KELLENBERGER H2000

Customized technology

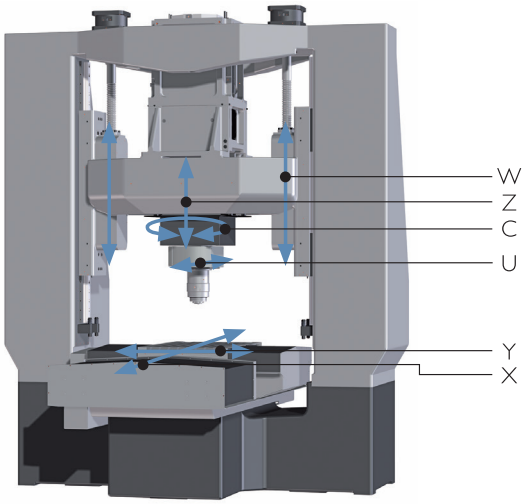


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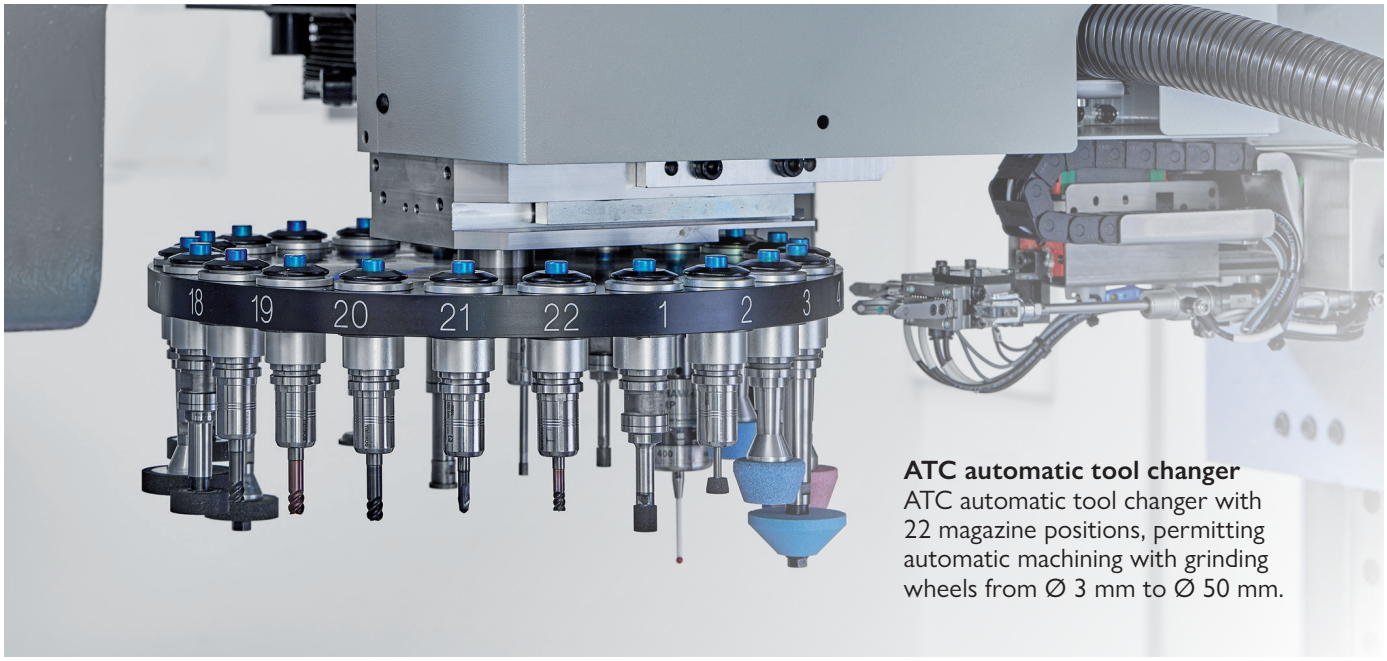
Customized technology





Machine

- Robust, distortion-resistant Module
- Consequent lay-out with regard to thermal stability



ATC automatic tool changer
ATC automatic tool changer with 22 magazine positions, permitting automatic machining with grinding wheels from Ø 3 mm to Ø 50 mm.

Options and accessories

Guideways / measuring systems / axes drives

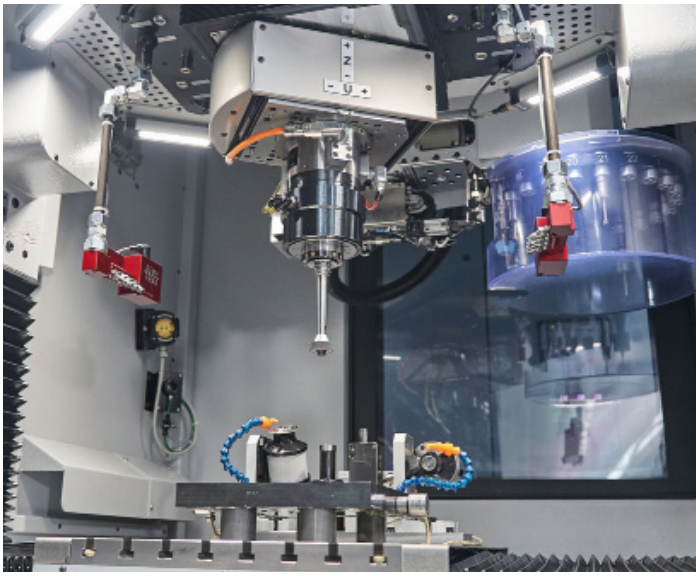
- Sliding guideways wherever required
- Linear guideways wherever possible
- Absolutely smooth stroke reversal
- Measuring systems optimally positioned with regard to the measuring technique
- Axes drives in the centre of friction



Guideways

- Scraped sliding guideways in X- and Y-axis





Control system

If you appreciate user friendly menu programming and insist on the advantages of ISO/DIN programming, then the Kellenberger product will be the right choice.

Axis X, Y, C, U, Z and W are CNC controlled, as a standard with FANUC 30i-B. Based on this controller we have created KELLENBERGER H2000 software cycles, ensuring that the control will perfectly cover all the special requirements of jig grinding.



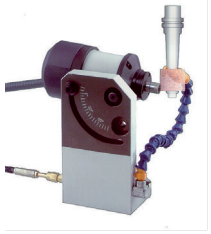
Grinding motor

Grinding motor 70s ATC with its extremely wide range of application, from 9'000 min^{-1} to 65'000 min^{-1}. This grinding motor, and its state-of-the-art design is an absolute must for getting optimal use out of the grinding tool changer.



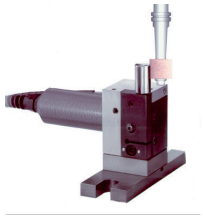
CBN dressing unit

CBN dressing unit with HF drive, for conditioning (dressing) vitrified and resinoid bond CBN grinding wheels.



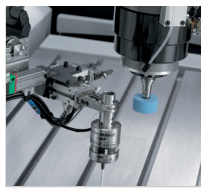
MSS

MSS – multi-sensor-system for automatic suppression of "air grinding" and for automatic grinding wheel calibration.



Measuring probe

Measuring probe for the automatic best fit of work-pieces.



Rotary and rotary tilting axes

A-B axes in customized version are available as additional units.



KELLENBERGER H200 coordinate grinding head

High-grade rigidity and stiffness leads in duplicating the stock removal capability and cuts in half the spark out time.

Allows the combination of grinding and hard milling.

Significant boost in stroke speed and stroke frequency leads into reduced grinding cycle time.

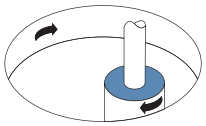
Hydrostatic guided spindle bearing system allows circular accuracies within < 0.5µm in planetary grinding.

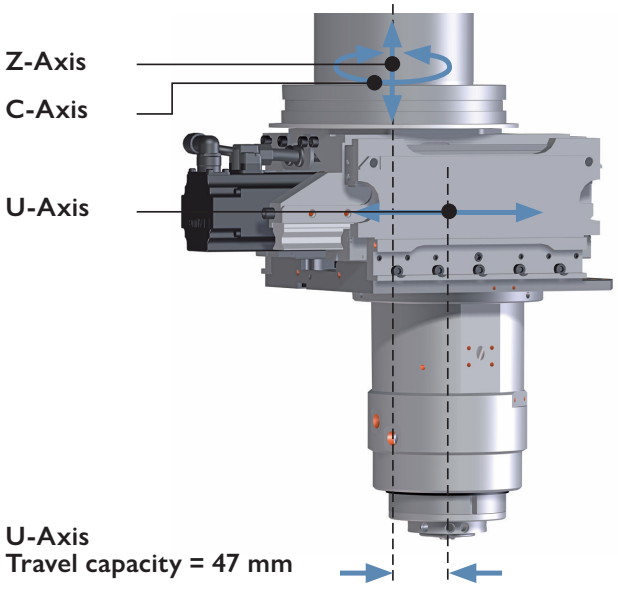
Unparalleled U-axis capacity up to ± 47 mm increases the grinding autonomy.



Drive Section

Precision section





Machine Control

Control System FANUC 30i-B

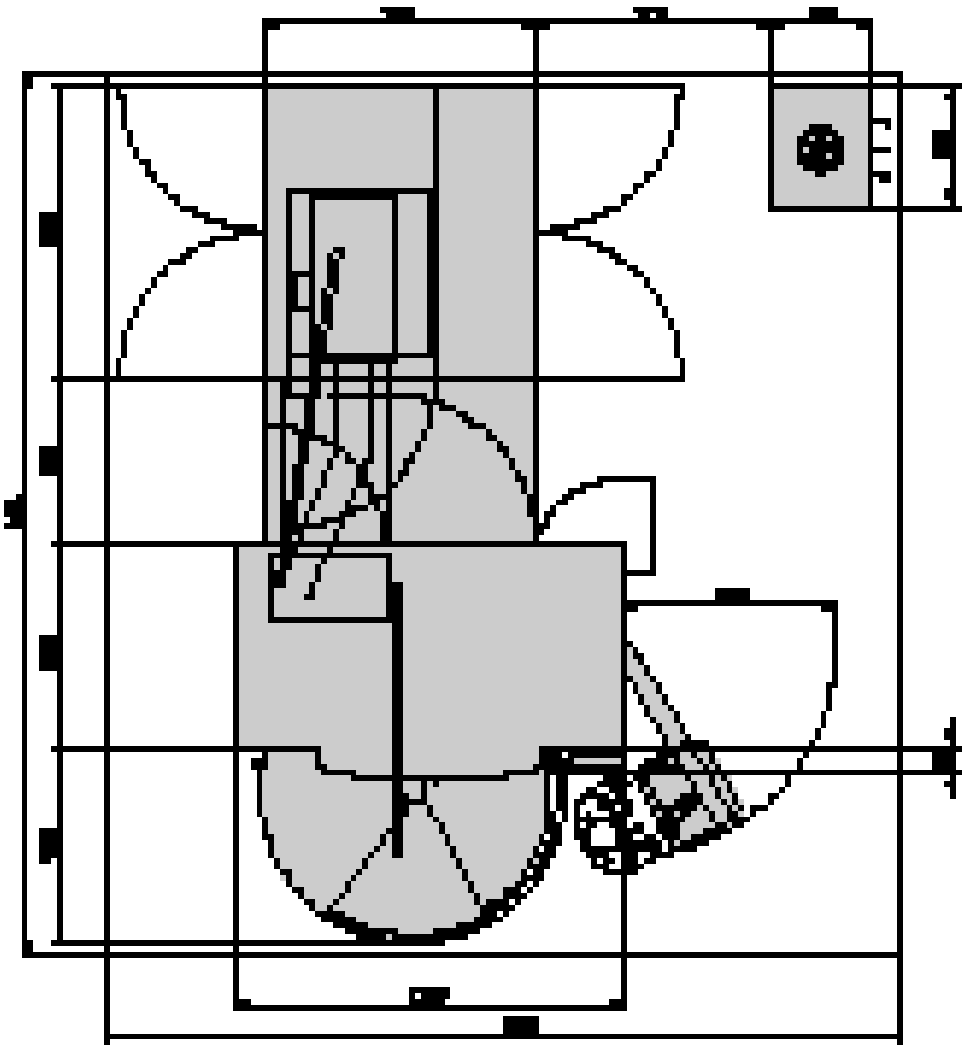
- Max. number of paths: 10 - 15 paths
- Max. total number of control axes:
- 96 axes (72 feed axes, 24 spindles) / 10 paths
- 72 axes (56 feed axes, 16 spindles) / 15 paths
- Max. number of simultaneous control axes: 24 axes

The big capability of this model helps to realize an advanced multi axis machine tool. Thanks to a number of control axes, various machining processes can be executed at the same time. Its 5-axis machining function can achieve the machining of complex shape. It has the flexibility to control various types of machine tools.





Floor plan



Specifications

Work range	
Range of adjustment X, Y mm 550×300	550×300 mm
Vertical adjustment of grinding head (W) mm 450	450 mm
Clearance between table top and U-axis reception face grinding motors mm max. 745	max. 745 mm
Clearance between table top and grinding motor reception nose (70S) mm 0–550	0–550 mm
Diameter ground in planetary mode, with grinding wheel Ø 50 mm / 70S:	
• Grinding motor 70S in U-axis central position, automatic grinding mode	max. 144 mm
• Grinding motor 70S in U-axis offset position, semi automatic mode	max. 234 mm
• with extension plates	max. 360 mm
Diameter ground in planetary mode, with grinding wheel Ø 100 mm/40S:	
• Grinding motor 40S in U-axis central position, automatic grinding mode	max. 194 mm
• Grinding motor 40S in U-axis offset position, semi automatic mode	max. 284 mm
• with extension plates	max. 360 mm
Taper grinding, included angle, divergent and convergent (Option)	max. 120 degree
Table	
Working surface	650×432 mm
8 T-slots, width	10 mm
Permissible table load	max. 300 kg
Feeds	
Table and saddle X, Y:	
• Machining speed	0–4'000 mm/min
• Traversing speed	8'000 mm/min
Vertical traversing speed W:	
• Machining speed	0–4'000 mm/min
• Traversing speed	8'000 mm/min
Grinding Spindle Z, C, U	
Diameter of the spindle sleeve	125 mm
Basic machine is prepared for use of following grinding spindle speeds:	
• For electric grinding motor 40S, infinitely adjustable and programmable	4'000–40'000 min^{-1}
• For electric grinding motor 22S, infinitely adjustable and programmable	4'500–22'500 min^{-1}
• For electric grinding motor 45S, infinitely adjustable and programmable	9'000–45'000 min^{-1}
• For electric grinding motor 70S, infinitely adjustable and programmable	9'000–70'000 min^{-1}
• System to activate grinding turbine T15	150'000 min^{-1}
• For electric slot grinding attachment, infinitely adjustable	3'900–18'300 min^{-1}
C-axis planetary mode:	
• Planetary mode, infinitely adjustable and programmable	1–350 min^{-1}
• C-axis follow-up mode, AC servo-drive	up to 10 min^{-1}
Z-axis in alternating stroke mode:	
• Z-alternating stroke movement, infinitely adjustable, from	Vmin. 0,500 mm/min
• Z-alternating stroke movement, infinitely adjustable up to	Vmax. 26'000 mm/min
• Z-stroke frequency	max. 10 Hz
• Z-stroke length, infinitely adjustable	0,1 to 170 mm
Z-axis in CNC mode:	
• Z-axis machining speed	0–4'000 mm/min
• Z-axis traversing speed	8'000 mm/min
U-axis radial travel capacity in CNC mode	from -3 bis +47 mm
Accuracy	
Positional uncertainty of the axes X, Y and W, P (corresponding to VDI/DGQ 3441)	0.0015 mm
Planetary grinding accuracy C:	
Achievable roundness accuracy provided max care is taken	0.0005 mm
Room Temperature Conditions (essential to achieve stated accuracy)	
Ambient temperature	20 -0/+2 °C
Permissible temperature changes	2° in 24 Std., resp. 0.5° in 1 Std. °C
Permissible temperature variations within the machine volume	0.5 °C
Relative humidity	25–75%

All specifications and designs are subject to alterations without notice

Control System

• Control System FANUC 30i-B

All prices and details are subject to change without notice. 1/2026

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