



SERVICE

Upgrades and
Retrofits



To ensure that your Kern machine can be adapted to current requirements any time, we offer a wide range of different upgrades and retrofits. To provide you with an individualized concept which meets your particular demands and needs, please give us a call or send us an e-mail.

01. Productivity Package II (KolaSZ 2.0)

Model-based thermal compensation of the spindle expansion, thus eliminating the μ -Epsilon. The system increases the accuracy of the machine in terms of temperature stability and influences from the variation of spindle speeds. The compensation takes place in real time and does not require any intervention by the operator. This eliminates the sensor-based μ -Epsilon-System to stabilize the temperature on the Z-axis and also the necessary components on the spindle. As a result, there is more freedom of movement during machining.

02. Enhanced Kern Temperature Management

Internal, ultra-dynamic temperature management for all parts of your Kern milling center which have an influence on the accuracy of your workpiece. With this enhanced system you increase the temperature stability and the accuracy of your Kern milling machine. Individual temperature changes, often caused by the environment or machining cycles, are compensated immediately and even more precisely.

03. Wet Machining <-> Dry Machining

Expand your product- and parts range through the use of cooling lubricants. Temper and lubricate your machining in one step. Benefit from better surfaces and longer tool life.

04. Paper Band Filter

Longer tool life and increased process stability due to finest filtration of the coolant. Benefit from longer unattended production times because a higher coolant volume remains. Of course, the coolant is kept on temperature and the chips are being removed automatically.

05. Paper Band Filter with Chip Conveyor

Automatically remove large quantities of chips from the work area and skip unnecessary breaks when cleaning/emptying the chip tray. The significantly larger chip container can be emptied comfortably while the machine is running without any downtime.

06. Through-Spindle Coolant

Coolant through spindle puts coolant in a place where it is needed most, right in the tool. This results not only in reduced cycle times with higher feed rates, deeper cuts and deep hole drilling without pecking but also in a better surface finish.

07. Retrofit to Use Oil Based Coolant

Benefit from longer tool life, more stable temperatures and better surfaces and let your oil-based coolant take care of the cleaning during production time. You can also add more product ranges to your portfolio. Let us discuss which lubricant fits your needs.

08. Fire Suppression System

Secure temperature intensive processes as well as working with oil-based cooling lubricant by installing a fire suppression system. The machine chamber, tool changer and extraction system are safely protected against the risk of flames catching over, since the activation of the system is triggered optically and thermally. We cooperate with well-known partners to provide the best protection.

09. Minimum Quantity Lubrication (MQL)

Expand your range of products and parts by using minimal quantity lubrication. Cool and lubricate your machine in one step. Benefit from better surfaces and longer tool life. We enjoy sharing our experience when choosing the best suitable lubricant.

10. Enlarged Tool Changer

Expansion of the tool changer to more tool pockets. Use this upgrade to unlock the full potential of your Kern machine. More tools mean both shorter set-up times and more time for the machine to run without staff, all the way through to production over the weekend. You can also use the option of sister tools together with options from Heidenhain even more effectively.

11. Addition of Workpiece Changer (internal/external)

Join Industry 4.0 together with us and have considerably more workpieces machined. The workpieces are supplied by internal and external pallet pool and there is no staff needed to produce more parts. Let your Kern machining center do the work, also over night and on weekends. This option is a boost for your productivity. We provide solutions for full automation, also with well-known partners in the industry. We are your competent partner from the first idea all the way through to the installation.

12. High Precision Kern Interface for HSK Tool Holder

Retrofit of your DIN tool magazine to the high-precision Kern interface. Benefit from the high-precision, finely balanced tool holders with a Kern interface. This interface, developed in close cooperation with the spindle manufacturers, improves the interaction with the spindle. This increases the stability of radius and length in terms of dimensions and surfaces, as well as precise angle orientation of the tools.

13. More Machine Upgrades

13.1 Energy Saver (Software)

With this upgrade it is easy to meet energy standards and environmental standards. Automatic power-off once production has finished and/or automatic power-on when the weekend is over are a given. This is efficiency paired with protection of the environment.

13.2 NC-Softwareupdate

In close cooperation with Heidenhain, Kern always releases updates for your Kern machine. Benefit from a large range of functions and possibilities. Use the full potential of your control. By optimizing your processes your results are a greater variety of products and a steep increase in productivity.

13.3 Enlarged Swivel Range of B-Axis (Software)

With this upgrade you can increase the machining range of the swivel axis of your Kern machine. Workpieces which could not be milled until then can now open a new business segment for you.

13.4 Dynamic Collision Monitoring DCM (Software)

Do you often work on prototypes, new designs or do you machine small batches and many pilot projects? Then leave nothing to chance. Together with Heidenhain we developed the Dynamic Collision Monitoring. This system monitors your machine and prevents collisions. This saves expensive damage-repair costs and prevents downtimes.

13.5 Angle Measurement 4th and 5th Axis (KET-5 Option)

The KET5 option is a measurement unit for monitoring the machine accuracy. The unit is hardware and software. This allows adjusting the machine to individual conditions and recording of machine data while verifying the accuracy of the machine without service support. This unit is a great tool for quality management.

14. More helpful items

Lift-off function, DNC 18 option, 5-axis simultaneous milling, auto start unit, energy saving unit, e-mail interface, status light/LED status display, retrofit teleservice PC, production data acquisition and much more.

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Upgrades and Retrofits

	Kern Micro Platform	Kern Micro HD	Kern Pyramid Nano	Kern Evo
01. Productivity Package II (KolaSZ 2.0) 	●	●	●	●
02. Enhanced Kern Temperature Management 	●	inkl.	●	
03. Wet Machining <-> Dry Machining 	●	●	●	●
04. Paper Band Filter 	●	●	●	●
05. Paper Band Filter with Chip Conveyor 	●	●	●	
06. Through-Spindle Coolant 	●	●	●	
07. Retrofit to Use Oil Based Coolant 	●	●	●	●
08. Fire Suppression System 	●	●	●	●
09. Minimal Quantity Lubrication (MQL) 	●	●	●	●
10. Enlarged Tool Changer 	●	●	●	●
11. Addition of Workpiece Changer (internal/external) 	●	●	●	●
12. High Precision Kern Interface for HSK Tool Holder 	●	●	●	●
13. More Machine Upgrades				
13.1. Energy Saver Save costs, energy and resources and take care of your environment	●	●	●	●
13.2. NC-Softwareupdate  - Variety of products	●	●	●	●
13.3. Enlarged Swivel Range of B-axis  - Variety of products	●	●		
13.4. Dynamic Collision Monitoring (DCM) 	●	●	●	●
13.5. Angle Measurement 4th and 5th Axis (KET-5 Option) Measurement of the geometry in the work envelope	●	●		

 Improved Productivity

 Accuracy

 Temperature Management

 Process Stability