



**THE HSK-SLIM.
FROM RÖHM.**



**A STAR REPLACEMENT FOR
YOUR MILLING SPINDLE**



THE HSK-SLIM. FROM RÖHM.

The HSK-Slim is a tool clamping set for automatic clamping of tools with an HSK-A, HSK-B, HSK-E or HSK-F shank. Due to its slim outer contour, it also fits in milling spindles with a contour from OTT-JAKOB. It is mainly used on CNC milling machines and machining centers for machining metal or wood.

Our HSK tool clamping sets score points due to their very compact, robust yet simple design. They can be replaced quickly and easily as a complete assembly; extremely wear resistant giving long term life and reliability.



FOR WHOM

Machining centers with automatic tool changing

FOR WHAT

Clamping Tool holders for machining metal or wood

WHY

- Compact
- Robust
- Quick and easy to change
- Outer contour compatible with OTT-JAKOB clamping sets

HOW MUCH

Excellent cost-effectiveness

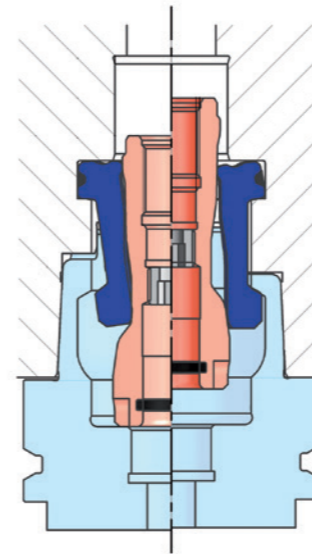
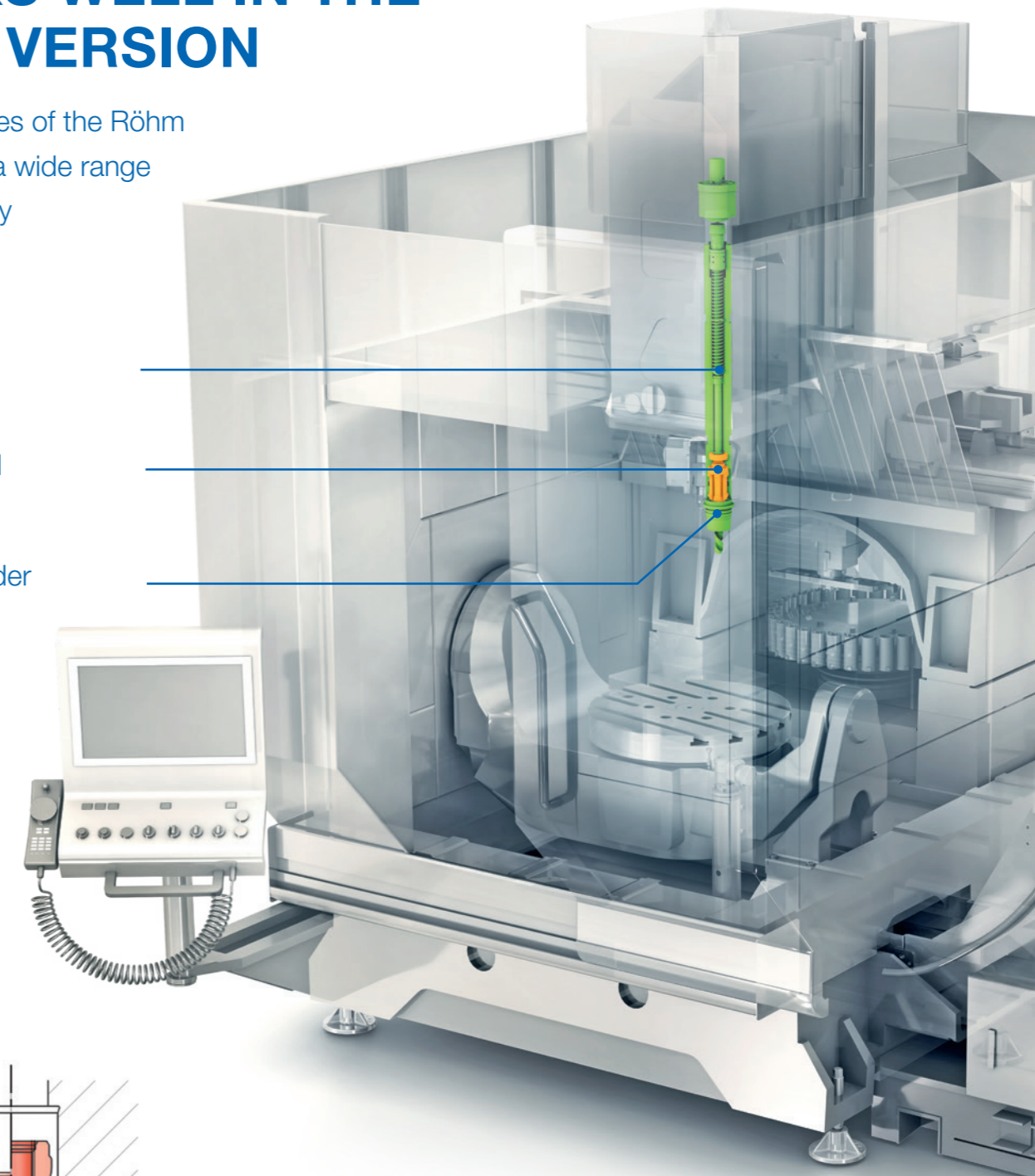
WORKS WELL IN THE LONG VERSION

The advantages of the Röhms features with a wide range of compatibility

Tool clamp

HSK-Slim tool clamping set

HSK Tool Holder



WE GAVE IT A LOT OF THOUGHT. THIS RESULTED IN A SIMPLE, ROBUST AND COMPACT DESIGN



Clipring

Special Röhms kinematics for high forces, precision and repeatability

Our designers put a lot of thought into our tool clamping sets. This resulted in fewer and improved contour and fit. Röhms HSK tool clamping sets only consist of the pressure piece and the fingers and the Röhms patented clipring. The clip ring is made of a special, elastic polymer that holds the collet elements and pressure piece together as an assembly. The clear advantage of the tool clamping set is a complete assembly that is ready to install in the spindle rather than installing each component separately. Due to the high manufacturing accuracy, the clamping stroke has a tolerance of max. ± 0.3 mm. This enables a very small detection window for the clamping stroke sensor.

The clip ring holds the tool clamping set together into a complete assembly ready for simple and quick installation.

AND NOW AVAILABLE IN A LONGER VERSION

Fits on numerous tool clamps in the market

Our HSK tool clamping sets are known by their compact design, high clamping force and large transmission ratio. Until recently these advantages were only available on Röhms original clamping spindles but now we have developed a more universal clamping head as a replacement set for various HSK spindle installations. Nothing could be easier. The result is the HSK-Slim. It is compatible with OTT-JAKOB tool clamping sets.



Röhms clamping sets have been around for a long time. For years, their typical Röhms trademarks have been the compact construction, high clamping force, large transmission ratio and the extremely easy installation.

The longer, HSK-Slim design is now available from Röhms—with a contour for numerous tool spindles. It is compatible with OTT-JAKOB.



INSTALLATION

DRAMATICALLY SLASHES INSTALLATION TIMES

Clip ring for fast assembly.
Adjustable pressure piece for precision.

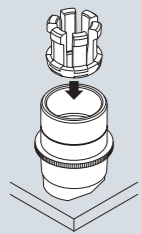
The Röhm patented clip ring holds the complete assembly together. When replacing the tool clamping set in the machine, the HSK-Slim simply has to be inserted in the spindle and screwed tight. Röhm provides an installation tool to make this even easier. The clamping set is placed into it, pre-loaded with the plunger and released in the spindle.

The pressure piece has a standard hexagonal form for a socket, open jaw or ring wrench.

The adjustment dimension of the pressure piece in the tool clamp can be set with repeatability of ± 0.3 mm. It is adjusted via a counter screw with a standard hex or allen wrench. Afterwards, the pressure piece fits firmly. The counter screw is also included with the replacement clamping set from Röhm.

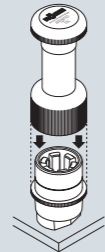
Don't worry, this same tool can also be used for installing your OEM Roehm Compact Clamping heads too

1.



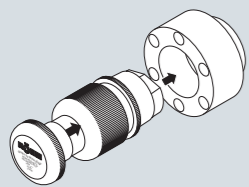
Insertion of the tool clamping set into the mounting sleeve of the assembly tool

2.



Pre-loading of the tool clamping set with the plunger

3.



Insert into the spindle and release by pressing in the plunger



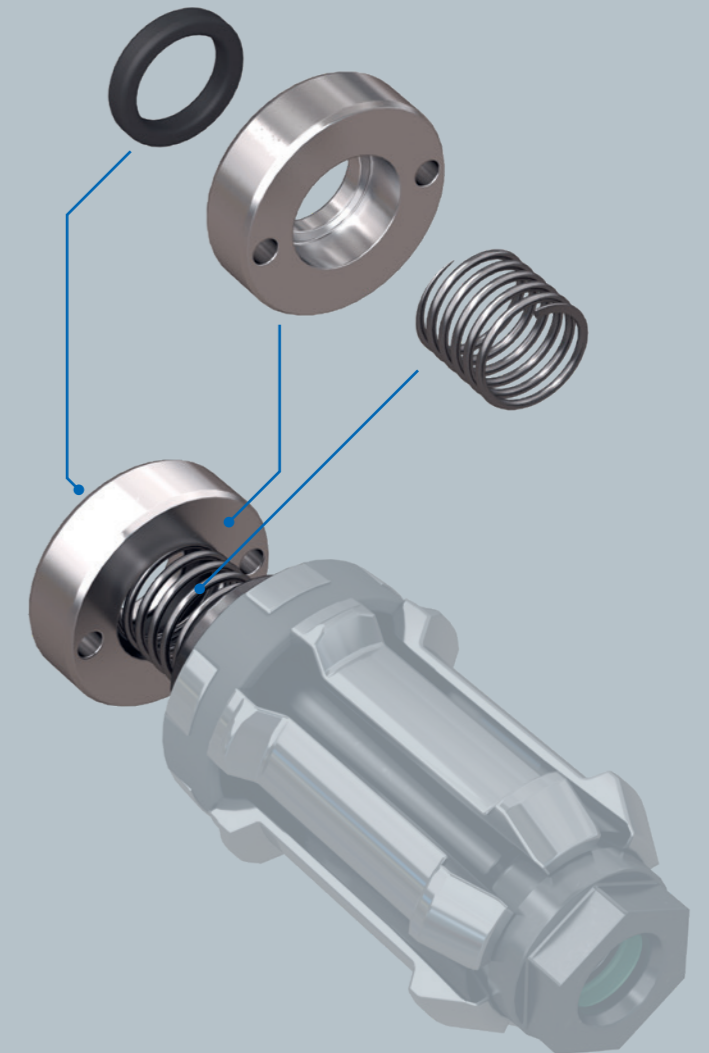
The Röhm assembly tool

INSTALLATION II

STREAMLINING THE ASSEMBLY PROCESS

The seal set is already included

Many spindles with the contour of the HSK-Slim have to be separately sealed against the pressure piece of the tool clamping set. To ensure you don't have to waste time searching or ordering additional items, the seal set—consisting of the O-ring, washer and spring—is always included with the HSK-Slim.



The seal set, consisting of the O-ring, washer and spring, is always included with the HSK-Slim.

FOR A LONG LIFE



DLC coating

It goes without saying at Röhme: all pressure pieces are generally DLC (Diamond Like carbon) coated. In this process, a µm-thick layer of carbon is vapor-deposited on the surface of the pressure piece. On the one hand, this gives the pressure pieces their shiny, black color; on the other hand, it provides the high degree of hardness of the surface. Since the collet elements slide on the surface with every tool clamping operation, the hard DLC coating reduces the wear.



Clamping force measurement with F-Senso Spindle

CAN SOMEONE PLEASE QUICKLY MEASURE THE CLAMPING FORCE?

F-Senso measuring device as part of the complete system

There is the F-Senso Spindle clamping force measuring device from Röhme to measure the clamping force of your tool clamping set to give you piece of mind that your clamping set is actually proving the right forces.

FOR A LONGER LIFE



The Lubritool lubrication tool with the replaceable Lubriflux grease cartridge

Lubritool lubrication tool

Are you lubricating your HSK clamping heads at the right time and with just the right amount of the right grease? If you do, then you are doing the best for extended life, reduced wear and tear and optimum and reliable clamping performance. We'd like to make sure you don't miss out on this and allow you to automate this valuable maintenance. That is because HSK clamping sets that are lubricated regularly not only last considerably longer – lubrication therefore really saves money – but this also enables considerably higher clamping forces. That is because the components slide better on lubricated tool clamping sets.

When your clamping set is not lubricated, it increases the friction, which reduces the clamping force needed to pull the tool into the spindle. By lubricating the clamping set, the torque of your machine is transferred optimally to the tool thereby enabling higher feed rates and speeds. And, once again, that saves money – namely manufacturing costs.

GOOD TO KNOW

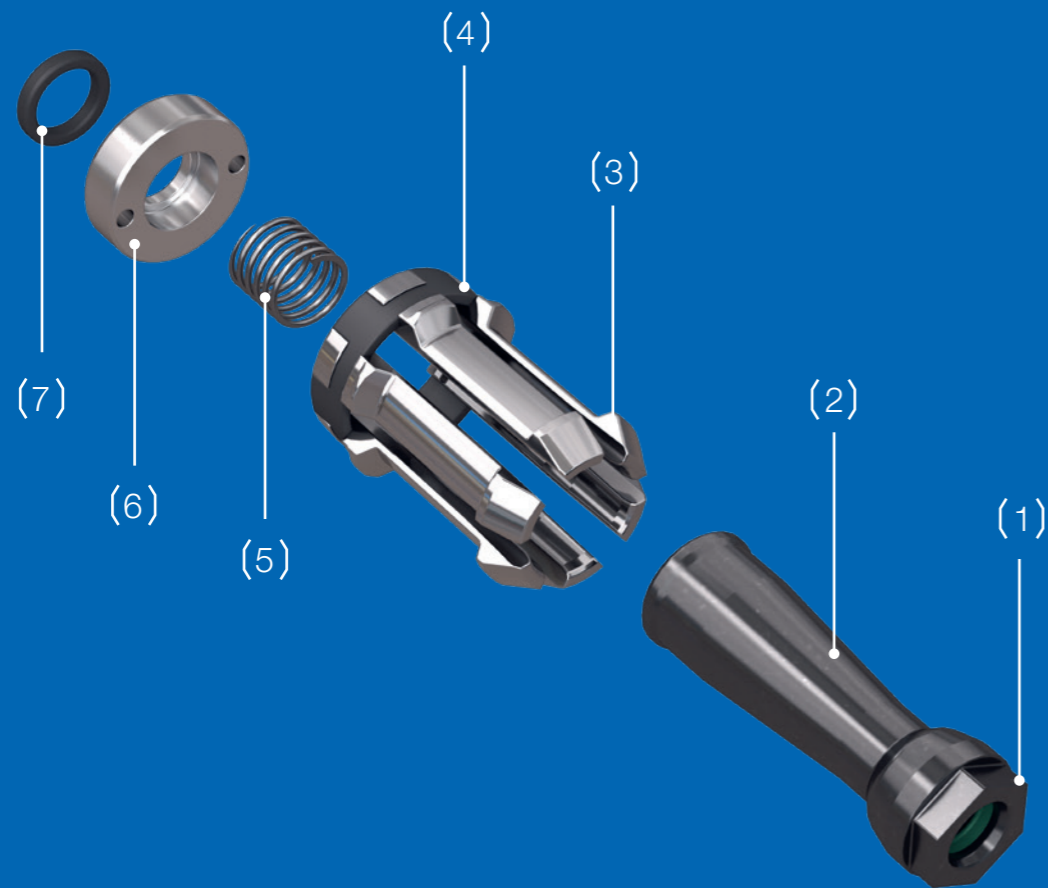
To make sure you no longer "forget" to lubricate in the future, we developed the automatic lubrication tool Lubritool. It is simply inserted in a tool pocket in the tool change magazine and swapped in by the machining program for regular lubrication. Therefore, the machine lubricates itself. This saves you having to use a technician or machine operator for lubrication (saves money again) reduces the time the machine is not earning money and takes the burden of planning off your hands.

You can find out more about the Lubritool lubrication tool – including a short application video – at www.roehm-lubritool.com

The Lubritool has is stored ready for use in the tool changer and is simply swapped automatically for the lubrication operation by the machining program



TECHNOLOGY

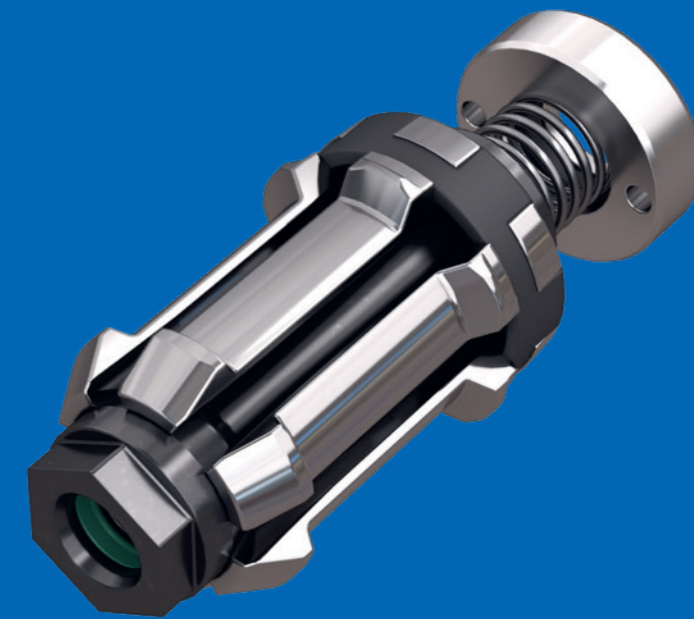


- (1) External hexagon for wrench
- (2) Pressure piece
- (3) Clamping elements
- (4) Roehm Patented Clip ring
- (5) Spring
- (6) Ring
- (7) Seal
- (8) Counter screw (installed in the pressure piece (2))

HOW THE HSK-SLIM FROM RÖHM WORKS.

The pressure piece (2) is screwed together via an inside thread with the machine-side tool draw bar on the inside of the tool spindle. The external hexagon (1) on the front end is used for tightening. The six collet elements (3) are clipped in an elastic polymer clip ring (4). The unit made up of collet elements and the clip ring is fitted onto the pressure piece. The stroke of the pressure piece is set via the counter screw (8). It screws the pressure piece from the inside to the lower front side of the tool clamp.

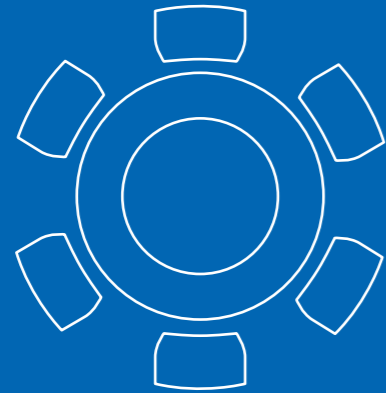
The spring-loaded draw bar actuates the pressure piece in the tool clamp. Here, the collet elements lie on the face and do not move. Due to the shape of the pressure piece, this relative movement pushes the collet elements apart. The entire unit spreads out and presses from the inside against the HSK shank of the tool holder to be clamped.



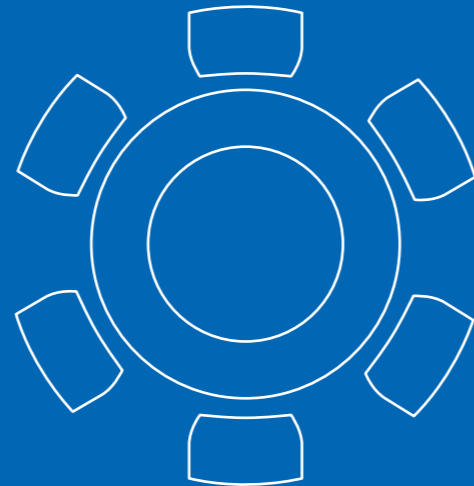
You can find more information on the HSK-Slim on our website at

ROEHM.BIZ/HSK-SLIM

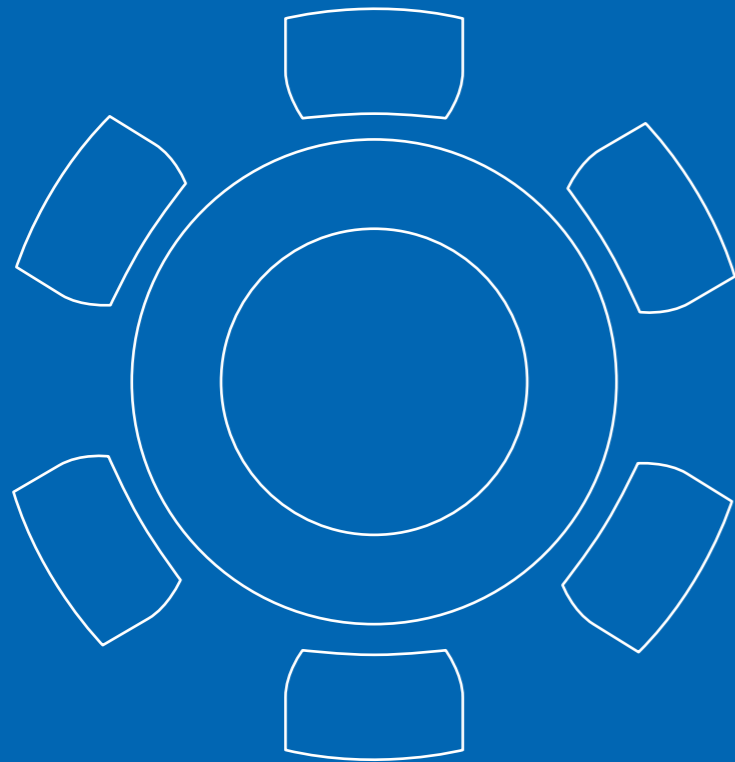
THE RIGHT REPLACEMENT FOR YOUR MILLING SPINDLE



∅ 50 mm



∅ 63 mm



∅ 100 mm

	HSK-50	HSK-63	HSK-100
Corresponds to C-specification	A50	A63	A100
Corresponds to D-specification	B63	B80	B125
Corresponds to E-specification	E50	E63	E100
Corresponds to F-specification	F63	F80	F126
Actuating force [kN]	3,85	6	15
Clamping force [kN]	11	18	45
Set-up Adjustment dimension mm	10,5	10,5	13
Clamping stroke mm	6,4	7,4	9,15
Eject stroke mm	0,5	0,5	0,5
External hexagon for pressure piece SW	SW 18	SW 21	SW 36
Internal hex wrench for counter screw	SW 5	SW 6	SW 8
Pressure piece coating	DLC	DLC	DLC
Id.-No.	1341914	1341915	1341916

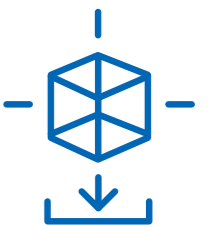


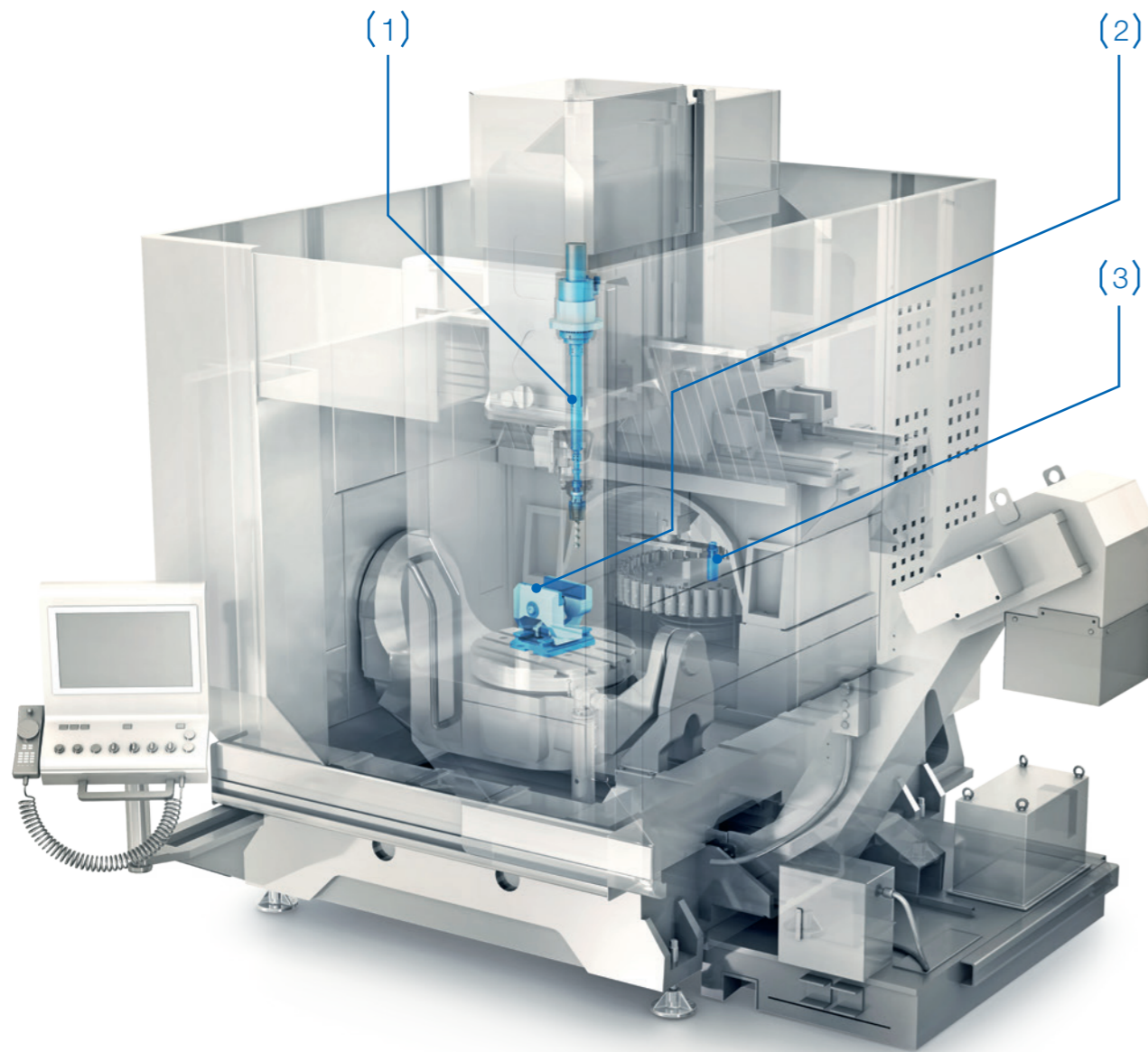
INSTALLATION TOOL

Id.-No.	1329001	1324230	1329010

CAD data for the HSK-Slim can be found at




www.roehm.biz/CAD





YOU NEED THE WHOLE SYSTEM ...

The HSK tool clamping sets are the direct interface to the machining tool on your machine. But precise machining and clamping calls for even more components. We have the complete system for this ...

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- (1)  ... to clamp HSK tool clamping sets. There are modular tool clamps from Röhme for this.
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- (2)  ... to clamp workpieces manually or automatically. There are vises from Röhme for this for 3-axis or 5-axis machining.
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- (3)  ... to regularly lubricate HSK tools. There is the automatic Lubritool lubrication tool from Röhme for this.
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-  ... don't just have the clamping forces in the documentation, but measure them as well. There is the F-Senso Spindle clamping force measuring device from Röhme for this. Simply clamp it into the clamping set. Measure the clamping force. Piece of mind!
-
-  ... equip your material handling robots with one of Röhme's grippers and swiveling units.
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You can conveniently buy clamping and gripping technology from Röhme in our online shop 24/7:

eshop247.roehm.biz

PERHAPS YOU NEED SOMETHING A BIT DIFFERENT ...

There is no question. With the HSK-Slim, we have developed a tool clamping set as the perfect replacement which your milling machines have longed for. But perhaps you have requirements that can be covered better with a special solution.

Maybe because you have other requirements of the geometries to be machined. Or, there are other boundary conditions due to the number of units you have to manufacture. In any case, we at Röhme have the right clamping solution. That's a promise.

... because a Röhme tool clamp is installed in your machine tool. Naturally, there are our HSK tool clamping sets for this with the "original" Röhme compact design.



... because your machine tool doesn't clamp automatically, but rather manually. There are manual HSK clamping sets from Röhme for this.



... because your machine tool doesn't clamp with HSK (hollow shank taper) but rather with SK (steep taper) such as the common SK, BT or DIN types. There are CAT automatic clamping sets for all types of draw studs from Röhme for this.



... because you don't need HSK clamping technology for standardized tools, but rather for the connection of machine components in a minimum amount of space. There are the RESK built-in clamping heads and the matching studs from Röhme for this.



... you would like to use HSK clamping technology for accurately locating and clamping pallets. There are the SPK clamping heads as well as the matching components from Röhme for this.

