

# FREJOTH

## 5 AXES MACHINE CENTER

### ● UMC-1000 / 5 AXES

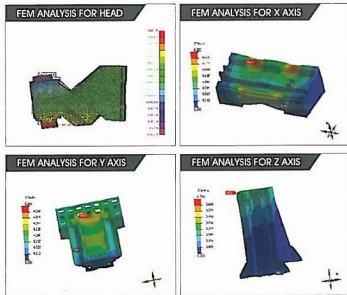
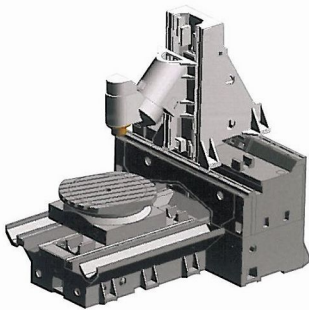
- Multi-sided machining without having reset saves time.
- Rapid movement and high acceleration maximize productivity.
- Unlimited flexibility and versatility when manufacturing individual part.
- Optimum load distribution maximizes stability.
- Highest machine precision repeatability avoids any axis overlapping.



THE LEADER IN QUALITY AND RELIABILITY  
~SINCE 1973~

## TOTAL LY FEM ANALYSIS

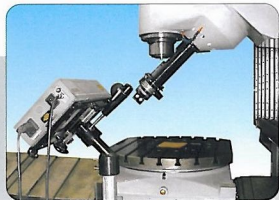
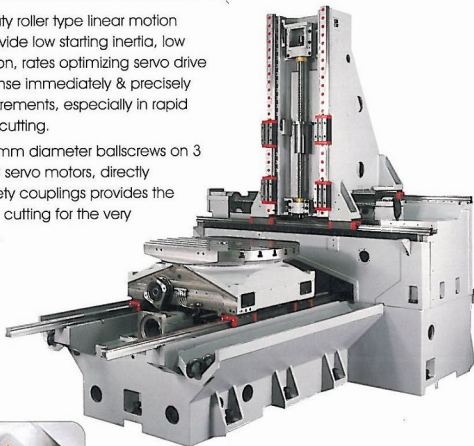
Using the most advanced computer aided design and Finite Element Method analysis programs, an extremely rigid casting frame is being created and then maintains the outstanding accuracy of this high performance machine.



## RIGID FRAME

The high rigid and heavy duty roller type linear motion guideways on 3 axes to provide low starting inertia, low friction and high acceleration, rates optimizing servo drive and ensure machine response immediately & precisely for high speed cutting requirements, especially in rapid positioning and contouring cutting.

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



## LASER CALIBRATION IN EVERY AXIS

## C AXIS CNC WORK

1000mm x 800mm diameter with 1500kg load driven by servo motor, it can be 0.001° by high precision gear, clamping force 9000kg, positioning by J cylinder.



## INNOVATIVE SWIVEL

Offers an extra flexibility; to horizontal positions by extra flexibility : multi-sided manufacture of complex machining without additional rotary table.



## B AXIS SWIVEL MI

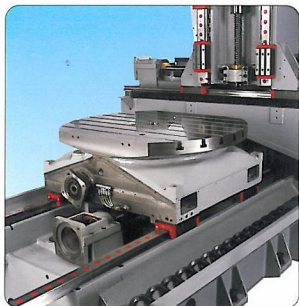
A 0.001° continuous in vertical & horizontal C variable position, by using torque motor to get the torque.



## LE AND HEAD

### WORKING TABLE

Dimension  
by AC  
indexing  
worm  
up to  
hydraulic



### VERTICAL MILLING HEAD

The fully automatic 0.001° indexing from vertical means of torque motor, this gives operator an efficient machining without re-setting the workpiece; components with a single set-up; 5 sided radial fixture; 5 axis machining in combination of



### INDEXING MILLING HEAD

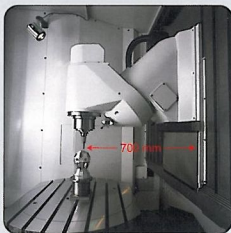
Indexing milling head  
rotation in infinite  
latest technology of  
highest accuracy &



### AUTOMATIC TOOL CHANGER

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

## WIDE THROAT DISTANCE



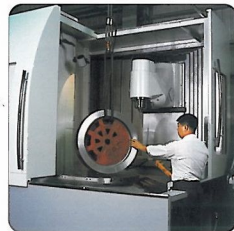
A very wide distance 700 mm between spindle center and X axis slideway cover, this gives operator a great convenience of different workpiece setup.

## SAFETY GUARD

### USER-FRIENDLY FULL GUARDINGS

A modern designed compact sheet metal full guarding, not only cover from the front and sides, but also from the top and back, this keeps the shop clean from chip and coolant and optimize conformance to environmental concerns.

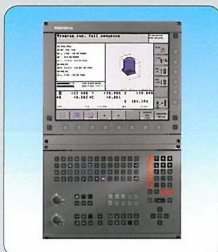
Two major requirements for nowadays guardings: protection & ease of use. Sliding front & side doors with a super wide top opening, this make very easily for straight forward loading awkward shaped workpiece. The sliding doors provide very good access and inspection facilities between operator and workpiece.



## CNC CONTROL CONSOLE

### THE RIGHT CONTROL IN THE RIGHT POSITION

A swivel control panel located in front of machine, easily move to the most suitable position to make the operator's job more straight forward and enhance safety and productivity.



### HEIDENHAIN i530

15.1" TFT color display  
hard disk 6GB spline  
interpolation ethernet  
interface.



### SIEMENS 840D

10.4" TFT color display hard  
disk 4.3GB  
NCU 573.4  
ABC spline / NURBS  
PCU 50 & USB

<b>MODEL</b>	
<b>TRAVEL</b>	
X,Y,Z axis	1000 x 800 x 700 mm
<b>DISTANCE</b>	
Vertical spindle nose to table	150~850 mm
Horizontal spindle center to table	50~750 mm
<b>INDEXING TABLE</b>	
Dimension	1000 x 800 mm
To floor distance	1000 mm
Maximum load	1500 kg
Indexing increment	0.001° x 360.000
T slots (No x width x pitch)	7 x 18H x P100
<b>MOTOR SPINDLE HEAD</b>	
Maximum speed	16.000 RPM (20.000)
Power	17.2 Kw (21.4 Kw)
Taper	SK40 (HSK-A63)
Indexing increment	0.001° x 360.000
Front bearing	70 mm
<b>FEED RATE</b>	
Rapid	24 / 24 / 24 m/min
Cutting	10 m/min
<b>ATC</b>	
Tool holder	SK40
Pull stud	MAS 403P40T1
Tools	40
Max. Dia / length / weight	Ø120 mm / 300 mm / 7 kg
<b>GENERAL</b>	
Power requirement	40 KVA
Floor size height	3.7 m x 4.5 m x 3 m
Net weight	15000 kg

( ) option

## STANDARD ACCESSORIES

## OPTIONAL ACCESSORIES

- |                            |                           |  |
|----------------------------|---------------------------|--|
| ● Full guard with roof     | ● Working lamp            | ● Linear scales  |
| ● Arm 40 tool changer      | ● Alarm light             | ● Laser tool defector  |
| ● Coolant system           | ● Leveling pads & bolts   | ● Workpiece probe  |
| ● Spindle air blast        | ● Adjusting tools and box | ● Coolant thru spindle with<br>14000 RPM / 20.9 Kw / 115 Nm / SK40 |
| ● Auto lubrication         | ● Spindle water cooler    | ● Powerful motor   |
| ● Chip conveyor & bucket   | ● 15000 RPM motor spindle | 14000 RPM / 29.3 Kw / 160 Nm / SK40                                |
| ● 2 sets chip auger screws | ● 3 Axis safety couplings |  |

● SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.


**FREJOTH INTERNATIONAL LTD.**

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