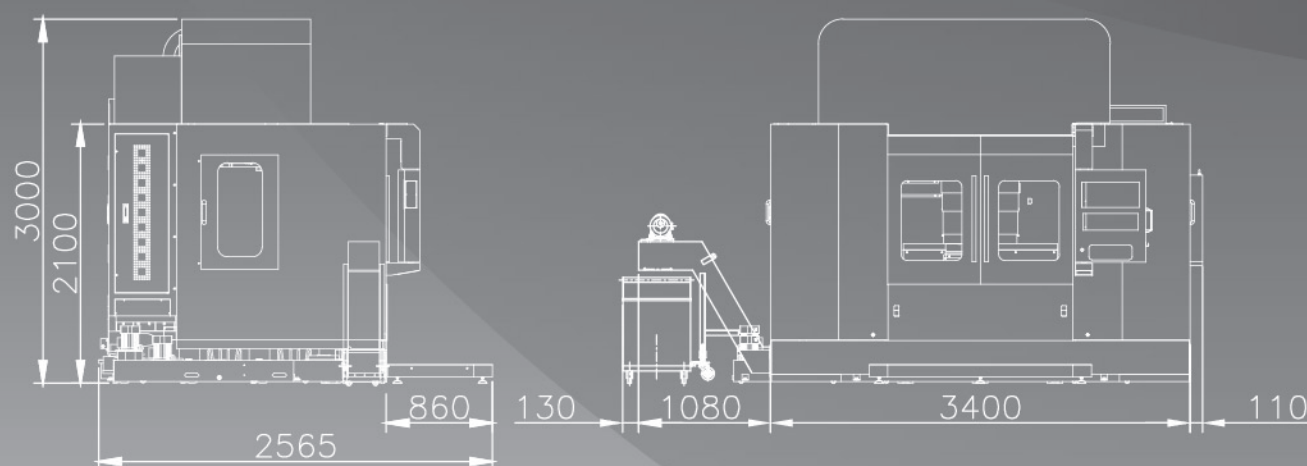
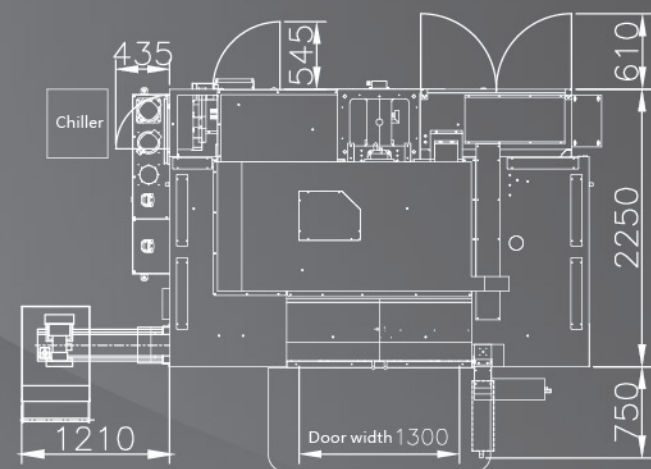


# UH-500

## Machine Dimensions



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Agent:



2018.11

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# UH-500

## FIVE AXIS MACHINING CENTER



*High Quality , High Efficiency*



# UH-500

## DIVERSIFIED APPLICATION NEEDS

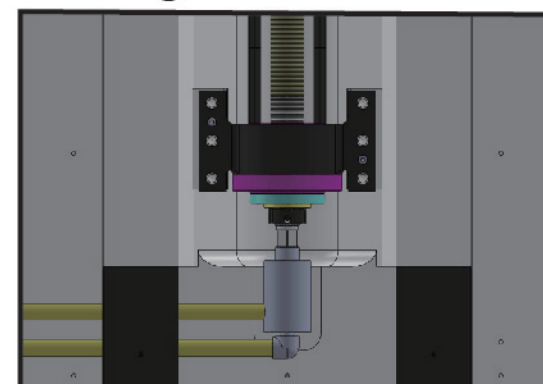
The application of UH-500 is wide, it combines computer numerical control, high-performance servo driver and precision processing technology and is applied in the highest efficiency and precision of complex surfaces.

The five-axis processing machine can works for Aerospace, Military, Healthcare and Automobile Industries. The features that to refine processing which one time fixing can finish complexed workpiece and the diversified manufacturing needs. The machine primarily character to shorten production time, enhanced processing accuracy for complex parts in response to diversified needs, greatly saving molds expense, increase production efficiency and market competition.

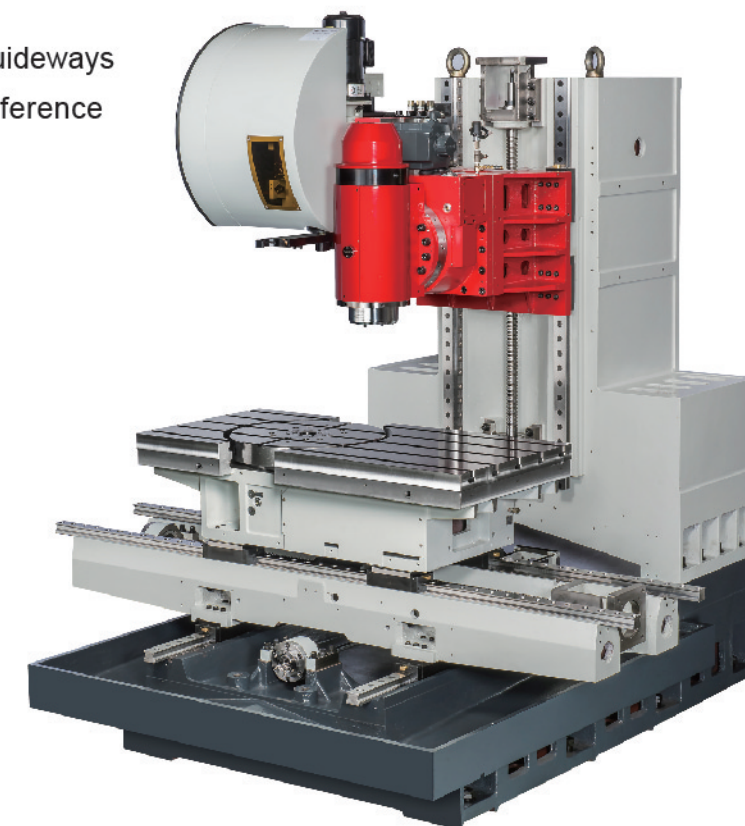


1. This machine is made of high quality Meehanite cast iron, the hardness is over HB190 which are annealed and stress-relieved.
2. All axes are equipped with C3 class precision ball screw, and high-speed high-thrust servo motor, the X/Y axes rapid traverse can reach 30m/min, cutting feedrate up to 10m/min.
3. Z axis precision ballscrew with coolant through design, it can greatly reduce the accuracy error due to the lone time processing.
4. B axis swivel head use high-precision worm wheel module, self-locking and high rigidity, the minimum angle 0.001°.
5. C axis rotary table with high-precision worm wheel design, it can also be available with DD direct drive motor as optional, high-speed and no sluggishness.
6. UH-500 use movable tool magazine with linear guideways and hydric cylinder design, it can avoid the interference with spindle when B axis swing.

### Z Axis Coolant Through Ballscrews



Z axis precision ballscrew with coolant through design to reduce thermal expansion error

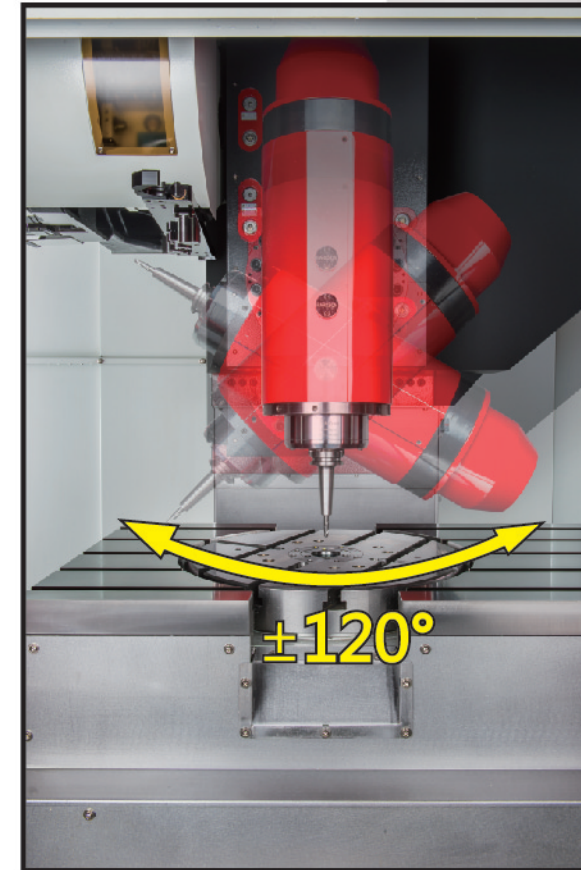
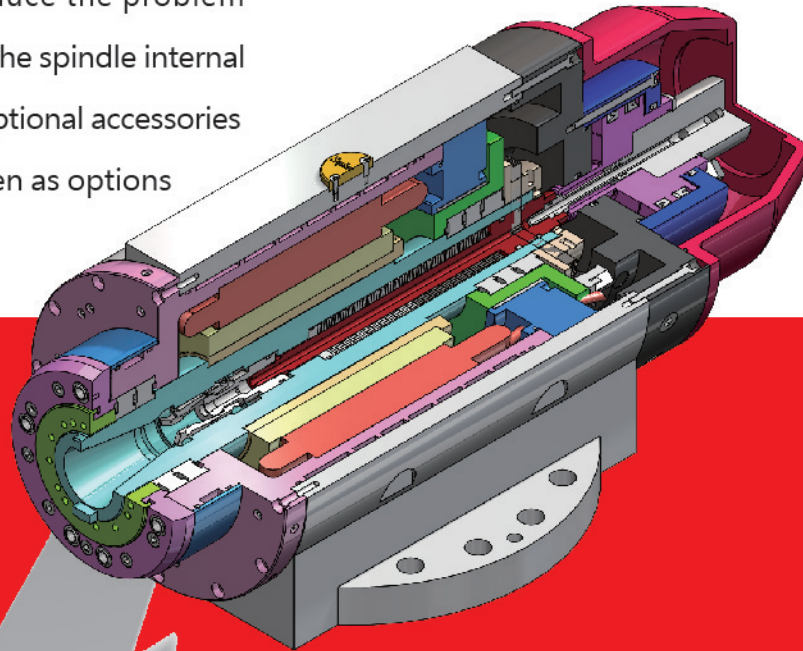




# UFI-500

## Built-in spindle 15000rpm – BBT40

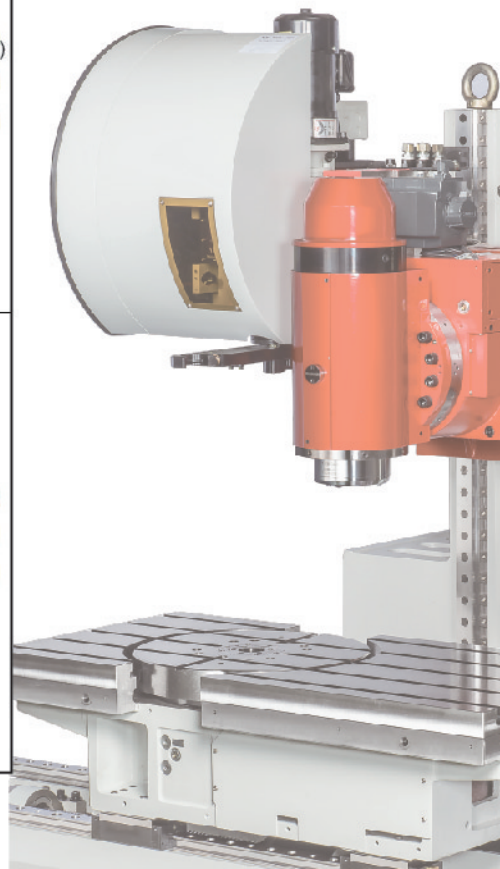
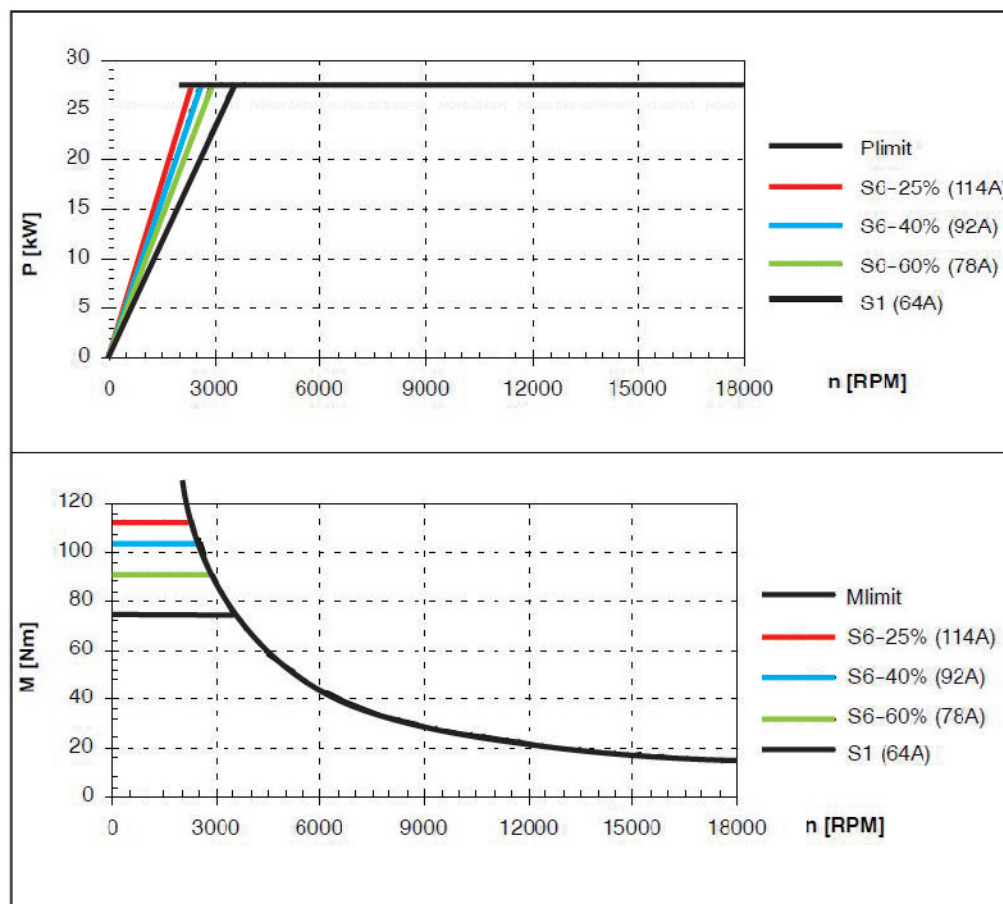
- Spindle motor 27.5kw, torque output 112Nm at 2500rpm
- Spindle with grease lubricating system
- Multi-labyrinth design to effectively reduce the problem happened that cutting fluid and oil-air into the spindle internal
- Coolant through spindle 20bar/40bar are optional accessories
- Tooling system HSK-A63 also can be chosen as options



## Swivel Head (B Axis)

- Max. swiveling range  $\pm 120^\circ$
- B axis swivel head use high-precision worm wheel module, self-locking and high rigidity, the minimum angle  $0.001^\circ$ .
- Heidenhain RCN optical encoder is standard accessories
- Disc hydraulic braking system, radial cutting ability 100kgf

## Spindle Motor Torque Diagram



## Rotary Table (C Axis)

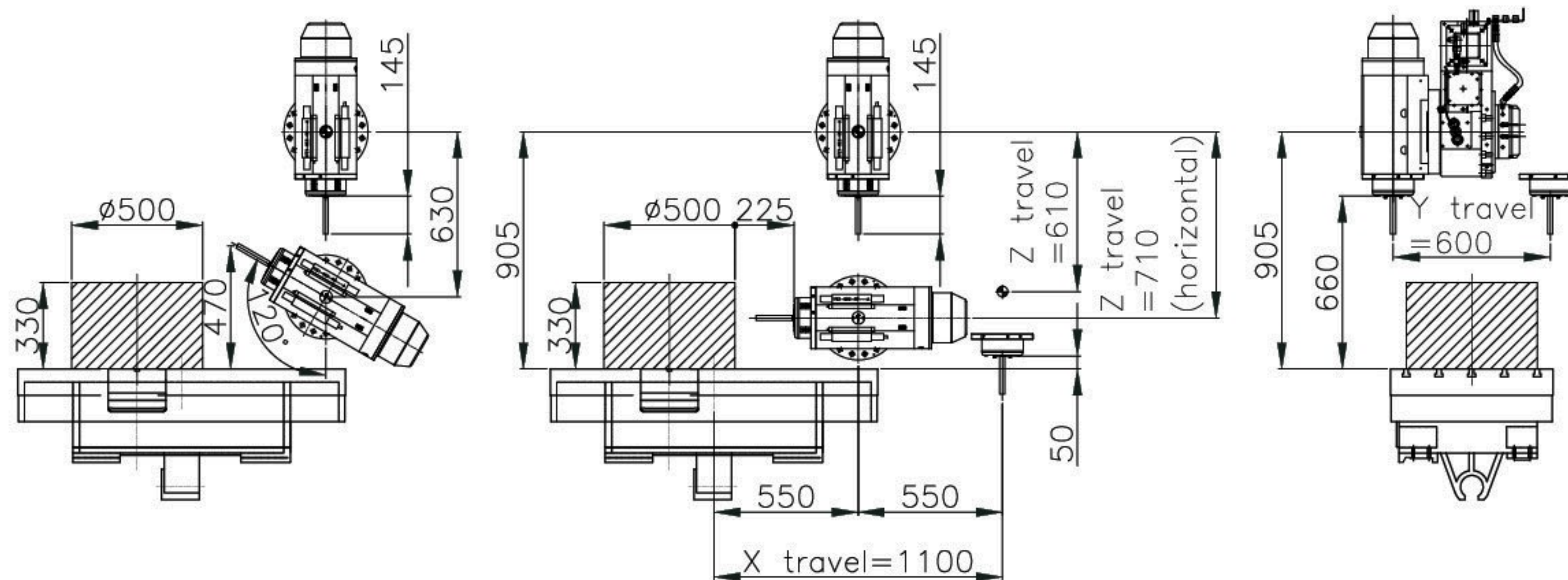
- C axis rotary table with high-precision worm wheel design, it can also be available with DD direct drive motor as optional, high-speed and no sluggishness.
- Rotary table diameter  $\varnothing 500\text{mm}$ , standard with worm wheel design the max. speed 25rpm; DD motor is optional which max. speed is 800rpm.
- Indexing resolution  $0.001^\circ$
- Disc hydraulic braking system





# UH-500

## Processing Range



## Standard Accessories

- Built-in spindle speed 15000rpm (BBT40)
- Arm type ATC 24-tools
- Full sealed splash guarding
- Roller type linear guideways
- B axis optical encoder
- Z axis coolant through ballscrews
- Chain type chip conveyor
- Rigid tapping
- Cutting coolant nozzle
- Cutting air blast system
- Spindle splash ring
- Spindle oil chiller
- Auto lubrication system
- Heat exchanger
- LED warning light
- Air gun
- Coolant gun
- LED work lamp

## Optional Accessories

- Coolant through spindle 20bar / 40bar
- Arm type tool changer 30-tools
- X/Y axis coolant through ballscrews
- C axis optical encoder
- Tool measurement system
- Workpiece measurement system
- Air conditioner for electrical cabinet
- Transformer
- Rear coolant flushing device
- Disc type oil skimmer

## Specifications

MODEL	UNIT	UH-500	UH-500D
<b>Travel</b>			
X axis travel	mm	1100	1100
Y axis travel	mm	600	600
Z axis travel (Vertical)	mm	610	610
Z axis travel (Horizontal)	mm	710	710
Table area	mm	1250 x 620	1250 x 620
T-slot	mm	18 x 125 x 5	18 x 125 x 5
Spindle nose to work table surface (vertical)	mm	50~660	50~660
Spindle center to work table surface (horizontal)	mm	195~905	195~905
3 axes guideways type		Roller Linear (45/45/45)	Roller Linear (45/45/45)
Ballscrew diameter X/Y/Z	mm	45 / 40 / 40	45 / 40 / 40
Pitch of ballscrew X/Y/Z	mm	10 / 10 / 12	10 / 10 / 12
<b>Swivel head (B axis)</b>			
Built-in spindle max. speed	rpm	15000	15000
Spindle power (Fanuc)	kw	15/18.5	15/18.5
Spindle power (Siemens)	kw	27.5	27.5
B axis swivelling range	°	±120°	±120°
Spindle taper		BBT-40 / HSKA63 (opt.)	BBT-40 / HSKA63 (opt.)
Indexing accuracy (B axis)	sec.	20"	20"
Repeatability (B axis)	sec.	6"	6"
<b>Rotary table (C axis)</b>			
Rotary table diameter	mm	Ø500	Ø500
Indexing resolution	degree	0.001°	0.001°
Drive method		Worn wheel	DD motor
Max. speed	rpm	25	120/800
Max. table load	kgs	500	500
<b>Feedrate</b>			
Cutting feedrate	m/min	1-10m/min	1-10m/min
X/Y/Z axis servo motor (Fanuc)	kw	4 / 4 / 7	4 / 4 / 7
X/Y/Z axis servo motor (Siemens)	kw	4.9 / 4.9 / 4.4	4.9 / 4.9 / 4.4
Rapid traverse (X/Y/Z)	m/min	30 / 30 / 24	30 / 30 / 24
<b>Auto Tool Changer</b>			
Magazine type		Arm type	Arm type
Tool magazine capacity	set	24 / 30 (opt.)	24 / 30 (opt.)
Max. tool weight	kgs	7	7
Max. tool length	mm	250	250
<b>Other</b>			
Air supply required	kgs/cm²	6	6
Power supply required	KVA	40	40
Machine weight	kgs	9200	9200
Floor space (L x W x H)	mm	4500 x 2565 x 3050	4500 x 2565 x 3050