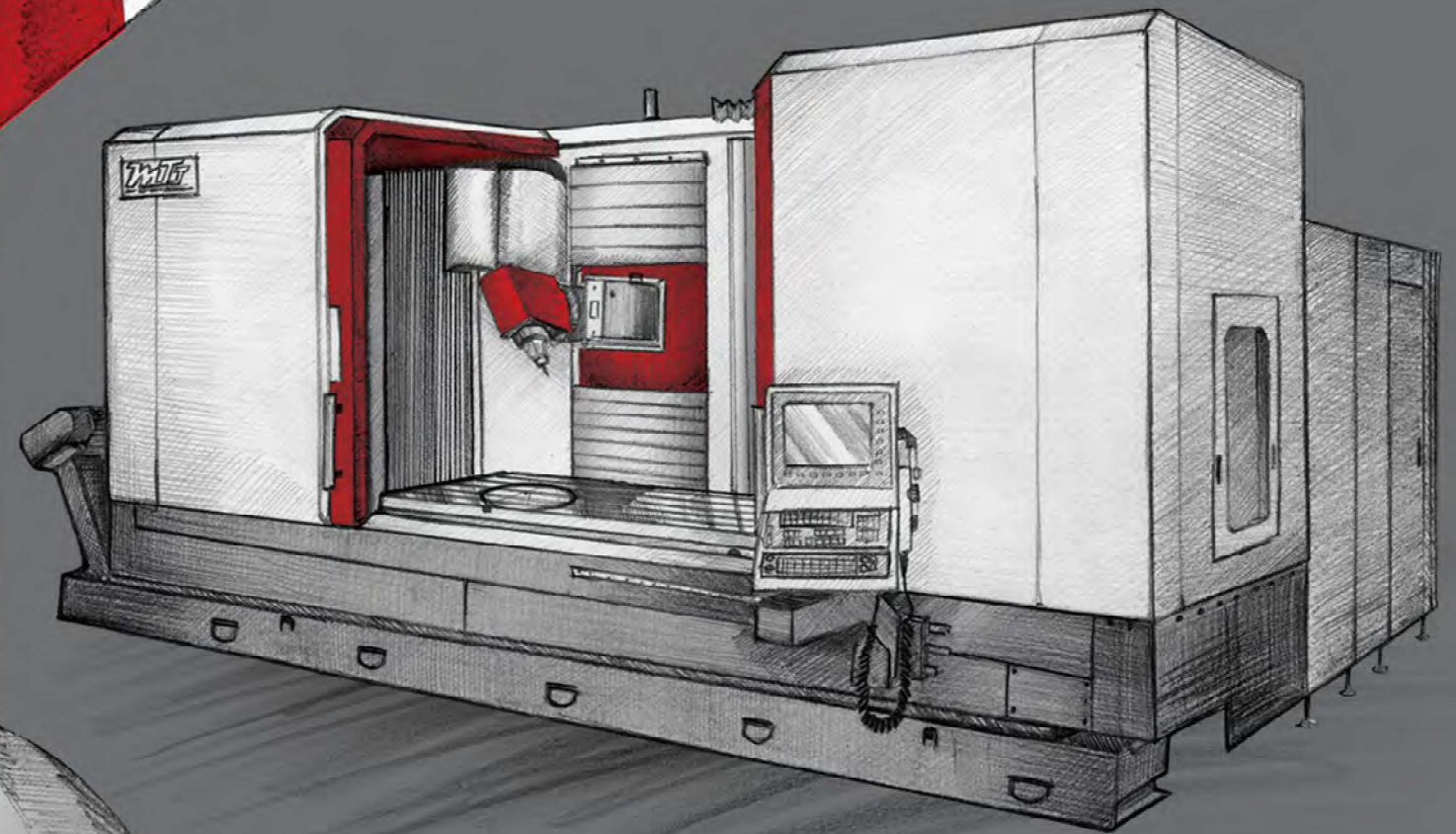


SOLUTION OF WORLDWIDE SALES NETWORK



**HORNET**  
Series

**Moving Column Type 5-axis Machining Center**  
(Swivel head B-axis & rotary table C-axis)



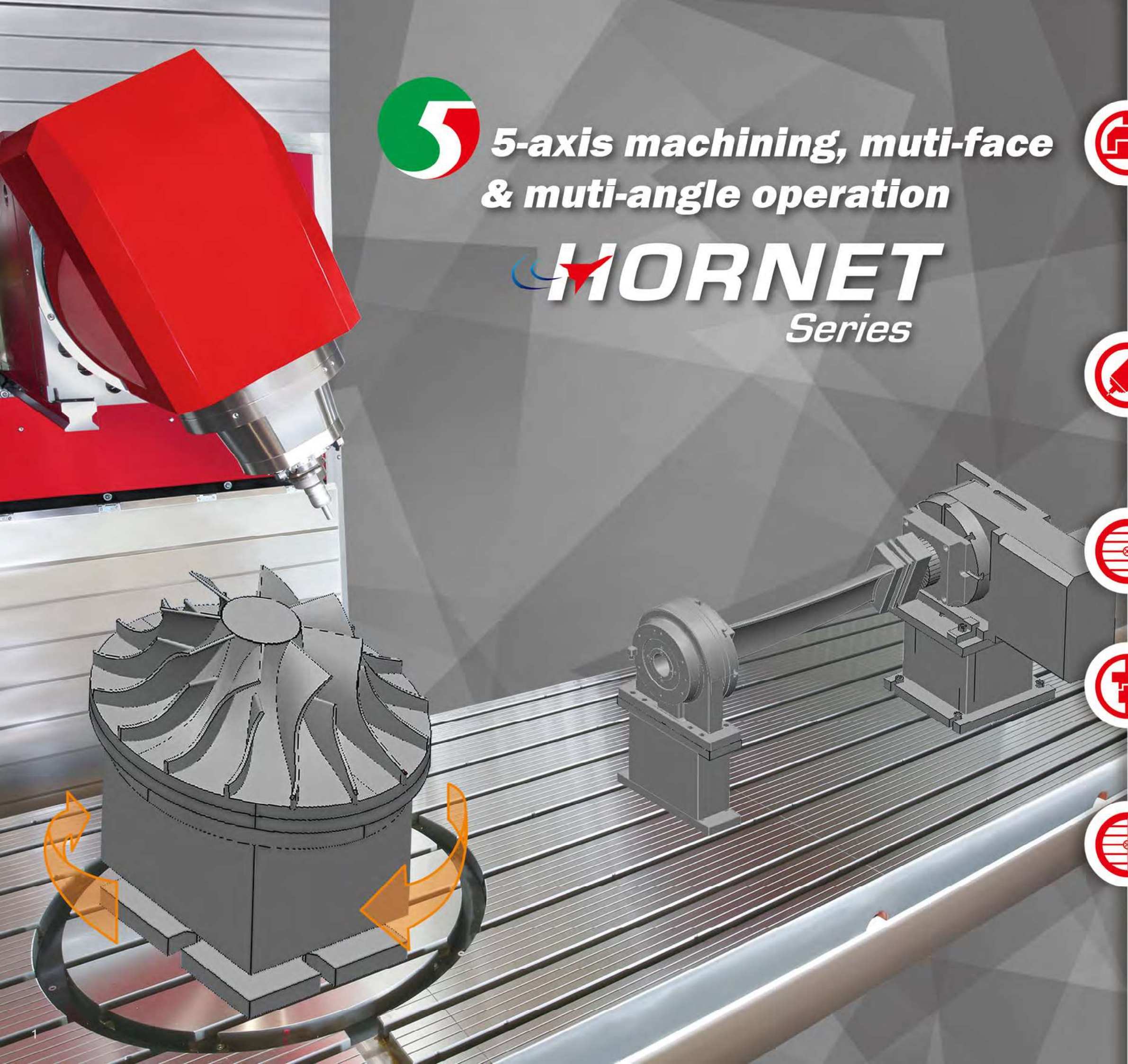
**Twinhorn**

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**5-axis machining, multi-face  
& multi-angle operation**

**HORNET**  
Series

## Structural Characteristic



### High Rigidity Structure

HORNET Series machine is optimized for structural rigidity and high dynamic performance.

The Z-axis wagon adopts box frame structure and wide span roller rails, which ensures proper stability and excellent accuracy under high speed or heavy duty cuttings.



### Swivel Head (B-axis)

B-axis swivel head with C-axis rotary table enables single set-up for irregular curved surface or complex angle machining tasks, dramatically enhances the productivity.



### Rotary Table (C-axis)

Maximum workpiece diameter of 640 mm and maximum loading capacity up to 1000 kg.



### Transmission System

DD motor powered rotary axes provides excellent accuracy and high speed without backlash.

Linear axes rapid speed up to 30 m/min.



### Dual Working Area

Dual-working-area concept allows flexible utilizations of working space. The set-up of the other work-piece can be done at one area while is on duty, and achieves maximum productivity.



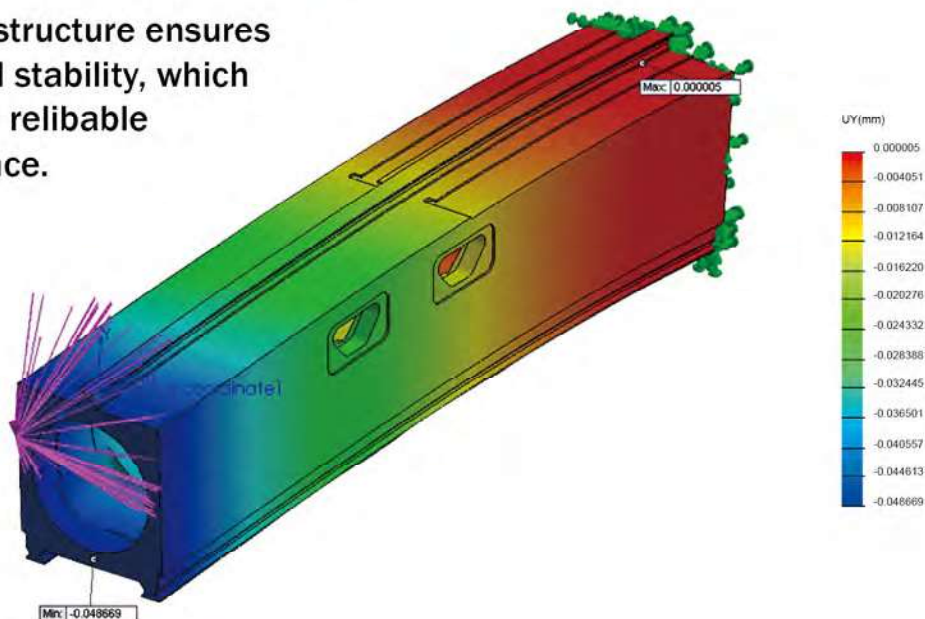


# HORNET

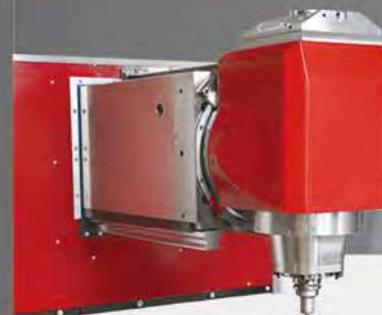
## Swivel Head Rotary Table

### Finite Element Analysis (FEA)

FEA proven machine structure ensures excellent rigidity and stability, which enables accurate and reliable machining performance.

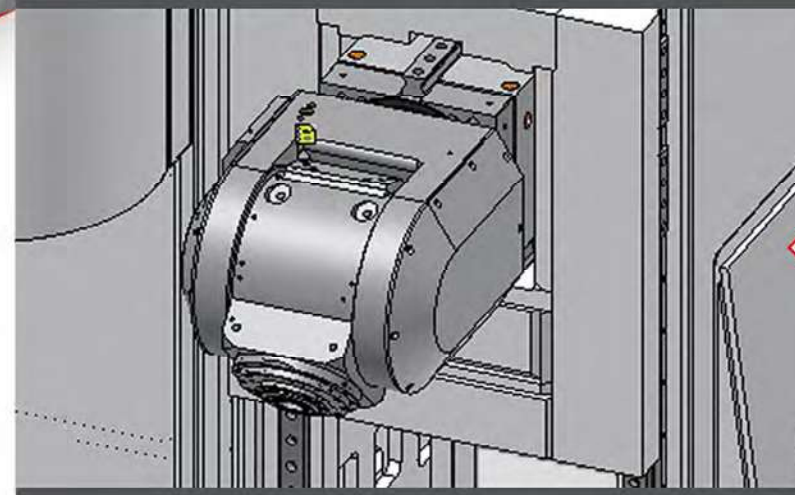
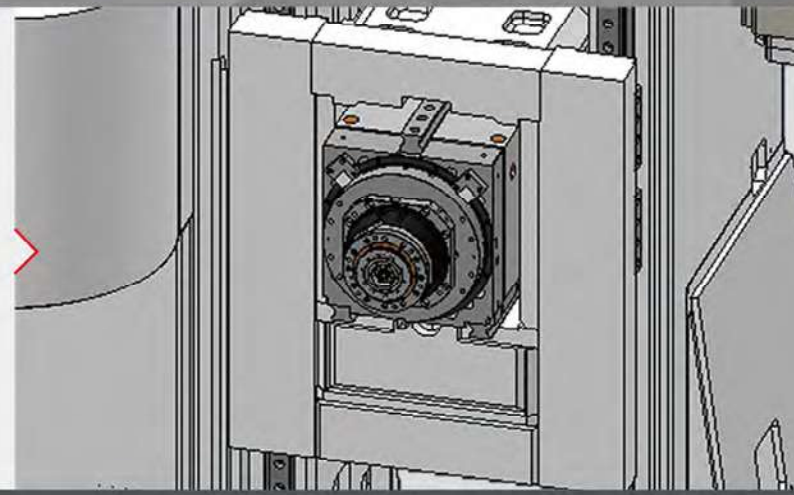


## VARIOUS HEAD SELECTION



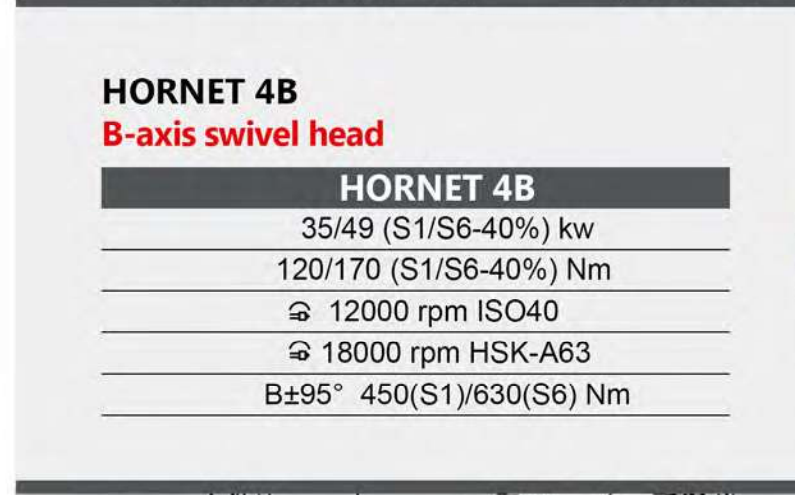
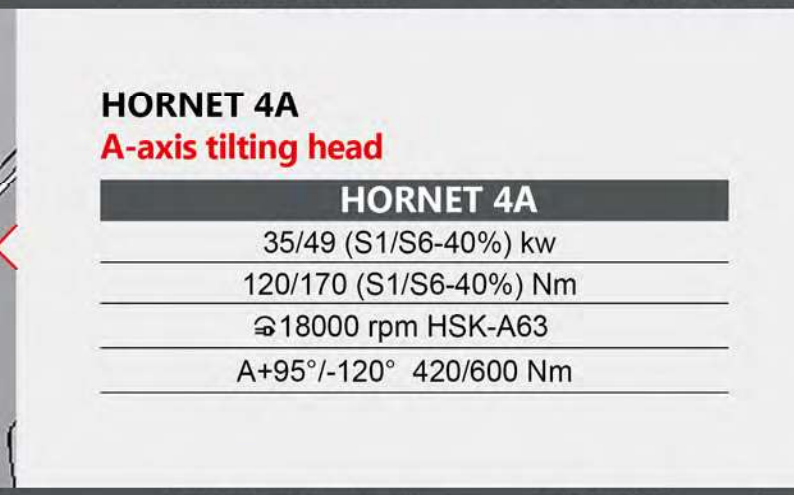
### HORNET 3 horizontal spindle

HORNET 3
35/49 (S1/S6-40%) kw
120/170 (S1/S6-40%) Nm
⌀ 12000 rpm ISO40
⌀ 18000 rpm HSK-A63



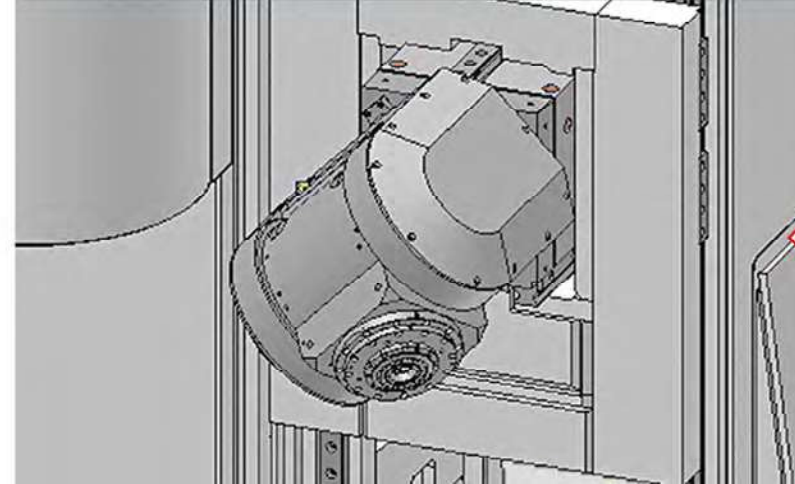
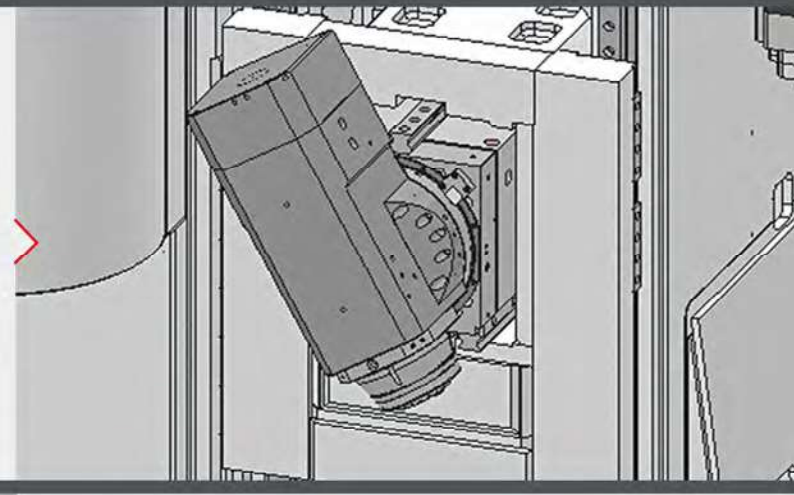
### HORNET 4A A-axis tilting head

HORNET 4A
35/49 (S1/S6-40%) kw
120/170 (S1/S6-40%) Nm
⌀ 18000 rpm HSK-A63
A+95°/-120° 420/600 Nm



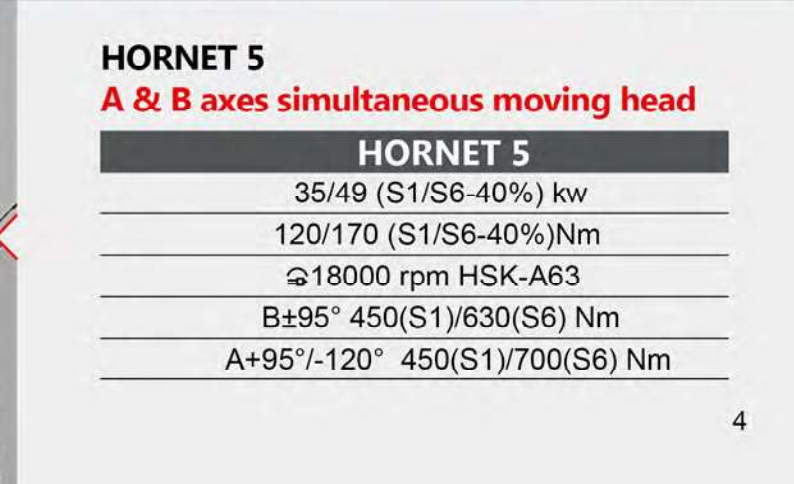
### HORNET 4B B-axis swivel head

HORNET 4B
35/49 (S1/S6-40%) kw
120/170 (S1/S6-40%) Nm
⌀ 12000 rpm ISO40
⌀ 18000 rpm HSK-A63
B±95° 450(S1)/630(S6) Nm



### HORNET 5 A & B axes simultaneous moving head

HORNET 5
35/49 (S1/S6-40%) kw
120/170 (S1/S6-40%) Nm
⌀ 18000 rpm HSK-A63
B±95° 450(S1)/630(S6) Nm
A+95°/-120° 450(S1)/700(S6) Nm





## APPLICATION SAMPLE PARTS



## MACHINE SPECIFICATION

<b>Stroke</b>	
X-axis	3000 mm
Y-axis	1000 mm
Z-axis	1000 mm
<b>Table</b>	
Table size	3280×1065 mm
maximum loading capacity (per square meter)	2500 kg/m <sup>2</sup>
Distance from spindle nose vertical to table surface	100 - 1100 mm
T-slot (number x size x pitch)	7x18 mmx130 mm+2x18 mmx90 mm
<b>Swivel head (B-axis)</b>	
Swivel angle	±95°
B-axis speed	120°/sec
Positioning accuracy	0.001°
Maximum rotating torque	450 (S1) / 630 (S6) Nm
Clamping torque	2000 Nm
<b>Built-in spindle</b>	
Spindle taper	HSK-A63
Motor power	35/49 (S1/S6-40%) kw
Speed	10000 rpm
Maximum torque	120/170 (S1/S6-40%) Nm
<b>Rapid feedrate</b>	
X/Y/Z rapid	30 m/min
Cutting speed	1-10000 mm/min
Diameter & pitch of ballscrews	X/Y/Z : 63/50/50 , P20/20/20
<b>Rotary table</b>	
Diameter of rotary table	640 mm
Diameter of center hole	60 mm
Maximum loading capacity	1000 kg
Rotating angle	Continuous
Maximum rotating speed	130 rpm
Positioning accuracy	±0.0015°
Rotating torque	530/980 Nm (normal/peak)
Clamping torque	2500 Nm
<b>ATC</b>	
Number of tools	32 Tool ATC
Max. tool diameter (w./w.o. adjacent tool)	80 / 120 mm
Max. tool length	300 mm
Max. tool weight	8 kg
Tool change time	T-T 10 sec
<b>Others</b>	
Machine dimension (WxDxH)	7650x4150x3320 mm
Machine weight	25000 kg

### Standard Accessories

- 32 Tool ATC
- 3-axis optical scale
- Spindle oil cooler
- Coolant system
- Automatic lubrication system
- Electric control box with airconditioner
- Working lamp
- Maintenance tools
- Warning lamp
- Leveling pads and bolts
- M30 Automatic power off
- Operation manual
- Chain type chip conveyor with cart

### Optional Accessories

- 4<sup>th</sup> Axis rotary table
- Coolant through spindle
- 40/48 Tool ATC
- Spindle speed 12000/15000 18000 rpm
- Automatic tool length measuring system
- Automatic workpiece measuring system

### Controller

SIEMENS  
HEIDENHAIN  
FAGOR  
FANUC  
MITSUBISHI

\* The company reserves the right to change the mechanical specifications, accessories and appearance without prior notice.