



**THE HSK-SLIM.
FROM RÖHM.**



**A GREAT ASSIST 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 (OTT Type K and OTT Type B). It is mainly used on CNC milling machines and machining centers for metal cutting or machining wood.

Our HSK tool clamping sets score points due to their very compact, robust and simultaneously simple design. They can be changed quickly and easily as a complete assembly; they are low-wear and as a result have a long service life.



FOR WHOM

Automatically clamping machining centers

FOR WHAT

Milling of metal or wood

WHY

- Compact
- Robust
- Quick and easy to change
- Outer contour compatible with OTT clamping sets of Type K and Type B

HOW MUCH

Excellent cost-effectiveness

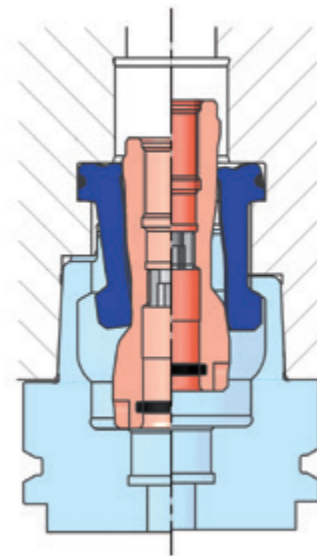
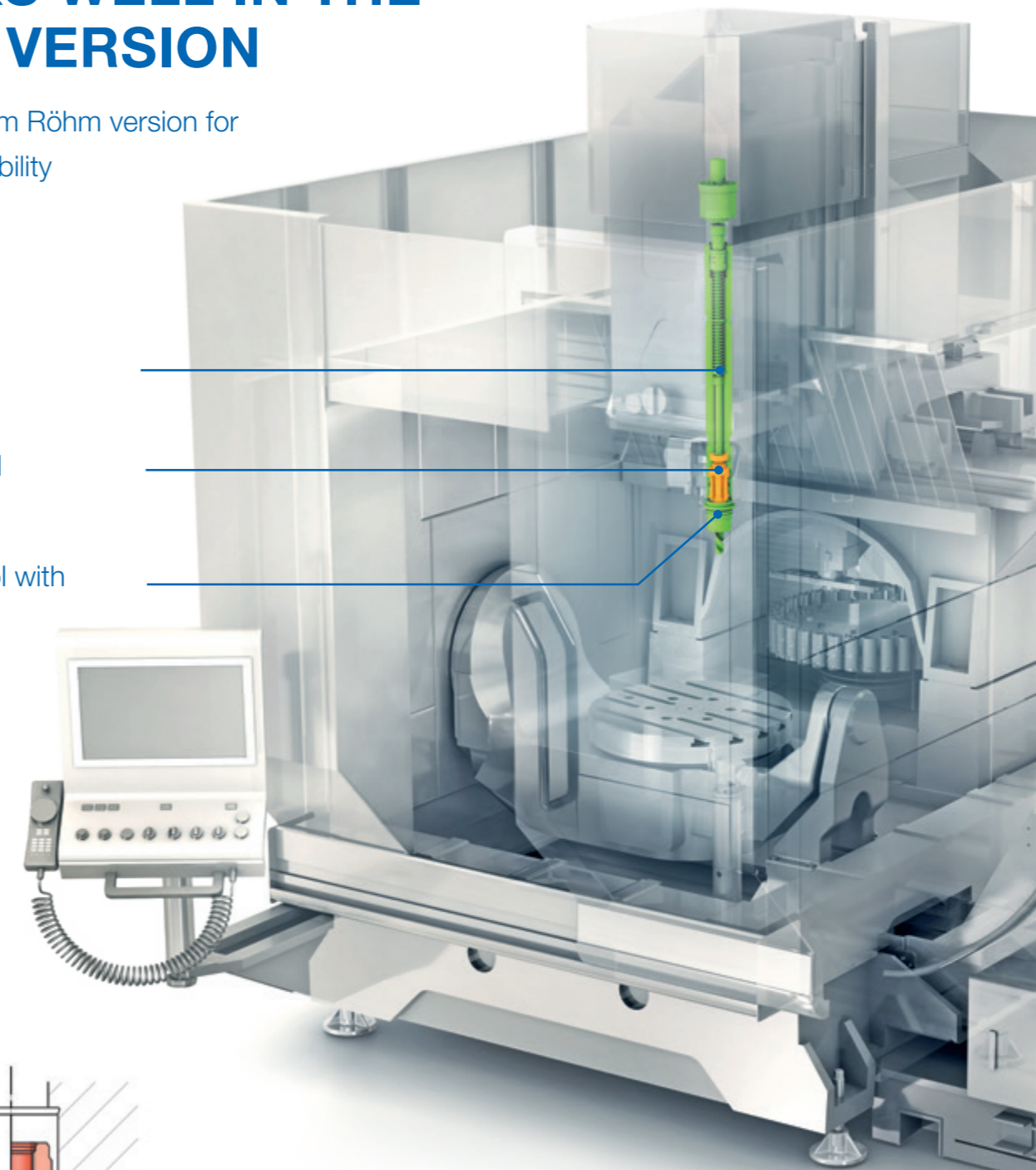
WORKS WELL IN THE LONG VERSION

The longer, slim Röhm version for more compatibility

Tool clamp

HSK-Slim tool clamping set

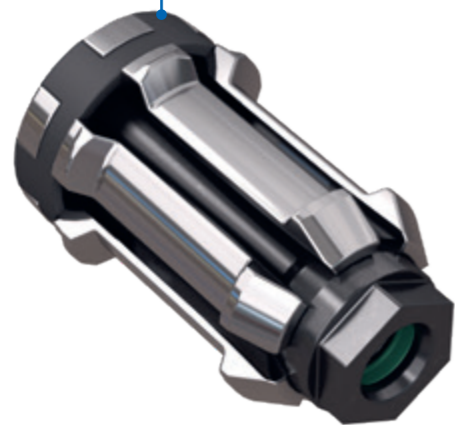
Machining tool with HSK shank



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



Clipring



The clip ring holds the tool clamping set together into a complete assembly

Special Röhms kinematics for high forces, precision and repeatability

Our developers put a lot of thought into our tool clamping sets. This resulted in fewer components. This results in improved contour and fit. Röhms HSK tool clamping sets only consist of the pressure piece and the collet and the patented clipring. The clip ring is made of a special, elastic rubber that holds the collet elements and pressure piece together. The clear advantage of the tool clamping set is a complete assembly that doesn't have to wait to be assembled from its individual parts in the spindle. Due to the high manufacturing accuracy, the clamping stroke has a tolerance of max. ± 0.3 . This enables a very small detection window for the clamping stroke sensor.

IT IS NOW ALSO AVAILABLE IN A LONG 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. The only catch from the perspective of many customers is that the Röhms tool clamping set doesn't fit in their tool spindle. Nothing could be easier. We made our tried and true clamping set a bit longer and adjusted the contour. The result is the HSK-Slim. It is compatible with tool clamping sets of OTT Type K and OTT Type B.



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 variant is now available from Röhms—with a contour for numerous tool spindles. It is compatible with OTT Type K and OTT Type B.



INSTALLATION

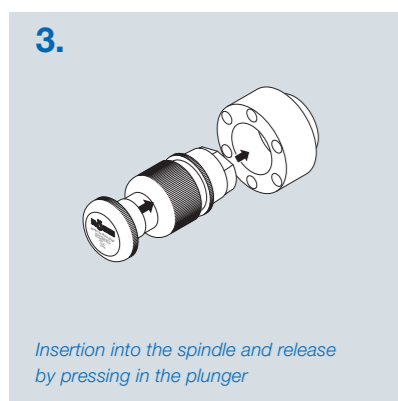
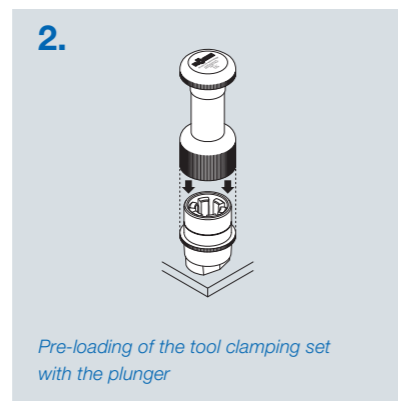
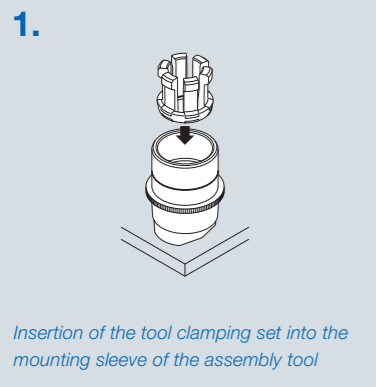
DRAMATICALLY SLASHES INSTALLATION TIMES

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

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

The pressure piece is designed with an external hexagon making it easy to screw together with an open-end 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 DIN external hexagon wrench. Afterwards, the pressure piece fits firmly. The counter screw is naturally included with the clamping set from Röhm.

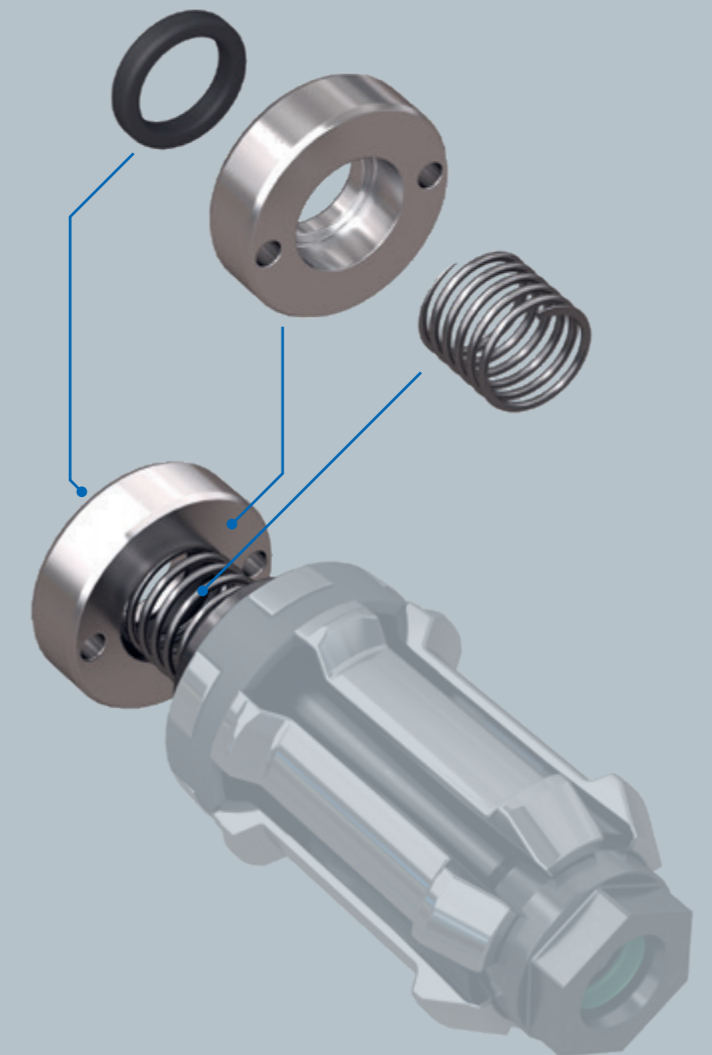


INSTALLATION II

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 looking, 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 Röhmm: all pressure pieces are generally DLC coated. In this process, a μ -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 Röhmm to measure the clamping force of your tool clamping set.

FOR A LONGER LIFE



The Lubritool lubrication tool with the replaceable Lubriflux grease cartridge

Lubritool lubrication tool

So, who actually lubricates your HSK clamping sets? If you would rather not say, then you are like most manufacturers. But, it's actually too bad. 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

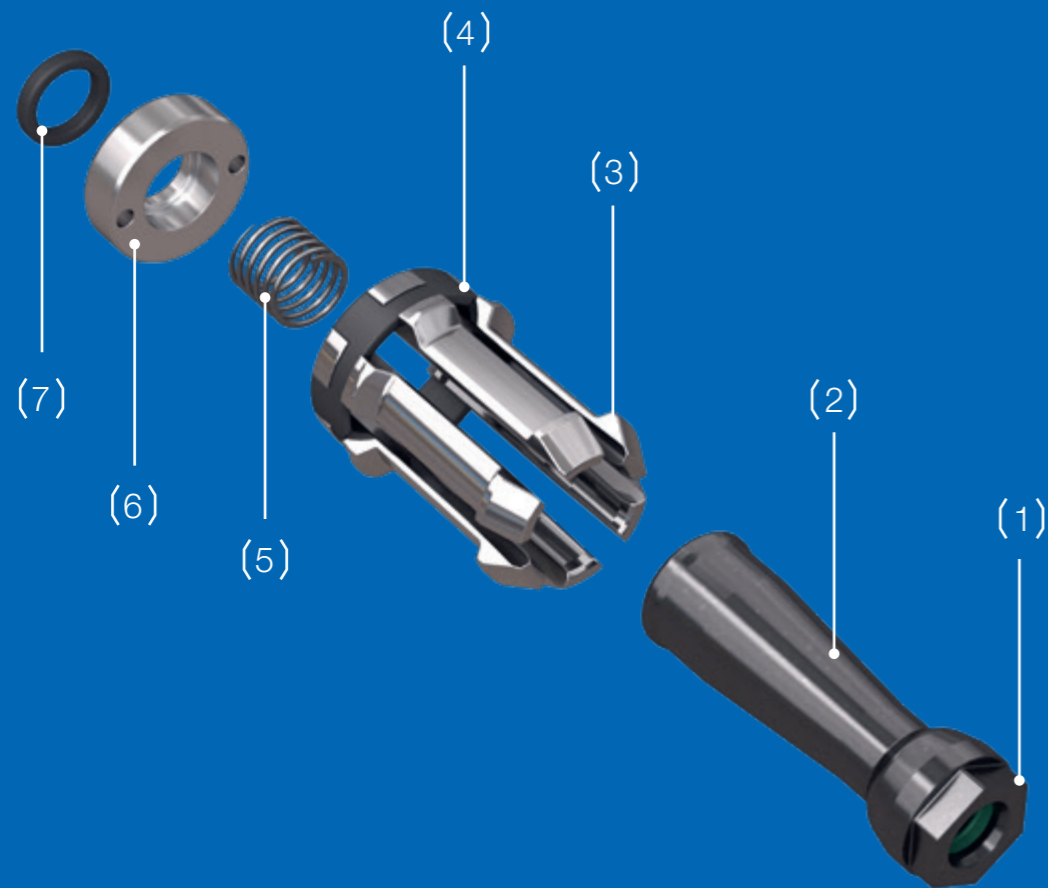
To make sure you no longer “forget” to lubricate in the future, we developed the automatic lubrication tool Lubritool. It is simply inserted in a tool pocket in the tool change magazine and swapped in by the machining program for regular lubrication. Therefore, the machine lubricates itself. This saves you having to use a technician or machine operator for lubrication (saves money again).

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



The Lubritool has its fixed place in the tool changer and is simply swapped in cyclically by the machining program

TECHNOLOGY

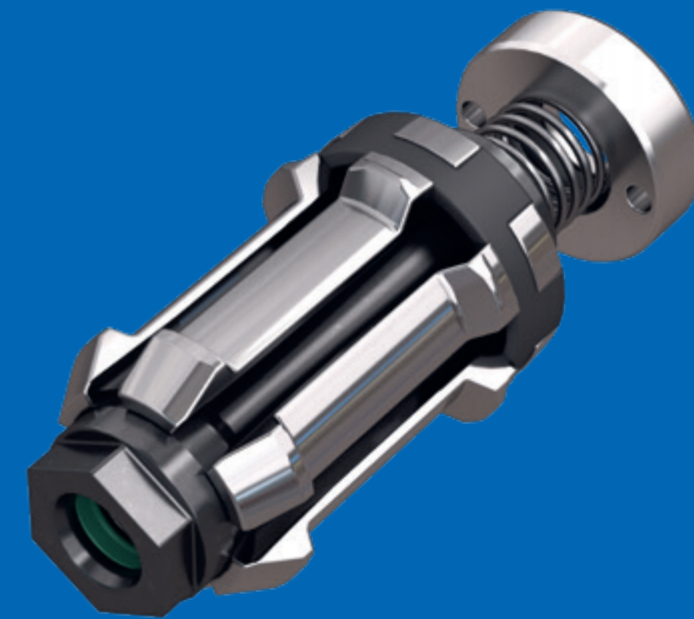


- (1) External hexagon for screw joint
- (2) Pressure piece
- (3) Clamping elements
- (4) Clip ring
- (5) Spring
- (6) Ring
- (7) Seal
- (8) Counter screw (installed in the pressure piece (2))

HOW THE HSK-SLIM FROM RÖHM WORKS.

The pressure piece (2) is screwed together via an inside thread with the machine-side tool clamp 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 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.

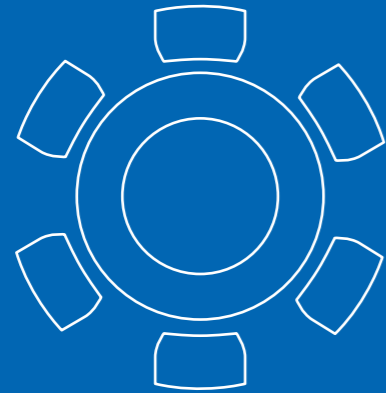
The spring-loaded draw bar actuates the pressure piece in the tool clamp. Here, the collet elements lie on the face and do not move. Due to the shape of the pressure piece, this relative movement pushes the collet elements apart. The entire unit spreads out and presses from the inside against the HSK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



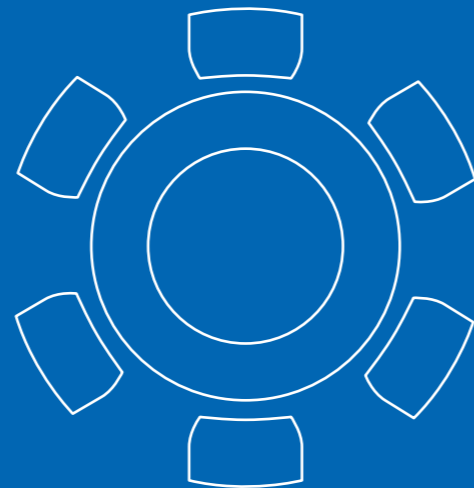
You can find more information on the HSK-Slim on our website at

ROEHM.BIZ/HSK-SLIM

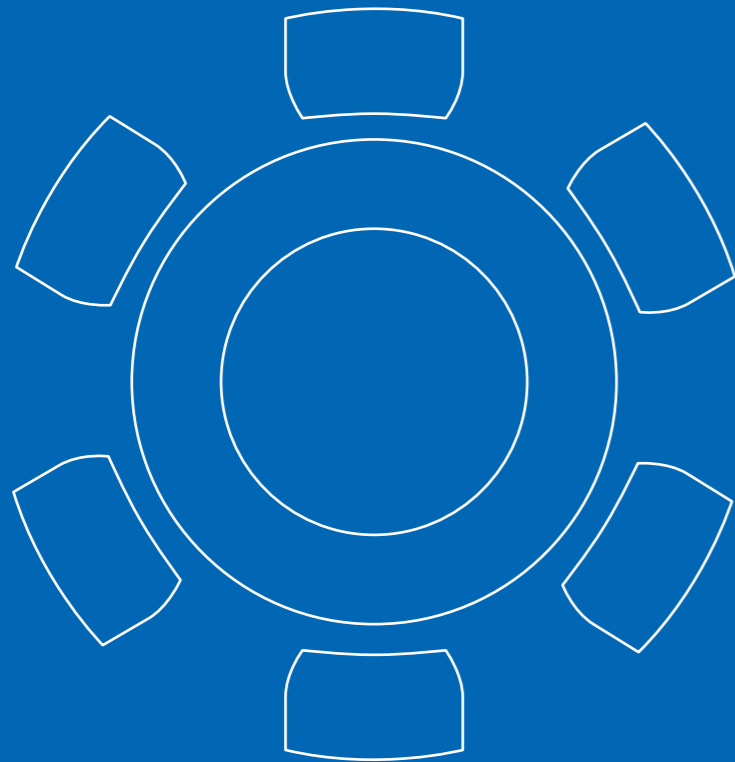
THE RIGHT LENGTH FOR YOUR MILLING SPINDLE



∅ 50 mm



∅ 63 mm



∅ 100 mm

	HSK-50	HSK-63	HSK-100
Corresponds to A-specification	A50	A63	A100
Corresponds to B-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
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
Hexagon socket for counter screw SW	SW 5	SW 6	SW 8
Pressure piece coating	DLC	DLC	DLC
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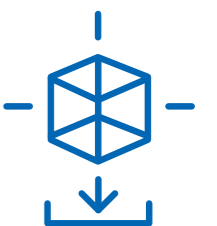


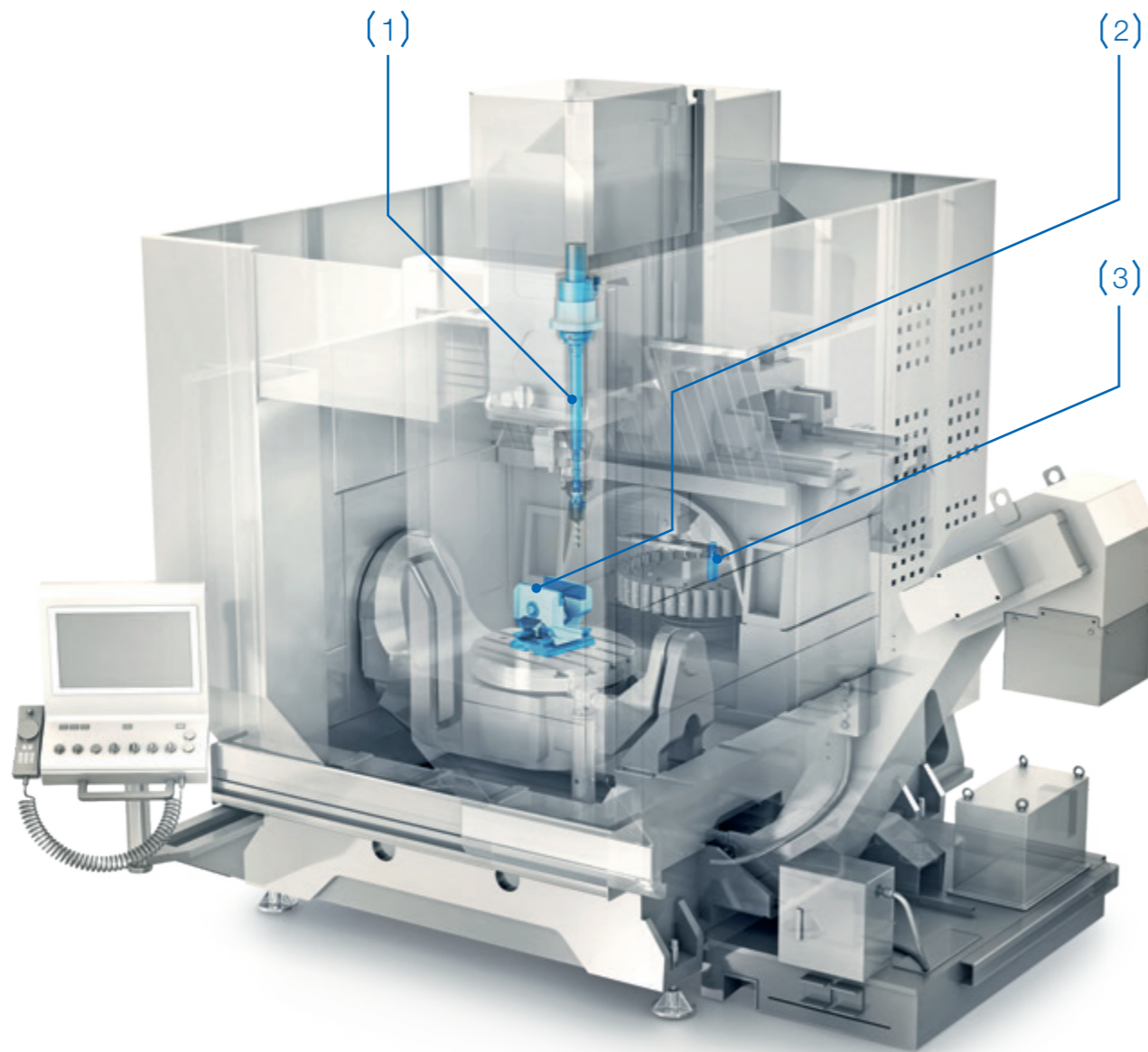
INSTALLATION TOOL

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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.
-
-  ... to not only realize high clamping forces, 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. Finished.
-
-  ... 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 after which your machine tools will long 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 contour.



... 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 CAT (steep taper). There are CAT automatic clamping sets 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 from Röhme for this.



... you would like to use HSK clamping technology for clamping pallets.
There are the SPK clamping heads from Röhme for this.

