

# Eumach

*Always A Step Ahead*



**UMC-2000**

**5 AXES MACHINING CENTER**

**5 AXES**

**A PROFESSIONAL CNC MACHINES MANUFACTURER**

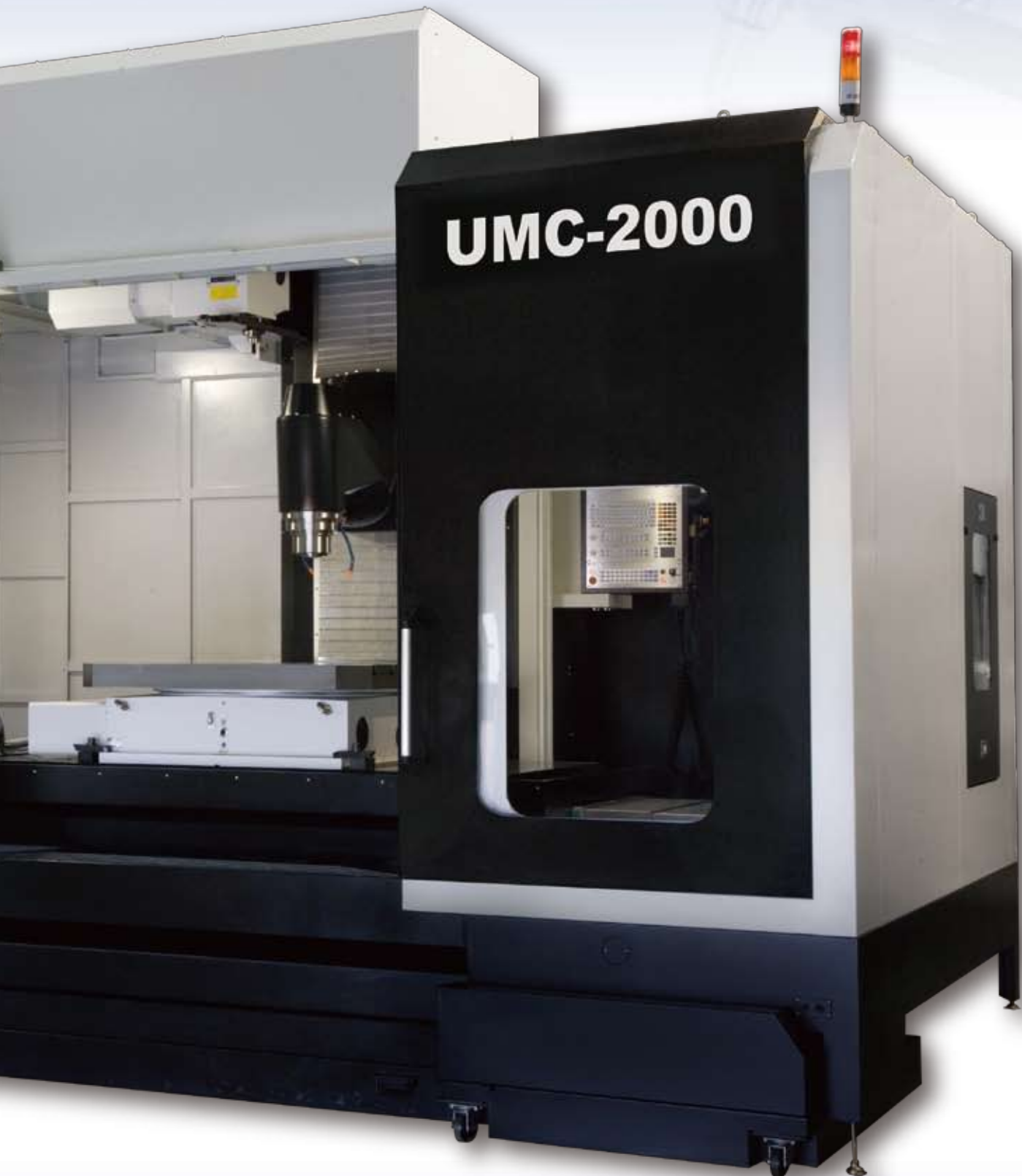
# ***THE MOST EFFICIENT & INTELLIGENT MACH PERFORMANCE MACHINING, INCREASE PRO***

## **● UMC-2000 5 AXIS SIMULTANEOUS MILLING CENTER :**

- 2150mm x 1100mm x 1400mm three axis travel
- 1200mm x 1200mm working rotary table with 3000kg 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



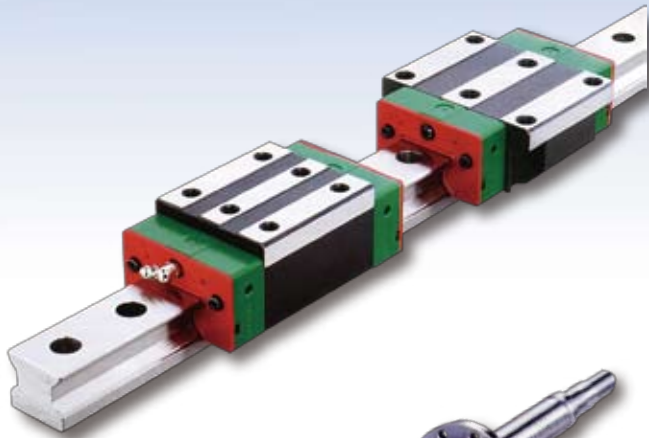
# ***INING CONCEPT FOR MULTI-SIDED HIGH DUCTIVITY, FLEXIBILITY AND REPEATABILITY***



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



# ***SUPER RIGID CASTING FRAME***

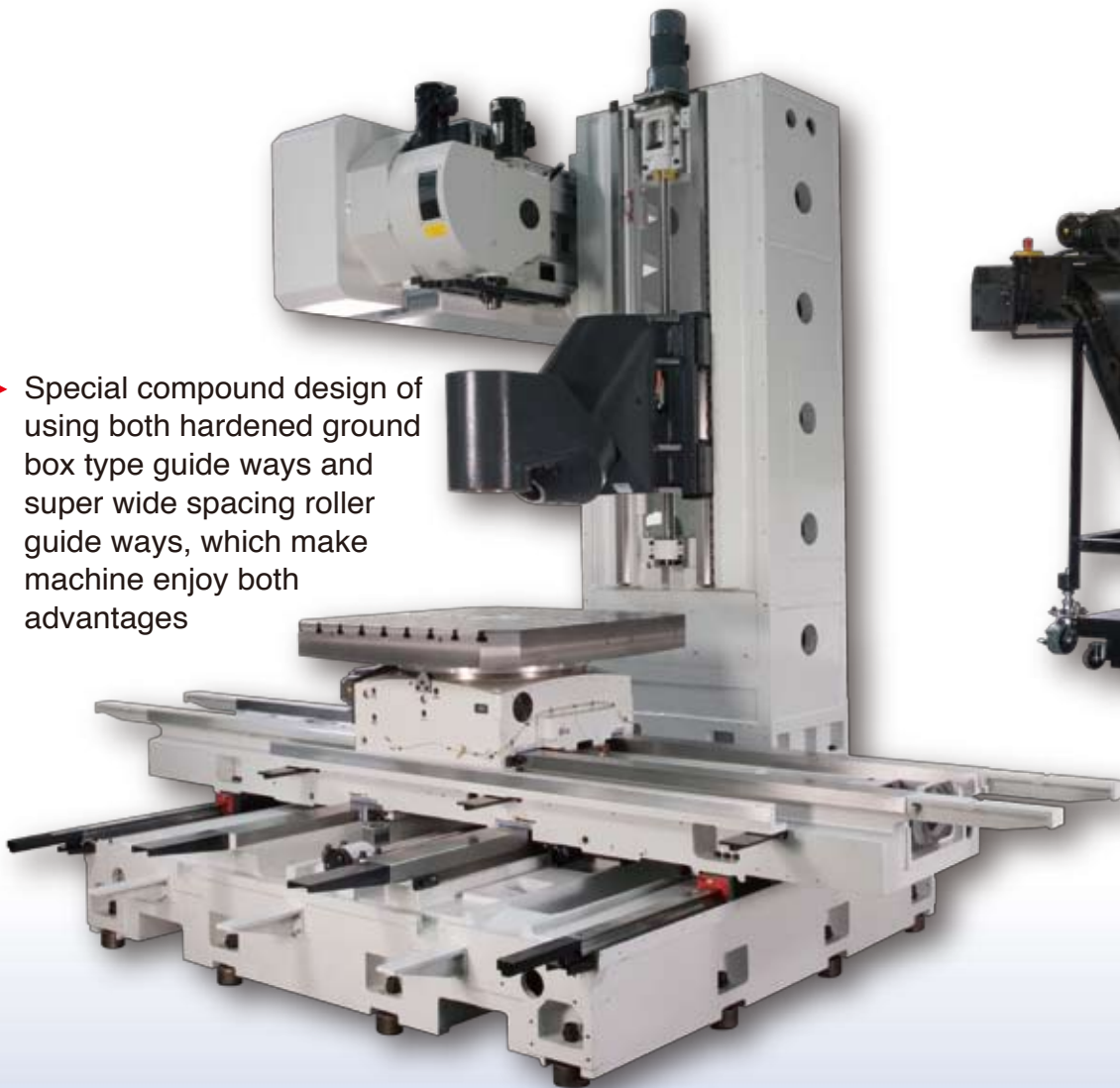


▶ The latest improved super heavy duty roller guideway on Y & Z axis, not only provides fast & accurate rapid feed but also the allowance of heavy work piece axis.



▶ 3 axis pre-loaded C3 class high precision Ballscrews all has been well pre-extended and directly coupled to ac servo motors, greatly eliminates backlash and ensures highest rigidity.

▶ Special compound design of using both hardened ground box type guide ways and super wide spacing roller guide ways, which make machine enjoy both advantages



# ***ERGONOMICALLY OPTIMIZE GUARD***



- ▶ Even with super large 2150mm x 1100mm x 1400mm travel, 32 tons machine weight, machine guarding still very compact

# ***B AXIS INNOVATIVE SWIVEL MILLING HEAD***



- ▶ 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.



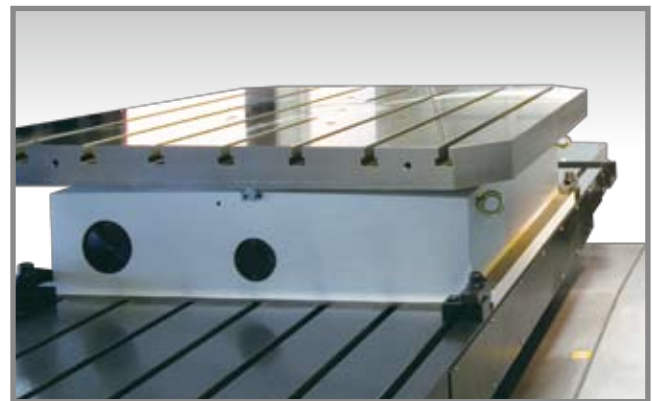
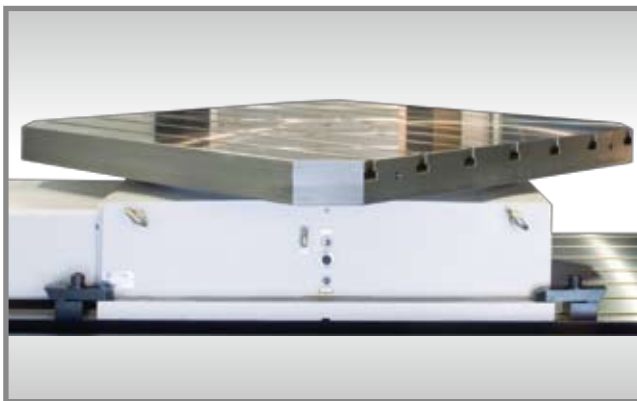
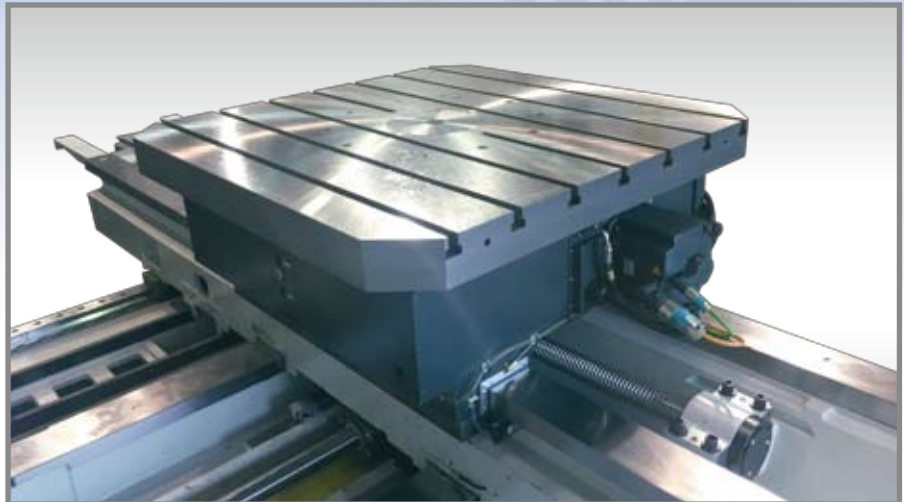
- ▶ The latest technology torque motor manages the B axis continuous swivel milling head , it guarantees maximum movement dynamic and linearity and thanks to the absence of those traditional mechanical kinematics parts, it results a much higher performance on finishing surface. The direct reading system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



# C AXIS DURABLE CNC ROTARY TABLES

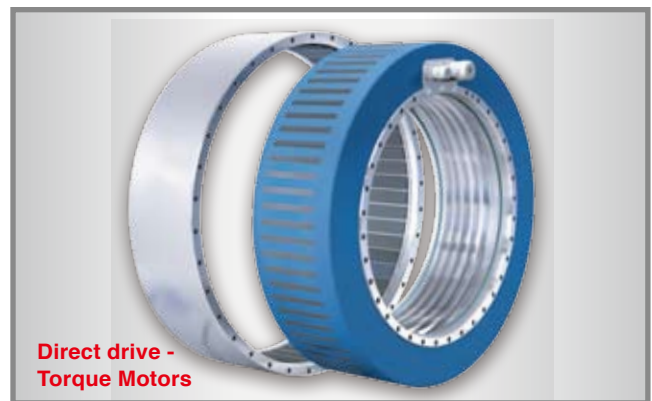
## STANDARD:

- ▶ Standard milling rotary table, built-in saddle integrated type, non-removable. no more machine original rectangular table 2200 X 1100mm.



## OPTIONAL:

- ▶ Optional milling rotary table, placed on top of a rectangular 2200 x 1100mm plain table, removable; can do 3~5 axes applications even long work pieces.



## OPTIONAL:

- ▶ Optional removable CNC torque table with turning milling availability.

	Standard milling	Optional milling	Optional mill-turn
Top plate dimension	1200mm x 1200mm	1200mm x 1200mm	φ1000mm
T slots	7 x 22H8 x P160	7 x 22H8 x P160	16 x 18H8 x P22.5 °
Transmission	Worm wheel	Worm wheel	Torque motor
Maximum speed	8.33RPM	8.33RPM	800RPM (S6)
Maximum load	3000kg	3000kg	1500kg
Clamping torque	1000kg-m	1000kg-m	1127 / 2065Nm

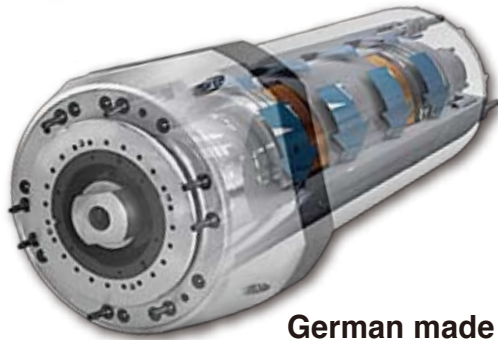
# POWERFUL MOTOR SPINDLES



Taiwan made milling



Italy made milling



German made milling

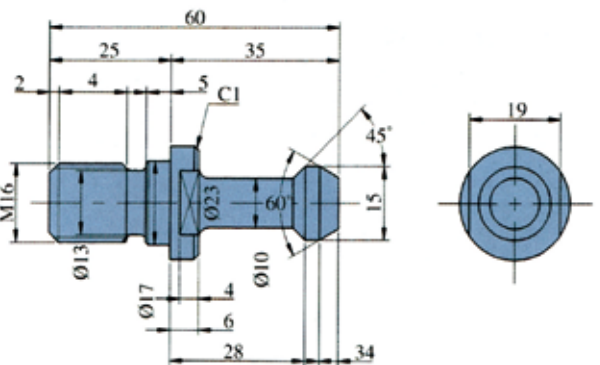
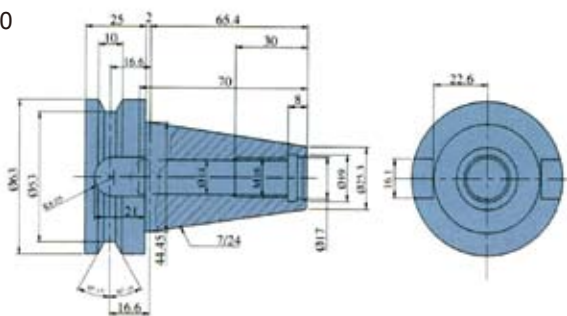


German made mill turn

Models	RPM	Taper	KW	Nm	In use	Made	Remarks
N14	14000	BT#40	29.3 / 35	70 / 160	Milling	Taiwan	Standard
P18	18000	HSK-A63	26 / 32	124 / 154	Milling	Italy	Optional
C34	24000	HSK-A63	34 / 43	72 / 91	Milling	Germany	Optional
C34B	12000	HSK-A63	34 / 42	160 / 200	Milling	Germany	Optional
P12	12000	HSK-A100	30 / 39	227 / 295	Milling	Italy	Optional
C40	15000	HSK-A100	40 / 50	160 / 200	Milling	Germany	Optional
C50	8000	HSK-A100	50 / 64	240 / 300	Milling	Germany	Optional
C27T	12000	HSK-T63	27 / 34	130 / 170	Mill turn	Germany	Optional
C34T	10000	HSK-T100	34 / 43	160 / 200	Mill turn	Germany	Optional

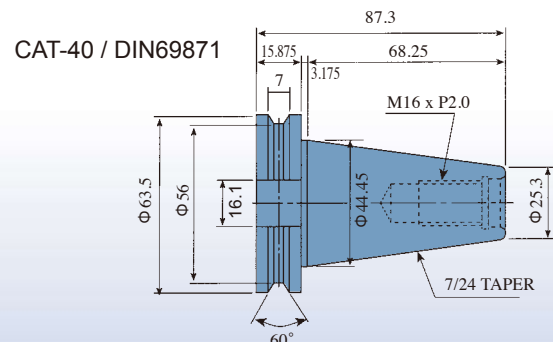
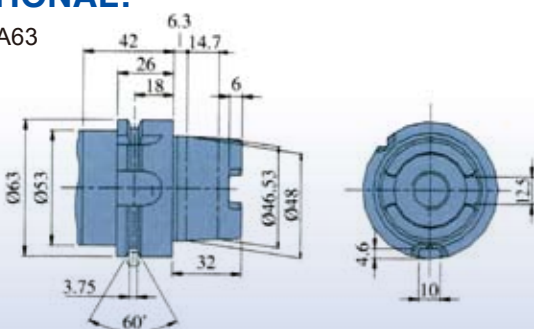
## STANDARD:

BT#40



## OPTIONAL:

HSK-A63





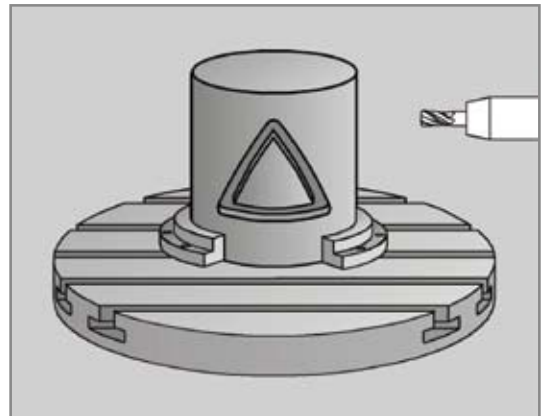
# DIGITAL CNC CONTROLS



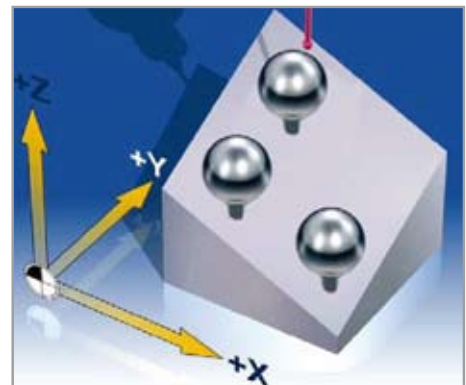
Inspecting and optimizing machine accuracy by calibrating rotary axes with kinematics

## Heidenhain iTNC-640 HSCI newest control :

1. MC 7522 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 730 key board & MB 720 panel & 15" XGA screen

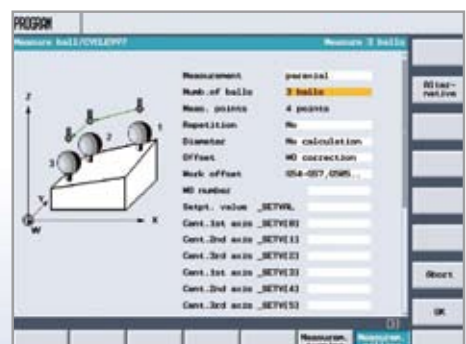


Cylindrical surface interpolation



## Siemens 840Di Solution Line newest control :

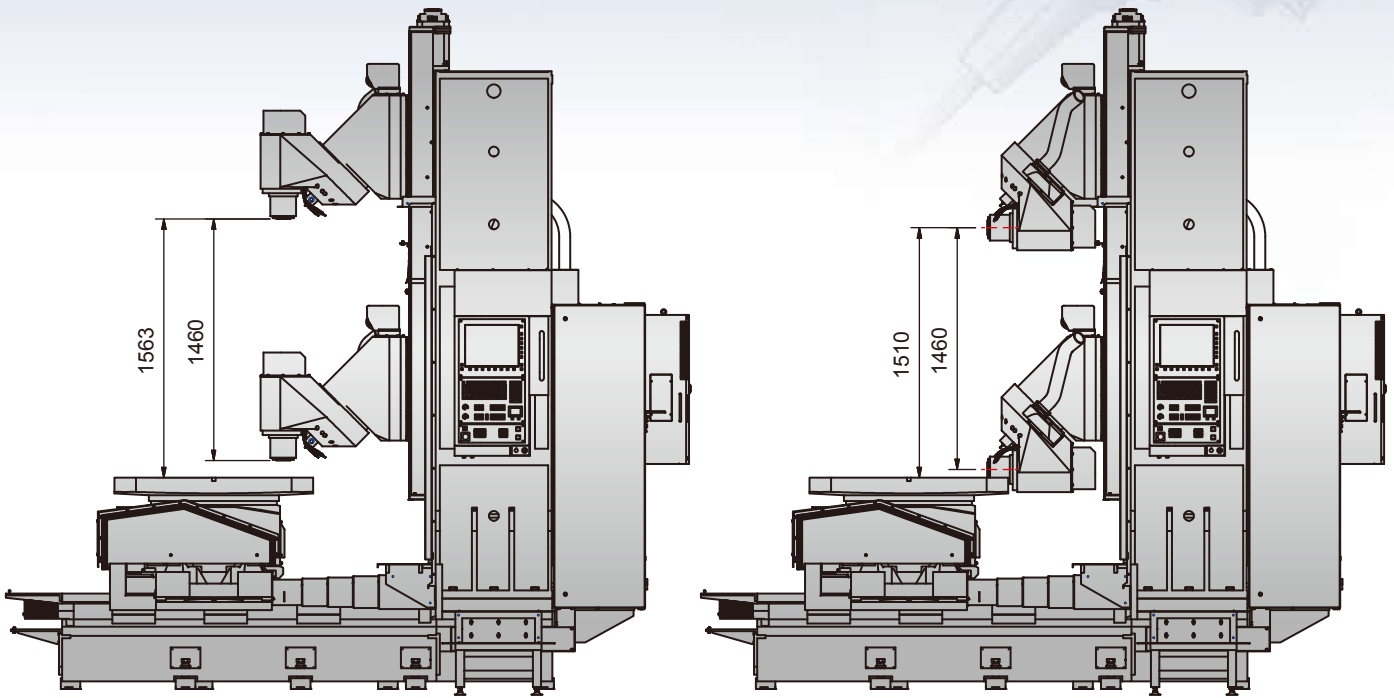
1. NCU 730.2 with PLC 317 - 2DP + 40GB HD
2. PCU 50.3 1.5Ghz , 512Mb, WinXP/Pro interface
3. Shopmill + 3D simulation 1 & HMI Advanced
4. MCP483C panel + OP 015A 15" TFT screen



MEASURING 3 SPHERE

# WORKING ENVELOPE

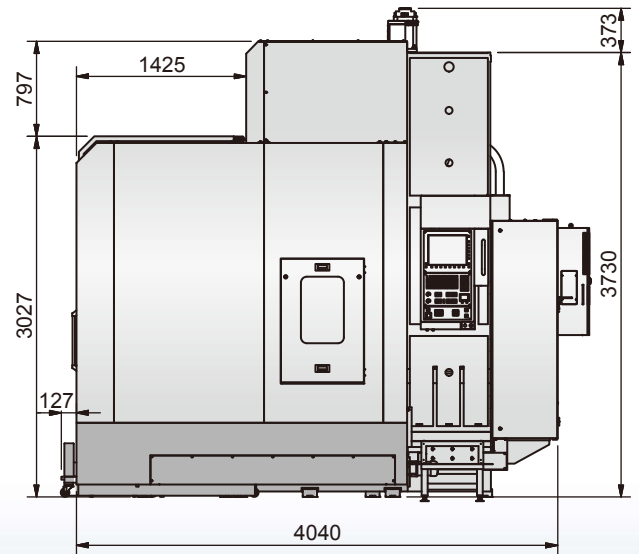
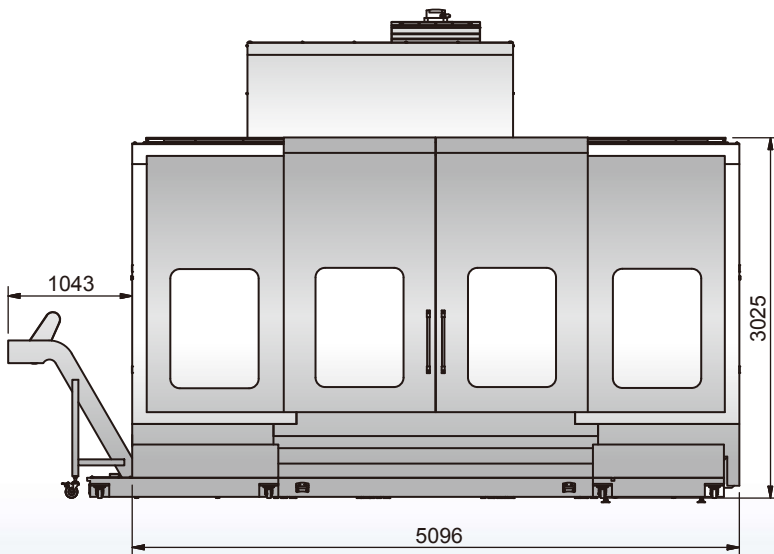
With standard spindle N140D & integrated rotary table



# MACHINE DIMENSION

FRONT VIEW

SIDE VIEW



Note : Above dimension only for reference.

# UMC-2000 Technical Specification:

Unit : mm

Model	Specifications	Milling center	Mill-turn center	
<b>Travel</b>	X axis ( table right & left )	2150		
	Y axis ( table forward & backward )	1100		
	Z axis ( head up & down )	1400		
<b>Milling head (B axis)</b>	Type	45° universal		
	Vertical to horizontal	3 seconds		
	Transmission	DD torque motor		
	Rotary angle	Deg.	0° ~ 180°	
	Continuous / peak torque	Nm	705 / 1500	
<b>Rotary table (C axis) ( see page 7 )</b>	Type	Integrated (removable)	Removable	
	Table dimension	1200x1200		
	Rotary table surface to floor	1279		
	Maximum loading	KG	3000	
	Maximum rotation	RPM	8.33	
	Transmission	Worm wheel		DD torque motor
	Indexing increment	Deg.	0.001°	
	T slots ( No.xsizepitch )		7 x 22H8 x P160	16 x 18H8 x P22.5°
	Continuous / peak torque	Nm		
<b>Motor spindle ( see page 6 )</b>	Maximum spindle speed	RPM	14,000 (8000~24000)	
	Spindle power S1/S6	KW	29.3 / 35 (~ 50 / 63)	27 / 32
	Spindle torque S1/S6	Nm	70 / 160 (~130 / 170)	
	Spindle taper	BT#40 (50)		HSK-T63 (T100)
	Front bearing diameter	70 (100)		
<b>Ball screws</b>	X / Y / Z Diameter x pitch	φ 63 / 63 / 50 x 10 / 10 / 10		
<b>X/Y/Z axis Guideways</b>	Type	box / box + roller / roller		
	Number	2 / 4 / 2 guide ways		
	Guide ways width	box 120 / box 150 + roller 65 / roller 55		
	Rapid feed X / Y / Z	12 / 12 / 12m/min		
<b>ATC</b>	Tool holder type	BT#40 (50)	HSK-T63 (T100)	
	Tools number	40 (60) pieces		
	Maximum tool dia. / length / weight	φ120 / 300 / 7kgs		
	Tools exchanging position	vertical		
<b>Weight</b>	Before packing	KG	32000	

( ) OPTION

## STANDARD FEATURES & ACCESSORIES

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

## OPTIONAL ACCESSORIES :



TOOL PROBE



TOOL LASER MEASUREMENT



WORK PLECE PROBE



COOLANT THUR SPINDLE





# EUMACH FAMILIES



◦ **VMC-2150**  
Vertical machine center  
400MM ~ 3200MM X axis travel



◦ **TVMC-2000 / 3000**  
Moving column machine center  
2320MM & 3320MM X axis travel



◦ **LBM-1500**  
High speed bridge type machine center  
1100MM ~ 2200MM X axis travel



◦ **GVM-800U**  
5 Axes gantry type machining center



◦ **EBM-2150**  
5 Face machine center  
1400MM ~ 3200MM X axis travel



◦ **MB-1500**  
Moving column horizontal machine center  
1100MM ~ 2200MM X axis travel



◦ **DVM-4025**  
5 Face & double column machine center



◦ **FBE-1500**  
Universal milling machine  
1500MM ~ 4000MM X axis travel



◦ **FBM-10040**  
Floor type milling center  
4M~20M X axis travel

**Eumach Co.,LTD.**

★ Specifications subject to change without notice.  
Catalogue No.A7080301

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