

Technology and equipment capabilities for precision processing of heat resistant alloys.

With advanced and efficient production, we are able to provide a stable supply of high quality, quick delivery, and low cost.

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Capital / 41.04 million Japan Yen

No. of Employees / 137 (M : 126 F : 11)
incl. 3 architects (Average age : 37.7)

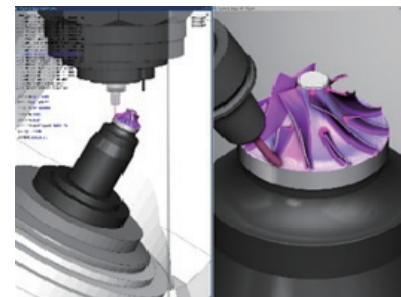


Major Products

Manufacturing of Aviation Engine Parts , Industrial Machinery Parts
Industrial Vehicle Parts , Construction Machinery Parts & attachments,
Parts for Nuclear Power plants , National Defense and Environment Protection Equipment

Major Clients (in alphabetic order)

- | | |
|---------------------------|-----------------------------------|
| Caterpillar | Mitsubishi Heavy Industries |
| Hitachi Metals , Ltd. | Aero Engines, Ltd. |
| IHI Ltd. | Mitsubishi Heavy Industries, Ltd. |
| Katsushiro Matex Co.,Ltd. | NIPPON SHARYO, Ltd. |
| Kobe Steel, Ltd. | Takeuchi Manufacturing Co., Ltd. |

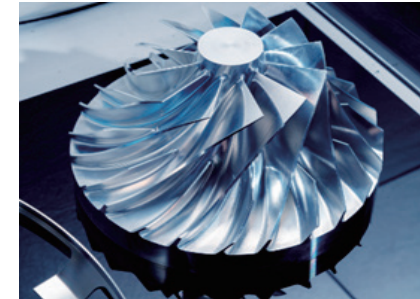


Certifications

ISO9001 (Certified in '15) , JIS Q 9100 ('16) , Eco-Action 21 ('09 edition)
Certificate of sub-tier supplier for MHIAEL Rolls-Royce products
JNDI Non-Destructive Testing Technical Level II (PT, UT, MT)

Main Equipments

Equipment		Units	Equipment		Units
5-axis Processing Machine	(DMG MORI)		CMM	(Mitutoyo)	
DMC125FD duoBLOCK	1,250×1,250×1,000	2	STRATO-APEX 163016	X1,600、Y3,000、Z1,600	1
5-axis Processing Machine	(DMG MORI)		Movable 3D Measuring Machine	FARO 3,800	1
DMC100U duoBLOCK	1,000×1,250×1,000	1	Surface Roughness Measuring Machine	X100	1
Turning Center	(O-M Ltd.)		Hardness Testing Machine	Shore・Rockwell	2
VTLex2500	φ2,500×1,815	1	Ultrasonic Flaw Detector		1
Turning Center	(O-M Ltd.)		Magnetic Flaw Detecting Machine		1
Neo-20EX	φ2,000×2,000	1			
Turning Center	(O-M Ltd.)		3D CAD/CAM	NX	1
Neoα-22EX	φ2,200×2,000	1	3D CAD/CAM	hyperMILL	1
Turning Center	(O-M Ltd.)		3D CAD	Solid Works Professional	3
VTLex1100	φ1,100×800	1	Simulation software	VERICUT	1
			Machine-Tool Characterization	Metal Max	1
Shrink fit device (HYMER)	Power Clamp Comfort	1	3-D Scanner	VL-300	1
Tool Pre-setter (HYMER)	UNO automatic drive	2	3-D Printer	AGILISTA-3200	1



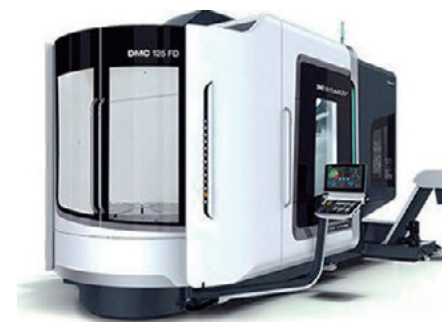
Core technology and Expertise

- High precision machining of difficult-to-machine materials such as nickel alloys and titanium alloys
- Flexible support for both single products and mass production
- Integrated turning and milling using a simultaneous 5-axis machine with turning
- Welding and machining in a wide range of materials (aluminum, stainless steel, nickel material, copper alloy)



Sales points

- Turning and 5-axis machining of aero engine parts
 - Workpiece shape: Round objects, rings, impellers, blades, etc.
 - Workpiece size : 300 to 2500mm dia.
- High speed scanning head CMMs and shape measuring machines enable precision measurement and inspection in a short time.
- We have a dedicated section for aircraft engines and handle all aspects of our operations, including process design, jig design, machining, and quality assurance.
- High quality and low cost production through process integration with multitasking machines
- Continuous process improvement using CAD/CAM, simulation software and vibration analysis software



Prospects

- Aero Engine Combustion Apparatus parts
- Combustion Chamber Outer Case (CCOC)

Special Notes

- Processing in a constant-temperature room meets customers' high quality requirements
- Consolidating a wide variety of processing and inspection equipment in one plant
- The air conditioning system in the thermostatic room uses ceiling air conditioners with less uneven humidity to create a stable environment for equipment and products.
(Temperature $\pm 2^{\circ}\text{C}$ and humidity $\pm 10\%$)
- Inspection room: illumination of more than 1076lux (calibration control)



Management Policies for Future

- Expansion of capacity by promoting plans to introduce the latest processing machines
- By continuing research on machining, we propose the latest methods using multi-function machines and angle heads.
- Use lot to promote visualization and improve production efficiency

