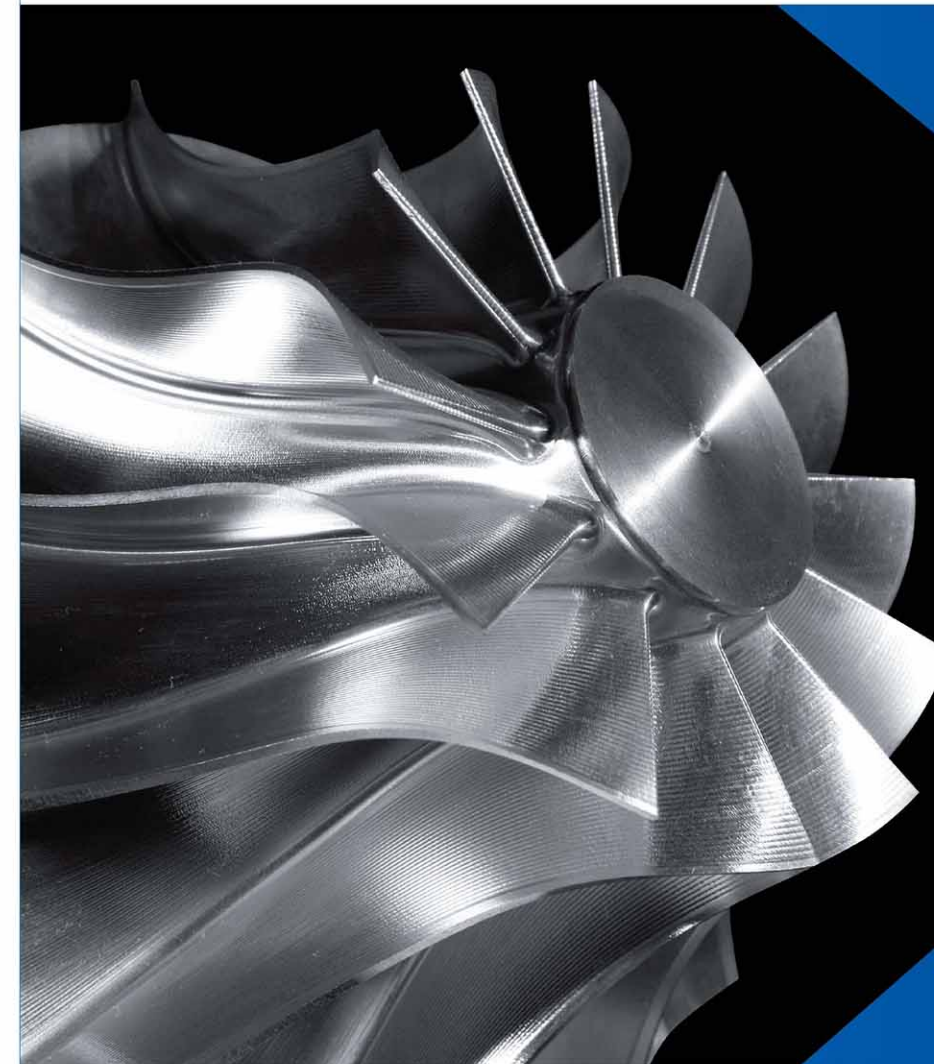
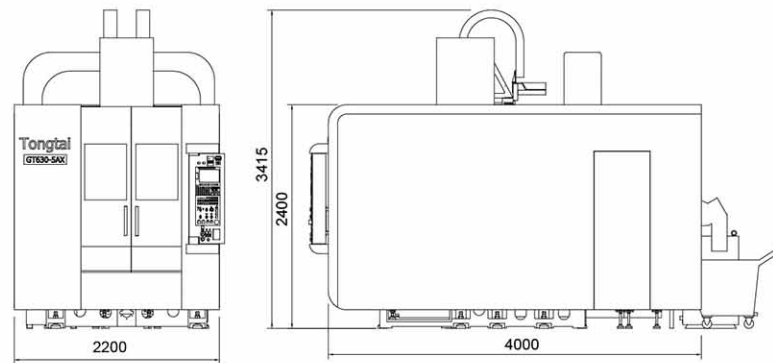


Item	Specification	Unit	GT630
Table	Table size	mm	φ630
	Max.loading capacity	kg	500
	Table height from floor	mm	900
	Max. workpiece dimension (Diameter×height)	mm	Ø800x500
	A/C axis min. indexing increment	deg	0.001°
Spindle	Spindle taper		7/24 Taper No.40
	Spindle speed	rpm	12000 · 20000
Stroke	X/Y/Z axis stroke	mm	760/820/560
	Spindle nose to table	mm	150~710
	A axis stroke	deg	-30°~120°
	C axis stroke	deg	±360°
Feed	X/Y/Z axis rapid traverse	m/min	48/48/48
	A/C axis rapid traverse	rpm	83/125
	Cutting feedrate	mm/min	1~10000
ATC	Tool shank		BBT40
	Tool capacity	pc	30 · 60
	Max. tool diameter	mm	80
	Max. tool diameter (w/o adjacent tool)	mm	125
	Max. tool length	mm	300
	Max. tool weight	kgf	8



**GT**  
**630**

**FIVE-AXIS VERTICAL MACHINING CENTER**

**HOTLINE: +49-6158-84772**  
**info@gk-werkzeugmaschinen.de**

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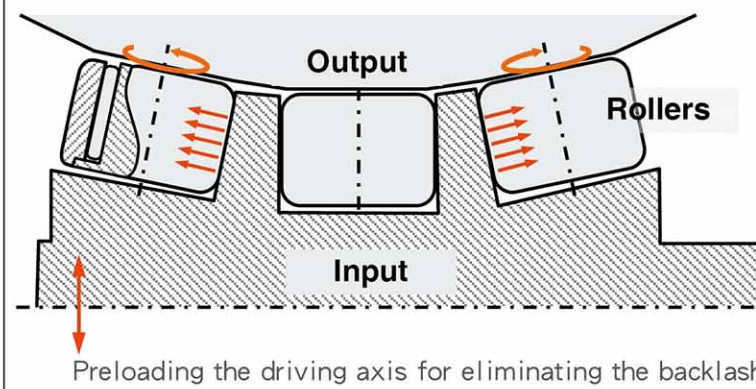




### Roller driver type A and C axis



#### Pre-load mechanism



Zero backlash

High positioning accuracy

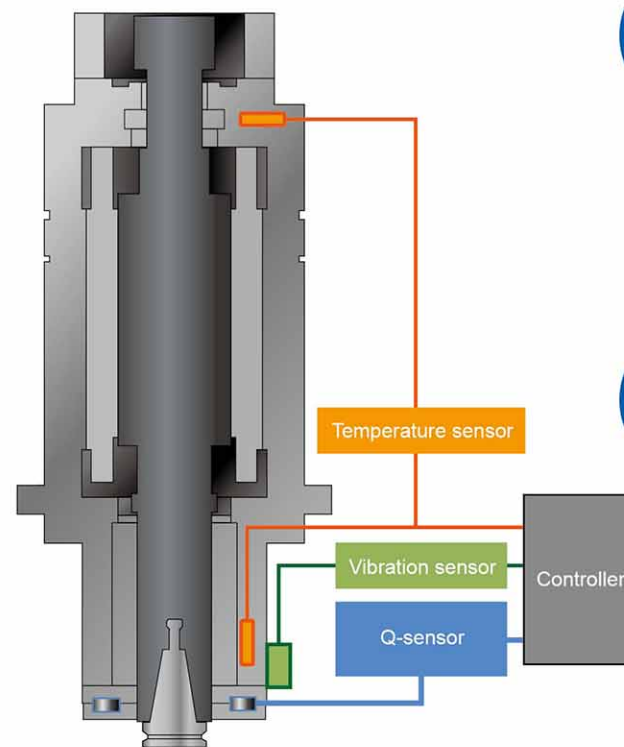
Low abrasion

High durability

A roller gear cam is used in the indexing table to replace slide motion with roll motion. In the high deceleration rate, due to the roll motion by the roller driver, the lower torque is required during starting. Furthermore, it has the protection mechanism to avoid damage when crash happen during machining. Moreover, roller driver type B axis is able to keep the rotating accuracy after long-term machining, especially suitable for high speed rotation. With Tongtai's roller driver and latest large torque spindle, high accuracy is maintained in long-term heavy duty machining.



### Intelligent spindle design



#### Spindle thermal deformation compensation

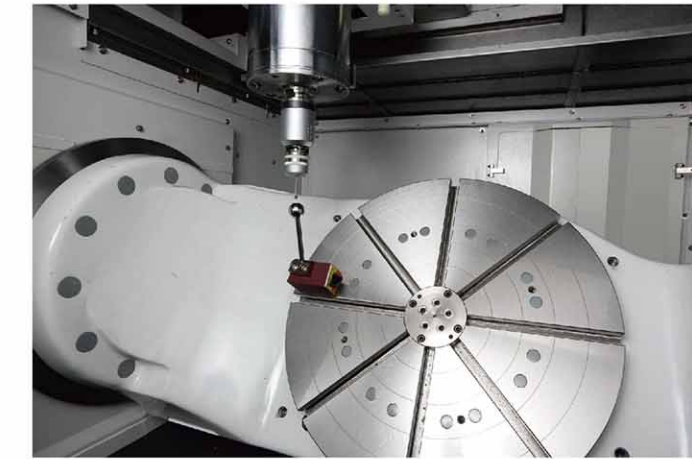
1. Built-in type temperature sensor detects the temperature of spindle bearing for protecting the bearing from overheating.
2. Enhances the temperature rise of the thermal deformation compensation according to the closest bearing temperature compensation data.



#### Spindle vibration monitoring

1. Spindle unusual vibration monitoring
2. Chip metals invasion monitoring
3. Spindle position monitoring

### Rotary central position detection software for five-axis machining center



Tongtai developed Q-sensor system for facilitating the central correct in the five-axis rotary axes.

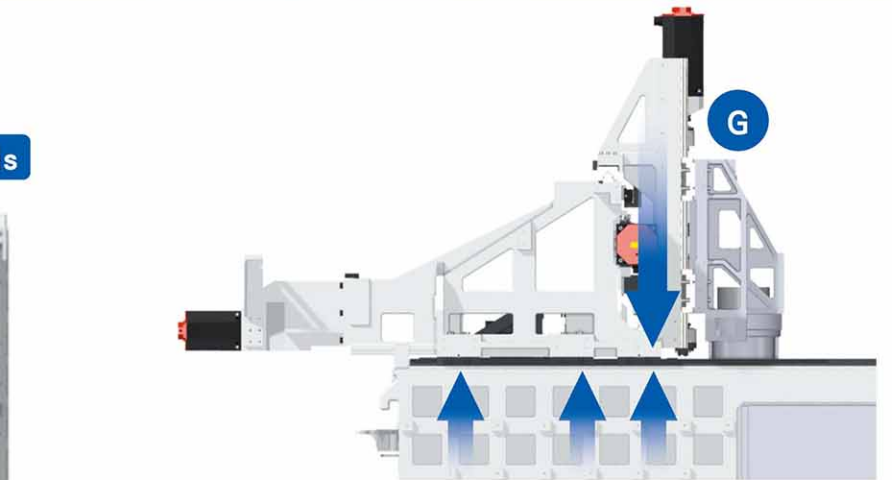
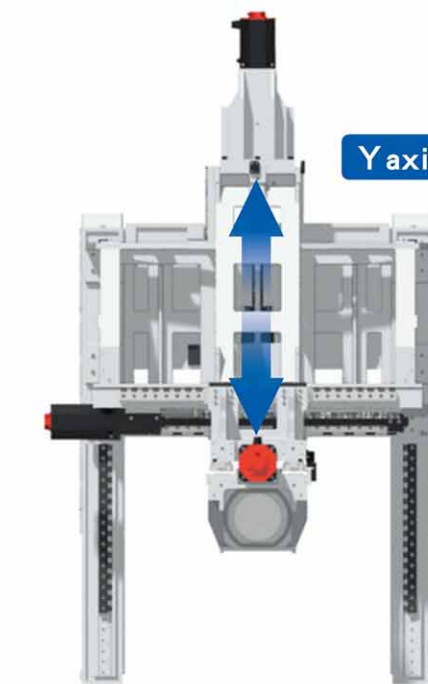


#### Q-sensor applications :

1. Correction of the rotary axes center
2. Tool length measurement
3. Tool breakage detection
4. Manual workpiece position measurement
5. Automatic workpiece position measurement
6. Non-cutting acceleration function

### Driven at the center of gravity and lightening moving parts

new slide structure patent M436522

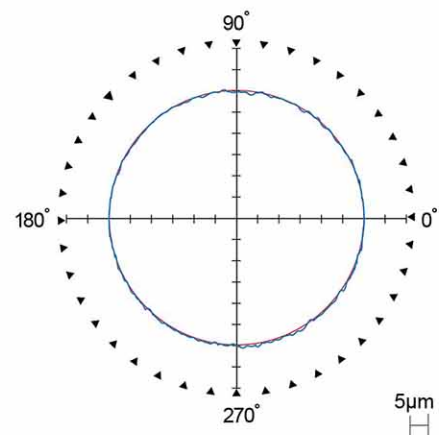
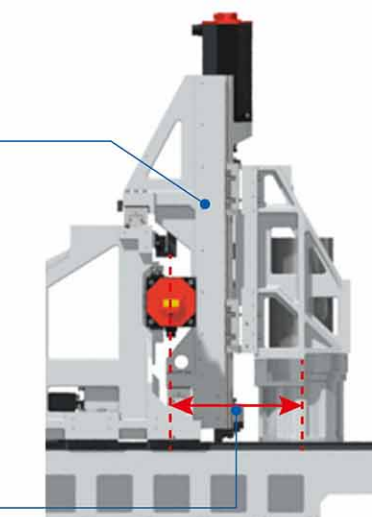


#### Driven at the center of gravity

1. Y axis is driven by single ballscrew at the center of gravity to ensure the parallel of slide moving.
2. When the center of gravity is within the supporting range of sliding block, it fixes the problem of spindle plunging and improves dynamic stability.

Using Finite Element Analysis (FEA) to assist in designing the structure to get shortest force route between Z-axis and X-axis to decrease the weight of the slides.

Less overhang spindle provide excellent rigidity in heavy duty machining.



Roundness	5.92μm
(JIS) Material	A6061
Tool	Super hard endmill Ø25 mm
Spindle speed	5000 rpm
Feedrate	3000 mm/min
Workpiece shape	Ø120×Ø150×60 mm

NAS Standards



Undercarriage



Compressor turbine