

COMPACT LINE

Flexibility –
Grind a step ahead!



COMPACT LINE –
Grinding technique
at the highest level!



COMPACT LINE

Professional grinding for your indexable inserts

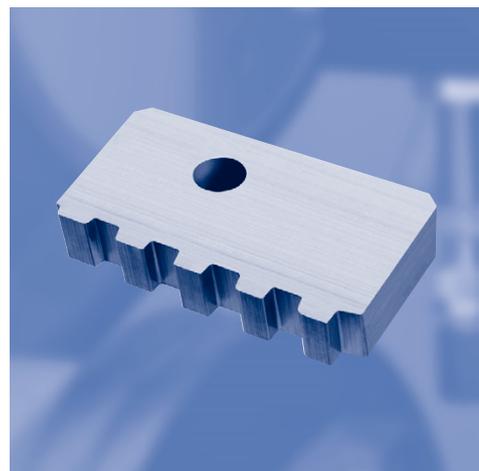
The COMPACT LINE grinding machine is virtually predestined for the highly precise manufacture or for the re-sharpening of all your inserts. Whether the material is carbide, cermet, ceramic or super hard CBN/PCD, the CNC-Grinding Machine meets all of the high requirements of precision and speed. Especially with the realization of complex work piece geometries the COMPACT LINE guarantees a professional solution.

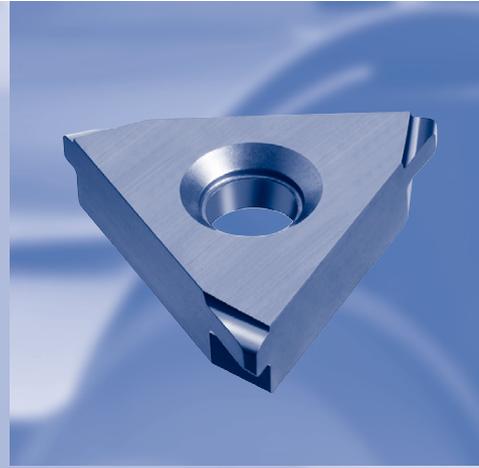
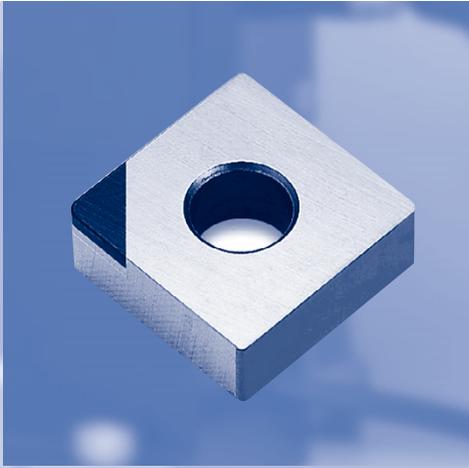
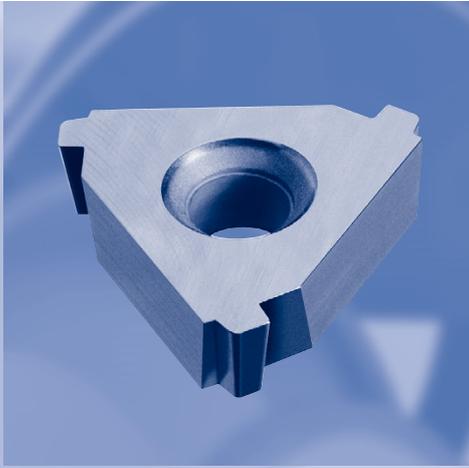
To be flexible and to be able to react to the rapidly changing market needs?

The COMPACT LINE with the proven 5-Axes-CNC-Kinematik and newest Technologies is the key to your success.

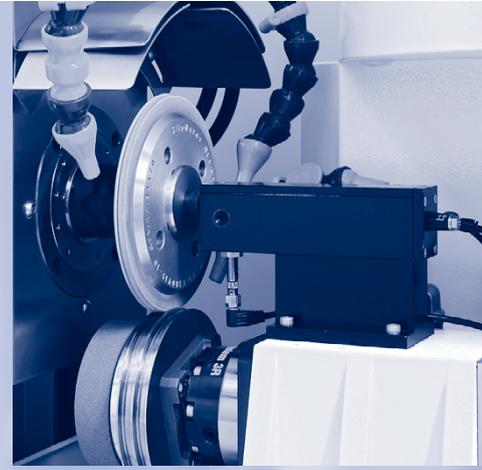
COMPACT LINE – The name keeps its promises: Compact construction, ergonomic operation and the integrated Robot system set new measures in the smallest space.

COMPACT LINE – Compact, fast and extremely precise!





COMPACT LINE – Technology that thrills!



Sharpening unit «three in one»
Dressing, Regenerating and Crushing:
Three processes with maximum
accessibility in a small space.

TECHNOLOGY

Newest Technology for your success

COMPACT LINE – Optimization with the Precision, Flexibility and Economics, these are the requirements for your success in business.

The direct-drive-actuation of the grinding spindle, the linear technology and the 5-axis-CNC-Kinematic are the platform for successful grinding of all your indexable cutting inserts. The concept of the COMPACT LINE – with the 6-axis FANUC Robot – for an autonomous multi-shift operation important to you. Shorter cycle and down-times and consequently higher productivity speak for itself. The «three-in-one» sharpening unit: Dressing – Regenerating – Crushing, assures an ever perfect grinding wheel.

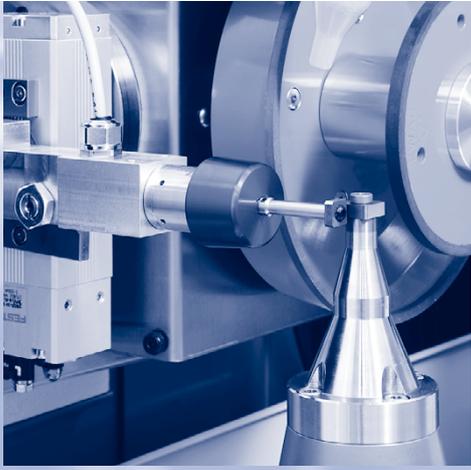
EWAG has successfully further developed the Plug & Play interface for the clamping systems. All clamping systems are mechanically identically installed.

COMPACT LINE – Tightest tolerances economically produced!

Perfect Ergonomics

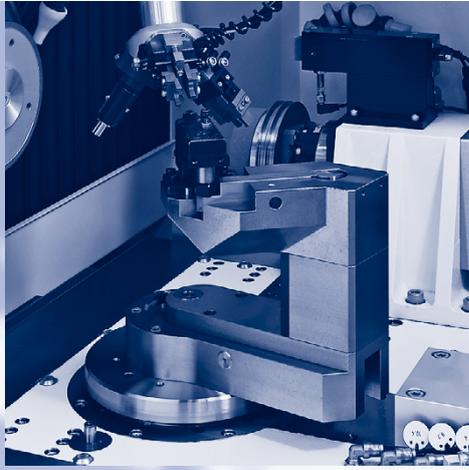
From one position you can reach the entire machine interior as well as all control elements. The rapid change system makes possible the exchange of grinding wheels with push on a button.





3-D Measuring

Through measuring the work pieces in one clamping, the tolerance is warranted starting with the first part.



Clamping stations on the B-Axis

All clamping systems are mechanically identically mounted on the B-axis and identified with the Plug & Play System. This allows for maximum flexibility and shortest change-over times.



Pin clamping system

The work pieces are fixed on the clamping system with a tension pin. The system guarantees highest accessibility during the complete machining.

FANUC Robot System

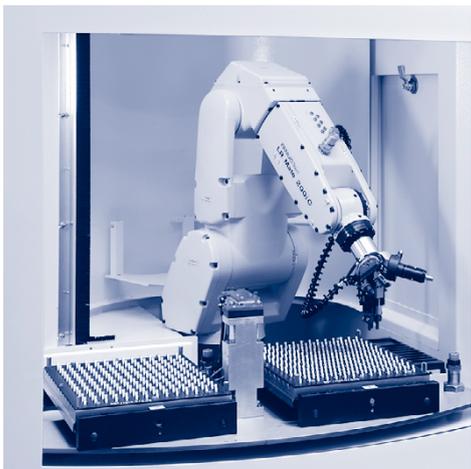
The 6-axis FANUC Robot makes it possible to utilize the machine in an autonomous multi-shift operation.

Grinding wheel change with HSK-E 50

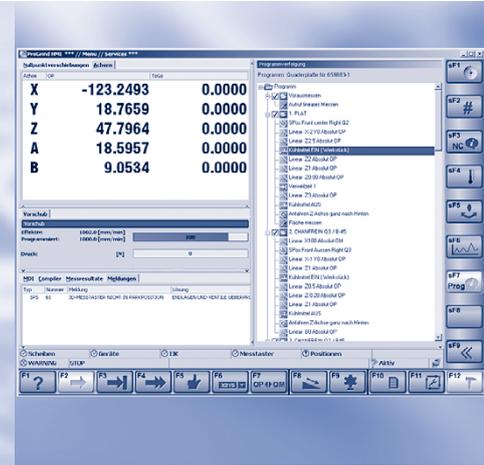
The grinding wheel is taken up over the clamping system HSK-E 50 and makes possible a fast and precise change-over of the grinding wheel packages with up to two grinding wheels.

Compact Interior

Everything is positioned closely around the working axis B, so that the travel of the axes and Robot are kept to a minimum. Consequently the non-productive cycle times are reduced significantly.



PRO GRIND™ – Sets entirely new Standards!



Human Machine Interface (HMI)

A user-friendly interface simplifies the setup of production orders and the controlling of the grinding process. Production data can be continuously accessed online and utilized for process optimization.

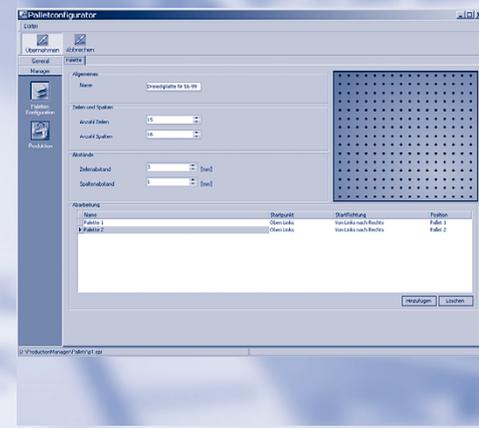
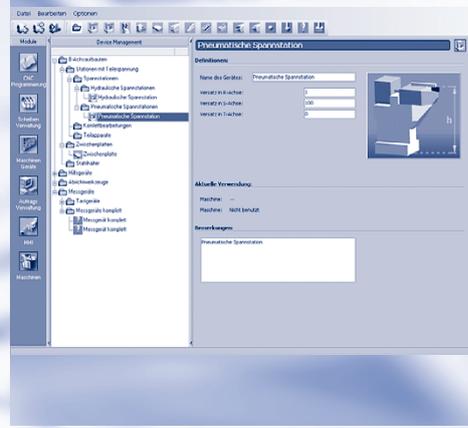
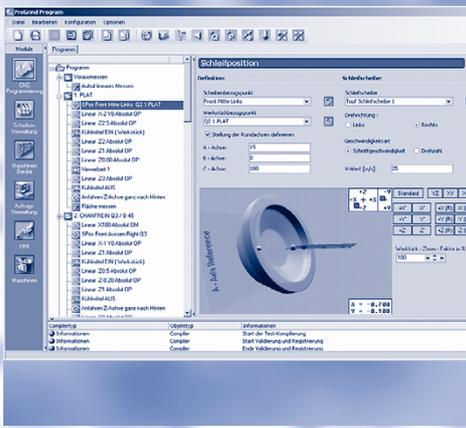
SOFTWARE

PRO GRIND™ – More than just Software!

Innovation virtually calls for innovative Software. PRO GRIND™ as a customer oriented software will completely fulfill all of your discerning expectations. The FANUC-controller complements itself ideally with our Software.

All grinding programs can be programmed fast and easy on the user friendly Touch-Screen-Panel. The input masks are supported with 3-D-Graphics. Thanks to Ethernet it is possible to integrate the COMPACT LINE into your company network. At the same time our specialists have access to conduct diagnostics and service.

PRO GRIND™ – Developed for you!



Flexible Programming

The grinding programs are put together from various function blocks, which are pre-defined and selected by the operator and transferred into the actual program.

Hardware Management

For each work piece to be produced, a certain hardware configuration for clamping-, measuring system and grinding wheels is necessary. This hardware data is transferred from a database into the work piece program.

Robot Integration

All applicable pre-settings of the Robot such as pallet size, part flow and clamping means are defined on the operator panel of the COMPACT LINE.

Technical Data

Basic design

Movement range

Resolution

Quick traverse

Measuring system

Linear axes

Transverse axis X	450 mm	0.0001 mm	15 m/min	Glass scale
Height adjustment axis Y	180 mm	0.0001 mm	10 m/min	Glass scale
Infeed axis Z	150 mm	0.0001 mm	10 m/min	Glass scale

Rotation axis

Swivel axis B	∞	0.0001°	18 000°/min	Direct measuring system Fanuc
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Inclination Axis

Grinding head with A-axis	-15° ... +25°	0.0001°	2000°/min	Resolver Fanuc
Clamping station HSK 50				

Grinding spindle drive

Grinding spindle power	5.5 kW/ 20 000 N/m
Speed adjustable	to 10 000 min ⁻¹



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