DUGARD EAGLE

XP series

700/1000

High Speed Bridge Type Machine Centre

XP series

High Speed Bridge Type Machine Center

Double Columns High Speed Machine Center / Structure Design

The Dugard Eagle XP-series high-speed machining centres are especially developed for the die & mould industry. In order to provide machines with distinguished accuracy and stability, we use advanced softward for dynamic simulation and structure analysis to assure rigidity of the machine and to strengthen stability of the machine during operation.

High Stability

Made of high-quality Meehanite cast iron with durable ribbed frame.
All castings are stress relieved and seasoning treated for long-term accuracy and long service life.

Built-in Spindle
Direct Spindle

Dugard Eagle XP700/XP1000 are installed with high speed, low noise and reliable spindles (Built-in & Direct type), which is indispensable in high-speed processing and die & moule industry.

Spindle Thermal Growth Compensation System (optional)

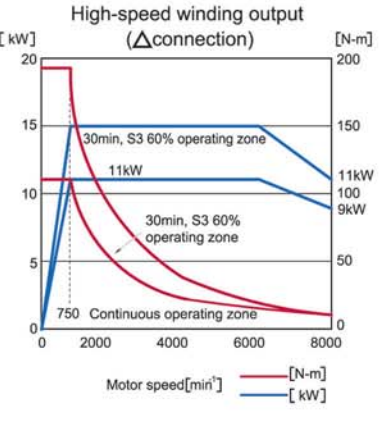
Spindle thermal growth compensation system is installed on Dugard Eagle XP700/XP1000 to ensure consistent accuracy.

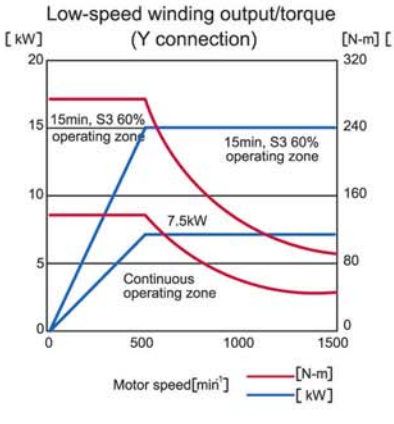
Moreover, the built in temperature monitoring device and spindle thermal growth compensation system can assure the consistent accuracy during consecutive operation

Spindle Power &Torque

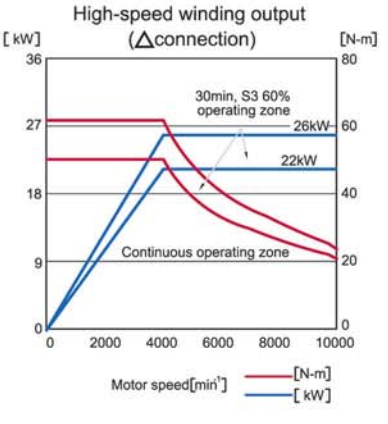
Direct Spindle

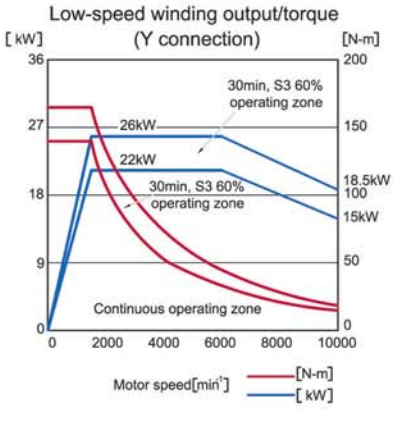
6000 rpm





10000 rpm





Spindle

Spindle cooling system

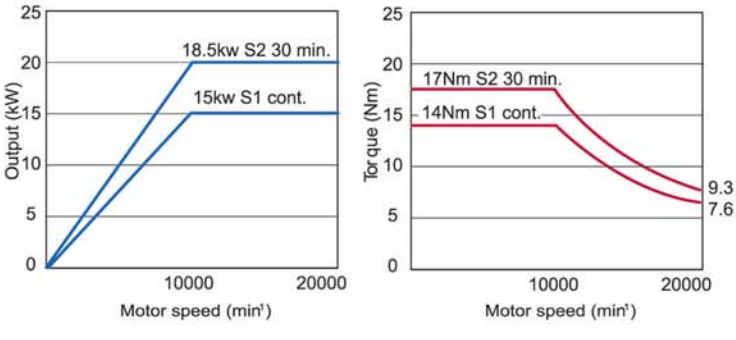
Dugard Eagle XP700/XP1000 has circumambient cooling system installed to enormously reduce thermal expansion effect and therefore assures accuracy during operation

• **IBAG Built-in Spindle (Optional)**

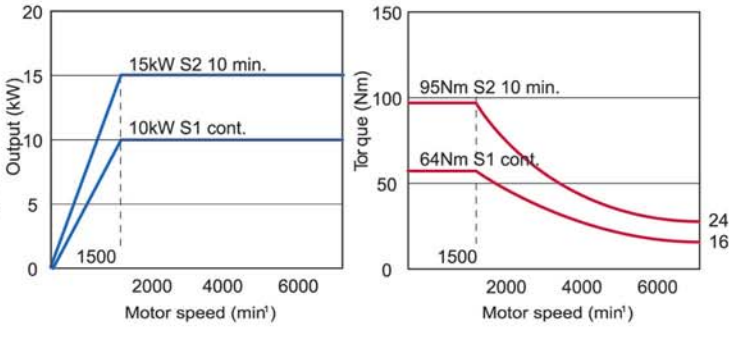
Built-in spindle

16000/20000 rpm

High Winding

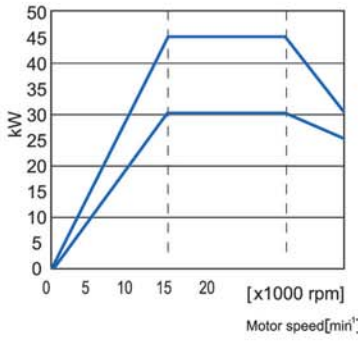


Low Winding

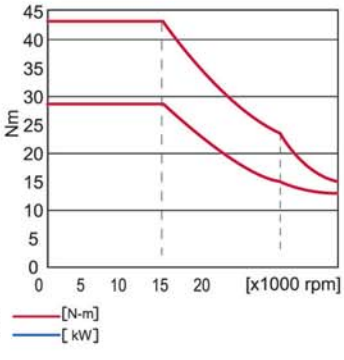


24000 rpm

Power - Diagarm



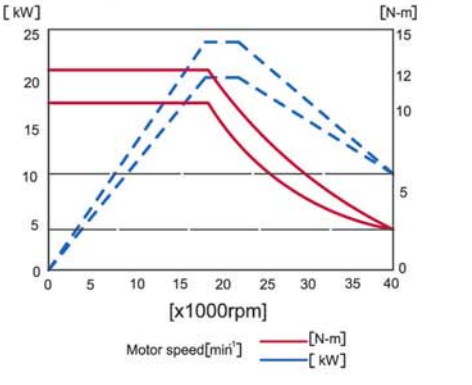
Torque-Diagarm



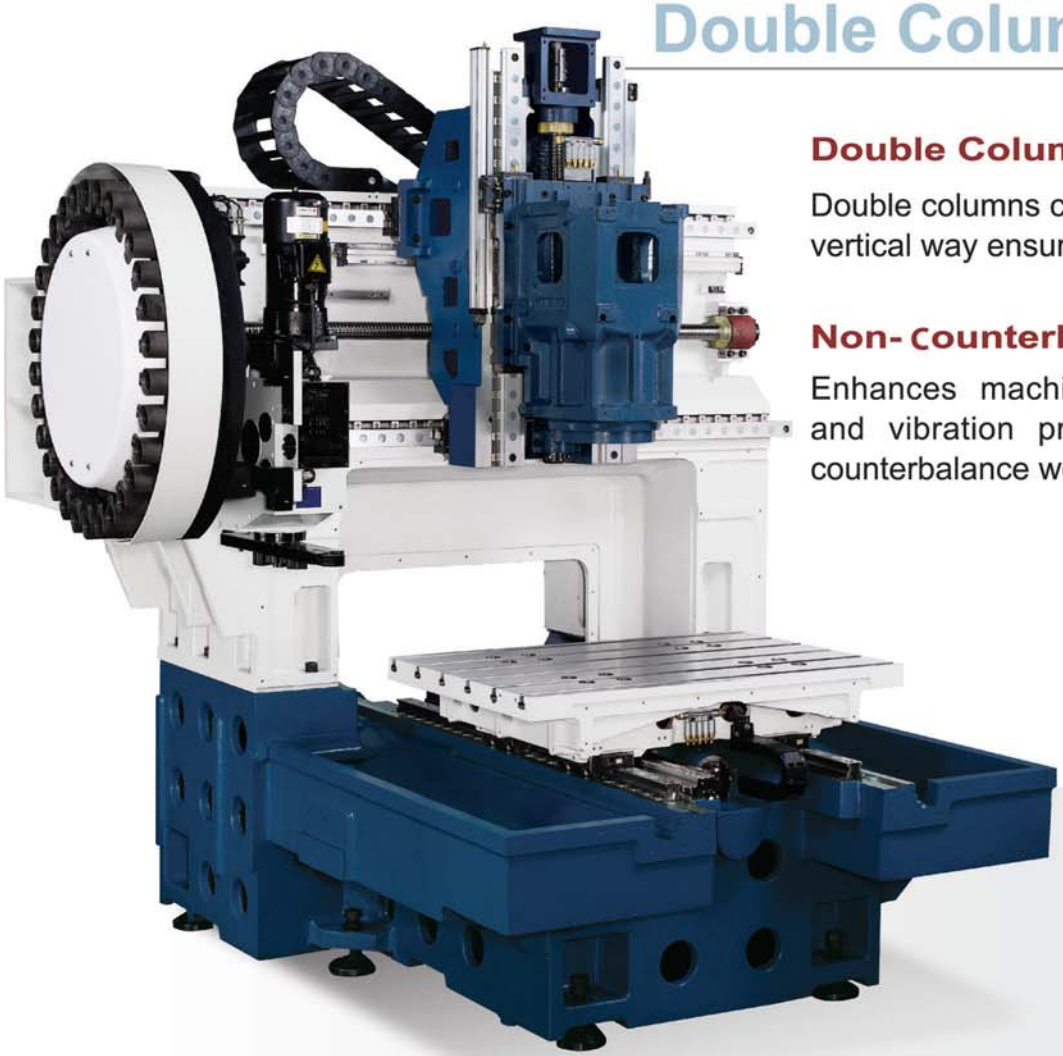
36000 rpm

Power - Diagarm

Torque-Diagarm



Double Columns Design



Double Column

Double columns combined with the base in vertical way ensure the machine accuracy

Non- CounterBalance on Z-axis

Enhances machine dynamic properties and vibration problem associated with counterbalance weights is eliminated.

T-shape Machine Bed Design

T-shape Machine Bed

With superior rigidity, ensures the accuracy and stability during operation.

Transmission Design

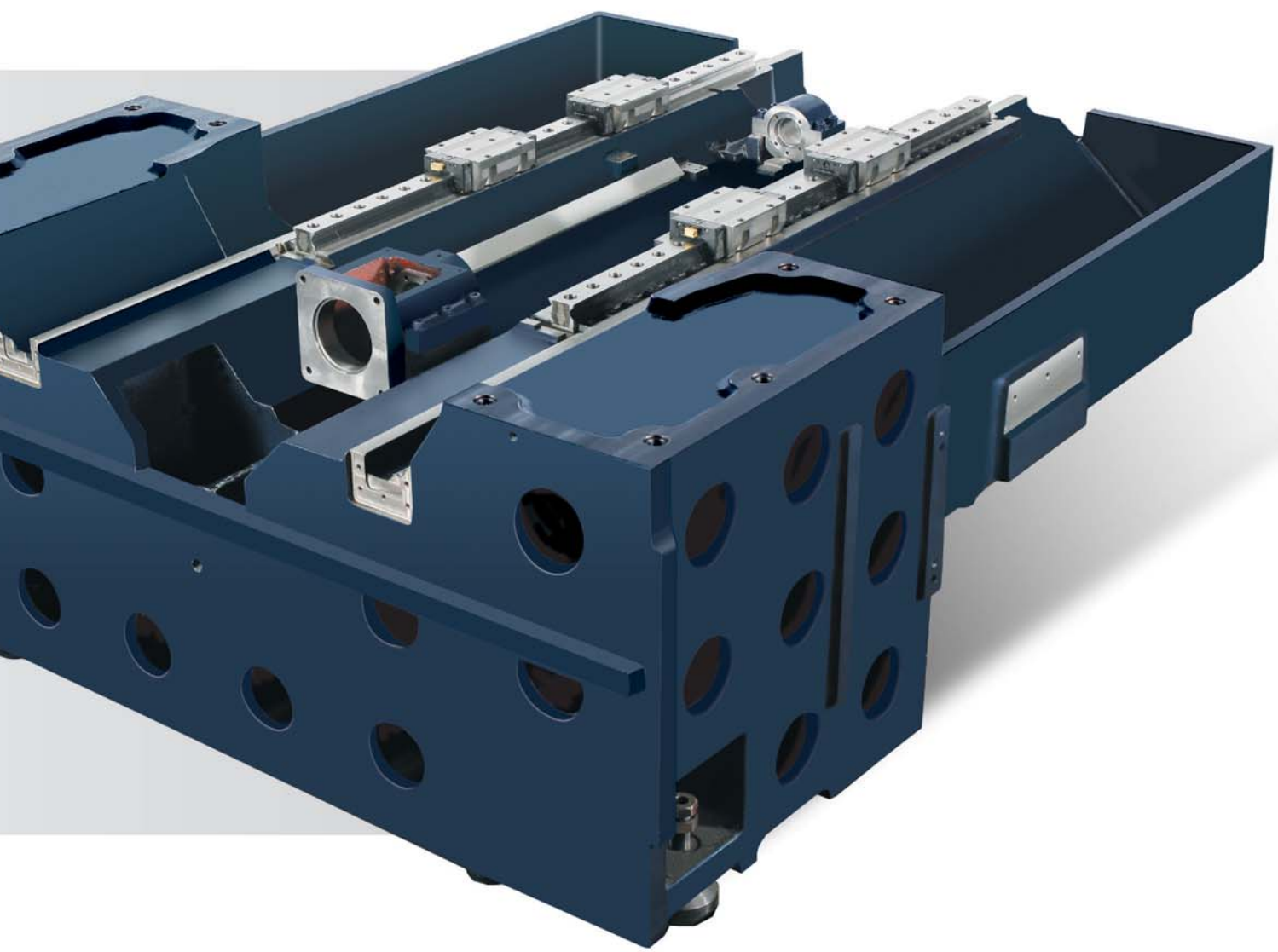
- **Roller Linear Guide-ways**
  With high loading structure, smooth dynamic moving and low abrasion high accuracy.

  Installed with high accuracy ball-screws ensures consistent accuracy and feeding rate during operation.

- **Feed Rate**
  Rapid traverse rate 32 m/min.
  Cutting feed rate 20 m/min.

- **Acceleration**
  High acceleration speed on 3 axes, above 1G.

- **Absolute Encoder Position Motors on 3 Axes**
  Absolute encoder position motors on 3-axes reduce time and cost.



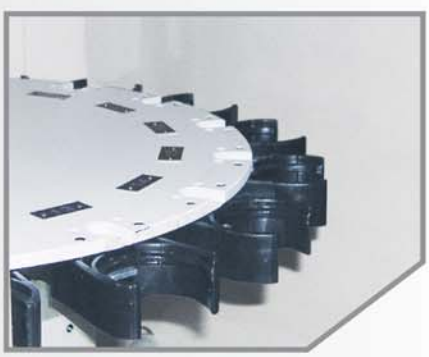
Automatic Tool Magazine

• Arm-Type:

Arm-type tool magazine with the design of automatic door can keep tools clean and increases tool life and quality.A rapid arm-type tool changer is driven with a precision cam, which in turn will help maintain long-term spindle-clamping accuracy.

• Disk-type:

tool magazine with the design of automatic door can keep tools clean and increase tool life and quality.



Multiple Choices of CNC controllers

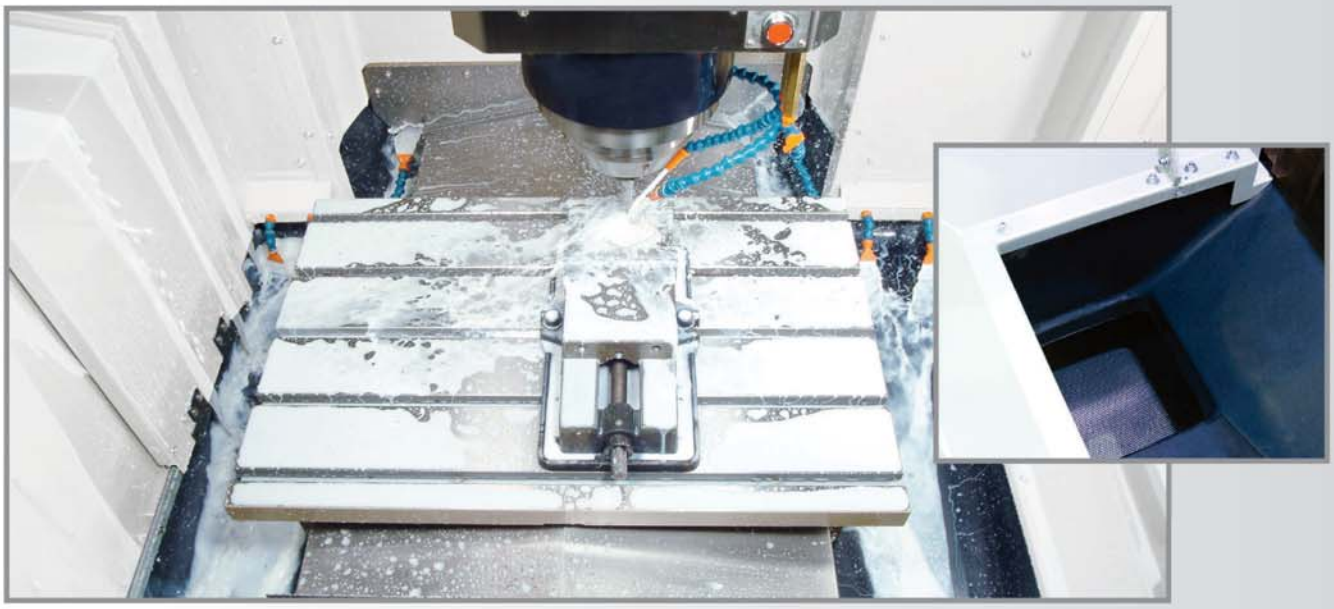
Heidenhain or Fanuc can be installed upon request.

Fanuc

Heidenhain

Coolant Chip Flushing System

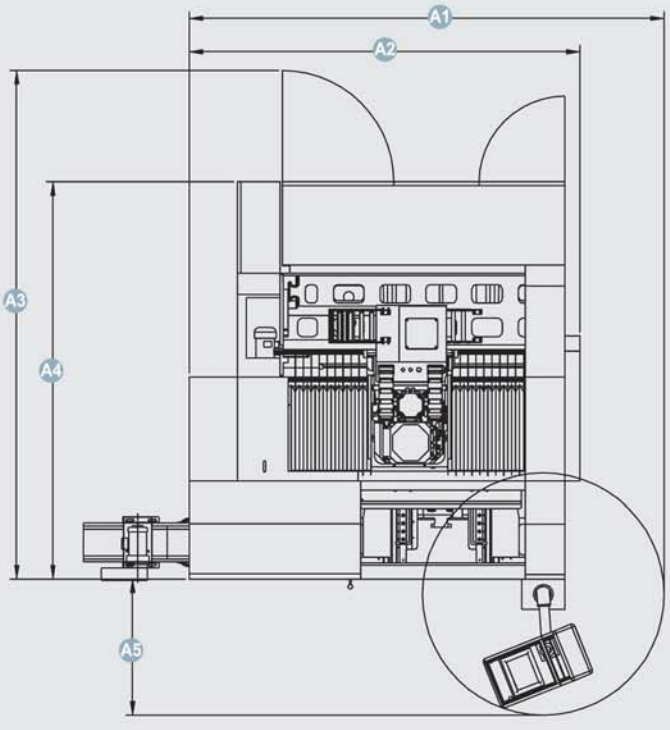
Coolant chip flushing system set up on both sides of the base and oil skimmer design can remove chips from the machine immediately to reduce the effect of machining heat on the bed and ensure the cleanness during operation.

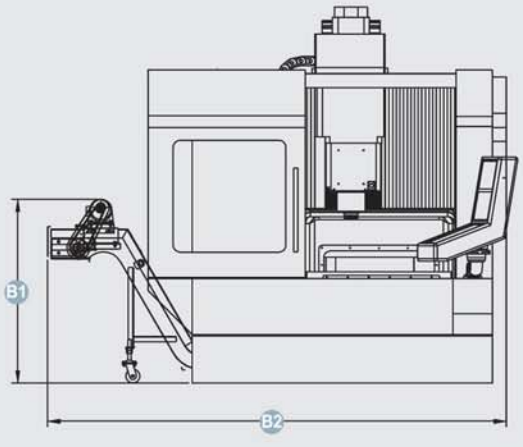


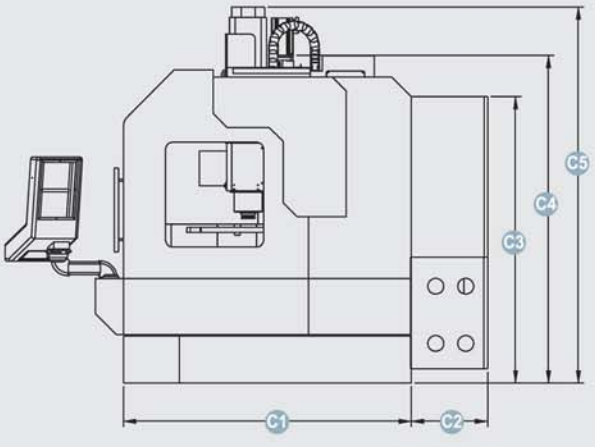
Machine Dimension 700/1000

1000

A1	3115 mm / 122.6 inch
A2	2560 mm / 100.8 inch
A3	3330 mm / 131.1 inch
A4	2600 mm / 102.4 inch
A5	892 mm / 35.1 inch
B1	1315 mm / 51.8 inch
B2	3278 mm / 129.1 inch
C1	2055 mm / 80.9 inch
C2	545 mm / 21.5 inch
C3	2049 mm / 80.7 inch
C4	2352 mm / 92.6 inch
C5	2690 mm / 105.9 inch







STANDARD SPEC.

	700					1000	
Stroke							
X-axis(mm/inch)	700/28.3					1020/40.2	
Y-axis(mm/inch)	600/23.6					700/27.6	
Z-axis(mm/inch)	500/19.6					500/19.7	
Dist.between spindle nose & table surface(mm/inch)	150-650/5.9-25.5					180-680/7.1-26.8	
Table							
Table size(mm/inch)	810x620/29.5x23.6					1050x700/41.3x27.6	
Loading capacity(kg/lb)	500/1101					800/1763.6	
T-slot(mm/inch)	18mmx5/0.7inchx5					6x18mm/6x0.7inch	
Spindle	**Built-in (700)**					**Direct (1000)**	
Spindle speed(rpm)	16000	20000	24000	30000	36000	6000	10000
Spindle drive motor(kW)	18.5	18.5	30	17	20	18.5	18.5
Spindle torque(Nm)	95.4	95.4	43	6	11	118	118
Spindle taper hole	NBT40	HSK63A	HSK63A	HSK40E	HSK40E	NBT50	NBT50
Feed Rate							
Rapid traverse(X/Y/Z)(m/min)(inch/min)	32/1260					32/1260	
Cutting feed(X/Y/Z)(m/min)(inch/min)	20/787					20/787	
Motors(X/Y/Z-axis)(kW)	4.5/4.5/4.5					4.5/4.5/4.5	
ATC	**700**		**1000**				
Tool shank	NBT40/ HSK63	HSK40E	NBT40/ HSK63	NBT50	NBT40/ HSK63	HSK40E	NBT50
Magazine capacity(pcs)	24	24	30	24	16	20	12
Max.tool length(mm/inch)	250/9.8	100/3.9	250/9.8	270/10.6	250/9.8	80/3.1	300/11.8
Max.tool weight(kg/lb)	7/15.4	5/11	7/15.4	15/33	7/15.4	4/8.8	15/33
Max.tool diameter(mm/inch)	75/2.9	40/1.57	75/2.9 100/3.9	100/3.9 120/4.7	80/3.1	32/1.2	100/3.9
Magazine type	Arm	Arm	Arm	Arm	Disk	Disk	Disk
Misc.							
Pneumatic source(kg/cm^2)/(bar)	50-70					50-75	
Power consumption(kVA)	6/5.88					6/5.88	
Machine Size							
Weight(kg/lb)	6500 / 14300					8500 / 18700	
Dimension(LxWxH)(mm/inch)	2200x2800x2650 / 86.6x110x104					2700x3000x2960 / 106x118x116	

• Spec. are subject to change without notice. • Detailed spec.can be found in user's manual of controller's

STANDARD ACCESSORIES

- Fully Enclosed Splash Guard
- Spindle Cooling System
- Disposal-Chip Tank
- Air Blower & RS-232C Interface
- Movable MPG Box
- Oil Skimmer
- User's Manual
- Tool Box
- One-year Machine Warranty
- Two-year Controller Warranty

OPTIONAL EQUIPMENT

- Linear Scale
- Tool Length Measuring System
- Oil Mist. Cutting Equipment
- Graphite Dust Arrester
- Transformer
- The 4th AXIS
- Link Type Chip Conveyor

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