



Chester 800-5AX Series



High Precision 5 Axis Machining

- High performance control system
- High speed contour control
- Optimal surface precision
- Short machining time
- Accurate
- Driven by a highly dynamic 5 Axis
- Capable of machining complicated pieces

AUTOMATIC PALLET CHANGER SYSTEM
Optional Accessory



Technical Specifications	800-5AX	Chester 800T-5AX (with Turning Function)	800B-5AX
Travel			
X-Axis Travel	800mm	800mm	760mm
Y-Axis Travel	900+330mm	900+330mm	900+330mm
Z-Axis Travel	620mm	620mm	620mm
Distance from Spindle Nose to Table Surface	100-720mm	50-670mm	75-695mm
Worktable Dimensions	800mm	800mm	800mm
Worktable Load	1000kg	1000/500(Milling/Turning)	1000kg
Feed System			
Rapid Feed(X/Y/Z)	48/48/48m/min	48/48/48m/min	48/48/48m/min
Cutting Feed(X/Y/Z)	0.001-20m/min	0.001-20m/min	0.001-20m/min
Motor			
Spindle Motor	22kw(29.92hp)	30kw(40.8hp)	27kw(36.72hp)
X/Y/Z Motor Power	4.4/3.77/8.17kw(5.98/5.13/11.11hp)	4.4/3.77/8.17kw(5.98/5.13/11.11hp)	4.4/3.77/8.17kw(5.98/5.13/11.11hp)
B/C Axes Motor	22.2/11.1kw(30.19/15.1hp)	22.2/74.3kw(30.19/101.5hp)	
Rotary Axis			
A-Axis Rotation Angle	±120°degree	±120°degree	±120°degree
C-Axis Rotation Angle	360°degree	360°degree	360°degree
A-Axis Max.Speed	75rpm	75rpm	75rpm
C-Axis Max.Speed	100rpm	100rpm	100rpm
Spindle System			
Spindle Transmission Type	Direct Drive(standard)/Built-in(OP)/Two Stage Gearbox	Direct Drive(standard)/Built-in(OP)/Two Stage Gearbox	Direct Drive(standard)/Built-in(OP)/Two Stage Gearbox
Spindle Speed(max.)	12000rpm	18000rpm	8000rpm
Max.Torque	240Nm	87.9/123.8Nm	700Nm
Tool Handle Spec.	#40/HSK A63	#40/HSK 63T	#50/HSK A100
ATC System			
Magazine Capacity	32T(Standard)	32T(Standard)	24T(Standard)
Tool Change Method	DRUM	DRUM	DRUM
Max.Tool Dis./with Adjacent Tool	75/125mm	75/125mm	125/125mm
Max.Tool Length	300mm	300mm	300mm
Max.Tool Weight	7kg	7kg	7kg
Control System			
Controller	Siemens 840D	Siemens 840D	Siemens 840D
Other			
Chip Conveyor	Chain Type	Chain Type	Chain Type
Machine Occupancy(LxWxH)	4528x2240x3605mm	4528x2240x3605mm	4528x2240x3605mm
Machine Weight	21000kg	21000kg	21000kg

Standard Accessories:

- ✓ Siemens 840Dsl (5-Axis/5-Interactive)
- ✓ Spindle Oil Cooler
- ✓ Spindle Motor Cooling System
- ✓ Coolant Through Spindle (Chester 800T-5AX)
- ✓ ZF Gearbox(Chester 800T-5AX)
- ✓ Spindle Programmable Air Blow System
- ✓ Circle Injection System(Chester 800-5AX,Chester 800B-5AX ,Chester 1200-5AX)
- ✓ Chain-type Chip Conveyor
- ✓ Chip Collector
- ✓ Water Gun
- ✓ Air Gun
- ✓ Manual Top Cover (1200-5AX has programmable top cover)
- ✓ Full Enclosure
- ✓ Large Worktable
- ✓ Front Door/Safety Switch/ATC Backdoor
- ✓ ATC
- ✓ 3-Axis Roller Type Linear Guideways
- ✓ 3 Axes Linear Scales (Heidenhain)
- ✓ A Axes Linear Scales (Heidenhain)
- ✓ C Axes Linear Scales (Heidenhain)
- ✓ Z-Axis Motor System with Brake
- ✓ Worklight(LED)
- ✓ Alarm Light(LED)
- ✓ M30 Automatic Shutdown System
- ✓ Air Conditioner
- ✓ Air Condition Software for TNC-640)

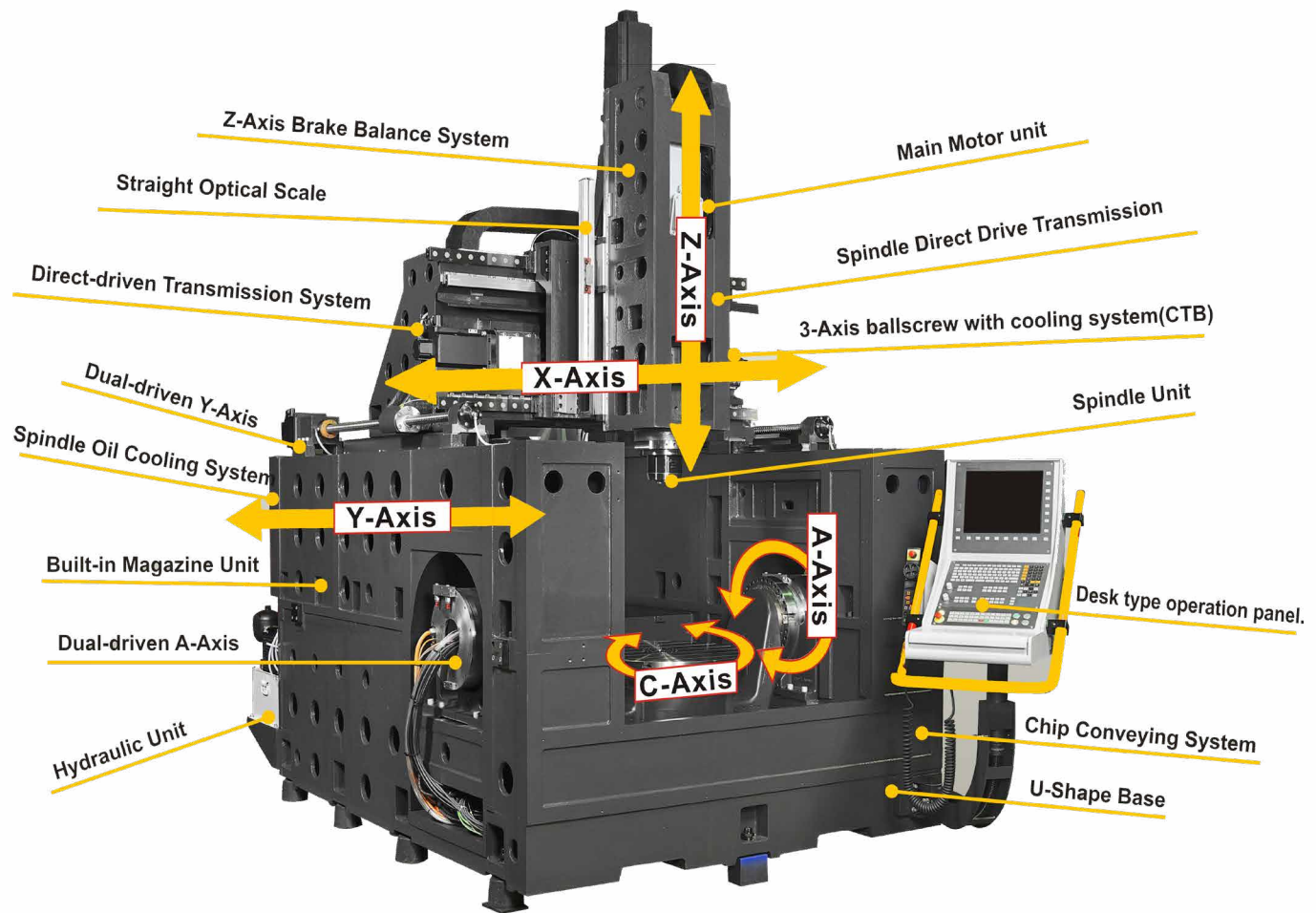
Optional Accessories:

- ☐ Spindle Speed-15000rpm(LU-800) (Chester 800-5AX,Chester 800T-5AX)
- ☐ Coolant Through Spindle(Chester 800-5AX, Chester 800B-5AX,Chester 1200-5AX)
- ☐ ZF Gearbox(1200-5AX)
- ☐ Worktable Washing System
- ☐ Oil Path Tool Handle Stopper
- ☐ Coolant Cooling System
- ☐ Programmable Top Cover(Standard for 1200-5AX)
- ☐ Laser Tool Length Measuring
- ☐ Wireless Workpiece Measuring
- ☐ Worktable Clamp Air Hydraulic Source
- ☐ Increased Tool Magazine Capacity
- ☐ Heidenhain TNC-640(5-Axis/5-Interactive)
- ☐ Centering Calibration Function
- ☐ Oil Demister System
- ☐ Rotary Window
- ☐ Automatic Pallet Changer

* The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.



New Level of Kinematics



High Performance 5 Axis Machining Centre's

- Through the interaction of 5 axes, the Chester 5AX series will execute machining of complicated Workpiece shapes, they also feature one-process clamping for multi-face machining.
- This new generation of machines offer high-efficiency production achieved by high quality machining and working sequence.
- They provide the perfect integral configuration by combining ergonomics and the latestest operation technology.

* The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

High Performance Control

The Chester 5AX Series are designed for highly efficient production. They are equipped with a high performance control system to execute high-speed contour control for achieving the optimal surface precision and accuracy within the shortest machining and working time. Driven by a highly dynamic 5-axis.

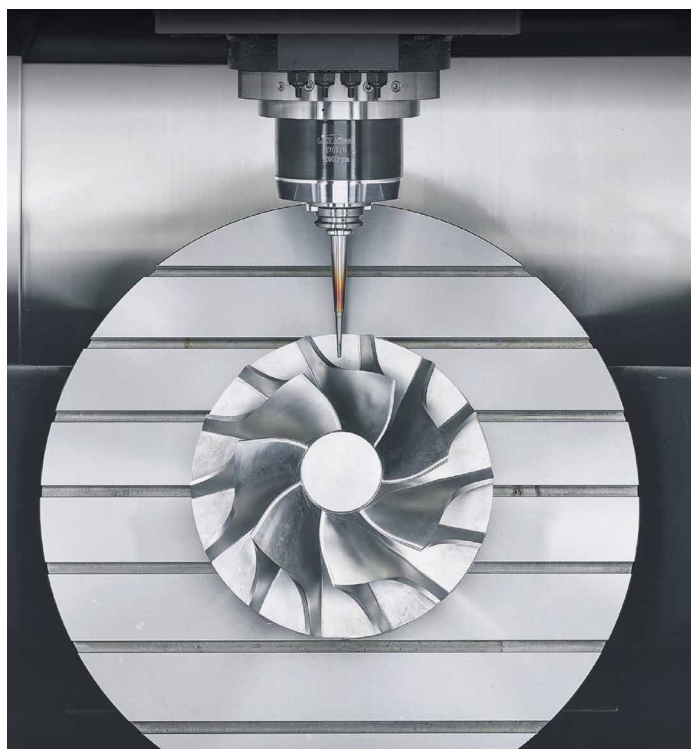


Vertical Machining Centre (5 Axis)

Entering a new era for 5 axis machining.

Crane-type High-Level 5 Axis Machining Centre

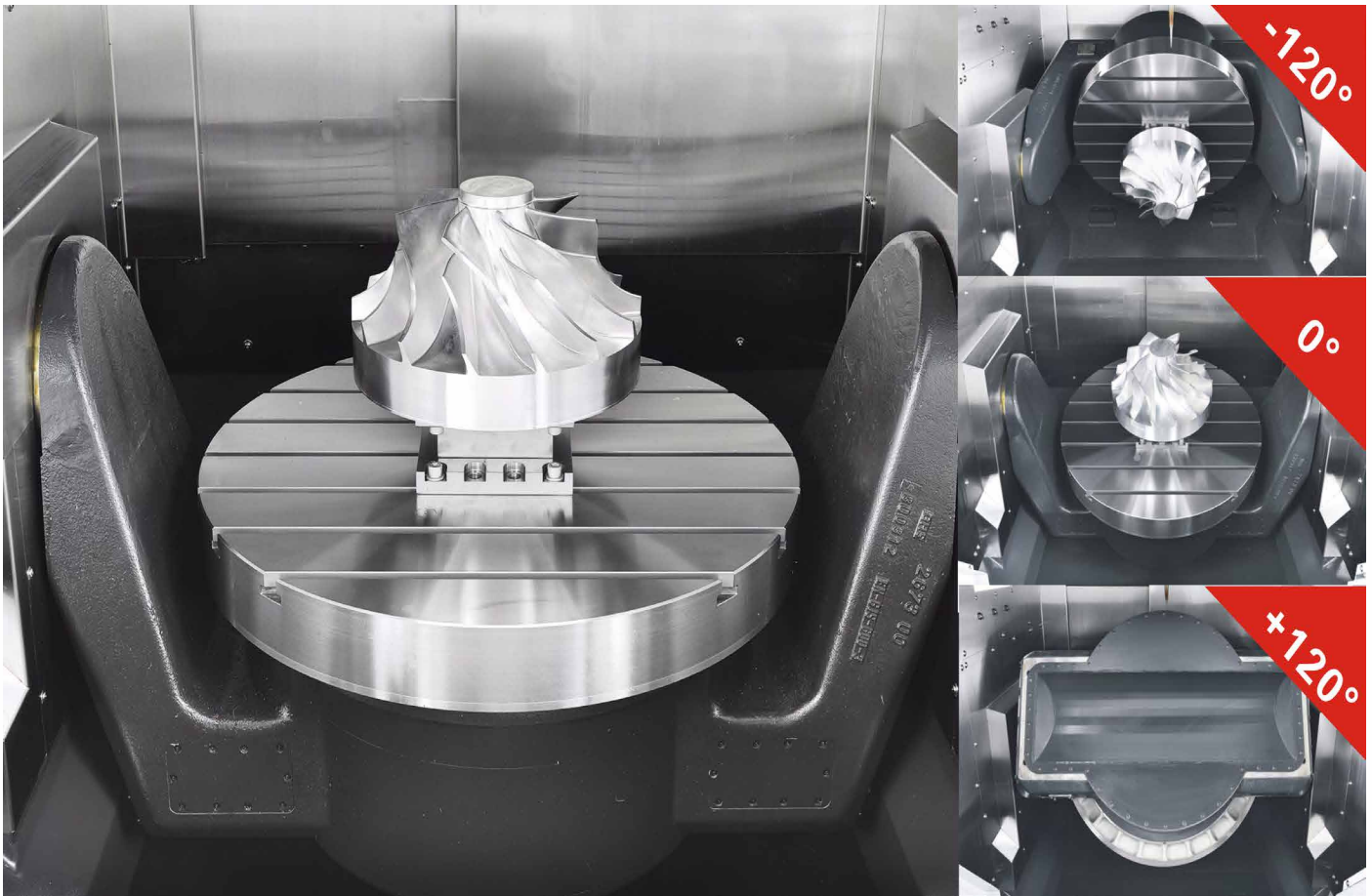
The most advanced Direct drive spindle can handle high speed tooling to carry out economical and accurate machining by direct drive to the Rotary C-Axis and tilt A-Axis.



* The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.



A, C Axes (Rotary Axes) Unit



A, C Axes are using the Direct Drive Motor to work with the Rotary Table detected by the encoder. Its performance is superior in power transmission efficiency and the reduction of power consumption than conventional worm gear configuration.

Higher freedom in the working area

Working Bench load:

- Chester 1200-5AX A/B max. load up to 2000kgs
- Chester 800-5AX A/B max. load up to 1000kgs
- Chester 620-5AX A/B max. load up to 300kgs
- Chester 400-5AX A/B max. load up to 150kgs

Table free of chip swarf

The tilting A-Axis and the Rotary C Axis are in the Workpiece centre (U-shape)

The dual-drive calibration function prevents twisted deformation

* The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.



Tool Magazine Unit



■ 1200-5AX

Magazine capacity: 24T
 Max. Tool Length: 400mm
 Max. Tool Dia.: 125mm
 Max. Tool Weight: 15kgs
 Max. Machine Load: 240kgs

■ 800-5AX

Magazine capacity: 32T
 Max. Tool Length: 300mm
 Max. Tool Dia.: 75mm
 Max. Tool Weight: 7kgs
 Max. Machine Load: 128kgs

■ 620-5AX

Magazine capacity: 32T
 Max Tool Length: 250mm
 Max Tool Diameter
 (No adjacent tool): 75 (127)
 Max Tool Weight: 7kgs
 Maximum Tool Load: 224kgs

■ 400-5AX

Magazine capacity: 30T
 Max tool length: 250mm
 Max Tool Diameter
 (No adjacent tool): 75 (127)
 Max Tool Weight: 7kgs
 Maximum Tool Load: 210kgs

* The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

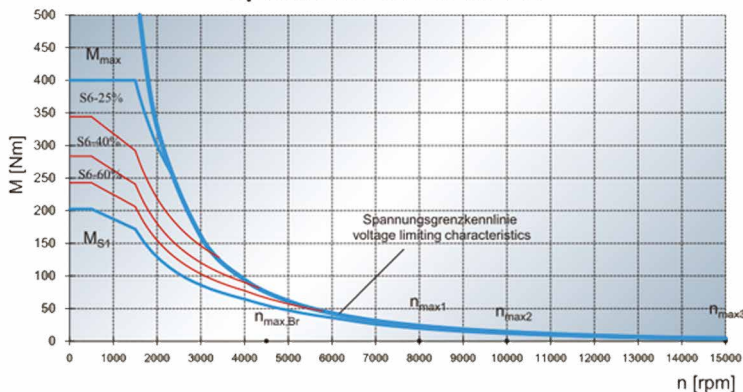


Spindle Motor Torque

Advanced spindle technology ensures a total-torque output within the low speed range, comprising of a highly stabilised ceramic spindle bearing and housing fitted with a constant temperature cooling unit to maintain the spindle at a fixed temperature during the entire operation process.

Spindle Motor Torque Curve - 1200-5AX

Spindle Motor: 1PH8137

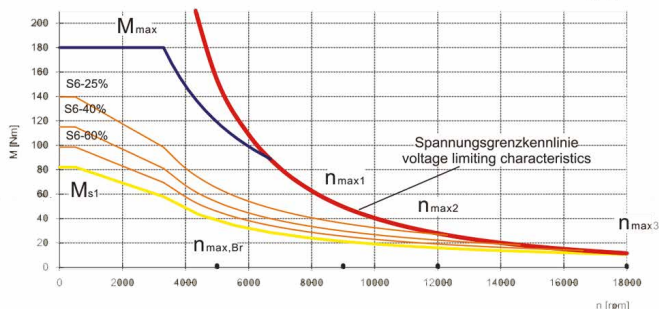
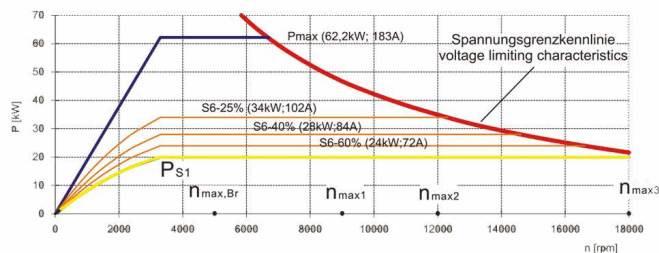


Spindle Motor Torque Curve - 620-5AX

Heidenhain TNC-640

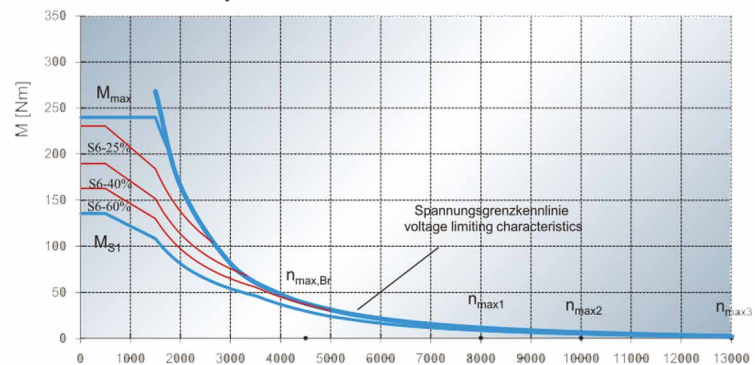
Tabelle 1-476 SINAMICS, 3 AC 400 V, Active Line Module, (ALM), 1PH8107-□□M2□□

n_N [rpm]	P_N [kW]	M_N [Nm]	I_N [A]	n_{max1} [rpm]	n_{max2} [rpm]	n_{max3} [rpm]	$n_{max.Br}$ [rpm]	n_2 [rpm]	M_{max} [Nm]	I_{max} [A]	M_0 [Nm]	I_0 [A]
3300	20,0	58	60,0	9000	12000	18000	5000	18050	180	183	82	73
3000	18,0	57	60,0					18050				



Spindle Motor Torque Curve - 800-5AX

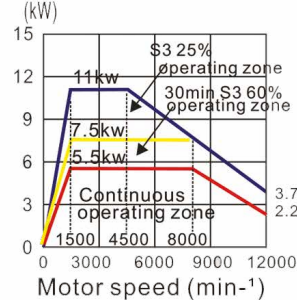
Spindle Motor: 1PH8133



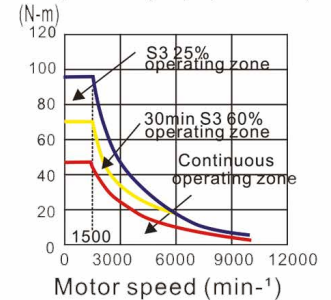
Spindle Motor Torque Curve - 400-5AX

FANUC 0iMF Applicable amplifier αiSP 11
βiSVSP*-11

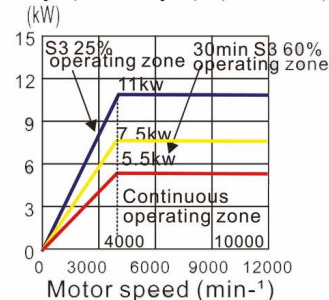
Low-speed winding output (Y connection)



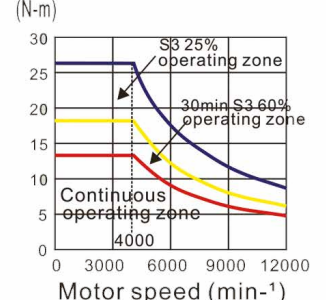
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



* The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.