MORI SEIKI
THE MACHINE TOOL COMPANY

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Press Release

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The compact machining center of next generation MILLTAP 700 Launched!

Mori Seiki Co., Ltd. is pleased to announce the MILLTAP 700, the compact machining center of next generation, which is the first corporate development with German business partner, GILDEMEISTER AG (hereafter, "DMG").

From the first customer feedback, development and construction to the world premiere at the EMO: The vertical milling and boring center MILLTAP 700 as the first joint development of DMG / MORI SEIKI documents their high standard to always offer its customers significant added value to suit all applications. The MILLTAP 700 achieves absolute top values in all processes and with its combination of impressive work capacity and chipping performance, it also achieves a so far unrivalled performance on the tapping center market.

Productivity and efficiency were at the core for development of the MILLTAP 700. For this reason, DMG and MORI SEIKI have concentrated their innovative power and equipped the vertical milling and boring center with a series of outstanding technical details. The high machining speed usual in the field of tapping centers is thus supported by a high speed tool changer which achieves chip-to-chip times of 1.5 seconds and so enables a highly efficient process. There is also a special feature: The complete drive of the magazine – it takes 15 or optionally 25 tools – is integrated into the spindle head. Key features in this context are the impressive dynamic response of up to 1.6 G in the linear axes as well as fast axis movements up to 60 m/min, which significantly increases productivity.

Furthermore, the MILLTAP 700 considers aspects like process reliability and maintenance costs. Its triangular bed design as well as the static cover of the X-axis optimize the chip flow and enable parallel disposal of the chips. Users can either position the cooling system on the machine from the front or back. All in all the innovative machine concept impresses with a width that is 30 percent less compared to the competition, which is due to the optimized table design. The footprint of the MILLTAP 700 is 10 percent less compared with the competition.

Despite all this compactness, the work area with 700 mm in the X-axis and 420 mm in the Y-axis (with a Z-path of 380 mm) is generously dimensioned and above all designed ergonomically in such a way that perfect accessibility is ensured. The sturdy machining table and the wide distances between the linear guideways enable the machining of workpieces up to 400 kg. Furthermore, a number of clamping options promises highest flexibility.

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On the spindle side, the MILLTAP 700 impresses with a high-torque 10,000 min^{-1} spindle, whereby the machinable material spectrum can even be increased with the optional high- speed spindle with 24,000 min^{-1}. With a spindle drive of 25 kW, which is more than doubled spindle output compared to the conventional model TV-300, the new development of DMG and MORI SEIKI is complete top of the range. Furthermore, the symmetric spindle head ensures extreme rigidity and high thermal stability. The rigidity of the machine is also helped by the C-frame design and usage of robust castings. The user benefits with highest surface quality of the workpiece and long tool life.

Apart from the manufacturing- and process-relevant features, the MILLTAP 700 also presents itself with an outstanding control performance. The adapted Siemens 840D solutionline with Sinamics 120 compact inverter and 10” monitor ensures simple and efficient programming. The system guarantees highly dynamic contour accuracy and efficient program sequences. Optionally the MILLTAP 700 can also be equipped with the PROGRESS*line*, which clearly displays the remaining time and quantity of a complete machining order as status control.

The topic of energy efficiency is dealt with by DMG / MORI SEIKI with a perfected energy management. Here the CNC control, combined with efficient drive technology, ensures an energy consumption that is up to 30 percent reduced in direct comparison with competitor machines.

With a strong partnership with Gildemeister, Mori Seiki will continue to provide an extensive product lineup to support many more customers' production sites.

Type	High speed, High precision, Compact Machining Center
Model	MILLTAP 700
Market	Automobiles, Electronics, etc.

Major specification

items	MILLTAP 700
Axis travel (X/Y/Z) (mm)	700/ 420/ 380
Table working surface (mm)	840×420
Max. workpiece size (mm)	880×550
Table loading capacity (kg)	400
Rapid traverse rate (X/Y/Z) (m/min)	60/ 60/ 60
Max. acceleration (X/Y/Z) (m/s^2)	10/ 10/ 16 (1.0/ 1.0/ 1.6 G)
Max. spindle speed (min^{-1})	10,000 [24,000]
Spindle drive motor (Max.) (kW)	25 [20]
Spindle torque (Max.) (Nm)	45 [40]
Tool storage capacity	15 [25]
Floor space (mm)	1,650×2,340

[ ] option

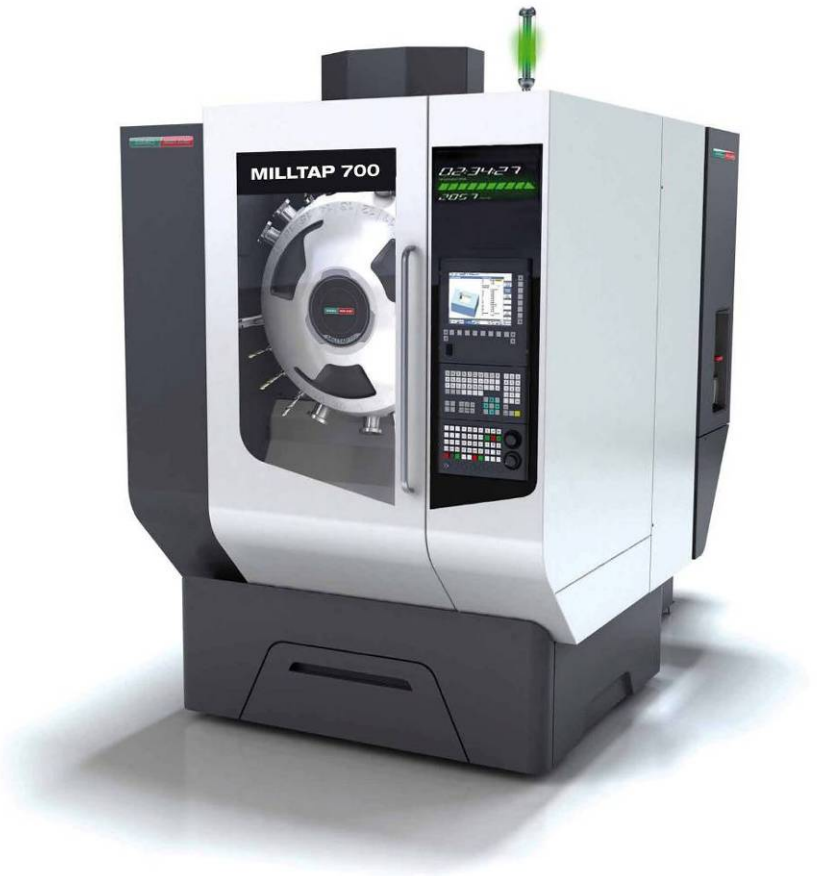

Fig.1 Exterior

Fig.2 Spindle with ATC function
(Tool storage capacity: 25)