

The premier class for the highest demands

The KELLENBERGER 1000 series was developed for the high demands of precision production of prototypes, as well as small and medium series, e.g. in tool and mould making, the automotive and electrical industries and the aircraft industry. The solid machine table with the reinforced machine bed provides very high static and dynamic rigidity and stability, a prerequisite for high precision. With centre heights of 200/250/300 mm, centre widths of 600/1,000 mm, generous X-axis strokes of 365 mm and Z-axis strokes of 1,150/1,670 mm, the KELLENBERGER 1000 covers a wide range of workpieces weighing up to 300 kg.

The automatic 1° indexing axis with high positioning accuracy and the direct-drive internal grinding spindles up to 60,000 rpm are further features. The KELLENBERGER 1000 is equipped with hydrostatic guides in all main axes for maximum shape accuracy in grinding tasks with interpolating axes. The B-axis has a direct drive. The turret grinding head swivels around three times faster and positions with an accuracy of less than one angular second. This reduces non-productive times and thus increases productivity, especially when processing requires the swivelling in of different grinding wheels.

Over 30 grinding head variants with external and internal grinding spindles are standard on the KELLENBERGER 1000. Operator guidance is via an intuitive 19"

touchscreen interface on the latest Fanuc 31i CNC control system. The innovative BLUE Solution software enables even inexperienced operators to program quickly and intuitively.

Integrated Z2 axis for automatic length compensation

Automating grinding processes on workpieces of differing lengths is a challenge. The design engineers at Kellenberger developed an integrated positioning axis (Z2 axis) for this task for the KELLENBERGER 1000, which ensures automatic length compensation during fully automatic loading by a robot or gantry loader. Previously, the workpiece headstock or tailstock had to be repositioned manually for the necessary length compensation during workpiece change. The Z2 axis reduces the changeover time by around 80 percent.

The Z2 axis moves on the Z axis and the automatic zero-point shift is performed via a longitudinal probe. Workpieces up to a diameter of 300 mm can be machined while a steady rest can be clamped for longer workpieces. Non-circular parts can also be ground. These are oriented fully automatically on the C-axis.

Flexible for maximum customer orientation

The KELLENBERGER 100 offers a wide range of configuration options for a wide variety of grinding operations and thus enables a

strong customer focus. With a centre height of 200 mm, centre width of 600/1,000 mm and generous X-axis strokes of 365 mm and Z-axis strokes of 750/1,150 mm, the machine covers a wide range of workpieces weighing up to 150 kg. The automatic 1° indexing axis with high positioning accuracy and the direct-drive internal grinding spindles up to 90,000 rpm are further features. The large drive power of the grinding wheel results in high productivity, while the new Z-guide ensures high profile accuracy. The C-axis with direct drive provides greater accuracy for non-circular grinding.

The technical highlights of the KELLENBERGER 100 include an innovative compact grinding head, 10 grinding head variants, 11.5 kW drive power, 500 mm wheel, up to 63 m/s, HF spindles for internal grinding incl. diagonal and tandem arrangement, a collision-free universal head with three tool and one measuring position as well as a new measuring probe arrangement without swivel mechanism for increased measuring accuracy. A synchronous tailstock allows the complete machining of shafts without a driver, i.e. the workpiece can be machined completely over its entire length.

The reinforced casing allows larger grinding wheel diameters for internal grinding. Operator guidance is via an intuitive 19" touchscreen interface on the latest FANUC 31i CNC control system. The





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Flexible for small and medium batches

The VOUMARD 30 internal grinding machine is ideal for all industries whose main focus is on simple internal grinding operations in the small and medium series. With a footprint of 1.80 x 1.80 m, the very compact machine is designed for workpiece lengths of up to 150 mm and diameters of up to 150 mm. Depending on the application, either one or two high-frequency internal grinding spindles arranged in parallel can be used. These high-quality internal grinding spindles ensure the best grinding results with short cycle times. They are available with speeds of max. 45,000, up to 120,000 min⁻¹. Other outstanding features are the

high-precision work headstock and a high-precision X/Z cross table. These ensure the best grinding results with short cycle times. They are available with maximum speeds of 45,000 to 120,000 rpm.

Other outstanding features include the high-precision work-head and a high-precision X/Z cross table. The VOUMARD 30 can be equipped with three different dressing devices. The machine is equipped with a FANUC Oi control with the latest BLUE Solution software generation, which is now standard on all Voumard and Kellenberger grinding machines. BLUE Solution is characterised by simple, fast and intuitive touch operation. The operating elements are designed so that they can be quickly grasped and logically selected. The special feature: During data entry, the operator is optimally supported by an

intelligent control system. This system is equipped with a plausibility monitor that indicates incorrect entries. The operator can then readjust his entries. For automatic loading, the VOUMARD 30 can be equipped with a robot, and the robot can be optionally integrated into the machine enclosure.

The KELLENBERGER 1000 with Automation FLEX, KELLENBERGER 100 with Automation FLY and VOUMARD 30 machines will all be on display at GrindingHub.

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