



AICHI-NAGOYA

THE HEART OF JAPANESE AEROSPACE





AICHI-NAGOYA AEROSPACE CONSORTIUM

The Heart of Japanese Aerospace, AICHI-NAGOYA

Aichi Prefecture is the world's leading industrial manufacturing region, which is home to the headquarters of both a passenger jet manufacturer and major automotive manufacturers. Mitsubishi Aircraft and Mitsubishi Heavy Industries, Ltd., develop the Mitsubishi SpaceJet Family, which is the first "made-in-Japan" passenger jet. One third of Body parts for the Boeing 787 are produced by Mitsubishi Heavy Industries, Ltd., Kawasaki Heavy Industries, Ltd., and SUBARU Corporation. The Japanese national flagship launch vehicle, the HII-A, HII-B, and H3, are also developed and produced in our region. Furthermore, Aichi Prefecture is the world's largest automotive industrial region, where the headquarters of Toyota Motor Corporation and its exceptional parts suppliers are located.

AICHI-NAGOYA AEROSPACE

CONSORTIUM strives for development of the regional aerospace industry in Aichi Prefecture through the collaboration of all sectors of the aerospace industry in our region, such as The Aichi Prefectural Government, The City of Nagoya, industry-supporting organizations, industries and universities. We serves as a bridge toward facilitating business relations internationally, under cooperation with overseas local governments and cluster organizations where aerospace industries are concentrated.

Our consortium promotes the aerospace industry through various initiatives, such as networking events, exhibits at international events, training programs and seminars for technical level workers, internship programs, and the formation of R&D teams.

Members



Overview



GDP Larger than Denmark and Philippines
\$360 billion

Population **7.5** million

Companies **220,388**

Employees **4.2** million

Universities **50**

Turnover **\$426** billion
 No. 1 in Japan for 41 consecutive years

Export **\$176** billion
in Nagoya Customs
 No. 1 in Japan

Turnover of main industries

Automotive **\$231** billion
 No. 1 in Japan
TOYOTA
DENSO
AISIN
MITSUBISHI MOTORS

Material **\$38.6** billion
 No. 1 in Japan
Metal
Rubber
Plastic

Production machinery/
Robotics **\$20.5** billion
 No. 1 in Japan
Yamazaki Mazak
OKUMA
DMG MORI
JTEKT

Aerospace

Aerospace Industry in the Chubu Area centered on Aichi Prefecture

Turnover **\$6.90** billion



Domestic share of turnover
50%

Companies **187**

Employees **13,932**



© Mitsubishi Aircraft Corporation

Prime maker
Mitsubishi
SpaceJet
development and final assembly



B787
Approx. **1/3**
of B787 body parts production



Japanese Flagship
Launch Vehicle
H-IIA, H-IIB, H3

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No. Company Name

01 TAKAGI STEEL Co., Ltd.

02 NORITAKE CO., LIMITED

03 Mitakaseihan Co., ltd.

04 Takasago Electric, Inc.

05 Shinmei Industry Co., Ltd.



TAKAGI STEEL Co., Ltd.



Address	3-308 Fujimae Minato-ku Nagoya Aichi 455-0855, Japan
Tel	+81-52-301-1801
Email	t-takagi@takagi-steel.co.jp
Website	www.takagi-steel.co.jp
Contact Person	President and CEO Tomohide Takagi Nagoya Sales Manager Kazutaka Yamashita
Capability Category	Sales and distribution of materials for aircraft.
Representative	President and CEO Tomohide Takagi
Sales Amount	1,200 million yen
Capital	50 million yen
Employees	33 people
Established	1955/4/8
Certification	EN 9120 (obtained in June 2018)
Major Customers	AISIN SIN'EI Co., Ltd DENSO Co., Ltd AMANO Corporation ALPHA Corporation FDK Corporation Konica Minolta, Inc. JTEKT Corporation THK Co., Ltd Tsukiboshi Manufacturing Co., Ltd. FUKUI BYORA Co., Ltd NITTO KOGYO Corporation Nitta Corporation HAMANAKODENSO Co., Ltd HAMANA PARTS INDUSTRY Co., Ltd Hirose seikou Co.,Ltd. NIPPON POP RIVETS AND FASTENERS Ltd MIWA LOCK Co., Ltd. Musashi Seimitsu Industry Co., Ltd. MEIRA Corporation UNICRAFT NAGURA Corporation YKK Corporation

Business Overview

In the business area, we have partnership with over 200 companies in over 60 years for sales of materials mainly for special steels and tool steels. We have advantage that be able to do parts completion to one-stop by collaboration with partners and utilizing our own factory. In line with the acquisition of EN 9120 certification, we have established a specialized department "Aviation Group" across sales, management and warehouse. As a result, the quality inspection and control system for handling aircraft materials has been strengthened.

Products · Materials · Part Sizes · Facilities & Equipment

【Handling material】

Aircraft Materials: A286, 17-4PH, 17-7PH, 15-5PH, PH13-8Mo, Nimonic80A, Inconel 718, Waspaloy, PWA 92, Hastelly, Ti6A4V, 17-22A, H-11, Greek-Ascology, 4130, 4140, 4330, 8740, A2017, A2024, A6061, A7075

Special steel materials: SKH51, SKH55, SKH57, HAP, YXR, DURO, SLD-i, SLD-MAGIC, SKD11, SKS, SK, DAC-MAGIC, SKD61, HPM, NAK, SUS, SC, SCM, SNCM

【Major equipment】

Cutting machine, Machining center, NC grinding machine, three-dimensional measuring machine, three-dimensional CAD / CAM.



Our Strength

We can sales the only drawbench materials (about aeronautical field) produced by Japan domestic. We provide production scheme with "Hitachi Metals, Ltd." a major manufacturer of aviation materials in Japan and a drawbench processing. This method is in demand for heat resistant steels such as A286 and Inconel 718.



Needs we can correspond / Business partners we want

- We offer various service such as arranging purchase parts, designing, manufacturing and inspection, which can save your labour. (We have achieved 40% cost reduction from target price.)
 - We offer service with low-cost, high quality and short delivery time. (3 days is the fastest delivery after your order)
- We offer KAIZEN (e.g. cost reduction by design changes)

Office & Plants

- Headquarters :
3-7-19 Nishiki, Naka-ku, Nagoya, Aichi 460-0003, Japan
- Nagoya Office :
3-308 Fujimae, Minato-ku, Nagoya, Aichi 455-0855, Japan
- Toyohashi Office :
51-1 Motoyashiki, Mitsuya-cho, Toyohashi, Aichi 441-3114, Japan
- Seto Factory :
16 Higashiyasudo-cho, Seto, Aichi 489-0053, Japan





NORITAKE CO., LIMITED *Noritake*

Address	3-1-36, Noritake-Shinmachi, Nishi-ku, Nagoya 451-8501, Japan
Tel	+81-52-561-9868
Email	newcera@n.noritake.co.jp
Website	https://www.noritake.co.jp/
Contact Person	Sumio Nishiwaki Shuji Kawabata
Capability Category	Manufacturing (From Prototype to Mass Production) Development, design, and commercialization of Ceramics Cores for precision investment casting and industrial abrasive grind wheel. Development and commercialization by additive manufacturing.
Representative	Hiroshi Kato
Sales Amount	1,198 Million USD /2018 (@ 105 yen/USD)
Capital	149 Million USD (@ 105 yen/USD)
Employees	5091
Established	January 1st, 1904
Certification	ISO9001, JQA-2835 and ISO14001
Major Customers	MHI, KHI, IHI, HOWMET AEROSPACE

Business Overview

NORITAKE's Ceramic Cores are being used for manufacturing high-precision rotor and stator blades for gas turbines and jet engines, these ceramic cores contribute greatly to high quality of precision investment casting materials. In addition, we can make the Ceramic Cores by additive manufacturing (3D printing) which contributes greatly to the shortening the development and commercialization speeds to meet customer or market demands. In addition, we can develop, design and commercialize the various abrasive tools for difficult-to-machine materials including heat-resistant steel.



Products · Materials · Part Sizes · Facilities & Equipment

The product line of NORITAKE's Ceramic Cores are shown at below or above table. We have various molding methods and materials, and we can support any sizes and shapes of the products.

Selection is made from among the material model on the basis of molten metal temperature, casting materials, and shape (size) of cast product at customer's request.

Minimum thickness is 0.30mm, Maximum thickness is 150mm, Maximum length is 1,000mm

In addition, we can offer most suitable abrasive tool and the specifications to any machining materials or abrasive method according to customer or market demands.

Material model 品番	MONARC					
	N200	N400	N450	N500	N600	N700
Major composition 主成分	SiO ₂ -ZrSiO ₄	SiO ₂ -ZrSiO ₄	SiO ₂ -ZrSiO ₄ -Al ₂ O ₃	SiO ₂ -Al ₂ O ₃	SiO ₂ -Al ₂ O ₃	SiO ₂ -ZrSiO ₄
Molding method 成形方法	Pressing method 熱圧成形	Medium pressure injection molding 中圧射出成形			High pressure injection molding 高圧射出成形	
Trace impurities 微量不純物	Fe <300 ppm Pb <25 ppm Bi <1 ppm Ag <1 ppm	<80 ppm <25 ppm <1 ppm 1 ppm	<80 ppm <25 ppm <1 ppm <1 ppm	<30 ppm <25 ppm <1 ppm <1 ppm	<200 ppm <25 ppm <1 ppm <1 ppm	<300 ppm <25 ppm <1 ppm <1 ppm
Characteristic values 特性値	Porosity 気孔率 30%	34%	33%	34%	35%	34%
Thermal expansion rate at 1000°C 熱膨張率	0.25%	0.25%	0.25%	0.25%	0.10%	0.25%
Bending strength at Room Temperature 室温曲げ強度	7Mpa	6Mpa	9Mpa	10Mpa	7Mpa	8Mpa
at 1,000°C 1,000°C時	24Mpa	20Mpa	25Mpa	24Mpa	20Mpa	22Mpa
Size サイズ	Maximum length 最大長 $\leq 1000\text{mm}$	-L1000mm		-L500mm		-L250mm
Minimum thickness 最小肉厚	0.80mm	0.50mm		0.50mm	0.30mm	
Cast type 積造用途	CC/DS/SC	CC	CC/DS/SC	CC	CC/DS/SC	

Our Strength

NORITAKE is one of the leading company for "Ceramics" and has 4 different business fields with the application and development of a variety of ceramics manufacturing technologies which come from tableware production we originally started.

Utilizing "NORITAKE core technology" which means that controlling the size and volume of pores in ceramic and our special materials design and firing technology, our special industrial grinding wheels with optimized abrasive grain arrangement and our special ceramics cores support various industries.

Needs we can correspond / Business partners we want

We would like to be one of the business partners with any oversea companies for the precision investment casting on Aero-engines, IGT and something.

Office & Plants

- Miyoshi Factory, Aichi Japan (For Ceramic Cores)
- Matsusaka Factory, Mie Japan (For Ceramic Cores)
- Miyoshi Factory, Aichi Japan (For Industrial abrasive grind wheel)
- Kurumei Factory, Fukuoka, Japan (For Industrial abrasive grind wheel)



Mitakaseihan Co., Ltd.



Address	83 Futami-cho, Toyokawa, Aichi, Japan
Tel	+81-533-85-4351
Email	sales_gr@mitaka-seihan.co.jp
Website	http://www.mitaka-seihan.co.jp/
Contact Person	Taichi Takasu - Chief of Aerospace intergration/Executive vice president Katou Katsuo - Manager of domestic / overseas market development Hoang Dao - Oversea sales staff

Capability Category	Manufacturing high standard industrial nameplates such as for aerospace, etc ① Anodizing and etching ② Plate making (silk screen printing, label printing, etc.) and processing with molds ③ On-demand printing and processing without initial cost ④ Advanced technology equipment such as 3Axis-YVO4SHG laser markers ⑤ Hi speed processing (double-sided tape, thin plastic sheet, insulating sheet, rubber, sponge, etc.) High-precision Thomson pressing"
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Representative	Ryuta Takasu
Sales Amount	¥ 344 million
Capital	¥ 30 million
Employees	65
Established	April 7, 1955
Certification	JISQ9100(AS9100):2016, ISO9001:2015, ISO14001:2015
Major Customers	Nabtesco Corporation, Yokogawa Electric Corporation etc

Business Overview

[Buyer/Seller] We supply high standard industrial nameplates and traded goods in Japan and overseas.
 Self - contained manufacturing system
 With superiority of QCD control, we ensure to comply and fulfill customer's requirements

Products · Materials · Part Sizes · Facilities & Equipment

- Product information: We handle all kinds of industrial nameplates
- Handled materials: Metal (aluminum 0.1t-4.0t) / High-performance plastic film in general, labels
- Specific size: Please contact us.
- Main equipment: Alumite processing, silk screen printing machine
 High technology on-demand printing machine
 3Axis-YVO4SHG laser marker, 3D measuring equipment
 Salt spray tester, etc.



Our Strength

- ① Founded in 1955, this year gain 65 year experience.
- ② Highly customer recommendation in various industries.
- ③ Initial costless & on demand Processing (for both small lot and mass production).
- ④ Conventional marketing & Digital transformation for saving



Needs we can correspond / Business partners we want

- ① Partner s for high quality requirement industries
- ② Total industrial nameplates solutions
- ③ Consideration of importing/exporting goods. <We also have t trading subsidiary>

Office & Plants

[Head Office] 83 Futami-cho, Toyokawa-shi, Aichi, Japan
 [Noguchi Factory] 51-6 Tsuiji, Noguchi-cho, Toyokawa-shi, Aichi, Japan
 [Sales Office] 405 Frente Shinosaka 1-2-5 Miyahara, Yodogawa, Osaka, Japan



Takasago Electric, Inc.

Address	66 Kakitsubata, Narumi-cho, Midori-ku, Nagoya, Aichi 458-8522, Japan
Tel	+81-70-6580-2404
Email	info@takasago-elec.co.jp
Website	https://www.takasago-fluidics.com/
Contact Person	Masahiko Inoue
Capability Category	Valves and pumps. Development, design and manufacture of the following products: <ul style="list-style-type: none"> • Solenoid valves including hydraulic valves, thruster valves, pinch valves, proportional valves, etc. • Check valves • Small liquid pumps and micro pumps • Integrated fluidic systems for space experiments • Precisely machined metallic and plastic parts



Representative	Koichi Kojima, Haruyuki Hiratani
Sales Amount	US\$30.6M (¥ 106/\$, as of September 2020)
Capital	US\$849K (¥ 106/\$)
Employees	265 (as of September 2020)
Established	July 1st 1959
Certification	AS9100/JISQ9100/EN9100, ISO9001
Group Name	Takasago Electric (DBA in US: Takasago Fluidic Systems / TFS)
Major Customers	NASA, JAXA, Tamagawa Seiki Co., Ltd., Tokyo Aircraft Instrument Co., Ltd., ALE Co., Ltd., etc.

Business Overview

Takasago has provided more than 10,000 different valves, pumps and other related products for medical, diagnostic and analytical applications over the last 60 years. In the last decade we started our aerospace business that includes hydraulic valves, thruster valves and experimental devices.

Products · Materials · Part Sizes · Facilities & Equipment

- > Thruster valves for 2 – 20N class satellite propulsion systems. The smallest weighs only 8g.
- > Ultra-small and ultra-lightweight (1.5g~) valves
- > Hydraulic solenoid valves and check valves
- > Fuel valves
- > Pressure adjustment valves for pilot suits
- > Valves for galley inserts and lavatory systems

Facility & Equipment

- > Processing Machines
 - 5-axis grinding machine (ROKU-ROKU Co., Ltd.), Machining centres (FANUC Corporation), etc.
- > Inspection Machines
 - 3D coordinate measuring machine (Carl Zeiss AG)
- > Evaluation Equipment
 - 500 – 4500psi hydraulic testing machine (NETUREN HYMEC CO., LTD.)

Our Strength

- > High-level quality control with 60 years' experience in the medical industry
- > Custom design solution and high-mix low-volume production to meet various customer needs
- > Customisation and miniaturisation to make a system light-weight
- > In-house manufacturing from precision machining and in-clean-room assembly to final function tests.

Needs we can correspond / Business partners we want

- We can supply custom-designed valves for hydraulic, ventilation, galley, lavatory and satellite propulsion systems. We can directly correspond to tier 1 – 2 suppliers for such systems.
- We seek European business partners who can assist us with marketing and business development.

Office & Plants

<Japan> Headquarters: Nagoya, Branch Offices: Tokyo, Kyoto
 <U.S.A>TFS U.S. Branch Office : Massachusetts
 <China>Takasago Electric (Suzhou) Co., Ltd: Suzhou
 Shenzhen Branch Office : Shenzhen



Shinmei Industry Co., Ltd.

SHINMEI

Address	3-20, Koromogahara, Toyota-shi, Aichi, Japan
Tel	+81-565-32-3450
Email	miway@shinmei.co.jp
Website	https://www.shinmei.co.jp/
Contact Person	Yusuke Miwa



Capability Category	<p>【Aviation business】</p> <ul style="list-style-type: none"> •Design, development, manufacture and sale of Aircraft body CFRP Repair Process Scarf Sanding Automation equipment (Planned to start sales in 2021) <p>【Factory automation business】</p> <ul style="list-style-type: none"> •Design and manufacture of automobile production equipment (automation and labor saving) •Design, manufacturing, and engineering of logistics and production systems <p>【Other business】</p> <ul style="list-style-type: none"> •Design and manufacturing of press dies •Various automobile maintenance and new/used car sales •Various special vehicle production and old car restoration
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Representative	Kazuhiko Sasaki (President)
Sales Amount	30 billion yen
Capital	98,100,000 yen
Employees	Consolidated 1,100 people/Non-consolidated 930 people
Established	December, 1949
Certification	ISO14001
Group Name	Shinmei Group (SHINMEI TOHOKU MACHINERY CO.,LTD. Several other companies)
Major Customers	Toyota Motor Corporation, Toyota Tsusho Corporation, Toyota Industries Corporation, Primeearth EV Energy, Aisin Seiki Co., Ltd.

Business Overview

Taking advantage of mechatronics technology, manufacturing technology, assembly technology, inspection technology, automobile maintenance technology, etc. that have been accumulated and refined in the automotive field, we are working on cutting-edge technology development in order to create new business areas.

Products · Materials · Part Sizes · Facilities & Equipment

Aircraft body CFRP (thermosetting carbon fiber reinforced plastics) bonding repair process
Automatic scarf sanding equipment

Our Strength

Our strength is our comprehensive system engineering capability that enables the entire process to be carried out, which ranges from product development and proposal to production startup, maintenance and services.

Needs we can correspond / Business partners we want

By providing automation / labor saving equipment that can cope with the highly technical MRO field of skilled workers, we will achieve significant improvements in quality, cost and lead time.

Office & Plants

- 【Head office】
3-20, Koromogahara, Toyota-shi, Aichi, Japan
- 【Chokoji Plant】
8-20, Chokoji, Toyota-shi, Aichi, Japan
- 【R & D Center】
17-2, Teraike, Tsutsumicho, Toyota-shi, Aichi, Japan



AICHI-NAGOYA AEROSPACE CONSORTIUM



AICHI PREFECTURAL GOVERNMENT



CITY OF NAGOYA



Central Japan Aerospace Industrial Technology Center



AICHI INDUSTRY PROMOTION ORGANIZATION



Nagoya Industries Promotion Corporation



Chubu Bureau of Economy, Trade and Industry



Nagoya Chamber of Commerce & Industry



Japan External Trade Organization(JETRO)
JETRO NAGOYA



Greater Nagoya Initiative Center



CONTACT

Next Generation Industry Section, Bureau of Economy and Industry, Aichi Prefectural Government
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AICHI PREFECTURAL GOVERNMENT / CITY OF NAGOYA / Central Japan Aerospace Industrial Technology Center / AICHI INDUSTRY PROMOTION ORGANIZATION / Nagoya Industries Promotion Corporation

Chubu Bureau of Economy, Trade and Industry / Nagoya Chamber of Commerce & Industry / Japan External Trade Organization(JETRO) JETRO NAGOYA / Greater Nagoya Initiative Center / NAGOYA UNIVERSITY / CHUBU UNIVERSITY / Aichi Prefectural University



Web Site

