

GT-875-5AX Advanced Structure Design

Exhibits Unique Stability in High Speed Machining

Machine Features

Rigid Structure!

- The Gentiger GT-875-5AX features T-shape machine structure, exhibiting superior rigidity. The width of column is the same as the base. The table is independently installed on the base and is fully supported through the entire stroke. This machine offers high speed, maximum stability and high precision, providing a competitive edge in small type precision mold and die machining.

High Quality Cast Iron Multiple Treatments

- The structural parts of GT-875-5AX are manufactured from high quality cast iron, stress relieved and seasoning treated for the deformation-free performance year after year.

Roller Type Linear Guide Ways on Three axes

- Precision roller type linear guide ways on 3 axes achieve high loading resistance, high rigidity and long service life. Another benefit is that the machine provides the best dynamic accuracy at high feedrate.

Screw Chip Conveyor

- There is one screw chip conveyor each equipped at each side of base, delivering chips to a chip conveyor for exhausting chips out of the machine.

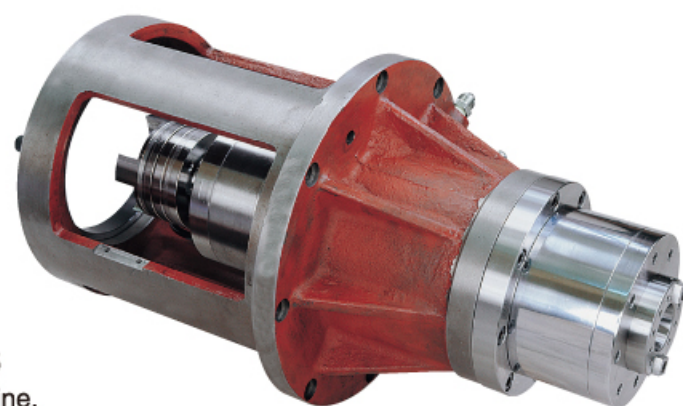
- 3 axes cutting feedrate: 20 m/min.
- 3 axes rapid feedrate: 48 m/min.
- Positioning accuracy: 0.004/300 mm (Equipped with optical scale)
- Repeatability: ± 0.003 mm (Equipped with optical scale)

15,000 RPM High Speed Spindle with Extra High Rigidity and Stability

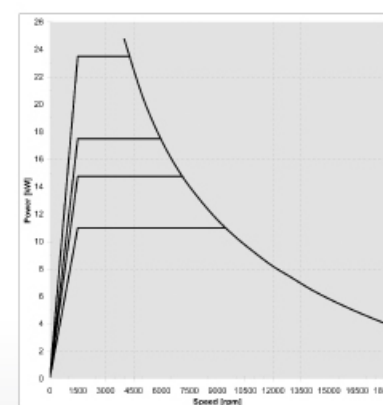
T15P

Direct Drive Spindle BT-40 Oil Circulated Cooling

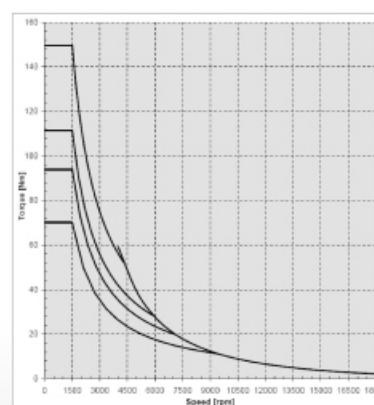
- Maximum spindle speed: 15,000 rpm
- Bearing lubrication: Grease
- Spindle motor: 11/14.75 kW
- Spindle torque: 70/94 Nm
- Spindle inner diameter: $\varnothing 70$ mm
- High precision ceramic bearings
- ※ Cutter balance should be calibrated to within G2.5
- ※ Other spindle speed also available with this machine.



Spindle Speed / Power Diagram

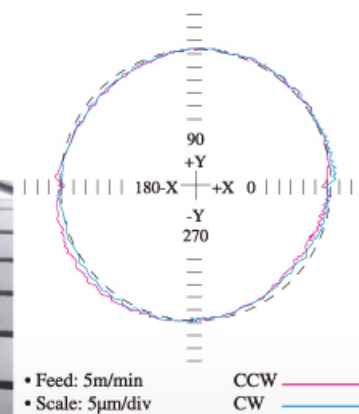


Spindle Speed / Torque Diagram



Ball Bar Circulating Accuracy Inspection

A high precision Renishaw ball bar tester is used for inspecting servo accuracy and geometric errors between two axes, thereby ensuring outstanding circularity accuracy.



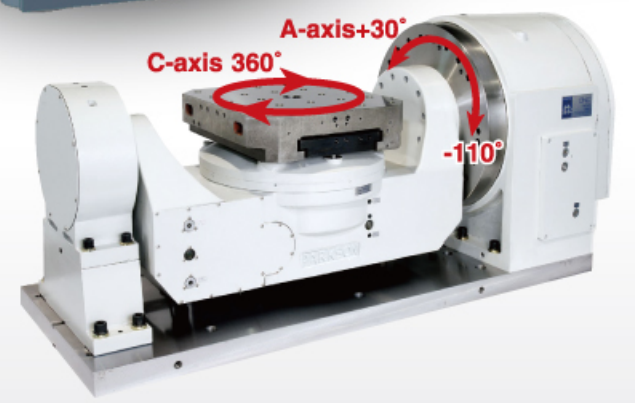
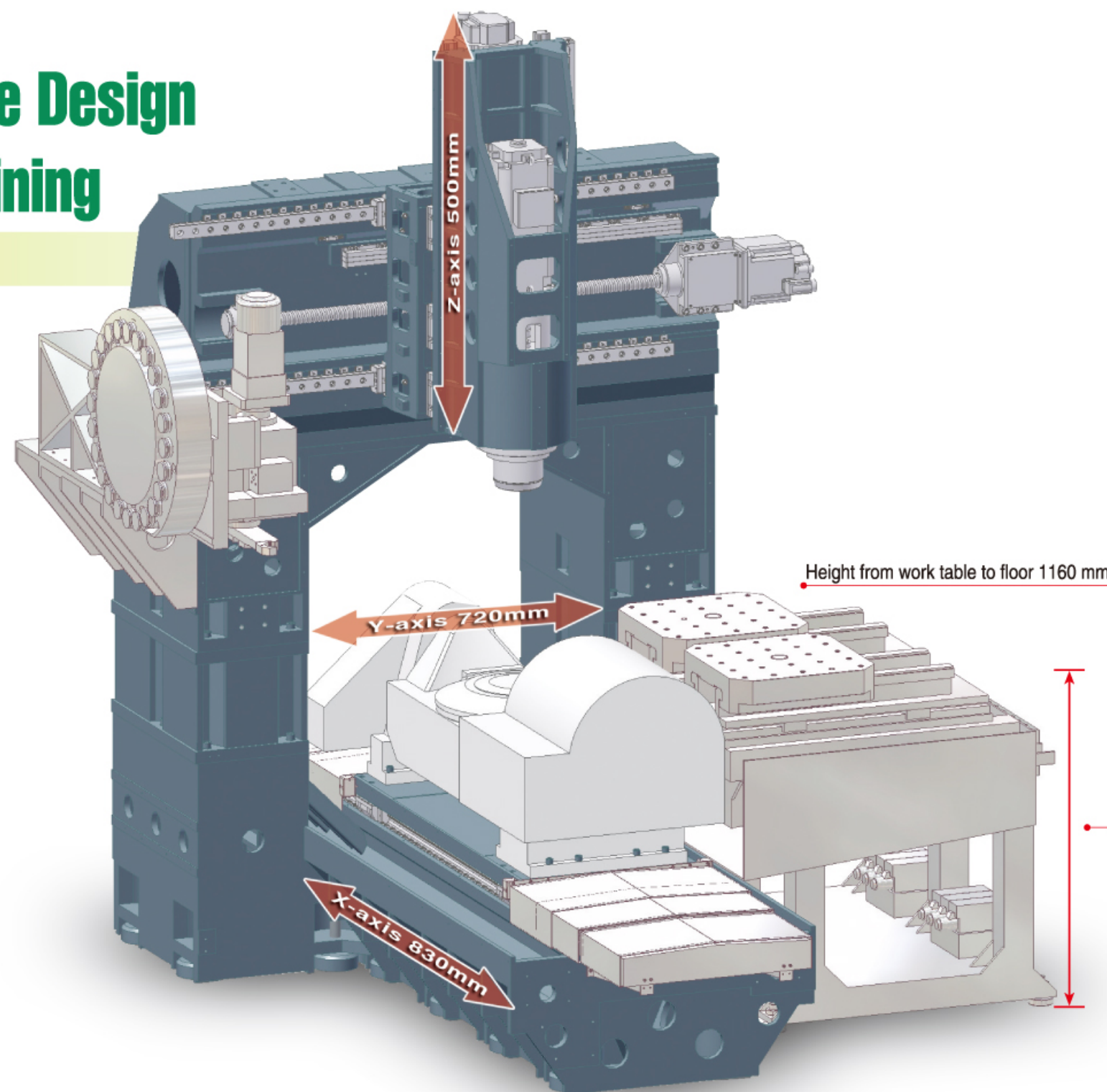
CCW

CW



Precision Worm / Worm Gear Transmission

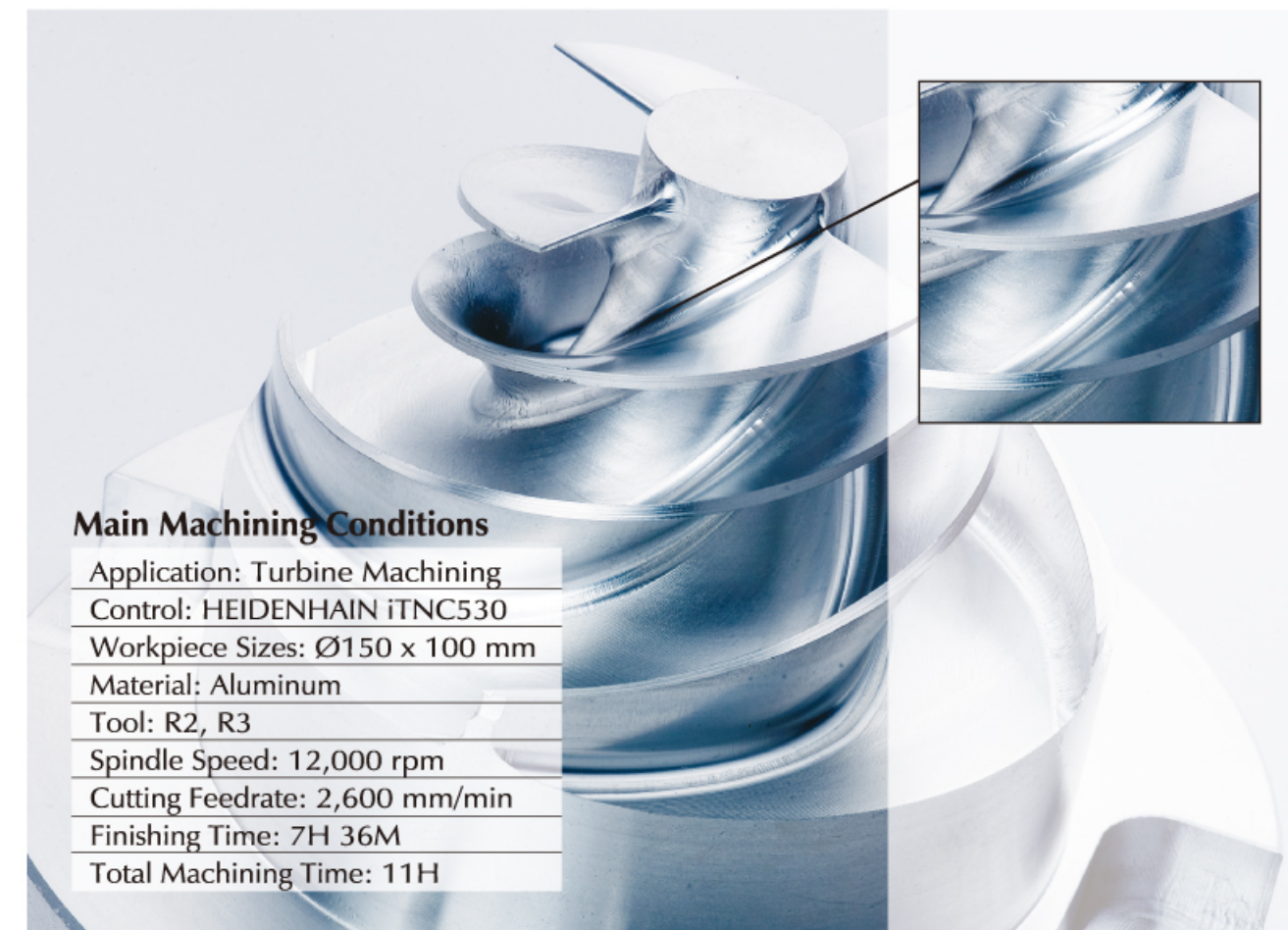
- The worm shaft is a two-section structure for increasing convenience of backlash adjustment.
- 5~8 μ backlash ensures high transmission accuracy.



5-axis Rotary Table

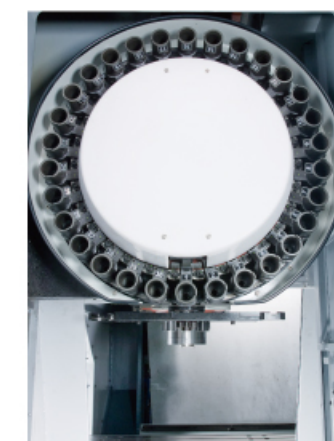
- Table sizes 500 x 500 mm.
- Positioning accuracy of rotating axis (C-axis) is 15 sec.
- Positioning accuracy of tilting axis (A-axis) is 45 sec.
- Repeatability accuracy is ± 3 sec.
- Min. setting unit is 0.0001°
- Hydraulic brake

Outstanding Mold Machining Capability



Main Machining Conditions

Application: Turbine Machining
Control: HEIDENHAIN iTNC530
Workpiece Sizes: $\varnothing 150 \times 100$ mm
Material: Aluminum
Tool: R2, R3
Spindle Speed: 12,000 rpm
Cutting Feedrate: 2,600 mm/min
Finishing Time: 7H 36M
Total Machining Time: 11H



Arm Type Magazine

- Standard loading capacity of magazine is 30 tools.
- Accommodates BT-40 tool shank.
- Fast tool change with smooth and stable tool change motion.
- Precision cam drive achieves ± 0.08 mm positioning accuracy.
- Tool change arm is excellently water-proof to prevent coolant from entering into the arm.



Coolant Inner Ballscrew

Coolant inner ballscrews on 3 axes prevent ballscrew deformation, while assuring smooth feed motions and high positioning accuracy.

Optional Equipment



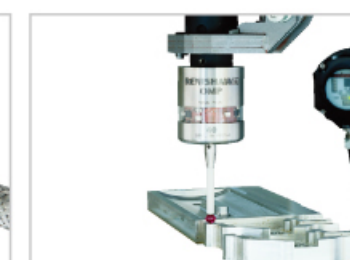
Automatic pallet change (APC)



CTS Coolant Through Spindle Device



Automatic Tool Length Measurement System (Laser Type)



Automatic parts Measurement Device

GT-875-5AX Specification

MODEL	T15P
Travel (X/Y/Z)	830 x 720 x 500 mm
Cutting feedrate	20 m/min
Rapid feedrate	48 m/min
Table area	500 x 500 mm
Height of table from ground	1,160 mm
Max. Height of working piece	450 mm
Distance from spindle nose to table surface	15 ~ 515 mm
Max. Load of table (average load)	300 / 400 kg
Max. Spindle speed	15,000 rpm
Type of spindle motor	Direct Drive
Bearing lubrication	Grease
Spindle cooling	Oil Cooling
Spindle taper	BT-40
Spindle motor	11 / 14.75 kw
Spindle torque	70 / 94 Nm
Spindle bearing Ins.diameter	Ø70 mm
ATC capacity	30 tools
ATC tool system	BT-40
Max. Tool diameter	Ø75 mm
Max. Tool length	300 mm
Max. Tool weight	7 kg
Motor of tool magazine	375 w
Motor of CAM BOX	375 w
Air pressure requirement	7 kgf / cm ²
Air conditioner	960 / 1,170 w
Spindle cooler	2,900w (50HZ) / 3,500w (60HZ)
Automatic Lubricator(slideways)	150 w
Coolant motor	750 w
Chip flush motor	1,580 w
Total power consumption(Max.)	55 kw
Coolant tank capacity	280 Liter
Controller	HEIDENHAIN
Servo motor for 5 axes	8.6 kw(X) / 5.6 kw(Y) / 5.1 kw(Z) 8.6 kw(A) / 3.1 kw(C)
Machine dimension	4,410 x 3,880 x 3,270 mm
Packing dimension	4,950 x 3,700 x 3,900 mm
Machine net weight	13,400 kg
Machine gross weight	15,000 kg

* Other spindle speed also available with this machine.
* All specification, design and characteristics shown in this catalogue are subject to change without prior notice.

5-Axis	Rotray Shaft	Tilting Shaft
Worktable area	□ 500 x 500 mm	
Center bore diameter	Ø50H7 mm	
Min. Input increment	0.001°	
Inclination axis tilting angle	-110° ~ +30°	
Load capacity	0°	400
	90°	300
Total speed reduction ratio	1/180	1/240
Motor speed	3,000 rpm	3,000 rpm
Max. Table rotation speed	11.1 rpm	11.1 rpm
Pneumatic	6 kg/cm ²	6 kg/cm ²
Rotation axis Clamping torque	150 kg-m	200 kg-m
Indexing accuracy	15 sec	45 sec
Repeatability	±3	±3

Standard Accessories

- Coolant system
- Work lamp
- Toolbox
- Spindle air blow system
- Chip air blow device
- Air conditioner for electrical cabinet
- MPG
- M30 work end indication light
- Full enclosed splash guard
- Central control lubricator
- Operation and maintenance manual
- Leveling bolts and pads
- Internet function
- Spindle heat compensation system
- Screw chip conveyor and cart
- A,C axis optical scale
- Two screw chip conveyor equipped at the base
- Coolant inner 3 axes ballscrew

Optional Accessories

- 3 axes optical scale
- Oil skimmer
- Oil-mist cooling system
- Auto tooling measurement
- Coolant through spindle
- Automatic pallet change (APC)



Professional High-Speed Machine
GT-875-5AX

High Speed 5-Axis Machining Center

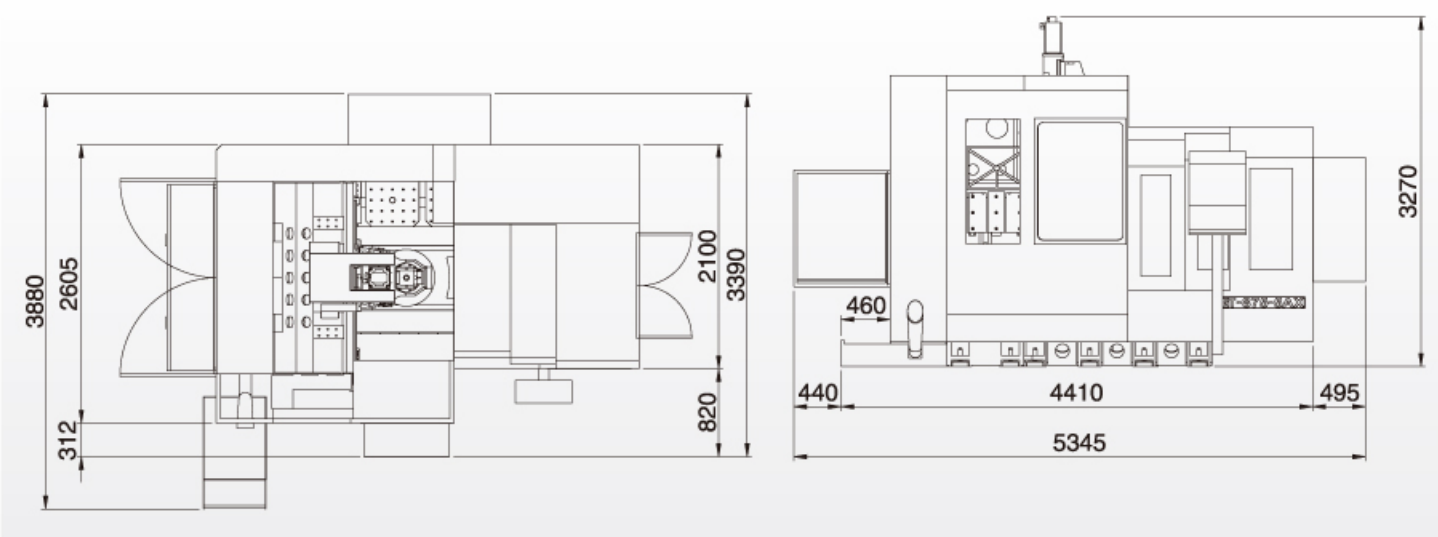
With Excellent Performance to

Handle Mold and Complex Parts Machining



Dimensional Drawings of the Machine

Unit: mm



Gentiger Machinery Industrial Co., Ltd.

No.2-2,Shueitou Lane, Jiahou Rd, Waipu Township,
Taichung County 438, Taiwan.
TEL: 886-4-2683-6919
FAX: 886-4-2683-9900
Http://www.gentiger.com.tw
E-mail:gentiger@ms38.hinet.net

122411500709C

Gentiger Machinery Industrial Co., Ltd.



CE ISO 9001