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World premiere: DMU 85/95 monoBLOCK 2. Generation

Maximum precision for the future of manufacturing

Munich. The world premiere of the DMU 85 monoBLOCK 2. Generation combines the proven machine concept of the previous series with numerous optimizations that have been incorporated directly from the practical experience of users. The versatile 5-axis simultaneous machining center has always been the perfect introduction to future-proof production. In the latest generation, DMG MORI has significantly increased the precision - as with the smaller models already introduced at the Open House. Improved cooling measures and direct-driven ball screws ensure a positioning accuracy of 5 µm. This means that the DMU 85 monoBLOCK 2. Generation also meets the highest quality requirements in the production of demanding workpieces. The integration of additional machining processes, for example with the optional mill-turn table and grinding functionality, a wide range of automation options and CELOS X as the basis for digitized production make the new generation of the successful series an ideal manufacturing solution for companies in the die & mold, aerospace, semiconductor and other demanding industries - especially in times of Machining Transformation (MX). With the DMU 95 monoBLOCK 2. Generation, DMG MORI is also once again offering a pre-configured and powerful complete package.

Optimum temperature compensation and directly driven ball screws

DMG MORI achieves the increased accuracy and excellent surfaces through design measures and improved temperature stability. Directly driven ball screws in the X and Y directions, an arrow-toothed belt drive in the Z-axis and the swivel rotary table optimized for continuous operation are just as much a part of this as the thermo-symmetrical ram cooling and the comprehensive cooling of the ball screws. The powerful 5 kW cooling unit has been integrated in such a way that the footprint of the DMU 85 monoBLOCK 2. Generation is kept to a minimum. The volumetric accuracy has been increased by 30 percent thanks to VCS Complete. The work area is designed for workpiece sizes up to ø 1040 x 590 mm and a maximum component weight of 1000 kg (optional 1,500 kg).

Large modular system with spindles for every application

In order to cover the wide range of requirements in the numerous target industries, the DMU 85 monoBLOCK 2. Generation modular system includes the widest range of spindles on the market: speedMASTER spindles with speeds of 30,000 rpm for machining perfect surfaces or high-torque powerMASTER spindles with up to 430 Nm for heavy-duty machining of titanium components. The MASTER spindles still come with a 36-month warranty. The tool magazine of the DMU 85 monoBLOCK 2. Generation offers 30 pockets as standard and can be expanded to 180 pockets.

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Process integration for efficient complete machining

Machining on machine tools is developing in such a way that more and more production processes are being integrated into one workspace, as this reduces throughput times and optimizes machine capacities. In addition, quality increases because manual reclamping processes on several machines are no longer necessary. The DMU 85 monoBLOCK 2. Generation supports this machining philosophy by carrying out milling, turning, grinding, gear cutting, in-process measuring and ULTRASONIC technology in a single set-up if required.

Well-equipped for automated and digitalized production

Thanks to the 3-point support, the DMU 85 monoBLOCK 2. Generation can be put into operation quickly and easily. In view of the large number of predecessor models installed - there are more than 6,000 monoBLOCK machines on the market - DMG MORI has attached great importance to the unrestricted compatibility of the series. This also applies to integration into automated production. The world premiere can be operated autonomously with numerous pallet handling systems, self-propelled transport systems or the Robo2Go Milling. The good accessibility of the machines with a door width of 1,500 mm remains the same. Meanwhile, the DMU 85 monoBLOCK 2. Generation promotes digitalized production with its unlimited connectivity and intuitive CELOS X control system. SIEMENS and HAIDENHAIN are available as options. In addition, DMG MORI technology cycles implement complex machining operations through simple dialogue-guided programming.

Energy-efficient operation with up to 30 percent savings potential

In addition to process integration, automation and digital transformation (DX), the DMU 85 monoBLOCK 2. Generation also serves the fourth pillar of machining transformation (MX). Energy-efficient operation with savings of over 30 percent is achieved through up to twelve GREENMODE measures. In addition, resources such as coolant are used sparingly and optimally cleaned with the help of the zero sludge chip conveyor.

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With a positioning accuracy of 5 μm , the DMU 85 monoBLOCK 2. Generation also meets the highest quality requirements in die & mold, aerospace, semiconductor and other demanding industries.

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Company Profile // DMG MORI

DMG MORI is a leading global manufacturer of high-precision machine tools and is represented in 43 countries – with 116 sales and service locations, including 17 production plants. In the “Global One Company”, more than 13,000 employees are driving the development of holistic solutions in the manufacturing industry. Under the guiding principle of Machining Transformation (MX), DMG MORI combines four pillars for the efficient, sustainable production of the future: Process Integration, Automation, Digital Transformation (DX) and Green Transformation (GX).

DMG MORI stands for innovation, quality and precision. Our portfolio covers sustainable manufacturing solutions based on the technologies Turning, Milling, Grinding, Boring as well as Ultrasonic, Lasertec and Additive Manufacturing. With technology integration, end-to-end automation and digitization solutions we make it possible to increase productivity and resource efficiency at the same time.

At our production sites worldwide, we realize holistic turnkey solutions for the main sectors of aerospace, automotive, die & mold, medical and semiconductor. With the DMG MORI Qualified Products (DMQP) partner program, we offer perfectly matched peripheral products from a single source. Our customer-oriented services cover the entire life cycle of a machine tool – including training, repair, maintenance and spare parts service.

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