

Directory of Aerospace Enterprises

in the Chubu Region, JAPAN





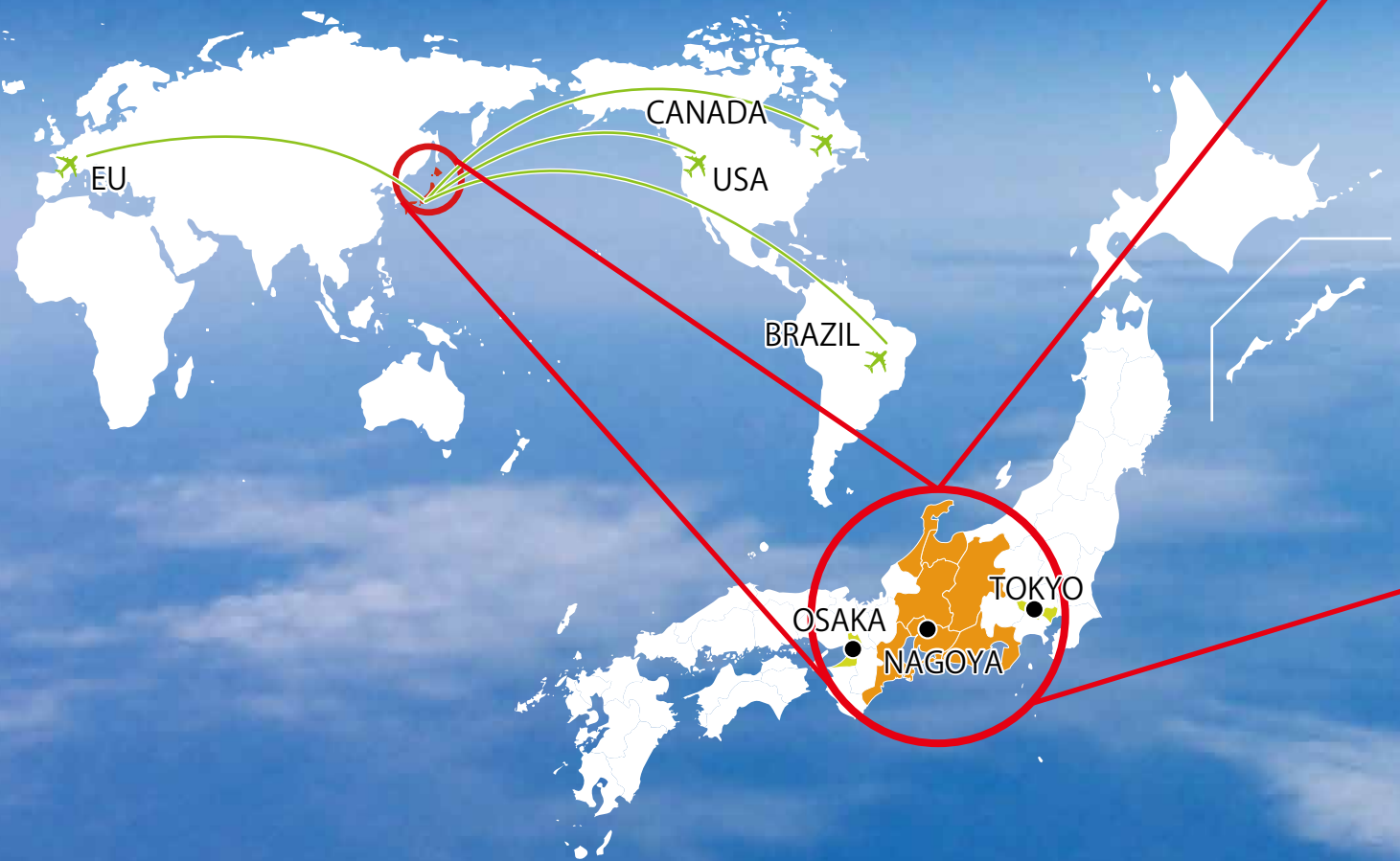
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 - Major aerospace companies in Chubu
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 - Greater Nagoya Initiative Center (GNIC)
 - Chubu Aerospace Industrial Technology Center (C-ASTEC)

✈ Major aerospace companies in Chubu



✈ The Chubu region



✈ Data on the aerospace industry in Chubu



Year 2015 (\$1@ ¥ 120)
Not included Nagano/Shizuoka pref. September 2016 September 2016 Year 2014



MRJ (Mitsubishi Regional Jet)

- The new aircraft made in Japan will soon be flying around the world.
- The first test flight was successfully completed on 11 November 2015.
- The first delivery is expected in 2018.



Resource: Mitsubishi Aircraft Corporation

BK117

Jointly developed by Kawasaki Heavy Industries, Ltd. and Airbus Helicopters. The world's best-selling helicopter.



Resource: Kawasaki Heavy Industries, Ltd.

H-II A/B

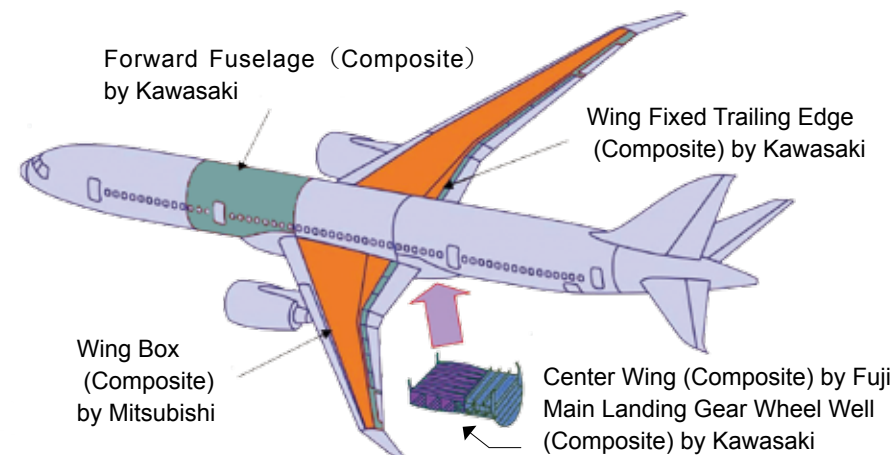
Mitsubishi Heavy Industries, Ltd. is H-IIA/B launch vehicle manufacturer and launch services provider.



Resource: Mitsubishi Heavy Industries, Ltd.

Airframe

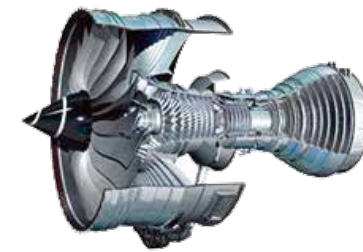
35% of the Boeing 787 airframe is manufactured by Mitsubishi, Kawasaki and Fuji Heavy Industries, Ltd.



Resource: JADC

Engines

The Trent XWB and Trent 1000 are engines of Rolls-Royce's Trent series. Mitsubishi Heavy Industries Aero Engines, Ltd. and Kawasaki Heavy Industries, Ltd. have participated in these programs as risk-sharing partners.



TRENT XWB



TRENT 1000

Resource: (c)2015 Rolls-Royce plc

Seats

Toyota Boshoku jointly developed with All Nippon Airways the Boeing 767 economy class seats for domestic flights.



Resource: TOYOTA BOSHOKU CORPORATION

Equipment

Nabtesco:

Elevator Power Control Unit, Aileron Power Control Unit, Actuator Control Electronics

Sinfonia Technology:

Linear servo actuator for the launch vehicle

Tamagawa Seiki:

Sensors and motors for aircraft

Nabtesco



SINFONIA

Tamagawa



Linear servo actuator for the launch vehicle

Sensors and motors for aircraft

CFRP

TORAY supplies CFRP prepreg material exclusively to Boeing.



Resource: TORAY INDUSTRIES, INC.

Capability Matrix



No	Company Name	page	Capability												Remarks of 12
			1	2	3	4	5	6	7	8	9	10	11	12	
01	AERO INC.	7	✈									✈			
02	Aerospace IIDA	9			✈	✈			✈			✈	✈		
03	AIKOKU ALPHA CORPORATION	11			✈	✈									
04	AKEVONO INDUSTRY CO.,LTD.	13		✈	✈							✈			
05	APC AEROSPECIALTY INC.	15	✈		✈	✈			✈			✈	✈	✈	Sewn fabrics Electrochemical Machining
06	Asahi Kinzoku Kogyo Inc.	17	✈		✈				✈						
07	Chubu Nihon Maruko Co.,Ltd. (CNM)	19							✈			✈	✈	✈	Wiring analyzer Laser wire marker
08	CHUO ENGINEERING CO.,LTD.	21										✈	✈		
09	CHUOZUKEN. CO.,LTD.	23										✈	✈		5100D Manual
10	CRE Co.,Ltd.	25										✈			
11	Daiichi System Engineering Co.,Ltd.	27										✈			
12	DAIKI SANGYO Co., Ltd.	29	✈									✈	✈		
13	Enomoto BeA Co.,Ltd.	31			✈							✈			
14	FUSO MACHINE WORKS,LTD.	33			✈							✈			
15	HIKARI MANUFACTURE CO.,LTD.	35			✈	✈						✈			
16	HODEN SEIMITSU KAKO KENKYUSHO CO.,LTD.	37				✈			✈						
17	IMAI AERO-EQUIPMENT MFG.CO.,LTD.	39	✈		✈	✈			✈			✈			
18	Ishigane Seiki CO.,LTD.	41		✈	✈										
19	ITO SEIMITSU CO.,LTD.	43										✈			
20	Kakamigahara Aero Equipment Co.,Ltd.	45		✈					✈			✈	✈	✈	Laser marking machine
21	KANEFUSA CORPORATION	47										✈			
22	KATO MANUFACTURING CO.,LTD.	49			✈				✈			✈	✈		
23	Kondo Machine Corporation	51	✈	✈	✈	✈									
24	KOSAKA IRON WORKS CO.,LTD.	53			✈	✈									
25	Koyama Chemical Co.,Ltd.	55							✈						
26	MATSUURA CO.,LTD.	57					✈		✈			✈			
27	Meinan Machinery Works Co.,Ltd	59			✈	✈							✈		Rotary Grinding
28	MEIRA Corporation	61	✈		✈	✈			✈	✈					
29	Mizuhocraft CO.,LTD.	63												✈	Heater, Controller
30	Mizuno Machinery Co.,Ltd.	65			✈										
31	MIZUNO METAL WORKS CO.,LTD.	67	✈	✈	✈							✈			
32	NABELL CORPORATION	69		✈								✈		✈	MRO Covers, Functional Covers for Machining Centers

No	Company Name	page	Capability												Remarks of 12			
			1	2	3	4	5	6	7	8	9	10	11	12				
33	Nabtesco Corporation	71	✈	✈										✈		✈		
34	Nishimura Works Co.,Ltd.	73			✈	✈								✈	✈			
35	O&M HEATER CO.,LTD.	75													✈	Heat blanket		
36	OHORI GRINDING CO.,LTD.	77												✈	✈	Grinding		
37	Okaya Special Steel Center Co.,Ltd	79		✈		✈												
38	Ryoki Tool Company, Ltd.	81			✈	✈						✈		✈	✈	Waterjet, advanced inspection		
39	Sanko Hamono Co.,Ltd.	83												✈				
40	SANKO MFG CO.,LTD.	85												✈	✈			
41	Sinfonia Technology Co.,Ltd.	87	✈	✈	✈	✈						✈	✈	✈	✈	3DPrinter		
42	S-TEC Co.,Ltd.	89				✈									✈			
43	TAKAGI CHEMICALS,INC.	91	✈		✈				✈					✈	✈	✈	3DPrinter	
44	TAKAGI INDUSTRY CO.,LTD.	93												✈				
45	Takasago Electric, Inc.	95	✈	✈														
46	TAMADIC Co.,Ltd.	97													✈	✈		
47	TAMAGAWA INDUSTRIES,LTD.	99	✈	✈	✈	✈								✈	✈			
48	TAMAGAWA SEIKI CO.,LTD.	101	✈	✈										✈		✈	3DPrinter	
49	TANIDA LTD.	103	✈		✈	✈								✈		✈	Sand Casting 3D Printer	
50	TECH SASAKI CO.,LTD.	105	✈											✈	✈			
51	TEKNIA Co., Ltd.	107	✈		✈	✈									✈	✈		
52	TENRYU AERO COMPONENT CO.,LTD.	109	✈						✈	✈	✈				✈		Engineering and design of Aircraft seats	
53	TOBA KOKEN CO., LTD.	111			✈	✈	✈							✈		✈	Water jet	
54	TOHMEI GROUP (TOHMEI Ind.)	113	✈											✈	✈			
55	TOKUDA INDUSTRIES CO., LTD.	115	✈		✈										✈			
56	TOYO KOKU DENSHI Co.,Ltd.(TKD)	117	✈											✈	✈	✈	Automatic circuit testing equipment	
57	TOYO SEIKO Co.,Ltd.	119												✈			✈	Inspection device
58	TOYOTA BOSHOKU CORPORATION	121	✈												✈	✈		Decals, Labels, Air sealing unwoven fabrics
59	Tsuchiya Group	123															✈	Landing gears, rod end
60	Usetech. Co.,Ltd.	125			✈													
61	WADA AIRCRAFT TECHNOLOGY Co.,Ltd.	127			✈									✈				
62	Waka Manufacturing Co.,Ltd.	129	✈											✈	✈		✈	Metal mold shaping
63	Yamaichi Special Steel - PRISMADD JAPAN	131												✈		✈	✈	AM (3DPrinter)



AERO INC.

株式会社 エアロ



CERTIFICATION JIS Q 9100, JIS Q 9001, JIS Q 14001

WEBSITE <http://www.aeross.jp>

Outline of Business

- Construction and assembly of aircraft
- Painting of aircraft
- Design and production of assembly jigs



Our Strengths

- **Concentrating AERO's skills and knowhow**
AERO's collective skills and expert knowledge all come together in assembly, the company's core business. The quality of aircraft comprising tens of thousands of parts and components is supported by the assembler's sense of mission in aircraft construction, along with skills developed through constant improvements.
- **Dedicated paint booth helps shorten delivery times and reduce costs**
Upon noticing productivity losses in the transport part of "assembly-transport- painting" in outsourced painting jobs, we immediately purchased customized painting booths designed especially for painting aircraft bodies. This reduces the time between the assembly and painting stages while lowering costs.
- **Global standard quality assurance**
Before establishing any of our quality maintenance check systems, from human resources training to improve skills and awareness to decisions on work procedures designed to ensure uniform quality, we acquired certification of JIS Q 9100 and JIS Q 9001, the global benchmarks for quality standards, superseding other quality management systems based on rigid rules.

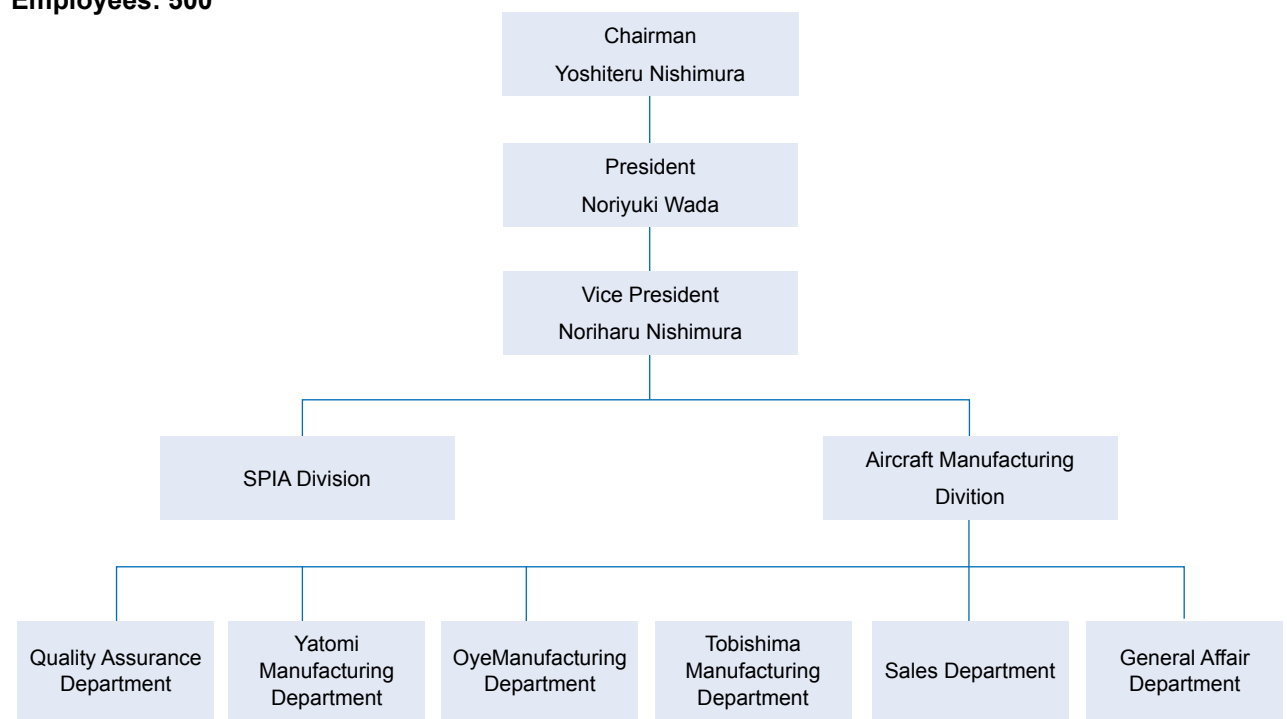


Facility & Equipment

- **Paint Booth**
- **Manufacturer** SAICO (Italy)
- **System** Downdraft spray booth
- **Dimensions** Sanding booth 6200mm×6700mm
 Paint booth 6200mm×6700mm, 8200mm×6700mm
 Drying booth 15200mm×6700mm

Organization

Employees: 500



Company Profile / Contact

Representative	Noriyuki Wada, President	Address	2-65-27 Kusunoki, Yatomi, Aichi 498-0066, Japan
Capital	US\$208,333	TEL	+81-567-66-3501
Major Customers	MHI, FHI, KHI	E-mail	contact@aeross.jp



Aerospace IIDA

エアロスペース飯田



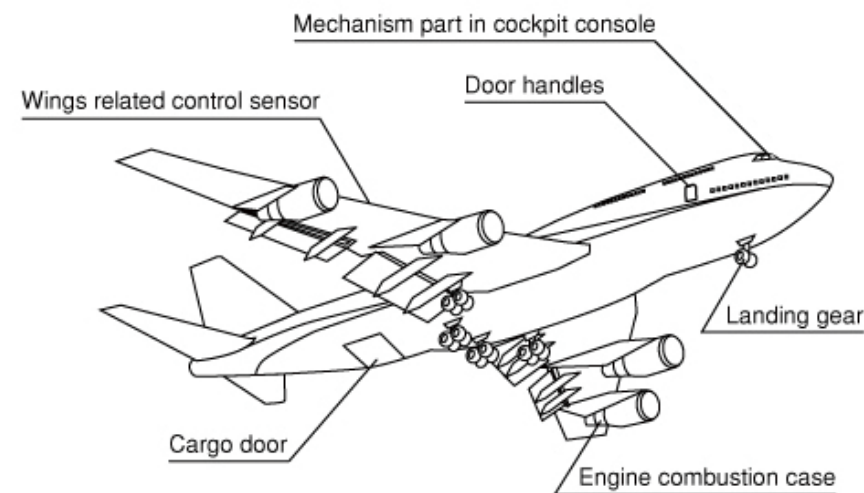
CERTIFICATION JIS Q 9100

WEBSITE <http://www.aerospace-iida.com/>

Outline of Business

Aerospace IIDA is a cooperative organization represented by the company "NEXAS", consisting of small and medium-sized companies, and conducted a deep and remarkable study through over 600 working teams and formed a new world-class industrial cluster in 2006.

In order to undertake large work projects, trust among the companies is very important, which is built through team working. Above all, under the quality assurance system backed by JIS Q 9100, Aerospace IIDA is steadily winning contracts for manufacturing aircraft parts.



Our Strengths

The representative company NEXAS has overall responsibility for quality assurance of products according to JIS Q 9100. Completion of the base plant for the aerospace industry cluster enables us to perform machining processes and special processes (such as heat treatment, surface treatment, and non-destructive testing) and sub-assembly work by establishing an intra-regional integrated manufacturing system.

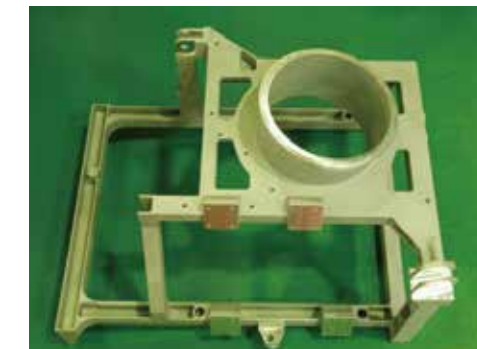
Facility & Equipment

	Max. Capability
5-axis machining center	4000×1500×1000
Machining center	4200×3000×1500
NC compound lathe	614×250×2060
Electric discharge	550×350×320
Hob machine	160 Dia φ120
NC surface grinding machine	1095×440
Boring machine	1020×760×300
Sheet metal processing machine	2,650×1,290
3-D coordinate measuring machine	1200×2000×800
Applicable software	CATIA V5

Products



Parts processed by 5-axis control machining center (MC)



Airplane related processed article

Company Profile / Contact

Representative NEXAS Co., Ltd. Koji Kaneda
Capital US\$16,667 (\$1 = ¥120)
Major Customers Tamagawa Seiki Co., Ltd.

Address 51-6, Shimotonoka, Iida, Nagano 395-0154, Japan
TEL +81-90-5416-9629
E-mail ne.k_mizutani@ne-co.jp



AIKOKU ALPHA CORPORATION

アイコクアルファ 株式会社



CERTIFICATION JIS Q 9100:2009, TS 16949:2009, ISO 14001

WEBSITE <http://www.aikoku.com>

Outline of Business

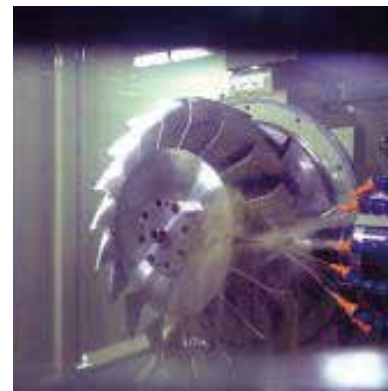
- Founded in 1943
- Started AP Division in 1969

Products

- **Aero structure parts**
Ribs, Inspa-ribs, Beams, Hinges, Trunnions, Fittings
- **Aero Engine parts**
Engine cases, Frames, Blisks, Diffusers
- **Impellers**
Compressor wheels for Gas turbines, Turbochargers

Our Strengths

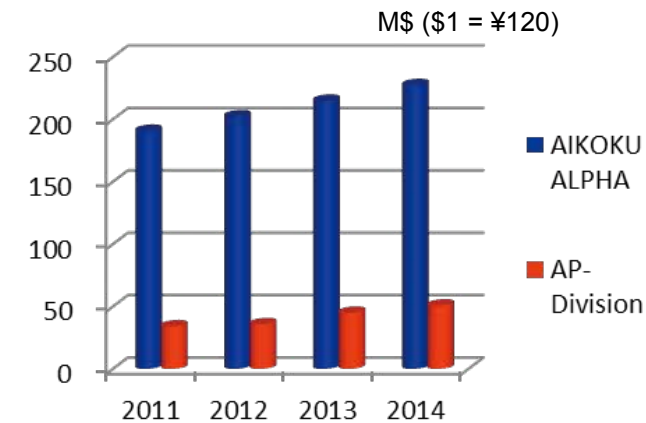
- We are the first company to introduce 5-axis machining center in 1975 in Japan. Our company is leading 5-axis technology, and have a wealth of experience in making complex aerospace, industrial and automotive parts. We have developed original cutting know-how utilizing a 3-D CAD/CAM system (CATIA), and aim to become the world's leading 5-axis machining company. (CATIA is a trademark of Dassault Systemes.)



Facility & Equipment

- **5-axis machining centers: More than 110**
 - MAKINO: T1, MAG1, a61-5x, D300
 - MITSUI: HS6A-5, HU63T, HU50T, HS5A-5, VERTEX550
 - MAZAK: VORTEX1400, e1060
 - OKUMA: VMP16, M1000VH, M800VH
 - DMG MORI: DMU200P

Sales Amount



Organization

- AP Division**
- APST (Aero-Structure Parts Team)**
 - AS1G (Sales & Production Control Group)
 - AE1G (Engineering Group)
 - AP1G (Manufacturing Group)
- AQCT (Quality Control Team)**
- APDT (Development Technology Team)**

Specialties

Aikoku Alpha AP Division is a leading 5-axis manufacturer offering advanced design skills, cutting technology, anti-vibration system by Fourier analysis, and advanced CAD/CAM tool-path program supported by the MS Division.

- Materials:** Aluminum, Titanium, Nickel, Stainless steel
- Part sizes:** Plate: up to 12,000mm x 4,000mm, Impeller: up to Φ1,800mm

Company Profile / Contact

Representative	Katsufumi Hida, President	Address	Morikami, Sobue-cho, Inazawa, Aichi 495-8501, Japan
Capital	US\$10.0 million (\$1 = ¥120)	TEL	+81-587-97-1115
Major Customers	Mitsubishi Heavy Industries, Ltd. Fuji Heavy Industries, Ltd. ShinMaywa Industries, Ltd..	E-mail	a-kawaguchi@aikoku.com



AKEVONO INDUSTRY CO., LTD.

曙工業 株式会社



CERTIFICATION ISO 9001, ISO 14001, JIS Q 9100 (scheduled in 2016)

WEBSITE <http://www.akevono.co.jp>

Outline of Business

- Small & medium size aircraft parts
- Automobile trial products
- Precision machinery parts processing
- Equipment parts processing, robot parts, machine tool parts processing

Our Strengths

Delivering high-quality products through efficient equipment and state-of-the-art knowledge

- First we propose the production method, then fix the production process together with the customer.
- Superior processing technology
 - 1) JR Maglev superconducting magnet cooling equipment
 - 2) Humanoid robot exhibited at Aichi Expo 2005
 - 3) Special bolts
- Flexible customer service

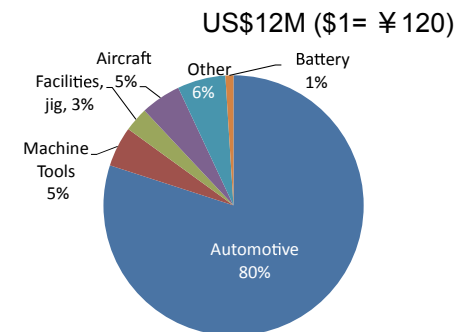
Meeting the needs of customers, such as lot production, rapid delivery, low price



Facility & Equipment

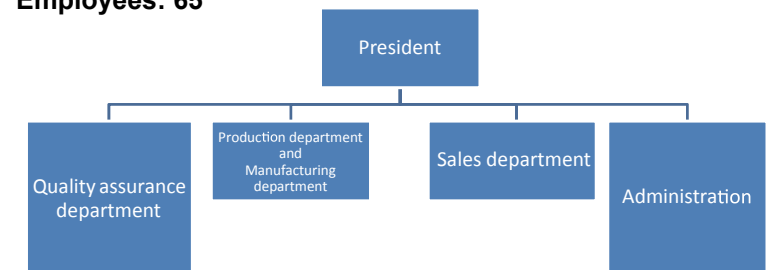
Machine	Maker	Model name	X-axis Y-axis Z-axis	Type	Introduced
Horizontal spindle machining centers	JTEKT Corporation	FH550SX	750x800x850mm	500x500 (pallet dimensions)	Jul. 2008
Vertical spindle machining centers	Matsuura Machinery Corporation	MX520	630x560x510mm	5-axis	Jan. 2014
Vertical spindle machining centers	BROTHER	M140x1	200x440x305mm	5-axis	Nov. 2014
Vertical spindle machining centers	DMG MORI Co., Ltd.	DMU100	1000x1250x1000mm	5-axis	Nov. 2015
NC lathes	Okuma Corporation	LB300		Drum type	Mar. 2007
CNC cylindrical grinders	JTEKT Corporation	GL4P-S50 III	Distance between centers 500mm		Aug. 2013

Sales Amount



Organization

Employees: 65



Important Information / Notices

Akevono Industry meets customers' needs and solves problems. We help to create "monozukuri" products and machine tools for the aircraft and automobile industries. We offer outstanding products at reasonable prices.

Company Profile / Contact

Representative	Akitaka Sugiyama	Address	55-1 Minamiutaguchi, Satomachi, Anjoh, Aichi 446-0001, Japan
Capital	US\$284,000	TEL	+81-566-97-0677
Major Customers	AISIN Group JTEKT Corporation Hoshizaki Electric Co., Ltd.	E-mail	tetsuharu@akevono.co.jp



APC AEROSPECIALTY INC.

APCエアロスペシャルティ 株式会社



CERTIFICATION JIS Q 9100, JIS Q 14001, Nadcap (Nonconventional Machining)

WEBSITE <http://www.apc-aero.co.jp>



Outline of Business

- Jet engine parts manufacturing using electrochemical machines (ECM)
- Precise machining using precision electrochemical machines (PECM) for high dimensional and repeat accuracy

- * Burr-free surface
- * No thermal damage
- * No tool wear
- * Capable of machining complex shapes in extremely hard materials



Jet engine parts



Injection nozzle



Sample of aerodynamic surface

- Heavy-duty containerization systems for satellite and space development equipment

- * Full production of reusable shipping and storage containers
- * Design, integration, testing and analysis
- * Satellites, military and commercial engine modules, missiles, and precision electronic equipment
- * Helical cable isolator for shock and vibration attenuation
- * Container accessories such as breather valves, humidity indicators, desiccant baskets, and record holders
- * Jigs and fixtures



Spacecraft container



Carriage assembly



Helical isolators

- Deburring and surface finish equipment for removing burrs, cleaning internal and external surfaces, and improving surface roughness for castings and machined parts



Electrochemical deburring machine



ROSDER deburring & surface finishing machine

- Subassembly of civil and military aircraft panels
- Repair of aircraft panel components



- Large paint booth

Works

Gifu	Machining, electrochemical machining Building deburring and surface finish equipment
Kagamigahara	Heavy-duty containers, Sophisticated painting
Yamazaki	Aircraft panel subassembly

Company Profile / Contact

Head Office	1-8-15 Iwamoto-cho, Chiyoda-ku, Tokyo 101-0032, Japan
TEL	+81-3-5820-1831
Fax	+81-3-5820-1839
E-mail	overseas@apc-aero.co.jp
Established	December 1957
Capital	210 million yen
Employees	450



Asahi Kinzoku Kogyo Inc.

旭金属工業 株式会社



CERTIFICATION Nadcap, JIS Q 9100, ISO 9001
WEBSITE <http://www.asakin.com/>

Outline of Business

- **Manufacture of airplane parts for Boeing, Airbus, Bombardier, MRJ, etc.**
Aerospace-related products account for 96% of our total production.
- **Machining, shot-peening, non-destructive testing, surface treatment (plating, anodizing), painting, sub-assembly**

Our Strengths

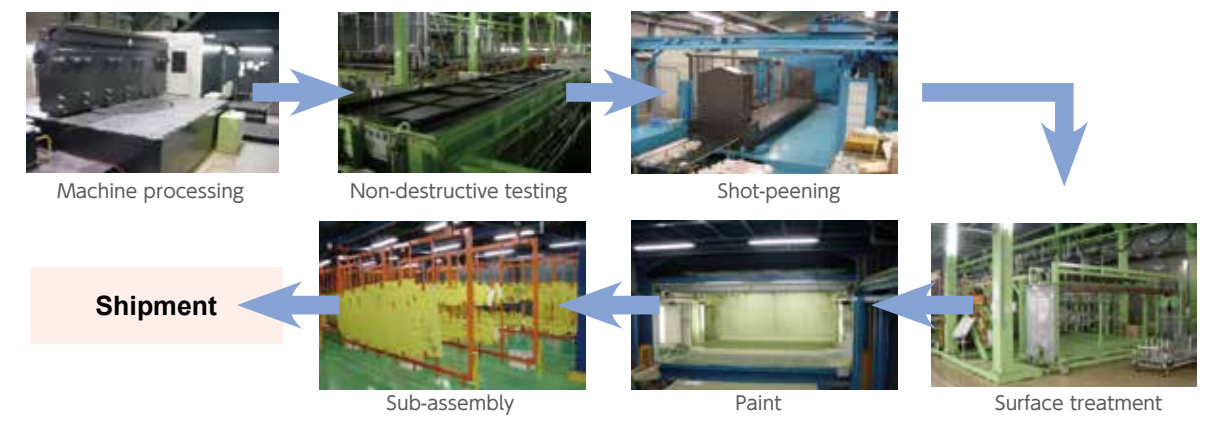
- We implement all special processes in vertically integrated production ("One-stop Shop").
- Special processes approved by individual customers
- The first company in Japan to receive Nadcap accreditation
- Nadcap accreditations for non-destructive testing, shot-peening, chemical processing and thermal spray coating
- Advanced technology for thermal spray coating (HVOF: High Velocity Oxygen Fuel)



Facility & Equipment

- Facilities** Headquarter plant, Kyoto-South plant, Gifu-Anpachi plant, Gifu-300 year Plant, Gifu-East Plant
- Equipment**
- Shot-peening** Shot-peening equipment (impeller type and nozzle type)
 - Anodizing** Chromic acid anodizing, sulfuric acid anodizing, boric-sulfuric anodizing, hard anodizing, hard anodizing with Teflon impregnated
 - Thermal spray coating** HVOF equipment with spray guns DJ2700 and DJ2600
 - Inspection** Penetrant inspection equipment, salt spray test cabinet, rupture (hydrogen embrittlement) evaluation, tensile strength (adhesion strength)

Vertically Integrated Production



Sales Amount

6,405,542,000 yen
(Sept. 2013 – Aug. 2014)

Social Contributions

We built the Anpachi Sky Wall for free climbing at the Gifu-Anpachi Plant, which is enjoyed by both employees and locals.



Company Profile / Contact

Representative	Yasuhiro Yamanaka	Address	Gifu-Anpachi Plant: 4851-4 Maki, Anpachi-cho, Anpachi-gun, Gifu 503-0125, Japan
Capital	US\$829,166	TEL	Gifu-Anpachi Plant +81-584-64-5061
Major Customers	Mitsubishi Heavy Industries, Shimadzu Corporation, Kawasaki Heavy Industries	E-mail	asakin@akg.co.jp



Chubu Nihon Maruko Co., Ltd. (CNM)

中部日本マルコ 株式会社



CERTIFICATION JIS Q 9001, JIS Q 9100, MIL-STD-790

WEBSITE <http://www.nmg-interconnect.com>

Outline of Business

Chubu Nihon Maruko(NCAGE: SKY48) is a Japan based technology company specialized in engineering and manufacturing of interconnect products for aerospace, defense, and industrial markets.

Established in 1990, today Chubu Nihon Maruko is one of the most experienced domestic companies in the markets, earning credentials by supplying highly reliable interconnect solutions.

CNM's expertise broadens from MIL standard connectors, customized harness assemblies and connectors for defense and aerospace systems.

As an interconnection expert, CNM has been playing its role as solution provider for critical missions such as H-IIA, H-IIB launcher vehicles, HTV and HAYABUSA.

Our Strengths

- **Connectors**
 - MIL standard connectors (MIL-DTL-83513 Micro Miniature Connectors & MIL-DTL-389999 Circular Connectors)
- **Custom Harness Assemblies**
 - Design and develop harness assemblies for harsh environmental applications
- **Fiber Optic Interconnect Solutions for aerospace applications**
 - Fiber Optic connectors and E/O converters
- **Rotary Link Connector®(Non-Contacting Opto-electronic Rotary Joint)**
 - >3Gbps data transmission through rotational interface with continuous 360 rotation



Featured Product

■ MIL-DTL-38999 – MIL Standard Circular Connector (Souriau) & Custom Harness Assemblies

CNM is the local authorized VAD(Value Added Distributor) for MIL-DTL-38999 Circular Connectors by Souriau, which are world-widely well-known for exceptional performance and wide range of product lines such as hi-density signal layouts, fiber optics, quadrax, and hi-speed ethernet. CNM supply custom harness assemblies according to customer requirements.



■ Rotary Link Connector®(RLC) – Non-Contacting Opto-Electronic Rotary Joint

RLC is a non-contacting opto-electronic rotary joint for hi-speed signal transmission and power supply through a rotational interface allowing 360 degree rotation between stator and rotor section.

- **Applications:** Airborne Surveillance Camera, Radar, Robotics



Sales Amount

US\$13 Million

Organization

Employees: 132

Komaki factory (headquarters)

- Production
- Production Control / Procurement
- Engineering / R&D
- Quality Control
- Sales / International Sales
- Administration

Kobe sales office

Company Profile / Contact

Representative	Hiroyuki Koitabashi, President	Address	23-3, Noguchi, Komaki, Aichi 485-0806, Japan
Capital	330K *\$1.0@¥120	TEL	+81-568-79-6512
Major Customers	Mitsubishi Heavy Industries, Ltd. Kawasaki Heavy Industries, Ltd.	E-mail	m_koitabashi@cnmaruco.co.jp



CHUO ENGINEERING CO., LTD.

株式会社 中央エンジニアリング

CERTIFICATION ISO 9001, JIS Q 9100
WEBSITE <http://www.chuo-eng.co.jp/>

Outline of Business

- Design, analysis and testing in the development of aerospace products

Our Strengths

- We have worked to expand and enrich aerospace engineering for over 50 years. We currently employ over 300 engineers in many different projects related to the aerospace industry. We focus primarily on the design and analysis of aircraft, aerospace engines, and aerospace equipment, and offer specialized services to the development of various aircraft and space projects across Japan.



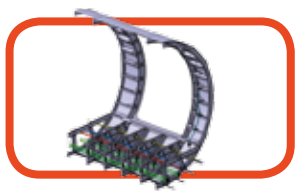
- Analysis:**
- Various type of analysis
 - Fatigue and damage tolerance
 - FEM modeling and analysis
 - Fluid and thermal analysis



Total Integrated Design



- Testing equipment:**
- Design & manufacturing
 - Testing support



- Design:**
- Airframes, systems, interiors
 - Layout and detail design
 - Design for manufacturing
 - Production and maintenance tools

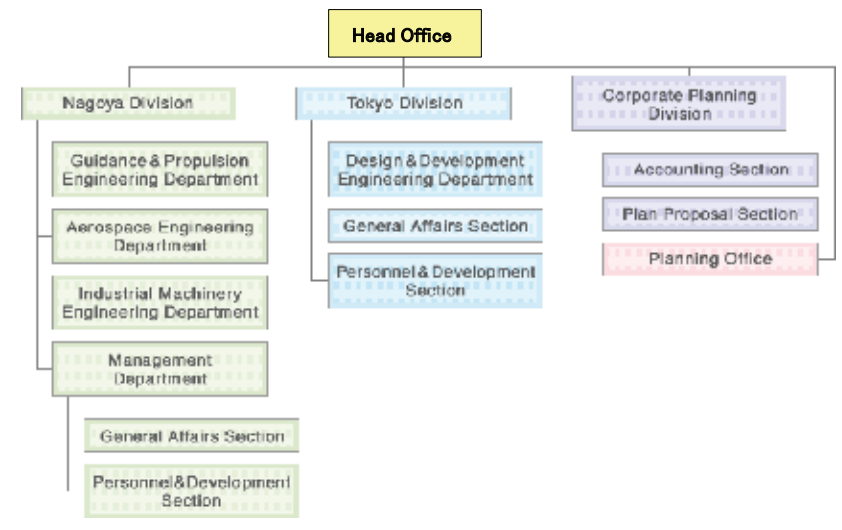
Facilities & Equipment

- | | | |
|---|---|--|
| <p>Analysis tools</p> <ul style="list-style-type: none"> • MSC Nastran • Patran / Femap • Marc • Adams • NASGRO • FLUENT • HyperWorks | <p>Design tools</p> <p><u>3D CAD</u></p> <ul style="list-style-type: none"> • CATIA V4, V5 • Creo • NX (UG) • SolidWorks • I-CAD/SX | <p><u>2D CAD</u></p> <ul style="list-style-type: none"> • Micro CAD • Auto CAD • CAD PAC • CCD |
|---|---|--|

Sales Amount

US\$36.7 million
(fiscal 2014)

Organization



Company Profile / Contact

Representative	Yoshihiro Saita, President	Address	Nitta Bldg., 1-17-23 Meieki-minami, Nakamura-ku, Nagoya, Aichi 450-0003, Japan
Capital	US\$0.97 million (including capital reserve)	TEL	+81-52-589-2975
Major Customers	Mitsubishi Heavy Industries, Ltd. Mitsubishi Aircraft, Ltd. Kawasaki Heavy Industries, Ltd.	E-mail	aerospace@chuo-eng.co.jp



CHUOZUKEN. CO., LTD.

株式会社 中央図研



WEBSITE <http://www.chuozuken.co.jp>

Facilities & Equipment

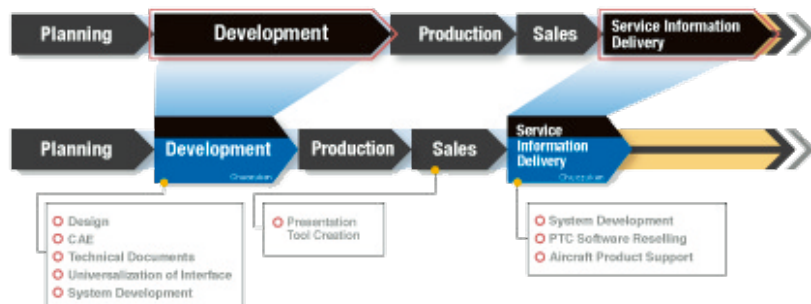
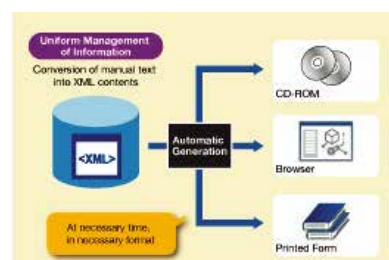
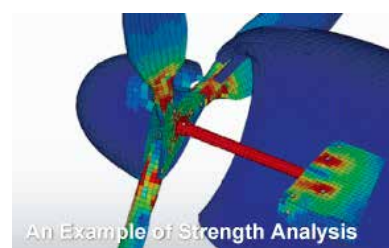
Design	CAE	Technical Publication	System Development
CATIA V5	HyperWorks, Nastran, Primer	PTC Arbortext	VB, .Net, C, C++, C#, Java

Outline of Business

- Design**
 Aircraft design
 Automobile design
- CAE**
 Crash analysis
 Vibration analysis
 Noise analysis
 Strength analysis
 Fluid analysis
- Technical Publication**
 Aircraft manual development (ATA iSpec2200/S1000D)
 Electronic manual development (DITA/XML/SGML)
- System Development**
 Web contents creation
 DTP

Our Strengths

- CAE**
 30 years of experience in automobile structural analysis and thermo-fluid analysis
 10 years of experience in aircraft structural analysis
- Technical Publication**
 Compliance with ATA iSpec2200 and S1000D (aviation standards)
 English manuals, authored in full compliance with Simplified Technical English (ASD-STE100)
 15 years of experience in electronic documents in XML or SGML format
 Data constructed using PTC products (We are a licensed PTC software reseller.)



Sales Amount

US\$12,833,000
(fiscal year 2014)

Organization

- General Affairs Department
- Engineering Department
- 1st Engineering Section
- 2nd Engineering Section
- Planning Department

Important Information / Notices

Are you planning to do business with a Japanese company?
 Do you need to create aircraft manuals conforming to aviation standards?
 We offer a total solution for coordinating with prime or tier vendors regarding technical publication and customer support.
 We also provide structural design optimization supported by our design department.
 Why not improve the quality and growth of your products with our service backed by solid performance and experience?

Company Profile / Contact

Representative Masashi Yanagida
Capital US\$166,666 (\$1 = ¥120)
Major Customers Mitsubishi Heavy Industries, Mitsubishi Aircraft Corporation, Mitsubishi Motors Corporation, Nabtesco Corporation
Address 15-20 Furuwatari-cho, Naka-ku, Nagoya, Aichi 460-0025, Japan
TEL +81-52-323-2100
E-mail info@chuozuken.co.jp

10 Company Profile



CRE Co., Ltd.

株式会社 シーアールイー



CERTIFICATION JISQ9001 : 2008 (ISO9001 : 2008), MSJ4000

WEBSITE <http://www.cre-nagoya.com/corporate/index.html>

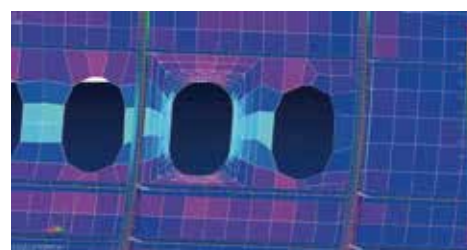
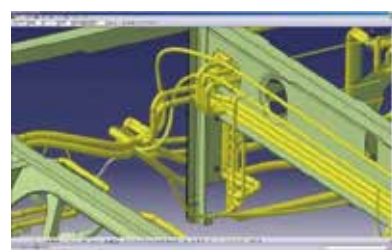
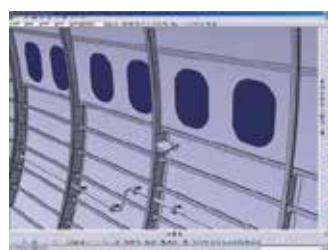
Outline of Business

Focused on gaining customer trust, CRE offers engineering support in the areas of aircraft structural design, structural analysis, electrical and electronic design, software development, device design, productivity-focused process design, and quality assurance.

CRE prepares and edits a variety of manuals. We also perform contracted projects associated with documentation, such as electronic conversions of documents and translations of technical documents and manuals.

Our Strengths

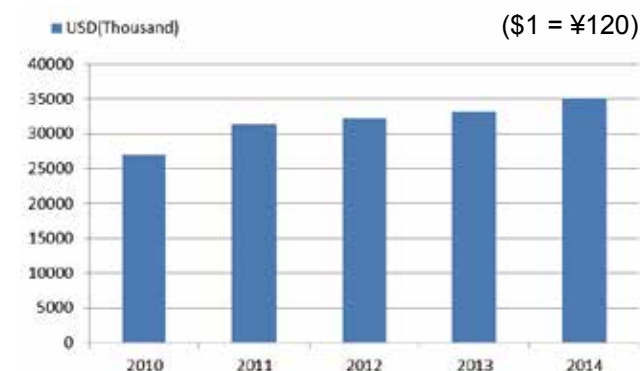
- CRE has been involved in nearly all of the major development projects in the Japanese aerospace industry, while building upon the strong relationships with aircraft manufacturers.
- CRE has experience in the design and development of almost all major components of aircraft.
- Our skilled engineers, with 30 years of experience in aircraft design and development, are assigned to key roles in projects in order to manage the projects and provide training and guidance to younger engineers.



Facilities & Equipment

CATIA V4	11
CATIA V5	18
CADAM	8
Solid Works	1
MD NASTRAN DESKTOP	3
LS-DYNA	1
HYPER WORKS	1
FEMAP WITH NASTRAN	1
NX13300 MACH3	1

Sales Amount



Organization

Employees: 640

Head Office

(Accounting Dept., General Affairs Dept., Personnel Dept., PR and Planning Dept.)

- Gifu Div.
- Nagoya Div.
- Aerospace Development Div.
- QA Div.
- Analysis Div.
- JIG Div.
- System Solution Div.
- Engineer Training Center
- Audit Office

Company Profile / Contact

Representative	Osamu Owaki	Address	1-2-2 Kanayama, Naka-ku, Nagoya, Aichi 460-0022, Japan
Capital	US\$0.7375 million (\$1 = ¥120)	TEL	+81-52-323-7731 (main number)
Major Customers	MHI, KHI, FHI, IHI, SMIC, NIPPI, MITAC	E-mail	pr_info@cre-nagoya.com



Daiichi System Engineering Co., Ltd.

株式会社 第一システムエンジニアリング



CERTIFICATION ISO 9001:2008

WEBSITE <http://www.dse-corp.co.jp/index.php/English/top>

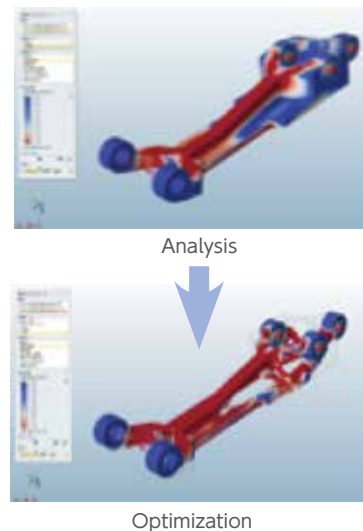
Outline of Business

“Better support through superior technology”

We challenge the most advanced technologies with innovation and expertise to provide our customers with the most cutting-edge and on-time industrial solutions.

■ Outline of Business

- R&D, Design, Product Engineering - analysis and optimization of aircraft parts and structures. (shown right)
- Quality Assurance - supporting functional and flight testing, and posttest data analysis.
- Software Development - numerical control machining.



Our Strengths

- Our employees work harder and go further to satisfy and exceed the needs of our customers with a company-wide mission to always look from the customer's viewpoint to provide the best possible service and make an indispensable contribution to our clients' success. DSE knows that the partnerships we build with our customers are changing the world by building a better tomorrow with technology and innovation, and we are committed to this endeavor.
- We have the right people with the right flexibility to meet the specific technical demands of our customers. We have over 600 employees with a wide range of experience, backgrounds, and know-how in both business and technical fields such as: marketing, aerodynamic design/analysis, production engineering and quality assurance relating to development programs in aerospace, automobile, industrial machinery and software.



DSE HEAD OFFICE

Software

CATIA V5, NX, TeamCenter (CAD Software and Tool)
HyperWorks (Structural Analysis and Optimization Tool)

Revenue

5.0 billion yen (as of March 2015)

Organization



Company Profile / Contact

Representative Atsushi Matsui, President
Capital 90 million yen
Major Customers Mitsubishi Heavy Industries, Ltd.
 Kawasaki Heavy Industries, Ltd.
 Fuji Heavy Industries Ltd.
 Mitsubishi Aircraft Corporation
 Toyota Motor Corporation
 Daifuku Co., Ltd., Denso Techno Co., Ltd.

Address (Head Office) 4F Green Bldg. 1-16-20 Nishiki Naka-ku, Nagoya, Aichi 460-0003, Japan
TEL +81-52-204-1380
E-mail Planning and Management Department Office Chief: kazuyuki-mizutani@dse-corp.co.jp



DAIKI SANGYO Co., Ltd.

大起産業 株式会社



CERTIFICATION ISO9001 , JIS Q 9100 , MSJ4000

WEBSITE <http://www.e-dsk.co.jp/>

Outline of Business

- **Assembly of aircraft structures , as well as Helicopters in Commercial & Self Defense Force.**
- **Periodic inspection and maintenance of Self Defense Force fighter aircraft and Helicopter parts.**
- **Design and Manufacturing of Jigs & Tools.**
- **Assembly of Rocket launching system and maintenance and inspection of associated parts and equipment.**
- **Design and Manufacturing of High performance and large powered(Max 21Mpa , 1 unit: 500 liters per minute) hydraulic systems.**

Our Strengths

Since in 1961, contributed to design , manufacture the custom-made machine/ equipment including rocket launching structural assembly and maintenance, inspection of associated parts and equipment.

- Extensive experience in aircraft structure assembly.
- The Accumulated know-how to design and manufacture jigs that can lead to less man-hours in operations.
- Collaboration with Mitsubishi Aircraft Corporation for the development of many process of MRJ assembly. Design and manufacturing of Jigs & Tools , Major component assembly.

Products



Jig for assembling framework of aircraft fuselage



Jig for panel assembly of aircraft fuselage turning by hydraulic system



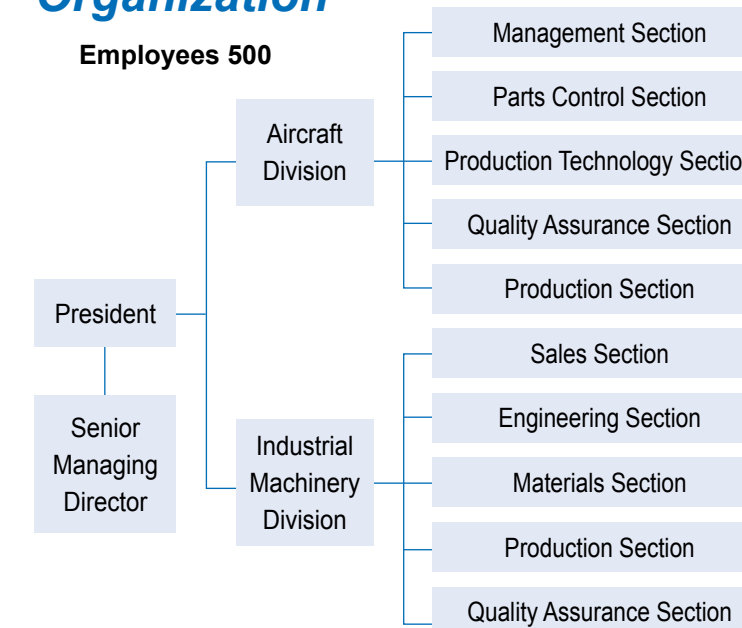
Back up trolley for shield machine with hydraulic unit

Facility & Equipment

CATIA V4	1
CATIA V5	7
MICRO CADAM	3
CADPAC CRIATOR	3
Solid Works	2
Laser Tracker (API)	2

Organization

Employees 500



Company Profile / Contact

Representative Shigenori Naito, President
Capital US\$ 250,000
Major Customers MHI, IHI

Address (Head Office) 3725-1 Yamada, Toin-cho, Inabe-gun, Mie 511-0251, Japan
TEL +81-594-76-2201
E-mail dsk-info@e-dsk.co.jp



Enomoto BeA Co.,Ltd.

榎本ビーエー 株式会社



CERTIFICATION JISQ9100, ISO9001

WEBSITE <http://www.enomotoweb.com>

Outline of Business

- Manufacture of aerospace-related components and design, produce, fixtures for machining.
- Develop, design, manufacturer and provide machine protection products.
- Research, develop, manufacture and provide environment-related projects and products.

Our Strengths

- We stand out amongst our competitors by specializing in many state of the art double column machining centers and large sized 3-axis and 5-axis machines.
- We currently have a sufficient number of skilled NC programmers and can react quickly to increase CAD/CAM(Catia) systems when necessary.
- Due to our 60 years of accumulated experience in the aerospace industries, our excellent technology to perform highly difficult precision manufacturing and quality assurance systems are highly appreciated by leading heavy industries.
- We develop our own machine protection products including (chip conveyors and telescopic way covers) which lead the market with a share of over 30% in Japan.
- We locate in Kakamigahara, Gifu which is a major aerospace industry center in the Tokai district.

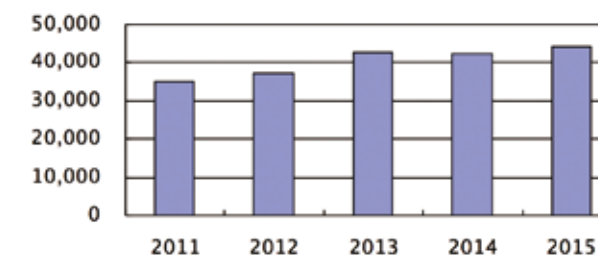


Facility & Equipment

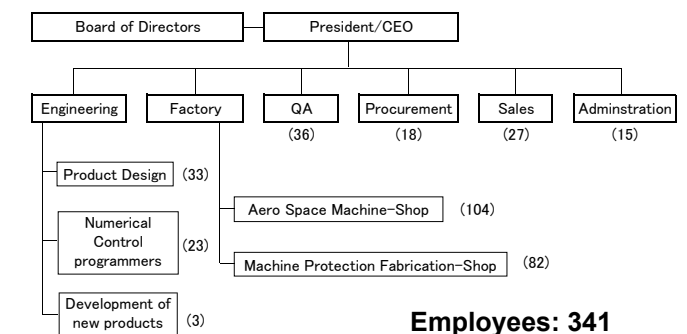
Type of Machining	Number of Machines	Manufacturer	Specification
5-Axis Machining Center	1	MAKINO	X:8,200mm×Y:2,200mm×Z:650mm Spindle Motor 120Kw Spindle speed 33,000rpm
5-Axis Machining Centers	9	OKUMA	X:3,050mm×Y:850mm×Z:700mm Spindle Motor 45/55Kw Spindle speed 12,000rpm
5-Axis 2-Spindles Machining Centers	2	TOSHIBA	X:12,000mm×Y:4,000mm×Z:800mm Spindle Motor 45/55Kw Spindle speed 12,000rpm
5-Axis Machining Center	1	OKUMA	X:11,500mm×Y:3,200mm×Z:800mm Spindle Motor 30/22Kw Spindle speed 4,000rpm
5-Axis Machining Center	1	MATSUURA	X:760mm×Y:845mm×Z:660mm Spindle speed 20,000rpm
Other 3-Axis,4-Axis, 5-Axis Machining Centers	37	OKUMA,DMG MORI SEIKI,SHIGA,MATSUURA,HORIBE,MAZAK MITSUBISHI etc.	
3-Dimensional Coordinate Measuring Machine	1	Carl Zeiss	X:1,100mm×Y:3,000mm×Z:1,000mm

Sales Amount

US\$ 44,166,666/2015fy
(Expected Sales Amount)
US\$ thousand (\$1 = ¥120)



Organization



Company Profile / Contact

Representative Naohiro Enomoto
Capital US\$ 83,333 (\$1 = ¥120)
Major Customers Kawasaki Heavy Industries,Ltd.
 Mitsubishi Heavy Industries,Ltd.

Address 5-10, Soharakoamachi,
 Kakamigahara, Gifu 504-8551,
 Japan
TEL +81-58-389-7433
E-mail e.hr@enomotoweb.com



FUSO MACHINE WORKS, LTD.

扶桑工機 株式会社



CERTIFICATION JIS Q 9100, ISO 9001, ISO 14001, OSHMS, MSJ 4000

WEBSITE <http://www.fusokoki.co.jp>

Outline of Business

■ **Establishment:** June 1, 1953

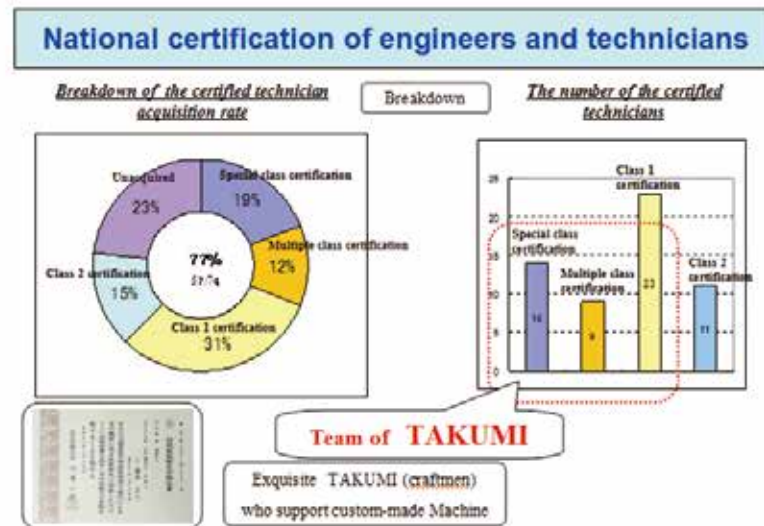
■ **Lines of business:**

- Design and manufacture of various equipment for automation (for automobile, autopart, and semiconductor industries)
- Design and manufacture of precision molds and dies for press and injection molding
- Processing of ultra-precision parts
- Machining & inspection of aircraft parts



Our Strengths

■ **Proof of Skills**



Facility & Equipment

- **5-axis machining center** (MAKINO TI) 1500×1300×2000mm
- **High-speed multi center** (SNK RB-4NM) 900×900×900mm
- **5-axis horizontal machining center** (Mitsui Seiki HU63A-5X) 900×900×900mm
- **5-axis vertical machining center** (SNK CMV-100) 1500×1330×1300mm
- **CNC jig borer** (Yasuda YBM 950V ver.III) 900×500×350mm
- **CNC 3-dimensional coordinate measuring machine** (Zeiss (Accretech) Prismo 7) 900×1180×650mm

Organization

■ **Employees:** 355

(Head Office and Factory: 225, Hokusei Factory: 75, Toin Factory: 55)

● **Head Office and Head Office Factory**

500 Ooaza, Masuda, Kuwana, Mie 511-8558
Tel: +81-594-24-5050 Fax: +81-594-21-9394

● **Hokusei Factory**

237 Ookondo-shinden, Hokusei-cho, Inabe, Mie 511-0425
Tel: +81-594-72-6111 Fax: +81-594-72-6115

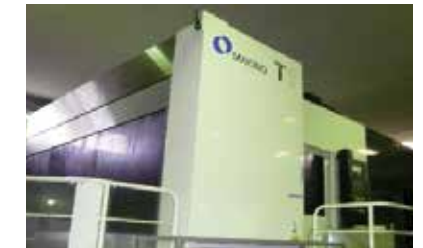
● **Toin Factory**

36 Aza Higashikawahara Ooaza, Chikushi, Toin, Inabe, Mie 511-0253
Tel: +81-594-76-0611 Fax: +81-594-76-0668

● **2nd Toin Factory**

1110 Ooaza, Roppo-shinden, Toin, Inabe, Mie 511-0242
Tel: +81-594-86-0001 Fax: +81-594-86-0022

Overseas affiliated companies: Tianjin Fuso Machine Works, Ltd.
Fuso U.S.A., Inc.
Pt. Fuso Machine Works Indonesia



Company Profile / Contact

Representative Gaku Hattori
Capital US\$250,000
Major Customers Denso Corp., Toyota Motor Corp., Honda Motor Co., Ltd., Nikon Corp., Tokyo Seimitsu Co., Ltd., Kobe Steel, Ltd., Covalent Materials Corp., Mitsubishi Heavy Industries, Ltd.

Address Fuso Machine Works, Ltd.
Hokusei Factory
TEL +81-594-72-6111
E-mail Group Manager, Sales Group,
Hokusei Factory : Kouji Fujii
kfujii@fusokoki.co.jp



HIKARI MANUFACTURE CO., LTD.

株式会社 光製作所

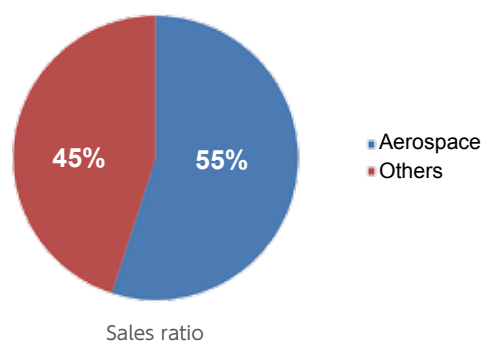


CERTIFICATION JIS Q 9100, Nadcap (CMSP), ISO 14001
WEBSITE <http://www.hikariss.co.jp/>

Outline of Business

Machining processing of parts for aircraft and spacecraft frames and engines. Application of processing technologies to produce a variety of products to be supplied to the market.

- Main aerospace products:**
 - Aircraft parts
 - Aircraft engine parts
 - Spacecraft parts and engine parts
 - Aircraft parts for composite materials
 - Jigs for composite laminated materials
 - Design and manufacture of special devices
- Other main products:**
 - Functional automotive parts
 - Hydraulic parts for construction machines



Our Strengths

- We carry out precision processing of complicated shapes of aircraft parts with many kinds of NC machines (including simultaneous 5-axis control).
- We machine all types of materials from aluminum alloys to difficult-to-cut thick titanium, stainless steel, nickel alloy, and carbon fiber reinforced plastics (CFRP).
- We use high-precision equipment and software for process setup, jig design, NC program creation, manufacture, and continuous operation to inspection.
- We manufacture various jigs, test equipment, etc. by performing design, material supply, welding, machining, and assembly adjustment in our company. This strength enables us to propose various solutions.



5-Axis NC machines



Coordinate measuring machine



CAD/CAM system CATIA V5

Facility & Equipment

Machining equipment

Horizontal 5-axis machining center	3	Mitsui Seiki	W1300mm × L1200mm × H1200mm
Bridge type 5-axis machining center	5	Shin Nippon Koki	W4000mm × L11000mm × H1000mm
Vertical NC lathe	5	Toshiba Machine	Φ1100mm × H800mm
Horizontal NC lathe	4	Okuma	Φ1000mm × L4000mm
Other NC machines (About 100)			

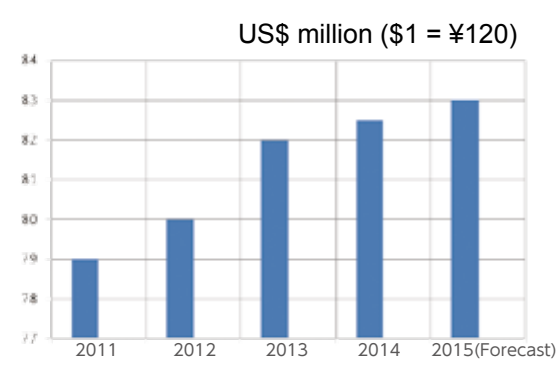
Measuring equipment

Coordinate measuring machine	3	Mitutoyo	W1000mm × L2000mm × H800mm
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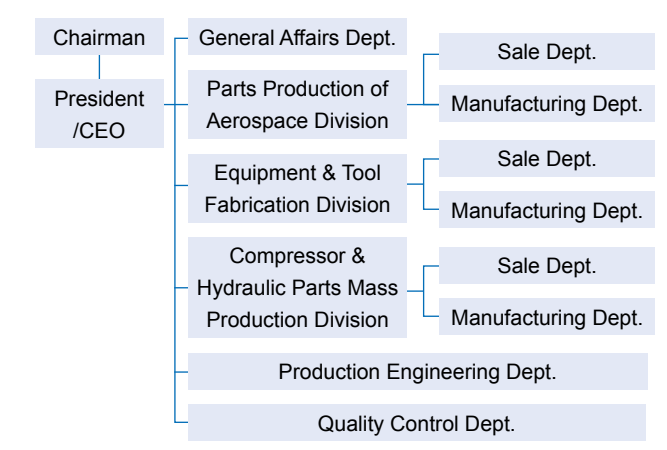
CAD/CAM system

CATIA V5	11		
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Sales Amount



Organization



Important Information / Notices

Fundamental Policy

To contribute to the development and welfare of society through eco-friendly manufacturing, providing quality assured products that satisfy our customers.

Company Profile / Contact

Representative	Yoshihito Matsubara, President	Address	248-3 Nakano, Kasamatsu-cho, Hasima-gun, Gifu 501-6034, Japan
Capital	US\$750,000 (\$1 = ¥120)	TEL	+81-58-387-4361
Major Customers	Mitsubishi Heavy Industries Co., Ltd. Fuji Heavy Industries Co., Ltd.	E-mail	g.affairs@hikariss.co.jp



HODEN SEIMITSU KAKO KENKYUSHO CO.,LTD.



株式会社 放電精密加工研究所

CERTIFICATION Nadcap(CP,CT,NM) , JISQ9100(AS9100) , ISO9001 , ISO14001

WEBSITE <http://www.hsk.co.jp>

Outline of Business

- Machining of the low-pressure turbine blade for the aero gas turbine engine and various parts for rocket engine.
- Metal surface treatment of aero engine parts and automobile parts etc.
- Manufacturing of various molds for the ceramics honeycomb injection and Aluminum injection.
- Trust processing of industrial gas turbine parts, automobile parts and other metal product.
- Development and manufacturing of the mechatronics products.
- Manufacturing of the high precise and high efficient digital servo press.
- Trust processing of the press parts.
- Sales of the chrome free paint "ZECCOAT".



Digital servo press machine "ZEN Former"

Our technology

■ **Technology of metal machining with electric discharge machining (EDM) as main.**
 HSK covers the metal machining technologies of the EDM cultivated by experience more than 50 years, the manufacturing of precise mold by several machining methods and the surface treatment that first developed the chrome free paint in the world. Particularly, in the EDM, HSK is the Japan's largest company and has been supporting the "manufacturing" as a pioneer of the EDM.

HSK held the Chubu establishment as an aircraft part manufacturing hub and acquired Nadcap (CP, CT and NM) based on the experiences that have proceeded the trust production of aircraft parts more than 35 years. HSK has an evaluation from customer in the management of various special processes.

In 2015, HSK launched a consecutive manufacturing line for low-pressure turbine blade used in low fuel consumption engine made in Rolls-Royce, in Komaki, Aichi prefecture as a new attempt and HSK started the blade productions.

In the future, HSK are going to acquire Nadcap of NDT and weld process in addition to Nadcap of above special process (CP, CT and NM) and will push the business enterprise which specializes in aero-part production/manufacturing



The consecutive manufacturing line plant

Facility & Equipment

EDM equipment

EDM	16
WEDM	4
Other machines	13

3-axis machining, EDM for small hole processing and various general-purpose machine

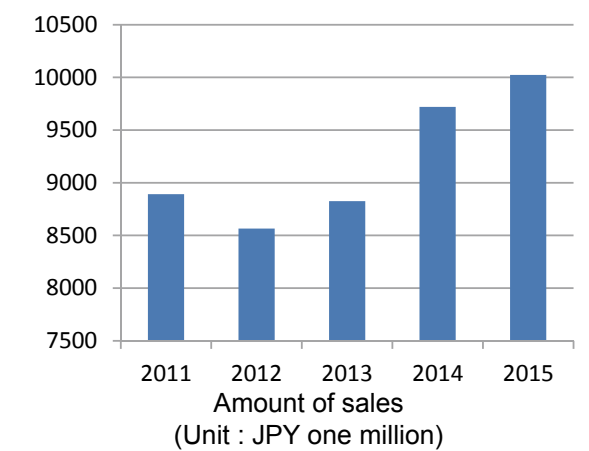
Surface treatment equipment

Blasting Machine	10
Various furnaces	14
Fluorescent penetrant testing (FPT) equipment	1
Plasma spraying machine	4

drying furnace , pack furnace, diffusion furnace and vacuum furnace

etc.

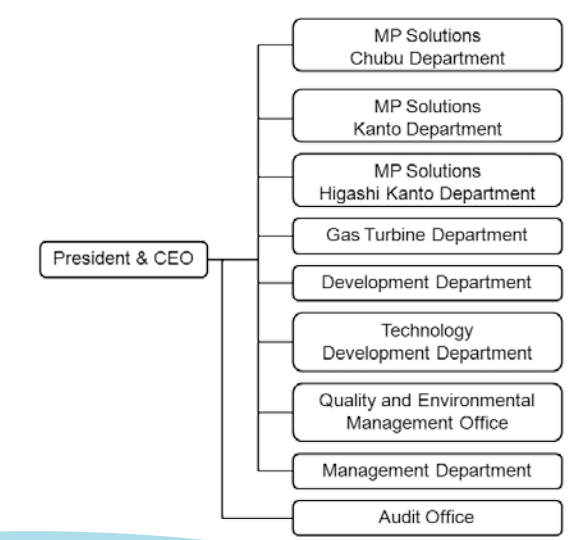
Sales Amount



※ The data for each year in February period

Organization

Employees: 478 (as at February 2015)



Company Profile / Contact

Representative	Katsuhiko Futamura, President	Address	6-783 Sakashita-cho, Kasugai, Aichi 480-0305, Japan
Capital	JPY 890 million (USD 7.4 million)	TEL	+81-568-93-0666
Major Customers	IHI, KHI, MHI, MHPS, Denso, LIXIL, NGK Insulators	E-mail	info@hsk.co.jp



IMAI AERO-EQUIPMENT MFG.CO.,LTD.



今井航空機器工業 株式会社

CERTIFICATION JIS Q 9100, ISO 9001 - Japan
AS9100/EN9100, NADCAP Chemical Process(CP),
NDT, Shotpeening --- Malaysia

WEBSITE <http://www.imaiaero.co.jp>

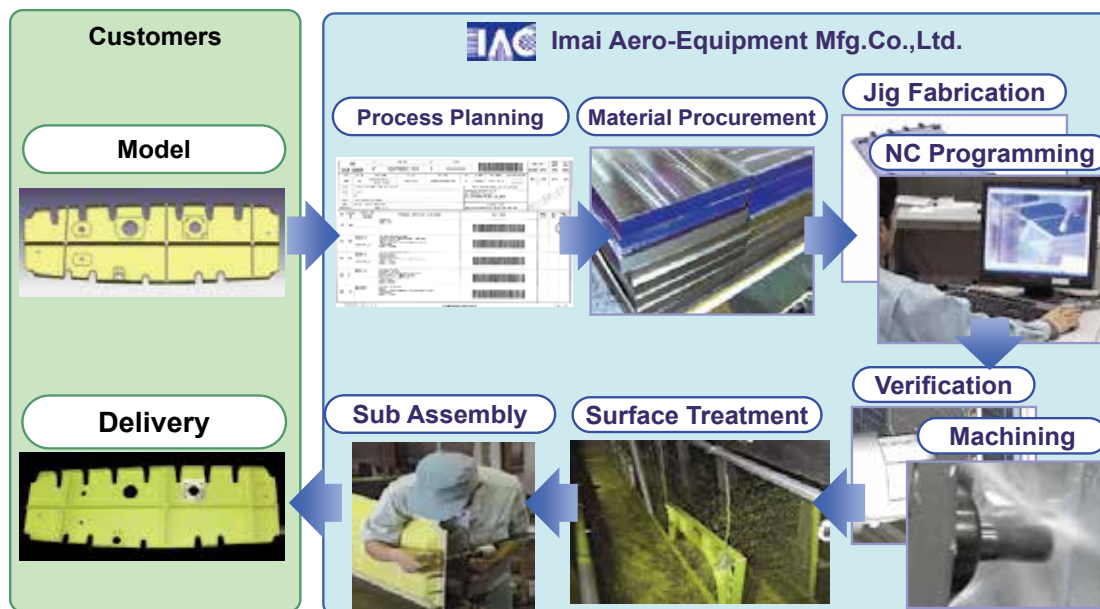
Outline of Business

- Production of machining parts for aerospace and assembly for aircraft.
- Design and development and production of GSE for aircraft.



Our Strengths

- IAC has 31 CATIA units and our 5-axis machining machine holds 52 units. Thus, we can process all parts including those with complex shape, and can perform 5-axis processing of large parts of up to 18m. Our Malaysia factory undertakes surface treatment and paint work. Thus, we can handle the whole process of material purchasing, machining, surface treatment, painting and sub-assembly.



Facility & Equipment

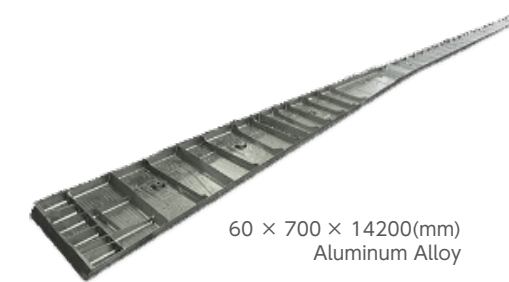
■Machining Center <small>* (Spindle)</small>	5-Axis	52 (58)*
	4-Axis	14
	3-Axis	41
		Total 107
■CAD/CAM	CATIAs	31
	CADAMs	2
■CMM		7 units
■Laser Tracker		4 units



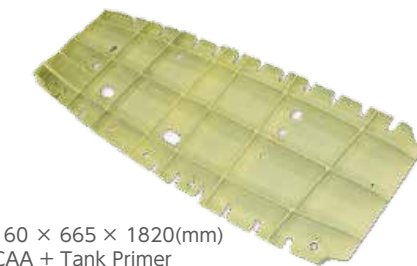
165 × 490 × 3660(mm)
CAA + Epoxy Primer + Topcoat



140 × 370 × 540(mm)
CAA + Epoxy Primer + Topcoat



60 × 700 × 14200(mm)
Aluminum Alloy



160 × 665 × 1820(mm)
CAA + Tank Primer

Company Profile / Contact

Representative	Tetsuo Imai	Address	128 Kinzokudanchi, Kakamigahara, Gifu 504-0957, Japan
Capital	US\$80,000	TEL	+81-58-389-2011 Japan +606-232-2062 / 2072 Malaysia
Major Customers	KHI, MHI, FHI, NIPPI, SMIC, Ministry of Defense, SPIRIT, SAM, ALESTIS	E-mail	iac@imaiaero.co.jp



Ishigane Seiki CO., LTD.

株式会社 石金精機



CERTIFICATION JIS Q 9100,ISO9001,ISO14001

WEBSITE <http://www.ishigane-fas.co.jp/>

Outline of Business

- Design and manufacture of aircraft-related parts, medical-related
- Design and manufacture of precision machine parts such as fabrication machines, semiconductor devices, HDD assembly devices, and energy-saving devices, etc.
- Trial manufacture of automotive parts, etc..

Entered the aircraft industry in 2013, the aircraft business until last year was about 5 percent of our company. Recently, we received an order for all 18 different parts from MRJ (Mitsubishi Aircraft Co., Ltd.) about the wings mounted components "TRACK RAIL".

In addition, we also received the order of all 800 items which consists of 20 models from Aircraft manufacturing companies. We expect from the production of aircraft-related parts started going into orbit, our company's business aircraft components will grow rapidly.

And from now on, we also make great effort to improve technical capability furthermore in order to satisfy customers and receive high quality evaluation from customers.

Our Strengths

- Processing of Blade shaped parts such as impeller, brisk.
- Manufacture all of aircraft parts such as casing, bracket, frame.
- Processing of High Tensile Strength Steel is also done with high technology, low cost and short lead time.
- We can deal with parts to mill difficult level include with multi-process from lathe turning,cutting,grinding to inspection in our company.
- We have built a factory only for manufacturing aircraft parts. And Facilities that can deal with any request from customers are prepared.



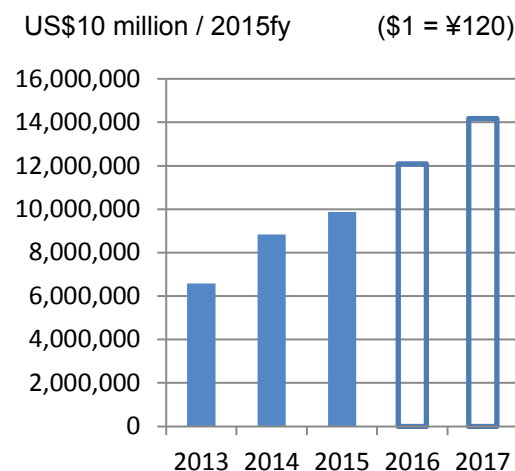
Facility & Equipment

With abundant facilities, we can manufacture in our company nearly all of processes from design, machining to assembly.

Device	Processing capacity	Manufacturer	Model	Q'ty
Universal milling machines for 5-sided / 5-axis machining	φ550x440x580	Matsuura Machinery Corporation	MAM72-35V(N)	1
	φ980x560x560	DMG Mori Co., Ltd.	DMU80mono BLOCK	3
	φ1600x1250x1100	DMG Mori Co., Ltd.	DMU160P duo BLOCK	1
5-axis vertical machining center	φ1250x1250x1000	DMG Mori Co., Ltd.	DMU125P duo BLOCK	1
Combined processing machine	φ250x1500	Yamazaki Mazak corporation	INTEGREX 300-IV	1
Coordinate measuring machine	1200x1800x1000	Tokyo Seimitsu Co.,Ltd.	ACCURA2 12/18/10	1

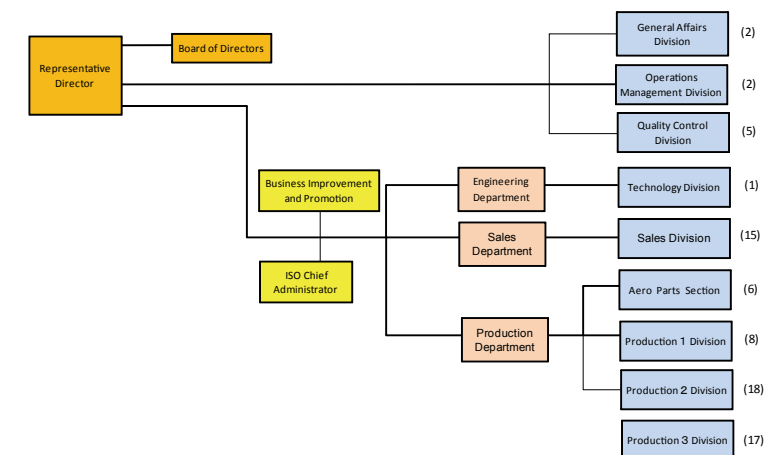
In addition, we have about 120 units of processing machines and inspection machines.

Sales Amount



Organization

Employees: 71 (Sep. 2015)



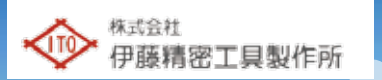
Company Profile / Contact

Representative	Katsuhiro Shimizu	Address	255 Nagaresugi, Toyama-shi, Toyama 939-8032, Japan
Capital	US\$250,000 *\$1.0@ ¥120	TEL	+81-76-423-8317
Major Customers	Kawasaki Heavy Industries, Ltd., IHI Corporation, Asahi Kinzoku Kogyo Inc., NACHI-FUJIKOSHI CORP.	E-mail	info@ishigane-fas.co.jp



ITO SEIMITSU CO., LTD.

株式会社 伊藤精密工具製作所



CERTIFICATION ISO 9001, 14000
WEBSITE <http://www.ito-seimitsu.co.jp>

Outline of Business

- Machining
- Designing/manufacturing of gauges and jigs
- Manufacturing of single and small unit of machining

Our Strengths

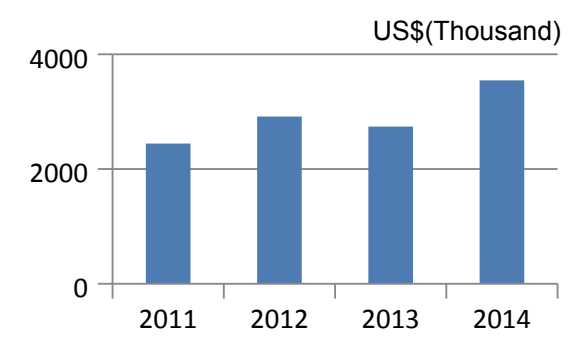
- We have high technology and great experience in designing and manufacturing inspection and measuring gauges and jigs.
- We offer excellent advice on improving quality based on many years of experience.
- We can accept orders for manufacturing a wide variety of products in small quantities.
- We have an outsourcing production network of about 40 companies in Japan, Thailand, South Korea, and China (Dalian).



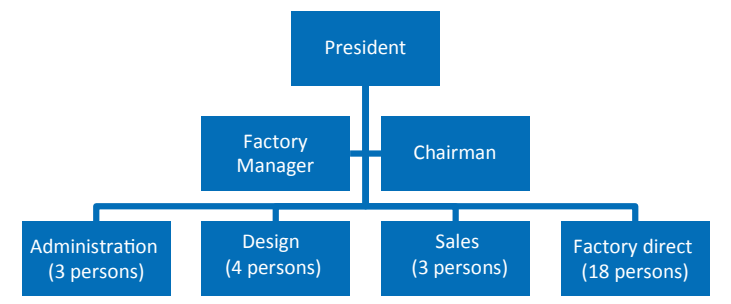
Facility & Equipment

Cylindrical grinder	3	JTEKT	φ300×500
Internal grinder	4	Toyo	φ4×φ200
Surface grinder	5	Kuroda	600×500
Jig borer	1	Mitsui Seiki	No4
Jig grinder	1	Mitsui Seiki	300G
Profile grinder	2	Waida	140×470
Electric spark machine	1	Sodick	300×200
Thread grinder	4	Matrix	φ300×500
Universal measuring machine	2	Zeiss	
Measurement of surface	1	Mitutoyo	
Contour form measurement	1	Mitutoyo	
CMM	1	Mitutoyo	FALCIO710

Sales Amount



Organization



Company Profile / Contact

Representative Masanori Ito
Capital US\$167,000
Major Customers Toyota, Honda, etc.

Address 4-10 Yanagishima-cho,
 Nakagawa-ku, Nagoya, Aichi
 454-0024, Japan
TEL +81-52-361-7537
E-mail info@ito-seimitsu.co.jp



Kakamigahara Aero Equipment Co., Ltd.

各務原航空機器 株式会社



CERTIFICATION JIS Q 9100 (AS 9100)
WEBSITE <http://www.kae-gifu.co.jp/>

Outline of Business

- Manufacture of wiring harnesses for aircraft, helicopters and missiles
- Manufacture of extremely high-quality wiring harnesses
- Wiring harness build-up for quick installation on aircraft
- Design and manufacture of ground support equipment

Our Strengths

Based on our technical skills outlined below, we strive to meet customers' needs with excellent technologies and reliability.

- Production of wiring harnesses with superior protection against the environment and electromagnetic interference
- Production at low cost with short delivery time based on high reliability and technologies



Facility & Equipment

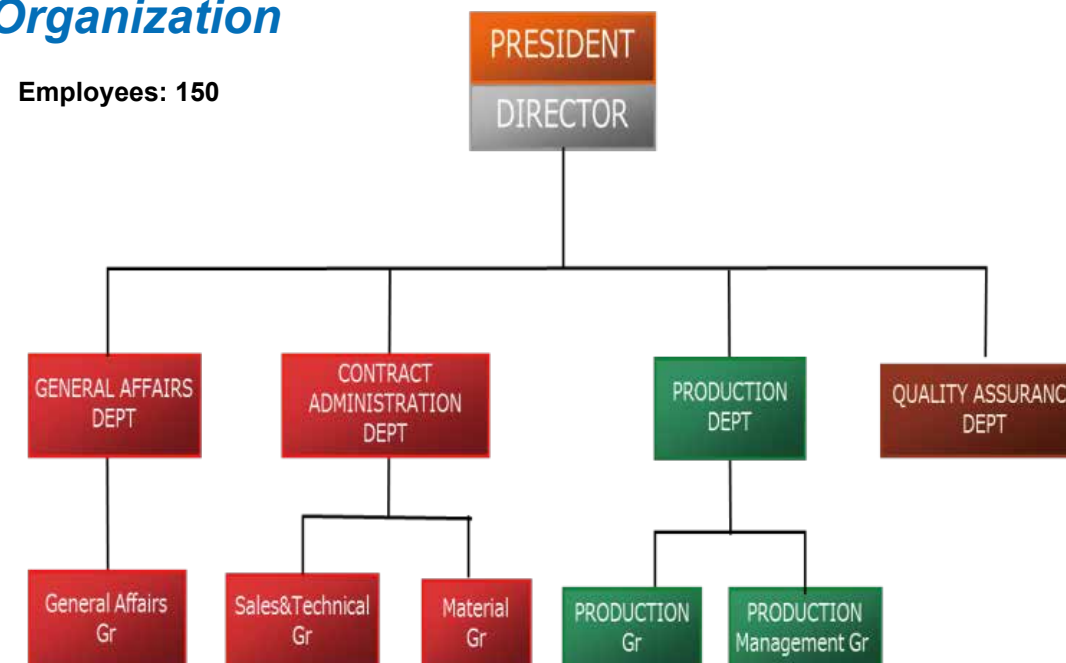
Extra-long wire-harness manufacturing (up to 80m)
 Laser marking machine.....3 sets
 Continuity and insulation test device2 sets
 Thermostat tanks for environmental testing ...1 set

Sales Amount

2013	2014	2015
US\$10,175 K	US\$9,933 K	US\$9,834 K

Organization

Employees: 150



Company Profile / Contact

Representative	Shigeaki Hashimoto, President	Founded	April 18, 1968
Capital	US\$84,000	Address	3-6 Sohara Koua-machi Kakamigahara, Gifu 504-0814, Japan
Major Customers	Kawasaki Heavy Industries Mitsubishi Heavy Industries Fuji Heavy Industries Nippi Corporation Yamaha-Motor Company Tyco Electronics Japan G.K	E-mail	k.kiyama@kae-gifu.co.jp



KANEFUSA CORPORATION

兼房 株式会社



CERTIFICATION ISO 9001, ISO 14001
WEBSITE <http://www.kanefusa.net/>

Outline of Business

We supply knives and circular saw blades for wood processing, cold saw blades for metal processing, diamond saw blades for the ceramic industry and other cutting tools for various materials that customers would like to cut.



■ Head office and factory ■ Our products

Our Strengths

- We specialize in producing custom-made polycrystalline diamond (PCD) tools.
- We are able to provide solutions to your problems by optimizing the specifications of the tool.

Countersink Cutter with PCD Insert

(Material: CFRP, Application: Riveting countersink holes of the aircraft frame)

- High-precision cutter with one PCD tooth
- Tooling cost is reduced due to singular blade type.
- More cost-effective than other brand products.



Micro stop countersink cages



PCD insert



■ Countersink cutter with one PCD insert

Material to be cut: CFRP
 Power tool unit: Microstop countersink cage
 Number of teeth: 1

PCD Fine Pitch Teeth Face Mill

(Material: Aluminum alloy, Application: Face milling)

- High-quality cutting surface with high-precision sharpened edge
- High-efficiency machining with super multi-cutting edges
- Resharpenable brazed edge without run-out adjustment
- The innovative clamping bolt structure for cutting-edge lubrication by a center hole coolant supply

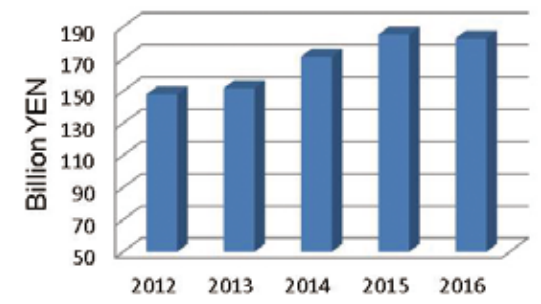


■ PCD fine pitch teeth face mill

Facility & Equipment

Equipment	Machine	Qty
Heat-treatment furnace	Electric furnace	29
	High-frequency heater	68
	Other heat-treatment facilities	8
Grinding machine	Several types of grinder	411
Machine tool	Several types of machine tool	78
	Several types of NC (numerical control) machine	134
Forming machinery	Several types of press & roll machine	70
Special machinery	Several types of special machinery	239
Others		386

Sales Amount



Worldwide



Important Information / Notices

We have been developing many tools for processing CFRP. We are willing to work with customers to develop special cutting tools together. Please contact us.



Company Profile / Contact

Representative	Masato Watanabe (President)	Address	1-1 Nakaoguchi, Ohguchi-cho, Niwa-gun, Aichi 480-0192, Japan
Capital	2.14 billion yen (As of 2016/03/31)	TEL	+81-587-95-7221
Major Customers	Toyota Motor Corporation Nissan Motor Co., Ltd. Honda Motor Co., Ltd. Kawasaki Heavy Industries, Ltd. Fuji Heavy Industries, Ltd.	E-mail	sales-ex@kanefusa.co.jp



KATO MANUFACTURING CO.,LTD

株式会社 加藤製作所



CERTIFICATION JIS Q 9100:2009 / JIS Q 9001:2008 (ISO 9001:2008)

WEBSITE <http://www.katoseisakusho.co.jp/>

Outline of Business

We are exclusively an aerospace and defense focused enterprise and specialized in machining complex parts to customer specifications.

- ▶ Design and Production Engineering
- ▶ Programing
- ▶ Machining
- ▶ Surface Treatment and Painting (Out Sourcing)
- ▶ Inspection



Our Strengths

Our manufacturing and facilities cover 55,112 square feet, and contain 47 single-spindle 3, 4 and 5 axis machining centers. Machine parts are manufactured from titanium, nickel based alloys, heat treatable steels, and aluminum.



Quality Assurant

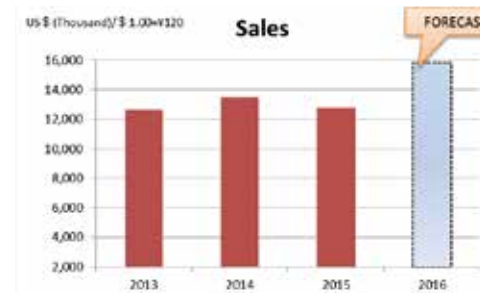
- 3D Measuring Instruments
- Size capacity: 47x118x40 (inch)



Facility & Equipment

Model	No Of Axis	Maker	Table Size(Xmm.Ymm)	Q'ty
VORTEX1400/160 MARK	5	Yamazaki	4000×1250 18,000rpm	2
VORTEX1400/160	5	Yamazaki	4000×1250	1
VORTEX I-630V(FMS44Pallets)	5	Yamazaki	630×630 10,000rpm	4
FH-6800(FMS 48Pallets)	4	Yamazaki	630×630 18,000rpm	3
FH-5800(FMS 68Pallets)	4	Yamazaki	500×500 25,000rpm	4
NEXUS5000- III	4	Yamazaki	500×500 25,000rpm	2
DH-60(FMS 69Pallets)	4	Mitsubishi	630×630	6
DH-60	4	Mitsubishi	630×630	2
MILLAC-630H	4	Okuma	630×630	4
MA-600H II (FMS 32Pallets)	4	Okuma	630×631	4
VM-7	3	Okk	1550×740 13,000rpm	3
MVR-25	3	Mitsubishi	3000×1500 12,000rpm	1
MCV-A II	3	Okuma	4100×1500	2
Any Other 3-Axis Vertical M/C	3			14
Nc Lathe	-			4
BHN710 CMMC-3S		Mitutoyo	1000×700×600	1
Crysta-ApexC123010		Mitutoyo	1205×3005×1005	1

Sales Amount



Important Information / Notices

In October 2016, No 3 plant is going to start operating in Matsusaka, that is a cooperative society organization. Machining, Sheet metal, Heat treatment, Surface treatment and paint, Shot peening include in this house.

Company Profile / Contact

Representative	Takashi Kato	Address	82-20.5-Chome Kakamihigashimachi Kakamigahara, Gifu 509-0103, Japan
Capital	US\$ 83.3(Thousand)	TEL	+81-58-379-0111
Major Customers	Mitsubishi Heavy Industries.Ltd Kawasaki Heavy Industries,Ltd	E-mail	takashima@katoseisakusho.co.jp



Kondo Machine Corporation



株式会社 近藤機械製作所

CERTIFICATION JIS Q 9100, Rolls-Royce SABRe Certificate

WEBSITE <http://www.kondo-kikai.co.jp>
<http://www.gokiso.jp>

Outline of Business

- Machine design and manufacturing
- Machine processing for aviation engine parts
- Ultra-precision parts manufacturing
- Mold design and manufacturing



Market Product (Exclusive Bicycle Wheel)

"GOKISO", the ultimate bicycle wheel system: development, design, manufacturing and international distribution



Our Strengths

■ Kondo Machine Corporation has a history of over 60 years and is a manufacturer of ultra-precision machines specializing in ultra-precision metal cutting. The company is also highly reputed as a parts manufacturer for jet engines. Our absolute and accurate quality control is applied to every single product. Every product lives up to uncompromising standards in design, production and quality control. Our products showcase the true value of craftsmanship. This is our philosophy.



The company launched the brand GOKISO in 2010 to convey our philosophy to the worldwide market.

Facility & Equipment

- Turning lathes
- NC lathes
- Cylindrical grinding
- Machining center
- Surface grinding
- EDM
- EDW
- CMM and inspection facilities



Organization

Kondo Machine Corporation has skilled people in the following areas:

- Development
- Design
- Manufacturing
- Q.A.
- Sales
- After-market



Important Information / Notices

"Kondo Machine Corporation is a small company – around 30 employees – that makes high precision metal parts that spin around" (David L. 2014, <http://positivo-espresso.blogspot.jp/2015/01/the-gokiso-story-gokiso-monogatari.html>)

Company Profile / Contact

Representative	Yutaka Kondo	Address	1-130 Funairi Kanie-cho, Amagun, Aichi 497-0048, Japan
Capital	US\$330,000 (\$1 = ¥120)	TEL	+81-567-95-1343
Major Customers	NTN Corp. Aerospace Bearing Dev.	E-mail	kondo@kondo-kikai.co.jp



KOSAKA IRON WORKS CO., LTD.

株式会社 小坂鉄工所



CERTIFICATION JIS Q 9100, MSJ 4000

WEBSITE <http://www.kosakaiw.com/>

Outline of Business

- Manufacture of precision parts for aircraft
- Mass-production of turbine blades grinding mounted on the aircraft engine
- Machining of rocket engine parts
- Manufacture of prototype products for rockets

(Aircraft products account for about 80%.)



Our Strengths

- We specialize in machining small precision parts, ranging in size from fingernail to hand size, and offer a wide variety of cutting.
- We can deal with urgent orders.
- We will challenge any project using technologies accumulated since 1958.



Facility & Equipment

Complex lathe	2	Honing machine	1
Multi-purpose lathe	12	Radial drilling machine	1
NC multi-purpose lathe	2	Electrical discharge wire cut machine	2
NC lathe	9	Electrical discharge machine	1
Multi-purpose vertical milling machine	2	Electrical discharge boring machine	1
Multi-purpose horizontal milling machine ...	1	Profile projector.....	1
NC milling machine	3	Shape measuring machine.....	2
Vertical machining center	4	Surface roughness measuring machine ...	1
Grinding machine for external diameter ...	4	3D measuring machine	2
Grinding machine for internal diameter.....	1	Laser marker.....	1
Flat grinding machine	7		



Sales Amount

Gross sales: ¥1 billion (2014)

Organization

Employees: 85 (Oct. 2015)

Important Information / Notices

Certified according to JIS Q 9100 (Aug. 2007)

Company Profile / Contact

Representative Hirotaka Kosaka, President
Capital ¥20 million
Major Customers Mitsubishi Heavy Industry Ltd.,
 Eagle Industry Co., Ltd.
 Kanto Aircraft Instrument Co., Ltd.
 NOK Corporation,
 Taiyo Nippon Sanso Corporation
 NSD Corporation, T
 erauchi Manufacturing Co., Ltd., etc.

Address Main factory:
 4-26 Kaname-cho, Minami-ku, Nagoya,
 Aichi 457-0802, Japan
 Mitake factory:
 2188-62 Minamiyama, Mitake, Mitake-cho,
 Kani-gun, Gifu 505-0116, Japan
TEL +81-52-611-5456 (Main factory)
 +81-574-67-4484 (Mitake factory)
E-mail kosakaco@poplar.ocn.ne.jp



Koyama Chemical Co., Ltd.

株式会社 コヤマケミカル

CERTIFICATION ISO 9001, JIS Q 9100, AMS 2412, AMS 2410, QQS 365

WEBSITE <http://www.info-surface.jp>

Outline of Business

- Processing of function-added plating mainly for aero-aviation components, electronic parts, and automobile parts

Our Strengths

- Copper, nickel, and tin plating for mass-produced products
- Excellent high-mix, small-lot production
- High technologies and know-how for surface treatment of various materials to meet customers' needs
- Network of partner factories, enabling us to reduce lead time of all types of surface treatment



Facility & Equipment

- Copper plating facilities
- Nickel plating facilities
- Tin plating facilities
- Silver plating facilities
- Gold alloy plating facilities
- Various electroless plating facilities



Products and Services

Our plate processing provides additional functions to aircraft engines and assembly parts such as seizure prevention.

Company Profile / Contact

Representative	Kiyoshi Koyama	Address	120-1 Aza-Kakitsubata Narumi-cho Midori-ku, Nagoya, Aichi 458-0801, Japan
Capital	10 million yen	TEL	+81-52-891-1881
Major Customers	NTN Corporation, Owari Precise Products Co., Ltd. Asahi-Seiki Manufacturing Co., Ltd. Panasonic Corporation	E-mail	info@surface.co.jp



MATSUURA CO., LTD.

株式会社 松浦

CERTIFICATION JIS Q 9100, Nadcap (Welding), ISO 9001, ISO 14001

WEBSITE <http://www.kk-matsuura.co.jp>

Outline of Business

- Aerospace parts
- Manufacturer of transportation equipment
- Other products (parts for automobiles, parking support equipment, electrical distribution, etc.)



Our Strengths

■ Major customers highly evaluate the following aspects of our products:

- 1) On-time delivery
- 2) High quality
- 3) Reasonable prices

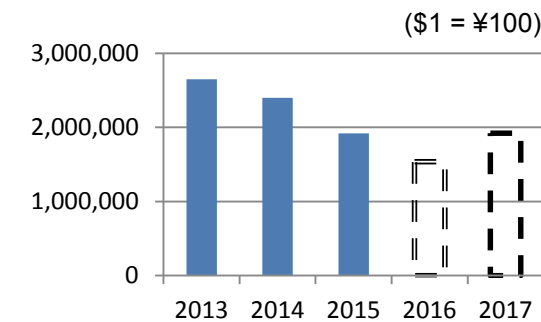
We do our best to meet customers' requests and gain their trust.



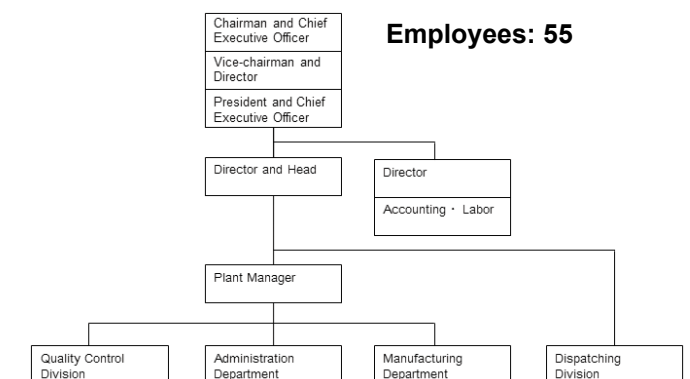
Facility & Equipment

- 1000-ton hydraulic double-action type press (introduced in Feb. 2016)
- 500-ton hydraulic single-motion type press
- Clamp press (250 ton, 200 ton, 140 ton and 100 ton)
- 2D laser beam machine
- NC turret punching machine (2 sets)
- Shearing machine (3 sets)
- Bending machine (125 ton, 100 ton and 60 ton)
- TIG automatic welding machine (introduced in Feb. 2016)
- TIG welding machine (for aircraft, 3 sets)
- Conical roll molding machine (introduced in Jan. 2016)

Sales Amount



Organization



Important Information / Notices

■ Selling points

We mainly produce parts in small volumes in efficient combination with mass-produced parts. We strive to create a good, comfortable workplace and work hard to provide customers with products which benefit society and are eco-friendly.

Company Profile / Contact

Representative	Takahiro Matsuura	Address	1296 Honjo, Komaki, Aichi 485-0821, Japan
Capital	US\$100,000 (\$1 = ¥100)	TEL	+81-568-78-3111
Major Customers	Mitsubishi Heavy Industries Ltd.	E-mail	office1@kk-matsuura.co.jp



Meinan Machinery Works Co., Ltd.

有限会社 名南機械製作所

CERTIFICATION JIS Q 9100 (scheduled in 2016), MSJ 4000

WEBSITE <http://meinan-kikai.co.jp>

Outline of Business

- Manufacture of machined parts for aerospace industry
- Design and manufacture of jigs & tools and parts for aircraft assembly
- Manufacture of prototype parts for automobiles
- Manufacture of parts for special machines

Our Strengths

- Machining of aluminum, titanium, and other hard-to-cut materials as well as 3D profiling
- Manufacture of serrated parts
- Rotary grinding
- We are able to respond to urgent orders for materials, quenching, surface treatment, and other special processes because our office and factory are conveniently located both for our workers and sub-contractors.
- We have received an excellent company award from JAXA and Mitsubishi Heavy Industries several times.



Serrated part



Part of hard-to-cut material



Aluminum part drilled with an angle head machine

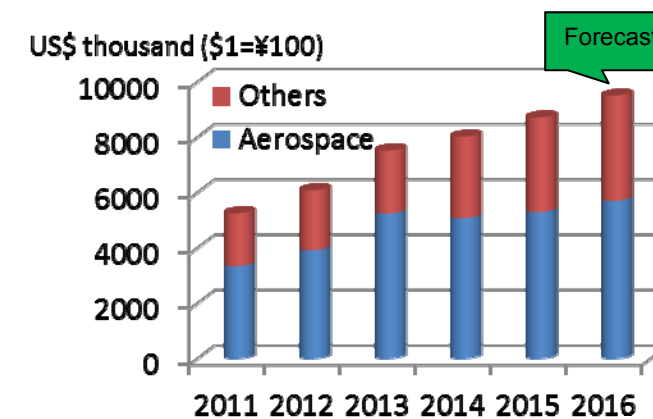
Important Information / Notices

The R&D Division for next-generation industry reports directly to the president. We have been collaborating with Nagoya Institute of Technology on the development of a training robot for rehabilitation for five years. In addition, we are developing in-house an industrial robot for aircraft assembly.

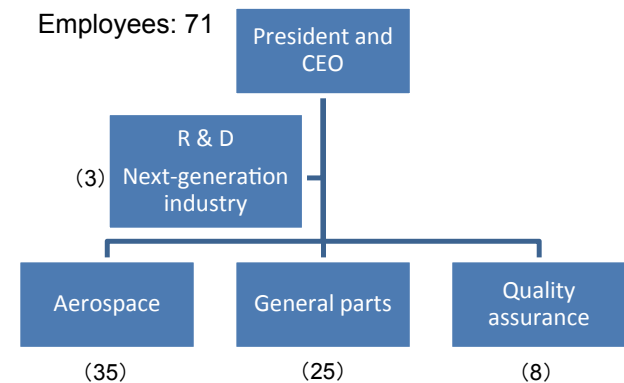
Facility & Equipment

Device	Processing Capacity	Manufacturer	Model	Q'ty
5-axis machining center	630×560×510, 60×660×610	Matsuura, Mazak	MX-520, VARIAXIS I-500	2
Turn mill center	φ500×450×200×1225	Mazak	INTEGREX 200-4ST, other	3
	φ600×500×600×160	Okuma	MULTUS B200 II, LB3000EX	2
4-axis machining center	630×630	Mitsubishi	DH60, MH-60E	2
NC machine				17
Surface grinding machine	1250×600×595	Okamoto	PSG126DX	5
Rotary grinding machine	φ1500	Ichikawa	ICB-1500	4
NC bandsaw	30×430×430	Amada	PCSAW430	1
WEDM	1050×820 ×305	Mitsubishi	MV2400S	1
Measuring machine	900×1600×600	Mitsutoyo, Faro	Crysta Apex S9166	2
CATIA V5				1
CAD CAM			CATIA V5, Auto CAD, Surfcam, other	19

Sales Amount



Organization



Company Profile / Contact

Representative	Yukio Kobayashi	Address	39 Ahara-cho, Minami-ku, Nagoya, Aichi 457-0063, Japan
Capital	US\$100,000 (\$1.0=¥100)	TEL	+81-52-823-2810
Major Customers	Mitsubishi Heavy Industries, Ltd. JFE Steel Corporation	E-mail	y.kobayashi@meinan-kikai.co.jp



MEIRA Corporation

メイラ 株式会社



CERTIFICATION JIS Q 9100, NADCAP (HT, CP, NDI, SE), ISO 14001

WEBSITE <http://www.meira.co.jp>

Outline of Business

Fasteners, machining parts and rod assemblies for aerospace, precision threaded parts and cold forging parts for automobiles, orthopedic implants and instruments.

Our Strengths

Products and Services

Meira supplies materials, and offers one-stop manufacturing and quality assurance covering machining, heat treatment, non-destructive inspection, surface treatment, coating/painting, and assembly.

Special Processes

Meira is NADCAP-certified in heat treatment, surface treatment, non-destructive inspections, and shot peening.



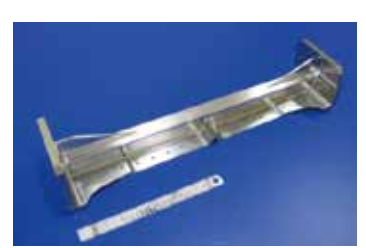
Spline bolt



S/L nut



Chemical processing line



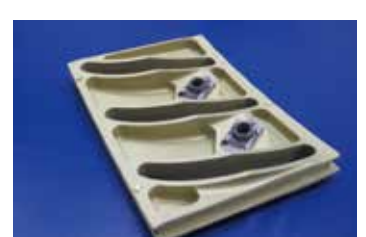
Machined product



Rod assemblies



Penetrant inspection



Machined product



Machined product



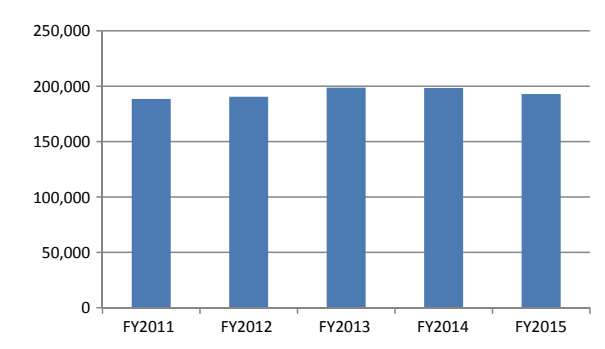
Magnetic particle inspection

Facility & Equipment

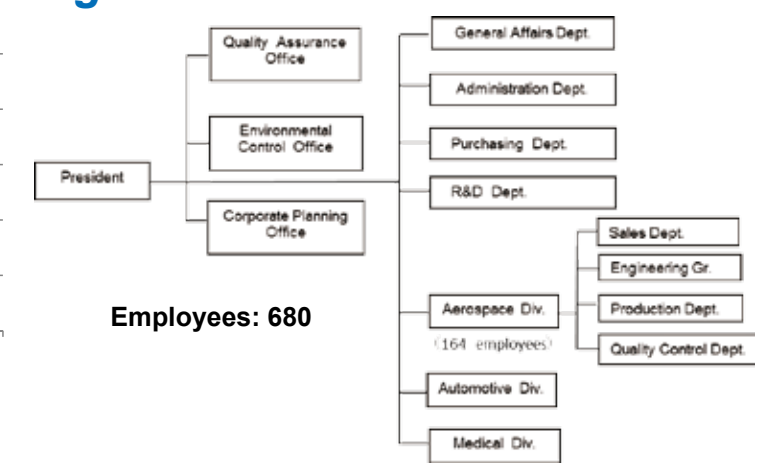
Chemical Processing
Cadmium plating - bright
Cadmium plating - low hydrogen embrittlement
Cadmium plating - fluoborate
Cadmium-titanium alloy plating
Zn-Ni plating
Hard chromium plating
Chemical conversion coating
Anodizing-chromic acid
Anodizing-sulfuric acid
Anodizing-boric acid-sulfuric acid
Passivation
Cleaning-descaling of titanium
Black oxide coating
Sol-gel conversion coating
Aluminum spray coating
Shot peening

Equipment
5-axis machining center (Table 630x630mm)
4-axis machining center
Multi-axis turning center
CMM
Vacuum furnace
Aluminum furnace
Paint line
Swage machine
CNC thread rolling machine
Gun drill machine
External cylindrical grinding machine
Press (300 ton)
SEM

Sales Amount



Organization



Company Profile / Contact

Representative	Makoto Ohashi, Representative Director	Address	17-15 Tsubaki-cho, Nakamura-ku, Nagoya, Aichi 453-0015, Japan
Capital	US\$27,500,000 (\$1 = ¥120)	TEL	+81-052-459-1276
Major Customers	MHI, KHI, FHI, IHI, Shin-Maywa, JAMCO, Nippi, Mitsubishi Electric, NEC	E-mail	miyashita@meira.co.jp



Mizuhocraft Co., Ltd.

ミズホクラフト 株式会社



WEBSITE

<http://www.mizuhocraft.co.jp>

Outline of Business

- For the aerospace industry: manufacture and delivery of various types of heaters such as polyimide heaters, and Hot Bonders (Heater Controllers) as CFRP and GFRP part repair kits
- For general industries: silicone rubber heaters, drum heaters and temperature controllers

Our Strengths

- We are manufacturing products under the Boeing's specific requirements and approved process.
- High performance based on strict quality assurance
 - Flexibility ----- can manufacture heaters to match your needs and applications
 - Free design ---- can design for any electric power level, for any size
 - Orders for a single unit ----- can handle any requests
- To satisfy all clients' needs without being bound to existing technology, we undertake the following:
 - material development
 - design development
 - manufacturing technology development
 - manufacturing facility development



BOEING737 RADOME HEATER (OUTER)

Usage Performance

BOEING 737	Japan Air Self-Defense Force KC-767
BOEING 747	Japan Air Self-Defense Force C-130H
BOEING 767	Japan Air Self-Defense Force UH-60J
BOEING 777	
BOEING 787	

Example

1. High-Flexibility Heat Blanket (Stretchable Blanket)

We decided to use materials with no glass fiber cloth, to make our heater more elastic than conventional products. We also made the heater as thin as possible, reducing its thickness to just 1.9mm (0.074").

With the new approach to the material itself and its thinness, we were able to create a more flexible heater.



2. Bladder Bag

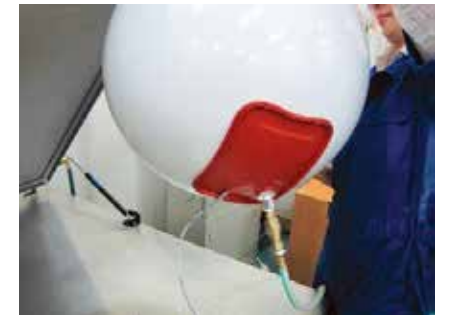
1. Heat resistant to 200°C (392°F)
2. Will not break at pressures up to 6 atm
3. Should be as thin as possible (hopefully less than 0.5mm (0.019"))



3. Vacuum Heat Blanket

We put all these parts together in one device:

1. Manufactured a new heater with integrated thermocouple
2. Manufactured a new insulated silicone bag with sealant function
3. Combined the heater and bag (#1 & #2)
4. Added an insulated vacuum port to the combined heater and bag (#3)



Company Profile / Contact

Representative	Soichiro Ito	Address	109 Creation-Core, 2266-22, Anagahora, Shimoshidami, Moriyama-ku, Nagoya, Aichi 463-0003, Japan
Capital	¥10 million (US\$100,000)	TEL	+81-52-737-0190
Founded	April 2009	E-mail	s.itou@mizuhocraft.co.jp
Major Customers	Boeing, Mitsubishi Aircraft, ANA Aero Supply Systems, ANA, JAL Engineering, JAXA, Sojitz Aerospace Corporation, Singapore Airline Engineering		



Mizuno Machinery Co., Ltd.

株式会社 ミズノマシナリー

M. (株) ミズノマシナリー

CERTIFICATION JISQ9100, ISO9001, ISO14001

WEBSITE <http://www.mizuno-machinery.co.jp>

Outline of Business

Let Us Be Different!

We strive to be a one-of-a-kind group of engineers who goes beyond customers' expectations. With over 50 years of experience, we will continue to master our craft to achieve competitive edge and never-ending growth.

Overview:

- JISQ9100 certified company specializing in 3 & 5-axis machining of aluminum components with high complexity, precision, and speed
- Serving customers in various industries including aerospace, semiconductors, and industrial machinery
- Located in Toyama, three hours from the major concentration of aerospace OEMs and suppliers in central Japan

Awards:

Awarded the Jury's Encouragement Prize for IT Management of Small and Medium Enterprises by the Japanese Ministry of Economy, Trade and Industry

Our Strengths

- 5-axis machining for various aluminum components (maximum table size of 2100mm x 5000mm)
- Highly flexible production environment enabling short lead times and high-mix low-volume production
- Strong emphasis on quality assurance by utilizing coordinate measuring machines (CMM) resulting in high precision



Facility & Equipment

Machining (28 units in total)

Mazak VERSATECH V-100N/240	.....5-axis machining (6000×3600×1960)
DMG MORI DMU200P x 2	.....5-axis machining (1800×2000×1100)
DMG MORI DMU125P	.....5-axis machining (1250×1250×1000)
DMG MORI DMU80P x 4	.....5-axis machining (800×800×800)
DMG MORI DMU80monoBLOCK	.....5-axis machining (880×630×630)
DMG MORI DMU60monoBLOCK	.....5-axis machining (730×560×560)
DMG MORI DMF360Liner x 2	.....Machining (3600×920×820)
DMG MORI DMF300Liner x 2	.....Machining (3000×560×720)

CMM (Coordinate Measuring Machine)

Tokyo Seimitsu/Carl Zeiss	.....ACCURA II (1200x2400x1000)
API Laser Tracker System (SA)	.....RADIAN (R20m)



Company Profile / Contact

Representative	Fumimasa Mizuno, President & CEO	Address	513-4 Fuchumachi Itakura, Toyama-shi, Toyama 939-2721, Japan
Capital	¥30,000,000	TEL	+81-76-466-9233
Establishment	1963	E-mail	info@mizuno-machinery.co.jp
Employees	48		



MIZUNO METAL WORKS CO., LTD.



株式会社 水野鉄工所

CERTIFICATION JIS Q 9100, JIS Q 9001

WEBSITE <http://www.miztec.jp>

Outline of Business

- **Aircraft Division:** The major division of our company, fabricating aircraft/spacecraft parts with state-of-the-art facilities and specialized machining technology such as long-size precision cutting, 5-axis cutting, and titanium cutting.
- **Vehicle and Aircraft Device Division:** Mainly designs and fabricates tools & jigs for aircraft assembly, and aircraft components for overhauls (repairs) of aircraft.
- **Hydraulic Device Division:** Mainly fabricates hydraulic device components for industrial vehicles and construction machines. Performs machining, welding and assembly, and also fabricates machined parts of aircraft.

Our Strengths

- Technique to process lamina long lengths of aluminum material by exclusive 10m processing machine.
- Technique to process titanium alloy products by self-developed high-efficiency tool.
- We specialize in the design and production of tool & jigs and mechanical processing.
- We have a one-stop manufacturing system for assembly and overhaul of components.



View of factory



Spar miller

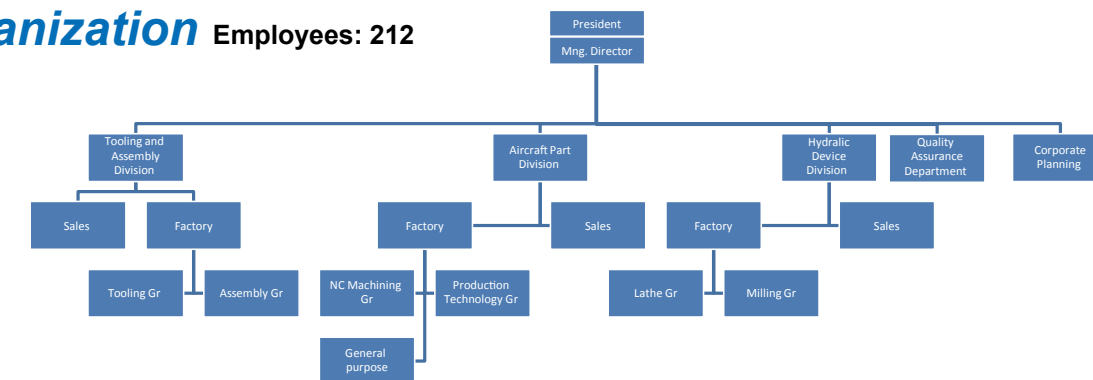


CNC turning center

Facility & Equipment

Spar miller	X	10,500	Y 700	Z 250			2
Five-axis machining center	X	4,460	Y 1,320	Z 712	A 45	C 270	16
Four-axis machining center	X	1,050	Y 900	Z 980			21
Three-axis machining center	X	6,000	Y 2,400	Z 600			23
Auto milling machine							9
CNC turning center	X	1,080		Z 850		W 1,200	6
CNC lathe	X	675		Z 2,520			12
Jig boring machine	X	1,500	Y 660	Z 660			3
Coordinate measuring machine	X	1,600	Y 6,000	Z 800			3
Catia V4, V5							9

Organization Employees: 212



Sales Amount

US\$23.5 million (2014)

Important Information / Notices

Management Policy:

By focusing on "first-class craftsmanship" to gain customers' trust, we seek to develop the company and employees' happiness, and thus widely contribute to society.

Company Profile / Contact

Representative Tatsuhiro Mizuno, President
Capital US\$400,000 (\$1 = ¥120)
Major Customers Kawasaki Heavy Industries, Ltd.
 Mitsubishi Heavy Industries, Ltd.
 KYB Corporation

Address 4539-10 Kurachi, Seki, Gifu
 501-3936, Japan
TEL +81-575-21-5511
E-mail info@miztec.jp



NABELL CORPORATION

株式会社 ナベル



WEBSITE

<http://www.bellows.co.jp>

Outline of Business

MRO covers for aerospace such as:

Tire covers, engine covers, intake covers, helicopter blade covers, etc.

Robot covers (Robot-Flex@)

Welding, painting, surface treatment, foundry, clean room (Scara Robot), EMC, robot boots

Way covers for machining center

Cross rail bellows of a large, horizontal-type machining center for an airplane wing
(16.4ft cross rail testing machine at Nabell)



Our Strengths

Innovation:

We see our products from the customers' viewpoint and turn customers' needs into our innovations.

Worldwide Network

Manufacturing: Japan, USA, China, Korea,
Sourcing: Japan, USA, Germany, France, Taiwan

Materials x Manufacturing Methods

With well-selected materials from the global market and sophisticated manufacturing methods, we consistently manufacture products for end users.

Facility & Equipment

Facilities: Nabell Global Network



Nabell Group

- Nabell Japan – Mie, Yamaguchi
- Nabell USA
- Seyoung Nabell
- Nabell Taiwan
- Nabell China

Equipment:

Water jet machines, bellows pleating machines, bellows welding machines, ultrasound welders, high-frequency welders, sewing machines, 3D scanners, 3D printers, laser machines (CO₂, fiber with punching)

Important Information / Notices

Dr. Bellows – Focused on the MRO market for the next 30 years

Our new brand, Dr. Bellows, looks ahead to the next 30 years. We focus on R&D for the future possibilities and potential of Bellows (such as our new portable and foldable solar panels). We also study end users' viewpoint and needs to identify their difficulties, and create new needs which no one has realized yet.



Bella-Solar
Portable and Foldable PV Panel

Company Profile / Contact

Representative	Norio Nagai	Address	7-2-3 Yumegaoka, Iga City, Mie Pref. 518-0131, Japan
Capital	US\$416,666.66 *\$1 = 120 yen	TEL	+81-595-21-5060
Major Customers	Mitsubishi Heavy Industries, Ltd. Mitsubishi Electric Corporation AMADA Makino Milling Machine Co., Ltd. Yamazaki Mazak Corporation DMG Mori Seiki Co., Ltd. SNK	E-mail	nabell@bellows.co.jp



Nabtesco Corporation

ナブテスコ 株式会社



WEBSITE

<http://www.nabtesco.com/>

Outline of Business

- Nabtesco Aerospace Company is a key business among six business units.
- It has over 60 years of experience in the design, development and manufacture of hydraulic components, engine-related components, and flight control actuation systems.
- One of The World's Top Suppliers for Flight Control Actuation:
 - * Domestic Programs: Almost 100% Share
 - * Boeing Commercial Program:
 - Top Supplier of "Fly-By-Wire" Flight Control Actuation Systems
 - Recent New Programs:
 - 737MAX FBW Spoiler Actuator
 - 777X Flight Control Actuation Systems
 - Awarded "2013 Supplier of The Year"
 - * Mitsubishi Regional Jet: Supplier of Flight Control Actuation Systems

Our Strengths

- Flight Control Actuation Systems:
 - Expertise and Know-How accumulated over the years through various programs
 - Highly Qualified Engineering Team based on CAD/CAE/CAT
 - Own EHSV: Key Component of Fly-By-Wire Flight Control Actuator
 - High Quality and Prompt Delivery for Customer Satisfaction
- Worldwide Customer Support:
 - Repair Shops Authorized by Various Countries' Civil Aviation Authority
 - * JCAB, FAA, EASA, CAAC, CAAS, DCA
 - Support Sites:
 - * Customer Support Offices: Gifu (Japan), Kirkland (WA, USA), Dusseldorf (Germany), & Singapore (Singapore)
 - * Repair Shop: Gifu (Japan), & Kirkland (WA, USA)



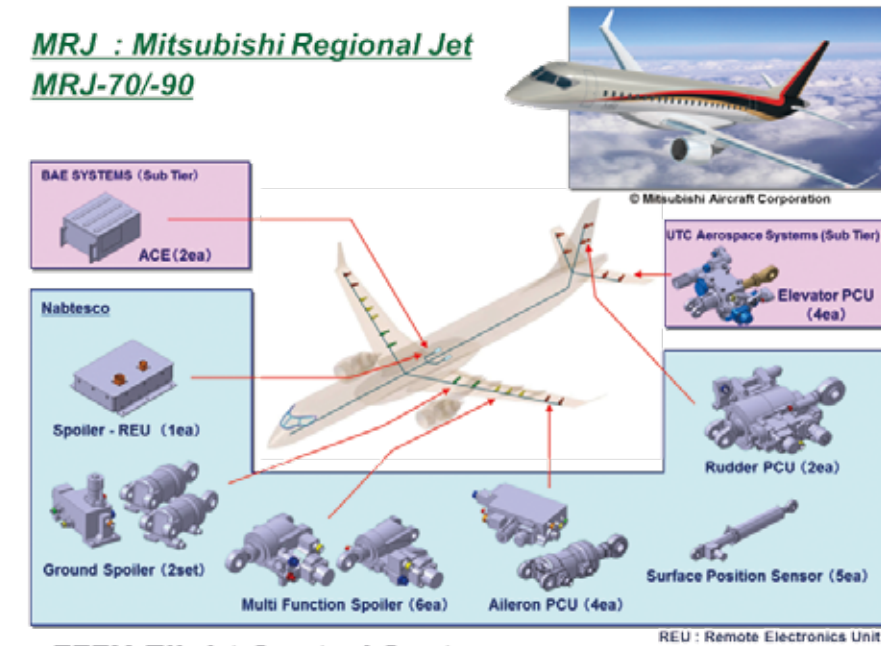
Gifu Facility
Aerospace Company



Nabtesco Aerospace, Inc.
Kirkland, WA, USA

MRJ Flight Control Systems

MRJ : Mitsubishi Regional Jet
MRJ-70/-90



Boeing 777X Flight Control Systems



Company Profile / Contact

Representative	Kazuaki Kotani	Address	JA Kyosai Bldg, 2-7-9 Hirakawa-cho, Chiyoda-ku, Tokyo 102-0093, Japan
Capital	10 billion yen	TEL	+81-3-5213-1166
Major Customers	Ministry of Defense, Japan Boeing Company Mitsubishi Aircraft Corporation	E-mail	info_aerospace@nabtesco.com



Nishimura Works Co., Ltd.

株式会社 西村製作所



CERTIFICATION JIS Q 9100:2004, JIS Q 9001:2008, ISO 9001:2008

WEBSITE <http://www.nishimuraworks.co.jp/>

Outline of Business

Precision products manufactured with advanced technology on state-of-the-art equipment

The tools and fixtures that Nishimura Works manufactures for the aerospace industry are highly-specialized products used in the production of the Mitsubishi Regional Jet, the Boeing 787, and the H-IIA/H-IIB launch systems, as well as helicopters and other aircraft. Nishimura is committed to meeting the challenges of the ever-advancing aerospace industry.

Tools and fixtures for the aerospace industry

Nishimura accepts orders from aerospace and defense contractors for the manufacture of tools and fixtures used in the production of passenger planes, fighter planes, helicopters, rockets, and other aircraft. Production standards for the aerospace industry call for extreme precision, and those tools and fixtures are exceptionally difficult to manufacture.

Manufacture of component parts for aircraft

All aircraft must be capable of transporting passengers in safety. Nishimura Works manufactures structural elements of passenger aircraft. These parts form the airframe itself and there is absolutely no room for error in their manufacture.

Dispatch of technical staff

We can provide support as necessary for the production of the latest aircraft by dispatching our technical staff to work directly at the customer's production or management facility.

Our Strengths

An integrated process of design, manufacture, and quality control

We have developed our own integrated process for product design, manufacture, and quality control based on the use of 3D CAD systems, five-axis machining, and inspection techniques such as 3D measurement. This system is the cornerstone of our ability to produce highly-specialized products while offering reduced costs, high quality, and short delivery times.

In addition to jigs/tools for the aerospace industry, we also manufacture aircraft parts. Expertise in these two segments creates a synergistic effect in our creative manufacturing capabilities.

We provide products of superior quality backed by recognized certifications such as JIS Q 9001 and JIS Q 9100.



The factory whole



Five-axis machine



Laser tracker

Facility & Equipment

Machining

- 6 Five-axis machines (8250×4320×1700mm)
- 8 Three-axis machines (5250×2400×1700mm)
- 2 Three-axis wire-cut machines (700×500×300mm)
- 1 General-purpose lathe (Φ600×650mm)
- 2 Surface grinding machines (600×400×200mm)
- 1 CNC vertical lathe (Φ2400×1550mm)

Bending/pressing

- 2 hydraulic presses (600t)

Measuring instruments

- 3 3D-coordinate measuring machines (1200×2000×1000mm)

Laser trackers

- 3 API laser trackers (30m (98ft) and 15m (49ft))
- 2 Faro tracker (30m)

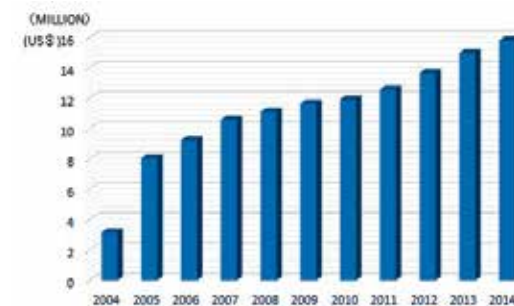
Automatic programming system

- 11 CATIA-V5

Welding machines

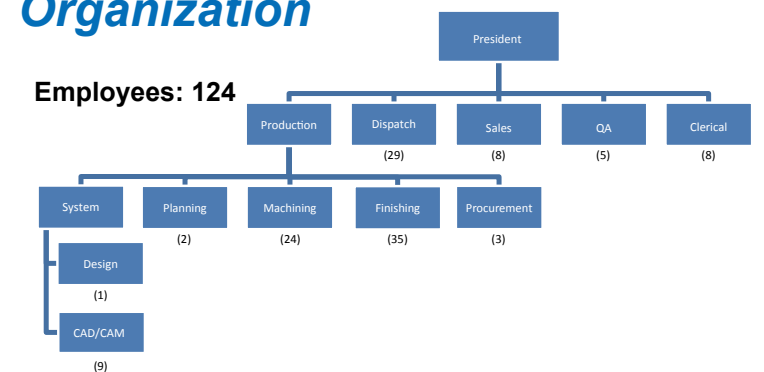
- 3 TIG welders (500A/300A)
- 4 MIG welders (500A/350A)
- 2 laser welders (300W)

Sales Amount



Organization

Employees: 124



Important Information / Notices

Nishimura Works has 50 years of experience as a jig/tool manufacturer for the aerospace industry.

Company Profile / Contact

Representative Koji Nishimura
Capital US\$83,334 (\$1 = ¥120)
Major Customers

Mitsubishi Heavy Industries, Ltd. Nagoya Aerospace Systems Works
 Mitsubishi Heavy Industries, Ltd. Nagoya Guidance & Propulsion Systems Works
 Kawasaki Heavy Industries, Ltd. Aerospace Company

Address 3-36 Kansei-cho, Minato-ku, Nagoya, Aichi 455-0066, Japan
TEL +81-52-651-2135
E-mail nss@nishimuraworks.co.jp



O&M HEATER CO., LTD.

オーエムヒーター 株式会社



CERTIFICATION ISO 9001:2008, ISO 14000:2004, EN 9100C

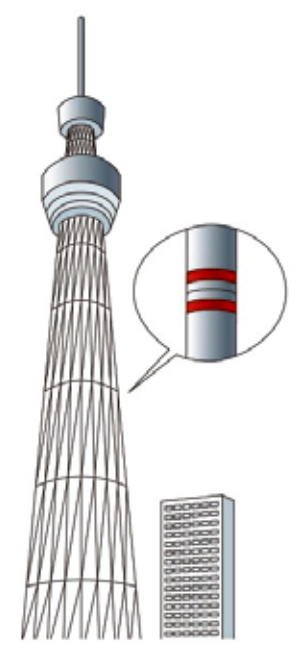
WEBSITE <http://www.om-heater.jp>

Outline of Business

- Design and manufacture of silicone rubber heaters (heater mat) for industrial use, for repair composite materials for aviation (stretch type, standard type, magnetic type)
- P&F heaters (polyimide flexible heater)
- Temperature controllers

Our Strengths

- Provision of customized heaters, even single units, using our patented process (shape, voltage, power, etc.)
We have even manufactured a 1x2m size heater.
- Quick response to requests, short lead time
Please contact us if a short lead time is required.
- Many applications
Aviation (for repair of aircraft), general industry, construction, medical care, automobiles, etc.
- Idea creation
Flexible ideas create a better future.



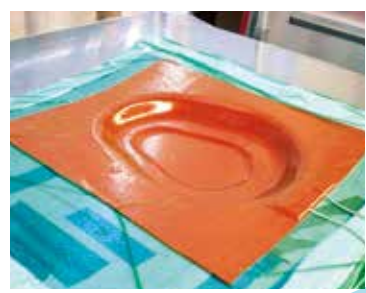
Magnetic type



Stretch type



CFRP repair for 777, 787, etc.



Stretch type

Facility & Equipment

- 100-ton hydraulic thermal press..... 8
- Electric testing system..... 1
- Thermo viewer 1
- Plasma cleaner..... 1
- 3D CAD 1



Sales Amount

- 430 million yen** (year to Sept. 2014)
(US\$3.58 million)
- 460 million yen** (year to Sept. 2015)
(US\$3.83 million)
(\$1 = ¥120)

Organization

Employees: 30



Company Profile / Contact

Representative	Yasuhiro Maruyama	Address	1-601 Hara, Tenpaku-ku, Nagoya, Aichi 468-0015, Japan
Capital	20 million yen US\$0.17 million (\$1 = ¥120)	TEL	+81-52-804-3140
Major Customers	Hitachi HiTech Co., Konica Minolta Co., Brother Co., Ebara Co., Fujifilm Co., Sony Co., Mitsubishi (MHI), Kawasaki (KHI), Fuji (FHI) Shinmeiwa (SMI)	E-mail	info@om-heater.jp



OHORI GRINDING CO., LTD.

有限会社 大堀研磨工業所



CERTIFICATION JIS Q 9100

WEBSITE <http://www.OHORIENMA.CO.JP>

Outline of Business

We serve as your partner for grinding in production development, and offer ideal processing and grinding solutions.

(1) Grinding processing by expert craftsmen

During the 47 years since our establishment, we have specialized in 'grinding the impossible' in a 1- μ m process by N/C machines, leveraging the intuition and experience of our craftsmen.

- Cylindrical grinding outside ϕ 570mm, inside ϕ 600mm
- Surface grinding 600mm x 2000mm
- Profile grinding 200mm x 200mm x 200mm



(2) Measurement of product dimensions with multiple inspection facilities

Constant-temperature chamber inspections, three-dimensional measuring machines, roundness measuring instruments, highly-trained measurement experts

Our Strengths

(1) Various products

Air-plane actuators, bearings, measurement devices, gauges, main spindles of industrial machines

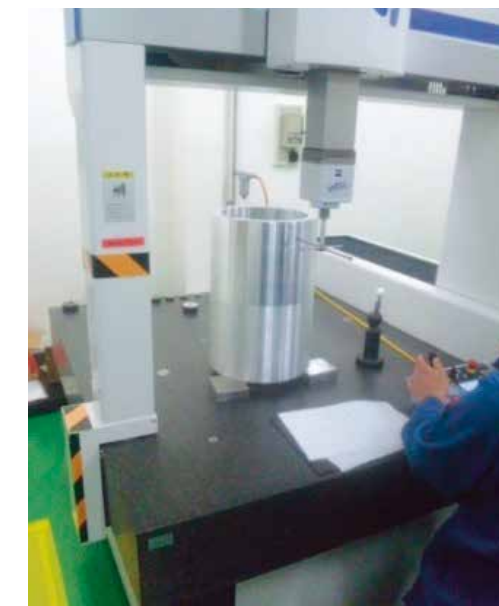
(2) Materials and manufacturing

- Fe, SUS, Al, FC, CFRP, Cu, Inconel, etc.
- From 1 to 100 pieces



Facility & Equipment

- External grinding 20
Okuma, JTECT ~ ϕ 570mm x 2500mm
- Internal grinding 15
TOYO ϕ 1mm - ϕ 600mm
- Surface grinding 10
Hitachi 600mm x 2000mm
- Profile grinding 4
WAIDA ϕ 200mm x 200mm
- Jig grindin 3
WAIDA 400mm x 500mm
- Center hole grinding 2
JTECT ϕ 125mm x 1250mm
- Surface roughness measurement 2
Kosaka Lab.
- Roundness measurement 2
Tokyo Seimitsu ϕ 600mm x 900mm
- 3D coordinate measuring machine 1
Tokyo Seimitsu 600mm x 600mm x 900mm



Organization

Employees: 49

Company Profile / Contact

Representative Ken Ohori
Capital US\$66000 (\$1 = ¥120)
Major Customers KHI, IAC, MEIRA

Address 1-9 Sohara, Terajima-cho,
Kakamigahara, Gifu 504-0842,
Japan

TEL +81-58-389-1811

E-mail ohorikenma@sky.plala.or.jp



Okaya Special Steel Center Co., Ltd.

株式会社 岡谷特殊鋼センター

CERTIFICATION JISQ 9100:2009 JIS Q ISO 9001:2008 ISO 14001:2004

WEBSITE <http://www.kotc.co.jp>

Outline of Business

- Our main business fields are the industrial machinery and construction machinery markets. We provide a variety of services including material stocks, cutting, and machining.
- We aim to undertake highly complex machining processes.
- We acquired JIS-Q-9100 in January 2015, and are entering the aerospace field.

Our Strengths

- **Machining capability:** We can manufacture highly complex materials by using NC turning machines, combined machines, machining centers, abrasive machines, etc.
- **Just-in-time delivery:** We offer just-in-time delivery utilizing our material stock capabilities.
- **Procurement:** By using the Okaya Group network, we can handle aerospace materials with more advantageous conditions.
- **Inspection capabilities:** We conduct product inspections both on internal products and outsourced products, with a 3D measuring machine and various measuring instruments under controlled temperature.
- We invested in two combined machines in 2016, and are upgrading our machining technologies.



Facility & Equipment

• Cutting Machine HFA 530φ etc	15
• Combined machine INTEGREGX 300 250φ x 1500mm	1
• Combined machine INTEGREGX 200ST 200φ x 1500mm	1
• Combined lathe NEXUS 350-II 220φ x 1500mm	1
• NC lathe M4 200φ x 1000mm	2
• NC lathe M5 350φ x 1500mm	1
• NC lathe power master 400φ x 2800mm	1
• General-purpose lathe 400φ x 1200mm	1
• Machining center SV-25 1500x800x650mm	1
• Machining center MCV650 1050x560x550mm	1
• Polishing machine GEPI100-CNC 250φ x 1000mm	1
• Three-dimensional measuring machine CONTURA 1000x1200x600mm ...	1

Organization

Employees: 48

Important Information/Notices

Customer service will be done by Okaya & Co., Ltd., which is the parent company of Okaya Special Steel Center.

Okaya was founded in 1669 as a hardware store in Nagoya and has a history of over 340 years.

As shown in the company name with the Chinese character for "iron", we have expanded in Japan and overseas markets as a trading company based on the key business of "iron".

Company Profile / Contact

Representative	Hideto Konishi	Address	Okaya & Co., Ltd. (Parent Company) 4-18, Sakae 2-chome, Naka-ku, Nagoya, Aichi 460-8666, Japan
Capital	US\$500,000 (\$1 = ¥100)		Department: Specialty Steel Department
Major Customers	Yamazaki Mazak, KYB	TEL	+81-52-204-8193
Address	111-1 Hagishima 1-chome Oguchi-cho, Aichi 480-0124, Japan	E-mail	takanom@okaya.co.jp



Ryoki Tool Company, Ltd.

菱輝金型工業 株式会社



CERTIFICATION ISO 9001, JIS Q 9100 (AS 9100)

WEBSITE <http://www.ryoki.co.jp>

Outline of Business

- Invar tooling for composites
- Tooling for aircraft and aerospace
- Aircraft parts fabrication
- Measurement services under contract
- Stamping dies for automobiles

Our Strengths

■ Advanced Invar tooling supplier

Ryoki, through its superior technologies and capabilities, designs, bends, welds, and machines Invar tools of unsurpassed quality. This is evidenced through its role in supplying fuselage, skin, center wing box, stabilizer, fairing, spar, and stringer tools for major Japanese and international Tier 1 companies.

■ 5-axis CNC capabilities

As of July 2014, Ryoki's large-sized tooling fabrication capability has increased significantly, thanks to a new, 1,470 m² (15,800 ft²) facility that houses two state-of-the-art 5-axis bed mills. Each of these machines has a 3.5x14 m (11.5x46 ft) bed, and a travel envelope of 3.5x15.5 m (11.5x51 ft), which brings the company's inventory of 5-axis mills to seven.

■ Engineering and quality assurance

The Engineering Group at Ryoki is comprised of 24 engineers who are experienced and knowledgeable in tool design and fabrication. These engineers provide the foundation for the quality tools that Ryoki proudly delivers. Among the tools at their command are eight seats of the latest version of CATIA V5.

In addition, Ryoki's dedicated inspection facility has five Faro laser trackers for verifying tool dimensions in a climate controlled environment. Thus, Ryoki's clients receive exactly the tool they need to deliver the best parts on time.

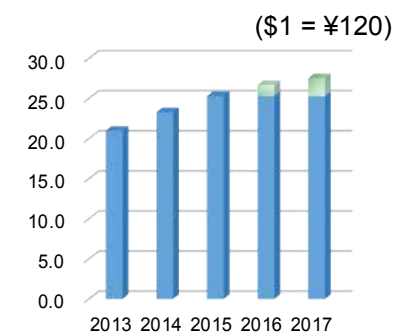


Facility & Equipment

(Only the primary equipment is listed.)

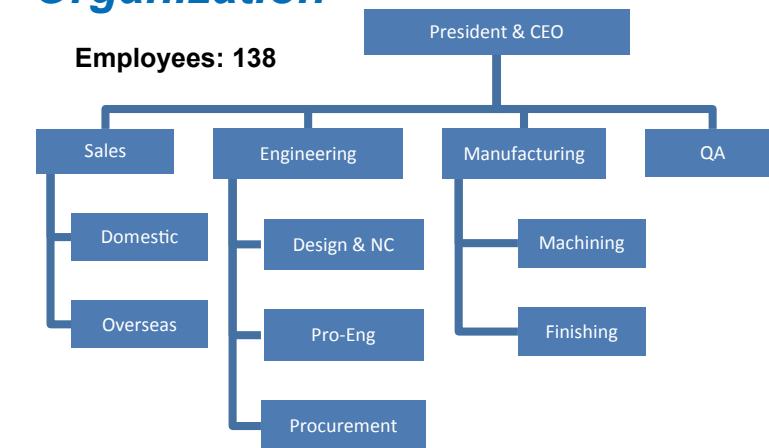
Equipment	Machine table size	Qty
5-axis bridge mill	14,000 x 3,500 mm (45.9 x 11.5 ft)	2
5-axis bridge mill	11,100 x 3,500 mm (36.4 x 11.5 ft)	1
5-axis bridge mill	5,000 x 2,500 mm (16.4 x 8.2 ft)	2
Bridge mill	6,000 x 2,500 mm (19.7 x 8.2 ft)	2
Bridge mill	5,000 x 2,000 mm (16.4 x 6.6 ft)	2
Bridge mill	4,000 x 2,500 mm (13.1 x 8.2 ft)	7
CAD/CAM	1 CATIA V4, 8 CATIA V5, 2 Unigraphics	
Measurement equipment	4 laser trackers, 1 portable CMM, 1 fixed CMM	

Sales Amount



Organization

Employees: 138



Important Information / Notices

Ryoki has a satellite sales office in Washington, US.
 Contact: Chris.Klapheke@ryoki.co.jp / m-hattori@ryoki.co.jp

Company Profile / Contact

Representative	Yasuhiro Hara, President & CEO	Address	2-8-21 Takaki, Ichinomiya, Aichi 491-0837, Japan
Capital	US\$150,000	TEL	+81-586-71-6792
Major Customers	MHI, KHI, FHI, Shin-Maywa, Nippi, IHI Mitsubishi Electric, Toyota Industries	E-mail	m-hattori@ryoki.co.jp



Sanko Hamono Co., Ltd.

株式会社 三光刃物製作所



WEBSITE <http://www.sanko-cutler.co.jp>

Outline of Business

- Manufacturing, customization, R&D and sales of cutting tools
- Product line-up includes drills, end mill routers, and cutters for CFRP, GFRP composites, metals, and wood materials
- Trial and customization of cutting tools to suit each customer's machine conditions

Sanko Hamono is a maker of industrial cutting tools and grinding tools, specializing in tool design, manufacture, repair, regrinding, and restoration. We provide tool manufacturing and repair services employing a comprehensive range of equipment including NC machining centers, wire cutting and brazing equipment, high-precision polishers, tool grinders, profiling machines, and inspection machines.

Our Strengths

- Our latest products include drilling and milling tools for carbon (CFRP) / glass (GFRP) composite materials, which are superior in preventing burr edges and delamination of composite layers and in extending tool life with special coatings

Burr-free and Delamination-free Drill and End Mill Router for Composites

- ▶ General problems in composite machining include poor cutting of carbon and glass fibers:
 - Burr edges occur and deburring is needed
 - Delamination reduces production yield
 - Decline in machining speed
- ▶ Special bit geometry for composites cleanly cuts the fibers:
 - No need for deburring process
 - Improved machining process yield
 - Reduced tool exchange
 - Faster processing using suitable cutting tools

		Material		
		GFRP + CFRP	CFRP + Aluminum	CFRP
Profile				
Cut edge				

Trial Service of Special Drill & End Mill Router

Our technical strengths include the customization and development of a cutting tool profile to suit each material and the customer's machining conditions. We offer a trial service based on analysis of the machining situation, and then design the tool specifications for on-site trial in the customer's process.

Facility & Equipment

- Flexible tool grinder (ANCA)
- Lathe (Mazak)
- Machining center
- Profiling NC milling machine
- NC lathe
- Ryumen blade edging machine
- Wire cut machine
- Inspection machine (Zoller)
- CAD 2D, 3D etc.

Sales Amount

US\$1.7 million (2014) (\$1 = ¥120)

Important Information / Notices

Product Line-up for Composite Machining

[Burr-free and delamination-free]

- Fiber drills
- Boring bits
- Fiber routers
- Compression routers
- Hole cutters
- Honeycomb cutters, etc.

For more information, visit our website at www.sanko-cutler.co.jp, where videos show the technical advantages of our tools and prototype development.



Company Profile / Contact

Representative	Hiroataka Morishima, President	Address	3-1-25 Fukufune-cho, Nakagawa-ku, Nagoya, Aichi 454-0836, Japan
Capital	US\$83,000 (\$1 = ¥120)	TEL	+81-52-363-2828
Major Customers	Kanefusa Corporation Nagoya Diamond Industrial Co., Ltd.	E-mail	h-morishima@sanko-cutler.co.jp



SANKO MFG CO., LTD.

株式会社 三光製作所



CERTIFICATION ISO 9001, JIS Q 9100

WEBSITE <http://www.sankomfg.co.jp>

Outline of Business

- Machining of ultra-precision parts, from aerospace engine parts to civilian-use water valves
- Machining of steel, aluminum, stainless steel, titanium alloy, nickel-based superalloy



The length of the bottom section of the solar panel is 57 m, the exact length of the H-2B rocket developed in Japan.

Our Strengths

- We have more than 40 years' experience in manufacturing aerospace parts such as rocket engines and hydraulic equipment.
- We have much experience and skills in machining difficult-to-cut materials such as Inconel, Haynes and Waspaloy with lathes, 5-axis machining centers and electrical discharge machining.
- We machine ultra-precision parts such as main engine parts for the H-2A/B rocket, second-stage motor parts, fuel control valves, and parts for civil aircraft engines.
- Our company policy is to "Keep challenging what others hesitate to try".



Facility & Equipment

Large 5-axis machining center ...	3 units	NC lathe	8 units
Machining center	12 units	NC vertical lathe	3 units
NC jig borer	3 units	NC wire-cut EDM	5 units
Universal jig borer	1 unit	NC wire-cut machine	4 units
Large NC lathe	5 units	Gun drill	2 units

Sales Amount

US\$5.8 million (2014) (\$1 = ¥120)

Organization

Employees: 60



Important Information / Notices

- We are a member of MASTT (Meiyu* Aerospace Support Technology Team), which consists of 24 regional engine parts manufacturers and can undertake integrated manufacturing of engine parts. We plan to expand not only domestically but also internationally as a member of MASTT.
(* Meiyu: Mitsubishi Heavy Industries, Ltd. Nagoya Guidance & Propulsion Systems Works)

Company Profile / Contact

Representative	Kiyoshi Okumura	Address	3-9, Yasumatsu, Shippo-cho, Ama, Aichi 497-0011, Japan
Capital	US\$0.25 million (\$1 = ¥120)	TEL	+81-52-442-0569
Major Customers	Mitsubishi Heavy Industries, Ltd. Aichi Tokei Denki Co., Ltd. Daicel Corporation	E-mail	info@sankomfg.co.jp



Sinfonia Technology Co., Ltd.



シンフォニアテクノロジー 株式会社

CERTIFICATION JIS Q 9100 (Aerospace), ISO27001, ISO14001, ISO9001

WEBSITE <http://www.sinfo-t.jp/eng/>

Outline of Business

- **Design, Develop, and Manufacture Aerospace Electrical Equipment**
 - Electrical power systems
 - Electro-mechanical actuation systems
 - Stores management systems
 - Hoists & Winches
 - Aircraft/Airport ground support equipment
- **Customer service**
 - Repair & Overhaul
 - Periodic inspection and maintenance
 - Engineering support
- **Research and Development**
 - Various Critical Elements for MEA (More Electric Aircraft)



Ise plant



Electrical equipment for aircraft and space



Store management systems

Our Strengths

- **Total solution**
Based on knowledge and technology we have accumulated through long experience with electrical power generator development, we have become only one total solution provider of airborne electrical power system in Japan.
- **In-House Design**
We have solid capabilities of design and engineering.
We are reputed to be capable for the best result tailored to customers' requirements.

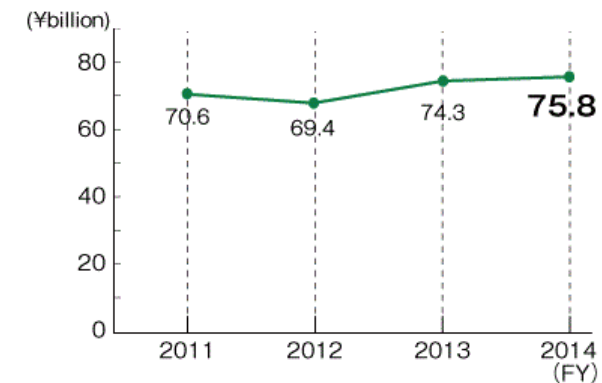
Facility & Equipment

Ise plant is fully equipped with manufacturing tools and machines for the Aerospace key components.

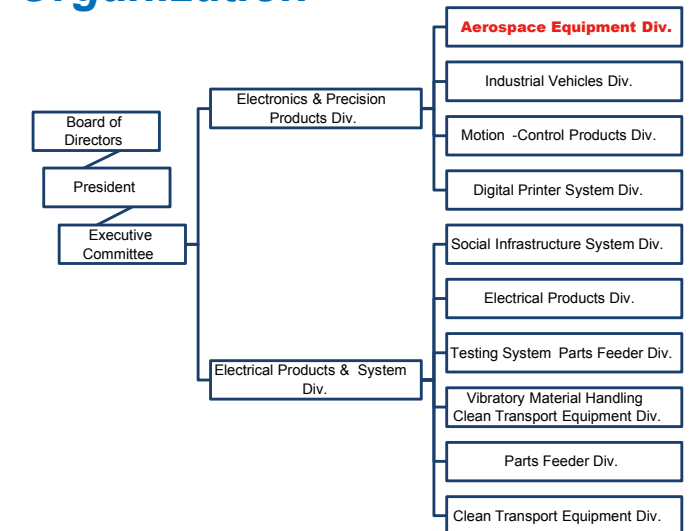
- **Aerospace Production Exclusive Building in Ise plant**
 - Ground Floor : Machining, Testing, Shipping
 - 2nd Floor : Manufacturing, Assembling, Special Processing (Clean Rooms)
 - 3rd Floor : Engineering, Administration, Experimenting, Repairing
- **Main Features**
 - Fully Air-Conditioned Environment
 - Anti-Dust Environment
 - Isolated High-Accuracy Machining Room
 - Clean Room Facilities
 - Complete Facility for Development Test

Sales Amount

JPY 82.0 billion / Outlook in 2015fy
(USD 683 million) (\$1 = ¥120)



Organization



Company Profile / Contact

Representative	Kozo Furutani, President	Address	100 Takegahana-cho, Ise, Mie 516-8550, Japan
Capital	JPY 10.1 billion (USD 84 million) (\$1 = ¥120)	TEL	+81-596-36-3335
Major Customers	JSDF, MHI, IHIA, KHI, FHI, JSW, JAMCO, IHI, etc.	E-mail	sinfonia-aerospace@sinfo-t.jp



S-TEC Co., Ltd.

株式会社 エステック



CERTIFICATION JIS Q 9100, ISO 9001, Nadcap (Scheduled in 2017)

WEBSITE <http://www.s-technology.co.jp/en/>

Outline of Business

- Aerospace equipment and parts manufacturing
- Design and manufacturing of swivel joints for aircraft
- Design and manufacturing of swivel joints and rotary joints for industrial machinery
- Medical device parts manufacturing

Our Strengths

- Based on our 30+ years of experience, we specialize in manufacturing difficult-to-cut materials, as well as complex shaped metal finishes. We have joined programs of V-2500 turbofan engine, HTV (H-II Transfer Vehicle), ISS (International Space Station), H2 rocket, MRJ (Mitsubishi Regional Jet) and many parts for aerospace-related products.
- We design and develop swivel joints and rotary joints. Our new swivel joints, which we designed and manufactured under the MIL standard, are used for the defense program.



1st Generation Swivel Joints for industrial machine Material: AMS 4928



2nd Generation Swivel joints for aircraft Material: AMS 4928



3rd Generation Swivel joints for aircraft Material: AMS 4928



Material: AMS 5639



Material: AMS 5645



Material: AMS 5647

Vision: From Manufacturing to Special Processes

Currently, we are trying to provide a Non-Destructive Testing service in-house including Penetrant Inspection and Magnetic Particle Testing. We acquired Nadcap certification at the end of 2017 and our employee is the Responsible Level III. We will be able to operate in-house integrated process.

Facility & Equipment

Device	Processing Capacity (mm)	Manufacturer	Q'ty
CNC lathes	φ370×L600	Okuma, DMG MORI, etc.	15
Combined lathes	φ450×L900	Okuma, DMG MORI	3
Horizontal machining centers	φ850×X900×Y800× Z1020	Makino Milling Machine	2
Vertical machining centers	X1300×Y562×Z562	Okuma	4
Wire-cut electrical discharge machines	X960×Y690×Z220	Okuma, Mitsubishi Electric	2
NC cylindrical grinder	φ200	Okuma	1

In addition, we have inspection facilities that include 3D-coordinate measuring machines, image dimension measurement systems and surface texture and contour integrated measuring instruments. We also use design tools that include CATIA V5, Solid Works, TOP-Solid and Auto CAD LT2016, etc. We will install robots and automation system for attaching/detaching and deburring, disposing chips and transportation for pre-processing materials in our factory. Furthermore, we're discussing MORE automated factory.

Machining Materials

- **Stainless steel:** AMS 5639 (SUS304), AMS 5647 (SUS304L), AMS 5653 (SUS316L), AMS 5645 (SUS321), AMS 5646 (SUS347), etc.
- **Precipitation hardening type stainless steel:** AMS 5659 (15-5PH), AMS5643 (17-4PH), etc.
- **Nickel alloy:** AMS 5666 (Inconel 625), AMS 5663 (Inconel 718), etc.
- **Aluminum alloy:** AMS-QQ-A-250/12 (A7075), AMS-QQ-A-250/4 (A2024), etc.
- **Titanium alloy:** AMS 4928 (Ti-6Al-4V), etc.
- **Cobalt alloy:** AMS 5759 (L605), etc.
- **CFRP, and others**

Important Information/Notices

- To meet expanding market demands, S-TEC will be relocated to our brand-new factory which has 4,000 square meters, approximately. Construction will start in January 2018 and end in July 2018. Productions are expected to start in September 2018.
- We are now conducting research & development of swivel joints for aircraft with lower cost and higher performance, and hope to work with partners on joint product development.

Company Profile / Contact

Representative	Seiichi Suzuki	Address	385-2 Fushimi, Shimizu-cho, Sunto-gun, Shizuoka 411-0907, Japan
Capital	US\$83,300 (\$1 = ¥120)	TEL	+81-55-972-7003
Major Customers	Mitsubishi Heavy Industries, Ltd. IHI Corporation Toshiba Machine Co., Ltd. Sakura Rubber Company Limited Meira Corporation	E-mail	n-doi@s-technology.co.jp
Sales Amount	US\$3.3 million (July 1, 2015 - June 31, 2016) (Aerospace-related products account for 70%)		



TAKAGI CHEMICALS, INC.

株式会社 高木化学研究所



CERTIFICATION JIS Q 9100:2009, ISO 9001:2008, ISO 14001:2004

WEBSITE <http://takagi-kagaku.co.jp/english/>

Outline of Business

Takagi Chemicals, Inc. was the first company in Japan to work on recycling of plastics. With many patents and deep expertise, we conduct R&D in line with customer needs.

We have set technology standards in various fields, such as recycling of PET bottles and resin coating for clips and clamps, etc.

Main Products

- Automobile parts, forklift parts/automatic warehouse parts, and motorcycle parts
- Plastic injection molding products for automobile interior parts and outboard engine parts
- Polyester short fiber, cotton and sound-absorbing materials



Sheet metal working



Resin working



Oil-less bearing



Colored short fiber



Car floor mat



Flame-retarding fiber

Product photos

Our Strengths

- R&D to meet customer requirements
- Development and manufacture of three types of products (metal, resin, and fiber products)
 - 1.Metal:** Small-lot production of many products, production without dies, and short-term delivery in Japan by laser machining (handling 4000 items), surface treatment (coating and plating) and welding
 - Supply of parts for prototypes and mass production
 - Fabrication of dies for mass production
 - Development of specific types of aircraft clamps
 - 2.Resin:** Commodity and engineering plastic products, two-color molding products, assembly
 - 3.Fiber:** Any color, light- and flame-resistance without halogenated flame retardants
- Technology for recycling PVC, nylon, and polyester since the company's foundation
- Track record of supplying aeroparts (metal parts)

Facility & Equipment

Equipment	Quantity	Description
NC milling machine	1	Makino milling machine 550×320×300
NC lathe	1	Okuma Corporation
Tapping center	1	Brother Industries
5-axis machining center	1	DMG 735×650×560 (to be installed in December 2015)
CAD software	4	Dassault CATIA V5 R22
	1	Siemens NX9
	1	Mitsubishi Electric CAM Magic
CAM software	1	Hyper Mill Open Mind

Company Profile / Contact

Representative	Hiroyuki Takagi	Address	21-1 Horita, Ohbata, Okazaki, Aichi 444-3502, Japan
Capital	US\$250,000 (\$1 = ¥120)	TEL	+81-564-48-3016
Major Customers	Toyota Industries Corporation Honda Motor Co., Ltd. Suzuki Motor Corporation	E-mail	info@takagi-kagaku.co.jp



TAKAGI INDUSTRY CO., LTD.



高木工業 株式会社

CERTIFICATION AS 9100, ISO 9001, MSJ 4000

WEBSITE <http://www.takagikk.co.jp/>

Outline of Business

- Production of metal plate parts for aircraft
- Production of small-size sheet metal parts for B777, B787, B767, GX, MRJ, F-15, etc.
- Production of metal plate parts for entrance doors, etc. for buses
- Production of large refrigerators for professional use

Our Strengths

- **Production of parts for aircraft**
Provision of metal plate parts for civilian aircraft, combat aircraft and rockets
Contribution to flight safety by meeting all requests concerning quality control and manufacturing processes
- **Production of parts for buses**
Provision of parts for entrance doors, emergency doors, side doors to roof bows and other parts
Integrated manufacturing process from blanking process, sheet metal stamping to sub-assembling such as welding, adhesion, etc.
- **Production of large refrigerators, etc.**
Ice stockers and ice crushers: Production and assembly of stainless steel outer plates and other metal plate parts. Safe packing and shipping of completed products: food machinery designed for hygiene and the environment

Facility & Equipment

For aircraft:

- NC router processing machine ... 1220×2440×t8 (mm)
- NC turret punching press 1270×1270×t2 (mm)
- NC milling machine stroke X=820, Y=520, Z=410
- 80t press machine, etc.
- Deburring machine
- 36t bending machine
- Shearing machine

Others:

- 3D laser processing systems
- NC turret punching press
- 500t double-crank press, etc.
- 80t bending machine
- Shearing press
- Welding robot



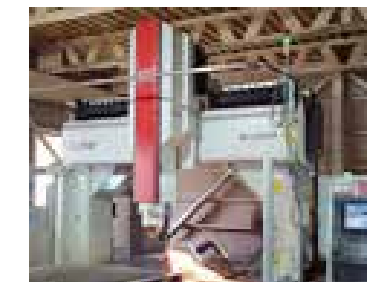
NC turret punching press



NC router processing machine



500t double-crank press



3D laser processing systems

Company Profile / Contact

Representative Yasuyuki Takagi
Capital US\$166,667 (\$1 = ¥120)
Major Customers MHI, MFBM, Hoshizaki

Address 2-17 Yajie-cho, Minami-ku, Nagoya, Aichi 457-0821, Japan
TEL +81-52-611-3239
E-mail aerospace@takagikk.co.jp



Takasago Electric, Inc.

高砂電気工業 株式会社

CERTIFICATION AS9100/JISQ9100/EN9100, ISO9001

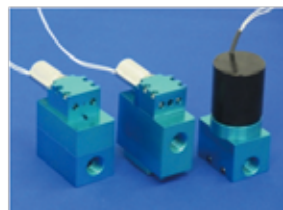
WEBSITE <http://www.takasago-elec.co.jp/>
<http://www.takasago-fluidics.com/>

Outline of Business

- Solenoid valves, check valves and pilot valves for hydraulic or pneumatic systems
- Air/gas valves for ventilation and oxygen supply systems
- Pinch valves and liquid control devices for beverage service, galley and lavatory equipment
- Proportional valves for fuel control
- Electrical actuators (solenoids)
- Precisely machined metallic and plastic parts
- Various fluid control devices for space experiments

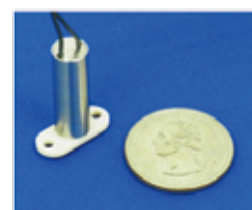


Pilot-operated Pressure Control Valves



Developed to achieve light-weight and large flow rate

Miniature and Light-weight Solenoid Valve



Developed for oxygen supply system (Approx. 0.2oz)

High-response Proportional Valve for JAXA Jet Engine



Adopted to control fuel for an experimental jet engine

Pinch Valve for Beverage Server



Suitable for beverage dispensing line

Our Strengths

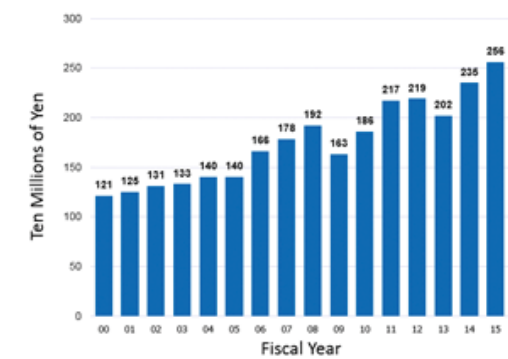
- High-level of quality control with 50-year experience in the medical industry
- Custom design solution and high-mix low-volume production to meet various customer needs
- Customization and miniaturization to make your system light-weight
- Manufacturing facilities in Japan and China, and sales offices in Japan, U.S. and China
- In-house manufacturing; precision machining, assembling in a clean-room, function testing, etc.



Facility & Equipment

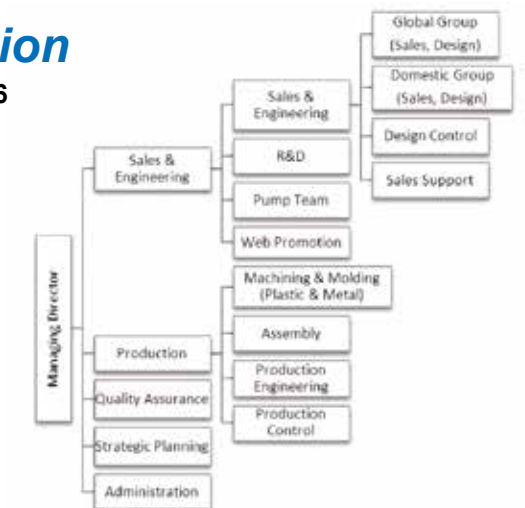
Process	Category	Manufacturer	Model
Plastic Processing	CNC Lathe	EGURO LTD.	10EX
	MC	FANUC Robodrill	A-T21iFa
		Makino Milling Machine Co., Ltd.	V-22
Metal Processing	5-axis Grinding Machine	ROKU-ROKU Co.,Ltd.	CEGA-SS400
	CNC Lathe	Mazak Corporation	QUICK TURN SMART 200L
	Combined Lathe	Nakamura-Tome Precision Industry Co., Ltd.	Super NTMX
		CITIZEN MACHINERY CO., LTD.	Cimcom A32
	MC	Makino Milling Machine Co., Ltd.	a-51
Molding	Injection Molding Machine	TOSHIBA MACHINE CO., LTD.	EC50SX
Measuring	Coordinate Measuring Machine	Carl Zeiss	DURAMAX5/5/5/CNC

Sales Amount



Organization

Employees: 236



Important Information / Notices

- Selected by the Ministry of Economy, Trade and Industry as one of "300 of Japan's Vibrant Monozukuri (Manufacturing) SMEs"
- Certified by SONY Corporation as a Green Partner

Company Profile / Contact

Representative Managing Director: Naoya Asai
Capital US\$ 750,000 (\$1 = ¥120)
Major Customers Shimadzu Corporation, GE Healthcare Bio-Science AB, Hitachi High-Technologies Corporation, etc.

Address 66 Kakitsubata, Narumi-cho, Midori-ku, Nagoya, Aichi 458-8522, Japan
TEL +81-52-891-2301
E-mail info@takasago-elec.co.jp



TAMADIC Co., Ltd.

株式会社 タマディック

CERTIFICATION JISQ9100, ISO9001, ISO14001, ISO/IEC27001, OHSAS18001,

WEBSITE <https://www.tamadic.co.jp/>

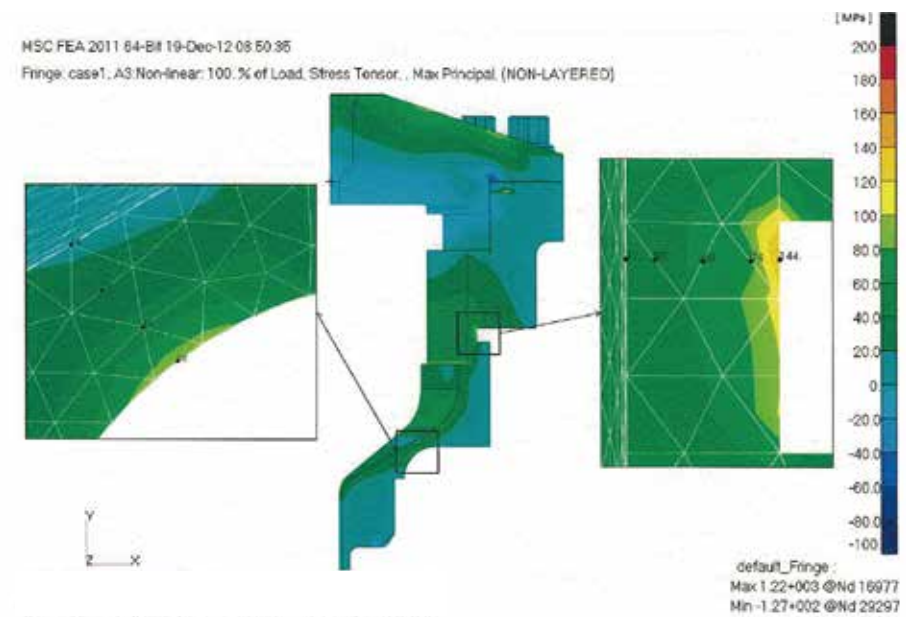


Outline of Business

- TAMADIC engineers are assigned various duties in the design phase, such as design and analysis of aircraft and support for rocket launchings etc.
- TAMADIC manufacturing engineers support leading-edge manufacturing technologies as production planners and tool engineers etc.
- TAMADIC designs and manufactures jigs, tools, and equipment.



Rocket engine test equipment



Computer analysis graphics

Our Strengths

Overall know-how, experience, and high engineering capabilities based on over 50 years history in the aerospace industry.



Flight simulator for entertainment

Facility & Equipment

■ CAD License : Total 319

CATIA V4/V5	45
Pro/E	10
Autodesk Product Design Suite	76
SolidWorks	14
MSC NASTRAN/PATRAN	4

UniDraf.....	17
MicroCaelom II	24
CADRA.....	38
AutoCAD LT	37
MATLAB	1
etc.	

Sales Amount

Annual sales : 11,710 million yen
(March 31, 2015)

Organization

Employees : 938
(as of April 2015)

Company Profile / Contact

Representative Toshihiko Morizane
Capital US\$ 825,000 (\$1 = ¥120)
Major Customers MHI, KHI, TOYOTA, NISSAN, MELCO

Address Nagoya Itochu Building 3F, I-5-11 Nishiki, Naka-ku, Nagoya, Aichi 460-0003, Japan

TEL +81-52-209-6711
E-mail prir@tamadic.co.jp



TAMAGAWA INDUSTRIES, LTD.

玉川工業 株式会社



CERTIFICATION JIS Q 9100, JIS Q 9001, MSJ 4000, MS 84001

WEBSITE <http://www.md.ccnw.ne.jp/tamagawa/>

Facility & Equipment

5Axis Machining Center	1 MAZAK	VARIAXIS 730-5X II	730×850×560
Gantry-Type Machining Center	1 MITSUBISHI	MVR30	4,200×3,000×700
Horizontal Machining Center	2 NIIGATA	ULTY501	800×850×750
NC Vertical Lath	1 OM	VTLex1250	φ1,200×1,160×2Axis
NC EDM	1 SODICK	AQ75L	700×500×350
NC Small Hole Drill EDM	1 ELENIX	CT500FX	550×380×450
Wirecut EDM	1 CHARMILLES	ROBOFIL510	700×400×400
CMM	1 MITSUTOYO	C9106	850×1,000×600

Outline of Business

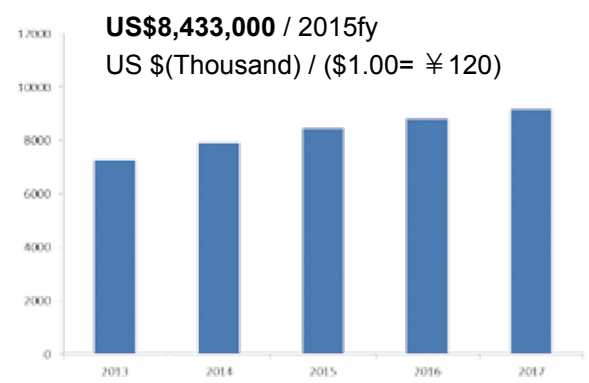
- Manufacture of parts for aircraft, space equipment, and nuclear power equipment
- Design and manufacture of hydraulic equipment, various testing equipment, and jigs & dies
- Structural sub-assembly and parts repair of aircraft

Our Strengths

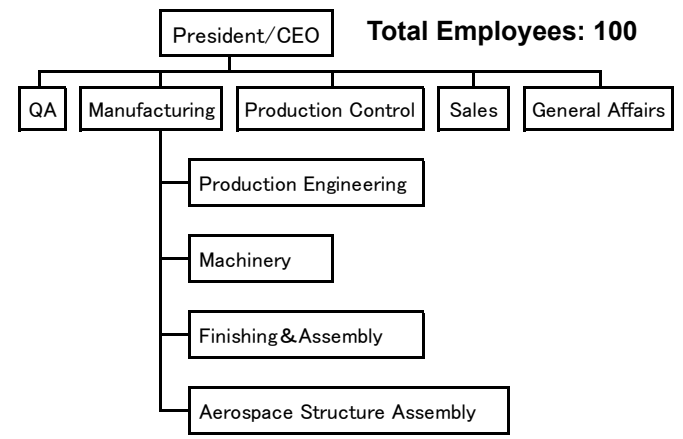
- We have more than 40 years of experience of manufacturing aerospace parts, where high quality and reliability are essential. We actively accept difficult jobs, with our keen curiosity and ambitious engineering spirit.
- We have technologies such as machining difficult-to-process materials (nickel based alloys), machining composite materials (CFRP, etc.), and manufacturing functional parts of missiles.



Sales Amount



Organization



Company Profile / Contact

Representative Takahiko Yoshida
Shiori Yoshida

Capital US\$100,000

Major Customers Mitsubishi Heavy Industries,Ltd.
Daicel Corporation.
Toray Industries, Inc.

Address 1218-18, Jifuku, Kagiya-cho,
Kasugai, Aichi, 480-0304, Japan

TEL +81-568-88-6551

E-mail tamagawa@md.ccnw.ne.jp



TAMAGAWA SEIKI CO., LTD.



多摩川精機 株式会社

CERTIFICATION JIS Q 9100, Nadcap, ISO/TS 16949, ISO 9001, ISO 14001, etc.

WEBSITE <http://www.tamagawa-seiki.co.jp>

Outline of Business

Tamagawa Seiki has long specialized in the development and manufacture of aerospace instruments, gyroscopes and defense-related equipment, ever since the company was founded in Kamata, Tokyo in 1938. Based on a long history of production and installation in aircraft with the Japan Defense Agency, the company's aviation business has been expanding for commercial aircraft with Tier 1 or Tier 2 integrators in recent years.

Business Contents

- Angular sensors and motors for pilot control system, flight control system, etc. for commercial aircraft
- Resolver, LVDT (linear variable differential transformer), RVDT (rotary variable differential transformer), and DC brushless motors
- Aircraft electrical equipment, gyros, inertial measurement instruments
- Electro-mechanical actuators such as throttle quadrant assy, landing gear actuators, etc.
- Motion control systems for factory automation
- Angular sensors for drive motors of hybrid electric vehicles and electric vehicles

Our Strengths

- Tamagawa has detailed know-how of the production equipment used to produce such components. Most of the equipment can be built in-house, which is our major advantage.
- Not only for factories but also vehicles, Tamagawa has succeeded in the market. The company supplies various resolver products for eco-friendly cars, proof of our high quality with very low failure rate.
- A unique plant that integrates technologies for three key transportation means, producing products for automobiles, aircraft, and trains on the same floor.



Motors, angular sensors

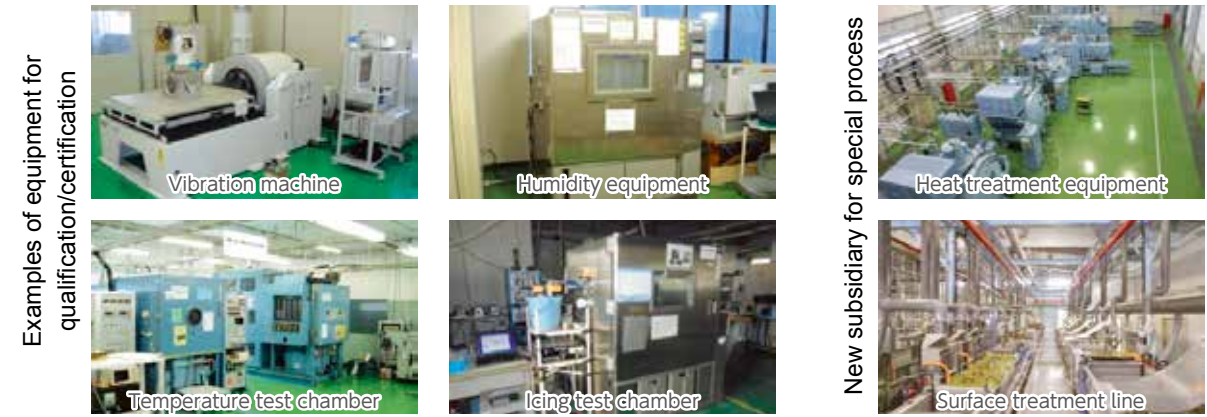


RVDT products

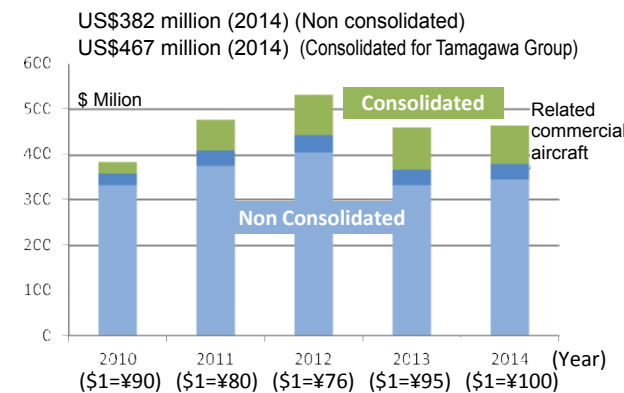


Electro mechanical actuators

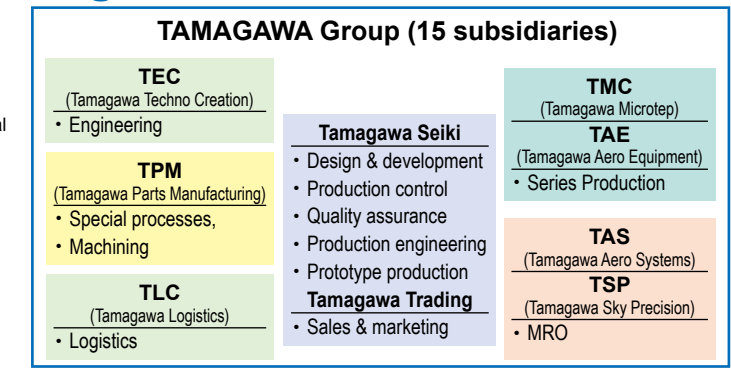
Facility & Equipment



Sales Amount



Organization



Important Information / Notices

Tamagawa has full confidence in its ability to develop excellent products by:

- Providing a stable supply of high-reliability products by manufacturing in Japan
- Continuously reducing costs, from development to series production
- Reflecting knowledge and reliable techniques obtained through previous developments in new programs
- Immediate resolution of quality problems

Company Profile / Contact

Representative	Shigeo Seki, President & COO	Address	1020 Kega Iida, Nagano 395-8520, Japan
Capital	¥100,000,000	TEL	+81-265-21-1814
Major Customers	Toyota, Mitsubishi Heavy Industries, Ltd., Mitsubishi Electric Corporation, ABB Automation Technology Products AB, Rockwell Collins, Ministry of Defense, JAXA, etc.	E-mail	tadasu-takigawa@tamagawa-seiki.co.jp



TANIDA LTD.

谷田合金 株式会社

CERTIFICATION Nadcap, JIS Q 9100

WEBSITE <http://www.tanida.co.jp>

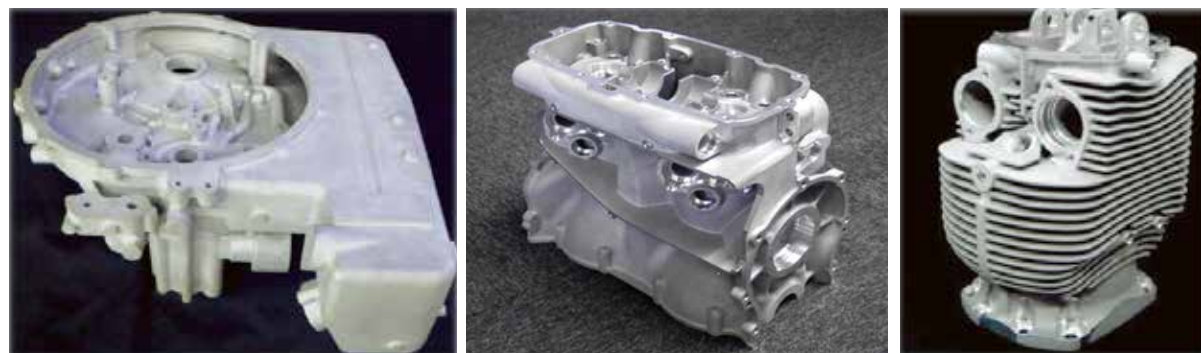
Outline of Business

- **Aerospace Parts:**
Accessory gear box, manifold, housing, cylinder head, crankcase, ...
- **Manufacturing Processes:**
Sand casting and 5-axis machining with 3D printing
- **Special Processes:**
Welding, heat treating, material testing laboratories, chemical processing, non-destructive testing

Our Strengths

We make aircraft lighter than ever

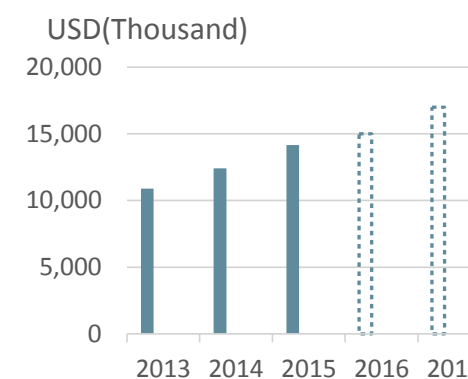
- **Innovative 3D-Print Manufacturing**
Super-flexible sand pattern casting for unrestricted designing
- **Magnesium Casting and Machining**
Extremely light metal for engine components



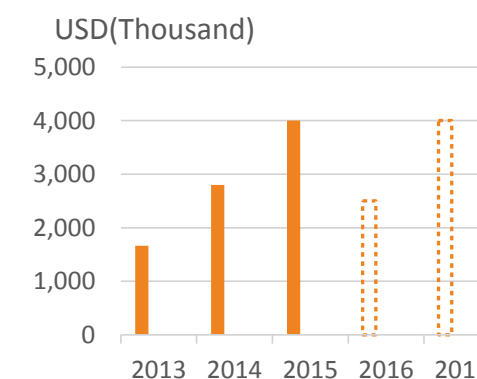
Facility & Equipment

Sand Casting	Al and Mg for aerospace, low-pressure and differential-pressure casting, 3D-printing sand core		
Machining	MAKINO	T1	XYZ (1500 x 1300 x 2000mm)
	MAKINO	a81nx	XYZ (900 x 900 x 1020mm)
	MAKINO	a82	XYZ (1100 x 850 x 1020mm)
	DMG MORI	NVL	XYZ (φ1600 x 1350mm)
	20 machines in total for aerospace		

Sales Amount



Investment for Aerospace



Important Information / Notices

A Taiwan branch was established in Taichung in 2014, as a joint venture with AvioCast Inc.

Company Profile / Contact

Representative	Koichi Komai	Address	28-2, Higashikagatsume-machi, Kanazawa, Ishikawa 920-0209, Japan
Capital	US\$830,000	TEL	+81-76-237-9400
Major Customers	KHI, IHI, SPP, Toyota, Yamaha, Nismo, Nabtesco, Aisin AW	E-mail	kohei@tanida.co.jp



TECH SASAKI CO., LTD.

株式会社 テックササキ



CERTIFICATION JIS Q 9100: 2009 (Aircraft Division)

WEBSITE <http://ssk-gp.jp>

Outline of Business

- **1.Aircraft: Aircraft structural assembly, design and fabrication of tools and jigs**
- **2.Conveyance equipment: Design and manufacture of conveying apparatus such as ceiling cranes**
- **3.Industrial facilities: Design and manufacture of air-conditioners and sanitary plumbing systems**
- **4.General-purpose compressors: Sales and maintenance**



Our Strengths 1/2

- **1.Integrated Manufacturing System from Planning to Assembly**
Tech Sasaki offers integrated manufacturing from production planning to designing and fabricating jigs to completion of assembly, by mobilizing the managerial resources of the Aerospace Division and internal group companies.
- **2.Newest Technologies for Handling Composite Materials**
We have been accumulating technologies for processing composite materials for various aircraft, the use of which is expected to increase, and have reinforced our technological capabilities to meet modern needs.
- **3.Quality Assurance System**
Tech Sasaki is JIS Q 9100 : 2009 certified, has a division which maintains the quality management system, and has established a solid control system for supplying high-quality products.

Our Strengths 2/2

- **4. Engineer and Assembly Worker Dispatch**
It has been 20 years since we launched the aircraft project, under which we provide staff with both excellent assembly skills and expert knowledge of the aerospace industry.
- **5. Various Technologies**
We have applied various technologies of other divisions to aerospace manufacturing sites.
 - Conveyance Equipment Division (design, construction, and sales of ceiling cranes, etc.)
 - Industrial Facility Division (design and construction of dust-free chambers, paint shops, etc.)
 - General-Purpose Compressor Division (pneumatic power sources and maintenance)



Company Profile / Contact

Representative	Hirokazu Sasaki	Address	4-9-21, Jinguu, Atuta-ku, Nagoya, Aichi 456-0031, Japan
Capital	US\$833,000	TEL	+81-52-678-7811
Major Customers	Mitsubishi Heavy Industries, Ltd.	E-mail	tech@ssk-gp.co.jp



TEKNIA Co., Ltd.

株式会社 TEKNIA



CERTIFICATION ISO 9001:2008, JIS Q 9100:2004

WEBSITE <http://www.teknia.co.jp>

Outline of Business

- Parts for machine tools, industrial machines, and aerospace

TEKNIA has highly sophisticated machining technologies backed by the company's 100- year history. Recently we have focused on reducing costs by effectively using our plant in Thailand.



Our Strengths

- **1. High-level machining technology**
A variety of machining tools and skilled craftsmen with sophisticated technologies (lathes, NC lathes, multi-lathes, milling, drilling, and grinding in the machining center)
- **2. Materials and sizes handled**
Difficult-to-cut materials such as high hardness steel (4340), stainless steel (15-5ph), titanium (6Al4V)
Sizes: φ50-800mm, φ50-600mm (material sizes)
- **3. Own processes, tools, and equipment planning**
Our policy is to build our own tools and equipment, and thus plan and develop the fastest, most efficient ways of manufacturing.



Facility & Equipment

NC lathe	46
Mill turn center	6
Machining center	35
5-axis	3
MCM	1



Sales Amount

¥1,000 million/2015



Organization

QA	5
Sales	2
Administration	4
Engineering	20
Manufacturing ...	120
4 factories:	
- Nagoya Factory	
- Aisai Factory	
- Gujo Factory	
- Thai Factory	
US.Head office	1

Important Information / Notices

As a third-tier supplier, we supply machined parts for aircraft equipment, especially motors, generators, gear boxes, hydraulic units, etc.

Company Profile / Contact

Representative	Hiroshige Takahashi	Address	3-459 Ematsu, Nakagawa-ku, Nagoya, Aichi 454-0954, Japan
Capital	US\$540,000	TEL	+81-52-303-3347
Major Customers	DMG, IAC, Sinfonia Technology	E-mail	ishida@teknia.co.jp



TENRYU AERO COMPONENT CO., LTD.

天龍エアロコンポーネント 株式会社



CERTIFICATION JIS Q 9100:2009, JIS Q 9001:2008, Nadcap

WEBSITE <http://www.tenryu-aero.co.jp/>

Outline of Business

- **Fabrication of aircraft parts**
(sheet metal parts and composite parts)
- **Sub-assembly of aircraft airframe**
- **Design, development and manufacture of aircraft equipment** (various seats, containers and racks)



Our Strengths

- **Aerospace industry**
We plan jig fabrications by receiving drawings and specifications from our customers, and manage all processes from parts fabrication (molding and special processes) to assembly.
- **Update of special processes**
We improve facilities in special processes (surface treatment, heat treatment, painting, etc.). We are able to introduce an integrated production system in cooperation with heavy industries and partner suppliers in the region and aim to expand overseas.
- **Certifications of strict quality control**
We have obtained JIS Q 9100 and Nadcap special process certifications for non-destructive testing and composite materials.
Various tests are conducted under these global standards to ensure the quality of products and services in the aerospace business.
- **Safety of seats**
Aircraft seats are required to have ultimate safety.
Our actual loading tests and state-of-the-art computer analysis enable us to confirm world-class safety.



Facility & Equipment

NO.	Name	QTY	Model	Manufacturer	Specifications & Ability
1	Hydraulic rudder press (1000t)	1	DPC-1000	Kawasaki Hydromechanics Corp.	1800W × 2500L (mm)
2	Heat treatment furnace	1	(FU-340)DELR-340	Trinity Industrial Co., Ltd.	1300W × 3100L × 2200H (mm)
3	Heat treatment furnace	1	(FU-120)DELR-120	Trinity Industrial Co., Ltd.	1000W × 2000L × 800H (mm)
4	Chemical coating treatment line	1	—	Tsumura Chemical Industry Co., Ltd.	1000W × 2500L × 1500H (mm)
5	Anodic coating treatment line	1	—	Tsumura Chemical Industry Co., Ltd.	1000W × 2500L × 1500H (mm)
6	Automatic riveting machine	1	D96K-3	BROTJE	
7	Automatic riveting machine	1	D96K-2	BROTJE	9ton, 96"
8	Autoclave furnace	1	—	Ashida Mfg. Co., Ltd.	φ2.2(m)×6(m) Humidity: 250°C max.
9	Autoclave furnace	1	—	Ashida Mfg. Co., Ltd.	φ3.2(m)×6.5(m) Humidity: 250°C max.
10	Dynamic testing apparatus	1	—	Seattle Safety LLC	50G
11	Static load testing apparatus	1	—	—	—
12	Fire-resistance testing apparatus	1	—	—	—
13	Oil burner apparatus	1	—	—	—
14	Endurance testing machine	1	—	—	—
15	Cushion hardness measurement apparatus	1	—	—	—
16	Coordinate measuring machine	1	CRT-A C123010	Mitutoyo Corporation	1205W × 3005L × 1005H (mm)

Sales Amount

Annual Sales:
US\$42.7 million (fiscal 2014)
US\$40.5 million (fiscal 2013)
US\$37.1 million (fiscal 2012)
US\$34.5 million (fiscal 2011)
US\$30.2 million (fiscal 2010)

Organization

Employees: 511
 Board of Directors:
 Makoto Fukunishi - President
 Kazuhiro Shiga - Director
 Ryozeu Hirata - Director
 Isamu Nakamura - Director
 Ya Ihara - Corporate Auditor

Company Profile / Contact

Representative	Makoto Fukunishi, President	Address	1-1 Sohara Koa-cho, Kakamigahara, Gifu 504-0814, Japan
Capital	US\$0.95 million (\$1 = ¥100)	TEL	+81-58-382-6431
Major Customers	Kawasaki Heavy Industries, Ltd. Mitsubishi Heavy Industries, Ltd.	E-mail	aireigyou@tenryu-aero.co.jp



TOBA KOKEN CO.,LTD.

鳥羽工研 株式会社



CERTIFICATION

JISQ 9100, JISQ 9001, ISO 14001
Nadcap (Heat Treating, Nonconventional Machining)
Boeing D1-4426 (BE10365503), P&W PWA119-1

WEBSITE

<http://www.tobakoken.co.jp/>

Outline of Business

- 1. Design, development and manufacturing of sheet-metal forming dies and jigs
- 2. Fabrication of sheet-metal parts of airframes and engines (aluminum and titanium)
- 3. Design, development and manufacturing of dies, and manufacturing of parts, sub-assemblies and BIWs for prototype automobiles

Our Strengths

- **Manufacturing of various sheet-metal parts using our own designed tools**
We have extensive experience of sheet-metal part manufacturing, including hydroforming, brake forming, punch press machining, etc.
- **Certification for special processes (heat treatment)**
We have obtained Nadcap certification for heat treating aluminum and are able to process 2024-T42, -T62; 6061-T42, -T62; 6013-T6; and 7075-T42, -T62, -T73.
Our furnaces can be calibrated by our own laboratory. Metallographic testing, hardness testing, tensile strength testing, etc. can be done in-house.
- **Laser beam machining certified by P&W and Nadcap(nonconventional machining)**
PW4000 engine parts made of Hastelloy material are machined using certified machines.
- **Machining sheet-metal of titanium**
Titanium sheet-metal can be machined by laser beam machining and abrasive water jet cutter.



Laser beam machining



Fluid cell press (Quintus)



Solution furnaces

Facility & Equipment (* Nadcap accredited)

Machining

NC router, NC machining center, abrasive water jet cutter, 5-axis laser processing machine*

Forming

Bending roller (L2,600mm, t=6.0), brake press, mechanical press, hydraulic press (max. 2,000t) fluid cell press (L1,600xW600xH80mm, Quintus), one more press (L2,000xW1000xH120mm, Quintus) to be added in Feb. 2018

Heat treatment

2 solution furnaces* (max. 1,800x800)
2 aging furnaces* (max. 2,000x1,000)

Inspection

CMM & digitizer (FARO)
Tensile testing machine*
Hardness tester*

Programing system

CATIA-V4, CATIA-V5



Abrasive water jet cutter



Bending roller



Hydraulic press

Important Information / Notices

TOBA KOKEN is one of the leading suppliers of the sheet-metal parts manufacturing industry in Japan. We are currently developing a more comprehensive system to handle everything from purchasing materials to surface-treatment painting. In the near future, we will also focus on assembly manufacturers overseas to expand our business worldwide.

Company Profile / Contact

Representative Shigeo Sobajima, President
Capital US\$3.3 million (\$1 = 120 yen)
Major Customers Mitsubishi Heavy Industries, Ltd.
Kawasaki Heavy Industries, Ltd.
Subaru, Ltd. / Shinmaywa Industries, Ltd.

Address 2-11 Himegaoka, Kani, Gifu
509-0249, Japan
TEL +81-574-62-3220
E-mail m-sobajima@tobakosan.co.jp



TOHMEI GROUP (TOHMEI Ind.)



東明グループ (東明工業 株式会社)

CERTIFICATION JIS Q 9100:2009 , JIS Q 9001 : 2008 , JIS Q 27001:2014 , JIS Q 14001: 2004

WEBSITE <http://www.tohmei.com>

Outline of Business

- Assembly of aerospace structure
- Periodic inspection and maintenance of aircraft
- Design and manufacture of fixtures, assembly tools and mechanical devices (electrical, hydraulic, pneumatic servo-control technology)
- Manufacture of advanced composite products
- Manufacture of special containers for aircraft and space equipment

Our Strengths

- **Aerospace industry**
 Assembly, painting and installation of aerospace structures
 Design and manufacturing of assembly tools
 Transportation of aerospace products with special packing services
- **Inspection and test equipment**
 We propose and fabricate a wide range of devices fully utilizing our electrical, hydraulic, and pneumatic servo-control technology.
- **Advanced composites including design**
 The Tohmei Group produces advanced composite products through our integrated production system. Design and stress analysis including tooling, fabrication, assembly, and painting.
 Design **Tohmei Engineering Co.**
 Fabrication **PNC Co., Ibaraki Ind.**
 Assembly & painting ... **Tohmei Ind.**



HTV structure



Collision test drive



Autoclave

Facility & Equipment

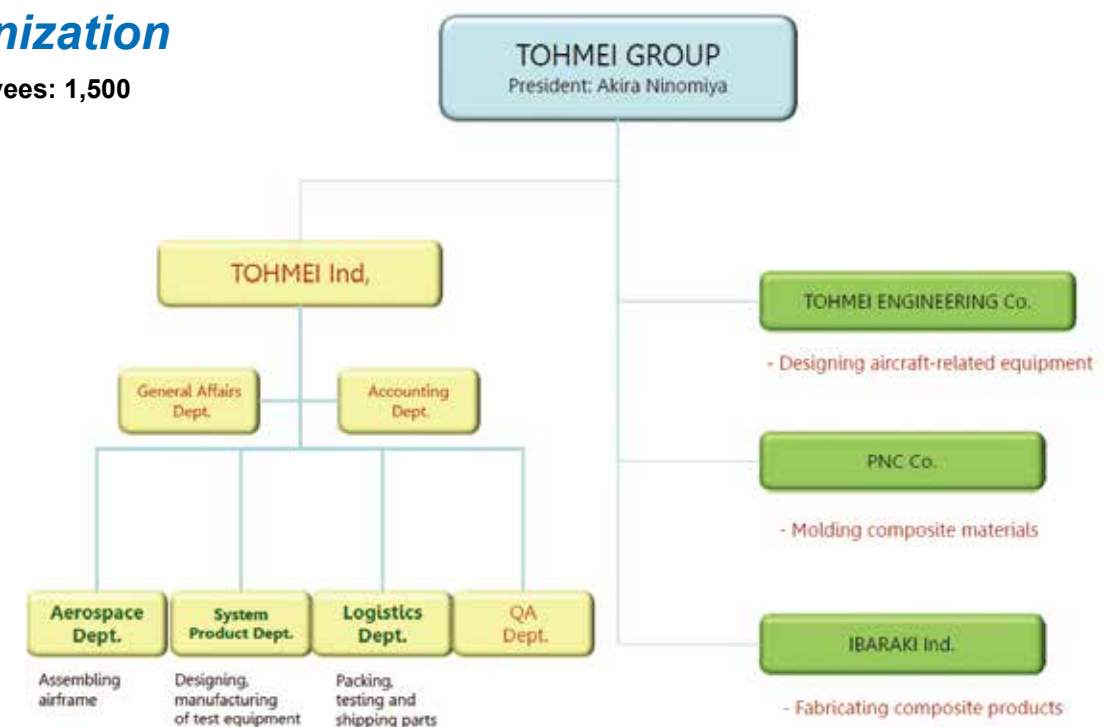
- Automatic riveter
- Paint booth (L: 18m, W: 5m, H: 5.5m)
- Autoclave (D: 2m, L: 5m, max 200°C)
- Thermoplastic 80t press (600 × 600 mm, Max: 450°C)
- NDI, CMM
- CATIA V5, NASTRAN

Sales Amount

US\$100 million (2014)

Organization

Employees: 1,500



Company Profile / Contact

Representative	Akira Ninomiya	Address	2-11 Shinkatanaike, Chita, Aichi 478-0069, Japan
Capital	US\$830,000	TEL	+81-562-54-1881
Major Customers	MHI, KHI, FHI	E-mail	info@tohmei.com



TOKUDA INDUSTRIES CO., LTD.



徳田工業 株式会社

CERTIFICATION JIS Q 9100, JIS Q 9001 (ISO 9001), MSJ4000

WEBSITE <http://www.tokuda.co.jp/>

Outline of Business

Aerospace

Our company specializes in machined parts of aircraft, design fabrication of jigs and tools for aircraft, and the production of various types of models for technical verification (wind-tunnel experiment models or mock-ups). We also assemble easy parts of aircraft.



Others

We design and manufacture jigs for automobiles (forming dies, check jigs, etc.) and produce medical equipment (laryngoscopes). We manufacture solid terrain models from digital data.

Our Strengths

We manufacture aircraft parts from various materials (e.g. aluminum, titanium, stainless steel, and CFRP). We possess 33 spindles, and can manufacture materials up to 17 m in length. We perform unattended continuous machining and possess process machines with the following features:

1. An automatic line that produces small parts continuously by one chuck
2. A mechanism that continuously produces a single material
3. A system that can stock up to 6 pallets (2000×6000) and carry them automatically

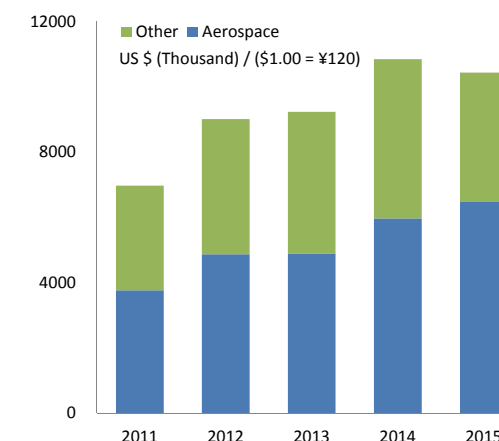


Facility & Equipment

Model	Maker	Axis	Stroke	Specification
Tricept T805	PKM	5	200×500	30000rpm (Patent acquired)
Vertex 550-5X	MITUI	5	550×600	20 pallet changer
C30U	HERMLE	5	650×600	20 pallet changer
e-1060V8	Mazak	5	1875×1060	6 pallet changer
HPS-150B	SNK	5	6150×1800	2 pallet changer + 6 pallet stocker
Mycenter-H300SC	Mazak	5	400×425	Continuous machining line
INTEGREX 300-III	Mazak	5	630×230	Continuous machining line
RB-200F	SNK	5	10250×2900	2 pallet changer
HPS-120B	SNK	5	4460×1400	2 pallet changer
HX-150B	SNK	5	1500×4000	30000rpm
HSM-Modal	EEW	5	17000×5000	Extremely large process machine
A55	MAKINO	4	560×560	21 pallet changer
a81M	MAKINO	4	900×800	8 pallet changer
YBM800N	YASUDA	4	1100×800	6 pallet changer

and other × 19

Sales Amount



Organization



Important Information/Notices

We have a patent for a continuous processing system.
We have been granted permission to manufacture medical equipment.

Company Profile / Contact

Representative Yasuaki Tokuda
Capital US\$250,000
Major Customers KHI, NIPPI, MHI, FHI, TOYOTA, FUTABA

Address 209 Kinzokudanchi, Kakamigahara, Gifu 504-0957, Japan

TEL +81-58-380-0003

E-mail sawai@tokuda.co.jp



TOYO KOKU DENSHI Co., Ltd. (TKD)

東洋航空電子 株式会社



CERTIFICATION JIS Q 9100:2009, JIS Q 9001:2008 (ISO 9001:2008)

WEBSITE <http://www.tokoden.co.jp>

Outline of Business

- Manufacture of electrical wiring harnesses
- Installation of wiring harnesses
- Design and manufacture of automatic circuit testing equipment
- Design and manufacture of ground support equipment



Installation



Wiring harnesses



Automatic circuit testing equipment

Our Strengths

- We have 48 years of experience in the manufacture & installation of wiring harnesses.
 - Products: B787, DASH-8-400, MU-2, MU-300 (BEACHJET 300)
 - Installation: MRJ, B787, DASH-8-400, GX, MU-2, MU-300
- **Best quality, cost and delivery**
 We can mass-produce while maintaining the best QCD because we have facilities for manufacturing exclusive harness boards and automatic circuit testing equipment.

Facility & Equipment

Laser marking machine: CAPRIS50-300 (Spectrum Tech.) 2
 Automatic circuit testing equipment (our product) 2 (5,400 points, 1,150 points)
 Braiding machine: custom-made (Kokubun Ltd.) 3

Sales Amount



Organization

Employees: 245



Company Profile / Contact

Representative	Kazuaki Niwa	Address	63-1 Kakihata, Inuyama, Aichi 484-0901, Japan
Capital	US\$800,000 (\$1 = ¥120)	TEL	+81-568-67-2160
Major Customers	MHI, Ltd., FHI, Ltd., KHI, Ltd., IHI Aerospace Co., Ltd., Nabtesco Corporation, NEC Corporation, Toshiba Social Infrastructure Systems Company	E-mail	info@tokoden.co.jp



TOYO SEIKO Co., Ltd.

東洋精鋼 株式会社

CERTIFICATION AS 9100, Nadcap (Surface Enhancement), MSJ 4000, ISO 9001, ISO 14001

WEBSITE <http://www.toyoseiko.co.jp/>



Outline of Business

- **Shot-peening processing of aerospace parts under contract**
 - Nadcap (surface enhancement)
- **Sales of Almen strip, Almen gage and Magna valves for the aerospace industry**
 - TOYO SEIKO is a distributor of Electronics Inc. (US shot-peening products) in Japan.
- **Sales of Conditioned Cut Wire** (aerospace approved)
- **Sales of Coverage Checker**
- **Residual Stress Measurement**



Our Strengths

- For more than 40 years, TOYO SEIKO has been manufacturing and selling Conditioned Cut Wire, which is used in the aerospace and automotive industries. We specialize in shot-peening, and have expanded to conduct, under contract, shot-peening processing of aerospace parts since 2006. TOYO SEIKO is Nadcap-certified for surface enhancement.
 - We perform shot-peening for suppliers to The Boeing Company.
 - We can help your business from test production to mass production.
 - We develop and sell Coverage Checkers.
 - We can measure residual stress for verifying peening quality.



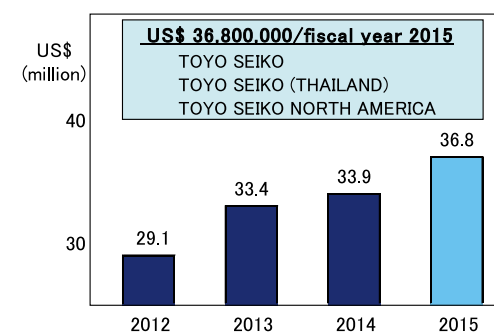
Facility & Equipment

Aerospace Division

- **Shot-peening processing equipment**
 - Large wheel type (Parts size: 900×1100mm)
 - Large air type (Robot) (Parts size: 1000×1500mm)
 - Small wheel type (Parts size: 200×500mm)
 - Small manual air type (2 machines)
- **Inspection devices**
 - Two X-ray diffractometers for residual stress measurement
 - Almen gage, Ro-Tap sieve shaker

We also have peening machines for automobile parts.
(A total of 12 peening machines for aerospace & automobile parts)

Sales Amount



Topics

- TOYO SEIKO is a member of the Aircraft Parts Manufacturing Cooperative (APM).
- We handle shot-peening treatment for all integrated parts produced in the Matsusaka Plant.

Important Information / Notices

Subsidiaries

- **TOYO SEIKO (THAILAND) CO., LTD.**
Mfg. & sales of Conditioned Cut Wire
Bangpoo Industrial Estate, Samutprakarn, Thailand
Tel +66-2-324-0046
Email: info@toyoseiko.co.th
- **TOYO SEIKO NORTH AMERICA, INC.**
Sales of Conditioned Cut Wire
South Bend, IN, USA
Tel +1-574-288-2000
Email: sales@toyoseiko-na.com

Company Profile / Contact

Representative	Yoshihiro Watanabe (President)	Address	3-195-1 Umaganji, Yatomi, Aichi 490-1412, Japan
Capital	US\$208,333 (\$1 = ¥120)	TEL	+81-567-52-3451
Major Customers	MHI, KHI, FHI, IHI, Toyota, Nissan, Honda, Subaru, NHK Spring, Chuhatsu	E-mail	toyo@toyoseiko.co.jp



TOYOTA BOSHOKU CORPORATION



トヨタ紡織 株式会社

CERTIFICATION Production and Inspection Approval by JCAB

WEBSITE <http://www.toyota-boshoku.com>

Outline of Business

- 1) Design, development and manufacturing of aircraft passenger seats
- 2) Development of automotive interior systems and manufacturing and sales of automotive interior products
- 3) Manufacturing and sales of automotive filters and powertrain components
- 4) Manufacturing and sales of other automotive components
- 5) Manufacturing and sales of fabric goods

Product Information

As a supplier of interior systems for automobile manufacturers, Toyota Boshoku provides integrated and effectively coordinated interior components such as seats, door trims, headliners, floor carpets and others.

In April 2015, Toyota Boshoku delivered its very first aircraft passenger seats to All Nippon Airways Co., Ltd. (ANA), Japan's leading and only 5-star airline. The seats are installed on ANA B767-300 aircraft for domestic service.

The project brought together ANA's experience and expertise in the aviation sector, with Toyota Boshoku's high-quality craftsmanship and manufacturing capabilities, which have been refined over decades of experience providing seats for a variety of automobile lines.



Our Strengths

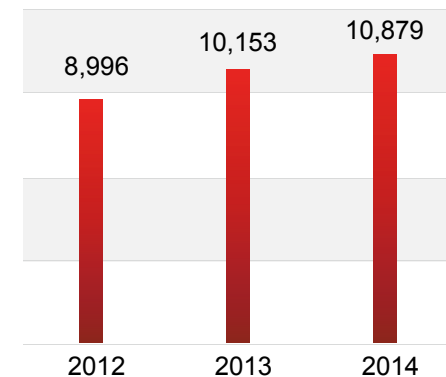
- Our new aircraft passenger seat is ergonomically developed for comfort across a wide range of body sizes and types, based on Toyota Boshoku's experience designing seats for customers around the world, which have included compact, luxury and racing cars.

Facility & Equipment

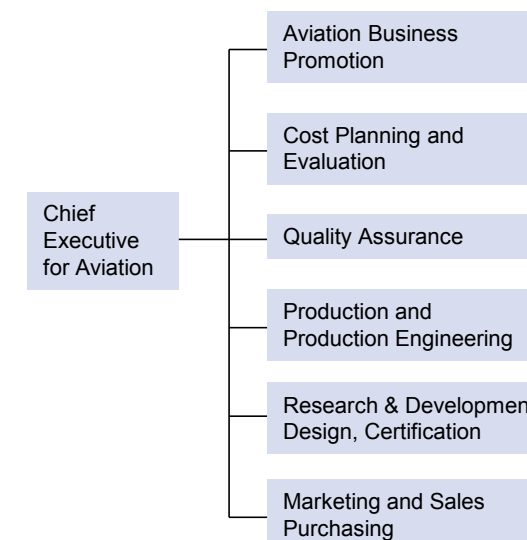
- Flammability test equipment (for Bunsen burner)
- Static test equipment

Sales Amount

Total consolidated fiscal year sales in US million dollars (\$1 = ¥120)



Organization



Company Profile / Contact

Representative Shuhei Toyoda, Chairman
Yoshimasa Ishii, President

Capital US\$70 million (\$1 = ¥120)

Major Customers All Nippon Airways (ANA)
Toyota Motor Corporation

Address 88, Kanayama, Kamekubi-cho
Toyota, Aichi 470-0395, Japan

TEL +81-565-43-2335
(Makishima, Sales)

E-mail yasuhiro.makishima@toyota-boshoku.com



Tsuchiya Group

株式会社 槌屋 (グループ概要)



CERTIFICATION ISO 14001, ISO 9001, MSJ 4000

WEBSITE <http://www.tsuchiya-group.co.jp>



Outline of Business

- Manufacturing and distribution of printings (striped tapes, caution labels), paints, resins, ceramics, adhesives, tapes, textiles, magnets and many other kinds of chemical products for the automotive, aerospace, business machine and housing industries.

Our Strengths

- Embracing the company motto "Creativity and Challenges", the Tsuchiya Group has been expanding since its establishment in 1950, with sales offices, R&D centers and factories around the world.
 - Distribution Our major products are paints, resins, tapes, adhesives and textiles guided by various property information from more than 500 suppliers.
 - Development Development of new products through the combination of R&D, sales and suppliers, based on the latest material technologies
 - Printing Rapid provision of high-quality products to market through our own development process from designing to finalizing product specifications
 - Textiles Provision of textile brushes, sealing materials developed for cushioning, noise-prevention and air sealing



Sales Amount

US\$1.2 billion (¥95,400 million)
(fiscal year 2014, domestic)

Organization

Employees: 1,500 (Domestic)



Company Profile / Contact

Representative Koichi Ohara, President & CEO

Capital US\$8.08 million
(Domestic only)

Major Customers

Toyota Motor Corporation, / Mitsubishi Heavy Industries, Ltd.,
Kawasaki Heavy Industries, Ltd., / Fuji Heavy Industries, Ltd.,
Denso Corporation, Aisin Seiki Co., Ltd.,
Mitsubishi Motors Corporation

Address 2-9-29, Kamimaezu, Naka-ku,
Nagoya, Aichi 460-8330, Japan

TEL +81-52-747-3204

E-mail tsunami@tsuchiya-group.co.jp



Usetech Co., Ltd.

有限会社 ユーズテック

CERTIFICATION EN 9100:2009

WEBSITE <http://www.usetec.co.jp>

Outline of Business

"Our advanced equipment, technologies and skilled operators provide reliable products for customers."

- Manufacturing of intricate aerospace parts by precision machining and cutting
- Manufacturing of high volumes of automotive parts (up to 5-digit parts production per day)
- Manufacturing of low-volume aerospace and rail vehicle parts
- Inspection for all parts with designated and calibrated measuring devices and tools

Our Strengths

- Can supply a wide range from simple parts to intricate parts to meet customers' requests.
- Can manufacture and procure difficult-to-cut-materials such as Invar, titanium, Kovar, as well as aluminum alloys.
- Utilizing our 3D coordinate measuring machine, we can ensure accurate measurements and production to meet customers' requirements at affordable prices.



Facility & Equipment

Machining Centers:

FANUC Robodril X4
 Matsuura FX-5 (20,000 S/S) X3
 Matsuura FX-5 (5-Axis, 30,000 s/s)
 Matsuura AM72-63V (5-axis)
 Matsuura MC500V
 Toyotakoki FH50B

NC Lathes:

Moriseiki NL 2500
 Eguro NUCLET

Presses:

Aida 80tf
 Washino 45tf

Measuring Instruments:

Accretec 3D coordinate machine

High-precision cutting machine
 Drilling machine/Tapping machine

Organization

Employees: 50



Company Profile / Contact

Representative Norio Ueyanagi, President
Capital ¥5 million
Major Customers Yura Sansho Co., Ltd.
 Mino Industry Co., Ltd.

Address 5005-18 Kanae Kiriishi, Iida,
 Nagano 395-0807, Japan
TEL +81-265-56-1210
E-mail usetec@usetec.co.jp



WADA Aircraft Technology Co., Ltd.

株式会社 和田製作所



CERTIFICATION JIS Q 9100, ISO 9001, JIS Q 9001, MSJ 4000

WEBSITE <http://www.wadass.com>

Outline of Business

- Design and manufacturing of jigs and tools for the aircraft and space industry
- Manufacturing of parts for the aircraft and space industry



Our Strengths

■ Processing systems

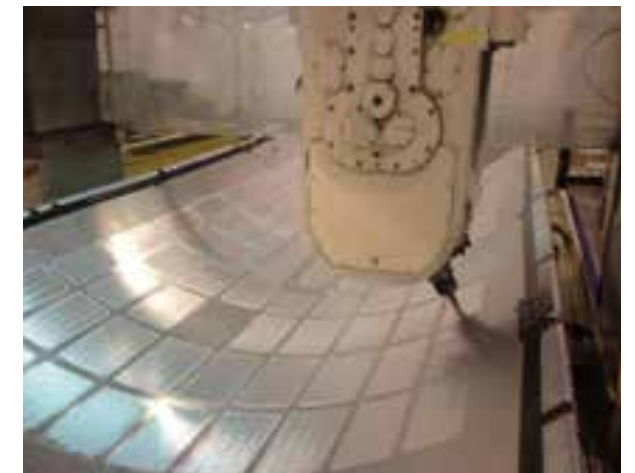
We perform design, manufacturing, assembly and quality assurance as well as maintenance and reworking of molding jigs for composites and sheet metal, positioning jigs, inspection jigs and assembly jigs. We have state-of-the-art facilities and systems to satisfy various customers' requirements.

■ Rubber forming dies

We have been manufacturing rubber forming dies for sheet metal since our establishment 50 years ago. We continue to develop original systems to ensure stable quality and low cost.

Facility & Equipment

Group	Specifications (X Y Z)	Maker	Number	Model name
5-axis machining center	324×114×56" [max.] (8,250×2,900×1,450mm)	SNK	6	RB300F, 250F, 200F MILLAC 1000VH
3-axis machining center	62×24×22" [max.] (1,600×610×560mm)	Okuma	9	MILLAC 611V2, 561V
CNC 3-dimensional measuring device	35×62×23" [max.] (900×1,600×600mm)	Mitutoyo	1	Crysta-Ape×916
Laser tracker	-	API	1	Tracker3
3D CAD	CATIA V5	Dassault Systemes	8	ASO, HD2
5-axis 3D CAM	Mastercam	CNC Software	6	5-axis



Company Profile / Contact

Representative Noriyuki Wada, President
Capital US\$80,000
Major Customers MHI

Address 72-1 Gogashima, Haruhi, Kiyosu, Aichi 452-0962, Japan
TEL +81-52-401-4711
E-mail info@wadass.com



Waka Manufacturing Co., Ltd.

株式会社 ワカ製作所



CERTIFICATION ISO 9001 & ISO 14001

WEBSITE <http://www.waka.co.jp/>

Outline of Business

Waka Manufacturing is a Japan-based technology company specialized in the engineering and manufacture of interconnection/coaxial cable products for the aerospace, defense, telecommunication and industrial markets.

Established in 1958, Waka Manufacturing is one of the most experienced domestic companies in the coaxial market, especially in millimeter wave frequencies up to 110 GHz.

Waka Manufacturing's expertise includes MIL standard connectors, customized cable assemblies and connectors for the defense and also aerospace industries. Our microwave coaxial connectors and technology have been accredited by JAXA for aerospace use as the first connector maker in the microwave category in Japan.

Our Strengths

■ Microwave Coaxial Business

Waka develops and produces coaxial connectors and cables that carry microwaves up to 110 GHz as well as microwave components such as phase shifters and filters. Our proprietary designs are based on our experience and know-how and analyses of electromagnetic fields, in particular our expertise in the millimeter wave band, as well as precision and quality production at the Omi Factory in Nagano.



Connectors/Cable assemblies

Standard SMA to 1.00mm W connectors (MIL-STD/IEEE-287)

Our cable assembly is used in passenger aircraft for in-flight internet communication.



Millimeter wave product

Adapters, cables and components up to 110 GHz are available.

E band falling object radar is in the R&D phase for ground support equipment of airport runways.



Phase shifters



Facilities



Head Office
Nishi-Shinjuku 1-20-3, Takagi Building 6F
Shinjuku-Ku, 160-0023 Tokyo JAPAN

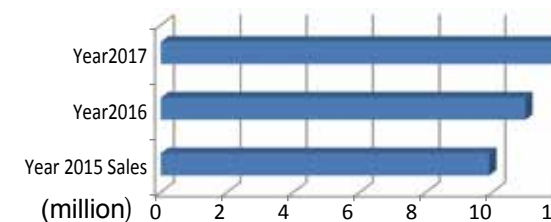


Matsumoto Plant
6043-17 Nanaki, Akasina, Azumino-shi,
Nagano 399-7104 Japan
Tel:81-263-62-2643
Fax:81-263-62-4964
URL:<http://www.waka-matsumoto.jp/>



Omi Plant
4590-1 O,Omi-mura, Higashichikuma-gun,
Nagano 399-7701 Japan
Tel:81-263-67-2174
Fax:81-263-67-2157

Sales Amount and Target



Our Segment



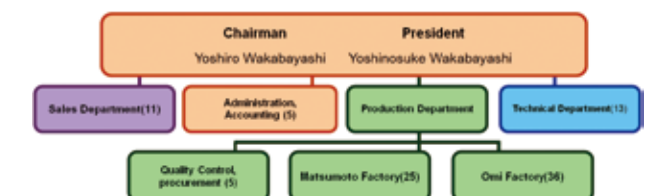
Important Information/Notices

■ JAXA accredited Waka!!(2013.03)

Our Micro wave coaxial connectors & technology have been accredited for aero space use as the first connector maker of micro wave category in Japan.

■ Waka is an engineering company;
10% of our employees are technical engineers.

Organization



Company Profile / Contact

Representative Yoshinosuke Wakabayashi, President
Capital US\$22.8M (\$1 = ¥101)
Major Customers Panasonic Corporation, Mitsubishi Electric Corporation

Address Takagi Building 6F, Nishi-Shinjuku 1-20-3, Shinjuku-ku, 160-0023 Tokyo, Japan
TEL +81-3-6635-5410
E-mail International Sales
Daisuke Suzuki
suzuki_d@waka.co.jp



Yamaichi Special Steel PRISMADD JAPAN



株式会社 山一ハガネ
プリズマット・ジャパン

CERTIFICATION JIS Q 9100, ISO 17025, ISO 9001, ISO 14001

WEBSITE <http://www.yamaichi-hagane.co.jp/>
<http://prismadd.jp>

Outline of Business

■ Additive manufacturing solutions:

- 3DMaterials - Powder manufacturing/supply
- 3DXpertise - Design/redesign (Simulation and topological optimization)
- PRISMADD - 3D printing manufacturing (Parameter optimization)

■ Manufacturing services:

- Yamaichi Special Steel - Special steel supply
- Ultra-precision machining
- Heat treatment
- Measurement (ISO 17025)

Our Strengths

We offer world-leading additive solutions for the aerospace industry.

- **AM Solutions** - Topological optimization for designs enables the reduction of material and volume, excellent surface condition, and best performance.
- Parameter optimization achieves the full potential of 3D printing systems.
- **Metal Powder** - We supply the best metal powder for AM, including titanium, Inconel, and stainless steel.
- **Precision Machining** ... - Our thermostatic controlled factory and YASDA machines ensure ultra-precision.
- **Heat Treatment** - Our heat treatment with strain reduction and anti-aging system produce materials of the best quality.
- **Measurement** - We guarantee ultra-precision machining by an ISO 17025 certified measurement system.



Facility & Equipment

- | | |
|-------------------------|-------------------|
| 3D printer | 3D Systems |
| Heat treatment | Chugairo, IHI |
| CMM | Hexagon Metrology |
| 5-axis machining center | HERMLE, YASDA |
| Jig borer | YASDA |

Sales Amount

15 billion yen

Organization

- Employees:** 200
- Locations:** Japan
Thailand
Vietnam
- Partnerships:** PRISMADD (<http://prismadd.com/>)
3D Xpertise (<http://www.3dexpertise.fr/>)

Important Information / Notices

PRISMADD JAPAN is a joint venture established by Yamaichi Special Steel and PRISMADD, the pioneer of the AM industry in France. We provide support ranging from selecting the powder material (3D Materials) to manufacturing (PRISMADD) with designs and redesigns made by topology optimization and realistic simulation (3DXpertise), as well as post-processes such as heat treatment, precision machining and accuracy assurance (YSS). We have added the new capability of AM to our specialties of heat treatment and precision machining to take advantage of the characteristics of special steels. We offer one-stop solutions for sophisticated development of aerospace and aeronautic parts.

Company Profile / Contact

- | | | | |
|------------------------|--------------------------|----------------|--|
| Representative | Motoharu Teranishi | Address | 2-146 Oneyama, Midori-ku,
Nagoya, Aichi 459-8007, Japan |
| Capital | US\$667,000 (\$1 = ¥120) | TEL | +81-52-621-8969 |
| Major Customers | MHI, Toyota, Aisin | Fax | +81-52-624-4711 |
| | | E-mail | y.oguri@prismadd.jp |



Greater Nagoya Initiative Center (GNIC)

Greater Nagoya Initiative Center is to promote **foreign direct investment** and **business alliance** between overseas and Japanese companies.

About Greater Nagoya

One of Japan's notable powerhouses of productivity is in central Japan, often referred to as the **Greater Nagoya (GN)**.

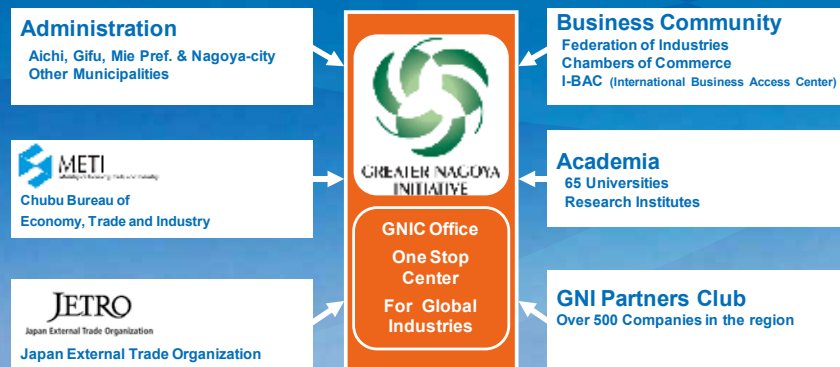
Greater Nagoya is defined as the area within a 100km radius of the Nagoya central business district covering Aichi, Gifu, Mie prefectures, the city of Nagoya at the heart of Japan.

A center of manufacturing prowess for well over a century, the region today boasts a total annual GDP of over \$577 billion, large enough to place it among the top 20 world economies.



Greater Nagoya Initiative Center

Greater Nagoya Initiative Center (GNIC), a joint organization of national and local governments, industries and academia, is to promote foreign direct investment into **Greater Nagoya** region and **business alliance** between overseas and Japanese local companies in the region.



The One-stop Solution

In cooperation with affiliated organizations, **GNIC** provides "**one-stop**" services to overseas corporations interested in starting or expanding business into **Greater Nagoya** region. The below complimentary supporting services are provided free of charge.

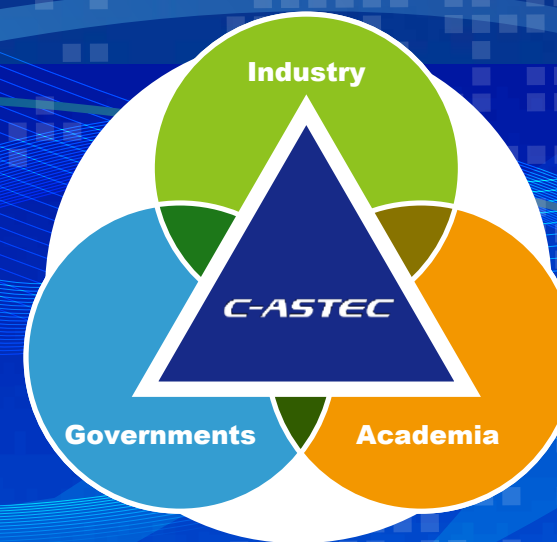
- 1) Comprehensive information / consultation services
- 2) Delegation / Invitation Program
- 3) Business matchings / meetings arrangement
- 4) Business startup support
- 5) Continuous follow-up

Contact Information Greater Nagoya Initiative Center (GNIC)

Address C/O Public Foundation of Chubu Science and Technology Center
Ikko Osu Building 7F, Osu 1-35-18, Naka-ku, Nagoya, Aichi 460-0011, Japan
TEL +81-52-218-4020 **FAX** +81-52-204-1469 **URL** www.greaternagoya.org

C-ASTEC

Chubu Aerospace Industrial Technology Center



Outline of Business


C-ASTEC is committed to comprehensively promoting projects related to the advancement of the aerospace industry and technology, and to creating a global aerospace industry cluster in the Chubu region.

The Chubu region is the center of Japan's aerospace industry. The region is endowed with an excellent environment, including various industries, universities, research laboratories, seaports, and airports, and is constantly developing. C-ASTEC was established in 1993 and has been engaged in integrating various fields of the aerospace industry and actively supporting collaboration among industry, academia and government.

- 1 Research and studies
- 2 Collecting and providing information and raising awareness
- 3 Technological assistance
- 4 Human resource development
- 5 Cooperation and exchange with related organization
- 6 Forming clusters and providing assistance in coordinating aerospace suppliers

Contact Information C-ASTEC (Chubu Aerospace Industrial Technology Center)

Address Pola Nagoya Bldg. 10F 2-9-26 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
E-Mail c-astec@c-astec.jp **TEL** +81-52-221-6681 **URL** <http://www.c-astec.jp/>



Inquiries *Chubu Aerospace Industrial Technology Center*
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