



**DUGARD
EAGLE**

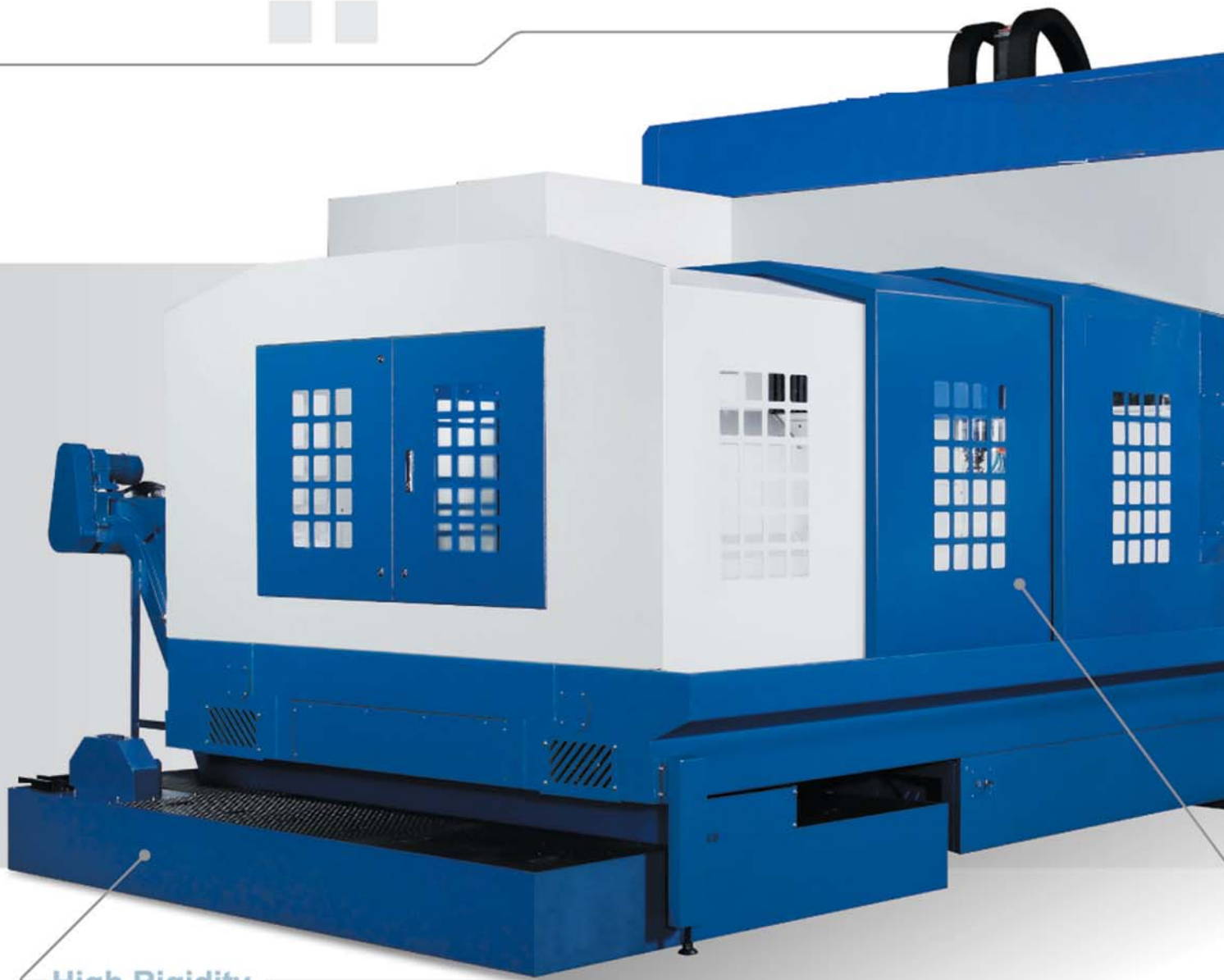
A decorative graphic consisting of a grid of small, light grey squares. The grid is partially obscured by the text below it.

XP series

2200/3200

**High Speed Bridge Type
Machining Centre**

XP series



High Rigidity

- 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.

New Generation

High Speed Bridge Type Machining Centre

Dugard Eagle XP-series high-speed bridge type machining centres are especially developed for the die & mould industry. We offer gear/direct/built-in spindle to increase the capacity of heavy cutting & reduce the time of the mould and parts processing.

XP2200/XP3200 are assembled with high precision elements to ensure that the machine reaches the standard of high speed, high precision & efficiency.

Operation Space

Superb Operating Ease

- **Transparent window**

Facilitate operation for maintain personnel to inspect the machine situation.

- **Bridge type electrical cabinet**

The electrical cabinet is designed to hang behind the column to decrease the floor space.

Controller

- Controller is operated easily and suitable for sorts of CAD/CAM programs.

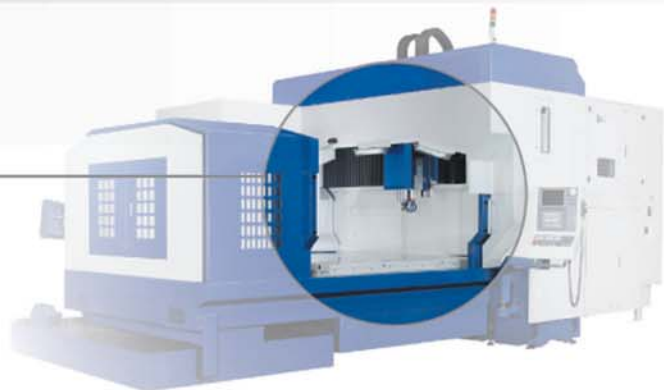
- Heidenhain or Fanuc can be installed upon request.

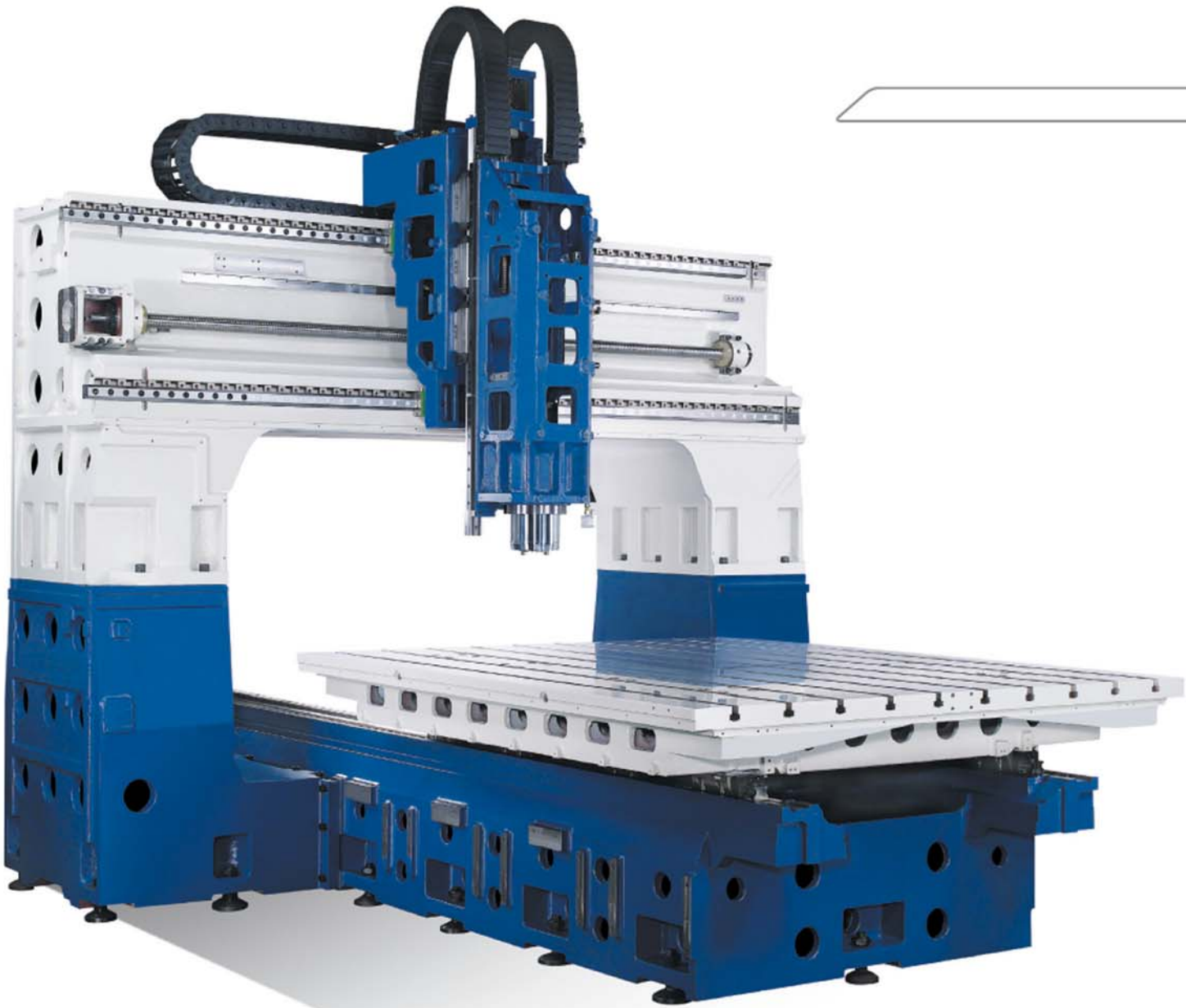
Unique Cover Design

- **Easy Crane Access**

The splashguard door and ceiling open together to create a large opening for loading and unloading large work pieces.

- **When door opens, the width reaches 2200mm(H22) 3200mm(H32)**





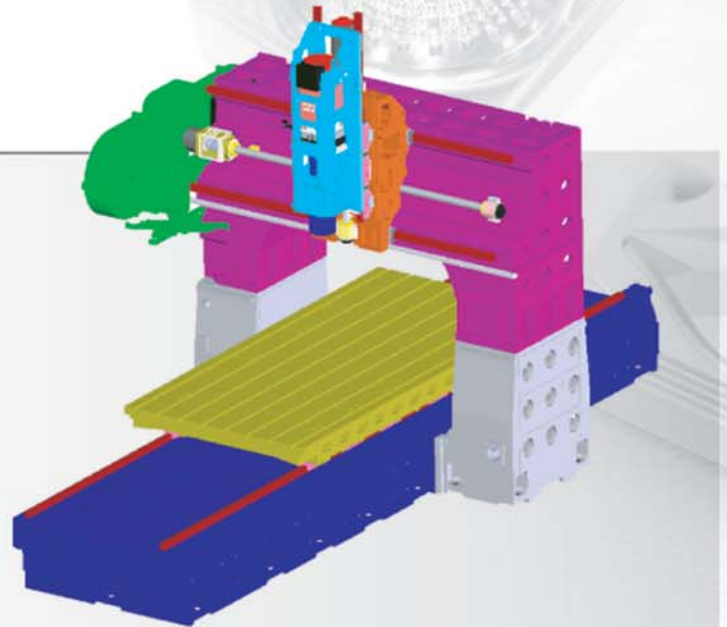
Base

- High rigidity: 11600kg (XP3200)
- All castings are stress relieved and seasoning treated for long-term accuracy and long service life.
- T-shape machine bed: With superior rigidity, ensures the accuracy and stability during operation.
- 3 level of cellular construction.
- Symmetrical design: Provide the heat stability for machine.
- Double columns combine with the base in vertical way ensure the machine accuracy.

Extremely Rigid

Extra Column Design

- Large column : 2350mm (XP2200+/XP3200+)
- Non-counterbalance on Z-axis
- High rigidity and hardness.
- Symmetrical design
- Non-cantilevered design



Working Table

- 10 blocks supported on the table make the loading spread averagely (XP3200)
- Max. loading: 12000kg (XP3200)
- A suitable table height ensures outstanding easy operation.



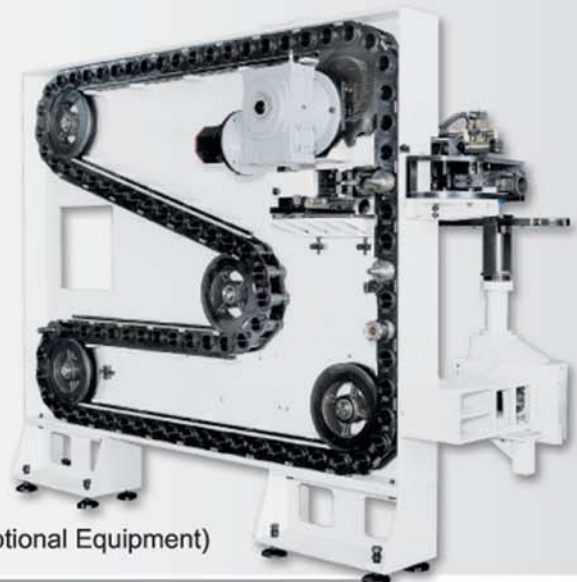
ATC Design

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

32 Tools ATC (Standard accessory)

Arm type ATC

- Speed & Stability
- Random choice
- Simplified CAM type structure enables, to the least extend, saves more working time.



90 Tools ATC (Optional Equipment)



Cutting Capability

900 cm³/min

● Power Cutting

XP2200+ Direct type spindle: 10000rpm 40HP / NBT50

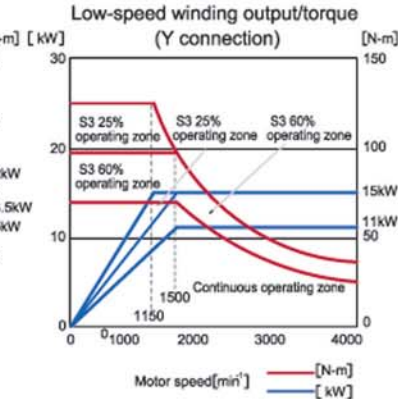
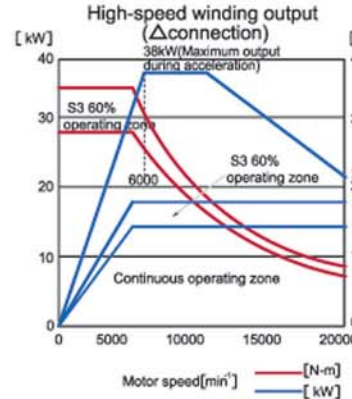
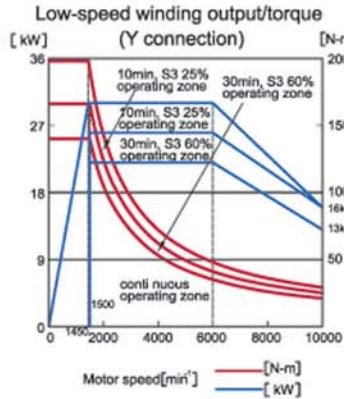
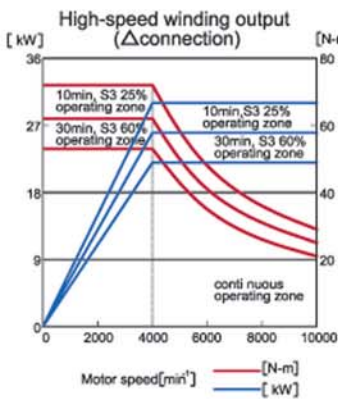
Tool	spindle speed min-1	cutting feed mm/min	cutting width mm	cutting depth mm	remove rate c.c
Φ63mm High speed cutting tool head	1500rpm	15600 mm/min	44.4 mm	1.3 mm	900 cc
Φ80mm Face mill cutter	1500rpm	2000 mm/min	70 mm	5 mm	700 cc

Direct spindle

Spindle Power & Torque

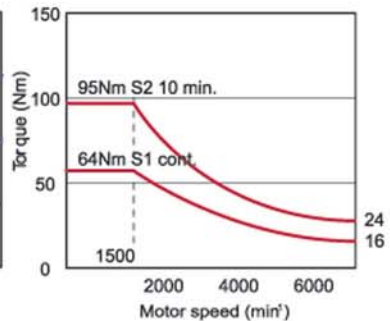
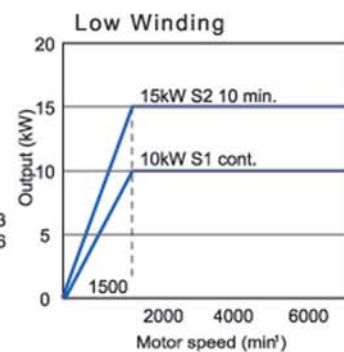
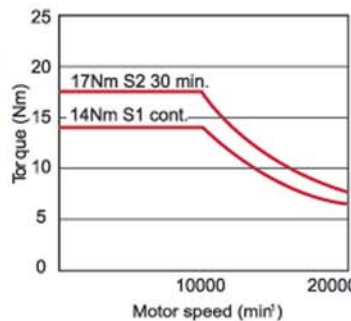
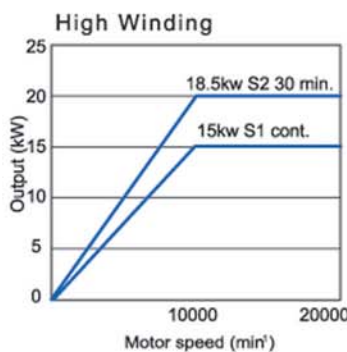
6000/10000 rpm

15000 rpm



Built-in spindle

16000/18000 rpm



Cooling System

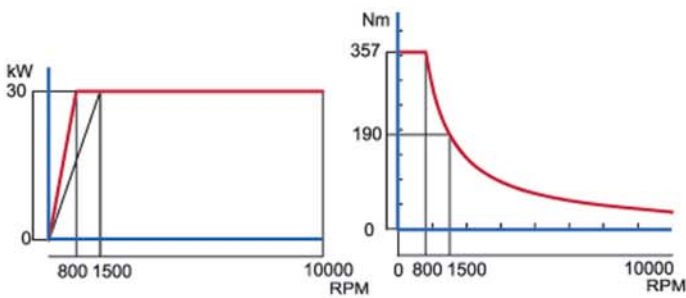
- The circumambient cooling system of the spindle enormously reduces thermal expansion effect and therefore assures the accuracy during operation.
- Coolant through spindle (Optional)
- Air through spindle (Optional)



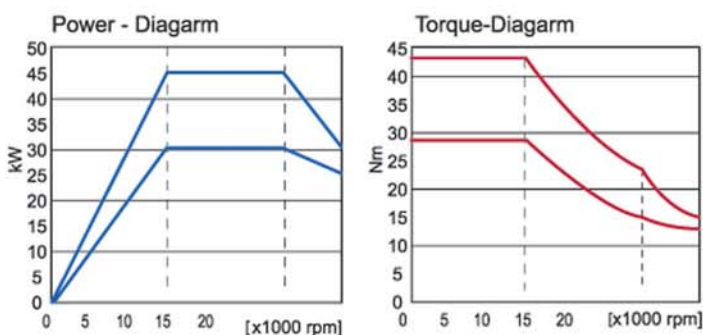
Gear spindle

10000 rpm

GEAR TYPE 40HP 10,000 rpm NBT50

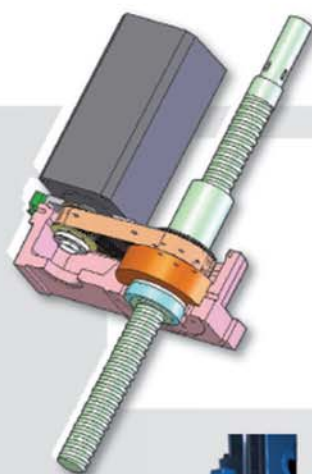


24000 rpm



Reduce The Non-working Time

- Feed Acceleration: Max.0.3G
- Rapid traverse: 20m/min(XP2200)
- ATC time (T-T): 4sec. (90tools)



Rotary-Nut Transmission

- The rotary nut is driven by the servomotor through belt, which increase the speed more than 40%
- Reduce the motor loading and prevent the heat generating.



XYZ Axes-Roller Linear Guide-ways

- High Accuracy and low abrasion
- High rigidity accuracy
- Width 55mm - high stability

XYZ Axes

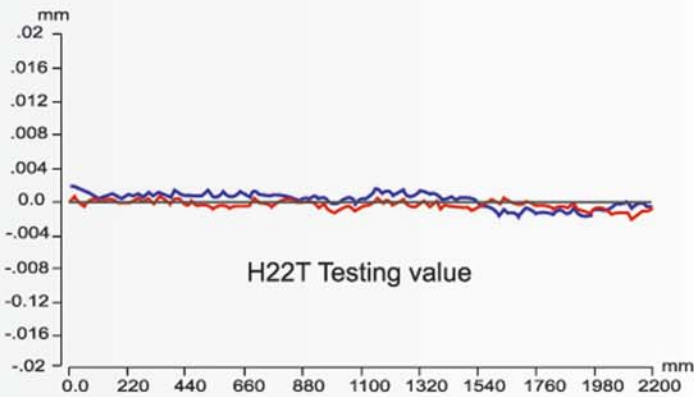
- Special Braced design
- Cooled ballscrew. (Optional)
- Installed with high accuracy ball-screws ensures consistent accuracy and feeding rate during operation.
- Absolute encoders on 3-axes reduce time effectively.
- X: 14kw, Y: 9.5kw, Z: 5kw





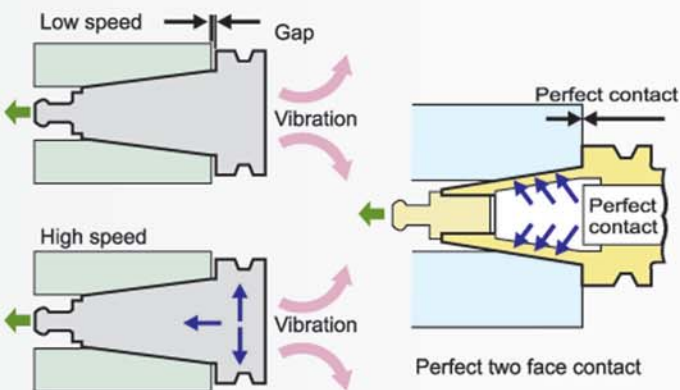
Reduce The Working Time

- High speed spindle
 Built-in type: 16000/18000/20000/24000 rpm
 Direct type: 6000(std)/10000/15000 rpm
 Gear type: 6000/8000 rpm
- Cutting Feed: 12 m/min
- Standard function HPCC: High speed & accuracy machining control mode (for Fanuc controller)



High Positioning Accuracy & Repeatability

- Precise test on 3 Axes ensures the requirement of high accuracy
- Increase the machine stability & long services life



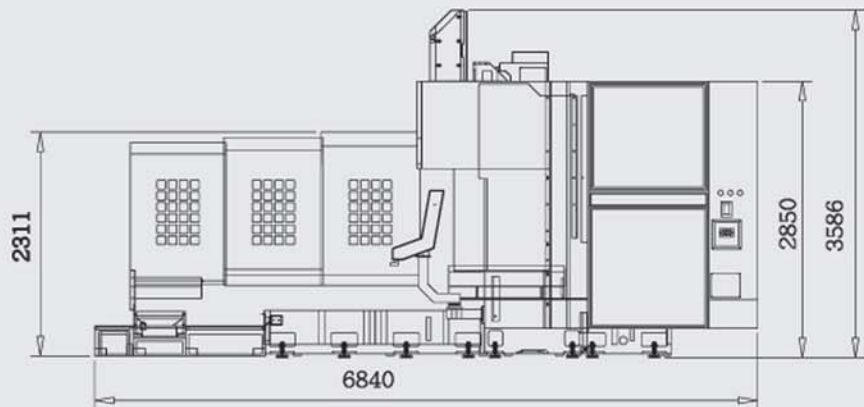
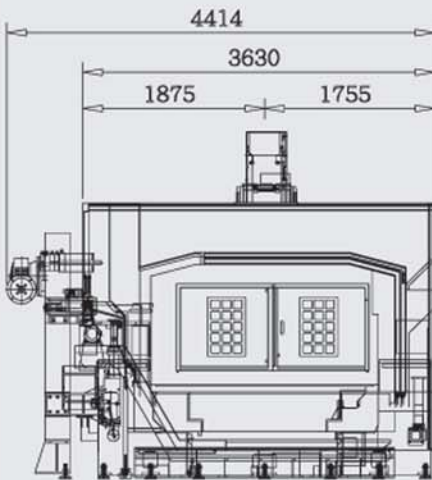
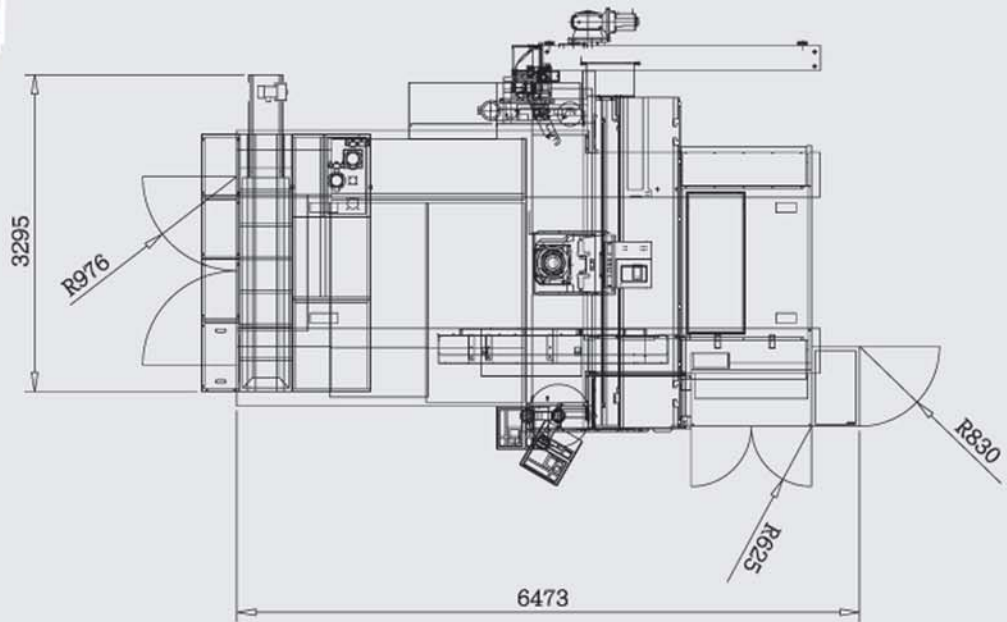
High Precise Spindle (NBT series)

- Hollow shank greatly reduces tool holder weight
- 20~50% chip removal rate improved

Machine Dimension XP2200/XP3200

unit: mm

XP2200+



STANDARD SPEC.

XP2200 XP2200+ XP3200 XP3200+

Stroke								
X-axis(mm/inch)	2200 / 86.6		2200 / 86.6		3200 / 126		3200 / 126	
Y-axis(mm/inch)	1650 / 65		2250 / 88.6		1650 / 65		2250 / 88.6	
Z-axis(mm/inch)	800 / 31.5		800 / 31.5		800 / 31.5		800 / 31.5	
Dist.between spindle nose & table surface (mm/inch)	250-1050 / 9.8-41.3		250-1050 / 9.8-41.3		250-1050 / 9.8-41.3		250-1050 / 9.8-41.3	
Table								
Table size(mm/inch)	2400x1600 / 94.5x63		2400x2100 / 94.5x82.7		3320x1600 / 130.7x63		3320x2100 / 130.7x82.7	
Load capacity(kg)	10000		10000		12000		12000	
T-slot(mm)	8x22HxP200		10x22HxP200		8x22HxP200		10x22HxP200	
Spindle	Built-in				Direct		Gear	
Spindle speed(rpm)	16000	18000	20000	24000	6000/10000		15000	6000/8000
Spindle drive motor(kW)	18.5	18.5	18.5	30	30		18.5	30
Spindle torque(Nm)	95.5	95.5	95.5	43	196		95.5	357
Spindle taper hole	NBT40		HSK63		NBT50		NBT40	NBT50
Feed Rate								
Rapid traverse (X/Y/Z) (m/min)(inch/min)	20/20/20 0.79/0.79/0.79		20/16/20 0.79/0.63/0.79		20/16/20 0.79/0.63/0.79		16/16/20 0.63/0.63/0.79	
Cutting feed (X/Y/Z) (m/min)(inch/min)	1-12000 / 472.4		1-12000 / 472.4		1-12000 / 472.4		1-12000 / 472.4	
Motors (X/Y/Z-axis) (kW)	14/9/5.5		14/9/5.5		14/9/5.5		14/9/5.5	
ATC								
Tool shank	NBT40/HSK63		NBT50	NBT50	NBT50		NBT40	
Magazine capacity (pcs)	30/48/60		32	90/120	20		20	
Max.tool length (mm/inch)	300 / 11.8		350 / 13.8	350 / 13.8	300 / 11.8		300 / 11.8	
Max.tool weight (kg/lb)	7 / 15.4		15 / 33	20 / 44	15 / 33		7 / 15.4	
Max.tool diameter (mm/inch)	75 / 2.95		125 / 4.9	125 / 4.9	150 / 5.9		120 / 4.7	
Magazine type	Arm		Arm	Arm	Umbrella		Umbrella	
Power								
Power consumption (kVA)	70-90							
Pneumatic source (kg/cm ²)/(bar)	6 / 5.88							
Dimension								
Weight (Ton/lb)	27 / 59741		31 / 68282		33 / 72687		37 / 81498	
Dimension WxLxH (mm/inch)	4000x6000x3900 157.5x236.2x153.5		4600x6000x3900 181.1x236.2x153.5		4000x8000x3900 157.5x315x153.5		4600x8000x3900 181.1x315x153.5	

STANDARD ACCESSORIES

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

OPTIONAL EQUIPMENT

- Tool Length Measuring System
- Oil Mist Cutting Equipment
- Graphite Dust Arrester
- Transformer
- Linear Scale For 3 Axes
- Coolant Through Ballscrew



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