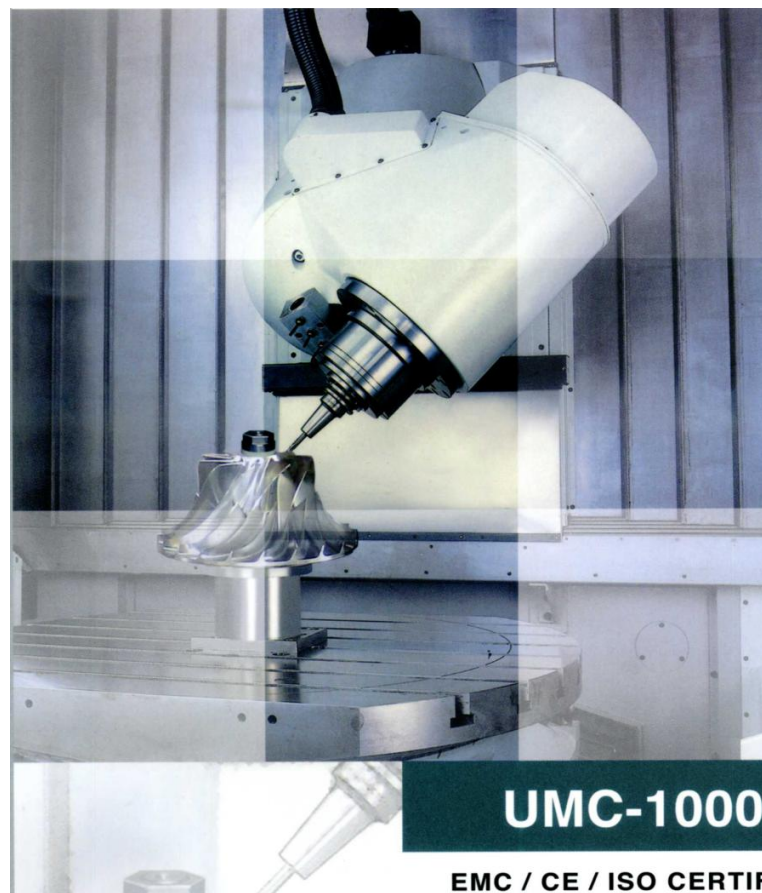




台灣力得衛宇龍科技(股)公司

LEADERWAY CNC TECHNOLOGIES, CO., LTD..



UMC-1000

EMC / CE / ISO CERTIFIED

5 AXES MACHINING CENTER

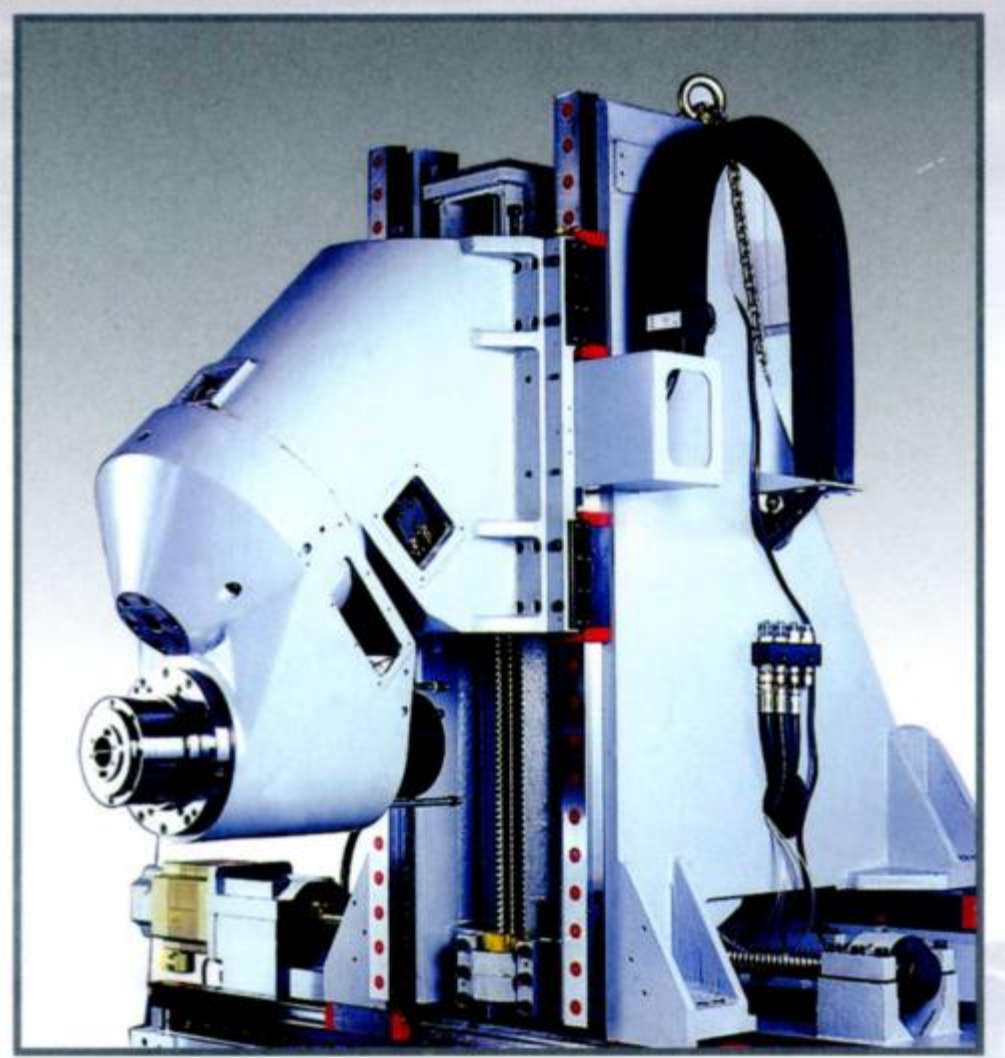


◉ **UMC-1000 5 AXIS SIMULTANEOUS MILLING CENTER :**

- 1000mm x 800mm x 700mm three axis travel
- 1000mm x 800mm working rotary table with 1500kg load
- 0.001 degree swivel milling head and rotary table :
Torque motor driven B axis swivel milling head
Worm gear driven C axis rotary table
- Standard 3 axis linear scales + 2 axis rotary encoders
- BT#40 / 14000RPM / 29.3KW motor spindle
- Time saving thanks to multi-sided machining without having re-set
- Maximum productivity thanks to rapid movement and high acceleration
- Unlimited flexibility & versatility when manufacturing individual part
- Maximum stability thanks to optimum load distribution
- Highest machine precision repeatability thanks to the avoidance of any axis overlapping



Sliding front & side doors with a super wide top opening, this make very easily for straight forward loading awkward shaped workpiece.



Automatic swiveling milling head

● UMC-1000 5 AXIS SIMULTANEOUS MILLING CENTER :

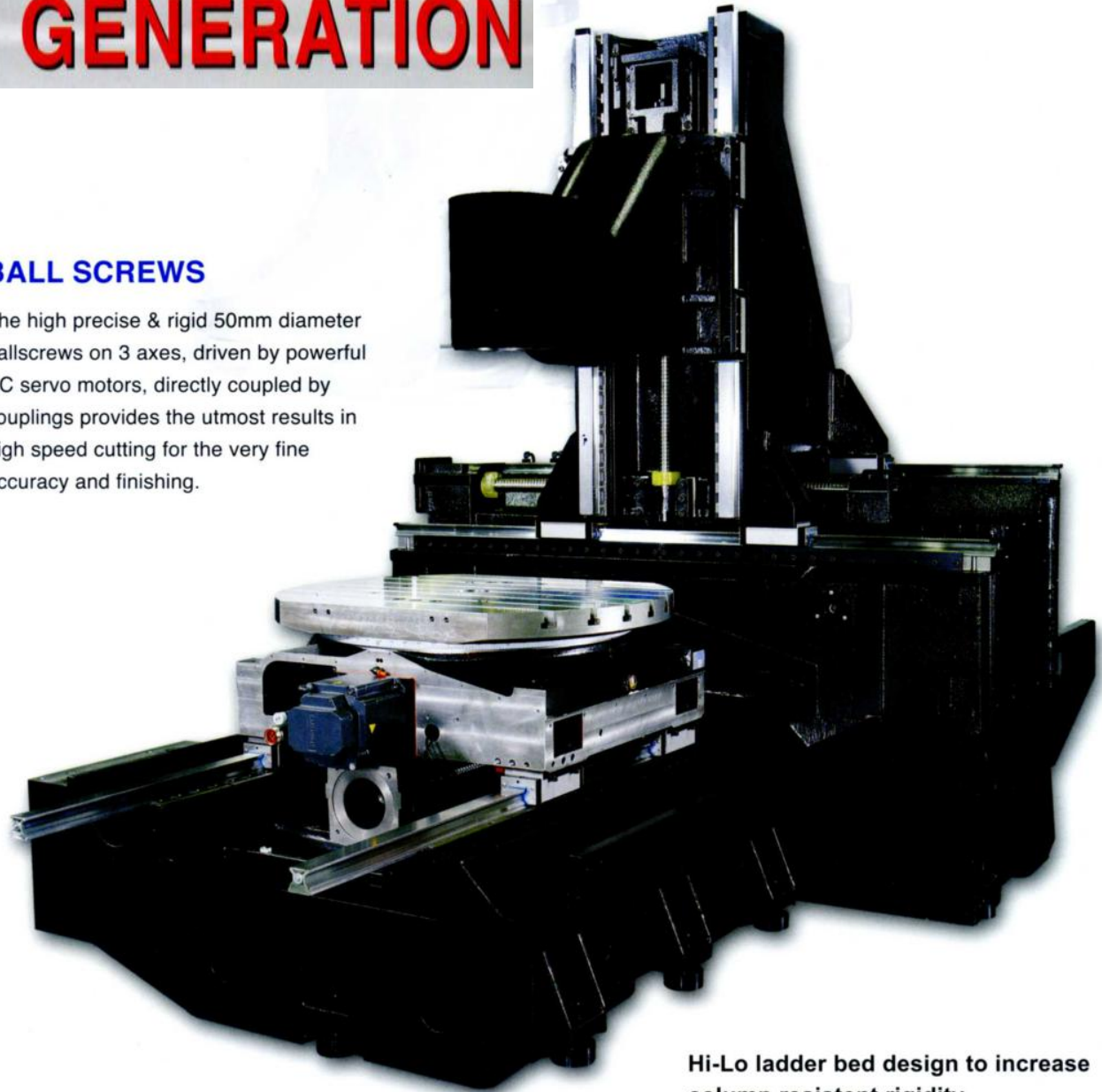
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NEXT GENERATION

● BALL SCREWS

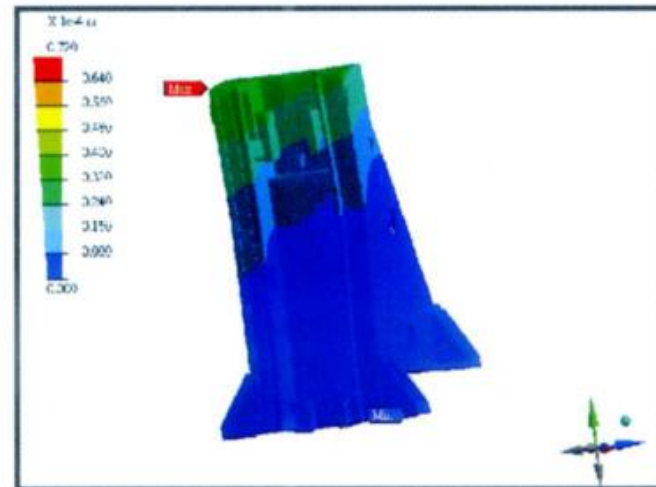
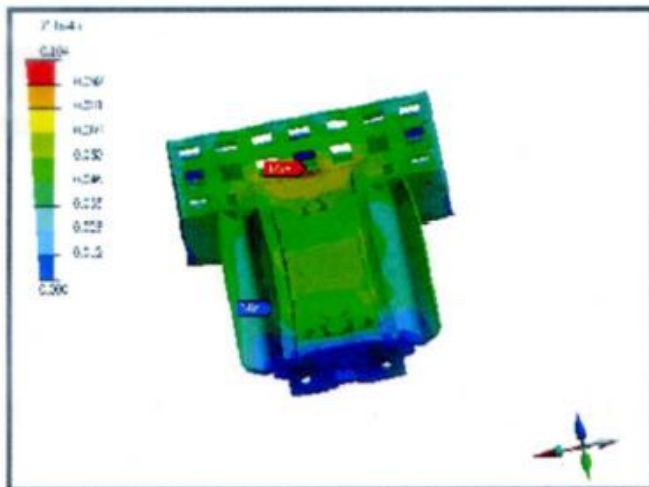
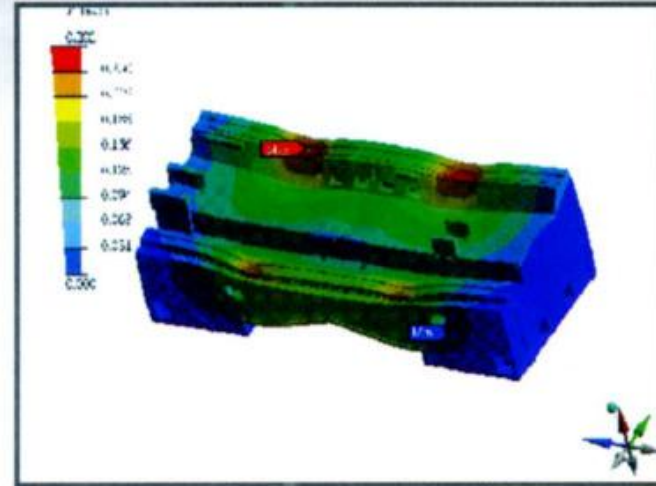
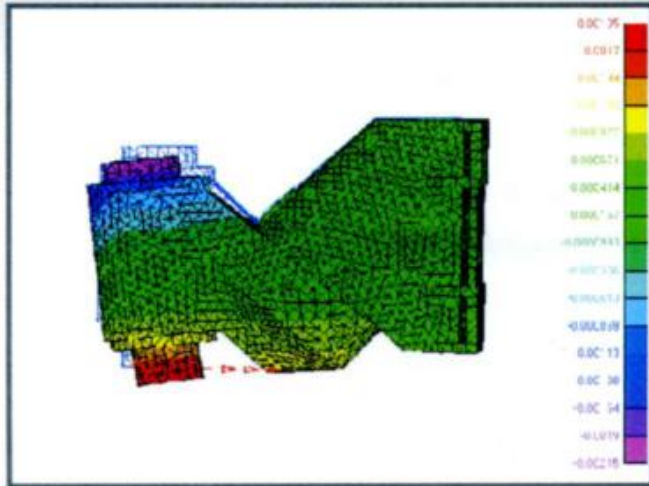
- ▶ The high precise & rigid 50mm diameter ballscrews on 3 axes, driven by powerful AC servo motors, directly coupled by couplings provides the utmost results in high speed cutting for the very fine accuracy and finishing.



Hi-Lo ladder bed design to increase column resistant rigidity.

● RIGID CASTING FRAME

- ▶ Using the most advanced Computer Aided Design and Finite Element Method analysis programs, an extremely rigid casting frame is being created.



● OUTSTANDING ACCURACY

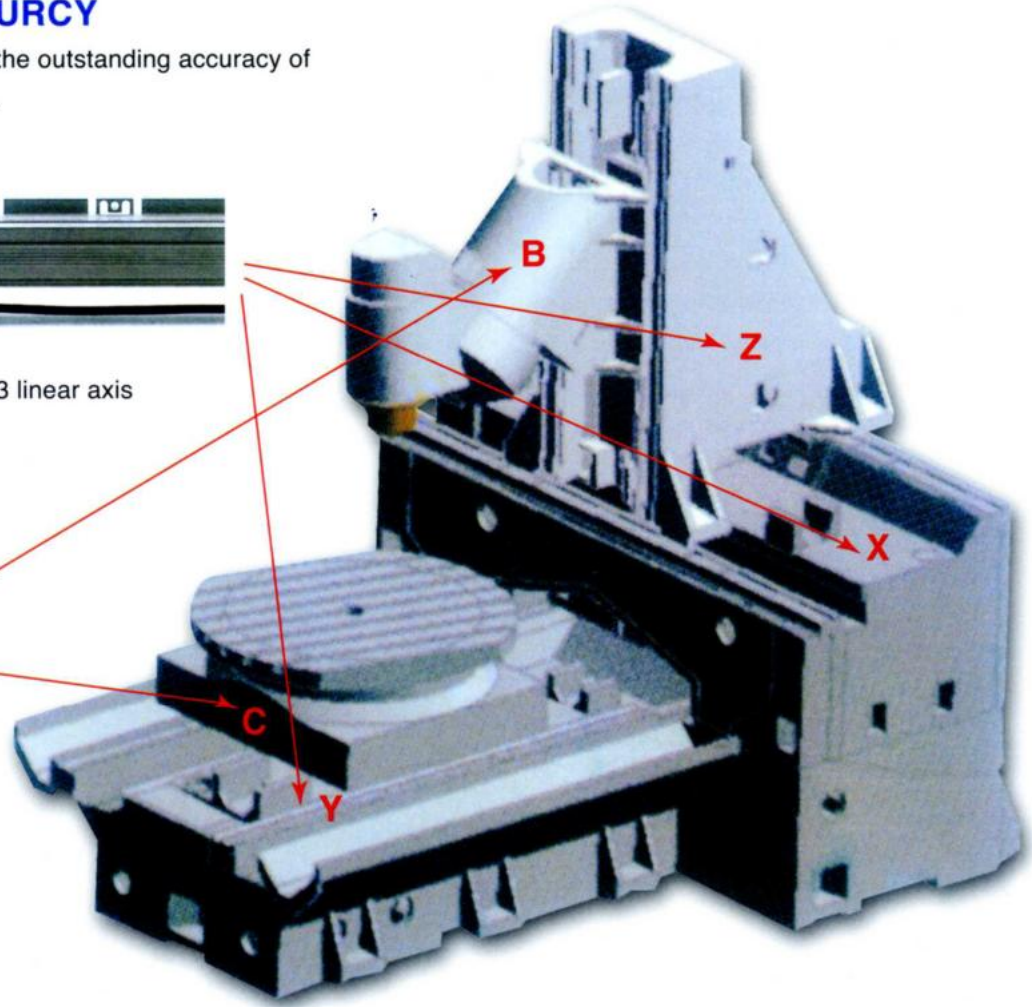
- ▶ Standard equipment maintains the outstanding accuracy of this high performance machine.



- ▶ High precision linear scales on 3 linear axis X & Y & Z.



- ▶ High precision rotary encoder on 2 rotary axis B & C.

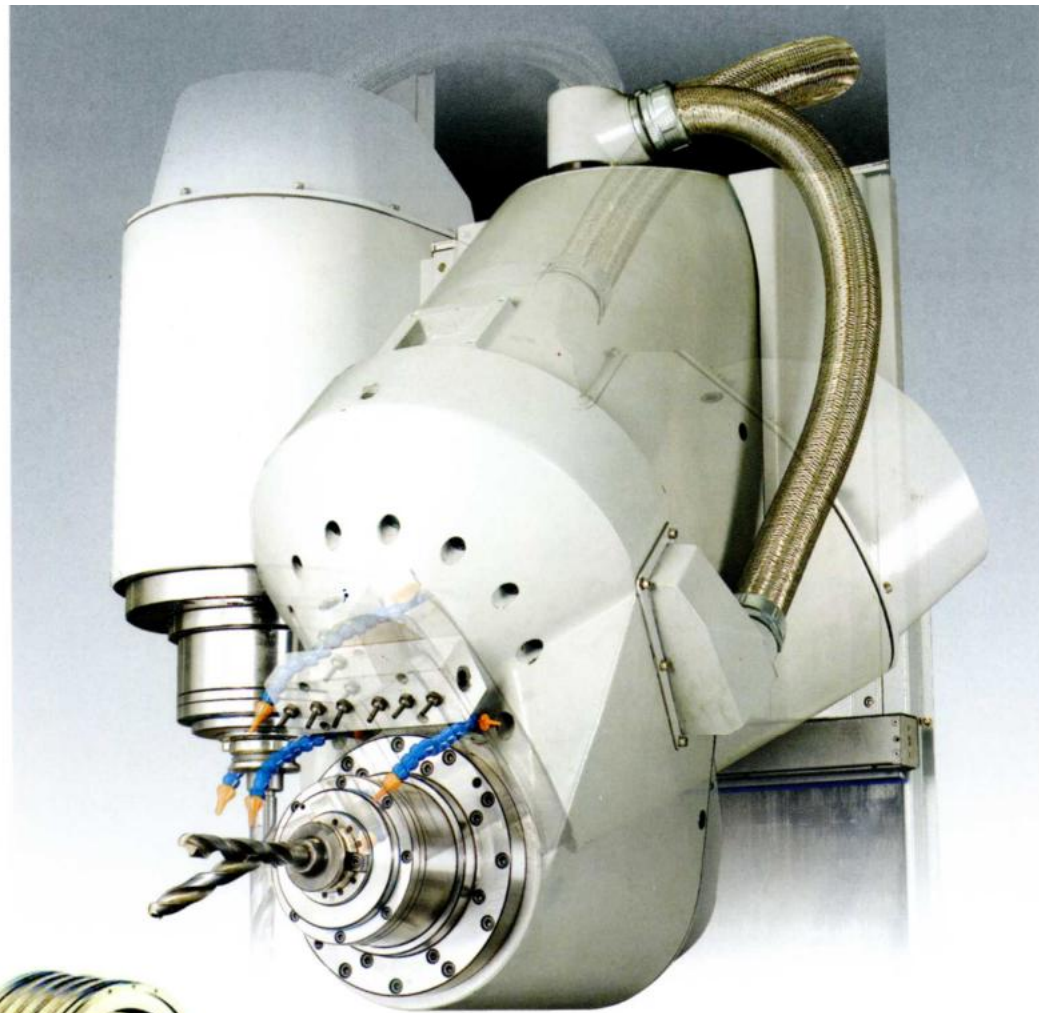


B AXIS INNOVATIVE SWIVEL MILLING HEAD



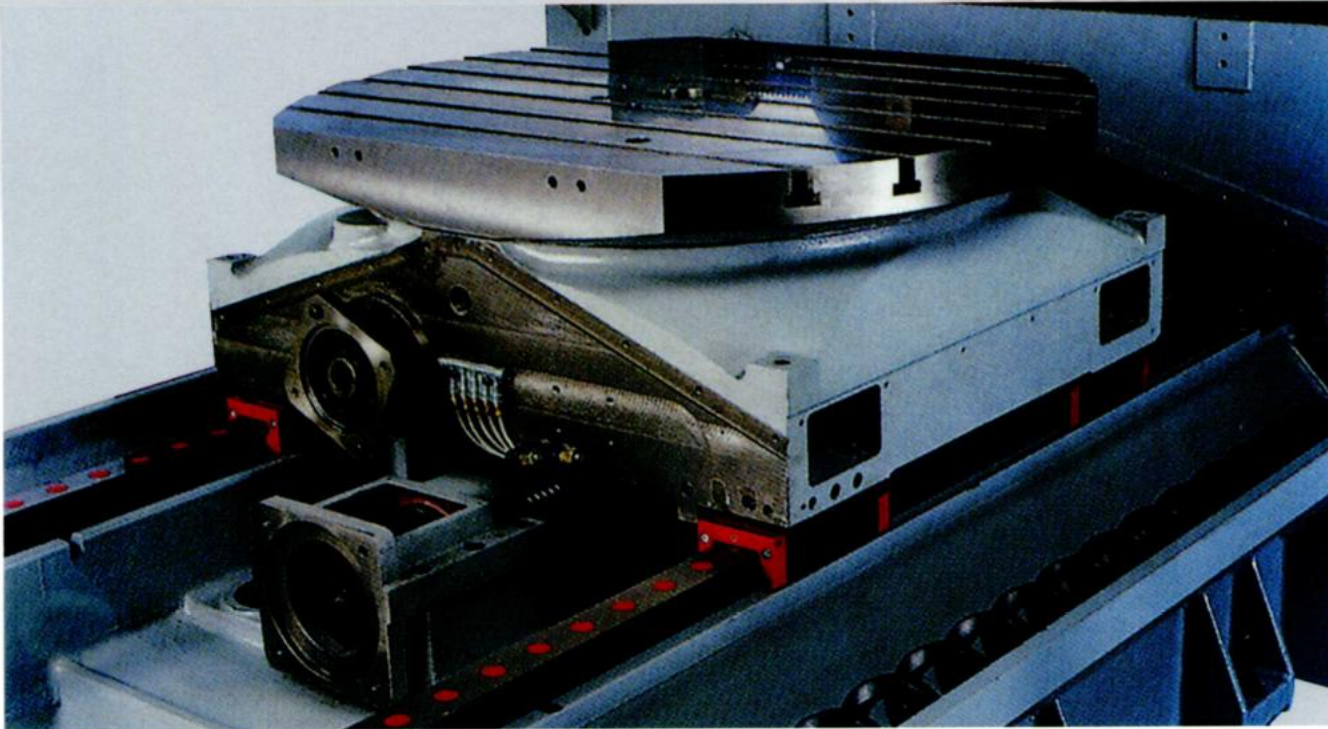
- ▶ The latest technology torque motor manages the B axis continuous swivel milling head , it guarantees maximum movement dynamic and linearity and thanks to the absence of those traditional mechanical kinematics parts, it results a much higher performance on finishing surface. The direct reading system by a high precision angular encoder is being integrated for maximum precision.

- ▶ As a controlled B-axis, the swivel head changes from vertical to horizontal machining in seconds.



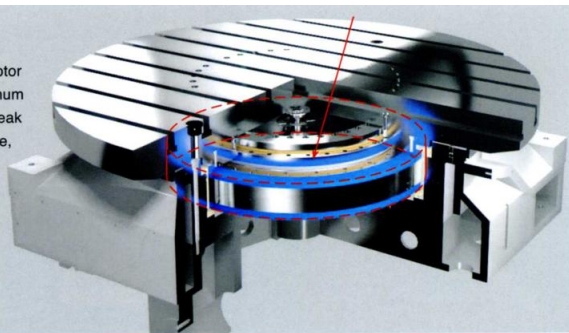
- ▶ Offers an extra flexibility; the fully automatic 0.001 indexing from vertical to horizontal positions by means of torque motor, this gives operator an extra flexibility: multi-sided machining without re-setting the workpiece; manufacture of complex components with a single set-up; 5 sided machining without additional fixture; 5 axis machining in combination of rotary table.

C AXIS DURABLE CNC ROTARY TABLE



OPTIONAL:

- ▶ 1000mm diameter torque motor drive rotary table with maximum rotation 60 RPM, 1820Nm peak torque, 4000Nm brake torque, 1200kg load, $\pm 5^\circ / \pm 2.5^\circ$ positioning / repeatability accuracy, German made !

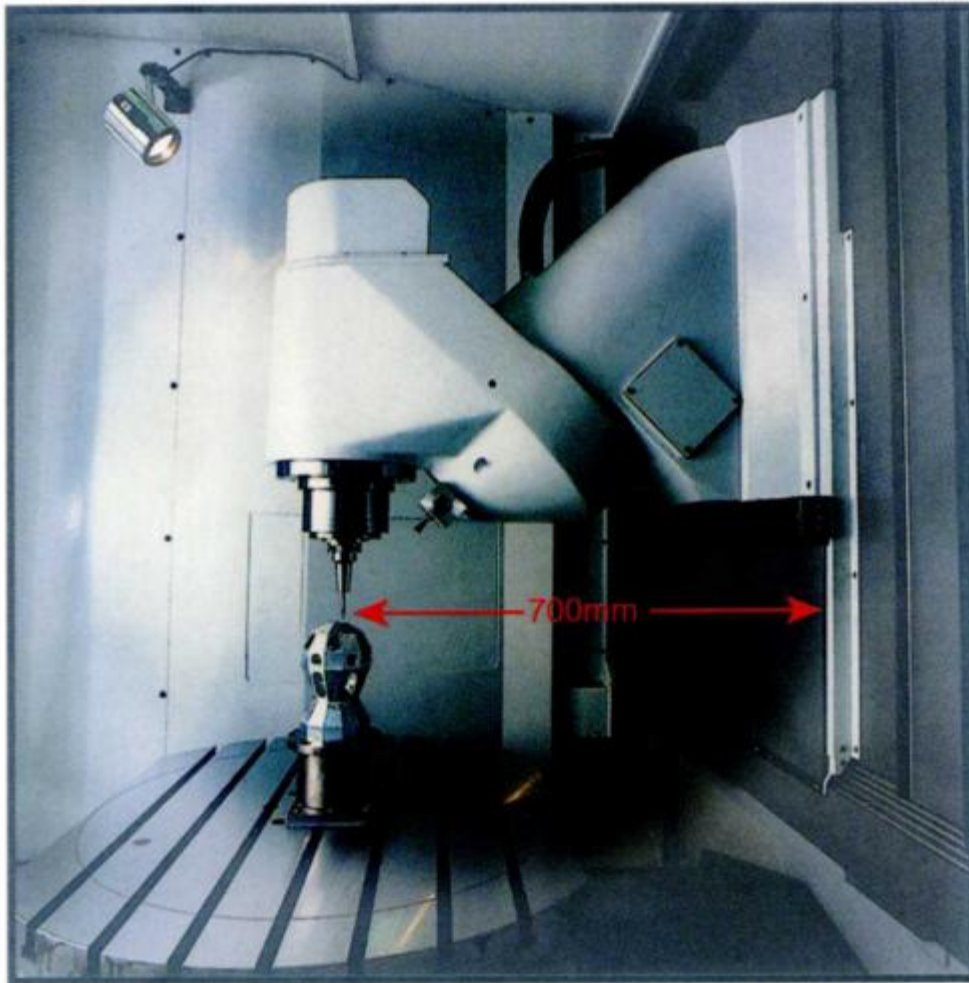


STANDARD:

- ▶ 1000mm x 800mm dimension with 1500kg load driven by AC servo motor, it can be indexing 0.001° by high precision worm gear, clamping force up to 9000kg, positioning by hydraulic cylinder; a high precision rotary encoder is included.

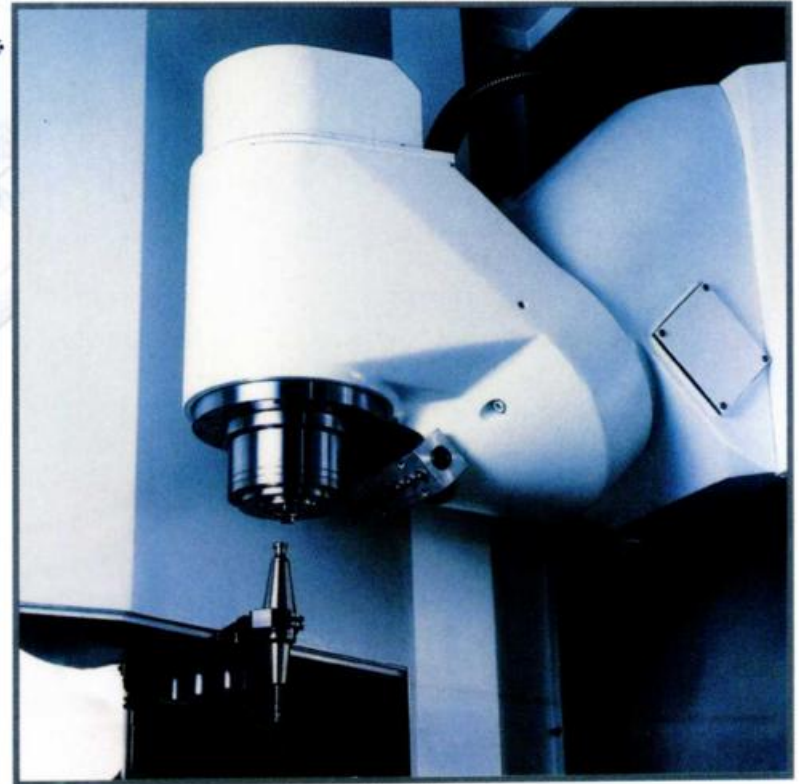
OPERATOR WORKING





● WIDE THROAT DISTANCE

- ▶ A very wide distance 700mm between spindle center and X axis slideway cover, this gives operator a great convenience of different workpiece setup.

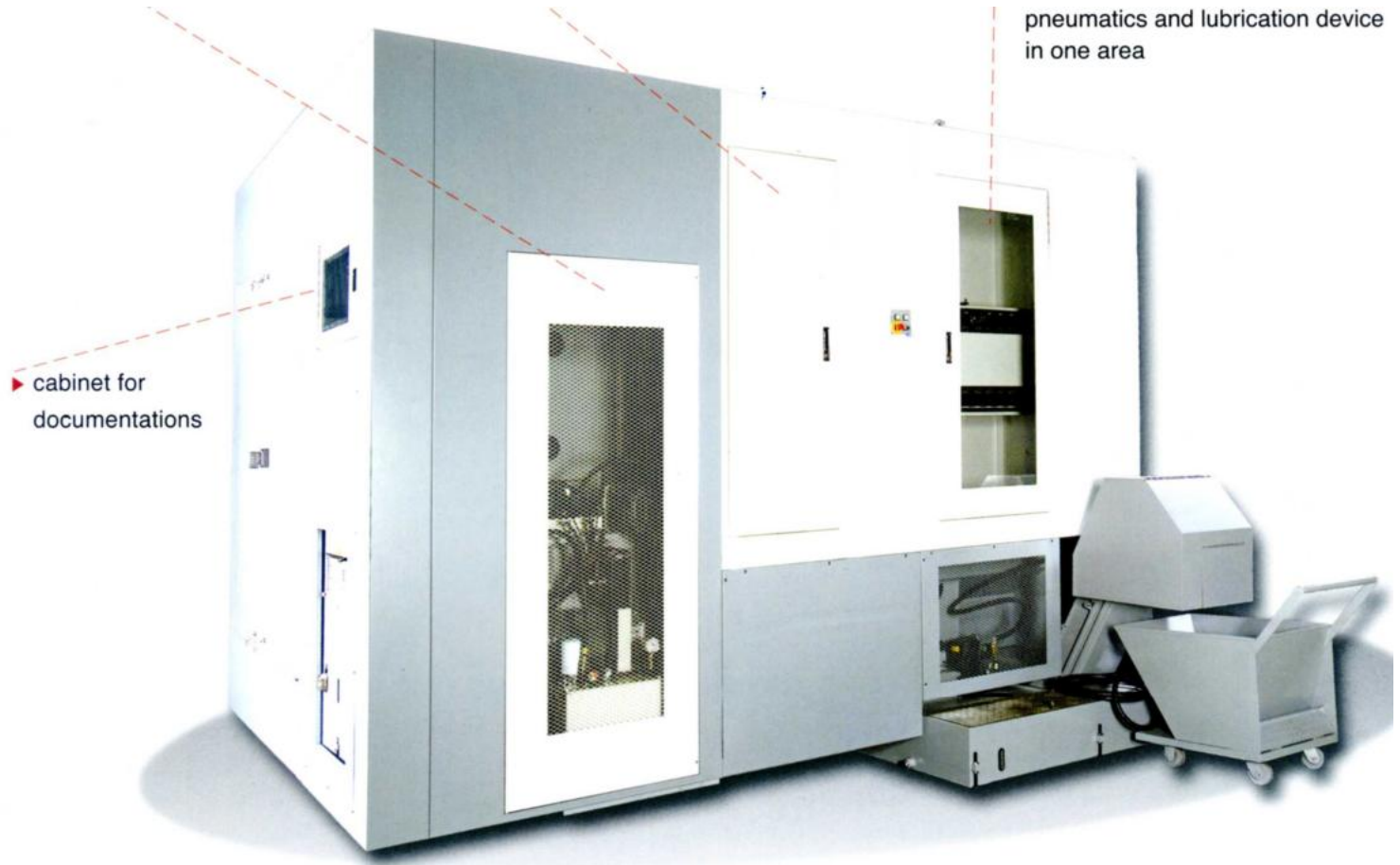


● AUTOMATIC TOOL CHANGER

- ▶ A 40 positions double swing arm ATC provides as standard for most of machining applications.

◉ TOTALLY COVERED GUARDING





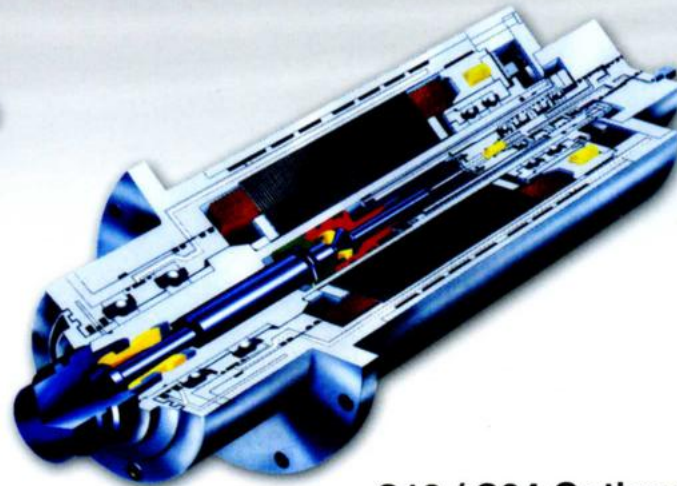
▶ cabinet for documentations

pneumatics and lubrication device in one area

POWERFUL MOTOR SPINDLE



N14D Standard

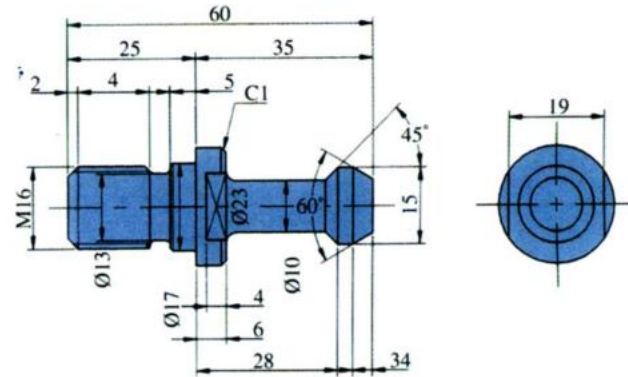
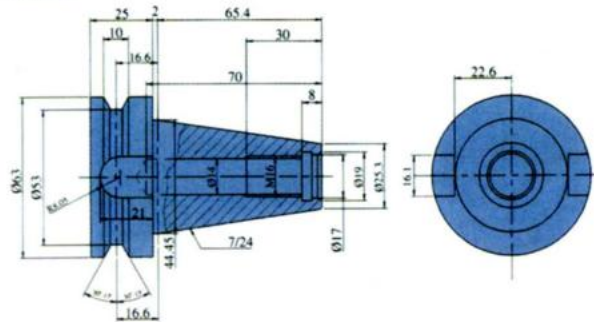


C18 / C24 Optional

Models	N14D	C18	C24
Max. speed - RPM	14000	18000	24000
Rated speed - RPM	4000	2000	4500
Spindle taper	BT#40	HSK-A63	HSK-A63
Housing diameter - MM	210	180	180
Power S1/S6 - KW	29.3 / 35	21 / 27	34 / 43
Torque S1/S6 - Nm	70 / 160	100/130	72 / 91
Bearings diameter - MM	70	70	65
Coolant thru spindle	OPT	OPT	OPT
Air thru spindle	N / A	OPT	OPT

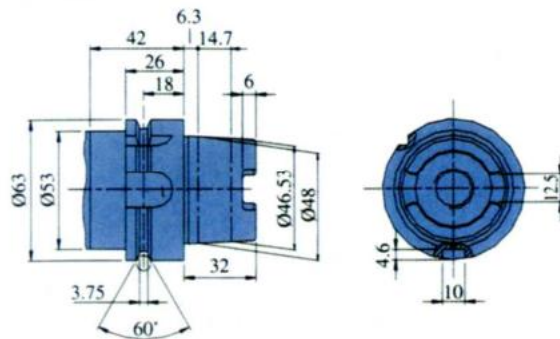
STANDARD:

BT#40

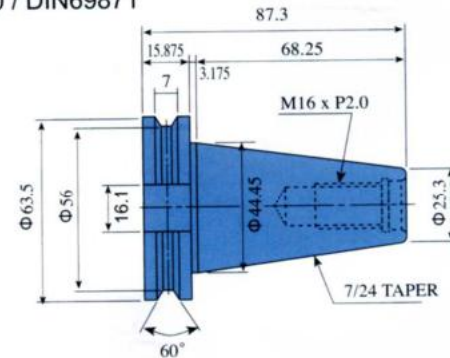


OPTIONAL:

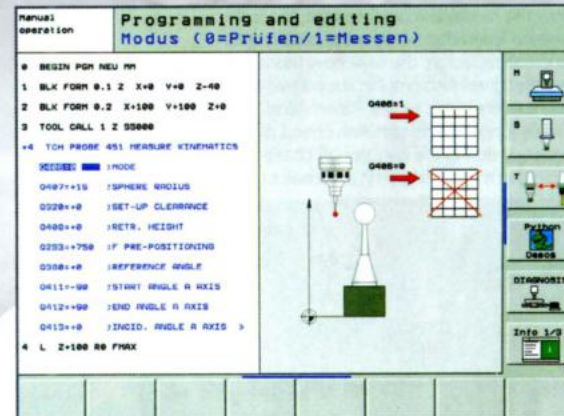
HSK-A63



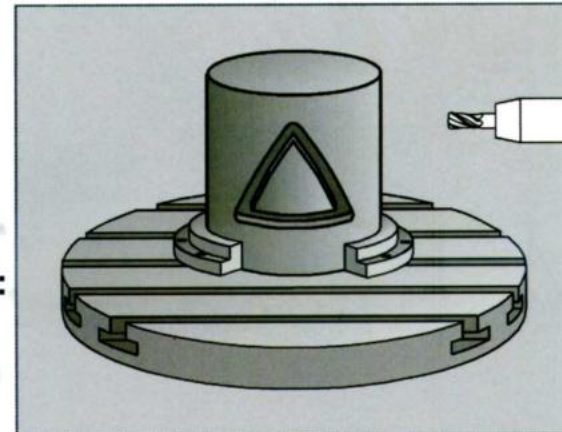
CAT-40 / DIN69871



DIGITAL CNC CONTROL



Inspecting and optimizing machine accuracy
by calibrating rotary axes with kinematics



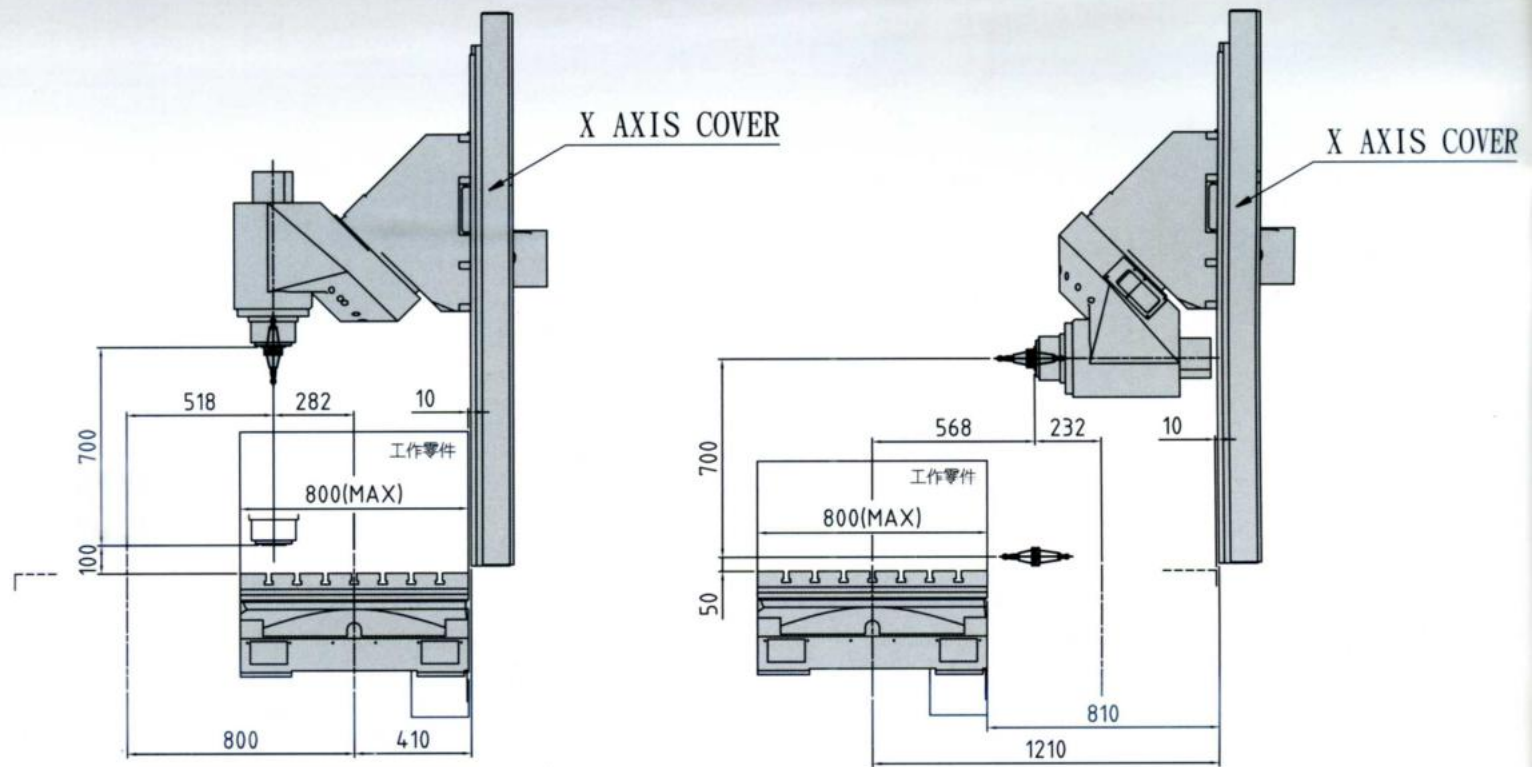
Cylindrical surface interpolation

Heidenhain iTNC-530 HSCI newest control :

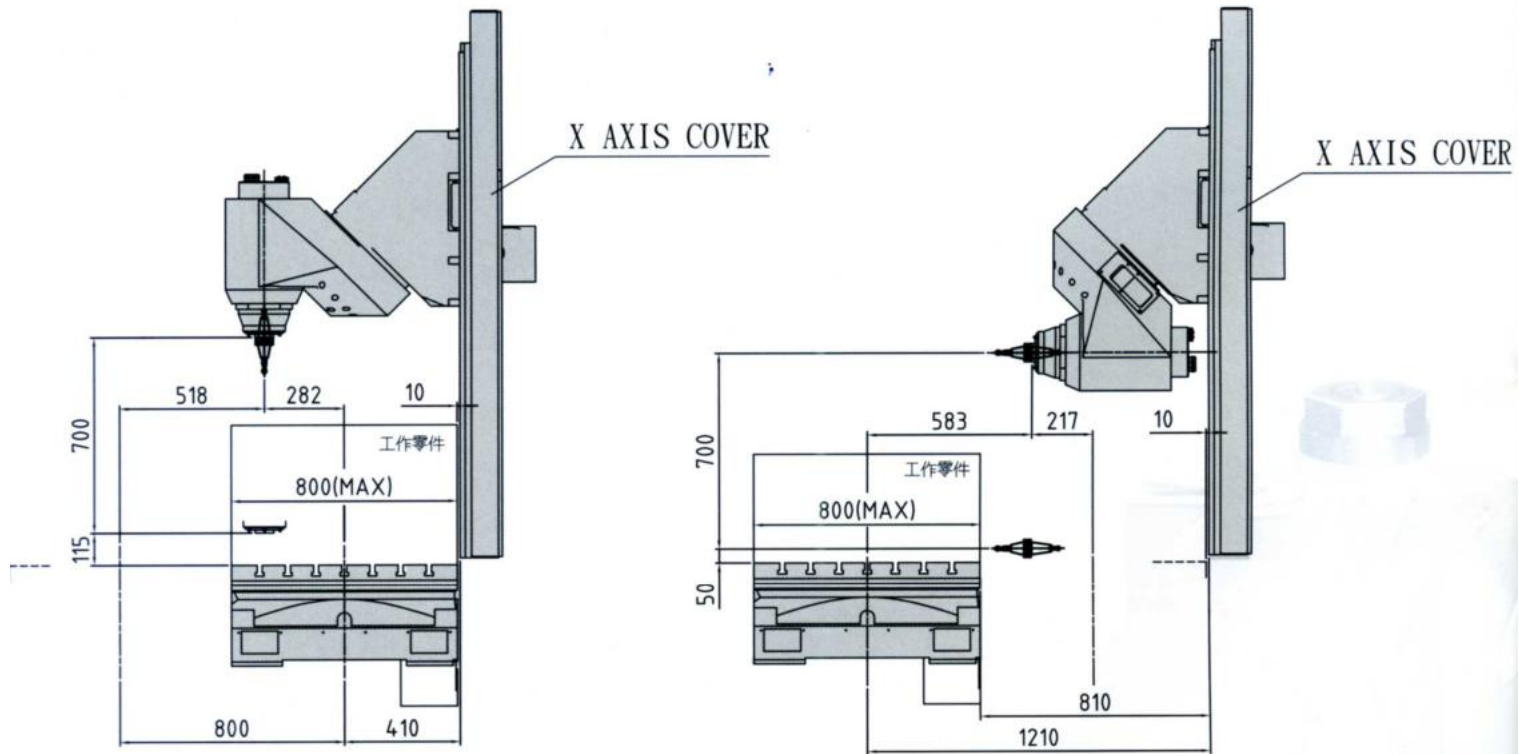
1. MC 6222 1.8GHz more powerful CPU than before
2. 32G SSDR storage media resistance to vibration
3. New HEROS 5 operating interface with PDF viewer
4. TE 630 key board & MB 620 panel & 15" XGA screen

WORKING ENVELOPE

1. With standard spindle N140D

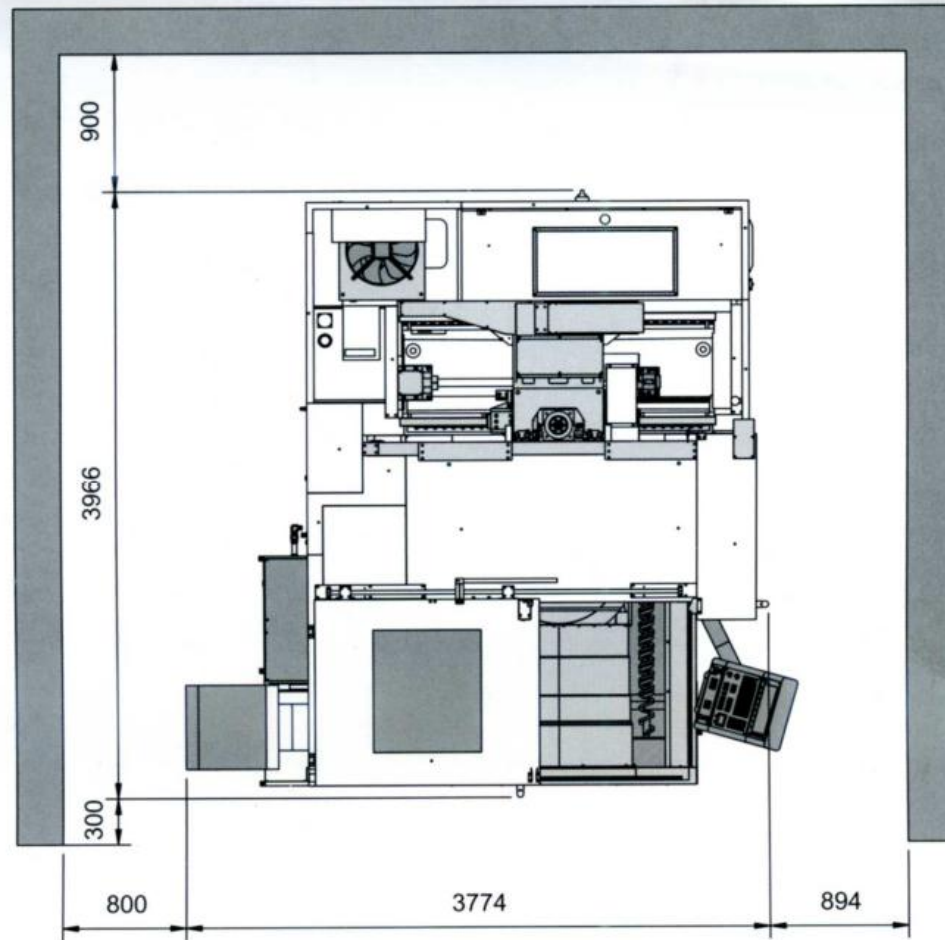


2. With optional spindle C18 / C24

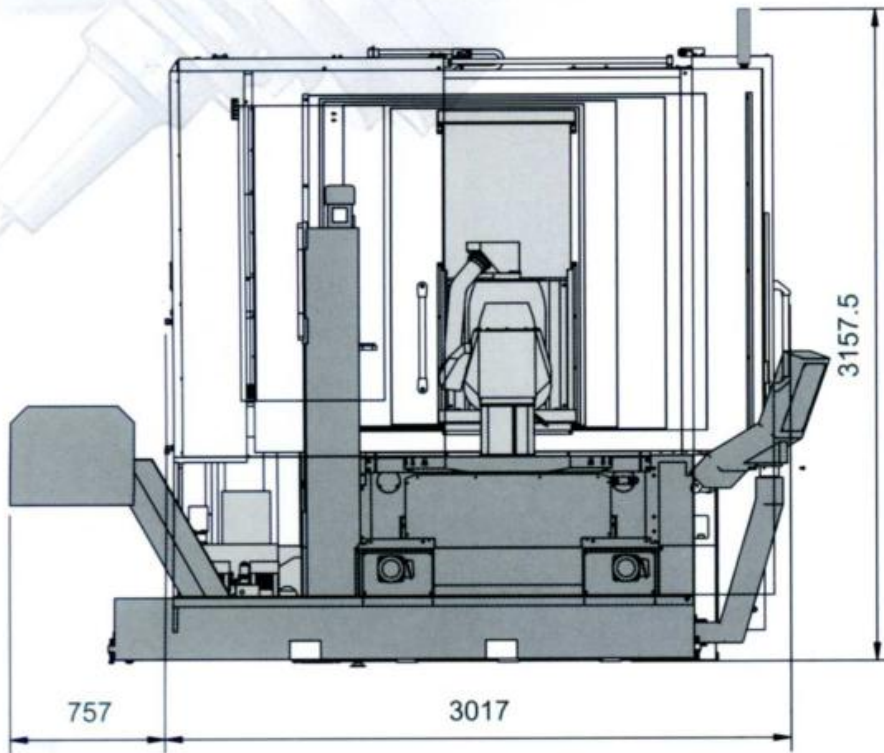


MACHINE DIMENSION

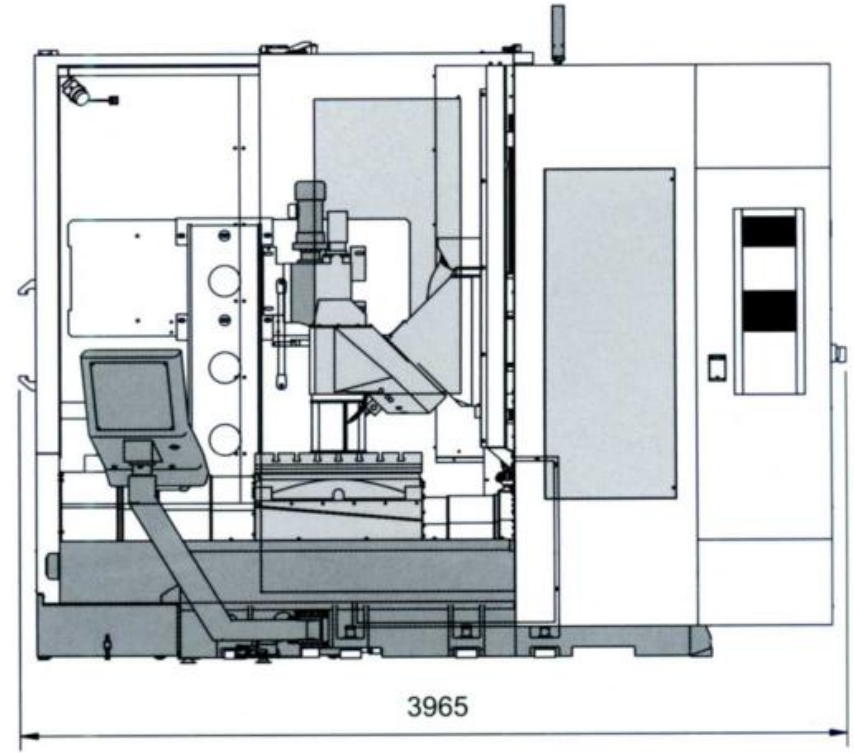
1. TOP VIEW



2. FRONT VIEW

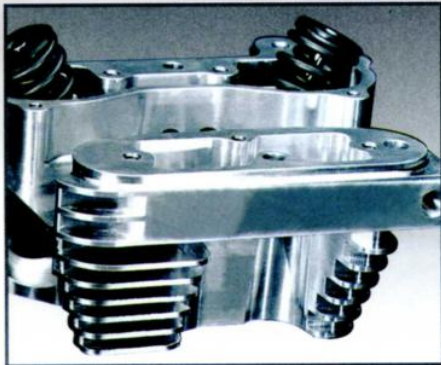


3. SIDE VIEW



APPLICATIONS

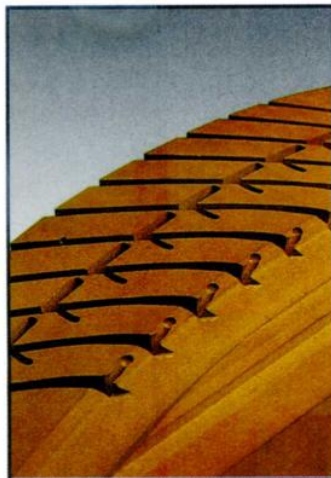
► The milling center can be used not only the typical various turbo impeller industries but also servicing aerospace aviation, automotive, medical and mould industries etc.



1. CYLINDER



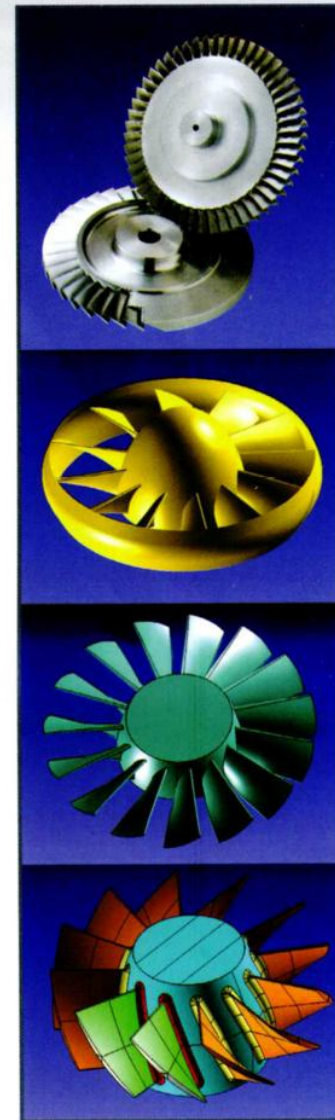
2. SHAFT



3. MOULD



4. WHEEL



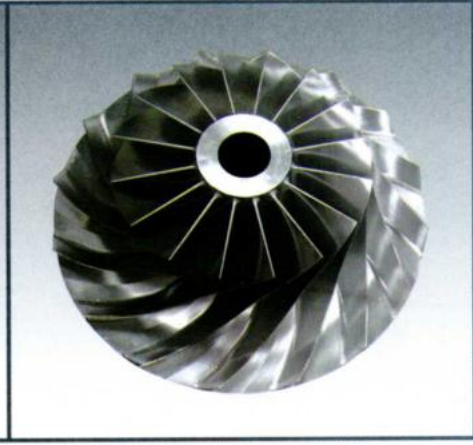
5. BLISK



6. TURBO IMPELLERS



10-BLADES



16-BLADES

MACHINE SPECIFICATIONS

ROTARY TABLE	table dimension T slots (width x No. x pitch) height of table to floor maximum load of fixed table index increment	1000mm x 800mm 18mm x 7mm x 100mm 1000mm 1500kg 0.001° x 180,000
TRAVEL	X Y Z	1000mm x 800mm x 700mm
TILTING SPINDLE	spindle taper spindle speed RPM spindle front bearing diameter spindle center to slideway cover spindle to table (vertical) index increment	BT#40 (HSK-A63) 14000rpm (18000rpm, 24000rpm) 70mm (65mm) 700mm 100mm - 800mm 0.001° x 180,000
AUTOMATIC TOOL CHANGER	tool capacity max. length / diameter / weight tool to tool time required tool balance	40 (52) 300mm / Φ120mm / 7kg 3 seconds 2.5G
MOTORS	main spindle motor power (S1 /S6) X / Y / Z / B / C axis motor torque	29.3 / 35kw (opt see page 9) 27/48/48/1320/48Nm
FEEDRATE	axis rapid feed cutting feedrate	24m / min 20m / min
ROLLER GUIDEWAYS	X Y Z	2 pcs. x 55mm x 4 bearings / axis
BALLSCREWS	X / Y / Z axis diameter X / Y / Z axis pitch transmission precision class	50mm 12mm direct coupling C3, 0.008mm/ 300mm
LUBRICATION SYSTEM	pump motor tank capacity	25w x 2 pcs 4l x 2 pcs
COOLANT SYSTEM	pump motor tank capacity	4 bar 400 l
WEIGHT	net	15000kg

() OPTION

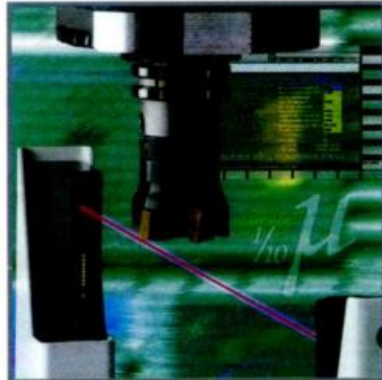
STANDARD FEATURES & ACCESSORIES

1. FULL SPLASH GUARD WITH TOP ROOF
2. PROGRAMMABLE COOLANT SYSTEM
3. AUTOMATIC LUBRICATION SYSTEM
4. SPINDLE AIR BLAST SYSTEM
5. WORK ALARM, INDICATON LAMPS
6. SPINDLE WATER COOLER
7. LEVELLING BOLTS & PADS
8. RS-232 TERMINAL INTERFACE PORT
9. MACHINE & CONTROL MANUALS
10. TOOLBOX WITH SPANNERS & WRENCHES
11. CHAIN TYPE CHIP CONVEYORS + 2 SCRCW CHIP AUGERS
12. 3 AXIS LINEAR SCALES + 2 AXIS ROTARY ENCODERS

OPTIONAL ACCESSORIES :



TOOL PROBE



TOOL LASER MEASUREMENT



WORK PLECE PROBE



COOLANT THUR SPINDLE
DEVICE



Thanks for your attentions.

