

Press Release

September 13, 2010

The NHX Series of horizontal machining centers makes a debut as the X-class

Mori Seiki Co., Ltd. has announced the debut of the **X-class**, which fills the needs of the times.

We start taking orders for the **NHX4000** and **NHX5000/40** horizontal machining centers on September 13, 2010.

The NHX Series offers improved cost performance by drastically reducing the number of parts, and is designed to reflect current market needs and 3,000 feedback comments from customers. It is packed with extensive features including (1) high speed (2) high rigidity, (3) high accuracy, (4) energy saving, (5) MAPPS IV + ESPRIT, (6) compliance with safety standards, and (7) variations.

(1) High speed

The NHX4000 and NHX5000 have a rapid traverse rate of 60 m/min. The NHX4000's pallet indexing time is 1.0 second (1 degree indexing specifications), and the NHX5000's is 1.49 seconds (90 degrees indexing specifications). The both models offer dramatically increased productivity by reducing non-cutting time.

(2) High rigidity

The NHX Series achieves high-rigidity and stable machining by using a thick, high-rigidity bed with the X- and Z-axis linear guides placed in a high position, spindle with a large-diameter bearing, and a table and pallets with a powerful clamping force.

(3) High accuracy

The NHX Series offers improved positioning accuracy by reducing weight of moving parts including a column. Additionally, it uses direct scale feedback as standard to ensure high accuracy.

(4) Energy saving

The NHX Series is designed to reduce environmental burden and running costs. While a hydraulic unit pump used in the conventional model rotates all the time to maintain pressure, the pump used in the NHX Series can be stopped during standby because an accumulator is attached to the hydraulic unit. In addition, the number of motors has been reduced. The NHX Series has achieved an approximately 40% reduction in total power consumption compared to the conventional model.

(5) MAPPSIV + ESPRIT

The NHX Series uses the MAPPS IV high-performance operating system for its operation panel. In addition to automatic programming software (standard), ESPRIT CAM software is available as an option. The combination of MAPPS IV and ESPRIT allows the machine to handle complex machining programming and to flexibly meet customer needs.

(6) Compliance with safety standards

The NHX Series conforms to safety standards all over the world, including CE Standards, UL Standards and ANSI.

(7) Variations

Since a wide range of variations, including ATC without arms and configurations without APC, is available, the NHX Series can also be used as special machines for the automobile industry.

Mori Seiki will continue to provide highly-functional and affordable products that satisfy the needs of our customers.

Type	High-Precision Horizontal Machining Center
Model	NHX4000, NHX5000/40
Market	Automobiles, construction machinery, agricultural machinery, general parts, etc.
Orders start	September 13, 2010
Production (for each model)	50 units/month

■Major specifications

Item	NHX4000	NHX5000/40
Axis travel (X/Y/Z) (mm)	560/560/660	730/730/880
Pallet working surface (mm)	400 x 400	500 x 500
Pallet loading capacity (kg)	400	500 [700] ^{*3}
Max. workpiece swing diameter/ Max. workpiece height (mm)	φ 630 x 900 ^{*1} , 880 ^{*2}	φ 800 x 1,000
Max. spindle speed (min ⁻¹)	12,000 [8,000] [20,000]	
Type of spindle taper hole	No.40	
Rapid traverse rate (X/Y/Z) (mm/min)	60,000/60,000/60,000	60,000/60,000/60,000
Tool storage capacity	Ring type (with ATC arms): 40 [60] Chain type (without ATC arms): [40] <To be expanded>	

[] Option

*1: Tap pallet specifications

*2: T-slot pallet specifications

*3: 700 kg specifications



Fig. 1 Exterior (NHX4000)



Fig. 2 Interior (NHX4000)



Fig.3 MAPPs IV + ESPRIT