# Dream of Aerospace NAGOYA Aerospace Industry Guide



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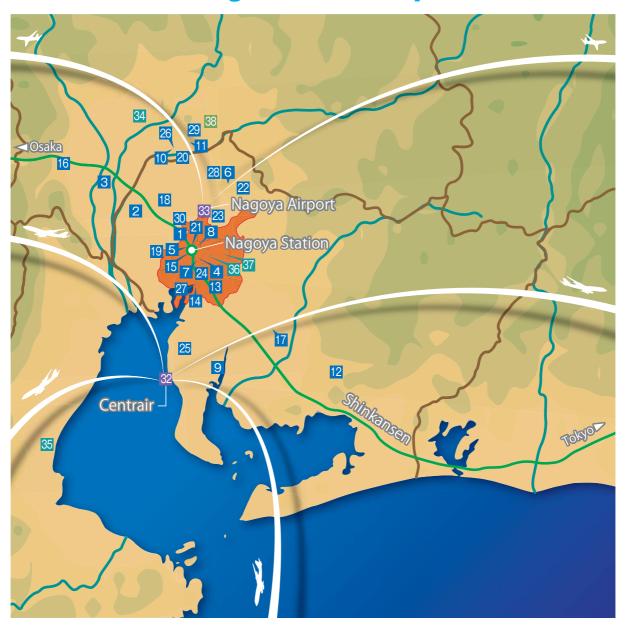
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# Capability Map, 2010

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										(	Asahi Kinzoku Kogyo Inc.
											BEST-TECH Co., Ltd.
										•	Bodycote Japan K.K.
										•	CHUBU NIHON MARUKO CO., LTD.
											CHUO ENGINEERING CO., LTD.
											Daiichi System Engineering Co., Ltd.
										•	FUJI HEAVY INDUSTRIES LTD. AEROSPACE COMPANY
										•	Imai Aero-Equipments Mfg. Co., Ltd.
										•	Kawasaki Heavy Industries, Ltd., Aerospace Company
										•	Maeda Shell Service Co., Ltd.
										•	MATSUBARA MFG CO., LTD.
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# **Organization map**



Journey time by Shinkansen bullet train between Nagoya and major cities

<ul> <li>Tokyo</li> </ul>	About 1 hour 40 min.
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•Osaka About 50 min.

#### Flight time between Chubu Japan International Airport and major airports

<ul> <li>Shanghai</li> </ul>	2 hours 20 min.
<ul> <li>Singapore</li> </ul>	7 hours 5 min.
<ul> <li>Detroit</li> </ul>	11 hours 40 min.
<ul> <li>Frankfurt</li> </ul>	12 hours 15 min.

## Aero Inc.

**Company profile** 

Address	15-6, 1-chome Chiryo, Nishibiwajima-cho, Kiyosu, Aichi, 452-0008 Japan
Tel	+81-567-66-3501
Fax	+81-567-68-6016
URL	http://www.aeross.jp/
E-mail	y_andou@aeross.jp
Contact person	Yuji Ando
Title	General Manager Sales Department

#### **Company Profile**

Founded: October 1997Capital: JPY 25 millionSales: JPY 2.0 billion in fiscal 2009 (approx. US\$24.4 million at 82.02 yen/dollar)Employees: 270 (as of April 2010)

#### **Major Line of Business**

Assembly and installation of airframe and components. Designing and manufacturing of jigs for assembling airframes. Painting of aircraft.

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd. Nagoya Aerospace Systems Works Kawasaki Heavy Industries, Ltd. MHI Aerospace Production, Ltd. Mitsubishi Aircraft Corporation JAMCO Corporation

#### Certification

JIS Q 9100:2004 / JIS Q 9001:2000 (BSK0199 BSKA0112) / ISO 14001: 2004 (BSKE0041)

#### **Our Strengths**

(Ministry of Defense) T-4 main landing gear door, CX body, PX body (Mitsubishi Heavy Industries) MRJ specimen (Space appliance) H2 rocket (Boeing) B737 flap, B747 Sec.11, B767 body, B777 pivot, B787 main wing (Bombardier) GX main wing



### Company profile

# Aikoku Alfa Corp.

Address	4-1, 11 Hongo, Morikami, Sobue-cho, Inazawa, Aichi 495-8501, Japan
Tel	+81-587-97-1115
Fax	+81-587-97-2137
URL	http://www.aikoku.co.jp
E-mail	k-kasugai@aikoku.com
Contact person	Koichi Kasugai
Title	AP Division APST Senior Manager

#### **Company Profile**

Founded: August 1943Capital: JPY 1.2 billionSales: JPY 16,440 million in fiscal 2009 (approx. US\$200.4 million at 82.02 yen/dollar)Employees: 1,000 (as of April 2010)

#### **Major Line of Business**

CF Division: Parts manufacturing by cold forming for auto CV joint, transmission shaft, etc. RH Division: Designing/Manufacturing/Sales of hand cranes. AP Division: Precision 5-axis parts machining for airframe structure, engine, impeller and blisk. MS Division: Sales and application guidance for CAD/CAM system and self-developed software.

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd., Nagoya Aerospace Systems Works and Nagoya Guidance & Propulsion Systems Works. IHI Corporation Fuji Heavy Industries, Ltd. ShinMaywa Industries, Ltd. Kawasaki Heavy Industries, Ltd. Kobe Steel, Ltd. Boeing.

#### Certification

TS16949, ISO14001, JISQ9100





#### **Our Strengths**

At the AP Division, aiming for niche, high-value added manufacturing, we introduced a 5-axis MC in 1975. Our operations include machining of airframe structure parts, engine parts, various impellers (for automotive, industrial use, and ships: up to maximum 1,700 mm). Our capability to do precision machining of parts with complex contours, by using a simultaneous 5-axis control MC is highly appreciated at home and abroad.

Furthermore, we have established our own machining technology and tools, using CATIA, CAD/CAM system.

Now, we have 73 5-axis machining centers and 4-CMM etc.

# Asahi Kinzoku Kogyo Inc.

Company profile

Address	Head Office: Chiekoinnisiiru, Shimodateuri-dori, Kamigyo-Ward, Kyoto 602-8176 Japan Plant: 4851-4 Maki, Anpachi-cho, Anpachi-Gun Gifu Pref 503-0125 Japan
Tel	+81-584-64-5061(Plant)
Fax	+81-584-64-5324(Plant)
URL	http://www.asakin.com
E-mail	asakin@akg.co.jp
Contact person	Tomaru Nakamura
Title	Director of Board Member

#### **Company Profile**

Founded: June 1948Capital: JPY 99.5 millionSales: JPY 3.6 billion in fiscal 2009 (approx. US\$43.9 million at 82.02 yen/dollar)Employees: 302 (as of April 2010)

#### **Major Line of Business**

Manufacturing Aerospace Parts, including Special Process

#### **Major Customers**

Heavy Industry Companies (Mitsubishi, Kawasaki, Fuji) ShinMaywa Shimadzu Sumitomo Precision KYB Yokohama-Rubber

#### Certification

AS9100, NADCAP (NDT, SE, CP, CT), Special Process Approval from Primes (i.e. Boeing, AIRBUS, Bombardier, Sikorsky, etc.)

#### **Our Strengths**

① **Full-Process Parts Production** +  $\alpha$ : Not only for having "Full-Process Production capability (Material Purchase  $\rightarrow$  Process Engineering  $\rightarrow$  M/C  $\rightarrow$  Surface Treatment  $\rightarrow$  Painting  $\rightarrow$  Sub Assy)", ASAHI can also propose added value services to support customers' lean production activities, as shown below.

- ➡ Delivery by Customer Assembly Schedule (Just in time)
- ➡ In the case of package order, set & delivery by assembly unit (KIT)

<sup>(2)</sup> Eco-Friendly Special Process & Technical Development: Quickly responding to Primes' requirements, ASAHI has immediately adopted new ECO-Friendly surface treatment. ASAHI also develops its own surface treatment technology, with accumulated experience and knowledge for 35 years.



(1) **Chromic Acid Anodize**⇒ Boric Sulphuric Acid Anodize (for Boeing), Tartaric Acid Anodize (for AIRBUS)

(2) **Chrome Plating**⇒ HVOF Therman Spray Coating (certified by Bombardier and Boeing)

(3) Cadmium Plating ⇒ Alkaline Low Hydrogen Emblittlement Zn-Ni Alloy Plating (Asahi-developed)
 ③ QUALITY: All used chemical liquid and drain are 100% purified by in-house filtering equipment, and establish

ZERO contamination & pollution scheme. Chemical analysis has been done by requirement and by own, under NADCAP Process.

# **BEST-TECH Co., Ltd.**

Address	Nichijyu-Bldg. 8F, 3-15, Ooi-cho, Naka-ku, Nagoya 460-0015, Japan
Tel	+81-52-321-8755
Fax	+81-52-321-8758
URL	http://www.besttechjp.com/
E-mail	aviation@besttechjp.com
Contact person	Makoto Kito
Title	President

#### **Company Profile**

Founded: June, 1988Capital: JPY 27 millionSales: JPY 500 million in fiscal 2009 (approx. US\$6.1 million at 82.02 yen/dollar)Employees: 53 (as of August 2009)

#### **Major Line of Business**

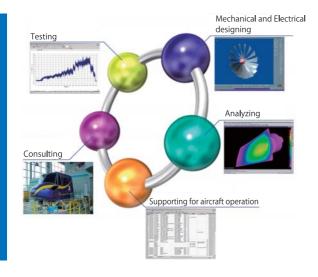
Mechanical and Electrical design: for aircraft structure and mechanical systems. Analyzing: outputs by NASTRAN and FLOWMASTER. Testing: planning test procedure, designing test tool and so on. Supporting for aircraft operation: maintenance manual, analyzing and maintenance status data. Consulting: supporting by technical experience, research/study of technology and so on.

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd. Kawasaki Heavy Industries, Ltd. Fuji Heavy Industries, Ltd. Shimadzu Corporation Nakanihon Air Service Co., Ltd. Aero Asahi Co. EUROCOPTER JAPAN T&E Co., Ltd. Japan Ministry of Defense

#### **Our Strengths**

We provide any technical engineering services in aerospace field especially. Our company is composed of special engineers having many experiences in aerospace field. So we can provide sure technical solutions to customers. We have many technical design achievements at development and modification phase for aircraft in Japan. We can make use of technical experiences based on a viewpoint of aircraft manufacture.



### **Bodycote Japan K.K.**

Company profile

Address	6-1 Ushijima-cho, Nagoya Lucent Tower – 40F, Nishi-ku, Nagoya, Japan 451-6040
Tel	+81-52-912-5518
Fax	+81-52-569-4702
URL	http://www.bodycote.com/japan
E-mail	japan.sales@bodycote.com
Contact person	Julian Bashore
Title	Representative Director - Japan

#### **Company Profile**

Founded : 2008 (Japan office)

#### **Major Line of Business**

Heat Treatments, Metal Joining, Hot Isostatic Pressing and Coating Services

#### **Our Strengths**

Founded in 1923, U.K.-based Bodycote plc is the world's leading supplier of heat treatments, metal joining, hot isostatic pressing and coating services. With more than 170 facilities in 27 countries, Bodycote established a presence in Japan in 2008. The sales office in Nagoya facilitates orders from aerospace-related manufacturers throughout Japan.

•Number of employees (worldwide): 5,512

- Number of facilities (worldwide): >170
- Registered trademarks: Corr-I-Dur®, Densal®, Kolsterising®
- Factory locations: U.K., Germany, Netherlands, France, Czech Republic, Poland, Canada, U.S., China, India, etc.
- Number of Nadcap-accredited facilities (worldwide): 37



# CHUBU NIHON MARUKO CO., LTD.

Company profile

Address	23-3 Noguchi Komaki city Aichi Prefecture 485-0806 Japan
Tel	+81-568-79-6512
Fax	+81-568-79-6503
URL	http://www.cnmaruco.co.jp/
E-mail	t_kataoka@cnmaruco.co.jp
Contact person	Tsutomu Kataoka
Title	Director

#### **Company Profile**

Founded: August 1991Capital: JPY 40millionSales: JPY 800 million (approx. US\$9.8 million at 82.02 yen/dollar)Employees: 48 (as of April 2010)

#### **Major Line of Business**

Circular/Micro-D Sub Connectors (MIL-DTL-38999/MIL-DTL-83513) certified manufacturer and import products for aerospace applications. Customized wire harness assemblies (MIL-STD-1553B, Coaxial Cable, Wire Harness, etc.) and Junction Box for aerospace, and provides endless rotary movement/high speed data transmission, "Rotary Link Connectors".

#### **Major Customers**

Kawasaki Heavy Industries, Ltd., Aerospace Company Mitsubishi Heavy Industries, Ltd., Nagoya Propulsion System Works Mitsubishi Heavy Industries, Ltd., Nagoya Aerospace System Works

#### Certification

Quality Management System : JIS Q 9100 : 2004/ JIS Q 9001 : 2008 (Certification No. BSK0144/BSKA0061) Manufacture of MIL-DTL-38999 Circular Connectors (JMOD Certification No. M-38999-00-0109-1) Manufacture of MIL-DTL-83513 Micro D-sub Connectors (JMOD Certification No. M-83513-97-0109-1)





#### **Our Strengths**

- Circular (D38999) and Micro D-Sub connectors have been manufactured by us, therefore will be provided short lead time with customers.
- The import products have been also provided with high quality because the products performed acceptance inspection are served by us.
- Among such a large industry of connectors, we are in VAD business with the following. Customer services are highly and expeditiously provided.
  - Axon's Cable S.A.S. : MIL-STD-1553B Data Bus and Coaxial Cable, etc.

Souriau S.A.S.: Circular connectors (D38999) and others.

Patents : Rotary Link Connectors

# **CHUO ENGINEERING CO., LTD.**

ompany profile

Address	(Head Office):lchiban-cho Central Bldg, 22-1 lchiban-cho, Chiyoda-ku, Tokyo 102-0082 Japan (Nagoya):Kanayama Sogo Bldg, 1-12-14 Kanayama, Naka-ku, Nagoya 460-0022 Japan
Tel	(Nagoya):+81-52-324-4770
Fax	(Nagoya):+81-52-324-4771
URL	http://www.chuo-eng.co.jp
E-mail	Please visit "contact us"page of our web-site

#### **Company Profile**

: September 1955 Founded : JPY 116 million Capital Sales : JPY 3,195 million for fiscal 2009 (approx. US\$39.0 million at 82.02 yen/dollar) Employees: 477 (as of April 2010)

#### **Major Line of Business**

Design, analysis and tests in development of aerospace products

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd. Kawasaki Heavy Industries, Ltd. Nikkiso Co., Ltd. etc.

#### Certification

ISO9001:2008, JISQ9100:2004

#### **Our Strengths**

Worked towards the expansion and enrichment of aerospace engineering for over 50 years. We currently employ over 280 people working within the aerospace field on many different projects.

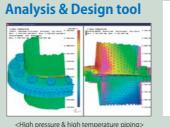
Our business is focused primarily on the design and analysis of aircraft, aerospace engines, and aerospace equipment. Presentation of our specialized services extends to many development of different aircraft and space projects across Japan.



#### **Our aerospace businesses focus**

- •Design of aircraft, rocket vehicles and engines
- Design of the space station and H- II transfer vehicle(HTV)
- Design of control devices for aircraft and jet engine
- Design and production of test equipment related to artificial satellites

• Design and production of test equipment related to other aspects of aerospace •Stress analysis



Analysis

NASTRAN

FLUENT

 ADAMS • MARC, etc.



<3D dynamic simulator for artificial satellite>



2D CAD AUTO CAD • MICRO CAD, etc.

### Company profile

### Daiichi System Engineering Co., Ltd.

Address	4F Green Bldg. Nishiki Naka-ku Nagoya, Aichi 460-0003 Japan
Tel	+81-52-204-1380
Fax	+81-52-201-6225
URL	http://www.dse-corp.co.jp
E-mail	katsunori-ikawa@dse-corp.co.jp
Contact person	Katsunori ikawa
Title	Manager, General Affairs Division

#### **Company Profile**

 Founded
 : October 1980

 Capital
 : \$1,098,000

 Sales
 : \$47.7 million (fiscal 2009)

 Employees
 : 576 (as of April 2010)

#### **Major Line of Business**

Engineering Services for the Aerospace, Automobile and General Machinery Industries.

#### **Major Customers**

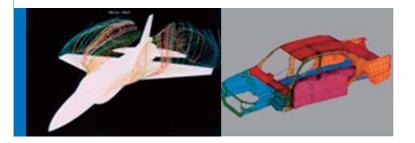
Daifuku Co., Ltd. Kawasaki Heavy Industries, Ltd. Denso Techno Co., Ltd. Mitsubishi Motors Corporation Mitsubishi Heavy Industries, Ltd. Toyota Motor Corporation.

#### Certification

JIS Q 9001:2008 (ISO 9001:2008)

#### **Our Strengths**

- ① Design and development of aerospace (777, 787, MRJ, etc.) / automotive / industrial machinery related parts, equipment.
- 2 Supporting tests, analyzing the data / reliability relating to the aerospace.
- 3 Developing the program of the numerical control machining.
- ④ Design / Development of the software based on the customers' spec.
- 5 The CAE / CAM software sales and engineering service for turbo-machinery.



# FUJI HEAVY INDUSTRIES LTD. AEROSPACE COMPANY

Address	(Head Office) 1-7-2 Nishishinjuku Shinjuku-ku Tokyo Japan 160-8316 (Handa Plant) 1-17 Shiohicho Handa-City Aichi-Pref. Japan 475-0032	
Tel	+81-569-29-4801(Handa Plant)	
Fax	+81-569-29-4810(Handa Plant)	
URL	http://www.fhi.co.jp/	
E-mail	Please visit FAQ of our web site. (Japanese only)	

#### **Company Profile**

Founded : July 15,1953 (Fuji Heavy Industries Ltd.)

**Company profile** 

Capital : JPY 153,794 million (Fuji Heavy Industries Ltd.)

Sales : JPY 1,428,690 million (approx. US\$17 billion 418.8 million at 82.02 yen/dollar) (Fuji Heavy Industries Ltd.) Employees : 13,009 (as of March 2010, Fuji Heavy Industries Ltd.)

#### Major Line of Business

Boeing: Center Wing for 777, Center Wing 787, etc. Airbus: Front edge of the vertical tail Ministry of Defense: Elementrary training aircraft T-7, T-5 Combat helicopter AH-64D, Utility helicopter UH-1J, UAV, etc.

#### **Major Customers**

Japanese Ministry of Defense Boeing Airbus

#### Certification

JIS Q 9100(=AS9100), JIS Q 9001(=ISO9001), JIS Q 14001 Nadcap: Composites, Chemical Processing, Heat Treating, Non Destructive Testing, Surface Enhancement, Welding, etc.

#### **Our Strengths**

Starting with the first jet training aircraft T-1 after the war, we have been achieving high-level of Quality, Cost and Delivery, and we are engaged in collaborative development of various programs with overseas aircraft makers such as Boeing and Airbus. For the Japanese Ministry of Defense, we develop and produce various training aircrafts, helicopters and UAV aircrafts.



# Imai Aero-Equipment Mfg. Co., Ltd. (IAC)

Address	128 Kinzokudanchi, Kakamigahara, Gifu 504-0957 JAPAN
Tel	+81-58-389-2011(Japan), +606-232-2062 / 2072(Malaysia)
Fax	+81-58-383-5001
URL	http://www.imaiaero.co.jp
E-mail	iac@imaiaero.co.jp
Contact person	Koji Asami
Title	Assistant Manager

#### **Company Profile**

Company profile

Founded: May 1947Capital: JPY 96 Million (960 Thousand USD)Sales: JPY 2.65 billion in fiscal 2009 (approx. US\$32.3 million at 82.02 yen/dollar)Employees: 320

#### **Major Line of Business**

Machining and assembly of aircraft component, Design and manufacturing of Jig and Ground Support Equipment.

#### **Major Customers**

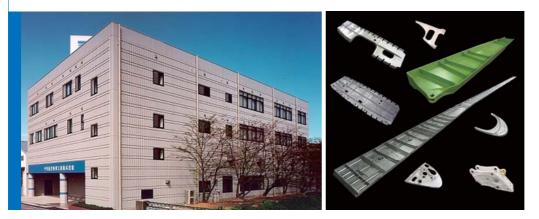
Kawasaki Heavy Industries Mitsubishi Heavy Industries Japan Aircraft Manufacturing Fuji Heavy Industries Shinmaywa Industry Japan Defense Agency Embraer

#### Certification

JIS Q 9100(2004), ISO 9001(2000) --- Japan EN9100:2003, AS9100(Rev.B), JIS Q 9100(2004), NADCAP Chemical Process(CP), NDT --- Malaysia

#### **Our Strengths**

- 1. IAC has the technology of 5- Axis processing of the aircraft parts. We have 19 of CATIA and 36 of 5-Axis processing machines, and we have dealings with manufacturers of aircraft in Japan and overseas.
- 2. IAC established a factory in Malaysia in 2006 and created a framework to improve price competitiveness in the aerospace industry. In 2009, we started surface treatment and painting work in our Malaysian factory. Thus, the whole process (Material purchase Machining Surface treatment and Painting Sub-assembly) came to be feasible.



### Kawasaki Heavy Industries, Ltd., Aerospace Company

Address	1, Kawasaki-cho, Kakamigahara, Gifu, Japan
Tel	+81-58-382-5712
Fax	+81-58-382-2217
URL	http://www.khi.co.jp/
E-mail	Via "Contact KHI" in the website
Contact person	
Title	

#### **Company Profile**

**Company profile** 

Founded: April 1923Capital: JPY 104,328 millionSales: JPY 188,892 million in fiscal 2010 (approx. US\$2,303.0 million at 82.02 yen/dollar)Employees: 3,139 (as of March 2009)

#### **Major Line of Business**

The KHI group manufactures ships, rolling stock, gas turbine power generators, motorcycles, Jet ski watercraft and a wide range of manufacturing equipment and systems. In the aerospace business, we are implementing development, production and maintenance of any aircraft and space equipments.

#### **Major Customers**

JMOD local governments Boeing The Eurocopter group JAXA

#### Certification

JISQ9100, JISQ9001

#### **Our Strengths**

For the JMOD, the peacekeeping force of Japan, we have delivered many trainers, anti-submarines, cargo and helicopters. In the commercial aircraft business, we are receiving a steady flow of orders for the aircraft we developed jointly with Embraer of Brazil and actively participating in the 787 program with The Boeing Company. Also, we are moving forward in development of "Doctor Helicopter" and other usage of the Helicopters.



### Maeda Shell Service Co., Ltd.

ompany pr

Address	76-4 Kanayama, Ikegane, Okazaki, Aichi 444-3595, Japan
Tel	+81-564-48-2411
Fax	+81-564-48-6252
URL	http://www.maedauni.co.jp
E-mail	maeda@maedauni.co.jp
Contact person	Satoshi Sumida
Title	Executive Director

#### **Company Profile**

Founded: November 1965Capital: JPY 49 millionSales: JPY 842 million in fiscal 2010 (approx. US\$10.3 million at 82.02 yen/dollar)Employees: 89 (December 2010)

#### **Major Line of Business**

Designing and machining of precision mold. using the shell mold or the Hot Steam Blowing (HSB) processes.
 Manufacturing of compressed air filters <a>3</a> Molding and lining of ultra wear-resistant urethane resin <a>4</a> New product development such as carbon nano tube (CNT), carbon nano fiber (CNF) and carbon fiber hybrid composites. <a>5</a> CNF R&D <a>6</a> HSB mold making <a>7</a> AlC casting

#### **Major Customers**

Toyota Motor Corporation Toyota Industries Corporation Aisin Takaoka Co., Ltd. JTEKT Corporation Toyota Tsusho Corporation

#### Certification

ISO 14001

#### Patents:

11 patents have been registered, 15 others pending, for compressed air filters and other products.



3 in 1 Multi Dry Filter "SKELETON"

Carbon fiber products

#### **Our Strengths**

We challenge the new area of technology utilizing skills and know-how accumulated internally.

- Designing and machining precision mold and manufacturing jigs
  - We provide precision machining with capabilities of 5 NC machines including 5 axis, 15 CAD/CAM systems, 3 electric discharging equipments, wire discharging equipment, 3 3-D measuring equipments and etc.
  - We have various electroless plating facilities and have long history in Ni-P, SiC, WC, PTFE.
- Compressed air filter "3 in 1 Multi Dry Filter SKELETON"
  - It filtrates 0.01 micron particles by 99.99% and provide clean and safe compressed air free from harmful bacteria, mold, impurities, oil mist and water droplets.
- The clear resin filters, the first ever made in the world, are used in fields of precision machining, IT, painting, cosmetics, pharmaceutical and foods industries.
- Ultra wear-resistant and long life " Vulkollan "
- It is a special kind of polyurethanes (produced) under license from Bayer Company in Germany. It has higher wear-resistant capability of 5-10 times than usual polyurethanes, and is now used for jigs and wheels in TOYOTA group companies. We can provide any shape of products to meet customer's specifications by casting and machining.
- We have developed the molding technology of carbon fiber composites. It is used for the lightest stick in the world (100g), stretcher(1.5kg), sport car parts, pipes and boards. We are now developing CNT/CNF.

# MATSUBARA MFG CO., LTD.

**Company profile** 

Address	2-111 Urasato, Midori-ku, Nagoya, Aichi 458-0847, Japan
Tel	+81-52-891-2084
Fax	+81-52-895-5720
URL	http://www.matsubara-mfg.jp
E-mail	Info@matsubara-mfg.jp
Contact person	Masahiko Takatsu
Title	Aircraft division director

#### **Company Profile**

Founded: August 1969Capital: JPY 48 millionSales: JPY 1.2 billion (approx. US\$14.6 million at 82.02 yen/dollar)Employees: 125 (as of April 2010)

#### **Major Line of Business**

Manufacture of sheet-metal parts and welded components for aerospace equipment

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd. TENRYU HOLDINGS CO., LTD. METALTEC Ltd. Ministry of Defense

#### Certification

Nadcap (Welding), JISQ9100, MSJ4400

#### **Our Strengths**

We have acquired Nadcap accreditation for special welding of nonferrous metals such as aluminum, achieving a technical level highly valued by our business partners.

Over and above the welding work, we have a division that processes sheet metal and machining, so we can cope with various products. Our company also has a system to design and create procedures for these processes and assembly jigs on our own.



# Company profile

### Mitsubishi Heavy Industries, Ltd.

Address	(Head Office) 16-5 Konan 2-chome, Minato-ku, Tokyo (Nagoya Aerospace Systems Works) 10, Oye-cho, Minato-ku, Nagoya City, Aichi, 455-8515, Japan
Tel	(Head Office) 81-3-6716-3111 (Nagoya Aerospace Systems Works) 81-52-611-2121
URL	http://www.mhi.co.jp/en/index.html
E-mail	Via "Contact MHI" in the website

#### **Company Profile**

Founded: January 11, 1950Capital: 265.6 billion yenSales: JPY 2,940.8 billion (consolidated) (approx. US\$35 billion 854.7 million at 82.02 yen/dollar)Employees: 67,669 (consolidated)

#### **Major Line of Business**

Engineering, manufacture and sale of ships, environmental improvement equipment, industrial machinery, aircraft, space systems, air-conditioner, etc.

(Aerospace Field) Designing and manufacturing aircraft and space systems, product-support services and launch services.



©Mitsubishi Aircraft Corporation

#### **Major Customers**

Ministry of Defense (Japanese government) Japan Aerospace Exploration Agency (JAXA) Boeing Bombardier Rolls-Royce Pratt & Whitney etc.

#### Certification

Received Certification of International Standard JISQ9100/ISO9001 Quality Management System for Aerospace ISO14001 Environmental Management System ISO27001 Information Security Management System

#### **Our Strengths**

We are the nation's leader in manufacturing state-ofthe-art aircraft and space systems.

The H-IIA launch vehicle is the mainstay of Japanese rockets. Based on its high reliability, MHI provides H-IIA launch services. MHI will further enhance its marketing activities and technologies in a quest to advance the future development of Japanese space industry.

Boeing 787 (named "Dreamliner") is the first passenger aircraft to make full use of composite materials. MHI is manufacturing the composite wing boxes for Boeing 787. With our high technological capabilities and reliability, MHI was the first company other than Boeing, which coordinates the overall frame, to design and manufacture the main wings of Boeing's large passenger aircraft.

The MRJ is the next-generation regional jet which will offer top-class operational economy, outstanding cabin comfort, and environmental performance that will significantly cut fuel consumption, noise and emissions. MRJ is being developed by Mitsubishi Aircraft Corporation based on aircraft development and manufacturing technology cultivated by MHI during many years.





## **Meira Corporation**

**Company profile** 

Address	17-15, Tsubaki-cho, Nakamura-ku, Nagoya 453-0015, Japan
Tel	+81-52-459-1276
Fax	+81-52-459-1284
URL	http:// www.meira.co.jp
E-mail	miyashita@meira.co.jp
Contact person	Katsumi Miyashita
Title	General Manager Sales Dept. Aerospace Div.

#### **Company Profile**

Founded	: June 1932
Capital	: JPY 330million
Sales	: JPY 19,230 million in fiscal 2009 (approx. US\$234.5 million at 82.02 yen/dollar)
Employees	5 : 629

#### **Major Line of Business**

Precison threaded parts and forging for automobile, Fasteners, Machining parts and Rod assembly for aerospace, orthopedic implants and instruments.

#### **Major Customers**

Japan Defense Agency Mitsubishi Heavy Industries Ltd. IHI Corporation Kawasaki Heavy Industries, Ltd. Fuji Heavy Industries, Ltd. Shimazu Corporation JAMCO Corporation Mitsubishi Electric Corp. Daicel Chemical Industries, Ltd. Nabtesco etc.

#### Certification

JIS Q 9100, ISO14001, NADCAP AC7102 (Heat Treatment Process), AC7108 (Chemical Processing), AC7114(Non destructive Testing), AC7117(Surface Enhancement)

#### **Our Strengths**

Aerospace Industry Field

- Precision Fasteners such as High Tension Bolts and Nuts.
- Swaged Rod Assemblies such as Push-Pull Rods, Tie Rods, etc.
- Integrated Processing Parts include Surface Treatment/Heat Treatment /NDI and Machining.



## **Nabtesco Corporation Gifu Plant**

**Company profile** 

Address	1110-1 Miyashiro, tarui-cho, Fuwa-gun, Gifu 503-2192, Japan
Tel	+81-584-22-3121
Fax	+81-584-23-1534
URL	http://www.nabtesco.com
E-mail	Akinori_Tagawa@nabtesco.com
Contact person	Akinori Tagawa
Title	General Manager, Administration Department

#### **Company Profile**

Founded: September 2003Capital: JPY 10 billionSales: JPY 126.2 billion in fiscal 2009 (approx. US\$1,538 million at 82.02 yen/dollar)Employees: 2,250

#### **Major Line of Business**

aerospace parts, etc.

#### **Major Customers**

BOEING Mitsubishi Heavy Industries Kawasaki Heavy Industries etc.

#### Certification

Nadcap, ISO14001, JIS Q 9100

#### Our Strengths

Nabtesco flight control actuator, which controls the flight orientation of the Aircraft, has a 100% share in the Japanese aircraft market.



### Nishimura Co., Ltd.

Company profile

Address	91 Kitashige, Hiromi-cho, Toyota 470-1215 Japan
Tel	+81-565-21-1583
Fax	+81-565-21-3579
URL	http://www.nishimura-net.co.jp
E-mail	Manabu-kinoshita@nishimura-net.co.jp
Contact person	Manabu Kinoshita
Title	Senior Managing Director

#### **Company profile**

Founded	: March 8, 1972
Capital	: JPY 29 million
Sales	: JPY 800 million (approx. US\$9.8 million at 82.02 yen/dollar)
Employees	: 49

#### **Major line of business**

Design and manufacture precision molds, Aircraft parts manufacturing, Medical device manufacturing

#### **Major Customers**

Mitsubishi Heavy Industries Kawasaki Heavy Industries AISIN SEIKI AISIN AW Toyota Auto Body TAIHO KOGYO

#### Certification

ISO14001, ISO9001, JISQ9100

#### **Our Strengths**

More precise machining techniques applied to the difficult machining technology in the field of aircraft manufacturing molds developed in the manufacturing technology for the automobile engines and the transmission. We have extensive experience working on machining of titanium and inconel used in racing cars. We will be able to work on the hard-to-manufacture material used in many parts of the aircraft engine components and rocket engines.



It is required to ensure high precision measurement technology. We guarantee high quality of products with instruments, advanced inspection skills and quality assurance system.

We have introduced CAD / CAM relatively earlier in small and medium enterprises, 3D, of course, we are also fully compatible with 5-axis machining.

# Ryoki Tool Co., Ltd.

**Company profile** 

Address	2-8-21 Takaki, Ichinomiya, Aichi, 491-0837, Japan
Tel	+81-586-71-6792
Fax	+81-586-71-7629
URL	http://www.ryoki.co.jp
E-mail	yhoshino@ryoki.co.jp
Contact person	Yasuhiko Hoshino
Title	Marketing group leader

#### **Company Profile**

Founded : June 1967 Capital : JPY 18 million Employees : 80 (as of April 2010)

#### **Major Line of Business**

Manufacture of aircraft parts. Design and manufacture of jigs and tools. Machining of large-sized parts. Design and manufacture of stamping dies.

#### **Major Customers**

Kawasaki Heavy Industries, Ltd. Fuji Heavy Industries Ltd.

#### Certification

ISO 9001 : 2000, JIS Q9100 : 2004

#### **Our Strengths**

- Design/data processing, using 7 CATIA software.
- Short delivery possible, by using up to 30 various machines, including 5-axis processing machines (11000\*4000\*4300), to start with.
- For quality assurance, we use 2 FARO laser trackers to ensure the most accurate measurements.
- For cutting materials, we use a water jet machine by Flow.
- For aircraft parts, we use up to seven 5-axis processing machines, starting with MAG3 and MAG4.





## SANKO MFG CO., LTD.

Company profile

Address	9, 3-chome, Yasumatsu, Shippo-cho, Ama, Aichi 497-0011 Japan
Tel	+81-52-442-0569
Fax	+81-52-442-9594
URL	http://www.sankomfg.co.jp
E-mail	info@sankomfg.co.jp
Contact person	Kiyoshi OKUMURA
Title	President

#### **Company Profile**

Founded: March 1956Capital: JPY 20 millionSales: JPY 629 million for fiscal 2009 (approx. US\$7.7 million at 82.02 yen/dollar)Employees: 49 (as of April 2010)

#### **Major Line of Business**

Manufacturing parts of aerospace equipments

#### **Major Customers**

Nagoya Guidance & Propulsion System Works of Mitsubishi Heavy Industries, Ltd. Aichi Tokei Denki Co., Ltd. Daicel Chemical Industries , Ltd.

#### Certification

ISO 9001, JIS Q 9100

#### **Our Strengths**

- We have 40 years experience in manufacturing parts of aerospace equipments such as rockets, engines and hydraulic equipments.
- We have much experience and skills in machining difficult-machining materials such as Inconel, Haynes and Waspaloy with lethes, 5 axis machining center and electrical discharge machining.
- Products
  - ultra precision parts of HII-A/B rocket main and second stage motor
  - · precision parts of flight control hydraulic equipments

Facilities

- Double column machining center, precision center, NC lathe, 3-D measuring equipment and etc.
- MASTT(Meiyu Aerospace Support Technology Team), which is composed of regional 24 engine parts manufacturers, can perform whole range of works to manufacture engine parts. We expect to deploy our business to international markets as a member of MASTT.



Total site area : 12,041.28m Building site : 5,094.14m Total floor area : 7,393.42m

# **SASAKI MANUFACTURING CO. LTD**

**Company profile** 

Address	1-24, 7-chome, Jougocho, Kakamigahara, Gifu, 504-0927, Japan
Tel	+81-58-383-6351
Fax	+81-58-383-6361
URL	http://www.sasaki-mfg.com
E-mail	sasaki@sasaki-mfg.com
Contact person	Masashi Wakasugi
Title	Senior Manager

#### **Company Profile**

Founded: April 1970Capital: JPY 40 millionSales: JPY 600 million (approx. US\$7.3 million at 82.02 yen/dollar)Employees: 50 (as of April 2010)

#### **Major Line of Business**

Manufacturing of various jigs mainly for the aircraft and automobiles

#### **Major Customers**

Kawasaki Heavy Industries, Ltd. ShinMaywa Industries, Ltd.

#### Certification

ISO 9001 : 2008

#### **Our Strengths**

We produce various jigs and tools, parts and testing equipments, by using the updated facilities and high latest technologies, thereby coping with the ever-increasingly sophisticated needs of the aerospace industry, by making full use of our equipments such 3D CAM, CATIA, laser testing equipment and 5-axis processing machine. Based on the aircraft configuration and materials information, we are supplying precision equipments, which are safe and excellent in quality.



# SINFONIA TECHNOLOGY CO., LTD.

Company profile

Address	(Head Office) Shiba NBF Tower, 1-1-30, Shiba-daimon, Minato-ku, Tokyo, 105-8564, Japan (Nagoya branch) 3-15-1, Meieki, Nakamura-ku, Nagoya, 450-0002, Japan
Tel	+81-3-5473-1816
Fax	+81-3-5473-1843
URL	http://www.sinfo-t.jp
E-mail	naka-shinji@sinfo-t.jp
Contact person	Shinji Naka
Title	General Manager

#### **Company Profile**

Founded: August 1949Capital: JPY 10.1 billionSales: JPY 62.3 billion in fiscal 2009 (approx. US\$759.6 million at 82.02 yen/dollar)Employees: 3,009 (as of March 2010)

#### **Major Line of Business**

Electrical Power Systems: AC systems, DC systems, Starter-generating systems, Primary/Secondary power management.

Avionics: Stores management systems, Data transfer equipment, De-icing & anti-icing equipment, Power converters/inverter. Actuation Equipment: Actuator, Servo actuator, Hoist & Winch.

#### **Major Customers**

Japan Ministry of Defense Mitsubishi Heavy Industries Kawasaki Heavy Industries Fuji Heavy Industries Sumitomo Heavy Industries, Ltd. IHI Corporation etc.

#### Certification

ISO9001, ISO14001, AS9100, ISO27001

#### **Our Strengths**

As the only Japanese manufacturer of on-board power units for aircraft, we have developed and supplied main generator systems, store management systems and VSCF converters for next-generation power supplies. We have solid achievements in the space field, including high capacity electrical powered servo actuators for rockets.



Aerospace Production Facilities

# TAMAGAWA INDUSTRIES, LTD.

**Company profile** 

Address	1218-18, Jifuku, Kagiya-cho, Kasugai, Aichi, 480-0304, Japan
Tel	+81-568-88-6551
Fax	+81-568-88-6554
URL	http://www.md.ccnw.ne.jp/tamagawa
E-mail	tamagawa@md.ccnw.ne.jp
Contact person	Akira Ito
Title	Manager

#### **Company Profile**

Founded: April 1949Capital: JPY 12 millionSales: JPY 1 billion in fiscal 2009 (approx. US\$12.2 million at 82.02 yen/dollar)Employees: 104 (as of April 2010)

#### Major Line of Business

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

#### **Major Customers**

Mitsubishi Heavy Industries Caterpillar Japan Mitsubishi Material Daicel Chemical Industries Tamagawaseiki

#### Certification

QMS ISO9001 (JIS Q 9001) & AS9100 (JIS Q 9100)

#### **Our Strengths**

- We have more than 40 years of experience in the field of aerospace parts manufacturing, where high quality and reliability are required. We have a challenging mind to accept work that poses extreme difficulty to achieve, with our never-ending curiosity and ambitious engineering spirit.
- We have technologies such as machining of difficult-to-process materials, machining of composite materials (CFRP, etc), and manufacture of missile functional parts.





Machining of main nozzle for the engine for the H-IIA two-stage rocket

# TAMAGAWA SEIKI CO., LTD.

**Company profile** 

Address	(Head Office) 1879 Ohyasumi, lida, Nagano-Pref. 395-8515 JAPAN (Sales Company, Nagoya branch) 5-10, Hakko-cho, Kasugai, Aichi-Pref. 486-0916 JAPAN
Tel	+81-265-56-5423
Fax	+81-265-56-5427
URL	http://www.tamagawa-seiki.co.jp
E-mail	kokyaku@tamagawa-seiki.co.jp
Contact person	Hiroshi Miyazaki
Title	General Manager, Int'l Aerospace Marketing

#### **Company Profile**

Founded	: March 1938
Capital	: JPY 100 million
Sales	: JPY 24.2 billion in fiscal 2009 (approx. US\$295 million at 82.02 yen/dollar)
Employees	5 : 650

#### **Major Line of Business**

Aerospace products, automotive products, related to product design and manufacturing plant

#### **Major Customers**

Mitsubishi Heavy Industries Kawasaki Heavy Industries Fuji Heavy Industries Mitsubishi Electric NEC Toshiba Hitachi Panasonic Corporation TOYOTA HONDA ABB Automation Technology Products AB Honeywell Inc. Rockwell Collins Ministry of Defense Japan Aerospace Exploration Agency etc.

#### Certification

Nadcap, ISO9001, JIS Q9100, ISO/TS16949, ISO14001, ISO17025

#### **Our Strengths**

We realize a stable supply of products for specific environment based on the performance of more than 70 years in the field of aviation/aerospace. The product lineup consists of electric components, fuel pumps, attitude control equipments, sensors or motors. Besides we manufacture angle sensors for hybrid vehicles, servo system for factory automation or others.





### Tech Sasaki Co., Ltd

Address	4-9-21 Jinguu, Atsuta-ku, Nagoya, Aichi, Japan
Tel	+81-52-678-7811
Fax	+81-52-678-7822
URL	http://ssk-gp.jp
E-mail	tech@ssk-gp.co.jp
Contact person	Kenichi Anabuki
Title	General Affairs Section Manager, Aerospace Division

#### **Company Profile**

Founded: October 1945Capital: JPY 45 millionSales: JPY 6,500 million in fiscal 2009 (approx. US\$79.2 million at 82.02 yen/dollar)Employees: 520 (as of April 2010)

#### **Major Line of Business**

Aircraft Assembly, Conveyance Equipment, Industrial Facilities, General-Purpose Compressors

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd.

#### Certification

Aircraft Division: AS 9100; 2004, ISO 9001; 2000

#### **Our Strengths**

- Metal structural assembly of Boeing and Bombardier aircrafts, and helicopters. Accumulated processing technologies for CFRP, which has been receiving attention in the aircraft industry in recent years.
- Design and fabrication of jigs needed for assembly of aircrafts.
- Design, manufacture, and maintenance of slings dedicated for aircraft assembly.



## Tohmei Industries Co., Ltd.

Company profile

Address	2-11 Shinkatanaike, Chita, Aichi 478-0069, Japan
Tel	+81-562-54-1881
Fax	+81-562-56-5873
URL	http://www.tohmei.com
E-mail	koji_nishimura@tohmei.com
Contact person	Koji Nishimura
Title	Manager, Planning Section, General Affairs Department

#### **Company Profile**

Founded: September 1973Capital: JPY 88 millionSales: JPY 6.3 billion in fiscal 2009 (approx. US\$76.8 million at 82.02 yen/dollar)Employees: 1,000

#### **Major Line of Business**

Assembly and installation of airframes and components. Designing and manufacturing of test equipment for aircrafts and vehicles.

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd. Kawasaki Heavy Industries, Ltd. Fuji Heavy Industries Ltd. Ministry of Defense JAXA Central Japan Railway Company Nachi-Fujikoshi Corp. Toyota Central R&D Labs., Inc. Tokai Rubber Industries, Ltd.

#### Certification

JIS Q 9100 : 2004 & JIS Q 9001: 2008, JIS Q 27001: 2006, JIS Q 14001: 2004

#### **Our Strengths**

6 plants in Aichi Prefecture with 1,000 employees consist of 3 divisions and 3 related companies with wideranging features. The advantages; Capably contributing to the aerospace industry through co-operated synergy productivity, plus integrated system (from designing to delivery) enable to supply various productions and offer various technologies to many different fields.

We also acquired the company in charge of handling CFRP in August this year. We continue to challenge to provide CFRP products which including machining, assembling, and painting.



The scene of assembling [HTV Un-Pressurized Carrier]

# 26 Company profile

### Tokuda Industries Co., Ltd.

Address	209 Kinzokudanchi, Kakamigahara, Gifu 504-0957, Japan
Tel	+81-58-380-0003
Fax	+81-58-383-8484
URL	http://www.tokuda.co.jp/en
E-mail	sawai@tokuda.co.jp
Contact person	Hiroshi Sawai
Title	Sales Section Manager

#### **Company Profile**

Founded: June1948Capital: JPY 30 millionSales: JPY 1.2 billion for fiscal 2009 (approx. US\$14.6 million at 82.02 yen/dollar)Employees: 140 (as of April 2010)

#### **Major Line of Business**

Manufacture of machined parts for aircraft. Manufacture of aircraft-related jigs and automobile-related jigs.

#### **Major Customers**

Kawasaki Heavy Industries, Ltd. Mitsubishi Heavy Industries, Ltd. Fuji Heavy Industries Ltd. Toyota Motor Corporation

#### Certification

JIS Q 9100 ; 2004, ISO 9001 ; 2008

#### **Our Strengths**

- Cutting work technology for aeronautical parts using cutting-edge machine tools such as super-sized/super-high-speed 5 -axis machining centers.
- High precision measuring technology using laser trackers (non-contact type measuring equipment) technology.
- Processing technologies for difficult-to-cut materials such as CFRP and titanium.

Patents: Geography-model order reception system (Patent pending), Processing device (Patent pending), Endmill (Patent pending)



Super-sized multi-purpose machining center

### Toray Industries, Inc.

Company profile

Address	Nihonbashi Mitsui Tower, 1-1, Nihonbashi-Muromachi 2-chome, Chuo-ku, Tokyo 103-8666, Japan
Tel	+81-03-3245-5111
Fax	+81-03-3245-5555
URL	http://www.toray.com
E-mail	Via "Contact Us" in the website
Contact persor	n
Title	

Title

#### **Company Profile**

Founded : January 1926 Capital : JPY 96,937 million (As of March 2010) Sales : JPY 1,360 billion (Consolidated March 2010) (approx. US\$16 billion 581.3 million at 82.02 yen/dollar) Employees : 37,936 (Consolidated March 2010)

#### **Major Line of Business**

Fibers & Textiles, Plastics & Chemicals, IT-related Products, Carbon Fiber Composite Materials, Environment & Engineering, and Life Science & Other Businesses.

#### **Major Customers**

AirBus Boeing Mitsubishi Heavy Industries Kawasaki Heavy Industries Fuji Heavy Industries

#### Certification

ISO14001, ISO9001, ISO/TS16949, JIS Q 9100

#### **Our Strengths**

Underlined in the Corporate Philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products," Toray Group will create "Advanced Materials" through continuous focus on strengthening R&D capabilities and strive to become a "new value creator" that creates new value and propose solutions to customers. The Group is operating globally in 21 countries and regions including Japan.



Our carbon fiber materials segment is underpinned by Toray's strengths, including: (1) global operations, with production bases in Japan, US, and Europe; (2) vertical development of prepreg, intermediate materials and composite materials as well as carbon fibers; (3) a superior lineup of carbon fiber products of the highest quality; (4) a technological competitive edge attributable to the stable quality of its prepreg products; and (5) solid position in aircraft applications.

# **TOYO KOKU DENSHI Co., Ltd. (TKD)**

**Company profile** 

Address	63-1 Kakihata, Inuyama, Aichi 484-0901 Japan
Tel	+81-568-67-2160
Fax	+81-568-67-2097
URL	http://www.tokoden.co.jp/
E-mail	info@tokoden.co.jp
Contact person	Katsushiro SENDA
Title	President

#### **Company Profile**

Founded: June 1967Capital: JPY 96 millionSales: JPY 1,675 million for 2010 (approx. US\$20.4 million at 82.02 yen/dollar)Employees: 194 (November 2010)

#### **Major Line of Business**

Eelectrical wiring system and ground test equipments for aerospace market.

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd. Toshiba Social Infrastructure System Company Fuji Heavy Industries, Ltd. NEC Corporation

#### Certification

JISQ9100:2004



#### **Our Strengths**

- We have contributed to aerospace industries as specialized manufacturer of electrical wiring and ground function test equipment since foundation of 1967.
- Based on over 40 years experience, technical know-how, and aerospace quality management system, we provide environment-proof and high reliable cable assemblies to various fields of industries.
- We expect to provide our products and service to inside of Japan and Asian area as an OEM partner of those prime makers, equipment makers or PMA holders. And as a member of MASTT(Meiyu Aerospace Support Technology Team) which is composed of regional 24 aero-engine parts manufacturers, we expect to deploy our business to international market in a field of electrical wiring and equipments.

### VR Techno Center Inc.

**Company profile** 

Address	1-1, Techno Plaza, Kakamigahara, Gifu 509-0109, Japan
Tel	+81-58-379-2277
Fax	+81-58-379-2282
URL	http://www.vrtc.co.jp/
E-mail	webmaster@vrtc.co.jp
Contact person	Katsuyoshi Kawai
Title	Coordinator, Human Resources Strategic Enhancement, Aircraft Industries

#### **Company Profile**

Founded: April 1993Capital: JPY 2.3 billionSales: JPY 330 million for fiscal 2008 (approx. US\$4.0 million at 82.02 yen/dollar)Employees: 24 (as of April 2010)

#### **Major Line of Business**

**Strategic enhancement of human resources** : Cultivation of talented human resources for the aerospace industry.

**Research and development** : Research for virtual reality engineering and robotics technologies and development of products.

**Development of local network**: Provider business, Network design/establishment/maintenance. **Rental business**: Providing offices for R&D.

#### **Major Customers**

Ministry of Economy Trade and Industry (concerning strategic enhancement of human resources and formation of regional industries)

Japan Atomic Energy Agency (concerning development of a VR underground experience system) Japan Aerospace Exploration Agency (concerning development of air traffic support systems)

#### **Our Strengths**

- We have been cultivating human resources who can cope with the needs of local industry in fields such as aircraft manufacturing and 3D CAD education.
- We also have been engaged in the development of products that employ VR/robotics technologies.

Patent : Patent applied for aircraft maintenance support system (No. 2009-251105)



### Wada Aircraft Technology Co., Ltd.

**Company profile** 

Address	72-1, Gogazima, Haruhi, Kiyosu-shi, Aichi 452-0962, Japan	
Tel	+81-52-401-4711	
Fax	+81-52-401-4712	
URL	http://www.wadass.com	
E-mail	n@wadass.com	
Contact person	Satoru Hanaki	
Title	General Manager, Manufacturing Department	

#### **Company Profile**

Founded: June 1964Capital: JPY 10 millionSales: JPY 1,000 million (approx. US\$12.2 million at 82.02 yen/dollar)Employees: 165 (as at April 2010)

#### **Major Line of Business**

1. Manufacture of jigs and components for aerospace equipment

2. Temporary staffing services

#### **Major Customers**

Mitsubishi Heavy Industries, Ltd., Nagoya Aerospace Systems Works

#### Certification

JISQ9100, ISO9001





#### **Our Strengths**

Manufacture of jigs is part of our development work. Our development is innovation that leads the future. Wada Aircraft Technology is a maker of R&D oriented jigs that create the future of aircraft jigs.

#### Design

Using cutting-edge CAD/CAM systems such as CATIA V5, we provide more sophisticated designs and higher quality programming.

#### Manufacturing

Coupled with various machinery and equipment, including high-specification large-size "Bridge type 5-axis machining centers" and craftsmanship in assembly and adjustment, we have established an outstanding manufacturing system that combines short delivery time and high quality.

#### Quality assurance

To maintain the high precision level required by aerospace components, we use equipments such as 3D measuring devices and laser trackers, thus assuring customers of our reliability through close quality control.

Aerospace jigs and components are produced at our four factories, with the main factory in Haruhi.

### Company profile

### MASTT (Meiyu Aerospace Support Technology Team)

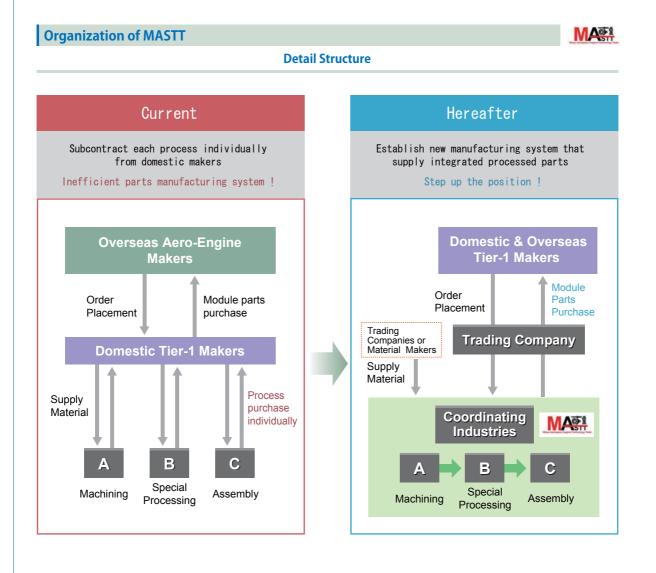
E-mail

info@mastt.jp

#### Organization

MASTT was established by 24 makers supporting aerospace market

- Ace quality management system backed with ISO 9001 and JIS Q 9100
- High precision machining technology for special material, Ni-based, Ti-based and so on
- High precision assembly technology
- Special process technology backed with NADCAP or special certification of aero-engine makers
- · New manufacturing system that supply integrated processed parts



#### Availability o total manufacturing process through 「Machining」→「Special process」→「Assembly」!!

#### **Machining specialist**

#### Machining specialist, large-size parts

- AIKOKU ALPHA CORPORATION ITO TEKKO CO., LTD. HIKARI MANUFACTURE CO., LTD.
- MIZUKI INDUSTRIAL CO., LTD. HEIWA SANGYO CO., LTD. MITSU SEIKI CO., LTD. NASADA CO., LTD.

#### Machining specialist, mid-size parts

- NT SEIMITSU CORPORATION KOSAKA IRON WORKS CO., LTD. ITO TEKKO CO., LTD. SANKO MFG CO., LTD.
- HIKARI MANUFACTURE CO., LTD. MIZUKI INDUSTRIAL CO., LTD. TAMAGAWA INDUSTRIES CO., LTD.
- HEIWA SANGYO CO., LTD. MITSU SEIKI CO., LTD. NASADA CO., LTD. KATO MANUFACTURING CO., LTD.
- YAMANOUCHI CO., LTD. MIZUNAMI SEIKI CO., LTD. MATSUDA KATO CO., LTD.

#### Machining specialist, smail-size parts

● NT SEIMITSU CORPORATION ● KOSAKA IRON WORKS CO., LTD. ● SANKO MFG CO., LTD. ● SHINKOSHA CO., LTD.

#### Machining specialist, parts made from aliminum

● AIKOKU ALPHA CORPORATION ● ASAHI KINZOKU KOGYO INC. ● ISOMURA INDUSTRIAL CO., LTD.

- ITO TEKKO CO., LTD. MIZUKI INDUSTRIAL CO., LTD. MIZUNAMI SEIKI CO., LTD.
- KATO MANUFACTURING CO., LTD. HEIWA SANGYO CO., LTD. MITSU SEIKI CO., LTD. NASADA CO., LTD.
- YAMANOUCHI CO., LTD.

Machining specialist, parts made from titanium, inconel, stainless alloys

- AIKOKU ALPHA CORPORATION ISOMURA INDUSTRIAL CO., LTD. MIZUKI INDUSTRIAL CO., LTD.
- HEIWA SANGYO CO., LTD. MITSU SEIKI CO., LTD. KOSAKA IRON WORKS CO., LTD. SANKO MFG CO., LTD.
- TAMAGAWA INDUSTRIES, LTD. HIKARI MANUFACTURE CO., LTD.

#### ECM and EDM specialist

EDM: 
 HODEN SEIMITSU KAKO KENNKYUSHO CO., LTD.
 SANKO MFG CO., LTD.
 TAMAGAWA INDUSTRIES, LTD.
 ISOMURA INDUSTRIAL CO., LTD.

#### Special-process specialist(Nondestructiv testing, Shot peening, Chemical processing, Coatings/paintings)

● APC AEROSPACEIALITY INC. ● HODEN SEIMITSU KAKO KENNKYUSHO CO., LTD. ● ASAHI KINZOKU KOGYO INC.

#### Sub-assembly specialist

Wiring: ● SANYU INDUSTRIES, LTD. ● TOYO KOKU DENSHI CO., LTD. Assembly: ● SANYU INDUSTRIES, LTD. ● TOHMEI INDUSTRIEIS CO., LTD.

### **CENTRAL JAPAN INTERNATIONAL AIRPORT COMPANY, LIMITED**

Address	1-1, Centrair, Tokoname, Aichi, Japan	
Tel	+81-569-38-7777	
Fax	+81-569-38-7773	
URL	http://www.cjiac.co.jp/english/eng_index.html	
E-mail	centrairweb@cjiac.co.jp	

#### **Company Profile**

Founded : May 1998

port pro

Capital : JPY 83.668 billion

Sales : JPY 42.272 billion for fiscal 2009 (approx. US\$515 million at 82.02 yen/dollar)

Employees : 232 (including directors)(as of April 2010)

#### Major Line of Business

1. Establishment and management of Central Japan International Airport and aviation security facilities

- 2. Construction and management of functional facilities such as passenger and cargo terminals, and convenience facilities such as stores
- 3. Business incidental to the above

#### Certification

#### ISO14001(2000), ISO9001(2008)

- Ranked first in [2005 AETRA customer satisfaction evaluation] (category for 5 15 million passengers)
- Ranked first in 「ASQ( the Airport Service Quality) Survey 2006, 2007, 2008」
- (category for 5 15 million passengers)
- Ranked first in 「Air Cargo Excellence Survey 2008,2010」

#### **Our Strengths**

- Gateway from the World to Central Japan With 300 weekly flights around 30 cities in the world, Central Japan (Chubu) International Airport, or Centrair, plays a large role to promote business, leisure travel and cultural exchanges. The airport facility offers efficient interline connections, making it easy for tourists to travel abroad from anywhere in Japan.
- Airport with Leisure Facilities The terminal building features nearly 100 excellent shops and restaurants. Various weekend events also attract both airline passengers and local residents. Enjoy a day of Airport shopping, dining and entertainment !
- Customer focus All airport staff members are committed to promotin customer satisfaction.
- Supporting Local businesses Located in Central Japan, a global manufacturing hub, Centrair supports local industries by promoting air freight services.

The airport also serves as a cargo hub for transporting the all-new Boeing 787 Dreamliner components.



#### **Major Customers**

2007 Passengers (International&Domestic)	11,821,894
Cargo(International)	206,953t
2008 Passengers (International&Domestic)	10,808,814
Cargo(International)	123,653t
2009 Passengers (International&Domestic)	9,259,322
Cargo(International)	119,021t

# **NAGOYA AIRPORT**

Airport profile

**Address** 

(Airport) Toyoyama-cho, Nishikasugai-gun, Aichi 480-0202, Japan

**Airport opened** 

February 17, 2005

#### **Establishment / Administration**

Aichi Prefectural Government Division in charge: Civil Aviation Administration Division, Department of Regional Development and International Affairs

Address: 3-1-2 Sannomaru, Naka-ku, Nagoya, Aichi 460-8501, Japan

Tel: +81-52-954-6131 Fax: +81-52-961-3247 URL: http://www.pref.aichi.jp/kouku/ E-mail: kouku@pref.aichi.lg.jp

#### **Designated Operator**

Nagoya Airport Terminal Building Co., Ltd. Address: Toyoyama-cho, Nishikasugai-gun, Aichi 480-0202, Japan Tel: +81-568-28-5633 (General Information desk) URL: http://www.nagoya-airport-bldg.co.jp/en/

#### **Flight Services**

**Regular domestic routes** : Regular domestic flights (commuter flights) are in service. **Business aircraft** : Airport facility for business jets, both domestic and overseas.

#### **Sales Points**

The nation's first terminal exclusively for business jets

Ample Slots, Parking Spots

Special business aircraft passenger terminal, separate from regular passengers

- High-level Privacy and Security
- Quick CIQ Process (All are conducted in one room.)
- Short passenger traffic route (only 70m [230ft] between the parking area and business aircraft terminal)

#### Performance

Fiscal 2006: No. of commuter aircraft passengers415,217 / No. of international business aircraft arrivals119Fiscal 2007: No. of commuter aircraft passengers430,088 / No. of international business aircraft arrivals143Fiscal 2008: No. of commuter aircraft passengers410,499 / No. of international business aircraft arrivals97Fiscal 2009: No. of commuter aircraft passengers439,745 / No. of international business aircraft arrivals67



# Gifu University

Address	1-1 Yanagido, Gifu, Gifu 501-1193, Japan
Tel	+81-58-230-1111 (main switchboard)
Fax	+81-58-293-3294 (Office of Public Relations)
URL	http://www.gifu-u.ac.jp/english/ (English site)
E-mail	fukagawa@gifu-u.ac.jp
Contact person	Hitoshi Fukagawa
Title	Professor of Special Mission

#### Profile

Gifu Teacher's Training School founded in 1873, A medical school attached to a public hospital, senior high school of agriculture and forestry, industrial high school, and others were predecessors of today's Gifu University, which was founded in 1949. The main university of Gifu Prefecture, with 5 faculties, 8 graduate schools and 12 various centers, on a campus unified in 2004 in a rich environment. About 5,800 undergraduate students, 1,700 graduate students, and 1,800 teachers and administration staff. About 40% of students belong to the faculty of engineering and the graduate school of engineering, thus providing excellent human resources for the Chubu (central Japan) region, where major manufacturing industries are located, such as automobiles and aircraft. Gifu University aims to become a top runner among local universities in Japan.

#### Introduction to Activities of Aerospace-related Research Laboratories

**Department of Mechanical and Systems Engineering**: Aerodynamic levitation type, high speed transportation system. Engine for next-generation ultra high-speed aircraft. Metal dies, CFRP forming dies and titanium machining. Reliability of lightweight structural materials such as CFRP and magnesium.

Department of Human and Information Systems : Electric propulsion rockets, small-size rockets, self-directed air-movement robots.

**Department of Materials Science and Technology**: Composite materials, recycling of composite materials. **Department of Mathematical and Design Engineering**: Finite element method / solid-state material strength.

Environmental and Renewable Energy Systems Division : Recycling technology for CFRP

**Center for Advanced Die Engineering and Technology**: Forming of difficult-to-form materials such as titanium. Study on impact deformation (The graduate school curriculum includes several aerospace-related lecturers.)



#### **Recent Activities**

- In 2004, "Space club Gifu" was started, attending a rocket event in France every year (CFRP-made rockets).
- From 2006 onwards, dispatching lecturers every year in support of the event "Cultivation of innovators for aerospace manufacturing, from Central Japan Gifu.".
- In 2010, a memorandum was made with Gifu Prefecture and Kawasaki Heavy Industries, Ltd. Concerning support for the operation of "Gifu technological innovation center.). A specialist was then dispatched to the "Study group for aeronautical components & materials." And started a CFRP study group at Gifu University.
- In December 2010, the "Hayabusa project support team" received a Ministry appreciation award.
- Joint research planned with the Gifu Technological Innovation Center, scheduled to open in May 2011, will have facilities for research in composite materials processing.

# 35 University profile

# **Mie University**

Address	1577 Kurimamachiya-cho Tsu city, Mie 514-8507, Japan	
Tel	+81-59-231-9763	
Fax	+81-59-231-9743	
URL	http://www.mie-u.ac.jp/en/	
E-mail	liaison@crc.mie-u.ac.jp	
Contact person	Daisuke Uyei	
Title	R&D research integrator, Social Cooperation Research Center	

#### Profile

Mie University has five faculties (Faculty of Humanities, Law and Economics, Facility of Bioresources, Faculty of Education, Faculty of Medicine, and Faculty of Engineering) and five graduate schools. In addition to them, Graduate School of Regional Innovation Studies has started in April, 2009 (Total number of students:7000, Total number of academic staffs:700). Further, we have a number of affiliated facilities such as a university hospital, experimental schools, farms, forests, a fishery research center and a training ship named Seisui-maru. These facilities bear the most important issues for the future of our country. Mie University is determined to be working on with regional people to respond to the demand of society.

#### **Aerospace Education and Research**

The Social Cooperation Research Center is Mie University's "multidisciplinary contact point" for promoting collaborations between industry, academia, and government not only for Aerospace Educations and researches. It fulfills this role in cooperation with the Management Office for Intellectual Property, the Graduate School of Regional Innovation Studies and Mie TLO Co., Ltd. [http://www.mie-tlo.co.jp/]

#### **Recent Activities**

Oct. 2003 Yokkaichi Front office has been established.

Mar. 2008 Development of downwind horizontal axis wind turbine for low wind speed condition has been done. July. 2008 Mie University Research Center has been established. [http://www.mie-u.ac.jp/research/] Oct. 2008 Advanced battery Research Center has been established.

Apr.2009 Research Center for creation was reorganized into Social Cooperetion Research Center [http://www.crc.mie-u.ac.jp/]

Apr. 2009 Iga Research Institute has been established. [http://www.iga.mie-u.ac.jp/] Apr. 2009 Graduate School of Regional Innovation Studies has been established. [http://www.mie-u.ac.jp/innovation/] Sep. 2009 Research Center of Security Technology for Industry and Social Infrastructure has been established.



Wind tunnel experiment ( Optimized Design Research and Development for Custom Parts based on Motorcycle Riding Posture Analysis via Ergonomics)

Active service of the needs of

## Nagoya Institute of Technology

**University profile** 

Address	Gokiso-cho, Showa-ku, Nagoya, 466-8555 Japan	
Tel	+81-52-735-5336	
Fax	+81-52-735-5342	
URL	http://eng.nitech.ac.jp/	
E-mail	tnakamur@nitech.ac.jp	
Contact person	Takashi Nakamura	
Title	Vice-President, Professor, Graduate School of Engineering, Techno-Business Administration	

#### Profile

Founded as Nagoya Higher Technical School in 1905. Faculty of Engineering is composed of seven Day Course Departments with about 4,000 students and four Evening Course Departments with about 400 students. Graduate School of Engineering is composed of seven Departments with about 1,600 Graduated Students. Nagoya Institute of Technology, situated in the world-quality manufacturing area of Central Japan, offers High-Class Education and Research that support the Technical Innovation and Industry Enhancement of this Area.

#### **Aerospace Education and Research**

- Quality Innovation Techno-Center
- Ceramics Research Laboratory
- International Center for Automotive Research
- Education in Department of Mechanical Engineering: Hydrodynamics, Thermodynamics, Dynamics of Turboengine, Hydro-Simulation
- Education in Graduate School of Engineering Physics, Electronics and Mechanics: High-Speed kinetics, Theory of Turbulent Flow, Numerical Hydrodynamics

#### **Recent Activities**

- 2007.4 3D-CAD (CATIA V5) Training Course started. (MEXT program)
- 2008.4 Study on High-Efficiency Machining for Heat Resistant Alloy started.
- 2010.4 Priority Research Project of Aichi Prefecture "Development of Environment-Friendly Nano/Micro-Processing Technology" started.
- 2011.4 Participation in Aerospace Industry Forum Lead by Ministry of Economics, Trade and Industry, Chubu





# Nagoya University

Address	Furo-cho, Chikusa-ku, Nagoya 464-8603, Japan	
Tel	+81-52-789-4402	
Fax	+81-52-789-4402	
URL	http://www.nagoya-u.ac.jp/en/	
E-mail	igdl@fuji.nuae.nagoya-u.ac.jp	
Contact person	Akihiro Sasoh	
Title	Professor, Department of Aerospace Engineering, School of Engineering	

#### Major Activity

Education and research

#### **Profile**

Funded as one of seven imperial universities in Japan, currently having 9 undergraduate schools and 13 graduate schools and 3 research institutes. Two graduates and two academia have obtained Novel prize, evenly in physics and chemistry. About 1/3 of ten thousand undergraduates and 1/4 of 6300 post-graduates belong to school of engineering.

Department of Aerospace Engineering have twenty two academic staff including three visiting academia from Japan Aerospace Exploration Agency (JAXA). Composite Engineering Research Center was founded February 2009.

#### **Aerospace Education and Research**

- Aerodynamics and Propulsion Laboratory: Fluid dynamics, Ionized gas dynamics, Propulsion system engineering
- Structure and Control Laboratory: Structural mechanics, Control systems engineering, Aerospace flight system engineering
- Aerospace vehicle design engineering (Collaborative Chairs from JAXA )
- · Environmental thermo-fluid systems (EcoTopia Science Institute)
- Composite Engineering Research Center (School of Engineering)



## **College of Naka-Nippon Aviation**

Address	1577 Hazama, Seki City, Gifu 501-3924 Japan		
Tel	+81-575-24-2521		
Fax	+81-575-22-9816		
URL	http://www.cna.ac.jp		
E-mail	kouhou@cna.ac.jp		
Contact person	Katsuhiko Okada	Established	1st April, 1970
Title	Chief of Administration Office	Employees	46 (Faculty), 18 (Staff), Total 64

#### **Objectives and Features**

The College of Naka-Nippon Aviation (C.NA) is one of the largest, most widely renown aviation colleges in Japan, where high school graduates receive practical training to prepare them for a bright future in the aviation industry. "WE TAKE PRIDE IN BUILDING GREAT PEOPLE, NOT JUST GREAT TECHNICIANS"

This motto emphasizes ethical attitudes in our students, as well as their technical abilities. In accordance with this motto, faculty members of C.NA provide students with a special curriculum, which includes the highest in technological education with an equally important focus on human relations. The Japanese aerospace industry considers this policy with high regard when employing C.NA graduates.

#### **Major Program Description**

The College of Naka-Nippon Aviation (C.NA) has three (3) programs; 1) The Aviation Maintenance Program : Curriculums accredited by the Japanese Government which grants the national license for both aircrafts and helicopters upon graduation ; 3-year program, 135 students. 2) The Aviation Systems Program : Curriculums reflected the needs of aircraft manufacturing companies and avionic companies ; 3-year program, 100 students. 3) The Airport Service Program : Curriculums to train specialists for a variety of airport ground services, ground staff and an international air cargo operators and licensed custom clearance agents in the airfreight business ; 2-year program, 100 students.

#### **Employment in the Aviation Industry**

MHI (Mitsubishi Heavy Industries, Ltd), KHI (Kawasaki Heavy Industries, Ltd), FHI (Fuji Heavy Industries, Ltd), IHI (Ishikawa-jima Heavy Industries, Ltd), Shin-Meiwa Heavy Industries, JAL Engineering, ANA Aircraft Techniques, ANA Flight-Line Techniques, ANA Avionics, ANA Logistic Service, JAL Cargo Services, Northwest Airlines, Cathay-Kansai Terminal Services, ANA Chubu-Airport

#### **Overseas Training By Affiliated Schools**

Spartan College of Aeronautics and Technology (Tulsa, Oklahoma USA), South Seattle Community College (Seattle, Washington USA), Korea Aviation Polytechnic College (Sacheon, Gyeongsangnam-Do Korea)



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