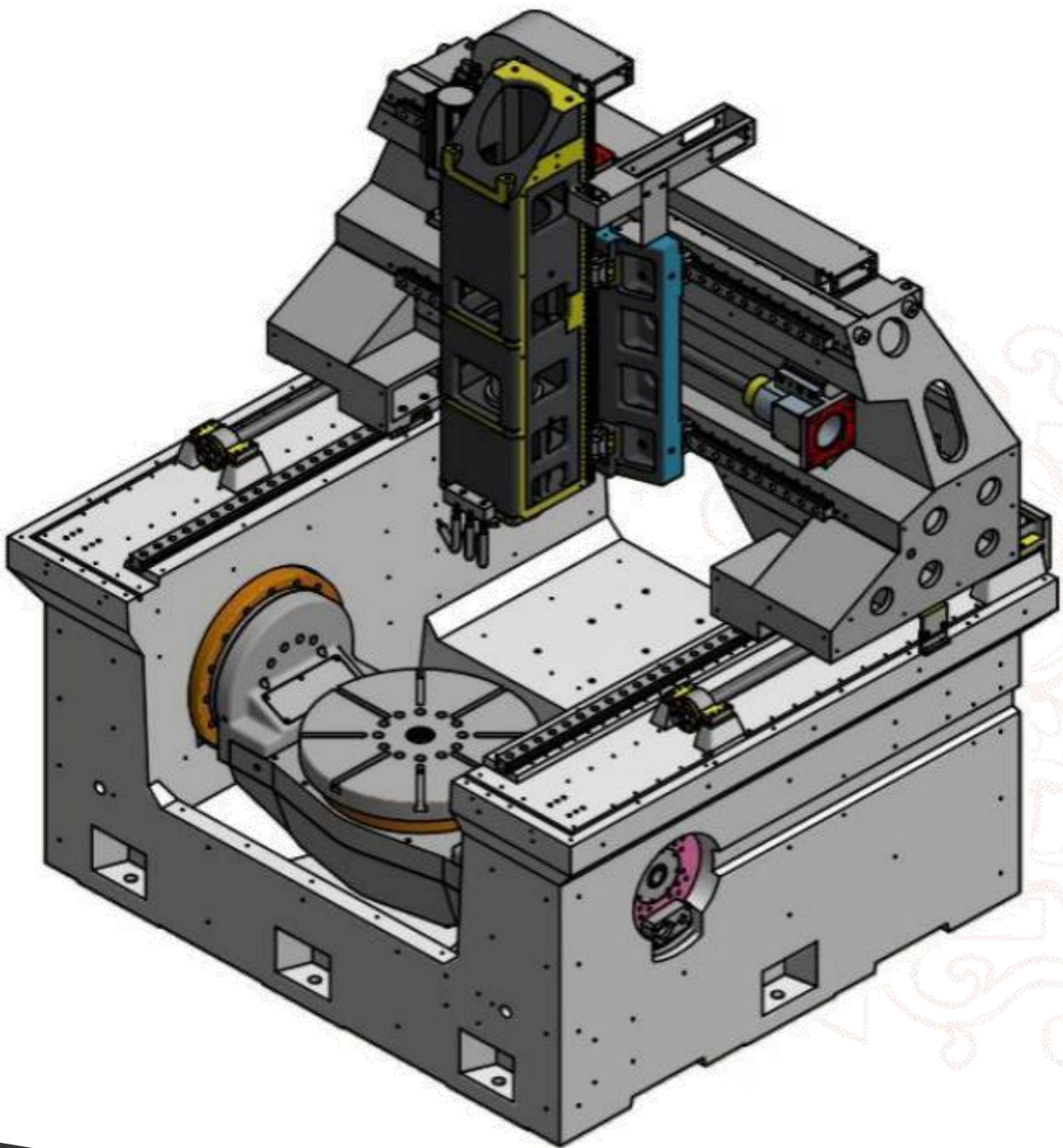


TF 630 Five-axis Machining Center

Technical Specification



Preface

Dear Users,

In order to ensure the safety of your equipment and normal use, please do read the following note.

Warning:

- ◆ When moving instrument, disconnected all the supply power, against hot plug.
- ◆ Handle with care when transportation, all of instruments put in the original package, place according to the iconic instruction, carried the goods in the way of closed type.
- ◆ Package material must be put in the place the children out of reach.
- ◆ The instrument must ground connection.
- ◆ Do not open the case to maintain by yourself. It is very dangerous for high pressure.



This marked warning operator attention to safety, for a variety of power supply, information line collection point and the place where there is a motor.



This marked a strong warning, do not touch.



This label is attached to the moving parts, such as no attention may cause harm to the human body.



This label requires professional personnel to operate, otherwise it is likely to cause damage to the machine or cause damage to personnel.



Grounding Mark.

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1. Machine tool characteristics

- TF630 is a Bridge-type five-axis linkage processing center, and the machine tool can be processed through 5-axis and 5-linkage through X, Y, Z, A, C. It is used for the flexible and efficient processing of impeller, valve body, thin wall, shell and frame parts. This machine is standard with 5-axis cradle turntable, the work piece can automatically and continuously complete multiple planes of high-speed milling, boring, drilling, hinge, tapping and other processing processes after a clamping.
- The base of the fuselage is cast with mineral material, which is non-seismic deformation and can maintain good stability. The moving parts are made of high quality resin sand shape and high strength cast iron material, and after finite element analysis, the reinforcement arrangement is reasonable to fully meet the cutting requirements of machine tools.
- Box spindle head structure, internal muscles and muscles strengthening, P4 ultra-precision bevel ball bearing and large span support design, Enables the spindle to withstand strong radial and axial thrust, eliminating the vibration generated under heavy load cutting. Configuration of famous brand spindle, spindle nose design with the spindle air curtain dust, can prevent debris entry, to ensure the accuracy and life of the spindle.
- Silk rod and guide rail adopt well-known brands in Taiwan and other industries to ensure the processing accuracy and service life of the machine.
- Equipped with volumetric type centralized lubrication system to ensure good lubrication of all moving parts, smooth operation, and improve the service life of wire rod and rail.
- The guide rail protective cover adopts the mountain structure with large inclination Angle, so that the cutting fluid and chips are discharged smoothly in time.

2. technical parameter

	Name	Unit	Parameter
Travel range	Workbench travel (X-axis)	mm	600
	Slide-saddle stroke (Y- axis)	mm	700
	Spindle box stroke (Z-axis)	mm	500
	Distance from spindle end surface to working surface	mm	100-600
	The A-axis swing angle	linear measure	±105
	The C-axis swing angle	linear measure	n ×360
	Mesa size	mm	Φ 630 / 18H7
Cradle	Allow to accept	kg	350
	Segmentation accuracy (A / C direct drive shaft)	sec	±10 / ±10
	Repeat positioning accuracy (A / C direct drive shaft)	sec	±6
	Rotary shaft oil pressure brake torque	kg*m	150
	Tilt shaft oil pressure brake torque	kg*m	350

Principal axis	Gear specification		BT40
	Install diameter	mm	Φ 150
	Maximum speed	r /min	12000
	Spindle motor power / torque	kW /N*m	18/47
Lead screw	X/Y/Z axle	Diameter guide line mm	4012 / 4012 / 3612
Lead rail	X/Y/Z axle	width mm	45 / 45 / 35
feed	X / Y / Z, axis fast shift speed	m/m in	36
Self Change knife(Optional)	Knife Library Capacity (PCS)	PCS	24
	Knife set specifications		BT40
	Knife weight	kg	8
	Maximum tool diameter	mm	φ 150
	Maximum tool length	mm	250
Machine tool accuracy	Positioning accuracy (X / Y / Z)	mm	0.005 / 300
	Repeat positioning accuracy (X / Y / Z)	mm	0.003
Else	Outline dimensions of the machine tool	mm	2100×1800×2650
	Weight	T	About 10
	Total electrical capacity of the machine tool	k W	35

3. Brand configuration table of key spare parts of machine tools

Order number	Name	Brand	Remarks
1	X, Y, Z axis ball rod	Taiwan PMI or any other equivalent brand	C 3 level
2	X, Y, Z axis rails	Taiwan PMI or any other equivalent brand	P-class roller rail
3	X, Y, and Z axis bearings	Japanese NTN or any other equivalent brand	
4	Spindle unit	DesCNC-china	AI MACH
5	24 knife arm type knife library	AI MACH	
6	Automatic lubricant pump	BAOTN	centralization

4. Machine tool standard configuration table

Order number	Configure	Quantity (unit: set)	Remarks
1	Rolling bead Line rail	1	
2	And 24 disc-type knife libraries	1	
3	Automatic centralized lubrication system	1	
4	Work piece cooling system	1	
5	Work piece air blowing device	1	
6	Spindle center air blowing device	1	

5. Environmental requirements and other auxiliary equipment

Order number	Project	Ask
1	ambient temperature	Working environment temperature + 5°C ~ + 40°C. After the ambient temperature, air conditioning should be added to ensure processing accuracy
2	ambient humidity	Relative humidity of 80%
3	Lightning protection	Equipment installation environment should have lightning protection measures. If there is no lightning protection measures, lightning strike accidents may be caused in lightning strike weather
4	surrounding environment	1. The machine tool should not be installed within the range of direct sun; 2. Stay away from oil pollution, dust and corrosive gas ; 3. Stay away from the equipment with large vibration, such as air compressor room, punch workshop, etc. ; 4. A distance of at least 1m apart from any other equipment (or wall) ; 5. Stay away from electrical interference equipment, such as electric welding machine, etc.
5	Installation site, surface requirements	The ground should be stable and strong, and the height difference should not exceed 10mm within the effective installation range of any single machine tool.

6. Installation and acceptance inspection

- After the machine tool arrives at Party A's site, Party A shall be responsible for the foundation, unloading, lifting, opening and positioning of the machine tool.
- Party A shall complete the final acceptance within 10 days after the machine tool arrives at party A's site. If party A fails to complete the final acceptance within 10 days due to Party A, it shall be deemed to pass the final acceptance, and the machine tool will automatically enter the warranty period.
- Acceptance content: it shall be carried out according to the accuracy specified in the qualification certificate provided by Party B, and repeated testing shall not be carried out for the items requiring the special testing instruments and inspection tools of the manufacturing factory.
- The accessories for machine tools such as guide rail oil and lubricating grease shall be purchased and provided by Party A itself.

7. Other

- Matters not covered herein shall be settled by both parties through friendly negotiation.
- This agreement, as an appendix to this contract, shall come into force simultaneously with the sales contract after being signed or sealed by both parties.
- This Agreement is made in duplicate, with each party holding one copy and the two copies having the same legal effect.