21
KIRARA, INC. ·····64
Kisan Kinzoku Chemicals Co., Ltd54
KITA MANUFACTURING CO., LTD. ···26
KM Seiko Co., Ltd20
Koeisha & Co., Ltd61
Koei Spring Industry Co., Ltd49
KONISHI METAL MOLD ENGINEERING LTD. ···37
KOTANI CHEMICAL INDUSTRY CO., LTD57
KOYO ENGINEERING CO., LTD. ·····62
KUMAGAI Electric Co., LTD65
KYOBOSHI CO., LTD. ·····64
Kyoushin Giken Co., Ltd24

K

LOBTEX Co., Ltd. .....23

Μ	Maeda Metal Works, Co., Ltd39
	MARL KINZOKUSEISAKUSHO35
	Maruemu Works ······20
	MARUI&CO., LTD44
	Marui Textile Machinery Co., Ltd58
	Masspack Co., Ltd59
	MATSUDA CO., LTD. ·····26
	MATSUMOTO MACHINE MFG. CO., LTD. ···50
	MEISEI METAL INDUSTRIES Co., Ltd. ···37
	MIKI SEISAKUSYO CO., LTD
	MIKITA MACHINERY Co., Ltd52
	Mikuni Pharmaceutical Industrial Co., Ltd56
	Mitsuboshi C. I. Co., LTD26
	Mitsuboshi Diamond Industrial Co., Ltd47
	Mitsumoto rasenkan Kogyo Co., Ltd22
	MORIMOTO PHARMA CO., LTD.······64
	Morita Aluminum Industry, Inc61
	MURAKAMI ELECTRIC IND. CO., LTD. ···52
	Mutsumi Industry Co., Ltd

Ν	Nagatsuka Abrasive Mfg. Co., Ltd27
	Nakamura Choukou Co., Ltd33
	Nakamura Iron Co., Ltd
	Nakano Manufacture Co., Ltd
	Nakata Co., Ltd

NAKAYAMA INDUSTRY CO., LTD. ···54
Nalux Co., Ltd53
New Medican Tech Corp43
NIHON SUPERIOR CO., LTD
NIMBARI KOUSAKUSYO CO., LTD.···63
Nippon Fusso Co., Ltd
Nippon Pillow Block Co., Ltd23
NIPPON WICO CO., LTD24
Nishimura Machine Works Co., Ltd. $\cdots 50$
NISSIN SEIKOU CO., LTD
NKC Co., Ltd61
NODA DIE MARKER Co., Ltd40
NOMURA MACHINE TOOL WORKS, LTD. ·····46
NSC Co., Ltd

Osaka Coat Rope Co., Ltd. .....27
 OSAKA SEIKO LTD. .....21
 Osaka Seimitsu Kikai Co., Ltd. .....43
 Osaka Yakin Kogyo Co., Ltd. .....37
 OURSTEX CORPORATION .....45

P Paper World Corp58	
	PIAS SALES CO., LTD
	PRIMIX Corporation48

Rex Industries Co., Ltd.....25 RIKEN KAGAKU KOGYO CO., LTD....62

RIKO CO., LTD. ·	
------------------	--

5	SAN-EI-SEISAKUSHO Co., Ltd. ······38
	Sankiblast Co., Ltd
	SANKYO MFG CO., LTD
	Sankyo Seiki Industry Co., Ltd28
	SANO SHARYO SEISAKUSHO CO., LTD.···46
	Sanyo Co., Ltd65
	Sanyo Paper Co., Ltd58
	Saraya Co., Ltd. ·····61
	SATO SPECIAL OIL CO., LTD54
	SATOU-NEJI SEISAKUSYO Co., LTD30
	SAWA CORPORATION ······42
	SDC TANAKA Inc
	SEAHONENCE Inc60
	SHARP CHEMICAL IND. CO., LTD55
	Shimada Kasei Corp., Ltd57
	SHIMAKAWA-SEISAKUSHO Co., Ltd. ···46
	SHIMONISHI SEISAKUSHO CO., LTD45
	Shin-Nihon Tech Inc
	SHOWA DENKI CO., LTD. ······43
	Showa Spring Co., Ltd
	SUMIRON Co., Ltd58

Taisei Kogyo Co., Ltd
Taiyo Cabletec Corporation
TAIYOPARTS CO., Ltd25

TAIYU CORPORATION45
TAKAISHI INDUSTRY Co., Ltd. ······31
TAKASHIMA Inc65
TAKENAKA SEISAKUSHO CO., LTD.·····20
TAKEYAMA RECORDER WORKSHOP···62
TANAKA PAPER TUBE CO., LTD59
Tanio Co., Ltd63
TATSUMI INDUSTRY Inc
TECHNO AOYAMA Inc41
TECHNO ROLL CO., LTD24
Techno Taiyo CO., LTD. ······32
TEIKOKU CHUCK CO., LTD. ······22
Three-F Giken Co., Ltd27
TOWARON Co., Ltd. ·····29
TOYO. ss. co., LTD
TSUKATANI HAMONO MFG CO., LTD. ···22
TSURUGA ELECTRIC CORPORATION54

U	Uchino Co., Ltd. ·····48
	UEGAKI KINZOKU SEISAKUSYO CO., LTD. ······33
	UINICS CO., LTD51
	UNION CORPORATION62
	USUTANI DENSHI Co., Ltd49
	Utsumi Recycle Systems Inc55

Whitemax Co., Ltd.	63
--------------------	----

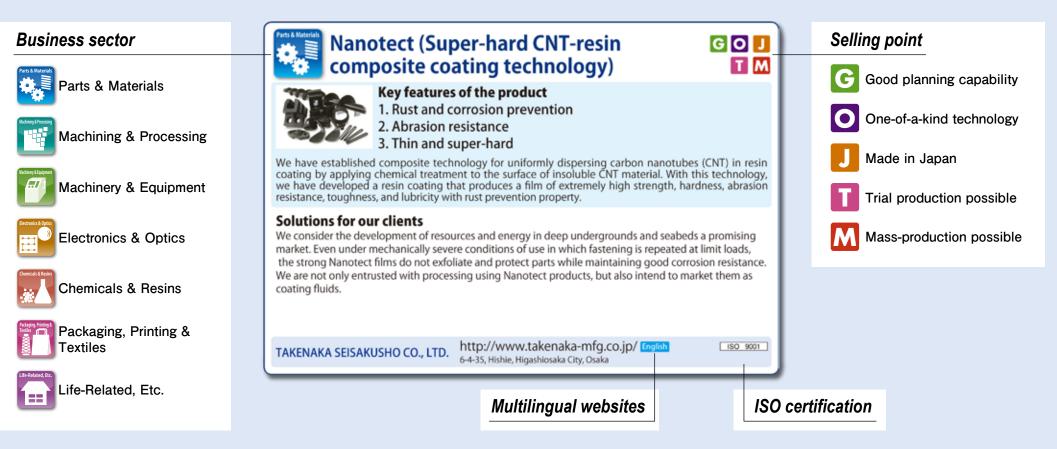
YAMAMOTO CORPORATION ·······60
YAMAMOTO KOGAKU CO., LTD. ······· 60
Yamamoto Suiatu Kogyosho Co., Ltd51
YAMAMOTO VINITA CO., LTD. ······42
YAMANAKA ENG CO., LTD
YAMARI INDUSTRIES, LIMITED50
YASHIMA DENGYO CO., LTD53
Yodogawa Works Ltd
Yoshiizumi Industry Corporation46
YUTAKA CO., LTD44

Z ZEROONE PRODUCTS CO., LTD. ....56



# Osaka regional leading **184** companies

### **Explanatory notes**



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

ISO 9001

GOJ

TM

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

-	
a ster	
and the second	

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.

I 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

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



📆 🐖 Key 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	ISO 9001
		4-7-12, Nozaki, Daito City, Osaka	ISO 14001

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

### Large machined nuts

Key features of the product

### 

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.

http://www.ipros.jp/company/detail/2030369/ ISO 9001 GLOBAL PARTS CORP. 2-6-15, Morikawachihigashi, Higashiosaka City, Osaka ISO 14001

Solutions for our clients

### OJM High functions steel wires for cold heading



**FUJISEISAKUSHO** 

### Key features of the product

http://www.fujiseisakusho.com/ English

made by craftsmen certified as advanced experienced technicians.

6-4-28, Hishie, Higashiosaka City, Osaka

- 1. High strength and improved workability
- 2. High strength eliminates the need for heat treatment.

1. The maximum size is 150 millimeters in inside diameter.

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

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 hand-

were used for the Seto-ohashi Bridge, Akashi-Kaikyo Bridge, Kansai International Airport, nuclear power plants, etc.

2. Handle all steel materials including iron, stainless-steel, and brass.

3. Handle all the processes to finishing. Special processing is possible.

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

## **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 guality products through the industry's top guick 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 guick 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

OJM

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

# ΟΜ

### Thin metal bellows



### Key features of the product

Superior elastic properties and low spring constant
 Can be molded to be requested inside and outside diameters.
 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



ISO 9001

Ο



#### Key features of the product

Slim design that prevents interference with workpieces
 Hydraulic method enables appropriate chucking of cutting tools.
 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 jigs, 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  $\langle BIG-PLUS BBT30/40/50 holder \rangle$  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 Pinnacle Die (Etching cutting dies for seals, labels, and films)

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Key features of the product
1. Can accept low-volume orders.
2. Can accept orders for diversified products.
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. htt

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
 Iso 9001

 2-1-50, Kitakyuhoji, Yao 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

ISO 9001

### Ball bearing units



### Key features of the product

High load bearing and high accuracy
 Rational, self-aligning optimal fit
 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 stainless-steel series, and a ceramic series.



http://www.fyhbearings.com/ English /中文 2306, Hirao, Mihara-ku, Sakai City, Osaka ISO 9001 ISO 14001

JM

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### 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 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

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.

LOBTEX Co., Ltd. http://www

http://www.lobtex.co.jp English 12-8, Shijyo-cho, Higashiosaka City, Osaka ISO 9001 ISO 14001

### High-purity integrated gas system (IGS) G O J for semiconductor manufacturing



### Key features of the product

1. Excellent reliability based on the W-Seal method 2. Dead space free

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

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

### Solutions for our clients

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

Fujikin Incorporated	http://www-ng.fujikin.co.jp English	ISO 9001
	Kitahankyu Bldg., 1-4-8, Shibata, Kita-ku, Osaka City, Osaka	ISO 14001

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

ISO 9001

### Aluminum-alloy connecting rods



### Key features of the product

Contribute to lighter weight products.
 Stable supply of high quality, high precision parts
 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 QCD (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.

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NIPPON WICO CO., LTD.	

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

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### Float type level switches



#### Key features of the product

Compact, durable, relatively inexpensive
 Diverse lineups for various kinds of liquids
 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 ISO 9001

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



**Key features of the product** 1. Self-adhesive rubber without adhesive 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

# 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 conveyor.

(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

ΟJΤ

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

### Plastic nippers

Solutions for our clients



# Ozone generators for comfortable and **D**



Key features of the product

1. Effective for decolorization and fat splitting

2. Effective for deodorization

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.	http://www.rexind.co.jp	ISO 9001
nex muustnes Co., Ltu.	1-9-3, Hishiyahigashi, Higashiosaka City, Osaka	ISO 14001

### Parts & Materials Eco-die-casting

cut material with 20 to 30% less force than other nippers.



FUJIYA CO., LTD.

#### Key features of the product

http://www.fujiya-kk.com/ English

2-6-32, Matsubara, Higashiosaka City, Osaka

Key features of the product

1. Can handle small lots starting from 30 units.

2. Mold costs are halved compared with conventional methods.

1. Sharpness and durability based on craftsman 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

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

nippers have won the overwhelming support of factory workers and professional craftsmen.

2. Precision cutting parts based on state-of-the-art polishing technology

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

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### Hardlock nuts



Key features of the product1. Do not loosen under vibrations and impacts.2. Can be repeatedly used.3. Simple workability

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

#### Solutions for our clients

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 retightened many times, they help reduce management expenses.

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

ISO 9001

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### 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

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### Cold-headed parts: Threaded fasteners, O J T nuts, collars, spacers, washers



#### Key features of the product

Specialized in producing lightweight and compact irregular-shaped parts
 High processing accuracy and high quality based on cold heading molding
 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, mold-making 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 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. htt 4-27

http://www.kita-mfg.com English / 中文 / 한국어 4-27, Rinkuminamihama, Sennan City, Osaka ISO 9001

JTM

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

### 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

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### **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 guaranteed by thorough polishing work, and, therefore, grinding belts are indispensable for making stainless steel. To enhance stability and improve guality, 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 9001 ISO 14001

http://www.digic.org English

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

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



### Key features of the product

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.

http://www.tfq.co.jp/ English Three-F Giken Co., Ltd. 1-3-11, Kishiwada, Kadoma City, Osaka

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. 1-209, Takefuchi-higashi, Yao City, Osaka

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

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



#### Key features of the product

Can process difficult-to-process stainless steel wire and hard steel wire.
 Can process materials in more than 25 processes without using molds.
 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

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### 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 JISQ9100 certification, which serves as the quality standard in aerospace fields.

 Sankyo Seiki Industry Co., Ltd.
 http://www.sankyo-seiki.co.jp/ English
 Iso 9001

 3-19-75, Kamishinjyo, Higashiyodogawa-ku, Osaka City, Osaka
 Iso 14001

### 📜 Neji-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.

http://www.engineer.jp/ English / 바文/ 한국어 2-8-9 Higashi-Imazato, Higashinari-ku, Osaka City, Osaka	
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Key features of the product1. 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., etc.

#### **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/
	2-8-35, Minamiminohara, Ibaraki City, Osaka

ISO 9001 ISO 14001

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

ISO 9001

ISO 14001





### Key features of the product

High-reliability product
 Earth-friendly, environment-responsive product
 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.

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### 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 quickly as a semi F series.

Katayama Chain Co., Ltd.

http://www.kana.co.jp English 2-3-43, Honjyonishi, Higashiosaka City, Osaka ISO 9001

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ISO 14001

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### Key features of the product

High durability owing to complete adhesion
 Uses high-strength core material for lighter weight
 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.
- (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.

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

#### ISO 9001

### Collars (Ultrathin milled products made by NC lathe)





Key features of the product

Thickness at inside and outside diameter: 0.1mm
 Circularity: 5/1000
 Surface roughness: Not more than 0.8

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

### Solutions for our clients

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

DAIKOUSEIKI CO., LTD. http://daikou-sk.jp English 6-11-21, Hommachi, Yao City, Osaka

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

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Parts & Materials

## Collar



### 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

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## U-nut



#### 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.

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

### **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.

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### 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.

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

### Hydraulic valves



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

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

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

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



### Key features of the product

1. Reduces static problems.

Removes dust and contamination without damaging the workpiece.
 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		TAK
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# 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





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Key features of the product1. 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.

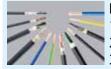
### Solutions for our clients

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       ISC         3-18, Arujihara-cho, Ibaraki City, Osaka       ISC	9001
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#### Key features of the product

The special conductor exhibits high bend performance.
 The lubricating sheath reduces friction with the outside.
 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.

Taiyo Cabletec Corporatio	http://taiyocable.com/ English 3-3-20, Umeda, Kita-ku, Osaka City, Osaka	ISO 9001 ISO 14001
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Parts & Materials

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

### **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., Lt

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

ISO 9001

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## 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

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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.

http://www.sankyo-mfg.co.jp/ English / Vietnam ISO 9001 SANKYO MFG CO., LTD. 2-6-37, Kounoike-Cho, Higashiosaka City, Osaka

### **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 laborsaving 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-guality, low-cost flanges 2. Custom-made limited production of diversified products 3. 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
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Good planning capability One-of-a-kind technology Made in Japan Trial production possible Mass-production possible

32

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

### "DINA-PRISM" self-developed diamond saw wires



#### Key features of the product

1. Low-priced diamond saw wire (For silicon / solar cells materials) 2. Long-life diamond saw wire (For sapphire /LED lighting)

We are independently developing the "DINA-PRISM," a diamond saw wire cutting tool that is essential to the slicing process of electronic materials used for solar batteries, LEDs, etc. By using a unique method for anchoring our diamond grains, we can achieve high-speed results, remarkable strength, and reduce costs, while maintaining a high reputation.

#### Solutions for our clients

Our high-speed, high-strength diamond fixation technology enables us to produce our "DINA-PRISM" diamond saw wire with high-efficiency at a low cost. This also allows us to provide speedy, detailed customization to meet the demands of various customers from slice processing sites i.e., diamond grain diameter, core diameter, and abrasive grain density. In February 2012, the "DINA-PRISM" diamond saw wire won the Minister of Economy Trade and Industry Prize at the 4th Monozukuri Nippon Grand Awards.

http://www.nakamura-gp.co.jp/ English /中文 27-27, Tsuruta-cho, Nishi-ku, Sakai City, Osaka

ISO 9001 ISO 14001

JTM

#### Machine-processed precision parts for JM various types of industrial machinery

#### Key features of the product

- 1. Machine-processed precision parts made of steel materials
- 2. Top-class quality, delivery and costs
- 3. Conduct concurrent activities with customers.

We specialize in important safety and other parts that require precision among component parts of various types of industrial machinery. We perform processing on materials and heat and surface treatment, and deliver products to customer assembly lines as finished products. Because we have acquired ISO9001 and ISO14001, customers can use our products without worry.

### Solutions for our clients

If companies aim to enhance the functions and precision of products, make machines that cause less troubles, strengthen quality assurance, and improve the rate of line progress, we can be consulted and make various proposals. We ensure the traceability of the products and meet customer demand by using a proprietary made-to-order production and inventory management system that covers from material procurement to processing and delivery. Because we have introduced the latest machines for most manufacturing processes, we can deliver products that customers can procure without worry.

UEGAKI KINZOKU SEISAKUSYO CO., LTD.

http://www.uks33.co.jp/ English 4-8-36, Kawata, Higashiosaka City, Osaka

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ISO 9001
ISO 14001
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#### Manufacture and assembly of general JTM industrial machinery parts



Key features of the product

1. Provide products that give security and reliability to customers. 2. High-accuracy precision cutting

3. Handle everything from material procurement to assembly and confirmation of functions

We have consistently performed precision cutting since our founding. Our advantage is that we have established a system of wide-ranging production from limited production of diversified products to highvolume production of similar products. We can perform integrated build-to-order manufacture from material procurement to precision cutting, heat treatment, surface treatment, and assembly.

### Solutions for our clients

With the precision cutting technology we have cultivated since our founding and the quality assurance capability we have acquired in the automobile industry, we supply manufactured parts and assemblies to 19 types of industry, including automobile torgue converter clutches, hydraulic equipment, reduction gears for ships, semiconductor equipment, measuring instruments, medical equipment, and robots for production. Regarding processing technology, we specialize in thin-wall high-accuracy processing. If you have any problems in parts processing and assembly, you can consult with us any time. We have acquired ISO certification and Eco-Action 21 certification.

Nakano Manufacture Co., Ltd.	http://www.nakanoss.com/ English 21-26, Shinmachi, Higashiosaka City, Osaka	ISO	9001
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### Key features of the product

1. Enables hole drilling as small as 5  $\varphi \mu$  in diameter.

2. Enables groove beveling of 0.1mm in width and 0.3mm in depth.

3. Enables mirror production with a surface roughness of Ra0.02 to 0.04 by cutting.

Examples of applications are as follows. 1. Equipment that detects of air, gas or liquid leaks based on ultra-small hole drilling technology 2. Miniature molds, biochips, fluid channel, etc. 3. Precision parts that require heat, light reflex, and sliding surfaces. Products that require high surface roughness, such as vacuum chambers and transfer arms used in the semiconductor industry.

### Solutions for our clients

The assumed customers are research and development departments and commercial production departments of LCD, semiconductor, medical equipment, automobile, and various types of automated machine makers. We can guickly deliver products at low costs owing to our integrated management approach to proposals that include design, materials, processing, and surface treatment.

1, 2. We realize forms and high precision that are difficult to achieve via pressing, laser cutting, and etching. 3. Since our mirror production technology (for aluminum, brass and copper) has realized high surface roughness without polishing, users can reduce polishing expenses and solve problems such as the encroachment of abrasive grains into materials in buffing and lapping processes.

Nakata Co., Ltd.	http://www.nakata-ss.co.jp/ English ⁄ धन्न	ISO 9001
Nakala CO., Llu.	5-1-15, Kamio-cho, Yao City, Osaka	ISO 14001

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

Machining & Processing

### Helical gear cold molding technology



#### **Key features of the product** 1. Pursue near net shape

Pursue near net shape
 High quality and high precision
 Longer life and lower costs for molds

We can forge precision tooth gears that used to be produced only by machining. Owing to our high productivity, we can mass-produce products at low costs. Our technology for correcting the dimensions of gears is based on distortion from forging and heat treatment, and has made the most difficult  $\mu$ -grade control of helical tooth profile errors and tooth trace direction errors possible.

### Solutions for our clients

The assumed customers are diverse industries including the automotive, forging, formed and fabricated materials, and parts industries. In the analysis software business, the assumed customers are companies that work plastics such as the heavy, construction machinery, electronics, steel, nonferrous metals, tools, heat treatment and lubrication industries. We make full use of state-of-the-art plastic working technology based on mold-making technologies, and meet customer needs, as a company that provides total solutions in plastic working fields, which include manufacturing of molds for precision-forging, CAE-optimized design, and development of products that ensure quick delivery using the press originally used for trial manufacture.

YAMANAKA ENG CO., LTD.

http://www.yamanaka-eng.co.jp/ English 4-4-24, Kano, Higashiosaka City, Osaka

# Directly carved precision molds and embossing rolls



### Key features of the product

- 1. Direct carving technology based on digital data
- 2. Advanced digital data editing technology
- 3. Simple trial manufacture system

Our core technology is to manufacture molds and embossing rolls through 3-D fine processing technology by faithfully reproducing complicated designs such as natural patterns, as 3D design digital data.

### Solutions for our clients

We meet a variety of needs from customers such as manufacturers of extrusion-molded ceramic exterior walls and other building materials, as well as wallpaper, tile and porcelain panels, metal patterned panels, paper, and resin films. In particular, we specialize in directly and deeply carving patterns of natural texture (wood grain, marble grain, Japanese paper patterns) into molds and embossing rolls. We can manufacture and quickly deliver miniature test molds with which customers can perform evaluation. We also take on challenges that require us to process superhard materials and microembossment.

MIKI SEISAKUSYO CO., LTD. http://www.mikiss.co.jp/ English 1-7-28, Oono, Nishiyodogawa-ku, Osaka City, Osaka Cold-forged molds



GO

ТМ

ISO 9001

ΟΙΤ

### Key features of the product

Long-life molds suitable for commercial production
 Can handle difficult-to-process materials and difficult shapes.
 One-stop service from design to shipping

Our molds are used for producing bolts and other important safety parts used for automobiles and construction. Based on superhard processing, coating treatment and proprietary mounting methods, we have succeeded in producing long service-life molds that are suitable for difficult-to-process materials and have good abrasion resistance and impact resistance.

### Solutions for our clients

Through one-stop service that covers from design to shipping products, we take an approach of solving the problems together with customers. Moreover, via production and management innovation based on 3S activities -- seiri (arrange), seiton (organize) and seiso (clean) -- that we have been working on since May 1999, we emphasize high quality control of molds and carefully crafted services to customers. As services that have developed from the 3S activities, the "Digital Dolphins" documentation system that controls user information as well as fee-based factory tours in which visitors can experience 3S activities, are welcomed by customers.

Hiraoka Hyper Tools, INC. http://www.sg-loy.co.jp/ English 2-7-22, Tatsuminaka, Ikuno-ku, Osaka City, Osaka

# Water-repellent, oil-repellent, and non-adhesion "SN fluorine coating"



### Key features of the product

1. Coating thickness is not more than  $1 \mu$  m.

2. Coating formation is possible at low temperatures not higher than 98°C.

3. Good water-repellent, oil-repellent, and non-adhesion effects

We have developed a fluorine coating that suppresses the adhesion of adhesive to work tools, which translates into enhanced productivity. The coating thickness is not more than  $1\mu$ m, compared with conventional coating of  $20-50\mu$ m. It can be used for cutting-edge ultraprecise molds. Moreover, the films can be formed at low temperatures of not higher than  $98^{\circ}$ C (compared with the conventional coating of  $260^{\circ}$ C or higher) and, therefore, the precision of molds is not damaged.

### Solutions for our clients

Sheet devices are increasingly introduced into the manufacturing processes of electronic parts such as touch panels. That has caused many problems such as quality problems due to secondary transfer of adhesive originally adhered to work tools onto products and a subsequent fall in productivity caused by material feeding errors and cutting troubles. Our "SN fluorine coating" suppresses the adhesion of adhesive to work tools, thus enhances productivity. The fluorine coating adds water-repellency and oil-repellency to products, and can be extensively used for cutting tools for highly-functional films of lithium batteries, industrial machinery, and medical equipment such as catheters. The film is formed at a low temperature of not higher than 98°C and, therefore, the precision of molds is not damaged.

Shin-Nihon Tech Inc. http://www.sntec.com English 2-2-81, Hama, Tsurumi-ku, Osaka City, Osaka ISO 9001 ISO 14001

GOT

ISO 9001

GOJ

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

#### VTOL (vertical takeoff and landing) GO unmanned aircraft (under development)



### Key features of the product

1. World's first quad tilt wing VTOL navigation 2. Aiming at long-distance (1,000 km) range 3. Make use of the advantages of fixed wing and rotary wing.

To rate the usefulness of our unmanned aircrafts, we are preparing them for Antarctic observation being conducted by the National Institute of Polar Research. Moreover, using the jointly-developed "Maido No.1" (thunder observation) satellite, we will establish a system in cohort with a university to supply thunder forecasting information via space, air and ground observation.

#### Solutions for our clients

Because the unmanned aircraft enables monitoring of large-scale disasters such as earthquakes and forest fires, disaster relief can be provided earlier. Moreover, the unmanned aircraft enables local observation of difficult-to-enter places such as the craters of volcanoes, Antarctica, and mountainous areas, thus preventing loss of life from close-up observation. The monitoring of transmission line control is normally conducted by manned aircrafts, but cost reductions are possible if costly monitoring observations are conducted by unmanned aircraft. Moreover, the unmanned aircraft facilitates exploration of oil and ocean resources.

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//www.aoki-maido.co.jp English Fakaidanaka, Higashiosaka City, Osaka

ISO 9001

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GO

Ultra-deep drawing press processing by transfer press



### Key features of the product

1. Integral molding from one piece of plate 2. Produces seamless pipes from one piece of plate. 3. Deep drawing press processing of ultra-thin plates

Using a transfer press, we make all-in-one products with covers and pipes integrated into the sides, as well as seamless pipes with a tolerance range of  $50 \,\mu m$ . Since our process requires no brazing or cutting, it contributes to cost and weight reductions.

### Solutions for our clients

We mainly handle metal products for automobiles, consumer electronics, and new energy through ultra-deep drawing press processing using a transfer press. By making full use of ultra-deep drawing technology, we can make design proposals and VA/VE proposals, and promote cost reductions. We make all products from one piece of plate using a deep drawing press. By integrating the conventional processes of brazing and introducing composite parts into the deep drawing press process, we have eliminated brazing and assembly all together. We also press die-cast and sintered products that conventionally require cutting, in order to eliminate the processing and reduce the weight of products.

Fuji Kinzoku Co., Ltd.

http://www.fuji-kinzoku.co.jp/ English 1-12-3, Haradanaka, Toyonaka City, Osaka

ISO 9001 ISO 14001





#### Key features of the product 1. Cost reductions by shortened process

2. Customized specifications via progress die-press functions and raising functions 3. Cost reductions by reducing the number mold surfaces

By changing the cutting process into pressing that ensures the precision of burrs, concentricity, and flatness, we produce 2 million gas emergency trip valve parts a year on an automated line of robots.

### Solutions for our clients

We have established an integrated production system from parts processing to finished product assembly by which we can meet requests based on customer designs and thereby reduce prices. We practice highprecision high-guality manufacturing using single die-presses, progressive die-presses and laborsaving robots. With the increase of commercial production capability by automation and the introduction of robots, we can perform small lot production of diversified products.

### MARL KINZOKUSEISAKUSHO

http://www.marl-k.co.jp/ English 6-2-13, Shibukawa-cho, Yao City, Osaka

### Manufacturing of aluminum die-cast products for automobiles and electronic equipment

### Key features of the product



1. Integrated production from mold-making to forging and precision instrument processing

2. Global production system in Thailand, China and Japan

3. Mass-production technology

The examples of applications are aluminum die-cast products for electronic equipment (hard disk drives, bases, drive motor parts, etc.) and aluminum die-cast products for automobiles (steerings, engines, car air conditioners, transmission parts, etc.)

### Solutions for our clients

We have established an integrated production system comprised of design and manufacture of aluminum die-cast molds, casting by die-cast machine, and precision instruments processing by machining center and NC lathe. Moreover, with the establishment of commercial production plants in Thailand, China, and Japan, we can supply high quality, precision die-cast products such as automobile parts and electronic equipment parts to customers around the word. In particular, the hard disk drive parts produced in Thailand have exceeded a 50% share of the world market.

NSC Co., Ltd.	http://www.nsc-osk.jp English	ISO 9001
	1-3-7, Shinke, Higashiosaka City, Osaka	ISO 14001

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

Μ

Machining & Processing

### "µ-MIM<sup>®</sup>" micro metal injection molding



#### Key features of the product

1. Materials of poor formability or high melting point can be formed into shapes. 2. Commercial production of precision metallic parts of complicated shapes 3. Combination of different kinds of materials and various composite technologies

We specialize in commercial production of extremely small, high density and high precision parts of complicated shapes and less than several grams in individual weight, and have established production as a proprietary technology called " $\mu$ -MM<sup>®</sup>". The technology can be applied to a variety of materials including stainless steel, titanium, and copper.

#### Solutions for our clients

Our forming technology can be applied in various fields including electronics, precision optical instrument, medical treatment, and robots. It is possible to combine and assemble more than two parts, and complicated shapes with under-cut restrictions are easily available using Net-Shape method, which make die release impossible in normal forming processes. Based on these technologies, we can promote a reduction in man-hours required for assembly, press-fitting, etc., stable quality, and cost reductions. Moreover, based on this technology, we have developed proprietary porous metallic materials (microporous metal) that contain innumerable micron-sized holes.

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http://www.taisei-kogyo.com English
26-1, Ikedakitamachi, Neyagawa City, Osaka
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ISO 9001 ISO 14001

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**High-precision magnesium die-cast** 



#### Key features of the product 1. Weight reduction by making products thinner 2. High dimensional accuracy

3. Flexible design

In response to weight reduction demands in how they lead to energy-savings, we specialize in products made of magnesium and can produce parts of difficult-to-make shapes if aluminum is used, using our molding technologies. Users also evaluate our technology for producing heatsink parts, for which aluminum parts are otherwise mostly used.

#### Solutions for our clients

Magnesium exists as an alternative material for aluminum by providing good radiation performance, flexible design and light weights that aluminum cannot achieve, as well as an alternative material for resin by providing strength that falls short if resin is used. For transport machines, light weights are essential. Based on technology that we have cultivated in producing magnesium die-casts, we can make parts lighter and thus improve fuel consumption. Better radiation performance resulting from thinner parts may improve luminous efficiency.

Sankiblast Co., Ltd.

http://www.sankiblast.co.jp English /中文 6-82-2, Yamaga-cho, Yao City, Osaka

### High frequency induction heating, precision surface hardening facilities



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#### Key features of the product

1. Minimal dimensional changes. Elimination of distortion and polishing processes possible. 2. World's fastest treatment rate (Cycle time) 3. Can reduce CO<sup>2</sup> emissions by 80%.

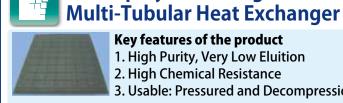
We design and manufacture high efficiency and high productivity equipment by using precision surface hardening technology based on induction heating (IH). We can propose and provide the most suitable heat treatment methods to customers. By further promoting technology development, we will deliver safer and more ecology-conscious surface treatment equipment.

#### Solutions for our clients

We provide integrated production services starting from the stage of trial manufacture to customers in industries that make automobiles, transport vehicles, heavy machinery, construction machinery, machine tools, machine parts, medical equipment, tools and energy. We can design and manufacture for customers products that employ the most effective induction heating-based precision surface hardening method. by not only reducing processes and improving product guality in view of all processes including contract processing, equipment planning, and planning and production schedule, but also reducing energy use and CO<sub>2</sub> emissions.

	Fuji Electronics Industry Co., Ltd.	http://www.fujidenshi.co.jp English/中文	ISO 9001
		6-71, Oibara, Yao City, Osaka	ISO 14001

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



Key features of the product

**Fluoropolymer Lining for** 

1. High Purity, Very Low Eluition 2. High Chemical Resistance

- 3. Usable: Pressured and Decompression

Nowadays, heat exchanger is utilized in every industry in various shape in order for purpose. "Fluoropolymer Lining for Multi-Tubular Heat Exchanger" will achieve problem solution in difficult areas which use high purity liquid as process liquid or fluorinated substances.

#### Solutions for our clients

(1) High Purity, Very Low Eluition on every liquid contact areas by NFX-2700 (high purity lining)

- (2) Multi-Use for Acids and Alkalis by High Chemical Resistance and Gas Barrier
- (3) No Crack by Physical Impact (Advantage to Glass Lining)
- (4) No Stick of Scales by fluoropolymer non-stick property
- (5) Available in Circumstances of Under Pressure or Decompression

(6) Applicable on Pressure Vessels (Lining is applied after equipment fabrication)

Nippon Fusso Co., Ltd.

http://www.nipponfusso.com/ English 2-4-6 Mokuzaidori, Mihara-ku, Sakai, Osaka

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ISO 9001
ISO 14001
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### MIM(Metal Injection Molding Parts)



#### Key features of the product

1. Suitable for medium-volume commercial production of intricate small products and products made of difficult-to-process materials

2. Labor-saving because of integrated parts

3. Labor-savings in post-processing

One field of sintering, MIM can produce complex-shaped, high-density, and high-accuracy metal parts. It is suitable for medium-volume commercial production of small parts and parts made of difficult-to-process materials. Through the integration of the vacuum heat treatment technology that we have cultivated for many years, we make proposals for yet higher strength, greater reliability, and joint development of new materials.

#### Solutions for our clients

In addition to providing the general features of MIM, as a total planner of MIM, we meet various customer needs. (1) Joint development including new materials by introducing gas atomized powder manufacturing equipment (2) Improvement of mechanical properties by obtaining further densification through the introduction of pressure-assisted sintering furnaces (3) higher reliability through the introduction of CT scan equipment and X-ray inspection system (4) Enhancement of inspection system through the introduction of a variety of inspection equipments including a noncontact fully automatic 3-D measuring system (5) Integration of the heat treatment technology we have cultivated for many years and proprietary production technology

Osaka Yakin Kogyo Co., Ltd.

http://www.osakayakin.co.jp/ English 4-4-28, Zuiko, Higashiyodogawa-ku, Osaka City, Osaka ISO 9001

### Making molds by shortened process



GJM



#### Key features of the product

Shortened process based on over half a century of experience
 Can make proposals on total cost reductions from planning to completion of products.
 Can pursue research and development through industry-academia-government collaboration.

We provide molds made by a greatly shortened process that was uniquely developed based on the experience and results of producing more than 10,000 molds over half a century. We can make molds in a shortened process because we have pursued labor-savings, which were realized by reducing overall processes ranging from product planning and trial manufacture to commercial production and completion of metal products, and developed environment-conscious production technology that helps reduce total costs.

#### Solutions for our clients

Our press molds have been used in various fields including automobile parts, air conditioners, steel furniture, consumer electronics, vending machines, architectural hardware, and lighting equipment. The assumed customers are manufacturing industries such as automobiles, consumer electronics, air conditioners, steel furniture, architectural hardware and lighting equipment. We have made more than 10,000 molds, and we have realized high quality, low costs and quick delivery based on the experience and results of more than half a century. We have established an integrated production system comprised of proposal, manufacturing and processing that covers from product planning and trial manufacture to commercial production and completion of metal products.

KONISHI METAL MOLD ENGINEERING LTD. http: 6-4-4

http://konishikanagata.sharepoint.com English 6-4-47, Nakaishikiri-cho, Higashiosaka City, Osaka

### Automotive press mold maintenance services



**Key features of the product** 1. Maintenance services for press molds

2. Repair services within maintenance services

3. Mold remodeling services by design change

We provide mold maintenance services to automobile makers in Japan and overseas. We accept difficultto-maintain molds from customers, and perform cleaning, repair, modification and design change of molds.

#### Solutions for our clients

By taking advantage of mold making technologies accumulated over a long experience with making automotive press molds, we support the launch of automaker projects around the world. We consider it a waste not to use our know-how to solve problems in the press mold industry. Molds directly made overseas and molds in the process of mass-production have various troubles and failures before start-up. We can provide our mold maintenance services by visiting customers in any place around the world.

	MEISEI METAL INDUSTRIES Co., Ltd.	http://www.meisei-metal.co.jp	ISO 9001
		4-5-12, Nozaki, Daito City, Osaka	ISO 14001

## Ultra-precision, ultra-fine, and ultra-small metal press working



Key features of the product

Specialized in ultra-fine metalworking of electronic parts
 From mold design development to commercial production

3. Can solve customer problems with technologies of true master craftsmen.

We specialize in ultra-fine, ultra-small press working of ultra-fine, ultra-small metal products such as electronic parts, semiconductors, sensors, heatsinks, optical packages, lithium ion batteries, medical parts, and in-vehicle parts. We provide products via an integrated production system from design and mold-making to mass-production.

#### Solutions for our clients

We have the top share of market worlds for one particular part built in mobile phones, etc. We deliver products only to companies listed on the first section of the Japanese stock exchange and large corporations with equivalent results. We provide products under rigorous quality, cost, and delivery controls. To make difficult things possible, we constantly take on the challenge of producing highly difficult-to-make products using technologies of true master craftsmen backed by traditional skills. We meet customer demands in any field with excellent technological capabilities including "precision metal press working technology," "mold design technology" and "measurement technology."

XEROM CO., LTD.	http://www.xerom.jp/ English	ISO 9001
	1-14-20, Itachibori, Nishi-ku, Osaka City, Osaka	ISO 14001

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

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Machining & Processing

### "Meguru" electric vehicles



#### Key features of the product

Japanese-style original design
 High technological capabilities of sheet metal craftsmen
 Hand-made one by one

"Meguru" electric vehicles are electric taxis mainly developed by local companies in Osaka. The electric vehicles are manufactured by making full use of the techniques of master craftsmen. The traditional Japanese design is best suited for taxis for tourism. They can be charged from a household outlet.

#### Solutions for our clients

As a prototype manufacturer specialized in sheet metal working, we have developed and prototyped consumer electronics, medical equipment, miniature electric appliances, and small hardware parts. We are currently pursuing a project to manufacture electric vehicles. We can perform in-house not only sheet-metal working and machining but also design in order to flexibly meet customer demand. We have established an integrated in-house system for controlling the flow of such processes and, thus, can realize low-cost cost production and quick delivery.

Yodogawa Works Ltd	Yod	ogawa	Works	Ltd
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http://www.yodogawa-ss.com/ English 1-13-6, Yakumonakamachi, Moriguchi City, Osaka ISO 9001

OJM

GO

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### "PIASTA" highly corrosion-resistant Bi-metal drill screw



#### Key features of the product

1. Corrosion resistance of austenite stainless steel 2. Drilling and Tapping performance of hardened steel

3. Realization of working efficiency and reliable joining

Since dissimilar metals are combined in one screw, each metal demonstrates its properties well. During installation, the super-hardened steel makes work speedy. Once installed, the corrosion-resistant stainless steel guarantees reliable joining. These highly corrosion-resistant Bi-metal drill screws have been highly rated by users.

#### Solutions for our clients

The screws are most suitable for joining roofs and exterior wall materials of buildings that require corrosion resistance, particularly structures in coastal regions exposed to sea breezes, chemical plants that emit corrosive gases and areas where acid rain is intense. Normally, despite its good corrosion resistance, stainless steel has low cutting performance and requires drilling work in other process, resulting in poor working efficiency. Conversely, hardened steel drill screws that can be installed in one step have poor corrosion resistance. With the use of drill screws made of composite metal, which bring together the advantages of two kinds of steel, we offer reliable joining that guarantees both workability and high corrosion resistance.

PIAS SALES CO., LTD.

http://www.pias-vis.co.jp/ English 4-3-44, Shinkitajima, Suminoe-ku, Osaka City, Osaka ISO 9001





Key features of the product 1. Single item, small-lot processing 2. Quick delivery

3. We have a plant in Vietnam that increases cost competitiveness.

Based on knowledge and experience we have accumulated over a long period of time, we manufacture all kinds of machine parts from small to medium size, such as shafts, flanges, bearing cases, and brackets, by placing importance on high accuracy, quick delivery, and reasonable prices.

#### Solutions for our clients

We process simple parts using simpler methods and complicated parts using as simple of a processing method as possible, using a combination of general-purpose lathes, NC lathes and machining centers. Thus, we can provide high-accuracy processing of singular parts in small lots with quick delivery. And through a network of subcontractors, we can provide finished products with surface treatment, etc. We can process all kinds of steel grades including SS400, S45C, SUS, aluminum, titanium, and hastelloy. We do all welding in-house and can handle any kind of material and shape. Moreover, we make constructive proposals for drawings presented by customers and offer optimal processing methods and prices.

SAN-EI-SEISAKUSHO Co., Ltd.       http://www.san-ei-seisakusho.jp/ English       iso 90         6-5-68, Izuo, Taisyo-ku, Osaka City, Osaka       iso 90	
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## Industrial rubber products, extruded products, IN M resin and metalworking technology



Key features of the product

1. Processing of urethane, teflon, nylon and various other types of rubber / resin materials 2. Precision parts for industrial machinery (Packings, rollers, shutters, etc.)

3. Medical care products and robot parts (Training equipment, covers, brackets, etc.)

We have the technology for processing industrial rubber and resin material products, including various types of rubber plates and rollers, molded products, and extruded products. Moreover, we apply our accumulated technologies to the processing of precision parts used for factory automation equipment such as electronic packaging robots, as well as the manufacture and marketing of training equipment for rehabilitation.

#### Solutions for our clients

Since the founding of the company, we have continued manufacturing precision parts used for industrial machines and plant automation equipment, as well as heavy goods transport equipment. The assumed customers come from a wide range of fields including machine tools, automobile and electrical equipment industries, education research institutes of universities, and the heavy goods transportation industry. We have a variety of machine tools and precision measurement equipment, and can accept orders from a single item to commercial production, and quickly deliver products at low costs. We can also provide integrated production of products made of industrial rubber, resin, and metallic materials.

IZUMO Co., Ltd. http://www.izumo-web.co.jp/ English 3-9-18, Shinomiya, Kadoma City, Osaka

ISO 14001

GJT



### Laser cutting and design



#### Key features of the product

Can manufacture your original design products.
 Can manufacture the world's only products.
 It is not necessary to make molds.

We put the silhouette of portraits and mascots in the laser processing data which is used for cutting the metal. Users can use products of 3 millimeter thick as ornaments and products of 1 millimeter thick by hanging them on walls or placing them in frames, for appreciation.

#### Solutions for our clients

We cut metal using laser beams to form silhouettes of city mascots and company image characters. If stainless-steel is used, our products can be placed outdoors and used semipermanently, which leads to cost reduction in the long run. Our products can be also used as mementos of individuals. For example, a couple can create a silhouette of their illustration for the commemoration of marriage. We also receive orders for creating design of Buddhist images since we have a stock of such design. Moreover, we can make original nameplates. The size of metal can be freely selected although metal is divided if the size is larger than 1200 mm x 2400 mm.

Maeda Metal Works, Co., Ltd.

http://www.maekin.co.jp English 3-14-2, Shimeno, Neyagawa City, Osaka

### Earth-conscious press working technology GO



#### Key features of the product

- 1. Appearance protection sheet-less processing
- 2. Complete combustion burner press processing
- 3. Composite press technology for shorter processing

Our press working technology enables complete and clean processing of combustion burners based on an earth-conscious processing method. Moreover, we have eliminated protective sheets required in appearance processing, thus realizing clean energy-saving processing at low cost. We are highly rated by customers for design and manufacture of composite molds via a shortened process.

#### Solutions for our clients

We have created a flexible production line that can handle one lot to large lots and deliver completed parts based on an integrated production system from design and prototyping to commercial production and assembly. Through the introduction of the latest production control system in conjunction with an EDI trading system, we monitor the real-time progress of processing steps, and enhance customer satisfaction via high quality control and delivery date management. Moreover, we propose antibacterial aluminum processing as extra added-value in addition to our processing technology. We have received the rationalization excellence award and other recognitions from Panasonic Corporation and other companies.

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IKK	CO	KP	<b>UK</b>	AII	IUr

http://www.iida-kinzoku.com/ English 1-9-12, Kasuga-cho, Yao City, Osaka

ISO 9001	]
ISO 14001	]

TM

### Digital free design (DFD)



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### Key features of the product

Can make molds just as imagined (improved design).
 Can faithfully reproduce molds from database information.
 Can reduce costs and improve mass-productivity.

We create 3D designs of detailed, irregular and textured patterns, and perform cutting on small-diameter end mills. Contrary to conventional chemical-machining using chemicals that have many constraints, we can faithfully reproduce, enlarge or reduce molds based on data. Our system enables gradation processing that is difficult to perform by conventional etching and thus can improve product design.

#### Solutions for our clients

If our DFD processing is applied to molds, texturing expenses become unnecessary and costs are reduced. Because we cut patterns simultaneously when cutting shapes, delivery dates can be shortened. Moreover, the DFD system has infinite possibilities and diversified applications because we not only can make molds but also process and reproduce handicraft products faithfully via metalworking.

NISSIN SEIKOU CO., LTD.

http://www.nissinseikou.com English 1-11-2, Kashitanishi, Higashiosaka City, Osaka

## LSR composite molding technology that allows insert molding to different materials



#### Key features of the product

Integral molding of seals part to thin parts of different material
 Development of a proprietary LIM molding machine
 Development of super high-accuracy injection mechanism

To perform insert molding of different materials such as thin resin and metal, we have developed a proprietary LIM molding machine based on technological capabilities we cultivated over many years. Even when molding rubber together with decorative thin resins such as in the case of mobile phones, the machine enables rubber molding without damaging the decorated side, thus helping to make water-proof mobile phones thinner.

#### Solutions for our clients

We provide customized design and manufacturing for customer applications and functions such as light electrical products, automotive parts, mobile phones and office equipment. In particular, regarding packing for protection against water, dust and sand, we can provide products that satisfy customer demands using technologies we cultivated over the years. Moreover, with the development of a proprietary LIM molding technique, we can provide high-accuracy rubber products unseen in other companies and perform composite molding of rubber and different materials in order to help manufacturers reduces the number of parts and downsize products.

KINJO RUBBER CO., LTD.	http://www.kinjogomu.jp English	ISO 9001
	1-4-25, Atobe-Kitanomachi, Yao City, Osaka	ISO 14001

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

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## Strain-free perfect circle elbow cut from a single block



#### Key features of the product

A perfect circle ensured wherever cut
 Identical strength in all parts
 Elbow that can deal with erosion

Because the elbow is cut from a single forged block, it has no welded parts, deformation and irregularity in thickness, while guaranteeing remarkably enhanced safety, reliability and fluidity compared with conventional products. Used as a specimen in a development project for strengthening infrastructure against aging, its quality has been highly rated.

#### Solutions for our clients

Since mechanical processing allows us to make highly accurate products of the same size, our products have been used as specimens by the research institutes of national universities. Because elbows were made to design under this method for the first time, it is expected that research and development of elbows, which has little progressed so far, will advance exponentially in the future. Since the product can be cut into a "perfect circle" wherever is cut, it increases flow efficiency and thus largely contributes to energy-saving.

NODA DIE MARKER Co., Ltd.

http//www.nodakanagata.co.jp/ English 3-38, Takasago, Takaishi City, Osaka ISO 9001

### 📲 Vacuum heat treatment technology



#### Key features of the product

1. High vacuum heat treatment (0.1 to 10<sup>-5</sup>Pa)

2. Treatment of large materials (H760mm x W760mm x D1,200mm) 3. Quick delivery by working around-the-clock, seven days a week

Metal heat treatment refers to "hardening," "softening," and "attaching". "Hardening" means quenching, ion nitriding, etc.; "softening" means annealing, solution, etc.; and "attaching" means soldering, diffusion bonding also known as "thermo compression bonding," etc. We heat and cool metals in a vacuum to give them hardness, toughness, and corrosion resistance.

#### Solutions for our clients

Compared with conventional treatment systems, our vacuum heat treatment can prevent unnecessary chemical changes and oxidation. Therefore, it is the best heat treatment method for metal products including stainless steel and titanium, which can add high values. In particular, the ion nitriding that hardens metal surfaces with nitrogen ions in the low temperature range, causes little distortion and completes the process in a short time by maintaining the surface conditions of metals. Moreover, ion nitriding needs no post-processing and the composition of nitrided case and gas ratio, which cannot be achieved by other nitriding processes, can be freely controlled. In addition, ion nitriding can also enhance abrasion resistance and corrosion resistance.

HATTA KOGYO CO., LTD.	http://www.hatta.co.jp/ English	ISO 9001
	2-18-40, Hattanishimachi, Naka-ku, Sakai City, Osaka	ISO 14001

### """ "DK-coat Infinity" inorganic ceramic coating



**Key features of the product** 1. High thermostability 2. High durability 3. High safety

DK-coat Infinity is a nontoxic, nonhazardous next-generation ceramic coating that is made only of inorganic material and contains no organic materials. The coating has antibacterial and antifouling effects, complies with standards for food contact substances, and has good corrosion resistance, chemical resistance, thermal conductivity, and electrical insulation properties.

#### Solutions for our clients

DK-coat Infinity is not viscous and offers good durability but contains no PFOA, which is suspected of being a carcinogen. Since DK-coat Infinity can be easily washed and has good thermal conductivity, it is attracting attention as a next-generation coating for safe cooking utensils used with food. In addition, the coating is expected to be used in various fields as, for example, it enables the use of specialized products at the highest allowable temperature limit of more than 450°C.

DAITOH CHEMICAL CO., LTD.

http://www.daitohchemical.jp/ English 501-3, Kitaamabe, Mihara-ku, Sakai City, Osaka

## High-quality special steel products, high-precision machined products

#### Key feat 1. High-qualit 2. Ultrah

 Key features of the product

 1. High-quality bearing steel products, high-strength non-heat treated steel products that require no heat treatment process

2. Ultrahigh-precision processed products of micron precision 3. Long shafts

1. We provide high-quality special steel products such as high quality bearing steel products and highstrength non-heat treated steel products that require no heat treatment process.

2. We provide ultrahigh-precision machined products such as spindles with a processing accuracy of  $2\mu m$ . 3. We provide long shafts (the length is not more than 2800mm) with a processing accuracy of 30  $\mu m$ .

#### Solutions for our clients

• We have several advanced steel product processing technologies that other companies do not have. To meet customer needs for a delivery of a large quantity of products as quickly as possible, we have developed a proprietary processing system based on a series of reforms of facilities and processes.

• We make proposals based on proprietary technologies for contributing to quick delivery and cost reduction for customers. We have developed a technology of "processing bearing steel products using commercially available chips instead of using forming tools" to realize shortened delivery time and cost reduction. We also have a technology of cutting "composite round bars made of steel material and special resin". Moreover, we have developed a technology of cutting and processing pieces from long materials that are high frequency-quenched after the heat treatment process to realize quick delivery and cost reduction.

HAYASHIDA SPECIAL STEEL Co., Ltd.

http://www.hssk.co.jp/ English 4-12-14, Imabayashi, Higashisumiyoshi-ku, Osaka City, Osaka ISO 9001

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## Machinery & Equipment

## CAD/CAM system and various types of automatic processing machines



#### Key features of the product

One CAD system can control all automated machines.
 Carry out development, production, sales and maintenance in-house.
 Acquired several patents and have them protected.

In addition to our proprietary CAD system that can control all automated machines, we provide highprecision and highly-functional automatic processing machines that can be used in manufacturing plants and offices of various industries, such as laser processing units, water jet systems, cutting plotters, automatic cutting tool bending machines, and blanking systems.

#### Solutions for our clients

Our CAD system enables users to centrally control various production machines, without preparing control CAD systems for each system. The industries to which our CAD system can be applied include the printing paper container and corrugated box manufacturing industries (for machines used in the processes of design, sample-making, making of cutting dies, and removing products after the die cutting process), clothing and other textile industries (for pattern-making machines), signage and display industries, store layout and signboards manufacturing industries (for machines producing exhibits), and industries manufacturing parts for automobile and aircraft industries (for machines that can make samples and small-lot products).

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LASEF	KCK (	_OKP(	JRATI	ON

http://www.laserck.com English 2-91, Wakabayashi, Yao City, Osaka

### Small component transfer robot system



#### Key features of the product

1. Can propose appropriate systems based on past results.

2. High reliability based on the appropriate system

3. Realize high speed and downsizing.

We have realized high reliability in transport segments that are often neglected in the system configuration, by using robots. Moreover, to cope with the acceleration of product cycles, we have introduced robots that make it possible to change and start production lines in a short amount of time by changing the robot teaching program.

#### Solutions for our clients

We will mark the 60th anniversary of the founding of the company this year. We have developed as a specialized maker that provides planning, development, design and manufacturing of various types of automation and man-power-saving systems such as factory automation, robots, and mechatronics. On a daily basis, we put together system projects and manufacturing systems in business deals that cover not only robot makers including Yaskawa Electric, Fanuc, Nachi-Fujikoshi, Daihen, and Denso, but also industrial categories ranging from the heavy industries, light electrical, automobiles to medical facilities. Based on our accumulated know-how of systems, we can propose the system configuration that is the most suitable for customers.

DAIKO TOOL MFG CO., LTD.

http://www.daikokikai.co.jp/ English 20-1, Kitaohi-cho, Takatsuki City, Osaka

### "Million guide" needle roller type guide post G O J



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ISO 9001

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### Key features of the product

- 1. Hexagonal liner roller guides used
- 2. High rigidity and accuracy, and rotation stopper
- 3. Low pre-loading gives the roller smoothness and a long service-life.

"We use needle rollers instead of ball rollers." – The Million guide adopts a hexagonal liner roller system and balances high rigidity in all directions. This is the "ultimate form" of liner guide. The main applications are mounting machines, guides for FA, various types of mold guides, etc.

#### Solutions for our clients

These liner guides are used for precision molds and systems. The assumed customers are electronic components, information equipment parts, consumer electronics parts, and automobile parts industries. By applying the "Million guide" to precision molds, users can achieve large cost reductions by increasing rigidity, improving product precision, decreasing defect rate, and prolonging die life. Our products also demonstrate their quality as a guide for systems that require rigidity. We can also meet customer requests for special processing.

CO., LTD.	http://isel.jp English 1-2-16, Atobekitano-cho, Yao City, Osaka
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## Electric resistance stud bolt welding system

ISEL



Key features of the product

1. Electric resistance welding makes welding quality stable.

- 2. Water-cooled electrode reduces costs.
- 3. Thin steel plates under 0.7mm in thickness can be welded.

Conventionally, stud bolts are welded to automotive body parts by arc welding. With the increased use of corrosion-proof steel sheets in recent years, however, steel sheets have become thinner so as to reduce weight, which inevitably causes more welding failures. Therefore, we have developed a simple welding process based on electric resistance welding, which can realize high-quality stud bolt welding.

#### Solutions for our clients

The main users of our welding system are automotive body plants and parts makers, but we also consider potential use in various fields including consumer electronics, farm equipment, and housing industries. Conventional technology requires costly management to ensure welding quality such as frequent maintenance of equipment and 100% product inspections. However, our system requires users to perform management on the same level as general spot welding and thus enables users to ensure welding quality and reduce costs. In particular, the use of our system helps users to increase the rate of operation on robot-based automatic welding lines and thus largely improve productivity.

TECHNO AOYAMA Inc. http://www.t-aoyama.co.jp English 1931-1, Fukasaka, Naka-ku, Sakai City, Osaka

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

ISO 9001

ISO 14001

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## High frequency dielectric heating-applied products



#### Key features of the product

- 1. Heating by high-frequency, or microwave
- 2. Rapid, uniform heating
- 3. High thermal efficiency and good energy saving

Dielectric heating based on high frequency, or microwave is internal heating in which objects are self-heated. It ensures rapid, uniform heating compared with conventional hot air and steam heating. Our products have been used in a wide range of fields including heating and drying of plastics, wood, food, and ceramics, as well as cancer treatment.

#### Solutions for our clients

We can contribute to the world by making products specialized in dielectric heating. The TEMPATRON is a high frequency tempering machine designed for large-scale food plants, and can unfreeze a large amount of frozen food materials made of beef, pork and chicken without losing their quality. The THERMOTRON is a high-frequency-based hyperthermia treatment apparatus that uses the cancer cells' weakness against heat. The apparatus has attracted global attention as a new cancer treatment without side effects.

#### YAMAMOTO VINITA CO., LTD.

TD. http://www.vinita.co.jp/ English 6-3-12, Ueshio, Tennoji-ku, Osaka City, Osaka

## Organic and nonorganic hybrid particle testers and manufacturing equipment



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# Key features of the product 1. Can produce hybrid nanoparticles. 2. Can produce nanoparticles with little agglomeration. 3. No pulverization is required.

The supercritical water nanoparticle synthesizer synthesizes nanoparticles using the properties of the supercritical state of water based on the supercritical hydrothermal synthesis method developed by Professor Tadafumi Adschiri of Tohoku University's WPI Advanced Institute for Materials Research (WPI-AIMR). The synthesizing method enables the manufacture of nanoparticle materials that have new functions and properties.

#### **Solutions for our clients**

We have delivered nanoparticle synthesizers to the research laboratories of universities and manufacturers of various types of materials. With the introduction of our systems, customers can perform experiments on synthesizing and produce nanoparticles at their research laboratories. Using nanoparticles, customers can synthesize next-generation lithium ion battery materials, solar cell materials, and magnetic materials. Moreover, as organic and inorganic hybrid nanomaterials, users can synthesize new materials with new functions, such as nanoparticles for power device materials that give resin high heat conductance.

ITEC Co., Ltd. http://www.itec-es.co.jp/ English 4-132-1, Kannabe-cho, Sakai-ku, Sakai City, Osaka ISO 9001

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### Solvent-Free ultrasonic metal stencil cleaner



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#### Key features of the product

1. Solvent Free

2. Simultaneous Cleaning and drying operations using proprietary cleaning head 3. Huge Running Cost Reduction

The Sawa Ecobrid SC-AH100 is an eco-friendly ultrasonic wave metal stencil cleaner that uses a VOC-free cleaner, "Sawa Water" is nonpolluting alkaline electrolyzed water created from city water. Non surfactant, non chemically synthesized substance contained. Earth friendly cleaning water effectively eliminates stains.

#### Solutions for our clients

The Sawa Ecobrid SC-AH100E is a metal stencil cleaner that can extensively support customer environmental measures. Using a proprietary cleaning process, the cleaning and drying can be completed in about 5 minutes. This product can help reduce the energy consumption at factories and CO<sub>2</sub> emissions by 43% (compared with other products of Sawa Corporation.) Moreover, using electronic alkaline water, it can help reduce organic solvent consumption that harms human health and environment.

SAWA CORPORATION http://www.sawa-corp.co.jp/ English /中文 2-17-1, Tsudayamate, Hirakata City, Osaka

### Automatic tool grinders



Key features of the product1. Can regrind four kinds of tools such as drills.2. Simple program-less control3. Compact design to enable regrinding on tables

This fully automatic tool regrinding machine can regenerate a majority of rotating tools used in production sites. Anyone can immediately operate the grinders by operating the easy-to-understand screens and inputting a few numerical values. Moreover, full automatic grinding prevents quality variations between different operators.

#### Solutions for our clients

Because customers can regrind tools that used to be outsourced to external regrinding companies, inhouse, they can save the time from sending tools until they are returned, and reduce the number of extra tools required during the outsourcing process. Moreover, our grinders are effective for companies that have no grinding department, particularly for small and medium-sized enterprises. Even with companies that have grinding departments, our small, space-saving and easy-to-use automated machines can offer efficient regrinding.

KANAE GIKEN CO., LTD. http://www.kanae-giken.jp/english/index.html English 2-19-10, Tsudayamate, Hirakata City, Osaka



## Highly efficient electric blowersG O JEquipped with Premium efficient (IE3) motor



#### Key features of the product

1. High efficiency

2. Superior heat resistance and corrosion resistance

3. Optimal products can be selected from 30,000 models.

We provide a variety of compact blowers equipped with in-house motors via quick accurate delivery. We have promoted high efficiency by combining newly designed high efficiency motors with high efficiency blowers. Our electric blowers can be installed in any kind of industrial equipment and systems for various applications.

#### Solutions for our clients

Making full use of "flow technology" and "rotary machine technology," we manufacture blowers that can be used for any kind of industrial equipment. The assumed customers are semiconductor makers, food makers, and other companies that use industrial equipment including industrial furnaces and driers. By using energy-saving highly efficient electric blowers, customers can promote energy-savings and reduce emissions of greenhouse gases. As the effects of using the electric blowers, customers can reduce power consumption by up to 17% (compared with other products from Showa Denki).

SHOWA DENKI CO., LTD.	http://www.showadenki.co.jp English 1-25, Shindenkitamachi, Daito City, Osaka

### CLP-35DDS high accuracy gear Measuring instruments



#### Key features of the product

Enable highly accurate gear measurements at production sites.
 High efficiency, high functionality and long service-life
 International MRA-accredited company

The machines of the CLP-35DDS series are successor models of the world's first NC gear measuring instruments, the GC-HP series, and feature high accuracy, strong resistance against temperature change, and quiet operation. The CLP-35DDS models can be used in various fields where high quality gears are required such as those for automotive transmissions and drives for office automation equipments, and is suitable for the measurement of ground gear and injection molded plastic gears.

#### Solutions for our clients

The accuracy of gears largely affects noise and vibration of machines, printing irregularities of printing machines, and also damage of gears themselves. If customers can measure and guarantee the high accuracy required of gears by using the highly reliable gear precision evaluation system of the CLP-35DDS series, they can have a competitive edge in terms of gear accuracy on global markets. The reliability of the measuring instrument is exhibited by the world's top-level measurement capability of gear calibration instrument, which are used in our gear calibration laboratory (that is the only one gear calibration laboratory in Japan and internationally accredited under mutual recognition arrangement).

Osaka Seimitsu Kikai Co., Ltd.

http://www.osk-corp.co.jp English /中文 6-5-16, Mikuriya, Higashiosaka City, Osaka

## High-performance reverse osmosis member water purification system



#### Key features of the product

- 1. Can be employed for generating contaminated groundwater into drinking one.
- 2. Safe, healthy and good tasting water is provided.
- 3. Space technology is applied for the water purification system

Our company has been manufactured and marketed water purification systems these 18years. The system can generate harmful contaminated water into drinking water. Safety, healthy and good tasting water was invited for the result of the space technology which researched and developed with Japan Aerospace Exploration Agency(JAXA).

#### Solutions for our clients

Our purification systems can remove not only heavy metals such as Cadmium, Arsenic and Mercury but also toxic chemicals such as Nitrate-nitrogen and Formaldehyde as well as radioactive substances as Cesium and Iodine. Our sales line is consist of three types of water purification systems: (1) Water purification system for residence use which can be generate the water from well and tap into drinking water. (2) Commercial use system which is employed at restaurants and hotels. (3) Rescue water purification system which can be generate drinking water from sea water in the case of disaster. These systems can provide drinking water 0.4 to 5 tons a day.

New Medican Tech Corp. http://nmt.or.jp/english/english.html English 15-8, Kawagishi-cho, Suita City, Osaka

## Image (camera and laser) measuring system



#### Key features of the product

Dimensional measurement is possible without touching workplaces.
 Scratches and waste can be examined.

3. Separately, we can develop and manufacture LED lighting systems.

The system enables users to perform highly accurate measurements of workplaces of a variety of shapes without touching them. No dedicated operators are required as anyone can easily operate the system. The system automatically outputs analysis data. Moreover, we can provide LED lighting systems as an energy-saving measure.

#### Solutions for our clients

Our image-based size measuring systems have been highly rated by customers as they can quickly and accurately measure LCD panels of TVs and mobile phones, polarizing plates, diffuser panels, metalworking parts, office automation equipment parts, camera parts, resin molding parts, and all kinds of seal-shaped workplaces, and enable users to quite easily perform inspection before product shipment. We have delivered the systems to customers in the USA, EU and Asia in large numbers and at reasonable prices compared with other companies, and customers who have introduced our systems have highly evaluated them. Moreover, we have provided LED lighting systems as straight type use and for plant lights and street lights.

CHUO ELECTRIC WORKS LTD. http://www.e-cew.co.jp/ English 2-7-12, Uchindai-cho, Miyakojima-ku, Osaka City, Osaka

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

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### **Microfocus digital Xray radioscopes**



#### Key features of the product

1. Maximum pixel resolution is 2  $\mu$  m. 1.5M pixel image. 2. Easy operation with a large-size shielding glass 3. Ultra-low power consumption of 150W

Using the 70KV micro focus X-ray source, the desktop Xray radioscope can see through a steel plate 1mm thick with a proprietary high-sensitivity, low-noise X-ray CCD sensor. Since the pixel size is  $20 \mu m$ , the pixel resolution becomes 2µm at 10 times magnification. The Xray radioscope shows 1.5M pixel high resolution images on the large screens like HDTV.

#### Solutions for our clients

To cope with the downsizing and densification of parts, using the desktop microfocus fluoroscope, users can promote the maintenance and improvement of product quality in their quality control and mounting sites. The microfocus Xray radioscope was developed at the request of production sites that seek equipment that "can inspect normal-size boards and has a size that does not require a large installation site", "enables anyone to easily use" and "even shows high-resolution images of semiconductor mounting." The microfocus Xray radioscope can be used like a magnifying glass or a microscope.

http://beamsense.co.jp/ English **BEAMSENSE Co., Ltd.** 2-19-16, Izumi-cho, Suita City, Osaka

#### **Concrete specimen end** ள grinding machines



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### Key features of the product

- 1. Grinds specimen ends within a flatness of 5/100.
- 2. Grinds three specimen end surfaces at one time automatically.
- 3. Uses high-speed rotating special grinders.

This is the ultimate in specimen end grinding machines. This machine grinds three specimen end surfaces at one time automatically. It is a reliable machine that reduces manpower, work time, and space to 1/3 and has posted sales results totaling more than 2,500 units in Japan. This product can be made only by a testing machine system manufacturer.

#### Solutions for our clients

We meet customer requests as the top civil engineering and construction-related testing machine manufacturer in Japan. Many of our concrete specimen end grinding machines are used in various research institutes of state organizations, universities, and general contractors for studying concrete, soil properties, and rocks. When preparing specimens for concrete tests, using this very convenient machine. users can accurately grind specimens that contributes to more labor-saving operations than conventional machines. Since we specialize in testing machine systems, you can relay on us.

http://www.marui-group.co.jp/ English MARUI & CO., LTD. 1-9-17, Goryo, Daito City, Osaka

ISO 9001

#### 100% Inspection Systems (for screws, bolts, G O U ..... nuts, automobile parts, medical fasteners, etc.)



#### Key features of the product

1. High accuracy (meets Japanese standards) 2. High quality 3. Usability

In Japan, where the highest quality standards are set, our inspection systems accurately check and clear a wide variety of parts ranging from micron-sized solder balls that look like powder and microscopic screws for electronic components to M16-sized screws.

#### Solutions for our clients

We have customers in the automotive, aerospace, military, railway, medical, electronic industries, and so on. Mechanization has evolved greatly from when it first started to now and numerous products have emerged, but one thing remains constant: all products are made up of smaller parts and any defects could lead to a serious accident. Armed with experience, proprietary technologies, and a unique know-how that we have cultivated, we continue to evolve every day and are convinced that we can contribute to our customers' quality control and efficiency.

YUTAKA CO., LTD.

http://www.tech-yutaka.co.jp English 24-12, Shinmachi, higashiosaka City, Osaka

### Manual probe stations

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#### Key features of the product

1. Enable to handle from chips to 12-inch size wafers. 2. Enable to use for wide-ranging needs including assessment and analysis. 3. Most suitable for IV/CV, RF measurement

The probe stations are designed for electrical measurement of semiconductors and can test devices as wafers and chips. We can also provide optional probe stations that can be used for ultra-low current measurement and measurement in high temperature environments. The probe stations of customized shape are also available for use in illumination.

#### Solutions for our clients

Using our manual probe stations, semiconductor developers and semiconductor process engineers can easily measure electric properties on the wafer and chip level. Moreover, since operability is taken into consideration, the stations are designed so that users can easily load and unload wafers from the front side. Our products are most suitable for IV/CV and RF measurements, and can satisfy wide-ranging needs in assessment and analysis. Thus, users can eliminate the troubles and costs associated with packaging.

http://www.apollowave.co.jp English **APOLLOWAVE** Corporation Daisho Bldg., 4F, 6-7-8, Nishinakajima, Yodogawa-ku, Osaka City, Osaka

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

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## Machinery & Equipmen

#### Energy Dispersive X-ray Fluorescence Spectrometer(EDXRF)



#### Key features of the product

Compact lightweight system that enables high-performance analysis
 Enables on-site analysis without relocating samples.
 Easy operation that requires neither preparation nor solvents

In environmental surveys, quality control of industrial products, advanced technology development, and inspections of unearthed archeological articles and cultural assets, quick on-site component analysis is demanded. Meanwhile, because analysis accuracy is increasingly more advanced, compact low-priced products are required. We develop systems that meet such needs.

#### Solutions for our clients

As the need to analyze contaminated soil, hazardous elements of consumer electronics, impurities in semiconductor components, salt damage in concrete structure, and elements contained in unearthed articles and cultural assets is increasing, our analyzers are practically used in fields such as state-of-theart material development, environmental testing, quality control, age determination, and cutting-edge research. Moreover, applications in resource exploration and detailed blood analyses are promising in the future.

OURSTEX CORPORATION

http://www.ourstex.co.jp/ English 13-20, Honmachi, Neyagawa City, Osaka

### "Sanitary" products (Tramp metal removal system)

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Key features of the product

1. Rapid response to customer specifications

2. Diverse lineups

3. High magnetic force and short delivery date

Stainless steel pipes are installed with strong neodymium magnets. The pipes can be incorporated into manufacturing lines for the food, medical and materials industries. Thus, the systems can efficiently and securely remove iron dust, etc. that is mixed into products.

#### Solutions for our clients

In this era where food safety is demanded worldwide, our "Sanitary" products remove metal dust from manufacturing lines of the food, medical and other industries, and enhance the safety and reliability of products. Making full use of magnetic field analysis technology, we can quickly satisfy customer needs including trial manufacture, and help customers enhance the quality of products.

SHIMONISHI SEISAKUSHO CO., LTD.

http://www.shimonishi.net/english/ English 6-8-25, Wakaehigashimachi, Higashiosaka City, Osaka

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

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#### **Key features of the product** 1. Compact size, light weight. 2. Enables long-range, wide-field measurement. 3. Protection Rating IP67

The sensor covers a scanning range of 30 m in detection distance and 270  $^{\circ}$  in viewing angle. Compact size(W60 x D60 x H87mm) and light weight (370g), it features a longer range and fast response. With an IP67 Protection Rating, it is most suitable for use as an environmental detection sensor that acquires data in synchronization with the motion of service robots.

#### Solutions for our clients

This laser range finder is most suitable as an environmental detection sensor for autonomous service robots that are extensively used in the life fields of medical care, nursing care, welfare, cleaning, and security, and in public fields such as disaster response. When used for the purpose of enabling a robot to avoid obstacles by judging the presence of humans in the direction of travel, visual sensors such as image sensors have the setbacks of being unusable in the dark, short detection distances, and narrow-angle detection ranges. With an IP67 Protection Rating, however, this sensor can be used for outdoor applications.

HOKUYO AUTOMATIC CO., LTD.	http://www.hokuyo-aut.co.jp <b>English</b>	
	Osaka HU Bldg., 2-2-5, Tokiwamachi, Chuo-ku, Osaka City, Osaka	ISO 14001

## AUTO-SLIME (Drilled pier slime measurement and removal system)



**Key features of the product** 1. Realize the visualization of treatment.

2. Reduce variations in the collection of accumulated slime.

3. Cope with wide-ranging drill hole sizes.

We have developed technology for measuring slime based the latest mechatronics and sensing technologies, and realized the world's first measurement of slime for cast-in-place piles. With this achievement, we have succeeded in visualizing the distribution of slime density in holes, and, based on this technology, we have developed a slime measurement and removal system, AUTO-SLIME. Thus, we have remarkably shortened the construction time and improved construction quality at construction sites.

#### Solutions for our clients

Our concept is "the promotion of ICT at construction sites." Specifically, in order to disengage on-site operators from distress work and safety management, we have brought state-of-the-art technologies to construction sites after collecting them from across the world, and have been striving for their realization. The ICT technology that we have cultivated via Japanese construction technologies will help customers at construction sites around the world. We consider Japanese construction technologies the world's best, and our company, which has made products in that rigorous environment, can provide technologies that will be accepted around the world.

TAIYU CORPORATION http://www.taiyu-corp.com 中文 4-11-7, Shimeno, Neyagawa City, Osaka GO

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

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### **Facing centers**

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ISO 9001

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### In-yard heavy cargo transportation vehicles



Key features of the product 1. Movable load is 1 to 50 tons. 2. Trailer-type vehicles, electric vehicles 3. Non-rail guided vehicles, rail guided vehicles

Our vehicles are most suitable for transporting ultra-heavy cargoes such as press molds, plastic injection molding molds, and steel plates and coils. The movable load is 1 to 50 tons (rail guided vehicles successfully tested up to 200 tons). The tire wheel vehicles (non-rail guided vehicles) can freely move anywhere. The rail guided vehicles are advantageous for automatic travel. Automated guided vehicles (AGV) are also available.

#### Solutions for our clients

With regard to in-yard transportation, there are limited methods for transporting ultra-heavy cargoes of more than 10 tons. As a company that satisfies user needs, we have a track record of planning and proposing more than 1,000 transportation vehicles a year. We also have a track record of developing more than 200 kinds of purpose-specific vehicles a year. We provide a variety of trailers for in-yard transportation such as 2WS types, 4WS types, and turntable types at low costs. Electric vehicles are available for non-rail guided remote controller-types (wired and wireless), rail guided remote controller types (wired and wireless), and rider types. We are unmatched around the world as a company that can provide such a wide range of in-yard vehicles.

SANO SHARYO SEISAKUSHO CO., LTD.

http://teamsano.co.jp English

1-9-10, Wakamatsu-cho-Higashi, Tondabayashi City, Osaka

### Industrial dryers, industrial heat treat furnaces, 🖸 🗾 🚺 exhaust-gas treatment equipment



#### Key features of the product

1. High-accuracy drying by the control of heat and wind 2. High-efficiency gas treatment based on catalytic combustion method 3. A combination of heat treatment and gas treatment is possible.

We manufacture and market industrial dryers, heat treatment furnaces, and their exhaust gas treatment equipment. We have manufactured a variety of dryers including hot air circulating dryers, vacuum dryers, and explosion-proof dryers. We can supply heat treatment furnaces such as kiln furnaces and conveyor furnaces. The exhaust-gas treatment equipment is a catalytic combustion plant of high efficiency and low running cost.

#### Solutions for our clients

The assumed customers are chemical manufacturers, electrical products manufacturers, universities, and intra-corporate research laboratories. We perform all design and manufacture in-house, and can flexibly handle the manufacture of detailed custom-made products. Our industrial drivers are used upon demand for the drying process of volatile works that contain flammable and/or explosive organic solvents. We have a lineup of large heat treat furnaces for rigorous temperature history management and massprocessing. We supply a variety of exhaust-gas treatment equipment from small gas volume (2m/minute) to large gas volume (2500m<sup>3</sup>/minute) in a lineup of treatment equipment of low running cost and high efficiency.

SHIMAKAWA-SEISAKUSHO Co., Ltd.

http://www.shimakawa.co.jp/ English Tsuda Science Hills, 2-9-3, Tsudayamate, Hirakata City, Osaka ISO 14001

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



#### Key features of the product

1. Largely reduce machining time to improve productivity. 2. Eliminate the attachment and takeoff of faceplates.

3. Shorten operation time with an automatic pallet changer.

Because the faceplate is embedded in the product, compared with horizontal boring machines that require attachment of a faceplate, the product can further enable highly rigid and accurate deep cuts. The rotary drive system of the faceplate is different from the main axis system, and has a high torque. Because the bearing is supported with an independent large-diameter bearing, it can maintain extremely high rigidity.

#### Solutions for our clients

Our facing centers are used for processing valves, parts of generators, construction machinery, shipbuilding heavy machines, aircrafts, and oil rigs. Moreover, our products can greatly reduce the time and trouble of compounded processing and increase the efficiency of fully automated production. They feature (1) a large reduction in the number of tools to be used compared with machining centers, (2) H7 hole drilling using the faceplate, and (3) installation of two faceplate tool holders.

http://www.nomurass.co.jp/

### Model YS-6000W universal slicer



#### Key features of the product

- 1. Sharpness that does not damage food
- 2. Discharges sliced foods in a line.
- 3. Various types of cutting possible by changing the blade

The slicer features a proprietary cutting method based on the motions of a halberd type rotary blade and scissors, which enables sharp slicing of hard-to-cut food materials. By replacing the cutters, the slicer can be used for various kinds of cutting, such as julienne, dicing, and diagonal slicing. As the main product of Yoshiizumi Industry, the universal slicers are extensively used in various fields including processing of vegetables, meats and marine products.

#### Solutions for our clients

There are numerous companies that manufacture and process food, such as convenience stores, supermarkets, food-service chains, meat processors, sushi chains, precut vegetable processing companies, the lunch service industry, pickle manufacturers, marine products processing companies, and confectioners. All of such companies never stop trying to improve the quality of their products and their working efficiency everyday. Under the motto of "cutting various food materials more rationally and beautifully," we manufacture various types of food slicers to meet customer needs.

**Yoshiizumi Industory Corporation** 

http://www.yoshiizumi.com English 2-1-1, Tsudayamate, Hirakata City, Osaka

ISO 9001

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

NOMURA MACHINE TOOL WORKS, LTD

3-25-1, Isonokami-cho, Kishiwada City, Osaka

## Machinery & Equipment

### Hybrid temperature transmitter



#### Key features of the product

Combination of mechanical thermometer and electric thermometer
 Site temperature indication and remote temperature indication are possible with one unit.
 Electrical signals can be output after being converted by a converter.

A small electric temperature sensor is built in to the temperature sensor of the mechanical thermometer using advanced technology, so the site indication and the remote indication can be read on a single thermometer. The leads of the temperature sensor are housed in the corrugated tube of the thermometer, and the terminal is stored in the case of the thermometer.

#### Solutions for our clients

This hybrid temperature transmitter enables temperature measurements in the same place using a site indicator and remote indication via an electric temperature sensor. As one specific application, the transmitter enables users to read substation transformers at the site and send the data to a remote control room as electrical signals, and thus unmanned operation of the substation becomes possible. In similar cases, the transmitters can be extensively used for temperature measurement, such as that of the bearings of material feed conveyers at ironworks and that of pipes in chemical plants.

HYODA INSTRUMENTS CORPORATION

http://www.hyoda.co.jp English 1-6, Izumoi-Honmachi, Higashiosaka City, Osaka ISO 9001

ISO 9001

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### 🚺 Internal Gear Pumps



#### Key features of the product

1. Can be used with fluids from low viscosity to high viscosity.

2. Can be used in small to large capacity applications.

3. Can transfer fluids as hot as 400°C .

We use proprietary Taocloid gears for our internal gear pumps. We have succeeded in developing pumps that can discharge fluids at as much as 500m3/h, the world's highest. Our internal gear pumps can be used for discharging fluids from 50cc/min to 500m3/h. The pumps can transfer fluids of viscosities as high as 2.5 million mPa.S.

#### Solutions for our clients

Our products have been used in coal liquefaction plants in Japan and overseas, where pumps are required to have abrasion resistance and handle fluids as high as 380° C, and they have been operated without troubles and highly evaluated. There are examples where companies that had been troubled with pumps made by other makers, and succeeded in solving their troubles after changing to our pumps. We can design and manufacture pumps ranging from standard pumps to pumps with special specifications. We have established a production plant in Shanghai, and have developed overseas agents in India, South Korea, Taiwan, Thailand, Malaysia and Singapore.

DAIDO MACHINERY CORPORATION

http://www.daidopmp.co.jp/ English 1-26-26, Fukazawa-cho, Takatsuki City, Osaka

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

Mechanical patterning Machine for CIGS thin-film photovoltaic cells



Key features of the product1. State-of-the-art Patterning2. Ultra long life Tool3. Specially designed CIGS patterning head

Pattering is created on chemical compound-based polycrystalline thin films used for photovoltaic cell panels, to increase generating efficiency when they are processed. We have developed needle-like tools that can be used for microfabrication of  $30\mu$ m in minimum width. The tools help to lessen dead area and increase yield in mechanical pattering.

#### Solutions for our clients

The chemical compound-based thin-film photovoltaic cells have a structure comprised of a single electrode-attached glass substrate laminated with a sunlight absorbing layer made of copper, gallium, selenium, etc. and a conductive film on top. Several cells are simultaneously used for generating power. Our LCD panel cutting technology has a 70% share of the FPD market worldwide. By applying this LCD panel cutting technology to the patterning machine used in the photovoltaic cell production process, we have developed a machine that can create the narrowest dead area on the CIGS compound-based thin-film of photovoltaic cells.

Mitsuboshi Diamond Industrial Co., Ltd. http://www.mitsuboshidiamond.com/ English / 中文/환국에 32-12 Koroen Settsu City, Osaka

## Trial manufacture of printed circuit boards for R&D (research and development)



Key features of the product

Can deliver boards after 4 trial manufacture processes in just two days.
 One-stop service for 4 processes
 Can board a form kinds of printed circuit boards

3.Can handle four kinds of printed circuit boards.

We provide the technology for four processes (board design + printed circuit board + parts procurement + board mounting) of trial manufacture of boards for R&D (research and development) at the fastest speed possible. We can handle four kinds of printed circuit boards - (1) FR-4, (2) FPC, (3) RIGID-FPC, and (4) Al-BASE.

#### Solutions for our clients

The assumed customers are research laboratories of manufacturers, universities, research institutes, and new businesses from other industries. To survive the global competition among companies, the speed of product development holds the key to business growth. We can propose comfortable one-stop service to customers so that they can concentrate on creating new technologies, functions and design values and conducting their verifications. Moreover, through our affiliated company in Hong Kong, we can support commercial production at low cost in China after trial manufacture.

DENSHI-GIHAN CO., LTD. http://w 62-8, Toyo

http://www.denshi-gihan.co.jp English 62-8, Toyotsu-cho, Suita City, Osaka Machinery & Equipm

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

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### Low-temperature workbench for blood products



#### Key features of the product

1. Most suitable for maintaining quality in the production process and supply operations 2. Can keep red blood cell concentrates at a temperature of around 4°C . 3. Can keep Flesh-frozen plasma at a temperature of not more than -20°C .

In the production process and supply operations for blood products, this workbench allows users to work efficiently as it prevents increases in temperature, maintains blood products in good quality and keeps them at a low temperature even indoors at room temperature. In Japan, we have been delivering products like this to the Japanese Red Cross Blood Center for more than 30 years, and the product is approved as medical equipment.

#### Solutions for our clients

We have supplied blood bank refrigerators for blood services mainly conducted by Japanese Red Cross Blood Center. The blood bank refrigerators help to maintain the quality of blood products, which require rigorous temperature management. In addition to blood bank refrigerators, we produce other products tailored to the components of blood products, such as incubator for platelet concentrates, horizontal shakers, low-temperature workbenches, and cold insulator for blood transportation, which are used to store blood in processes from blood drawing to blood supply. Since we have in-house facilities that can handle all processes from planning and design to completion, we can customize products for customers.

#### Daido Industries INC. http://www.daido-ind.co.jp English 1-6-45, Kusune, Higashiosaka City, Osaka

### GOJ (Thin-film spin system high-speed mixer)

### Key features of the product

- 1. Can uniformly disperse nanometer-sized particles.
- 2. Allows particle design by controlling dispersion condition.
- 3. Prevents secondary agglomeration to ensure long-term stability.

In the production process of battery materials, we have realized nano-level dispersion for lithium ion batteries in particular. We have developed this machine's proprietary mixing principle based on the high-speed mixing technology we specialize in. The principle has been patented in 16 countries.

#### Solutions for our clients

For emulsification, dispersion, pulverization and kneading needs, we have for more than 80 years been delivering products to a wide range of industries. In recent years, we have been concerned with the global environment and, though batteries are attracting attention as an energy alternative to oil today, we have been doing business with the battery industry for two decades. At present, the latest CDM continuous production systems centered around FILMIX have contributed to the manufacture of lithium ion batteries (particularly for automobile use). In particular, CDM process has allowed the production of battery cells about three times as compared to batch processing, and have improved battery performance.

PRIMIX Corporation	http://www.primix.jp/ <mark>English/中文/धन्नज</mark> 8-16-43, Ebie, Fukushima-ku, Osaka City, Osaka	ISO 9001 ISO 14001



### Forging high-efficiency induction heaters



#### Key features of the product

Built with a high-capacity low-loss IGBT element
 Compact with eye-level pass line
 Minimizes initial non-proper temperature materials.

Forging induction heaters employ a low-loss IGBT-applied inverter and, based on the optimal heating design, have achieved the world's lowest electric power consumption rate. With the use of a compact high-capacity IGBT, we were able to drastically make the size of heaters smaller.

#### Solutions for our clients

The assumed customers are Japanese and overseas forging companies as well as companies that manufacture automobiles, construction machinery, bearings, agricultural machinery, and general industrial equipment and outsource their forged parts to forging companies. Since we have delivered products to numerous companies in Japan, we are very used to proposing products from the customer's perspective. Therefore, we are continuing equipment development in pursuit of greater energy-savings, and promoting equipment downsizing and price reductions.

Uchino Co., Ltd. http://www.uchino-tec.co.jp/ English 5-5-23, Minamitsumori, Nishinari-ku, Osaka City, Osaka	ISO 900
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#### Key features of the product

1. Dust-proof plant that can handle machines to be used in clean rooms 2. Large-scale plant that can handle eighth-generation glass substrates 3. Advanced technologies based on long-cultivated know-how

When creating manufacturing machines used in clean rooms, we must take various important points into account in each production process such as considering the yield in the design stage and taking thorough burr measures in the processing stage. We design and manufacture machines based on long-cultivated know-how and advanced technological capabilities.

#### **Solutions for our clients**

We design and manufacture production machines used on production lines of plants mainly of electronics and automobile-related makers. Because we make machines via an in-house integrated production system comprised of design, machining, steel plate welding, assembling, control, and installation, we can quickly deliver products at low costs. As a company specialized in FA machines designed for clean rooms, we are fully equipped with a dust-proof plant that can handle machines to be used in clean rooms, and perform integrated production from processing to assembling in-house. We also make the utmost effort to cooperate with customer requests for reduced costs.

ISHIKOTEC CO., LTD.	http://www.ishikotec.co.jp. English	ISO 9001
ISHIKOTEC CO., ETD.	5-6-2, Mitejima, Nishiyodogawa-ku, Osaka City, Osaka	ISO 14001

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

ISO 9001

## Machinery & Equipment

#### "Mini-Mini Welder" ultra-miniature resistance welder



#### Key features of the product

Ultra-miniature resistance welder exclusively used for thin film and thin welds
 Exhibits high reliability in continuous and variable welding.
 Simple and safe operation that does not require skills to operate

Since their release onto the market in 1987, our welders have been used at work sites where minute and accurate metal processing is required. In recent years, our welders have been used not only in medical fields to make stents used in cardiovascular operations and dental laboratory techniques, but also in state-of-the-art manufacturing such as to make solar cell circuits.

#### Solutions for our clients

Since our welders can be used for micron-order welding, which is considered extremely difficult, they have been used in development and research laboratories of various companies and physics and chemistry research laboratories of universities. Moreover, our welders have been used by medical instruments makers that require minute metalworking as well as makers of gas appliances, electronic equipment and auto parts. Since the energization pulse is extremely short and welded parts can be small and finished beautifully, our welders allow users to perform temporary welding on accessories, etc.

USUTANI DENSHI Co., Ltd.

http://www.usutani.co.jp English 7-28, Shoji-cho, Kadoma City, Osaka

## High-quality springs handmade by skilled professionals



#### Key features of the product

1. Handmade by skilled professionals

2. Pursuing high quality and high accuracy.

3. Can manufacture diversified products in small lots.

We provide high-quality, high-precision springs made by experienced specialists. We manufacture diversified products in small lots ranging from microscopic springs not more than 1 millimeter in wire size to supersized springs of more than 90 millimeters in wire size and 400 kilograms in weight. We also provide products made of special steel with good heat and corrosion resistance.

#### Solutions for our clients

We can meet various kinds of requests from companies and research institutes that are seeking special springs. We can provide springs that are optimal for various applications. We can even realize high-precision springs that are difficult to make using machines owing to the experience and techniques of seasoned professionals. By adding quality and an environmental management system, we have enhanced our production and quality control efforts and conduct our manufacturing activities with consideration for the environment. In the future, we will also emphasize growth fields such as the environment and medical treatment, as well as the aerospace industry and energy, and make a contribution as a research and development company.

Koei Spring Industry Co., Ltd.	http://www.koei-spr.
Roel Spring muustry Co., Ltu.	1-50-14, Kashima, Yodogawa-

//WWW.KOEI-SPI.CO.JP/ English , Kashima, Yodogawa-ku, Osaka City, Osaka ISO 9001 ISO 14001

ΟΙΤ

### Pulse-free metering pump G O J (Pertinent for injecting liquefied carbon dioxide) T M



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#### Key features of the product

- 1. Super-precise pulse-free metering pump
- 2. Flow volume reproducibility is deviation 0.1% or less.
- 3. Allows high-pressure transfer of liquid gas and hardening liquids.

This metering pump has the world's best discharge accuracy and delivers constant rate pumping at all times. <Features> (1) Can pump hardening and gelling liquids such as isocyanate to extruders.

(2) Can accurately pump liquid gases such as liquefied carbon dioxide to high-pressure section.
 (3) Most suitable for accurate coating of films and shells

#### Solutions for our clients

(1) Filling to an extruder: Unlike a gear pump, there is no change in discharge flow rate caused by pressure fluctuations, so this product can fill a stable flow rate.

(2) Accurate transfer of liquid gas: Due to its pulse-free and constant-flow features, this product can accurately fill liquid gas for a long time. Because of the use of special axis sealing, there is minimal leaking.(3) Precision coating: Due to its pulse-free feature, it always allows coating to a uniform thickness. Moreover, it will not be affected by pressure changes caused by the clogging of precision filters.

FUJI TECHNO INDUSTRIES CORPORATION	http://www.fuji-techno.co.jp/ English / 中文/한국어 2-29-5, Kasuganishimachi, Hirakata City, Osaka	ISC
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### Stable low amp arc wire spray system - OU EAS-WD-IL model



🔚 Key features of the product

1. Stable operation at low amperage

2. "Push & Pull" wire feeding mechanism

3. Inverter-controlled power source

This model, which was developed by a Japanese spray system maker, is most suitable for ultra-thin zinc spraying of condenser tubes for car air conditioners. Our products hold the top share of the market in Japan. Overseas, we have delivered numerous products to automotive heat exchanger parts manufacturers in South Korea, China, Thailand, the U.S. and other countries.

#### Solutions for our clients

The assumed customers are makers of heat exchanger parts for automobile air conditioners and makers of heat exchanger parts for the outdoor unit of air conditioners.

As this spray system provides a synchronized spray control that enables coating according to tube extruder speed, uniform fine coating is possible, which is expected to improve the quality of tubes. We have also established a system for simultaneous interlocked spraying of 4 to 8 extruded tubes and thus can largely contribute to the improvement of production efficiency. The system is most suitable for spraying condenser tubes of car air conditioners.

Coaken Techno Co., Ltd. http://www.coaken-techno.co.jp English 5-2, Chikkohamaderanishimachi, Nishi-ku, Sakai City, Osaka

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

9001

## Continuous type centrifuge for deoiling cutting waste



#### Key features of the product

- 1. Recovery and reuse of expensive cutting oil
- 2. Continuous type of high throughput
- 3. Simple structure and easy maintenance checks

As the pioneer of centrifuges for deoiling, we manufacture products based on technologies and results that we have accumulated over many years. We can recover expensive cutting oil and make it reusable. Moreover, when treating cutting waste, our products can restrain the generation of hazardous smoke, and thus can be called "environmental pollution preventing machines."

#### Solutions for our clients

Most automakers in Japan use our products and we are proud of our extensive delivery record. We can adjust machine sizes and operations in accordance with throughput and treated products. Our products can deoil cutting waste by centrifugal force, and the oil recovery rate reaches about 90%. To prevent vibrations that frequently occur in rotary machines, we have introduced a three column suspension that enables smooth operation by sufficiently absorbing vibrations, which makes automation easy. Moreover, this centrifuges is unlike conventional products, it has no consumable and maintenance is quick and easy because our products are directly installed Special electric motors.

MATSUMOTO MACHINE MFG. CO., LTD.	http://www.mark3.co.jp/ English 2-5-1, Kinryo-cho, Sakai-ku, Sakai City, Osaka

### Rice flour milling technology



ISO 9001

GOJ



#### Key features of the product

1. Softening treatment technology that does not destroy starch cells of rice

- 2. Technology for adjusting milled particle size
- 3. Technology for developing new products for rice flour breads and noodles

The important trick of milling rice is not to destroy starch cells contained largely in rice. When milling rice, if a force is applied to the rice itself, the starch cells are destroyed. Therefore, we have developed technology that softens starch cells. Rice can be milled by softening treatment without destroying the starch cells.

#### Solutions for our clients

The assumed customers are as follows.

- Agricultural societies, companies specialized in flour milling and food processing companies in countries where rice is produced as a staple food
- · Food processing companies that produce allergenic foods such as wheat

The problems that can be solved are as follows.

• Improve rice flour milling technology in Southeast Asia. Improve productivity.

• Propose conventional rice confectionaries and new rice-processed foods such as rice flour breads and noodles.

Nishimura Machine Works Co., Ltd. http://www.e

http://www.econmw.co.jp/ English 2-6-9, Matsuyama-cho, Yao City, Osaka





**Key features of the product** 1. Uniform heat dissipation based on a small heat source

- 2. Reduce fuel costs and CO<sub>2</sub> emissions.
- 3. No complicated construction work is necessary

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These pipe heaters transfer latent heat resulting from evaporation and condensation of operating fluid encapsulated in an airtight container. These pipe heaters can transport a large amount of heat by small temperature difference utilizing the movement of latent heat resulting. In contrast to conventional hotwater supply type heaters, our pipe heaters are electric hearting systems of simple structure.

#### Solutions for our clients

The CO<sub>2</sub> emissions from our pipe heaters is about one-fifth compared with other heating sources such as fuel oil and kerosene. Moreover, in cold regions, the pipe heaters enable users to cultivate crops throughout the year by maintaining the soil temperature at  $20^{\circ}C\pm5^{\circ}$ . By just setting an appropriate temperature, supplying electric power, users can eliminate disease-causing bacteria in soil, harmful insects and weeds. Moreover, because no hazardous pesticides are sprayed, the pipe heaters cause no residual toxicity for crops or groundwater and no adverse effects on nearby crops.

YAMARI INDUSTRIES, LIMITED	http://www.yamari.co.jp English	ISO 9001
	1-5-4, Mishimae, Takatsuki City, Osaka	ISO 14001

### "Swing Master SWM" swing-type level switch



Key features of the product

1. An electric circuit that functions as the drive unit guarantees a long service-life.

2. It can measure low-density powder with high sensitivity.

3. Sealing by a partition wall gives good pressure resistance.

Based on the technological capabilities that we have cultivated in powder measurement over 40 years, we have developed a drive section made of an electronic circuit without using mechanical consumables such as a motor or clutch. Thus, the level switches enable driving by electromagnetic force via the partition wall. The swing type level switches three times durable as conventional rotary type level switches, and have been already patented.

#### Solutions for our clients

The assumed customers are plants that handle powder and granular materials in the food, chemical, steelmaking and electric power industries.

Under the environment where rotary type level switches are used, when powders are fluid, troubles such as chattering occur, and when the equipment frequently issues ON/OFF signals, machine parts such as motors need to be frequently replaced. With the introduction of this product, users can perform measurement even under a rigorous environment that makes detection difficult if rotary type level switches and other detection methods are used. Moreover, our products help users automate their production processes and promote labor-savings and cost reductions.

KANSAI AUTOMATION CO., Ltd.

http://www.kansai-automation.co.jp/ English /中文 180 9001 2-14, Togano-cho, Kita-ku, Osaka City, Osaka

#### Machinery & Equipment Bat syst

### Batch counter for quantitative weighing COL systems, CU-675



#### Key features of the product

1. Easily creates the a quantitative weighing system.

- 2. Easy setting and operation by 10-key entry
- 3. Protective construction that resists water droplets and dust (IP66)

This batch counter has the functions required for quantitative weighing systems used for liquids, etc. It not only has various interfaces required for opening and closing valves and pump control, but also corrective functions including overshoot adjustment, which makes reliable quantitative weighing possible.

#### Solutions for our clients

The batch counter is widely used by food factories and food processing manufacturers, as well as for equipment for supplying chemicals and fuel. Constructed to resist water droplets and dust, the counter enables users to freely select the installation site. Since the large-size 10-key panel improves operability, anyone can intuitively use it. By fully making use of our advantages as a company specialized in indicators, we realized a surprising low price. With this product, users can create the quantitative weighing systems at low cost.

UINICS CO., LTD. http://www. 123-1, Kami, Nishi

http://www.uinics.co.jp/ English /中文 123-1, Kami, Nishi-ku, Sakai City, Osaka ISO 9001 ISO 14001

GJT

### Power consumption monitors (WATT-MONITOR WM01)

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Key features of the product

1. Centralized system device that manages electric power consumption of offices and laboratories

2. Logs and calculates electric power data.

3. Observes power consumption over a long period of time.

The centralized system device manages electric power consumption of offices and laboratories. It not only measures electric consumption, but is also capable of logging and calculating data and observing electric consumption over a long period of time. Although it is compact, the monitor can simultaneously measure the power consumption of two channels, and can be presented as an eco-product.

#### Solutions for our clients

We provide consistent support from the planning and development of computer-related systems, to system design, hardware and software design, trial manufacture, commercial production, and environmental testing. We can also be contracted to develop hardware and software for computer systems in response to various kinds of requests from customers. We have the flexible thinking, advanced expertise and know-how required for customizing products, and, in particular, specialize in measurement and control.

Cyber Craft Co., Ltd. ht

http://www.cycraft.co.jp/ English 5F, 20-33, Matsuya-cho, Neyagawa City, Osaka

## Fully automatic miniature hydrofoaming and flexible tube molding machines



#### Key features of the product

Can be used for both flexible tube molding and hydroforming.
 Uses eco-friendly high hydraulic pressure.
 Energy-saving, compact

Based on "technology that makes use of eco-friendly high hydraulic pressure," the fully automatic machine guarantees safety and enables both flexible tube processing and mold bulging with just a single machine. In particular, the HDL-CHB-40 model enables highly accurate energy-saving molding, while the overall machine is smaller than conventional machines owing to downsized features.

#### Solutions for our clients

Since mold bulging conventionally requires a large machine that produces a large mold clamping force, machines dedicated to flexible tube processing and mold bulging were separately needed. With the introduction of a special machine lock mechanism, however, a large mold clamping force becomes unnecessary, and we have succeeded in producing a machine that can handle both flexible tube processing and mold bulging all in one. Moreover, as for flexible tube processing, the use of proprietary double-structure rotatable molds has helped make molds compact and exponentially prolong their service-life.

Yamamoto Suiatu Kogyosho Co., Ltd.	http://www.hyprex.co.jp/ English 2-8-8, Syomoto-cho, Toyonaka City, Osaka	ISO 9001
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## **"KUMONOS" Crack Inspection System**

## Key features of the product



1. Crack measurement from a distance 2. Automatic drawing CAD figures. 3. Easy to keep track of changes in cracks

KUMONOS consists of a light wave surveying instrument and a built-in crack scale. This system enables it to remotely measure the width, length, shape and coordinates of cracks. The measurement data are automatically plotted out into CAD figures on computers. Since the use of scaffolds is not necessary, it saves costs and ensures the safety of surveyors.

#### Solutions for our clients

For providing safety and efficient measurements, KUMONOS has been named by the Japanese Ministry of Land, Infrastructure, Transport as one of the most highly valued technologies. Using the conventional inspection method, it was necessary to directly measure cracks by use of a crack scale and then draw sketches of them. Using a KUMONOS, cracks can be measured without having to physically be near them. KUMONOS can accurately measure cracks from the front and oblique angles, and automatically draw CAD data, which makes it efficient in keeping track of changes in cracks over time.

Kansai Construction Survey Co., Ltd.

http://www.kankou.co.jp English 2-1-15, Senbahigashi, Minoh City, Osaka

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

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### Horizontal intermittent cartoning machines



#### Key features of the product

- 1. Can make thin boxes with razor-sharp edges.
- 2. Quick and reliable resizing is possible.
- 3. Boxes can be beautifully finished by comb-like surface belt transportation.

Our main product, the horizontal intermittent cartoning machine, can produce thin boxes with razorsharp edges. Moreover, the use of comb-like surface belt transportation ensures a consistently clean sealing finish.

#### Solutions for our clients

Some 90% of our customers are pharmaceutical companies, followed by food, cosmetics, and machine parts manufacturers. We have an integrated build-to-order manufacturing system from design and development to manufacture and introduction. Therefore, we can provide flexible and detailed services that include retrofitting into existing lines and staged introduction of machines that gives priority to cost-effectiveness. Recently, we have received many requests for machines with built-in laser markers that can print barcodes, and we take great pride in our contribution to the enhancement of security and traceability.

td. http://www.mikitakikai.co.jp/English/index.html English 150 9001 3-6-2, Techno-Stage, Izumi City, Osaka

## Robovie-R ver.3" everyday-use communication robot platform



#### Key features of the product

1. Highly capable of moving over irregular surfaces

2. The cost of drive mechanism was reduced while maintaining power.

3. Enables communication with various sensors and portable terminals.

Robovie-R3 was developed for a robot-based platform for the research of communication between humans and robots. Robovie-R3 is oriented for demonstration experiments of various robot services that will be conducted along shopping streets and stations.

#### Solutions for our clients

Robovie-R3 is a product designed for researchers who research communication between robots and humans, and developers of robot services. We have realized unparalleled low prices for robots that can move over heights of 1m. Because the robot platform is equipped with functions required for providing various kinds of services, such as shopping and showing the way, users can reduce hardware development costs. With the built-in notebook PC that can run Windows software, the robots can communicate with various sensors and existing products including mobile phones, and thus have high versatility and can be used for extensive service development.

Vstone Co., Ltd. http://www.vstone.co.jp English 2-15-28, Mitejima, Nishiyodogawa-ku, Osaka City, Osaka





### Key features of the product

Two-way communication system for R/C hobbies
 Strong radio and noise interference resistance and good communication performance
 Stable transmission and reception for machines 1 km away.

The development of hobby radio communications has been centered on products on the 2.4 GHz bandwidth, while radio and noise interference resistance has improved exponentially. We have adopted a diversity antenna system of strong directionality so that communications on the 2.4 GHz band are ensured. The transmitter of our system can receive information from a flying machine 1km away and display it on the unit.

#### Solutions for our clients

Our main customers are in the R/C hobby markets. The development of radio communication technology is based, however, on other technologies such communication technology, resin molding design and metal cutting design, motor control technology and attitude control technology, which can be used for various other purposes. Therefore, we can respond to requests from other business category for the development for special products. We have our own plants in Japan and Malaysia, and provide total services from product manufacture to packaging. We have developed an extensive overseas network with sales agents in the U.S., Europe and Asia.

JAPAN REMOTE CONTROL CO., LTD.

http://www.jrpropo.co.jp/ English /中文 2-2-12, Eiwa, Higashiosaka City, Osaka

## High-quality, low-cost printed circuit boards



GO



Key features of the product

1. Pattern design that reduces product costs

2. Proposal of new base materials according to product applications

3. Quick delivery after processing from trial manufacture to commercial production of lots

Since we handle both pattern design and board production by taking the process procedure and manufacturing specs into consideration, we can provide low-cost, high-quality products. Moreover, given the diversity of applications and operating conditions of printed circuit boards, we can propose a selection of better base materials.

#### **Solutions for our clients**

Since our boards are mainly used as customized parts in electronic products, we have electronic product makers as our customers. We make individual wiring boards for each product. Therefore, to develop a single product, we perform all processes in-house from design and trial manufacture to board manufacture and product launch. Thus, we can quickly deliver low-cost high quality products.

MURAKAMI ELECTRIC IND. CO., LTD.

http://www.murakami-elec.co.jp English 2-4-20, Kamihigashi, Hirano-ku, Osaka City, Osaka

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

MIKITA MACHINERY Co., Ltd.

#### LiFePo<sub>4</sub> type lithium-ion rechargeable batteries



### Key features of the product

1. More than 2,000 cycles in use 2. Small and lightweight 3. Large 100 Ah capacity

We are one of a few companies that market LiFePo4 type lithium-ion rechargeable batteries in Japan. Our rechargeable batteries have a large capacity of 100 Ah and their weight is less than half of lead batteries. Moreover, the rechargeable batteries have a long service-life with more than 2,000 cycles total.

#### Solutions for our clients

We continue to develop and sell secondary batteries. By providing 100 Ah large capacity, iron-phosphoric acid type lithium-ion rechargeable batteries, we can contribute to long-term power supplies and reduce electricity shortages. The assumed customers are companies that are planning to use solar panels and household storage batteries, and companies that require electricity in plants and for on-site work. We also specialize in inverters and LED lighting systems that can run on 100V AC supplied from batteries. We can develop products according to customer needs.



http://www.dlgbattery-japan.com English /中文 4-13-3, Nakamoto, Higashinari-ku, Osaka City, Osaka

### IR absorbing filters for CMOS sensors

#### Key features of the product

1. Less dependence on optical incidence angle compared with coated products

2. High moisture resistance

3. Can be customized according to infrared half-value wavelength, etc.

IR-cut filters and lowpass filters are used with camera CMOS sensors to prevent a reduction in image quality. At present, a large number of digital camera makers have used our IR-cut filters, and we have expanded our market share. Therefore, there are high expectations for our products and markets are expected to expand as a result of that.

#### Solutions for our clients

The IR absorption filter is laminated with a lowpass filter after a post-process of vapor deposition of an antireflection coating. Therefore, the assumed customers are vapor deposition makers, lowpass filter manufacturers, and electronic manufacturers that produce digital cameras. We specialize in customizing transmission properties to customer requests. Moreover, because we can provide integrated production processes comprised of development, manufacturing, and post-processing, we can enable customers to reduce costs and the burden of managing suppliers.

ISUZU GLASS CO., LTD.

http://www.isuzuglass.co.jp English / Deutsch 6-3-6, Minamitsumori, Nishinari-ku, Osaka City, Osaka

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ISO 9001
ISO 14001
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### **Optical components for** LED lighting systems



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#### Key features of the product

1. Can arbitrarily distribute light using original optical design technology. 2. Can reduce chromatic aberrations by diffraction grating. 3. Can reduce luminance non-uniformity using microlens.

We can provide customized and standard lenses according to customer requirements. Regarding customized products such as general illumination and LCD backlights that use LEDs as a light source, we can propose optical components to meet customer requests, based on our proprietary optical design and ultraprecision machining technologies.

#### Solutions for our clients

Although LED lighting systems have problems such as brightness non-uniformity on the irradiated surface and chromatic aberrations, our products can improve brightness uniformity with the use of microlens arrays and Fresnel lenses based on ultraprecision machining technology. As for chromatic aberration, we can make lenses with little chromatic aberration by forming diffraction gratings of nanometer precision on the lens surface. These lenses can be applied to LED electric lamps, LCD backlights, automotive headlights, and LED flashes for mobile phones, thus we can contribute to society's need to conserve energy.

lalux Co., Ltd.	http://www.nalux.co.jp/ English/中文 2-1-7, Yamazaki, Shimamoto-cho, Mishima-gun, Osaka

ISO 9001

ISO 14001

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### Processing various optical elements



Key features of the product 1. Processing of various shapes (various kinds) possible 2. Can perform all processing in-house. 3. Small lots starting from one unit possible

We can handle a variety of processing items and perform all processes from polishing to vacuum deposition, cementing, and painting in-house. Moreover, we can process high precision cylindrical lenses and have realized 0.1% reflectance (450 to 630nm) in vapor deposition, which has been highly rated by customers.

#### Solutions for our clients

We can meet various needs of customers such as medical equipment makers, measuring instrument makers, universities, and optical research organizations, and can supply high precision, high quality spherical lenses, cylindrical lenses, prisms, glass substrates, and other products of special shapes. Moreover, we specialize in manufacturing of a wide variety of products in small quantities, and meet requests for trial manufacture and special order products for necessary items staring from one unit.

KIKUCHI PRECISION OPTICS CO., LTD.

http://www.kikuchi-kougaku.co.jp/ English 213-1, Ohnoshiba-cho, Naka-ku, Sakai City, Osaka

ISO 9001 ISO 14001

53



### 20-channel ohm testers



#### Key features of the product

1. Suitable for determining the normality of battery cells 2. Channels can be increased up to 40. 3. Cost reductions per channel

This miniature, lightweight ohm tester with a built-in 20-channel scanner can increase the number of measurement points up to 40 channels. This tester is suitable for the measurement of multipoint resistance values for lithium ion batteries that have several cells, as well as connectors with many measurement points.

#### Solutions for our clients

The assumed customers are users that need to measure resistance values in multiple points in order to check and maintain the quality of products, such as secondary battery manufacturers, equipment manufacturers who use secondary batteries, connector and harness manufacturers, and the automobile industry. The testers reduce facility costs for resistance measurements, achieve space-saving, and shorten measurement man-hours. Moreover, since the tester has a built-in low-current power source for measuring, it does not require a connection to current source load device or an impedance meter, which makes measurement simple and easy. Measuring targets of the testers are connectors and batteries for which demand is expected to grow. These testers are helping to automate multipoint measurement.

TION	http://www.tsuruga.co.jp/English/中文	ISO 9001
	1-3-23, Minamisumiyoshi, Sumiyoshi-ku, Osaka City, Osaka	ISO 14001

#### Metal working fluids, special greases, ΟΙΤ special lubricating oils

#### Key features of the product

1. Research and development of oils suitable for applications 2. Line-up centering on high-performance special-purpose items 3. Manufacturing of a wide variety of products in small guantities

Metal working fluids: Optimal oils are selected based on a combination of processing elements such as grinding, cutting, and plastic working, and material elements such as general steel, nonferrous metals, and ceramics. Slide greases: Used for electricity contact points of automobiles, consumer electronics, etc. Have the effect of contact protection, life extension, and feeling adjustment. Lubricating oils for high temperature: Used for chains of driers and biaxial tenting machines. Have the effects of reducing sludge, preventing scattering and reducing oil consumption.

#### Solutions for our clients

In response to customer who "cannot procure oils suitable for processing" and "cannot obtain desired effects from general-purpose products", we develop and provide special oils to meet conditions of use, as a chemistry specialist. By making full use of the experiences and results that we have cultivated over many years and the most advanced technologies, we can make one and only products. Moreover, we can manufacture a wide variety of products in small quantities, which major oil makers find difficulty to do, and can meet customer requests based on rich knowledge and experience, and reliable development technologies.

SATO SPECIAL OIL CO., LTD.	http://www.satooil.co.jp English /中文 1-4-17, Imafukuhigashi, Jyoto-ku, Osaka City, Osaka	ISO 9001 ISO 14001

### Thermal barrier coating agent for windowpanes (Kisan coating ATO)



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#### Key features of the product

1. Transmittance of visible light is the same as general glass.

- 2. Shields infrared light as much as possible.
- 3. Shields ultraviolet light as much as possible.

When the coating agent is applied to inside windowpanes, a transparent thin film is formed, which blocks infrared and ultraviolet light. The film reduces room temperature 2 to 5°C in summer and prevents indoor heart from escaping outdoors in winter, making the agent an energy-saving product.

#### Solutions for our clients

We propose power-saving and energy-saving measures starting from glass. Customers can reduce cooling/heating expenses in residences, office buildings, and plants by coating our proprietary nanometallic oxide onto windowpanes. The coating agent has good heat shielding and insulation property and blocks ultraviolet light while maintaining a bright indoor space as if no coating is applied to windowpanes.

#### Kisan Kinzoku Chemicals Co., Ltd.

http://www.kisankinzoku.co.jp/ Englist 2-13-57, Nakajima, Nishiyodogawa-ku, Osaka City, Osaka ISO 9001

TM

#### "N containers (Returnable containers)" GOJ internationally patented recycling-oriented products



Key features of the product 1. Zero-emission and carbon offsetting 2. Can be simply folded and assembled. 3. Free design in accordance with products to transport

"N containers" have a patented structure and can be easily assembled and dismantled. Making full use of various designs, the low-cost containers can satisfy all kinds of customers. As returnable containers and packing materials, the containers can be recycled and reused so as to conduct operations waste-free.

#### Solutions for our clients

We have developed our business focusing on industrial parts in a variety of fields including light electrical parts, building materials, industrial materials and communication, and pursued the creation of eco-friendly recycling-oriented products and the development of technologies. We manufacture and market niche products to extensive business categories. Because the containers are distribution-related products, they can be applied to all kinds of industries and business categories. In particular, we have made the containers usable overseas in response to recent transfer of operations overseas by businesses (by applying for and partially obtaining international patents). With the introduction of a simple lock system, the containers can be assembled and dismantled even by one female operator. The pallet-size containers can be folded and stored in less space.

NAKAYAMA INDUSTRY CO., LTD.

http://www.nakayama-ind.co.jp/ English 4-10-19, Nishinakajima, Yodogawa-ku, Osaka City, Osaka

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

54

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



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ISO 9001

ТМ

#### Key features of the product

1. Reduces disposal costs by space reduction after use

2. Reduces storage space required prior to filling

3. Easy to use by DIY enthusiasts

The SK pouch is a new type of sealant container that can replace the conventional cartridge and sausage packs. Compared to the cartridge the SK pouch can reduce the space required for storage and disposal. A nozzle can also be attached so that tools are easily cleaned after use compared to the sausage pack. The SK pouch is a patented product.

#### Solutions for our clients

For users of sausage pack materials:

Sausage pack users benefit from the space and waste reduction features of a soft pack but often the use of the sausage pack can be messy. Tools and hands can easily be contaminated by the materials inside the sausage. The nozzle attachment on the pouch pack helps reduce the contamination and therefore reduces the cleaning up process after use. For large quantity users:

In places where large amounts of sealant are used the amount of waste created by packaging is of great concern. The pouch pack greatly reduces the space required for waste and therefore the cost of disposal.

SHARP CHEMICAL IND. CO., LTD. http://www.sharpchem.co.jp/ English / 中文 13-12, Chikkohamaderanishimachi, Nishi-ku, Sakai City, Osaka

## Coating and laminating of all kinds of G J T films and metal foils

К 1. 2. 3.

#### Key features of the product

1. Conductive high polymer-based antistatic films 2. Hard coating for touch panels

3. Coating on metal foils made of stainless steel, nickel, etc.

A conductive high polymer is mainly used as protective tape for transporting LSIs. Hard coatings are used for white boards and other touch panels, while metal foils are mainly used for promising applications such as fuel cells.

#### Solutions for our clients

We have been engaged in all kinds of coating and laminating for Class 1000 clean environment for many years. Because we can perform a series of processing steps from pretreatment (corona discharge treatment) to coating to slitting all in-house, we have customers in various industries such as the chemical and printing industries. We can process various kinds of products from plastic films to metal foils. Moreover, by processing within a Class 1000 clean environment, we can provide clean high quality products such as films for touch panels.

Asahi Chemical Co., Ltd. http://ww 2-33, Shinde

http://www.asahi-chemical.co.jp English 2-33, Shindennishimachi, Daito City, Osaka ISO 9001

## Integrated recycling system of PET Products G O M made from Post consumer PET bottles.



**Key features of the product** 1. Reliable and safe recycled PET product 2. Traceability and quality control system 3. Wide and plentiful product line up

It is important to ensure safety and security in recycling. Our Integrated recycling system of post consumer PET bottles has aquired certification under the Global Recycle Standard (GRS). We can provide various kinds of PET products made from post consumer PET bottles such as PET resin (pellet), solid state polycondensation products, sheets and moldings (for fruits, vegetables, egg containers and containers for industrial use).

#### Solutions for our clients

1. We provide products recycled from PET bottles ranging from flakes to pellets for synthetic fiber, sheets, cut boards, and moldings such as food containers and industrial part containers.

2. We can be contracted to process customer materials (PET material) into pellets.

3. Our materials(recycled PET pellet) and its products can be safely used because it has obtained the approval (No Objection Letter:NOL) from the U.S. Food and Drug Administration as a material that allows direct contact with food.

4. Our Sennan Factory is authorized by Sony Corporation as a Sony Green Partner.

 Utsumi Recycle Systems Inc.
 http://www.utsumi-k.co.jp/ English
 ISO 9001

 Taniyon Square Bldg., 1-2-15, Uchihonmachi, Chuo-ku, Osaka City, Osaka

### "DICERO" hard coat films



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#### **Key features of the product** 1. Highly transparent and high guality hard coat films

Alignly transparent and high quality hard coat films
 Diversified range of base materials such as PET and isotropic films
 Grade in combination with adhesive layer is available.

DICERO is a hard coat film of high transparency and high quality. The thickness of the base material can be controlled from 50 to 188  $\mu$ . Moreover, the types of base materials include not only PET but also grades of polycarbonate with good optical isotropy and acryl, as well as materials with adhesive on one side.

#### Solutions for our clients

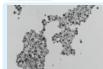
We are the top maker of diffusion films for LCDs. We have advanced optical technology and production technology that meet rigorous quality standards, and provide high quality products. The hard coat films are heavily used in the field of touch panels, and often used with LCDs at the same time. PET-based general products cause the problem of Moire patterns when looking through polarized sunglasses. Our isotropic film-based hard coat films have solved such optical problems.

KEIWA Incorporated	http://www.keiwa.co.jp/ English 1-2-5, Kamishinjyo, Higashiyodogawa-ku, Osaka City, Osaka	ISO 9001 ISO 14001
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### WOODUM table mats



### Manufacturing nano-size metal particles



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#### Key features of the product

1. Commercialize metal particles 10 nm in diameter. 2. Can synthesize large quantities via liquid phase synthesis. 3. Nano-particles make low-temperature firing possible.

We have succeeded in producing these nano-particles based on a proprietary liquid phase particle manufacturing process, which was developed jointly with the Osaka Municipal Technical Research Institute. Metals, from which we can produce nano-particles, include silver, gold, and copper. Nano-size metal particles are expected to pave the way for high density electrodes, joining via alternative solder metals, and water-free processes using the particles as alternatives for plating.

#### Solutions for our clients

We have manufactured and marketed metallic paste for firing electrodes and plating solution. There is increasing demand for micro wiring for electrodes, and the paste using these nano-size metal particles are suitable for such wiring. With the widespread use of hybrid vehicles and electric vehicles, nano-size metal particles are attracting attention in applications for joining high current electrodes. Studies into nanoparticle paste has been under way for some time. Moreover, because coating films made with these nanoparticles have a texture that is close to plating, it is possible to make the plating process water-free.

AIKEN CHEMICAL CO., LTD.	http://www.daiken-chem.co.jp/ English /中文	ISO 9001
AIREN CHEMICAE CO., ETD.	2-7-19, Hanatennishi, Jyoto-ku, Osaka City, Osaka	ISO 14001

### **TCPP** (Chemical name: Diphosphoryl chloride [Pyrophosphoryl chloride])

Key features of the product

- 1. We are the only manufacturer of this chemical. 2. We produce the chemical via an environment-conscious proprietary manufacturing process.
- 3. The chemical is used as a special phosphorylating agent.

We can provide phosphorylating agent of the chemical formula below.

CAS Registry Number:13498-14-1

#### Solutions for our clients

Although there are various phosphorylating agents, our TCPP is an especially strong phosphorylating agent and used for phosphorylation in drug manufacturing processes. Moreover, it has been recently reported that the chemical can be used as an intramolecular acylating agent. We expect the chemical to be used for trial by drug and intermediate manufacturers that require the process of phosphorylation. In addition, the chemical can be effectively used by chemical manufacturers.

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Mikuni Pharmaceutical Industrial Co., Ltd.

http://www.mikuni-seiyaku.co.jp/ English 2-35, Kamisu-cho, Toyonaka City, Osaka

ISO 9001 ISO 14001

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



#### Key features of the product 1. Fragrance and feel of natural wood

- 2. Good waterproofing and antifouling properties
- 3. No warp makes mats stable on flat surfaces.

This placemat uses flexible resin-impregnated wood veneer sheets (Tennage / world-patented). WOODUM has a variation of 10 wood types and 5 sizes. Although natural wood is used, the revolutionary table mats neither warp nor curl. Unlike conventional products, the placemats give users the fragrance and texture of wood.

#### Solutions for our clients

WOODUM placemats can be used as luncheon mats at home and in restaurants. The placemats can be also used for displaying vases and small objects on them, enabling a stylish presentation. Because any kind of natural tree can be commercialized, users can choose a tree that is suitable for the season, country, and local community. We utilize lumber from thinning and mill ends in order to contribute to an ecosociety.

ZEROONE PRODUCTS CO., LTD.

http://www.zeroone-pro.com English Suehiro Bldg., 3-6-14, Ueshio, Tennoji-ku, Osaka City, Osaka

# Chemicals & Resin



#### Key features of the product

Phosphorus flame retardant

- 1. Suitable for strengthening fire safety standards and flame-retardant standards 2. Meets non-halogen needs.
- 3. Optimal as a substitute for bromine fire retardant

Our phosphoric acid ester-based fire retardants are compatible with m-PPE, PC/ABS, PU, PVC, etc. They are particularly used for m-PPE and PC/ABS in consumer electronics such as LCD televisions and office equipment, PCs, copiers and printers.

#### Solutions for our clients

The assumed customers of our phosphorus flame retardants are compounders. Condensed phosphoric acid ester flame retardants have superior hydrolysis resistance, compared with other phosphorous flame retardants, have lower volatility and generates less gas in resin treatment, they can reduce contamination of processing machines and mold corrosion. In addition, they are eco-friendly as they generate no dioxins when the resin is combusted. You can use our non-halogen-type products in stead of brominated flame retardants that have been ever used for poly-ester, nylon, ABS and so on. Since we also produce phosphorus rare metal extractants, separate and refining makers are also our assumed customers.

http://www.daihachi-chem.co.jp/ English ISO 9001 DAIHACHI CHEMICAL INDUSTRY CO., LTD. 1-8-13, Hirano-cho, Chuo-ku, Osaka City, Osaka ISO 14001

56

### **Industrial cleaning solution** (Washing machine and detergent)



#### Key features of the product

1. Optimal solutions of washing machine and detergent

2. Fully custom-made solutions

3. Mechanical stability and durability with guick response

Our biggest advantage is that we can provide solutions composed of both industrial washing machine and industrial detergent. Having an equipment design department and detergent research department, we can provide the best solutions for industrial cleaning in Japan.

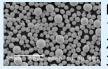
#### Solutions for our clients

After studying and analyzing the cleaning needs and current state of customers that are troubled by contamination, cost-effectiveness, and environmental issues, which are called into question in industrial cleaning, as well as by water quality, we can propose the best detergent and washing machine. Not only with washing machine that is subject to individual order but also detergent, we will pursue the most suitable product for the customer and provide optimal cleaning. Particularly in the automobile-related industries, we have a record of delivering many products in Japan and overseas.

Shimad	la Kasei	Corp.,	Ltd.

http://www.ssc-shimada.co.jp/e/ English /中文 6-33-2, Ikuno, Katano City, Osaka

### Nickel compounds, cobalt compounds



#### Key features of the product

1. Highly functional materials for electronics applications

- 2. High purity chemicals for surface treatment
- 3. High active metal materials for catalysts

Using metals such as nickel, cobalt, copper, magnesium, and zinc, we have developed and provided various functional metal compounds for half a century, based on proprietary chemosynthetic technology. Moreover, utilizing the fine particle manufacturing technology that we have developed for active materials for secondary batteries, we create new functions for applications such as electronics materials, surface treatment, and catalyst.

#### Solutions for our clients

To realize better electric properties in electronic materials, the size and shape of the materials and the combination of metals are important. Since fine particle manufacturing technology enables us to control the size and shape on the order of micrometers and synthesize several metals in arbitrary ratios, we can develop custom-made materials. Although the chemicals used for surface treatment require rigorous control of impurities, our chemicals are highly pure and of a chemically-enhanced purity, and, therefore, are easy to handle. Moreover, owing to their high purity, the chemicals also have high catalytic activity.

Kansai Catalyst Co., Ltd.

http://www.kansyoku.co.jp English 1-3-13, Kashiwagi-cho, Sakai-ku, Sakai City, Osaka ISO 9001 ISO 14001





GOJ

ISO 14001

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#### Key features of the product

1. Integral molding of continuous fiber and short fiber CFRTP 2. CFRTP can be molded into complex shapes. 3. High-strength, high-rigidity CFRTP

We can manufacture lighter-weight moldings as a hybrid of continuous fiber that has high strength and high modulus as its superior features, and short fiber CFRTP (carbon-fiber reinforced plastic) that can be molded into complex shapes.

#### Solutions for our clients

Because of current demand for environmental measures such as low energy consumption and CO2 reduction, weight reduction has become an important key word and a required property. We can realize weight reductions via a molding technique that allows the use of CFRTP instead of metal. Moreover, we can meet market demands for better productivity and lower costs. We consider industries that strongly demand weight reduction, such as the aircraft, automobile, and mobile device terminal industries, as our market.

Ibaraki Industrial Corporation

http://www.frp-ibaraki.co.jp English 2-11-6, Nonomiya, Ibaraki City, Osaka

ISO 9001

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### Pollen-release finishing agent (Brand name: Queenseter POL)



Key features of the product 1. Prevents adhesion of powder to fiber.

2. Aids removal of powder.

3. Effects will not deteriorate even after repeated washing.

Submicron nanoparticles fill the gaps between fibers and form a anti-stick resin film. This film impedes adhesion by pollen, sand, soil and cosmetics and makes removal thereof possible by just lightly dusting the surface. And, the effects do not deteriorate even after repeated washing.

#### Solutions for our clients

Immediately after we developed the agent about 11 years ago, it was used for bed sheets and guilt covers. At present, the agent is widely used for products of leading bedding and underwear manufacturers, as well as for household goods such as bath towels. Aside from pollen, the agent has also been found effective for preventing adhesion and soiling by sand, dirt, dust and cosmetics. Being a soil-resistant finishing agent that "prevents soiling and keeps fibers clean", the market for the agent has been rapidly expanding.

http://www.kotani-chemical.co.jp English /中文 KOTANI CHEMICAL INDUSTRY CO., LTD. 13-14, Chikkohamaderanishimachi, Nishi-ku, Sakai City, Osaka

## "Eco-Mushu" odorous waste disposal packing systems



- 2. Shuts out offensive odors.
- 3. Contains bacteria guickly to prevent infection.

We have developed the "Eco-Mushu" odorous waste disposal packing system by applying technology for producing surface protection tape that prevents products from being damaged. The system is extensively used at the forefront of medicine and nursing. When users place used diapers into the system, it seals them up by sandwiching with adhering tape, to contain odor and bacteria. Since two strips of tape do not separate, users can safely carry used diapers to a point of disposal.

#### Solutions for our clients

In the medical and nursing fields, odors are taken for granted, but the risk of infection from diapers is increasing. The "Eco-Mushu" system seals up used diapers with special tape, shutting out odor sources and simultaneously containing bacteria. Therefore, it prevents offensive odors and infection in medical sites and creates comfortable and safe environments. The "Eco-mushu" system was developed with the wish to make both those who provide nursing care and those who receive it happy.

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SUMIRON Co., Ltd.	http://www.sumiron.com/english/ EnglishISO 900111-9, Higashikozu-cho, Tennoji-ku, Osaka City, OsakaISO 14001	

## Plum-charcoal paper that produces superb O J T functions of charcoal

#### Key features of the product

1. Ecological paper that uses coal made from industrial byproduct

- 2. Paper with deodorant function
- 3. Paper with humidity conditioning function

We recycle waste plum pits into "plum charcoal" and use the powdered charcoal to make "plum charcoal paper" by a proprietary manufacturing method. As a paper that contributes to LOHAS (lifestyles of health and sustainability), the plum charcoal paper is made entirely from charcoal produced from industrial byproduct (plum pits) and wastepaper, and can potentially exhibit a plethora of functions of charcoal.

#### Solutions for our clients

The assumed customers are companies that seek natural materials such as textile, bookbinding, and paper coating companies, as well as trading companies that seek eco-materials. The paper has good "deodorizing" and "humidity-conditioning" effects, while also adsorbing gas and preventing fungi. Paper with charcoal characteristics can be processed into various shapes for a variety of applications including shoes deodorization, wallpaper, calendars, and boot holders.

, Ltd. http://www.sanyo-paper.co.jp English 6-4-25, Onosato, Sennan City, Osaka

ISO 9001

### Development of new products using paper and cardboard material



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#### Key features of the product 1. Eco-friendly recycled material

I. Eco-friendly recycled material

2. We can freely make various kinds of products such as stationeries, toys, and furniture.3. Best suited for sales promotion and gifts

We develop new products made of paper. We can create any kind of original product such as stationeries, toys, furniture, and miscellaneous goods. Customers can sell them as their products or use them as gifts or for sales promotion. We can make products completely from paper and we propose eco-friendly recycling.

#### Solutions for our clients

The assumed customers are companies and organizations that need to plan and sell original products as well as methods for displaying products and promoting sales, and advertising agencies, printing companies, planning companies, design companies, and product developers.

We are fully committed to designing and proposing what customers want.

Paper World Corp. http://www.paperworld.jp/ English 3-4-4, Uchikyuhojimachi, Chuo-ku, Osaka City, Osaka

ISO 14001

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ISO 9001

ΟΙΤ

## AMT-2 desktop type twisting machines



#### Key features of the product

1. Compact but can handle full-fledged ring twisting.

2. Very convenient to produce sewing thread for interlocking stitches, and original sample yarn

3. The twist number is variable from 100 to 600 T/m.

Power consumption is 75 W. The size is W300 x D400 x H600 mm. The weight is 30 kg. S-twisting and Z-twisting are changeable. The machine has four thread breakage stoppers and the full bobbin stop. The full-fledged ring twister enables increased twisting of single threads as well as doubling and twisting of two or more treads.

#### Solutions for our clients

The assumed customers are knit goods manufacturers. The machine is most suitable for making threads used for interlocking stitches. When the span thread of the same color is used for interlocking stitches of high-quality knit goods like cashmere, the stitches can be clearly seen due to the difference in thread quality. By increasing the twists in the twisted thread or twisting several threads into one and using it as sewing thread for interlocking stitches, the stitches are no longer visible, which largely improves the sense of quality. With just this machine, users can upgrade products and develop original yarns, and, by doing so, differentiate themselves from other companies. Users can also reduce the time required to develop new products and the cost of creating original sample yarns.

Marui Textile Machinery Co., Ltd.

http://www.marusans.com/e/ English 2-1-15, Takadono, Asahi-ku, Osaka City, Osaka

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

### "Hirose hooks" (hooks of sewing machine)



#### **Key features of the product** 1. Top quality

2. Quick delivery 3. Reasonable price

The "hook" of sewing machine is the part that stores the bobbin around which bobbin thread is wound. The hook catches the needle thread supplied from the needle, and, when going around to make a loop of the needle thread, passes the bobbin thread stored in the hook through the loop to create a stitch. Namely, the hook is the most important part of a sewing machine.

#### Solutions for our clients

We have provided more than 1,000 kinds of Hirose hooks suitable for all kinds of sewing machines used for sewing thin to heavy cloth, including no-oil-supply hooks (that eliminate oil spots on yarn and cloth) and tip-strengthened hooks (that reduce the damage to the hook tip by the needle). Moreover, we have conducted a study of "diamond-like carbon" via academic-industrial cooperation, and have succeeded in producing "durable hooks" that increase durability. Not only our accumulated technology but also our advanced processing technology, surface polishing technology and advanced dimensional accuracy are highly rated around the world.

HIROSE MFG. CO., LTD.

http://www.hirosemfg.co.jp/ **#**× 4-5-12, Tsukuda, Nishiyodogawa-ku, Osaka City, Osaka

### Paper displays for selling products in stores



#### Key features of the product

- 1. Can sell a large volume of seasonal products in stores.
- The print on the displays explains the features of products.
   Made of recyclable paper.

We provide various shapes of paper displays for selling products in stores, such as floor displays, paper hanging displays, counter display boxes, and point-of-purchase advertising displays. We have a database of abundant shapes built over 30 years of business.

#### Solutions for our clients

We have long made paper displays for store sales promotion. The assumed customers are the manufacturers of products such as daily necessities, drugs, and cosmetics as well as advertising agencies who handle sales promotion. Since we have established an integrated in-house system of planning, design, manufacturing, and shipment, we can propose shapes and designs in response to customer demand and quickly deliver products at low cost. In addition to paper, we can provide products made of plastic and metal.

Masspack Co., Ltd. http://mass 1-3, Minamibefu

http://masspack.co.jp English 1-3, Minamibefu-cho, Settsu City, Osaka ISO 9001

## Paper tubes and paper tube manufacturing equipment



GOJ

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ISO 9001

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ΤΜ

#### Key features of the product

Top quality and technology cultivated over 100 years of experience
 Various paper tubes available
 Earth-friendly products

We produce various kinds of paper tubes for films and fibers, as well as small caliber paper tubes. Moreover, we provide paper reels made of recycled paper and water-soluble paper tubes in order to deal with environmental problems, as well as composite core paper tubes that combine paper tubes of

#### Solutions for our clients

different inside diameters for special purposes.

We have developed paper tubes for textile markets since the foundation of the company in 1911. Over the years, we have also developed original paper tube finishing equipment. Based on the technologies and know-how that we cultivated over 100 years of experience, we have exported our technologies to South Korea, India and other countries overseas. We can provide paper tubes that satisfy various specifications according customer needs. Moreover, making use of our finishing equipment, we can enter into tie-ups with textile makers and paper tube makers that produce paper tubes for synthetic fiber.

 TANAKA PAPER TUBE CO., LTD.
 http://www.tanakapt.co.jp English

 6-88, Oihara, Yao City, Osaka

"adpack" volatile corrosion inhibitor paper
Image: Imag



#### Key features of the product

1. Changes rust prevention processing from anti-corrosion oil.

2. Easily protects products from rust at a low cost.

3. Rust prevention power that is stronger than rust prevention film

When metal products are wrapped or sealed in container boxes and plastic bags with "adpack," they are protected against rust. The paper enables metal products to be used as they are without cleaning after they are unpacked. After use, "adpack" can be disposed of just as paper.

#### Solutions for our clients

We have "40 years of experience dealing with anti-corrosion paper." Our product "adpack" has established trust and results with more than 2,500 customers including major steel manufacturers, automobile makers and machine tool companies.

In hot and humid Asian regions such as Japan, the volatile anti-corrosion paper can easily prevent rust that can cause big troubles, and thus greatly helps customers.

At present, we have sales agents in China (Shanghai), Taiwan, South Korea, Singapore, Thailand, Malaysia and India.

DCOAT CO., LTD.	http://www.adpack.jp English /中文 1-25-14, Hishie, Higashiosaka City, Osaka
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Good planning capability One-of-a-kind technology Made in Japan Trial production possible Mass-production possible

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ISO 14001

ТМ

ISO 9001

## Bio rubber Maxima material for medical equipment

# 2

#### Key features of the product

The infrared spectral reflectivity is 60% or higher at ordinary temperature.
 Helps users to release heat shock proteins.
 No heating, no need for electricity

The material emits high-level ultrared rays at ordinary temperature, helping users to increase body temperature by about 1°C. The material helps users to release heat shock proteins that physically repair cells damaged in daily life environments and thus augment the body's natural healing power. We have already presented the material to academic societies, established evidence of the benefits and acquired international patents.

#### Solutions for our clients

The generally known method of helping people produce more heat shock proteins is the hyperthermia therapy performed at hospitals. Since this therapy requires the body temperature to be increased to about 40°C, only people in good heath conditions can be treated. The development of this product is expected to produce the effects mentioned above in daily life. "Living a long healthy life" is the absolute theme in an aging society. Contemporary medicine has evolved greatly. Yet, we expect our product to be used by many people who want to make an effort to help themselves.

YAMAMOTO CORPORATION

N http://www.yamamoto-bio.com/ English /中文 5-13-11, Nakagawa, Ikuno-ku, Osaka City, Osaka

## From industrial protectors to athletic sunglasses



#### Key features of the product

1. From polarized sunglasses to laser protective eyewear

Various surface treatment technologies such as anti-fog.
 Ergonomic design

We have experiences in light control for 100 years and our products are extensively used in a variety of fields, from industrial protective equipment including laser protective eyewear to sunglasses for sports. Making full use of our proprietary surface treatment technologies, we provide high value-added products such as hard coated lens and hydrophobic lens.

#### Solutions for our clients

We manufacture and market industrial protectors and sporting goods. For 100 years since the founding of the company, we have dealt with the issue of ""eye protection."" We have a large market share for industrial protectors used at manufacturing sites, as well as sporting goods such as swimming goggles and sunglasses. We manufacture products through an integrated in-house production system that spans from design to manufacture and sales. In particular, our laser protective eyewear, injection molded polarized lens and surface treatment technology such as hard coating are something beyond comparison.

YAMAMOTO KOGAKU CO., LTD. http

TD. http://www.yamamoto-kogaku.co.jp/ English 3-25-8, Chodo, Higashiosaka City, Osaka



GO

JM

### CatEye Nano Shot Plus HL-EL625RC



#### Key features of the product

High-power rechargeable headlight
 Battery-integrated, miniature, lightweight
 USB rechargeable simplicity

This headlight delivers super-wide, super-strong light distribution based on our proprietary OPTICUBETM lens technology. The built-in lithium-ion rechargeable battery simply enables USB charging. Users can select usage from three lighting modes according to conditions of use, and a certain level of luminosity will be maintained just until turning the light off. An easy-to-understand battery indicator is another feature.

GOM

#### Solutions for our clients

Riding on sports bicycles at night at high speed increases the risk of an accident. For users who use sports bicycles for commuting, health maintenance, and training, we provide high-power headlights to enable them to ride more safely at night. With the slim compact body, the headlight produces the highest-class of luminosity and is sufficiently waterproof that cyclists can ride even in intense rain. The high-powered LED headlight that emits 600 lumens of light can be charged using a USB connector, and thus pursues simplicity and economical efficiency.

CATEYE CO., LTD.	http://www.cateye.com English /中文/ French / German / Dutch / Italian / Spanish	ISO 9001
CATLIL CO., LID.	2-8-25, Kuwazu, Higashisumiyoshi-ku, Osaka City, Osaka	ISO 14001

### FL-5600 low safety bed



Key features of the product
1. Eliminate the risk of patients being caught.
2. Reduce pressure when rising the back panel with drop seat and swing back system.
3. Safe low-voltage 24V electric equipment system

The beds ensure safety, comfort, and functionality, which are demanded for medical beds of inpatient centers. The beds also meet the practical needs of nurses and caregivers. In consideration of the hygiene required in medical practice, an antibacterial coating is applied to the beds.

#### Solutions for our clients

Medical institutions can widely use the beds regardless of acute or chronic stage conditions, and can improve the safety and comfort of treatment environments. Moreover, the beds can be extensively used in facilities where persons need physical therapy, such as facilities for elderly people, people with disabilities, and people requiring nurse attention. These beds eliminate the risk of the patient being caught in the side rail, which should be avoided in medical practice. Moreover, the beds take usability in medical practice into consideration with large-size casters for good transport and our electronic system has been designed to cut the electromagnetic wave for avoiding the interfering the other medical equipments.

SEAHONENCE Inc. http://www.seahonence.co.jp/ English 3-10-17, Fukaekita, Higashinari-ku, Osaka City, Osaka

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

ISO 9001

### Doctor Pick (Toothpicks that do not damage teeth)



#### Key features of the product

1. Do not hurt teeth and gums.

2. Removal of plaque and massaging the gum possible

3. Recommended by dentists

The conventional round-shaped toothpicks were originally made for cooking, and portable triangular toothpicks suitable for interdental spaces are extensively used in Europe and the U.S. Making use of conventional materials (processed round wooden sticks), we have developed a machine for cutting the sticks into "interdental toothpicks" with the tip cut into a triangular shape that fits gently into interdental spaces. The toothpicks can be placed on dining tables, and simply and effectively used for care after meals.

#### Solutions for our clients

According to dental experts, conventional round toothpicks can damage teeth if used to remove plaque from interdental spaces after meals, thus triangular toothpicks are suitable for the purpose. Conventional triangular toothpicks are cut by forming tools and connected at the sides. Therefore, users need to break off one toothpick each time, and fibers are likely to remain as burrs, making them dissatisfying as products. Making use of conventional processed round wooden sticks, we have developed the world's first "interdental toothpick" -- called Doctor Pick -- with the tip cut into a triangle that fits gently into interdental spaces.

Koeisha & Co., Ltd.

ife-Related, F

http://www.cleardent.co.jp English 885-Uehara-cho, Kawachinagano City, Osaka

### Vehicle impact shock absorbers

### **O J M**

OJM

#### 1 2 3

#### Key features of the product

- 1. Vehicle center-of-mass acceleration at collision below 200 m/s<sup>2</sup>
- 2. Passenger head collision speed below 40 f/s
- 3. Partial exchange possible

Our impact absorbers for vehicles meet USA structural safety criteria (NCHRP-350) for expressways and the safety assessment standards for Japanese passengers, and thus have been used in all expressways in Japan. In the Tokyo Metropolitan Expressway, our products are highly evaluated for their safety and we have a 100% market share.

#### Solutions for our clients

We have developed vehicle impact shock absorbers that protect precious human lives from traffic accidents. In the Public Works Research Institute of the Ministry of Land, Infrastructure and Transport, we conducted full-scale crash tests at a speed of 100 km/h. The results show that our products meet safety installation standards in the USA and Japan. We have delivered products to the Ministry of Land, Infrastructure and Transport, NEXCO, Metropolitan Expressway, Hanshin Expressway, etc. and we can be consulted about the improvement of individual installations. Moreover, because we have enabled the replacement of parts as opposed to the replacement of entire products, we can greatly reduce repair costs after the occurrence of collisions.

NKC Co., Ltd. http://www.nkcsp.co.jp English 4-27, Rinkuminamihama, Sennan City, Osaka

### Touch-free dispensers and dispenser stands G 🖸 M



#### Key features of the product

1. Sensor-activated, touch-free for dispensing disinfectants

- 2. Used for various chemicals
- 3. Can be installed anywhere owing to free height adjustment.

The products thoroughly pursue hygiene and usefulness. The touch-free dispensers are hygienic, and the size of container inside the dispenser is standardized to store various chemicals including disinfectants and hand-washing solution. To facilitate the use of small children to adults, the height of the dispenser stand can be freely adjusted from 131cm to 170cm, allowing the dispenser to be used for various applications and installed in various sites.

#### Solutions for our clients

We conduct corporate activities with the aim of becoming a one-of-a-kind company under the theme of hygiene, environment, and health. Our products can be used by a wide range of customers including medical institutions such as hospitals, public spaces such as schools and government offices, companies, plants, and stores. We can develop and manufacture both chemicals and feeders (equipment) in-house, and can directly and speedily reflect and realize customer needs. We develop environment-conscious products that contribute to solving environmental problems.

Saraya Co., Ltd.	http://www.saraya.com/ English	ISC
Salaya CO., Llu.	2-2-8, Yuzato, Higashisumiyoshi-ku, Osaka City, Osaka	ISC

### "pid" retractable indoor clothesline

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#### Key features of the product

1. Clothesline wire can be retracted when not in use.

2. Capable of supporting up to 10kg of laundry weight.

3. Wire retracts into unit at safe gentle pace.

This convenient indoor clothesline occupies little space, as the laundry wire can be retracted into the unit when not in use. The wire, which extends to maximum distance of 3.6m, can be used for drying laundry of up to 10kg weight. This product was awaded the Good Design Award in the Japan Institute of Design Promotion in 2009.

#### Solutions for our clients

An indoor clothesline is an ideal solution that solves many issues. For those who have no outdoor space for hanging out the laundry, those who do the laundry after coming home at night, those with pollen allergies, those who hang laundry indoors as a means of dealing with dry winter weather or rain, and those with large amounts of laundry can all benefit from this product. "pid" serves these needs whilst putting an emphasis on a clean and convenient living environment.

Morita Aluminum Industry, Inc. http://www.moritaalumi.co.jp/ English 530-1, Ozaki-cho, Hannan City, Osaka

### **Door handles and lever handles** for architecture



#### **Key features of the product** 1. A wide variety of lineups

A while vallety of interps
 Thorough commitment to materials and finishing
 Can accept various orders (special orders).

As an architectural hardware maker, we have a wide variety of lineups of door handles made of various kinds of materials, finishing, and designs. The door handles not only can match all kinds of spatial designs, but also are studied and developed based on our thorough commitment to user-friendly functions and shapes.

#### Solutions for our clients

Customers can select products from a wide variety of lineup according to applications and situations. For example, the lineups include products made of antibacterial materials to prevent hospital-acquired infections, products that hardly cause electrostatic shock, and products with rotating grips to lessen the burden on the wrist when opening a sliding door. Moreover, we can accept small-lot production and special orders, and can make one-of-a-kind products in accordance with customer demand.



Key features of the product
1. Adjust the height only by lifting the top board.
2. Prevent sudden drops using a slowdown mechanism.
3. Load capacity is 1,000 kg (still vertical load).

There are a lot of people who use wheelchairs in elderly facilities. Because the arm rests of the wheelchair do not fit under the normal table height and thus prevent the user from moving closer to the table, it is desired that the table height can be easily adjusted. Therefore, we have developed the LEGMAN table legs for use in elderly facilities.

#### **Solutions for our clients**

The LEGMAN can be easily height-adjusted, and can be used in various situations as it has strong load carrying capacity. The table legs can be used not only for dining tables of welfare facilities, but for lab tables in educational facilities and workbenches in factories. The height of table legs can be adjusted according to the growth of children, the body shape of individuals and work style.

http://www.artunion.co.jp/ English http://www.koyogear.com/ English /中文 ISO 9001 UNION CORPORATION KOYO ENGINEERING CO., LTD. 2-13-22, Minamihorie, Nishi-ku, Osaka City, Osaka 1214, Kusabe, Nishi-ku, Sakai City, Osaka "Rispon" porous resin based Ο ΟΙΤ **Takeyama recorder Maple series** on the extraction method Μ Key features of the product Key features of the product 1. Pore diameters can be freely selected. 1. Refined, elegant tone 2. Porosity can be freely selected. 2. Balanced musical interval 3. Resin can be freely selected. 3. Enables rich performance expression. We produce porous resins used as flexible Nibs for stationery, cosmetics and seals. We provide brush-Recorders are delicate musical instruments completed through many difficult processes. We can provide pencil Nibs and oil-based brush-pencils for the stationery field, soft-touch eyeliner pen Nibs and high quality, stable recorders based on technologies we have cultivated since 1960. These recorders have applicators for the cosmetics field, and sealing surfaces used for self-inking rubber stamps in sealing realized elegant barogue tones and a comfortable light reaction to playing. applications.

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#### Solutions for our clients

To match inks that are developed by customers, we research and select resins that of good chemical resistance, and manufacture products by emphasizing ink discharge, continuous writing capability and hardness, all of which are important for producing a good writing feeling. Because we use the extraction method for all products, we can assuredly form pores. We specialize in producing porous resins with pore diameters of 1 to  $100 \mu$  and a porosity of 45 to 85% v/v.

Life-Related, Etc.

RIKEN KAGAKU KOGYO CO., LTD. http://www

CO., LTD. http://www.riken-chem.co.jp/ English 2-25-28, Kasuganishimachi, Hirakata City, Osaka Solutions for our clients

High quality wooden recorders are musical instruments that are difficult to obtain because of high prices. Based on the design of our Bressan series used regularly by professional players, we have developed a maple series that is more affordable to players. This model is high quality recorder shown at reasonable prices, which are suitable for those who want to learn how to play a recorder and who want to play several kinds of musical instruments. Moreover, we can provide low-priced and high quality recorders overseas without being affected by foreign exchange rates.

TAKEYAMA RECORDER WORKSHOP http://www.takeyama-recorder.jp/ English 3-8-12, Anryu, Suminoe-ku, Osaka City, Osaka

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

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#### Manufacturing and restoration technology Ο for Japanese traditional handicrafts



Key features of the product 1. Woodworking technology

2. Lacquer technology 3. Mercury amalgam plating technology

We have manufacturing and restoration technology for Japanese traditional handicrafts, and are engaged in the manufacture and restoration of religious tools such as miniature shrines and Buddhist altar fittings. We perform mercury amalgam plating in a completely closed workplace. Therefore, we can process products without worrying about the effects of environmental pollution.

#### Solutions for our clients

We can repair and restore cultural assets possessed by museums, etc. In particular, we have engineers who can perform mercury amalgam treatment. There are only a few of these engineers in the whole wide world. Based on these traditional technologies, we can reproduce cultural assets just as they were manufactured in old times.



ife-Related, F

http://www.sairei-tanio.com/ English 1081-1, Syukuno, Nose-cho, Toyono-gun, Osaka

#### iPad2 Hard Case



Key features of the product 1. Thin and strong

2. Stylish 3. Can carrying iPad2 inside.

The hard case can securely protect the iPad2, which is thinner and weaker against external impact than the iPad. Since melamine facing plates are used as the panels, the stylish hard case looks more beautiful, tempting users to carry it outdoors. We can also provide hard cases for other tablet PC.

#### Solutions for our clients

We have facilities that can handle all processes from planning and design to completion of products in-house. Our manufacturing focuses on how to cast customer ideas wholly into shapes starting from one unit. Therefore, we are confident that our response capabilities will never be outdone by other makers in Japan or overseas. We can meet customer requests for producing cases designed for video and communication equipment, precision equipment, chemicals, robots, photovoltaic cells, and PCs. Moreover, we will continue developing five new products in-house every month, and thus will contribute to the development of society.

http://www.actec1972.co.jp/ English ACTEC CO., LTD. 3-10-10, Nagaokagumachi, Hirakata City, Osaka

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	ISO	14001	

GJT

"N-forme series" lockers for valuables

#### Key features of the product

1. Can provide custom-made products in addition to standard products.

2. Can change the size according to application.

3. Three types - self-standing type, desktop type, and wall type - are available.

Our lockers are designed to store valuables such as wallets, mobile phones, and notebook computers. Users can select either basic cylinder locks or password locks that can be used for an unspecified number of users. The standard size of one box is W186 x D310 x H140mm. The structure of one locker can be changed from one row and one tier to five rows and ten tiers.

#### Solutions for our clients

Our lockers are designed to store valuables of workers including part-timers at fast food shops, supermarkets and plants. Moreover, the lockers are used for a variety of applications at present, such as for storing notebook computers and mobile phones and for post-office boxes at universities in which academic reports submitted from students are temporally stored. They are all simple and high quality steel storage boxes. We can provide custom-made products according to the applications of customers and the things to be stored.

NIMBARI KOUSAKUSYO CO., LTD.

http://nimbari.co.jp/english/ English 3-14-6, Mizuhai, Higashiosaka City, Osaka

ISO 9001

GJ

#### Plastics processing to keep food fresh GOJ (Embalance processing)



Key features of the product 1. Can keep food fresh.

2. Can control the decrease in food nutrients.

3. Processing of various types of resins possible

Embalance processing is a method of mixing thermoplastic resins such as polypropylene and polyethylene, with specially treated water. We have patented the technology in Japan and the U.S. Using resin processed by this method, we produce and market containers for preserving foods, etc. Because the method enables processing into resin, we can process polyester to produce yarn and textile products.

#### Solutions for our clients

The assumed customers among general users are housewives who want to use food without generating waste, while the assumed customers among commercial users are food service stores. Particularly, it is possible for commercial users to reduce food costs by extending the freshness of food by one day. Moreover, because our special processing of materials can give new features to products, we can make original goods for general stores. We have the know-how for commercialization from production to packaging planning, and can commercialize products according to customer requests. Regarding textile products, we can commercialize products that have heat-retention, deodorization, and relaxation effects.

http://www.whitemax.co.jp English Whitemax Co., Ltd. 1-1-25, Doyama, Hirakata City, Osaka

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

### DIL (Lining material for denture bases)



#### Key features of the product

1. Functions as soft tissue conditioner first, then begins self-curing a week after wearing. 2. Patients feel comfortable and less pain with their dentures. 3. Takes a functional impression of the oral mucosa.

Our DIL is the first resin product in the world for repairing denture bases that has time-released functions for automatically starting self-curing. It functions as soft tissue conditioner first, then automatically begins selfcuring a week after wearing. Therefore, patients feel less pain with their dentures and the product enables a functional impression to be taken in line with motions of the mouth when actually talking and eating.

#### Solutions for our clients

We have manufactured and marketed biomaterial as medical equipment for dentistries over our history of more than 70 years. In particular, in the field of dentures, which are indispensable for elderly persons, we have a large market share in Japan and have obtained high ratings and trust from the industry. We have the technology to manufacture next-generation dental resins for denture lining material that is as soft as rice cake, but when applied to oral cavities, it automatically begins self-curing after a certain amount of time.

http://kamemizu.co.jp English KAMEMIZU CHEM, IND, CO., LTD,

17-16, Toyosato-cho, Neyagawa City, Osaka

ISO 9001

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#### Tamagon (Ball washer-driers for ball pools)



#### Key features of the product

- 1. One unit can handle the washing, wiping and drying processes.
- 2. Can call attention to cleanliness.
- 3. Can make integrated use with a ball pool.

The Tamagon is the only machine that can both wash and dry balls used for ball pools. All users have to do is to put the balls into the machine, and balls come out clean and wiped dry. It is even possible to place Tamagon next to a ball pool, and let children throw balls into the machine to make it wash the balls. Capacity: 3,200 to 3,600 balls per hour, size: W680, D500, H1450mm. No water facilities are required.

#### Solutions for our clients

We have been engaged in the development of peripherals for amusement industries. These ball washerdriers are new products that were born out of requests from customers in the ball pool business. Because the machine can wash balls during business hours while customers are watching, they emphasize and promote cleanliness. Moreover, a skeleton type that displays the washing process inside has a mechanism that entertains children and looks pleasing to the eye. Users require no water facilities, and can install machines anywhere that there is a power supply. The machines do not leak water used for washing.

# Related, Etc.

http://www.kirara-do.com/ English **KIRARA, INC.** 1-6-14-3, Kidonishimachi, Kawachinagano City, Osaka

#### Jelly kit drug "GT drug (Gel Together drug or ==| Good Taste drug)" with new dosage forms



#### Key features of the product

1. Can be applied to all kinds of solid and powder medicines. 2. Can be applied to high-active medicines including anticancer drugs. 3. Can be applied to LCM measures and new medicines.

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The jelly kit drugs are the world's first drugs with new dosage forms that enable users to take medicine without feeling bitterness only by pushing gelatinous jelly from the packaging as a swallowing support without drinking water. The drug and the swallowing-facilitating jelly are combined to make one kit. The active ingredient is wrapped in oblate film, which masks the taste and smell of medicine.

#### Solutions for our clients

The jelly kit drugs can increase the ability of taking medicines of all patients with swallowing difficulty, elderly people and infants, and renal patients who are subject to a restriction of water intake. Because the medicinal properties are wrapped in oblate, users can simply and deliciously take medicines together with the jelly. Thus, the jelly kit drugs prevent users from refusing to take medicines, thus reducing the burden of nursing persons and caregivers. Because the jelly kit drugs can become the optimal means of life cycle management (LCM) that extends the product life cycle by changing dosage forms, pharmaceutical companies can have an advantage that they can guickly deliver newly developed drugs by shortening the drug design process. The ielly kit drugs can be applied to drugs from a very small amount of 10 mg to a high volume of 1.000 mg.

MORIMOTO PHARMA CO., LTD.

http://www.morimoto-iyaku.jp English 1-25, Senriyamamatsugaoka, Suita City, Osaka



#### Recycled aggregate manufacturing system for ready-mixed concrete, GOJ based on the recycled aggregate wet type gravity concentration method



Key features of the product

1. Can produce structural recycled coarse aggregate. 2. Can produce structural recycled fine aggregate. 3. About 90% commercialization rate (yield) is possible.

To enhance recycled aggregate for structural quality, it is necessary to cut the mortar that is attached around the aggregate. Such process, however, requires huge energy and generates a large amount of waste. Using the difference in specific gravity by volume of attached mortar, the recycled aggregate wet type gravity concentration method enables the sorting and manufacturing of high quality aggregate and low quality aggregate.

#### Solutions for our clients

Although the reuse rate of concrete exceeds 90%, it is mostly reused as base course materials. Recycling as base course materials has its limits, however, and the use of recycled aggregate for concrete should be promoted. Our recycled aggregate manufacturing system enables the production of recycled aggregate that satisfies the quality of crushed stones for concrete. By producing high quality recycled readymixed concrete using such aggregate, we can realize the conversion from recycling to reuse. Only our gravity concentration method-based system corresponds to the guality classification (H, M, and L) on a commercial base, which is set by JIS (Japanese Industrial Standard).

http://www.concle.co.jp English **KYOBOSHI CO., LTD.** 965, Son-enji, Hirakata City, Osaka

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

### R40 series - Deodorant care pillows



Key features of the product

1. Low-elasticity of 9.6 newton

2.96% removal by adsorption of body odor components

3. Containing activated charcoal of superior hygroscopic property

This pillow uses low-elasticity foam of 9.6 newton, which is up to 5 times bigger than commercialized lowelasticity foam pillows. Moreover, because the activated charcoal contained in low-elasticity foam exhibits both a superior deodorization power that enables 96% removal by adsorption of body odor components and a moisture absorption power that absorbs perspiration while sleeping, users can enjoy a comfortable feeling in bed.

#### Solutions for our clients

Low-elasticity foam material that contains activated charcoal and has a low-elasticity of 9.6 newton is used for the pillow. The low-elasticity foam material, which brings elasticity close to zero, supports dispersed body pressures with a flexibility that even follows the form of individual hair and, thus, can provide incomparable usability to users. Moreover, because the activated charcoal contained in foam exhibits both a superior deodorization power that enables 96% removal by adsorption of nonenal (body odor component), 99% isovaleric acid, 98% acetic acid and 86% ammonia, and z moisture absorption power that quickly absorbs perspiration while sleeping, users can enjoy a comfortable feeling in bed.

TAKASHIMA Inc. http://www.takasima.co.jp English Takatsuki FJY Bldg., 5F, 1-5-25 Jyohoku-cho, Takatsuki City, Osaka

### Integrated production system



ife-Related, Et

Key features of the product

Receiving orders, design, and making drawings
 Resin mold-making and molding
 Painting, printing and assembly

For the rough 60 years since our founding, we have manufactured products centered on plastic molding based on an integrated system that consists of design, mold-making, molding, painting, assembly, and finishing.

#### Solutions for our clients

To meet customer demand, our departments in charge of molding technique, sales, production, and quality control sequentially hold meetings with customers. We not only offer design and manufacturing of high quality molds based on extensive experience and advanced technological capabilities, but also perform polymer processing using the latest equipment to realize high-precision manufacture. We also perform printing and painting to enhance the grade of moldings, including UV painting, and maintain high precision in the final assembly and finishing of products. To maintain precision in each process, the quality control department is making utmost efforts to thoroughly prevent the occurrence of errors and losses. We can provide a total answer to customer needs centered on resin products.

ASAHI electrochemical Co., Ltd.

http://smile-asahi.co.jp English 4-3-18, Kamiji, Higashinari-ku, Osaka City, Osaka

### Sanyo specialty cotton swabs



GOJ

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Key features of the product 1. Safe cotton swabs 2. Soft cotton 3. Strong sticks

The specialty cotton swabs feature increased softness and absorb 40% more water compared with ordinary swabs. Moreover, the shapes has been improved to reduce cotton loss without loosing the soft texture of cotton, and thus enhance safety. The products are only made by Sanyo who has long been dedicated to producing cotton swabs.

#### Solutions for our clients

Based on accumulated technology and quality, Sanyo produces cotton swabs with "safety and reassurance" as the primary concerns. The assumed customers for cotton swabs for general use are retail industries such as general merchandise stores and drug stores, and those for cotton swabs for industrial use and medical use are specialized agencies in each field. Since we use all internally-designed production lines, we have a high degree of freedom in development and production, and can increase the speed of commercialization. We can produce high value-added products in terms of shape and usability that match materials to applications.

Sanyo Co., Ltd.	http://www.sa-n-yo.co.jp/ English 2-2-6, Nakano-cho-Higashi, Tondabayashi City, Osaka
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### IC control heaters (SCH-900SC)



**Key features of the product** 1. Warms water in the container and retains the heat efficiently.

2. User-friendly design that emphasizes safety

3. Prevents damage via a boil-dry memory circuit.

This heater can warm water in the container and keep it at a desired temperature by temperature control. It is designed with safety in mind: the safety circuit detects a boil-dry state even if the unit is taken out of water without turning off the power by mistake. And, the heater cannot be turned on without the resetting the circuit first even if the unit's temperature and ambient temperature fall.

#### Solutions for our clients

Through the development and manufacture of heaters and thermostats used for tropical fish tanks, we have accumulated technologies for controlling the temperature of hot water. For household use, we make products that circulate and purify hot bath water and keep water a desired temperature. In recent years, we have marketed products that incorporate microcarbon fiber heaters such as gloves, socks, and vests, and they have been highly rated by customers. We can provide not only heater-related products but we can also design and manufacture products for a variety of fields with due consideration for safety.

KUMAGAI Electric Co., LTD. http://www.kumagai-dk.jp English 190-1, Nishikyuhoji, Yao City, Osaka	
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Good planning capability One-of-a-kind technology Made in Japan Trial production possible Mass-production possible

ISO 9001

ISO 14001

GO

ISO 9001

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

### Tips on how to get your business started in Osaka [1] Osaka Business and Investment Center (O-BIC)

### What we do:

- ✓ Business Support Office (Rent-free Offices can be used up to 6 months)
- Business matching for high-potential companies
- ✓ Local government incentives
- ✓ PR support for newly-established company
- ✓ Information on real estate, recruitment, company registration, and visa etc...







#### The Osaka Business and Investment Center (O-BIC)

is a non-profit organization established by the Osaka Prefectural Government, the Osaka City Government, and the Osaka Chamber of Commerce and Industry in a joint initiative. We' re here to assist foreign companies, consular missions, and organizations who would like to set up a center of operations in Osaka.

### **Osaka Business and Investment Center (O-BIC)**

Tel: 06-6944-6298 Fax: 06-6944-6293 URL: http://o-bic.net/ E-mail: o-bic@osaka.cci.or.jp c/o International Division, Osaka Chamber of Commerce and Industry 2-8 Hommachibashi, Chuo-ku,Osaka, 540-0029 Japan

### Tips on how to get your business started in Osaka [2] Osaka Prefecture's Incentives

### Subsidy for foreign-affiliated companies

Eligibility	Foreign-affiliated companies which would newly establish a headquarters or a gateway office to Asia etc.	
Contents of subsidy	<ul> <li>5% of buildings/facilities cost (max: up to 100 million yen) or</li> <li>1/3 of building rent (max: for 2 years, up to 60 million yen) The maximum amount will depend on the number of regular employees.</li> </ul>	
Conditions	<ul> <li>Entity will secure office floor space of at least 250m<sup>4</sup> and have at least 25 regular employees (to be achieved within 3 years after the application).</li> <li>Evaluation of the business plan by a screening panel will be required.</li> </ul>	

### Tax Breaks within Special Zones

\*Please refer to 7 page about special zones.

Contents of	When newly moving to the special zone in Osaka area:
reduction	<b>ZERO Taxes</b> for 5 years + <sup>1</sup> / <sub>2</sub> taxes for the next 5 years (Total: 10years)
Eligible tax items	Corporate prefectural residents' tax, Corporate enterprise tax, Real estate acquisition tax
Eligible	New energy / Life science business /
businesses	Business supporting projects related to new energy and life science

Issued : February 2013

Publisher : Osaka Prefectural Government Department of Commerce, Industry and Labor 25F Sakishima Building 1-14-16 Nanko-kita Suminoe-ku, Osaka City, Osaka 559-8555
Edited and produced : ASACK inc.
Printed and bounded : Asahi Kosoku Printing Co., Ltd.
Translated : YUKOSHA Co., Ltd.



http://www.m-osaka.com/en/B2B/