

Kellenberger expands its grinding portfolio in the entry-level segment

The Swiss grinding specialist Kellenberger is presenting two new cylindrical grinding machines at the Grinding Hub fair in Stuttgart, the KELLENBERGER K8 and the KELLENBERGER K10, significantly expanding its machine portfolio for beginners and smaller companies.

Kellenberger cylindrical grinding machines are characterised by maximum precision, process reliability, productivity and flexibility. Until now, the range available to dedicated grinding professionals extended from the cost- and cycle-time-optimised, energy-efficient universal cylindrical grinding machine K10, through the flexibly configurable K100, up to the premium-class K1000 and VM1000. All Kellenberger cylindrical grinding concepts are optimally configured for their respective application areas and can be expanded with a wide range of options.

With the new KELLENBERGER K8 cylindrical grinding solution, Kellenberger offers an optimally configured standard machine in which advanced equipment options have been deliberately omitted. The K8 was designed for beginners and smaller companies looking for a cost-effective machine without having to compromise on Kellenberger's proven premium quality.

This includes the stability and rigidity required for a successful grinding process, ensured by the solid machine bed cast in a single piece. The V-flat guideways in the Z-axis also contribute to this, featuring a special coating to prevent friction losses. High-quality Fagor measuring systems with a resolution of 0.05 µm guarantee maximum precision throughout the grinding process.

The K8 is ideally suited for grinding workpieces in small and medium batch production.

With a centre height of 200 mm, a centre distance of 1,000 mm and a maximum grinding diameter of 380 mm, the K8 covers a wide range of parts. The grinding head can be equipped with an external grinding wheel and an internal grinding spindle. The FANUC 0i-TF control system and user-friendly standard grinding software for external, internal and shoulder grinding ensure excellent grinding results.

Unlike the K10, K100, K1000 and VM1000 series, the KELLENBERGER K8 does not have a loader interface. The KELLENBERGER K8 is distributed through its own sales structure,

which also integrates the service network in accordance with the Kellenberger standard.

More features and a wide range of options: The new KELLENBERGER K10

In addition to the K8, the advanced universal cylindrical grinding machine KELLENBERGER K10 stands out with new features and an expanded range of options. These include, among other things, active longitudinal positioning, which enables precise position control of the workpiece during external, face and internal grinding.

The universal grinding head of the K10 accommodates two external grinding wheels, Ø 500/400 mm, as main and auxiliary wheels, as well as a directly driven high-frequency internal grinding spindle available in two speed ranges: 6,000–40,000 rpm and 10,000–60,000 rpm. The continuous Kellenberger table profile, already proven in the K100 and K1000 and suitable for all standard and optional configurations, is also used in the K10. A special feature is the low-maintenance energy supply via table interfaces. The dressing interface running along the entire rear side of the table reduces setup time and expands dressing options.

For extended machining capabilities, the KELLENBERGER K10 offers generous X- and Z-axis strokes, X = 365 mm/Z = 1,150 mm. The low-maintenance, high-precision linear guide in the X-axis and the V-flat slideways in the Z-axis are equipped with optical, absolute linear measuring systems. The B-axis is

designed as an automatic indexing axis (1°) with high positioning accuracy and a swivel range of +30°/-210°.

Like the high-performance machines K100, K1000 and VM1000, the KELLENBERGER K10 is equipped with the powerful FANUC 0i-TFP control system featuring a 19-inch touch control panel and Kellenberger user interface. The BLUE Solution software with Object Guide, ISO Guide and DXF import enables fast programming and setup, even for inexperienced operators. The BLUE Solution is continuously developed by Kellenberger's software experts and enhanced with innovative features for process optimisation. These features include the structure-borne sound sensor gTOUCH and the semi-automatic balancing system gBALANCE. The latest program enhancements for optimal grinding processes include the quality measurement control gMEASURE and grinding time monitoring gTIME. The newest BLUE Solution edition will be demonstrated at the GrindingHub. Visitors can also look forward to a presentation of the company's new in-house component manufacturing. In the future, Kellenberger will produce key machine components, essential for achieving the highest precision standards required by the company, at its Goldach facility. These include, among others, spindles and grinding heads.



At the GrindingHub, Kellenberger will also showcase its proven cylindrical grinding concepts for the highest demands: the KELLENBERGER K100, KELLENBERGER K1000 and KELLENBERGER VM1000. The Kellenberger 100 is available with centre distances of 1,700/1,000 and 600 mm and a centre height of 200 mm and is designed for workpiece weights of up to 200 kg. High grinding wheel drive power ensures high productivity, while the new Z-guide system delivers high profile accuracy. The C-axis with direct drive provides increased precision in non-cylindrical grinding. The K100 features a tandem grinding head with 10 grinding head variants.

The KELLENBERGER K1000 is equipped with hydrostatic guideways in all main axes for maximum form accuracy in grinding tasks involving interpolating axes. The CNC-controlled B-axis for the grinding head is hydrostatically mounted and therefore wear-free. It features a direct drive with a water-cooled high-torque motor and an angular measuring system with a resolution of 0.1 arcseconds.

The K1000 is optionally available with centre distances of 1,000/1,600 mm and centre heights of 200/250 and 300 mm. More than 30 different grinding head variants with external and



internal grinding spindles are available as standard, covering virtually every machining requirement.

The VM1000 is optimised for flexible, universal internal and external cylindrical machining of complex workpieces up to 300 mm in length. The range of workpieces includes the smallest individual parts for fuel injection systems in car engines, ball bearing rings, transmission components, hydraulic components and complex components used in machine tool construction.

The special feature of the VOUMARD 1000 are the two highly precise hydrostatic B-axes. The spindle turret on the B1 axis is equipped with a

uniquely compact grinding spindle head with a flexible spindle arrangement. This allows spindles and measuring sensors to be optimally positioned, enabling the machining of virtually any workpiece geometry as well as multiple internal and external grinding operations in a single clamping setup.

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