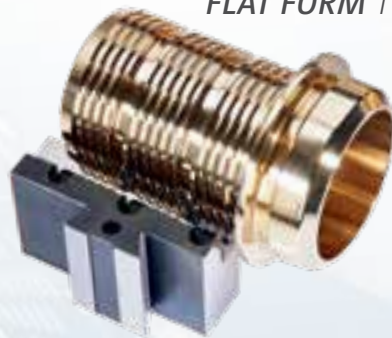


PERFORMANCE TOOLS

TOOL RANGE

FLAT FORM TOOLS



END FINISHING



FORM END MILLS

WHIRLING
KEYSEATING



WORK REST BLADES



PRODUCTION TECHNOLOGY

TOOL RANGE

INNOVATIONS

INTERNAL
COOLANT SUPPLY
p. 14



OVER-CUT
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TOP-TURN
p. 52



Visit us online:

<https://tools.leistritz.com>



Scan the QR code and get more information about our range of tools.

OVERVIEW LEISTRITZ P. 04

FLAT FORM TOOLS P. 13

END FINISHING TOOLS P. 51

WORK REST BLADES P. 69

END MILLS / DRILLS P. 81

WHIRLING / KEYSEATING P. 87

FLAT FORM

END FINISHING

WORK REST BLADES

END MILLS / DRILLS

WHIRLING / KEYSEATING



PRODUCTION TECHNOLOGY

Experts in metalworking

Leistriz Produktionstechnik GmbH, headquartered in Pleystein, provides solutions for complex manufacturing tasks. Our product range is divided into three fields — tools, machine tools and products of tube technology / sheet metal forming — whose common basis is metalworking. With more than 300 employees worldwide, we design and manufacture products with a wealth of experience.

Supplying tools, machines and processes from a single source results in many synergies that benefit our customers, who come from a wide range of industries - such as automotive, oil and gas, and the valve and fittings industry.

We convince our customers with our very high manufacturing competence, our flexibility and the high quality of our products. Many of these are customized designs.

WE ...

- stand for highly sophisticated technical products.
- offer solutions for complex manufacturing tasks.
- develop and manufacture our products ourselves.
- understand what the customer needs.
- are there for you at our branch offices: in Germany, in the US and in China.

» *We are flexible with our tools, so we can respond to very specific customer needs.*

TOOLS, MACHINE TOOLS, TUBES

Flexible and economical

We are also a reliable partner in the field of **precision tools** for metal cutting. In addition to our standard range of products, we offer special services and customized solutions – such as work rest blades for centerless grinding – so that our customers will be able to produce more efficiently and at a higher quality.

In the product area of machine tools, we develop **whirling and keyseating machines** for the economical production of internal and external threads as well as thread-like profiles.

The **tube technology / sheet metal forming** product area manufactures customized tube components for various fields of application.





LEISTRITZ **PERFORMANCE TOOLS**

Convincing precision

As a manufacturer of precision tools, we have decades of experience in the design and manufacture of customized tools. With our product range, we focus on both the machining of rotating workpieces (end finishing, profile

turning, groove turning, thread turning and general turning) and the further processing of turned parts (work rest blades for centerless grinding). Here we show a selection from our range of tools.

FLAT FORM TOOLS

Whether for internal or external machining (profile grooving, contour turning, form drilling, chasing, calibrating, polygon turning, gear shaping) - we have the right flat form tool.

➤ P. 13

END FINISHING TOOLS

With our end finishing tools, the ends of rotationally symmetric workpieces can be faced, chamfered, centered and turned in just one single process.

➤ P. 51



WORK REST BLADES

Leistritz manufactures work rest blades for all centerless grinding machines for through-feed grinding and plunge-cut grinding.

➤ P. 69



» *Leistritz tools fulfill both common standard applications and complex machining tasks with flying colors.*

SOLID CARBIDE END MILLS / DRILLS

The machining of complex parts requires sophisticated tools. With our solid carbide end mills, we have the right tool for every machining task.

➤ P. 81



WHIRLING / KEYSEATING

Our tools are optimally adapted for your processes. We are happy to assist you in finding the right tool solution.

➤ P. 87



OUR **WORLD OF SERVICE**

In good hands right from the start

Our tools and machine tools are used worldwide and have to meet the highest production and quality requirements every day. In order to prevail in tough competition, they must run efficiently and stably.

Whether it concerns the commissioning of a machine, operator training or the maintenance of tools - our technical support will be happy to assist you! The committed team has a lot of know-how in the fields of mechanical engineering, materials science and tool design. We are there for you worldwide – competently and with a focus on solutions.

OUR SERVICE OFFERS:

- Spare parts for our machines
Preventive maintenance
- Commissioning of machines
- Process optimization of machines and tools
- Training

»» *We ensure that your production is running smoothly.*

OUR RECONDITIONING SERVICE

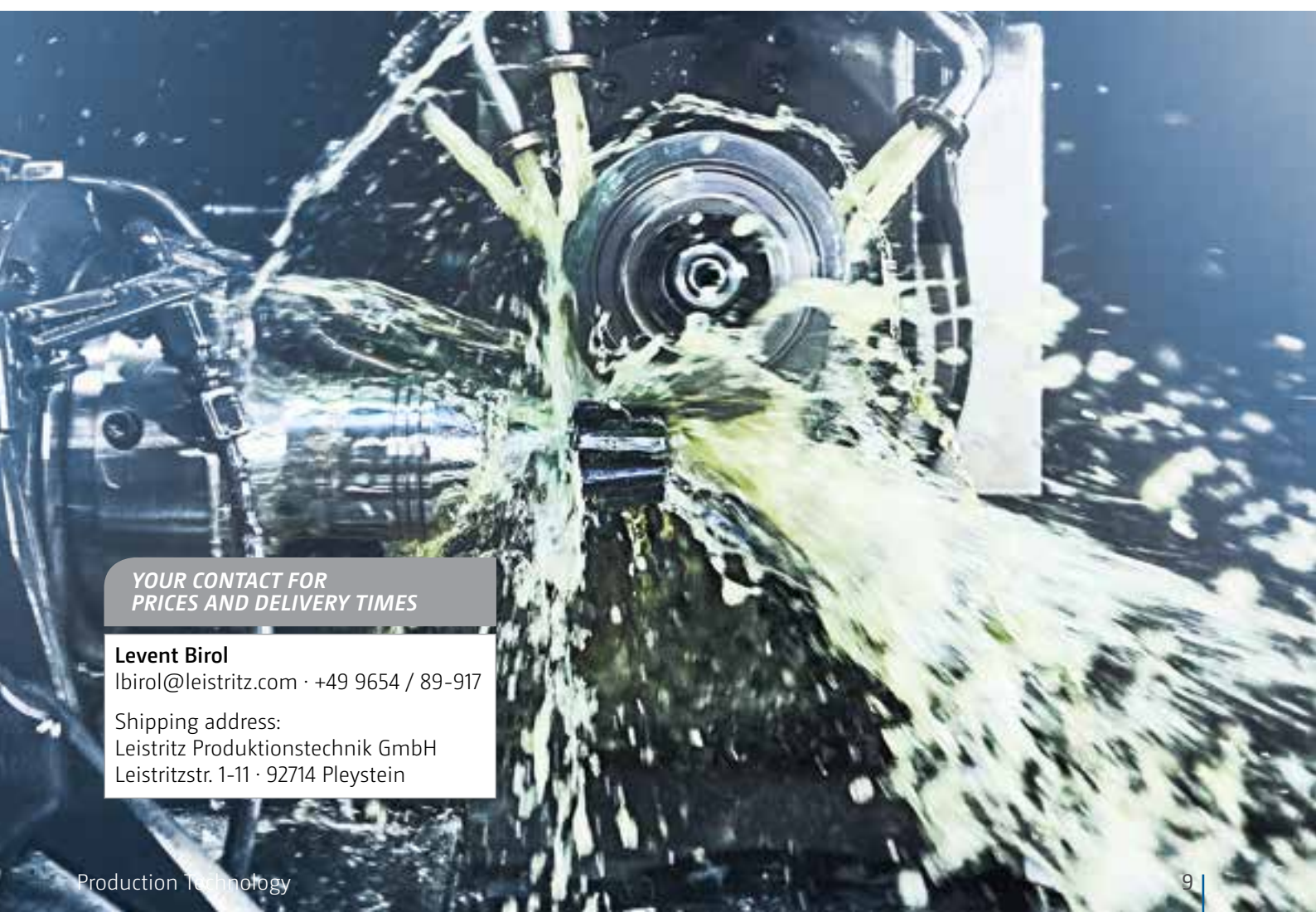
Make new from old

Where manufacturing is concerned, long durability and high productivity are key. If it comes to the wear of inserts and drills, we will help with our regrinding service.

On request, it is also possible to have reground tools coated. The use of our services guarantees that the original cutting edge geometries, such as clearance and rake angles, cutting edge preparation, etc., as well as the specified coating, are maintained. For our customers this means consistently high quality and long tool life! Depending on the condition, we recondition work rest blades for centerless grinding by regrinding, partial tipping or total tipping in OEM quality.

WE OFFER THE REGRINDING OF:

- Flat form inserts
- Work rest blades (also partial or total tipping)
- Drills and end mills
- Cutters
- Whirling plates



YOUR CONTACT FOR PRICES AND DELIVERY TIMES

Levent Birol

lbirol@leistritz.com · +49 9654 / 89-917

Shipping address:

Leistritz Produktionstechnik GmbH
Leistritzstr. 1-11 · 92714 Pleystein

MANUFACTURING SPECIALISTS

Bundled know-how

When it comes to turning, milling, whirling and optimal tool design, our customers rely on us. After all, we develop our tools and machine tools ourselves. With our team of design engineers we combine comprehensive technical knowledge, which is incorporated into each of our products. We do this with passion and the curiosity that is

necessary if you want to enter unknown territory and offer a customized solution. Last but not least, we also manufacture parts for our sister companies in the Leistriz Group. At our site in Pleystein, we have bundled all our manufacturing expertise in one place.

»» *For complex tasks related to turning, milling and whirling, you have come to the right place.*

**YOUR CONTACT FOR
CUSTOMIZED SOLUTIONS**

Markus Fuchs

mfuchs@leistriz.com · +49 9654 / 89-855





QUALITY MANAGEMENT

Top priority: customer satisfaction

Quality is when the customer comes back and not the product. And we want that our customers are happy. With our quality management, we work every day to achieve this goal. This is why aspects such as high product quality, delivery reliability and the continuous improvement of our processes are key issues at Leistriz Produktionstechnik GmbH.

With our quality management system, we ensure the high quality of our business processes, services and products. Therefore, it is a matter of course for us to be certified and monitored according to international standards.

WE ARE CERTIFIED ACCORDING TO:

- DIN EN ISO 9001:2015
- DIN EN ISO 14001:2015
- BS OHSAS 18001:2007

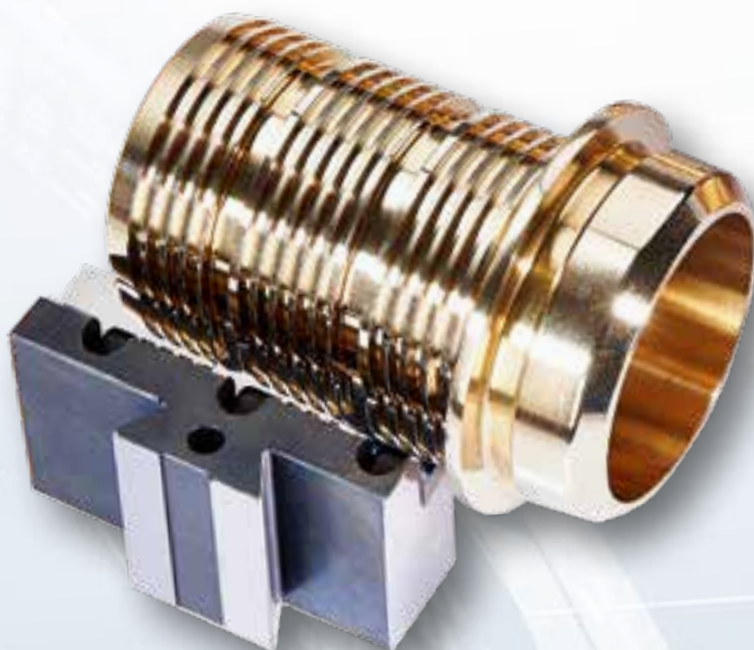
» *Making our products and processes as efficient and as good as possible is part of our corporate philosophy.*



» *Leistritz tools fulfill both common standard applications and complex machining tasks with flying colors. From work rest blades to flat form and end finishing tools right up to solid carbide drills.*



FLAT FORM TOOLS



INTERNAL COOLANT SUPPLY

Flat form holders with internal coolant supply (ICS)

The targeted use of cooling lubricants can significantly increase the service life of any tool. In most cases, the coolant is directed to the working point via an external nozzle. Here Leistriz goes one step further: With the newly developed shank holders, the cooling lubricant is brought directly through the holder to the cutting edge via a flat outlet nozzle. Due to the proximity of the outlet to the cutting edge, the coolant can get under the chip, which significantly increases the cooling effectiveness.



OUR ICS HOLDERS HAVE NUMEROUS ADVANTAGES:

- optimization of tool life
- different interchangeable nozzles
- customized connection designs
- reduced use of coolant
- existing flat form inserts can be reused

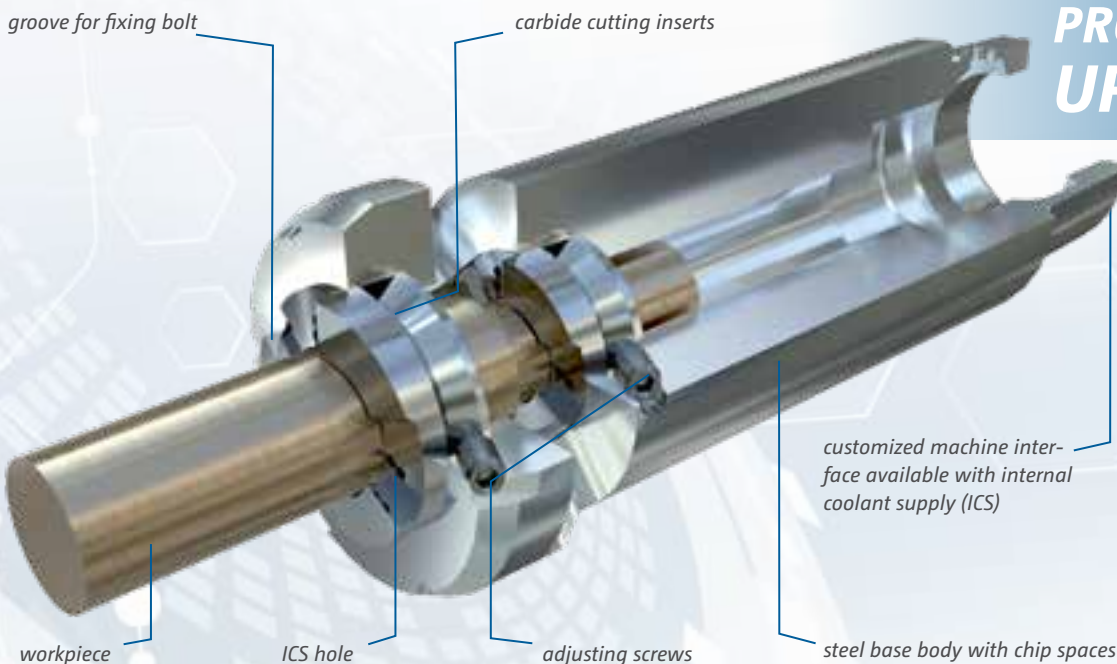
All holders marked with * can be equipped with ICS on request.

OVER-CUT

The innovation in the very simple machining of workpieces with small diameters of 1.5 mm or more

Unbeatable advantages:

- no radial displacement of the workpiece
- shorter machining time due to a higher feed rate
- interchangeable blade set
- different diameters can be used in one basic body
- higher surface quality
- longer service lives
- optionally available with internal coolant supply (ICS)



**INCREASE YOUR
PRODUCTIVITY BY
UP TO 600%**

OVERCUT - cutting inserts

cutting insert \varnothing for workpiece \varnothing

XS	12 mm	→	1.5 - 2 mm
S	16 mm	→	1.5 - 4 mm
M	20 mm	→	1.5 - 6 mm
L	32 mm	→	1.5 - 12 mm

For more information:





FLAT FORM TOOLS

As a pioneer of flat form tools, Leistriz offers solid carbide contour grooving inserts for a wide range of demanding applications. These are clearly superior to the classic indexable inserts for contour turning and contour grooving in productivity, quality and economy, as can be shown by a simple example. The idea of manufacturing so-called flat form tools (= product name for the range of Leistriz profile grooving tools) customer-specifically is as simple as it is

ingenious. A wide-ranging stock of insert blanks and different holder versions ensures that contour grooving tools can be delivered as required and within a very short time.

Special-purpose holders and specific solutions for all machines (even special inserts if required) are a matter of course for us.

» **Entire workpiece machining from a single source!**

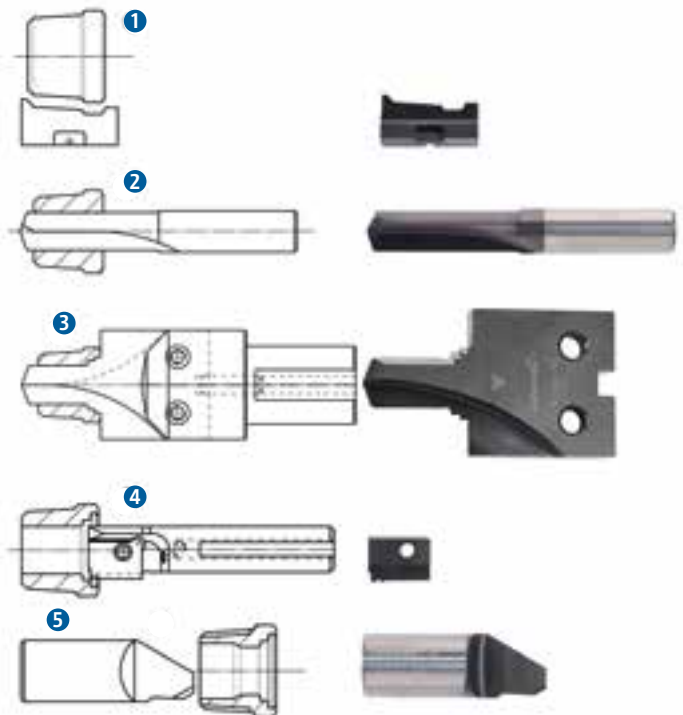
FLAT FORM TOOLS FOR:

- Multi-spindle lathes
- Single-spindle lathes
- Sliding headstock lathes
- Fixed headstock lathes

FOR ALL COMMON:

- Automatic rotary indexing machines
- CNC lathes*

* profile grooving replaces copy-turning and reduces machine running time



- ➊ profiled flat form insert for outer contour,
- ➋ solid carbide drill for pre-drilling,
- ➌ drill with insert, large, for a complex inner contour,
- ➍ inner contour with profiled form insert,
- ➎ solid carbide cutter for inside turning



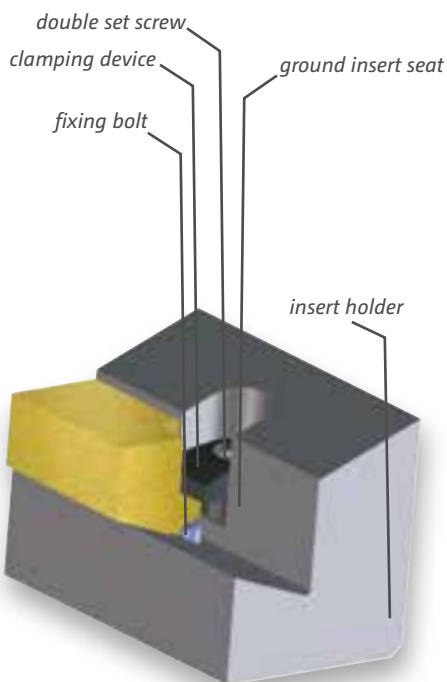
THE BOLT MAKES THE DIFFERENCE

With the invention and patenting of the changeable profile insert, Leistritz set a landmark in the history of profile turning tools. Since the patent application, the range of tools has been continuously developed, expanded and supplemented according to market requirements.

The Leistritz flat form tool with its distinctive and stable insert shape is characterized by its ground insert seat in combination with a fixing bolt. This allows the insert

holder to remain clamped in the machine while changing inserts. When changing inserts, the accuracy is higher than when pre-adjusting.

In order to enable the changing of the inserts under difficult or confined spatial conditions in the machine, the clamping claw can be loosened from the top and bottom in the holder via the double set screw.



ADVANTAGES:

- Using state of the art grinding centers, the inserts are profile-ground and the contours are designed with the bolt in the middle.
- The fixing bolt in the holder, in combination with the fixing groove that is precisely ground into the insert, guarantees a high repeat accuracy when changing inserts.
- The holder can remain in the machine while changing inserts.
- A simple clamping system allows a **fast**, **clean** and **exact** changing of inserts.
- A compact insert seat guarantees high process reliability.
- No losable parts.
- Wear-free due to the introduction of high cutting pressures over the entire width of the holder.
- A large stock of changeable inserts in different heights guarantees the most economical solution between cheap disposable blanks and blanks that can be reground.

PRÄZISIONS-
WERKZEUGE
TO

PROFILE CENTER

For the design of the cutting edge geometries, we draw on the extensive experience of our application technicians and engineers as well as a solid basic knowledge from decades of practical experience in the cutting sector. Due to the choice of suitable machines, we are able to economically produce even smallest batch sizes.

Our data storage allows us to grind reproducible inserts even after years, which can be clamped directly on the machine by the customer without having to adjust the holder.

Quality, precision and optimum grinding of the inserts are our highest priority when profiling.



The economical production of turned parts with sophisticated contours requires powerful profile-grooving tools. In the Leistriz Profile Center we will gladly take care of:

- Profile design
- Cutting conditions

YOUR WORKPIECE



OUR SUITABLE TOOL



Alternatively, we grind / profile according to your specifications. For this purpose, state-of-the-art profile grinding centers are available from our extensive machine park in order to profile with a high-precision cutting edge geometry:

- Form grooving inserts
- Solid carbide form drills or changeable-insert system
- Form cutters, etc.



Project planning, programming and production takes place via the most modern CAD-CAM systems.



Along the production process, we make use of precise measuring machines with state-of-the-art optical measuring technology.



In addition, a permanent visual inspection is carried out for an optimally ground surface pattern, highest surface quality and the detection of possible micro-cracks.




When measuring the profile, the visual display is carried out using a tolerance band of ± 0.005 mm above the ground contour. Tolerance deviation within the band is shown in green, exceedance in red. Thus position and dimensional deviation above 5μ are immediately visible.

These measurement protocols can also be used for documentation if required.

OVERVIEW - INSERTS


Blanks for profiling grooves




FLAT FORM INSERTS					MATCHING HOLDERS		
VERSION		Widths	Program no.	Rake face	Page	Program no.	Page
A		6 - 10	W 30xx	raw sintered	26	H 30xx	28
			FW 30xx	ground	27		
B		10 - 32	W 30xx	raw sintered	26	H 30xx	28-30, 33-35, 38
			FW 30xx	ground	27		
C		38 - 60	W 30xx	raw sintered	26	H 30xx	28-29, 32-33, 35
			FW 30xx	ground	27		

- **A:** with clamping surface, suitable for holders with clamping finger
- **B:** with a clamping pit, suitable for holders with a clamping element
- **C:** with two clamping pits, suitable for holders with two clamping elements

OVERVIEW - HOLDERS



Holder blanks for profiling grooves

FLAT FORM SHANK HOLDERS				MATCHING INSERTS		
VERSION		Widths	Program no.	Page	Program no.	Page
A		6 - 10	H 30xx	28-30	(F)W 30xx	26-27
B		10 - 32	H 30xx	28-30	(F)W 30xx	26-27
C		38 - 60	H 30xx	28-30	(F)W 30xx	26-27


FLAT FORM HOLDERS FOR AUTOMATIC MACHINES				MATCHING INSERTS		
VERSION		Widths	Program no.	Page	Program no.	Page
Gildemeister and Schütte						
B		14 - 32	H 30xx	31, 33	(F)W 30xx	26-27
C		14 - 32	H 30xx	32, 33	(F)W 30xx	26-27
Tornos						
B		10 - 32	H 30xx	34	(F)W 30xx	26-27
Index and Traub						
B		10 - 32	H 30xx	35	(F)W 30xx	26-27
C		38 - 60	H 30xx	35	(F)W 30xx	26-27

For all tables applies: All lengths are in **mm**.


FLAT FORM - INSERTS Blanks for profiling grooves

	Widths	Program no.	Rake face	Page	Matching Holders	
					Program no.	Page
	10 - 14	W 31xx	raw sintered	36	H 31xx	36
	Widths	Program no.	Rake face	Page	Matching Holders	
					Program no.	Page
	8 - 14	W 33xx	raw sintered	36	H 33xx	36



FLAT FORM - INSERTS "ECONOMY 3" Blanks for profiling grooves

	Widths	Program no.	Rake face	Page	Matching Holders	
					Program no.	Page
	4.76 - 10	SK 5401	raw sintered	37	SK 5400	37

BORING BARS AND SHANK HOLDERS - INSERTS Blanks for profiling grooves


	Widths	Program no.	Rake face	Page	Matching Holders	
					Program no.	Page
	14 - 20	SK 5338	raw sintered	38	SK 5293	38
					SK 5775	38

FLAT FORM SHANK HOLDERS Holder blanks for profiling grooves


	Widths	Program no.	Page	Matching Inserts	
				Program no.	Page
	10 - 14	H 31xx	36	W31xx	36
	Widths	Program no.	Page	Matching Inserts	
				Program no.	Page
	8 - 14	H 33xx	36	W 33xx	36

FLAT FORM

FLAT FORM SHANK HOLDERS "ECONOMY 3" Holder blanks for profiling grooves


	Widths	Program no.	Page	Matching Inserts	
				Program no.	Page
	4.76 - 10	SK 5400	37	SK 5401	37

BORING BARS AND SHANK HOLDERS Holder blanks for profiling grooves


	Widths	Program no.	Page	Matching Inserts	
				Program no.	Page
	14 - 20	SK 5293	38	SK 5338	38
	14 - 20	SK 5775	38		

INSERTS FOR **FORM DRILLS WITH REMOVABLE INSERTS**


Form drill - small

	Widths	Program no.	Page	Matching Holders	
				Program no.	Page
	10 - 16	SK 5820	40	SK 5816	41

Form drill - medium


	Widths	Program no.	Page	Matching Holders	
				Program no.	Page
	18 - 25	SK 6372	40	SK 6373	41

Form drill - large


	Widths	Program no.	Page	Matching Holders	
				Program no.	Page
	35 - 60	SK 5397	40	SK 5899 SK 5800 SK 6023 SK 5936	41

HOLDERS FOR **FORM DRILLS WITH REMOVABLE INSERTS**


Form drill - small

	Widths	Program no.	Page	Matching Blanks	
				Program no.	Page
	10 - 16	SK 5816	41	SK 5820	40

Form drill - medium

	Widths	Program no.	Page	Matching Blanks	
				Program no.	Page
	18 - 25	SK 6373	41	SK 6372	40

Form drill - large

	Widths	Program no.	Page	Matching Blanks	
				Program no.	Page
	35 - 60	SK 5899 SK 5800 SK 6023 SK 5936	41	SK 5397	40

RANGE W 30... RAKE FACES **RAW SINTERED**

Version		Program no.	Width	Height	Depth	Carbide Quality K10F	Item no.	Carbide Quality P20-30	Item no.
			B	H	T				
A		W 3006 - 0300 0000 N	6	3	12	●	07304264		
		W 3008 - 0300 0000 N	8	3	12	●	00060922	○	07307664
		W 3010 - 0300 0000 N	10	3	12	●	00060923	○	07307271

B		W 3010 - 0715 0000 N	10	7	15	●	07202091		
		W 3010 - 0800 0000 N		8	12	●	07202907		
		W 3012 - 0300 0000 N	12	3	12	●	00066767	●	00066859
		W 3012 - 0715 0000 N		7	15	●	07202519		
		W 3012 - 0800 0000 N	8	12	●	07202482			
		W 3014 - 0300 0000 N	14	3	12	●	00066768	●	00066860
		W 3014 - 0715 0000 N		7	15	●	07202092		
		W 3014 - 0800 0000 N		8	12	●	00066769	●	00066771
		W 3016 - 0300 0000 N	16	3	12	●	00060709		
		W 3016 - 0715 0000 N		7	15	●	07202093		
		W 3016 - 0800 0000 N		8	12	●	00060570	●	07305550
		W 3018 - 0300 0000 N	18	3	12	●	07202434		
		W 3018 - 0800 0000 N		8	12	●	07310372		
		W 3020 - 0300 0000 N	20	3	12	●	00060527	●	00060525
		W 3020 - 0327 0000 N		3	27	●	07209012		
		W 3020 - 0715 0000 N		7	15	●	07202094		
		W 3020 - 0800 0000 N	20	8	12	●	00060532	●	00060530
		W 3022 - 0800 0000 N	22	8	12	●	07202446		
		W 3025 - 0300 0000 N	25	3	12	●	00066773	○	00066864
		W 3025 - 0715 0000 N		7	15	●	07202095		
		W 3025 - 0800 0000 N		8	12	●	00066774	●	00066776
		W 3028 - 0300 0000 N	28	3	12	●	07202436		
		W 3028 - 0715 0000 N		7	15	●	07205529		
		W 3028 - 0800 0000 N		8	12	●	07202347		
W 3030 - 0300 0000 N	30	3	12	○	07208016				
W 3032 - 0300 0000 N	32	3	12	●	07304955	○	07312109		
W 3032 - 0715 0000 N		7	15	●	07202115				
W 3032 - 0800 0000 N		8	12	●	00060692	○	00060638		

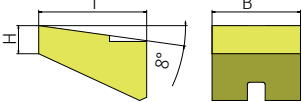
C		W 3038 - 0300 0000 N	38	3	12	●	07311082		
		W 3038 - 0715 0000 N		7	15	●	07202096		
		W 3038 - 0800 0000 N		8	12	●	07311896		
		W 3045 - 0300 0000 N	45	3	12	●	00060534		
		W 3045 - 0715 0000 N		7	15	●	07202097		
		W 3045 - 0800 0000 N		8	12	●	00066988	○	07302963
		W 3052 - 0715 0000 N	52	7	15	●	07202803		
W 3060 - 0215 0000 N	60	2	15	●	07203790				
W 3060 - 0715 0000 N		7	15	●	07202098				

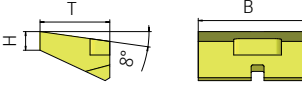
● = from stock

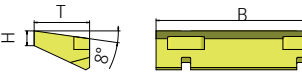
○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.

* = available on request with internal coolant supply (ICS)

RANGE W 30... RAKE FACES **GROUND**

Version		Program no.	Width	Height	Depth	Carbide Quality K10F	Item no.	Carbide Quality P20-30	Item no.
			B	H	T				
A		FW 3006 - 0300 0000 N	6	3	12	●	07201097		
		FW 3008 - 0300 0000 N	8	3	12	●	07201334	○	
		FW 3010 - 0300 0000 N	10	3	12			○	

B		FW 3010 - 0715 0000 N	10	7	15				
		FW 3010 - 0800 0000 N		8	12				
		FW 3012 - 0300 0000 N	12	3	12	●	07208917	○	07204282
		FW 3012 - 0715 0000 N		7	15				
		FW 3012 - 0800 0000 N	8	12					
		FW 3014 - 0300 0000 N	14	3	12	●	07208918	○	
		FW 3014 - 0715 0000 N		7	15				
		FW 3014 - 0800 0000 N		8	12	●			07203659
		FW 3016 - 0300 0000 N	16	3	12	●	07208919		
		FW 3016 - 0715 0000 N		7	15	●	07201447		
		FW 3016 - 0800 0000 N		8	12	●	07208932	○	
		FW 3018 - 0300 0000 N	18	3	12	●	07208925		
		FW 3018 - 0800 0000 N		8	12	●	07201337		
		FW 3020 - 0300 0000 N	20	3	12	●	07208920	○	
		FW 3020 - 0327 0000 N		3	27				
		FW 3020 - 0715 0000 N		7	15	●	07208931		
		FW 3020 - 0800 0000 N	20	8	12	●	07208928	○	
		FW 3022 - 0800 0000 N	22	8	12				
		FW 3025 - 0300 0000 N	25	3	12	●	07208921	○	
		FW 3025 - 0715 0000 N		7	15	●	07205125		
FW 3025 - 0800 0000 N	8	12		●	07201431	○			
FW 3028 - 0300 0000 N	28	3	12	●	07208926				
FW 3028 - 0715 0000 N		7	15						
FW 3028 - 0800 0000 N		8	12	●	07203660				
FW 3030 - 0300 0000 N	30	3	12						
FW 3032 - 0300 0000 N	32	3	12	●	07208922	○			
FW 3032 - 0715 0000 N		7	15	●	07203221				
FW 3032 - 0800 0000 N		8	12	●	07208927	○			


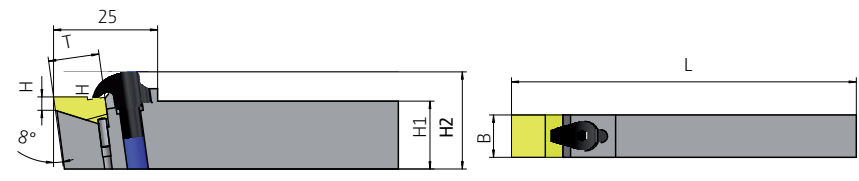

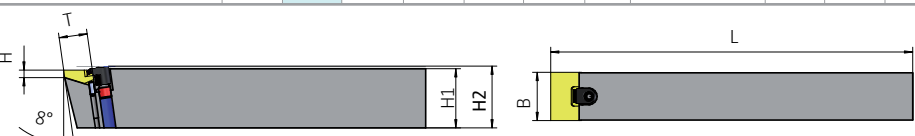

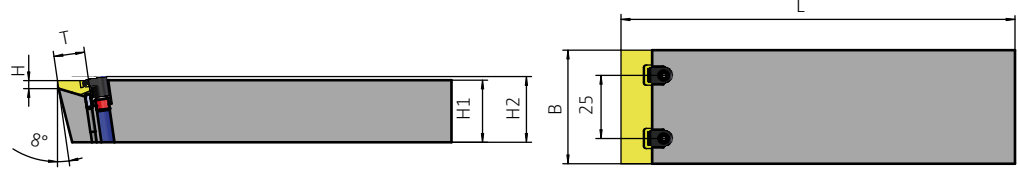
C		FW 3038 - 0300 0000 N	38	3	12	●	07208923		
		FW 3038 - 0715 0000 N		7	15	●	07203231		
		FW 3038 - 0800 0000 N		8	12				
		FW 3045 - 0300 0000 N	45	3	12	●	07208924		
		FW 3045 - 0715 0000 N		7	15	●	07203228		
		FW 3045 - 0800 0000 N		8	12			○	
		FW 3052 - 0715 0000 N	52	7	15				
FW 3060 - 0215 0000 N	60	2	15						
FW 3060 - 0715 0000 N		7	15						

● = from stock

○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.

* = available on request with internal coolant supply (ICS)


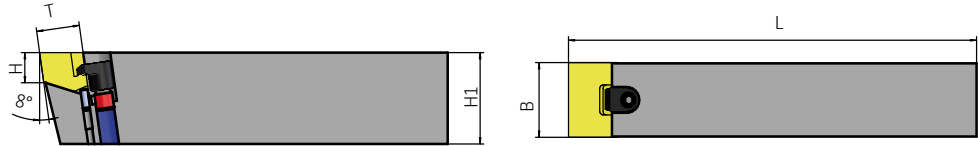

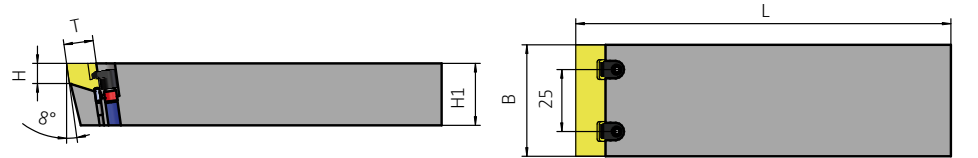
SHANK HOLDERS FOR **FLAT FORM INSERTS**

Version	Program no.	Dimensions in mm						Availability	Item no.	Spare parts			
	▼	B	H	T	H1	H2	L	▼	▼	▼	▼		
A  Width 6 - 10 mm													
	Program no.	B	H	T	H1	H2	L		Item no.	S	D	Z	G
	H 3006 - 1606 0003 N	6	3	12	16	21	125	●	07101259	1	-	1	1.5
	H 3008 - 1608 0003 N	8	3	12	16	23	125	●	07101260	2	-	1	2.5
	H 3010 - 1610 0003 N	10	3	12	16	23	125	●	07101261	2	-	1	2.5
B  Width 12 - 32 mm													
	Program no.	B	H	T	H1	H2	L		Item no.	S	D	Z	G
	H 3012 - 1212 0003 N	12	3	12	12	14	150	●	00066823	3	6	1	2.5
	H 3012 - 1612 0003 N		3	12	16	16	150	●	07100197	3	1	3	2.5
	H 3012 - 2012 0003 N		3	12	20	22	150	●	07102823	3	1	4	2.5
	H 3012 - 2512 0003 N		3	12	25	27	150	●	07102741	3	1	4	2.5
	H 3014 - 1214 0003 N *	14	3	12	12	14	150	●	07109700	3	6	1	2.5
	H 3014 - 1614 0003 N *		3	12	16	16	150	●	00066766	3	1	3	2.5
	H 3014 - 2014 0003 N *		3	12	20	22	150	●	00060547	3	1	4	2.5
	H 3014 - 2514 0003 N *		3	12	25	27	150	●	07100167	3	1	4	2.5
	H 3016 - 1616 0003 N *	16	3	12	16	16	150	●	07100389	3	1	3	2.5
	H 3016 - 2016 0003 N *		3	12	20	22	150	●	07102742	3	1	4	2.5
	H 3016 - 2516 0003 N *		3	12	25	27	150	●	07100168	3	1	4	2.5
	H 3020 - 1620 0003 N *	20	3	12	16	16	150	●	07104362	3	1	3	2.5
	H 3020 - 2020 0003 N *		3	12	20	22	150	●	07100390	3	1	4	2.5
	H 3020 - 2520 0003 N *		3	12	25	27	150	●	00060520	3	1	4	2.5
H 3025 - 1625 0003 N *	25	3	12	16	16	150	●	07104363	3	1	3	2.5	
H 3025 - 2025 0003 N *		3	12	20	22	150	●	07106190	3	1	4	2.5	
H 3025 - 2525 0003 N *		3	12	25	27	150	●	00066824	3	1	4	2.5	
H 3028 - 2028 0003 N *	28	3	12	20	22	150	●	07100005	3	1	4	2.5	
H 3032 - 2032 0003 N *	32	3	12	20	22	150	●	07103813	3	1	4	2.5	
C  Width >32 - 60 mm													
	Program no.	B	H	T	H1	H2	L		Item no.	S	D	Z	G
	H 3038 - 2038 0003 N *	38	3	12	20	22	150	●	07100009	3	1	4	2.5
	H 3045 - 2045 0003 N *	45	3	12	20	22	150	●	07106149	3	1	4	2.5
H 3045 - 2545 0003 N *	3		12	25	27	150	●	07100169	3	1	4	2.5	

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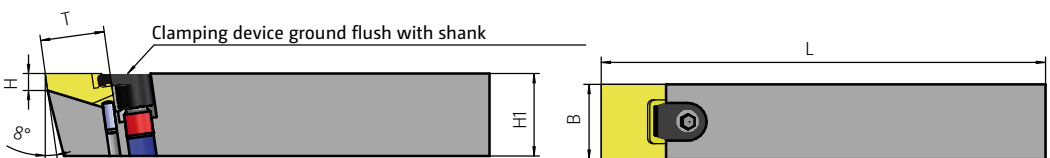

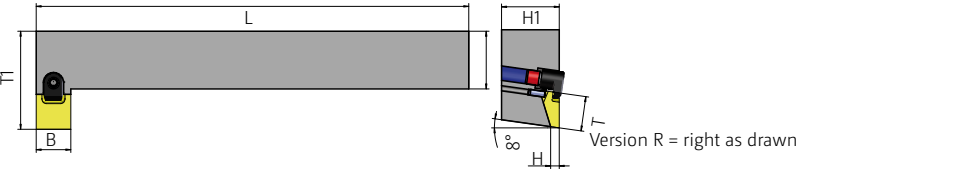
SHANK HOLDERS FOR **FLAT FORM INSERTS**

FLAT FORM

Version	Program no.	Dimensions in mm					Availability	Item no.	Spare parts			
	▼	B	H	T	H1	L	▼	▼	▼	▼		
B 	Width 12 - 32 mm											
	Program no.	B	H	T	H1	L		Item no.	S	D	Z	G
	H 3020 - 2520 0327 N *	20	3	27	25	150	●	07100345	3	1	3	2.5
	H 3014 - 2014 0715 N *	14	7	15	20	150	●	07104703	3	1	3	2.5
	H 3014 - 2514 0715 N *		7	15	25	150	●	07104101	3	1	3	2.5
	H 3016 - 2016 0715 N *	16	7	15	20	150	●	07103802	3	1	3	2.5
	H 3020 - 2020 0715 N *	20	7	15	20	150	●	07103803	3	1	3	2.5
	H 3025 - 2025 0715 N *	25	7	15	20	150	●	07103804	3	1	3	2.5
	H 3025 - 2525 0715 N *		7	15	25	150	●	10012190	3	1	3	2.5
	H 3032 - 2032 0715 N *	32	7	15	20	150	○	07105817	3	1	3	2.5
	H 3032 - 2532 0715 N *		7	15	25	150	●	07104126	3	1	3	2.5
	H 3032 - 3232 0715 N *		7	15	32	150	●	07102309	3	1	3	2.5
	H 3012 - 2012 0008 N *	12	8	12	20	150	○	10000397	3	6	3	2.5
	H 3014 - 2014 0008 N *	14	8	12	20	150	●	00066825	3	6	3	2.5
	H 3014 - 2514 0008 N *		8	12	25	150	●	00066764	3	1	4	2.5
	H 3016 - 2016 0008 N *	16	8	12	20	150	●	00060746	3	6	3	2.5
	H 3016 - 2516 0008 N *		8	12	25	150	●	07100166	3	1	4	2.5
	H 3020 - 2020 0008 N *	20	8	12	20	150	●	00060544	3	6	3	2.5
	H 3020 - 2520 0008 N *		8	12	25	150	●	00060521	3	1	4	2.5
	H 3025 - 2025 0008 N *	25	8	12	20	150	●	07102743	3	6	3	2.5
H 3025 - 2525 0008 N *	8		12	25	150	●	00066826	3	1	4	2.5	
H 3025 - 3225 0008 N *	8		12	32	150	●	07102744	3	1	4	2.5	
H 3032 - 2032 0008 N *	32	8	12	20	150	●	07102745	3	6	3	2.5	
H 3032 - 2532 0008 N *		8	12	25	150	●	07100812	3	1	4	2.5	
H 3032 - 3232 0008 N *		8	12	32	150	●	07102746	3	1	4	2.5	
C 	Width >32 - 60 mm											
	Program no.	B	H	T	H1	L		Item no.	S	D	Z	G
	H 3045 - 2045 0715 N *	45	7	15	20	150	●	07104271	3	1	3	2.5
	H 3060 - 2560 0715 N *	60	7	15	25	150	●	07104190	3	1	3	2.5
H 3045 - 2545 0008 N *	45	8	12	25	150	●	07100196	3	1	4	2.5	

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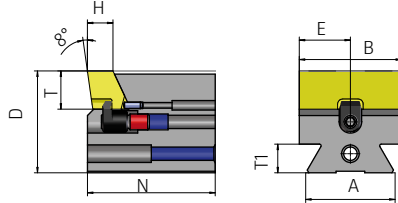

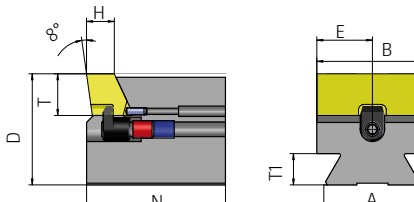
SHANK HOLDERS FOR **FLAT FORM INSERTS**

Version	Program no.	Dimensions in mm					Availability	Item no.	Spare parts				
B 													
	Program no.	B	H	T	H1	L		Item no.	S	D	Z	G	
	H 3012 - 0300 3103 N *	12	3	12	16	90	●	07104651	4	1	3	2.5	
	H 3012 - 0300 3132 N *	12	3	12	12	90	●	07106515	4	6	1	2.5	
	H 3014 - 0300 3048 N *	14	3	12	16	90	●	07105616	4	1	4	2.5	
	H 3016 - 0300 3022 N *	16	3	12	16	90	●	07108059	4	1	4	2.5	
	H 3020 - 0300 3024 N *	20	3	12	16	90	●	07105293	4	1	4	2.5	
	H 3020 - 0300 3032 N *	20	3	12	20	90	●	07105626	4	1	4	2.5	
H 3025 - 0300 3035 N *	25	3	12	20	90	●	07108013	4	1	4	2.5		
B 													
	Program no.	B	H	T	H1	T1	L		Item no.	S	D	Z	G
	H 3012 - 0300 3131 R	12	3	12	20	34	150	●	07106414	3	1	4	2.5
	H 3012 - 0300 3131 L	12	3	12	20	34	150	●	07100388	3	1	4	2.5
H 3020 - 0715 4109 R	20	7	15	20	30	85	●	07102481	3	1	3	2.5	

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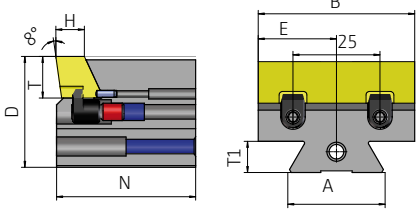

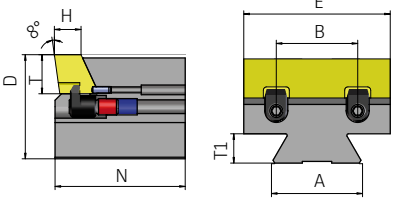
GILDEMEISTER AND SCHÜTTE AUTOMATIC LATHES

FLAT FORM

Version	Program no.	Dimensions in mm							Availability	Item no.	Spare parts						
	▼	A	B	H	T	T1	D	E	N	▼	▼	▼	▼	▼			
<p>Width 12 - 32 mm</p> 																	
	Program no.	A	B	H	T	T1	D	E	N	Item no.	S	D	Z	G	M		
	H 3020 - 0312 A20 N30	A20	20	3	12	7	32	10	30	○	07109750	3	1	1	2.5	30	
	H 3025 - 0715 A28 N40	A28	25	7	15	9	32	12.5	40	●	07103810	3	1	1	2.5	30	
	H 3032 - 0715 A28 N40		32	7	15	9	32	16	40	●	07103811	3	1	4	2.5	30	
	H 3032 - 0715 A28 N50		32	7	15	9	32	16	50	●	07104249	3	1	4	2.5	30	
	H 3032 - 0715 A40 N40	A40	32	7	15	11	32	16	40	○	10014595	3	1	4	2.5	30	
	H 3032 - 0715 A40 N50		32	7	15	11	32	16	50	●	07104895	3	1	4	2.5	30	
	H 3020 - 0812 A20 N30	A20	20	8	12	7	32	10	30	○	07108019	3	1	1	2.5	30	
	H 3025 - 0812 A20 N50		25	8	12	7	32	12.5	50	●	00060703	3	1	4	2.5	30	
	H 3032 - 0812 A20 N40		32	8	12	7	32	12.5	40	●	07104379	3	1	4	2.5	30	
	H 3014 - 0812 A28 N40	A28	14	8	12	9	32	7	40	●	07103824	3	1	4	2.5	30	
	H 3016 - 0812 A28 N40		16	8	12	9	32	8	40	●	07103825	3	1	4	2.5	30	
	H 3020 - 0812 A28 N40		20	8	12	9	32	10	40	●	07103826	3	1	4	2.5	30	
	H 3025 - 0812 A28 N40		25	8	12	9	32	12.5	40	●	07103827	3	1	4	2.5	30	
	H 3025 - 0812 A28 N50			8	12	9	32	12.5	50	●	00060705	3	1	4	2.5	30	
	H 3032 - 0812 A28 N40		32	8	12	9	32	16	40	●	07103828	3	1	4	2.5	30	
	H 3032 - 0812 A28 N50			8	12	9	32	16	50	●	07103491	3	1	4	2.5	30	
	H 3032 - 0812 A40 N40		A40	32	8	12	11	40	16	40	●	07103832	3	1	4	2.5	30
																	
Program no.			A	B	H	T	T1	D	E	N	Item no.	S	D	Z	G	M	
H 3020 - 0800 3032 N	A20	20	8	12	7	22	10	20	●	07106997	3	1	3	2.5	-		

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GILDEMEISTER AND SCHÜTTE AUTOMATIC LATHES

Version	Program no.	Dimensions in mm								Availability	Item no.	Spare parts																																																																																																																																																																
	▼	A	B	H	T	T1	D	E	N	▼	▼	▼	▼	▼																																																																																																																																																														
<p>Width >32 - 60 mm</p> 																																																																																																																																																																												
		<table border="1"> <thead> <tr> <th>Program no.</th> <th>A</th> <th>B</th> <th>H</th> <th>T</th> <th>T1</th> <th>D</th> <th>E</th> <th>N</th> <th>Availability</th> <th>Item no.</th> <th>S</th> <th>D</th> <th>Z</th> <th>G</th> <th>M</th> </tr> </thead> <tbody> <tr> <td>H 3045 - 0715 A28 N40</td> <td>A28</td> <td>45</td> <td>7</td> <td>15</td> <td>9</td> <td>32</td> <td>22.5</td> <td>40</td> <td>●</td> <td>07103812</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3060 - 0715 A28 N50</td> <td>A28</td> <td>60</td> <td>7</td> <td>15</td> <td>9</td> <td>32</td> <td>22.5</td> <td>50</td> <td>●</td> <td>10030048</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3045 - 0715 A40 N50</td> <td>A40</td> <td>45</td> <td>7</td> <td>15</td> <td>11</td> <td>40</td> <td>22.5</td> <td>50</td> <td>●</td> <td>07105168</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3045 - 0812 A20 N40</td> <td>A20</td> <td>45</td> <td>8</td> <td>12</td> <td>7</td> <td>32</td> <td>22.5</td> <td>40</td> <td>○</td> <td>07100034</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3038 - 0812 A28 N40</td> <td rowspan="2">A28</td> <td>38</td> <td>8</td> <td>12</td> <td>9</td> <td>32</td> <td>19</td> <td>40</td> <td>●</td> <td>07103829</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3045 - 0812 A28 N40</td> <td>45</td> <td>8</td> <td>12</td> <td>9</td> <td>32</td> <td>22.5</td> <td>40</td> <td>●</td> <td>07103830</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3045 - 0812 A28 N50</td> <td>A28</td> <td>45</td> <td>8</td> <td>12</td> <td>9</td> <td>32</td> <td>22.5</td> <td>50</td> <td>●</td> <td>07100198</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3045 - 0812 A40 N50</td> <td rowspan="2">A40</td> <td>45</td> <td>8</td> <td>12</td> <td>11</td> <td>40</td> <td>22.5</td> <td>50</td> <td>●</td> <td>07100187</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> <tr> <td>H 3052 - 0812 A40 N50</td> <td>52</td> <td>8</td> <td>12</td> <td>11</td> <td>40</td> <td>22.5</td> <td>50</td> <td>○</td> <td>10015354</td> <td>3</td> <td>1</td> <td>4</td> <td>2.5</td> <td>30</td> </tr> </tbody> </table>													Program no.	A	B	H	T	T1	D	E	N	Availability	Item no.	S	D	Z	G	M	H 3045 - 0715 A28 N40	A28	45	7	15	9	32	22.5	40	●	07103812	3	1	4	2.5	30	H 3060 - 0715 A28 N50	A28	60	7	15	9	32	22.5	50	●	10030048	3	1	4	2.5	30	H 3045 - 0715 A40 N50	A40	45	7	15	11	40	22.5	50	●	07105168	3	1	4	2.5	30	H 3045 - 0812 A20 N40	A20	45	8	12	7	32	22.5	40	○	07100034	3	1	4	2.5	30	H 3038 - 0812 A28 N40	A28	38	8	12	9	32	19	40	●	07103829	3	1	4	2.5	30	H 3045 - 0812 A28 N40	45	8	12	9	32	22.5	40	●	07103830	3	1	4	2.5	30	H 3045 - 0812 A28 N50	A28	45	8	12	9	32	22.5	50	●	07100198	3	1	4	2.5	30	H 3045 - 0812 A40 N50	A40	45	8	12	11	40	22.5	50	●	07100187	3	1	4	2.5	30	H 3052 - 0812 A40 N50	52	8	12	11	40	22.5	50	○	10015354	3	1	4	2.5	30
	Program no.	A	B	H	T	T1	D	E	N	Availability	Item no.	S	D	Z	G	M																																																																																																																																																												
	H 3045 - 0715 A28 N40	A28	45	7	15	9	32	22.5	40	●	07103812	3	1	4	2.5	30																																																																																																																																																												
	H 3060 - 0715 A28 N50	A28	60	7	15	9	32	22.5	50	●	10030048	3	1	4	2.5	30																																																																																																																																																												
	H 3045 - 0715 A40 N50	A40	45	7	15	11	40	22.5	50	●	07105168	3	1	4	2.5	30																																																																																																																																																												
	H 3045 - 0812 A20 N40	A20	45	8	12	7	32	22.5	40	○	07100034	3	1	4	2.5	30																																																																																																																																																												
	H 3038 - 0812 A28 N40	A28	38	8	12	9	32	19	40	●	07103829	3	1	4	2.5	30																																																																																																																																																												
	H 3045 - 0812 A28 N40		45	8	12	9	32	22.5	40	●	07103830	3	1	4	2.5	30																																																																																																																																																												
	H 3045 - 0812 A28 N50	A28	45	8	12	9	32	22.5	50	●	07100198	3	1	4	2.5	30																																																																																																																																																												
H 3045 - 0812 A40 N50	A40	45	8	12	11	40	22.5	50	●	07100187	3	1	4	2.5	30																																																																																																																																																													
H 3052 - 0812 A40 N50		52	8	12	11	40	22.5	50	○	10015354	3	1	4	2.5	30																																																																																																																																																													
																																																																																																																																																																												
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Program no.	A	B	H	T	T1	D	E	N	Availability	Item no.	S	D	Z	G	M																																																																																																																																																													
H 3045 - 0800 0228 N	A20	45	8	12	9	32	22.5	40	●	07100176	3	1	4	2.5	-																																																																																																																																																													

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GILDEMEISTER AND SCHÜTTE AUTOMATIC LATHES

FLAT FORM


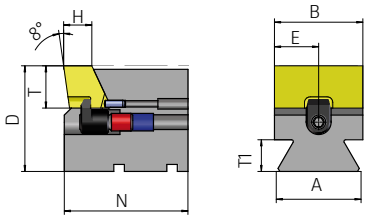

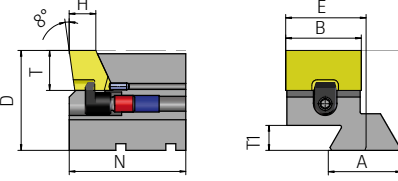

Version		Program no. ▼	Dimensions in mm							Avail- ability	Item no. ▼	Spare parts ▼ ▼ ▼ ▼ ▼							
B	Width 12 - 32 mm																		
			Program no.	A	B	H	T	T1	D	E	N		Item no.	S	D	Z	G	M	
			H 3020 - 0715 A28 R40	A28	20	7	15	9	35	18	40	●	07105355	3	1	4	2.5	30	
			H 3014 - 0812 A20 R30	A20	14	8	12	7	32	12.5	30	○	07104730	3	1	4	2.5	30	
			H 3014 - 0812 A20 R40		14	8	12	7	32	12.5	40	○	07104084	3	1	4	2.5	30	
			H 3014 - 0812 A20 R50		14	8	12	7	32	12.5	50	●	00060702	3	1	4	2.5	30	
			H 3014 - 0812 A28 R30	A28	14	8	12	9	32	18	30	●	07103794	3	1	4	2.5	30	
			H 3014 - 0812 A28 R40		14	8	12	9	32	18	40	●	07104059	3	1	4	2.5	30	
			H 3016 - 0812 A28 R40		16	8	12	9	32	18	40	●	07104165	3	1	4	2.5	30	
		H 3020 - 0812 A28 R40	20		8	12	9	32	18	40	●	07104166	3	1	4	2.5	30		
		H 3025 - 0812 A28 R40	25		8	12	9	32	18	40	●	07103831	3	1	4	2.5	30		
		H 3032 - 0812 A28 R40	32		8	12	9	32	18	40	○	10004022	3	1	4	2.5	30		
		H 3014 - 0812 A28 R50	14		8	12	9	32	18	50	○	00060704	3	1	4	2.5	30		
		H 3025 - 0812 A28 R50	25		8	12	9	32	18	50	●	00060706	3	1	4	2.5	30		
		H 3032 - 0812 A28 R50	32		8	12	9	32	18	50	●	07102827	3	1	4	2.5	30		
		H 3014 - 0812 A40 R50	A40		14	8	12	11	35	18	50	○	00060707	3	1	4	2.5	30	
		H 3025 - 0812 A40 R50		25	8	12	11	35	22.5	50	○	00060708	3	1	4	2.5	30		
	B			H 3025 - 0812 A28 L50	A20	25	8	12	7	32	18	50	○	07100182	3	1	4	2.5	30
				H 3014 - 0812 A28 L50	A28	14	8	12	9	32	18	50	○	07100183	3	1	4	2.5	30
			H 3025 - 0812 A28 L50	25		8	12	9	32	18	50	○	07104505	3	1	4	2.5	30	
			H 3025 - 0812 A40 L50	A40	25	8	12	11	40	22.5	50	○	07100186	3	1	4	2.5	30	
C	Width >32 - 60 mm																		
			Program no.	A	B	H	T	T1	D	E	N		Item no.	S	D	Z	G	M	
		H 3038 - 0715 A28 R40	A28	38	8	12	9	31	18	40	●	07105354	3	1	4	2.5	30		
		H 3045 - 0715 A40 R50	A40	45	7	15	11	40	30.0	50	○	07104996	3	1	4	2.5	30		
C			H 3045 - 0812 A50 R45	A50	45	8	12	13	40	34.5	45	○	07103833	3	1	4	2.5	30	
			H 3045 - 0715 A40 L50	A40	45	7	15	11	40	30.0	50	○	07104997	3	1	4	2.5	30	

● = from stock

○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.

* = available on request with internal coolant supply (ICS)


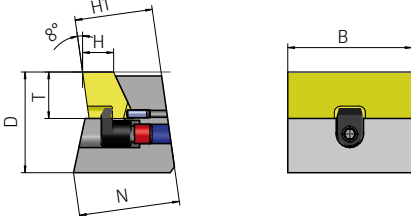

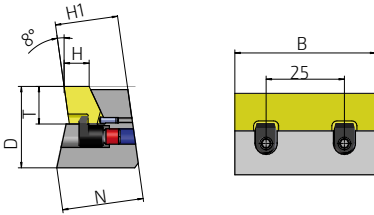
TORNOS AUTOMATIC LATHES

Version		Program no. ▼	Dimensions in mm							Avail- ability	Item no. ▼	Spare parts ▼ ▼ ▼ ▼				
B	 <p>Width 12 - 32 mm</p>															
		Program no.	A	B	H	T	T1	D	E	N		Item no.	S	D	Z	G
		H 3014 - 0800 0422 N	A22	14	8	12	7.5	30	7	35	○	00060711	3	1	4	2.5
		H 3016 - 0800 0422 N		16	8	12	7.5	30	8	35	○	07102469	3	1	4	2.5
		H 3020 - 0800 0422 N		20	8	12	7.5	30	10	35	○	07100193	3	1	4	2.5
H 3025 - 0800 0422 N	25	8		12	7.5	30	12.5	35	●	00060720	3	1	4	2.5		
B	 <p>Width 12 - 32 mm</p>															
		Program no.	A	B	H	T	T1	D	E	N		Item no.	S	D	Z	G
		H 3014 - 0800 0422 R	A22	14	8	12	7.5	30	22	35	○	00060723	3	1	4	2.5
		H 3016 - 0800 0422 R		16	8	12	7.5	30	23	35	○	07200391	3	1	4	2.5
		H 3018 - 0800 0422 R		18	8	12	7.5	30	23	35	○	07106496	3	1	4	2.5
		H 3020 - 0800 0422 R		20	8	12	7.5	30	22	35	●	07100194	3	1	4	2.5
H 3025 - 0800 0422 R	25	8		12	7.5	30	22.0	35	○	00060721	3	1	4	2.5		
B																
		Program no.	A	B	H	T	T1	D	E	N		Item no.	S	D	Z	G
		H 3014 - 0800 0422 L	A22	14	8	12	7.5	30	22	35	●	00060724	3	1	4	2.5
		H 3016 - 0800 0422 L		16	8	12	7.5	30	23	35	○	07106811	3	1	4	2.5
		H 3018 - 0800 0422 L		18	8	12	7.5	30	23	35	○	07104539	3	1	4	2.5
		H 3020 - 0800 0422 L		20	8	12	7.5	30	22	35	○	07100195	3	1	4	2.5
H 3025 - 0800 0422 L	25	8		12	7.5	30	22.0	35	○	00060722	3	1	4	2.5		

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 * = available on request with internal coolant supply (ICS)

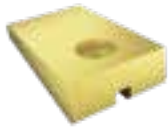
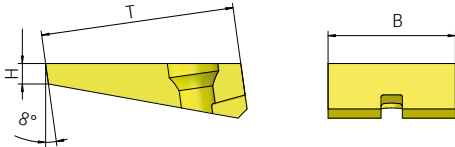
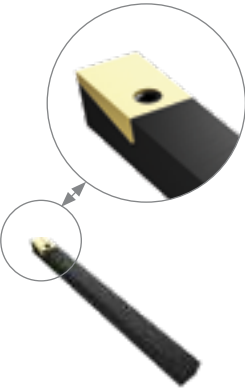
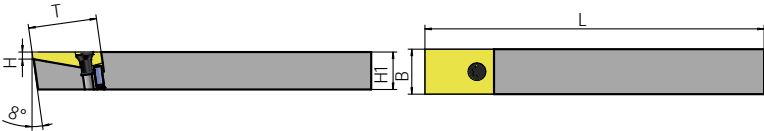

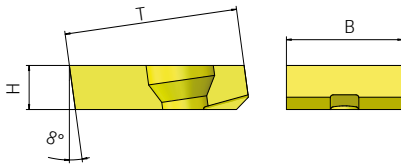
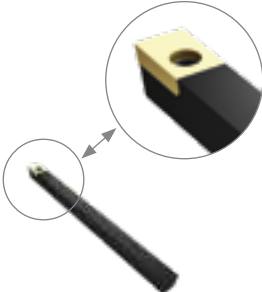
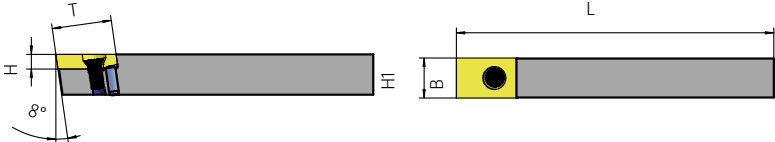
INDEX - TRAUB AUTOMATIC LATHES

FLAT FORM

Version	Program no.	Dimensions in mm	Availability	Item no.	Spare parts									
B 	Width 12 - 32 mm													
	Program no.	B	H	T	D	H1	N	Item no.	S	D	Z	G		
	H 3016 - 0300 0125 N	16	3	12	20	20	24	○	07101943	3	1	3	2.5	
	H 3032 - 0300 0125 N	32	3	12	20	20	24	●	07101946	3	1	3	2.5	
	H 3014 - 0800 0125 N	14	8	12	20	20	24	●	00066760	3	1	3	2.5	
	H 3016 - 0800 0125 N	16	8	12	20	20	24	○	07100170	3	1	3	2.5	
	H 3020 - 0800 0125 N	20	8	12	20	20	24	●	00060586	3	1	3	2.5	
	H 3025 - 0800 0125 N	25	8	12	20	20	24	●	00066762	3	1	3	2.5	
	H 3032 - 0800 0125 N	32	8	12	20	20	24	●	07104001	3	1	3	2.5	
	H 3016 - 0300 0142 N	16	3	12	26	20	26	●	07104160	3	1	3	2.5	
	H 3020 - 0300 0142 N	20	3	12	26	20	26	●	07100397	3	1	4	2.5	
	H 3025 - 0300 0142 N	25	3	12	26	20	26	●	07100396	3	1	3	2.5	
	H 3032 - 0300 0142 N	32	3	12	26	20	26	●	07105821	3	1	3	2.5	
	H 3016 - 0700 0142 N	14	7	15	29	20	26	●	07103805	3	1	3	2.5	
	H 3020 - 0700 0142 N	25	7	15	29	20	26	●	07103806	3	1	3	2.5	
	H 3025 - 0700 0142 N	25	7	15	29	20	26	●	07103807	3	1	3	2.5	
	H 3032 - 0300 0142 N	32	7	15	29	20	26	●	07103808	3	1	3	2.5	
	H 3012 - 0300 0142 N	12	8	12	26	20	26	●	07104923	3	1	3	2.5	
	H 3014 - 0300 0142 N	14	8	12	26	20	26	●	00066761	3	1	3	2.5	
	H 3016 - 0300 0142 N	16	8	12	26	20	26	●	07105398	3	1	3	2.5	
	H 3020 - 0700 0142 N	20	8	12	26	20	26	●	07100171	3	1	3	2.5	
	H 3025 - 0700 0142 N	25	8	12	26	20	26	●	00066763	3	1	3	2.5	
	H 3032 - 0700 0142 N	32	8	12	26	20	26	●	07100529	3	1	3	2.5	
	C 	Width >32 - 60 mm												
		Program no.	B	H	T	D	H1	N	Item no.	S	D	Z	G	
		H 3038 - 0800 0125 N	38	8	12	20	20	24	○	07103949	3	1	3	2.5
		H 3045 - 0800 0125 N	45	8	12	20	20	24	○	00060522	3	1	3	2.5
		H 3045 - 0300 0142 N	45	3	12	20	20	26	●	07108966	3	1	3	2.5
H 3038 - 0700 0142 N		38	7	15	20	20	26	●	07103753	3	1	3	2.5	
H 3045 - 0700 0142 N		45	7	15	20	20	26	●	07103809	3	1	3	2.5	
H 3060 - 0700 0142 N		60	7	15	20	20	26	●	07104607	3	1	3	2.5	
H 3038 - 0800 0142 N		38	8	12	20	20	26	●	07105537	3	1	3	2.5	
H 3045 - 0800 0142 N		45	8	12	20	20	26	●	00060523	3	1	3	2.5	


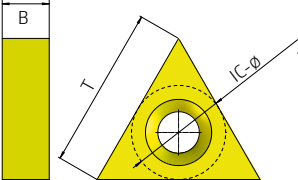

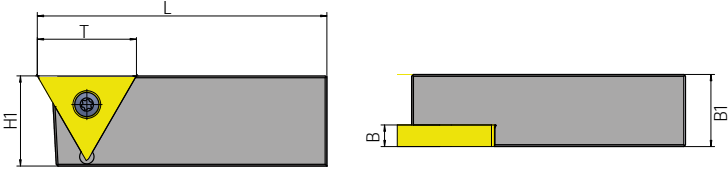

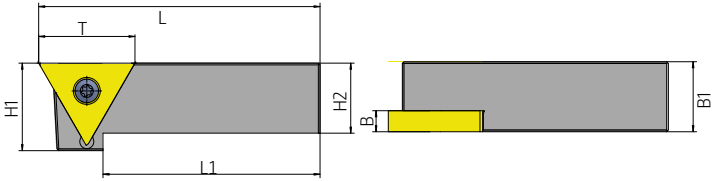
● = from stock
 ○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.
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SHANK HOLDERS FOR **FLAT FORM INSERTS PROGRAM NO.S 31 + 33**

Version	Program no.	Dimensions in mm					Avail-ability	Item no.	Spare parts			
	▼	B	H	T			▼	▼	▼	▼		
RANGE 31							K10F	Item no.				
		Program no.	B	H	T							
		W 3110 - 0200 0000 N	10	2	18			●	07205010			
		W 3112 - 0200 0000 N	12	2	18			●	07205012			
	W 3114 - 0200 0000 N	14	2	18			●	07205014				
RANGE 31												
		Program no.	B	H	T	H1	L	Avail.	Item no.	S	Z	G
		H 3110 - 1010 0002 N		2	18	10	150	●	07115210	7	6	T9
		H 3110 - 1610 0002 N	10	2	18	16	150	●	07115211	7	8	T9
		H 3110 - 2010 0002 N		2	18	20	150	●	07115215	7	8	T9
		H 3112 - 1012 0002 N	12	2	18	10	150	●	07115212	7	6	T9
		H 3112 - 2012 0002 N		2	18	20	150	●	07115216	7	8	T9
	H 3114 - 1014 0002 N	14	2	18	10	150	●	07115214	7	6	T9	
RANGE 33							K10F	Item no.				
		Program no.	B	H	T							
		W 3308 - 0300 0000 N	8	3	18			●				
		W 3310 - 0300 0000 N	10	3	18			●	10029903			
		W 3312 - 0300 0000 N	12	3	18			●	10029904			
	W 3314 - 0300 0000 N	14	3	18			●	10029905				
RANGE 33												
		Program no.	B	H	T	H1	L	Avail.	Item no.	S	Z	G
		H 3308 - 0808 0003 N	8	3	18	8	125	●	10029907	7	4	T9
		H 3310 - 0810 0003 N	10	3	18	8	125	●	10029908	7	4	T9
		H 3312 - 0812 0003 N	12	3	18	8	125	●	10029909	7	4	T9
	H 3314 - 0814 0003 N	14	3	18	8	125	●		7	4	T9	

- = from stock
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SHANK HOLDERS FOR **TRIANGULAR INSERT ECONOMY 3**


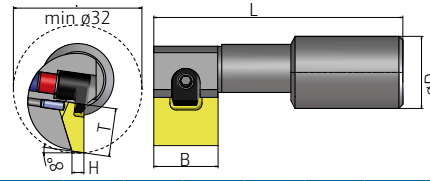
	Program no.	Dimensions in mm				Avail-ability	Item no.	Avail-ability	Item no.	
	▼						▼		▼	
										
	Program no.	B	T	IC	K10F	Item no.	P20-30	Item no.		
	SK 5401 - 16-4,76 N	4.76	16	9.52	●	07200024	●	07204275		
	SK 5401 - 16-6,00 N	6.00	16	9.52	●	10016392				
	SK 5401 - 16-8,00 N	8.00	16	9.52	●	10026297				
	SK 5401 - 27-6,00 N	6.00	27	18.88	●	07204530				
SK 5401 - 27-10,00 N	10.00	27	18.88	●	10035801					
										
	Program number	Dimensions in mm					Avail.	Item number	Spare parts	
		B	T	H1	B1	L			S	G
	SK 5400 - 1604 - 1616 R	4.76	16	16	16	125	○	07100260	11	T15
	SK 5400 - 1604 - 2016 R	4.76	16	20	16	125	●	07100024	11	T15
	SK 5400 - 1604 - 2520 R	4.76	16	25	20	125	●	07101902	11	T15
	SK 5400 - 2704 - 2520 L	4.76	27	25	20	125	●	07109659	11	T15
	SK 5400 - 1606 - 2520 R	6.00	16	25	20	125	●	10026286	11	T15
	SK 5400 - 2706 - 2520 L	6.00	27	25	20	125	●	07107213	20	T20
SK 5400 - 1608 - 2016 R	8.00	16	20	16	125	●	07107214	20	T20	
SK 5400 - 2710 - 2520 R	10.00	27	25	20	125	○	10036208	20	T20	
										
	Program number	Dimensions in mm					Avail.	Item number	Spare parts	
		B	T	H1	H2	B1	L		S	G
SK 5400 - 1604 - 1216 R	4.76	16	16	12	16	125	●	07109263	11	T15

● = from stock

○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.

* = available on request with internal coolant supply (ICS)

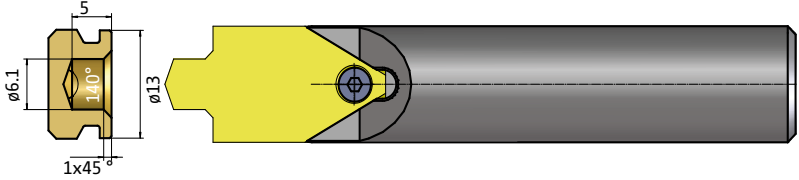
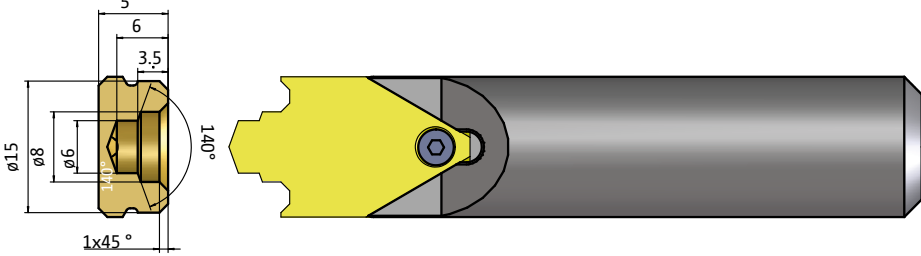
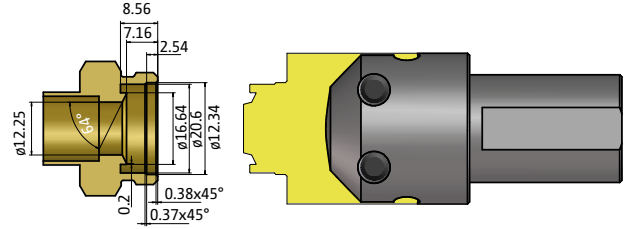
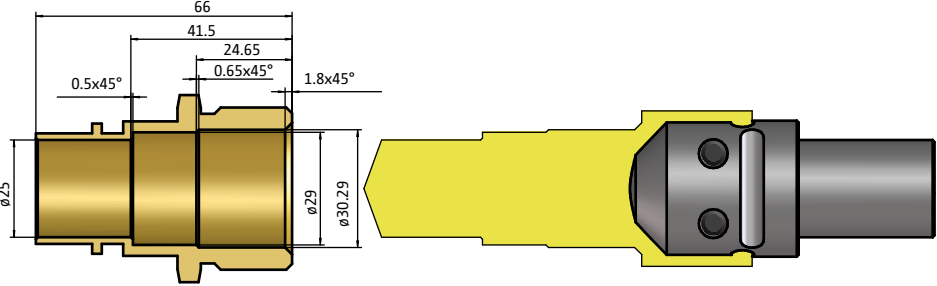
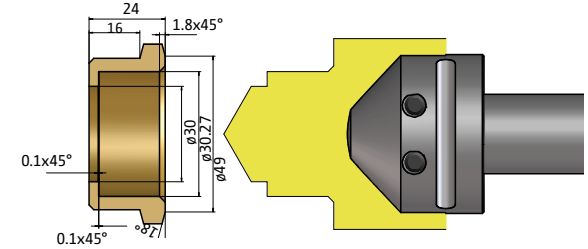
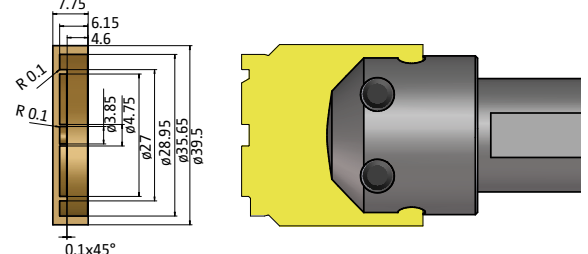
BORING BARS AND SHANK HOLDERS FOR **FLAT FORM INSERTS**

	Program no.	Dimensions in mm				Avail-ability	Item no.	Spare parts					
	▼						▼	▼ ▼ ▼ ▼					
													
	Program no.	B	H	T		K10F	Item no.						
	SK 5338 - 14 x 13,24 R	14	3	13.24		●	07204000						
	SK 5338 - 20 x 13,24 L	20	3	13.24		○	07204192						
	SK 5338 - 20 x 13,24 R		3	13.24									
SK 5338 - 25 x 13,24 R	25	3	13.24		○	07208154							
													
	Program no.	B	H	T	D	L	Avail.	Item no.	S	Z			
	SK 5293 R	14	3	16.8	12	64	●	07101696	7	T9			
													
	Program no.	B	H	T	D	L	Avail.	Item no.	S	D	Z	G	
	H 3016 0300 3015 R	16	3	12	18	62	●	07104168	3	6	1	2.5	
													
	Program no.	B	H	T	D	L	Avail.	Item no.	S	D	Z	G	
	H 3025 0300 3033 R	25	3	12	18	62	●	07105504	3	6	1	2.5	
													
	Program number	Dimensions in mm								Item	Spare parts		
		B	H	T1	B1	L	L1	H1	H2	Avail.	number	S	Z
	SK 5775 R	14	3	20	12	100	83	20	20.5	●	07102512	7	T9


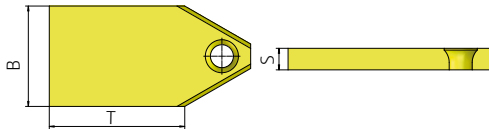

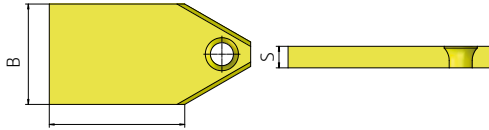

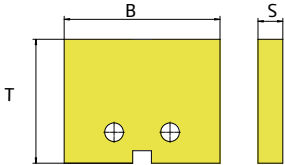
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FORM DRILLING with removable inserts

Examples of use:

<p>SK 5820-14-28 SK 5816-14</p>	
<p>SK 5820-16-28 SK 5816-16</p>	
<p>SK 5397-35-60 SK 5800-22.5 HB</p>	
<p>SK 5397-40-100 SK 5899-31.5 HA</p>	
<p>SK 5397-60-80 SK 5936 HA</p>	
<p>SK 5397-40-60 SK 5800-22.5 HB</p>	

REMOVABLE INSERTS FOR **FORM DRILLS**




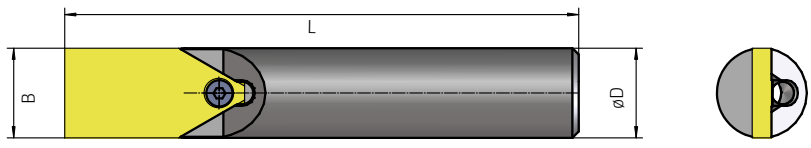

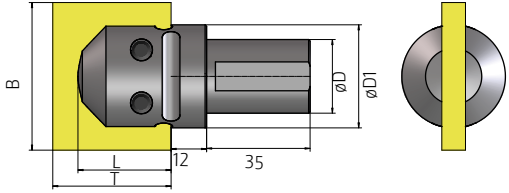
	Program no. ▼	Dimensions in mm			Carbide quality ▼	Item no. ▼
Removable insert, small 						
	Program no.	B	T	S	K30F	Item no.
	SK 5820 - 10	10	9.2	2	●	07282200
	SK 5820 - 12	12	7.5	2	●	07282201
	SK 5820 - 14	14	17.8	2	●	07282202
SK 5820 - 16	16	16.0	2	●	07282203	
Removable insert, medium 						
	Program no.	B	T	S	K30F	Item no.
SK 6372 - 25	25	40	6	○		
Removable insert, large 						
	Program no.	B	T	S	K30F	Item no.
	SK 5397 - 35 - 30	35	30	8	●	07200404
	SK 5397 - 35 - 40		40	8	●	07204166
	SK 5397 - 35 - 60		60	8	●	07204161
	SK 5397 - 40 - 60	40	60	8	●	07204272
	SK 5397 - 40 - 100		100	8	●	07204224
	SK 5397 - 50 - 40	50	40	8	●	07204147
	SK 5397 - 50 - 100		100	8	●	07204471
	SK 5397 - 60 - 80	60	80	8	●	07204559

● = from stock

○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.

* = available on request with internal coolant supply (ICS)


HOLDERS FOR **FORM DRILLS**


	Program no. ▼	Dimensions in mm					Avail- ability	Item number ▼	Spare parts ▼ ▼	
Holder for removable inserts, small, with ICS 										
	Program no.	B	T	L	Dh6		Item no.	S	G	
	SK 5816 - 10	10	9.2	60	10	●	07107253	7	T9	
	SK 5816 - 12	12	7.5	60	12	●	07107254	7	T9	
	SK 5816 - 14	14	17.8	80	14	●	07107255	7	T9	
SK 5816 - 16	16	16.0	80	16	●	07107256	7	T9		
Holder for removable inserts, medium, with ICS 										
	Program no.	B	T	L	Dh6		Item no.	S	G	
SK 6373 - 25	25	30	150	25	○					
Holder for removable inserts, large 										
	Program no.	D1	T	B	L	Dh6		Item no.	S	G
	SK 5899 - 31,5 *	35	40-100	35-50	31.5	25	●	07108914	20	T20
	SK 5899 - 22,5 *		30-100	35-50	22.5	25	●	07109427	20	T20
	SK 5800 - 31,5 *		40-100	35-50	31.5	25	○	07107300	20	T20
	SK 5800 - 22,5 *		30-100	35-50	22.5	25	○	07102477	20	T20
	SK 6023 - 31,5 *		40-100	35-50	31.5	25	●	07109596	20	T20
SK 5936 - 32,5 *	50	40-100	50-60	32.5	25	●	07109344	20	T20	

● = from stock
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 * = available on request with internal coolant supply (ICS)

FLAT FORM **SPARE PARTS**

	Group		Description	Size in mm	Program number	Avail.	Item number
	S	1	set of clamping fingers		172.9-825.1		07900426
		2		174.9-830.2	●	07900385	
	S	3	clamping claw		Y 2162	●	00066504
	S	4	special-purpose clamping claw		Y 11467	●	07104654
	S	7	torx screw		M3 x 7	●	07762157
		11		M3,5 x 11	●	07764038	
		20		M5 x 20	●	07761230	



	Group		Description	Size in mm	Program number	Avail.	Item number
	D	6	double set screw	12.5	Y 2106	●	00061912
		1		15	Y 2101	●	00060185
		3		19	Y 2103	●	00060186
		4		24	Y 2104	●	00060186




	Group		Description	Size in mm	Program number	Avail.	Item number
	D	6	fixing bolt	4mm	2m6 x 4	●	
		1		6mm	2m6 x 6	●	07763091
		3		8mm	2m6 x 8	●	07761466
		4		12mm	2m6 x 12	●	07761904

- = from stock
- = available at short notice, price and delivery time on request. Special sizes and other designs on request.
- * = available on request with internal coolant supply (ICS)

FLAT FORM **SPARE PARTS**

FLAT FORM

	Group		Description	Size in mm	Program number	Avail.	Item number
	M	5	adjusting screw	M6 x 5		●	07761195
	M	30	forcing screw / set screw	M5 x 30	DIN 913	●	00091465

	Group		Description	Size in mm	Program number	Avail.	Item number
	G	1.5	Allen key	SW 1.5			
		2		SW 2			
	G	2.5	Allen key with handle	SW 2.5	Y 2119	●	07104678
		3		SW 3	Y 9287	●	07104679
		4		SW 4	Y 7111	●	07104680
	G	T9	torx key with large flag		T9	●	07762160
		T15			T15	●	07762161
		T20			T20	●	07762985

● = from stock

○ = available at short notice, price and delivery time on request. Special sizes and other designs on request.

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DATA SHEET FOR PROFILED FLAT FORM TOOLS

Company: _____
 Street: _____
 Postal code: _____ City: _____

Name: _____
 E-mail: _____
 Phone: _____

TOOL DATA

Platform holder

H 30 _____ Pieces: _____

- Shank type cutting holder
- INDEX holder
- SCHÜTTE holder
- TORNOS holder

Platform insert

W 30 _____ Pieces: _____

- Height 2 mm
 - Height 3 mm
 - Height 7 mm
 - Height 8 mm
- Tolerance for tolerated dimensions:
 ±0,01 ±0,03 ± _____

Additional information: _____

Machine manufacturer _____

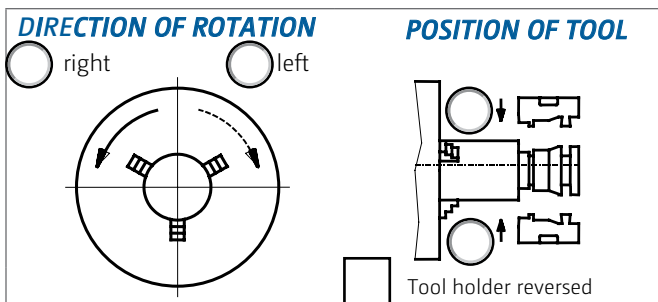
Position: 1 2 3 4 5 6

Speed: _____ rpm

Feed: _____ mm/rev

Machine type: _____

- Direction of grooving: radial
- axial
- internal grooving



Important: Mark the required machining in the drawing!

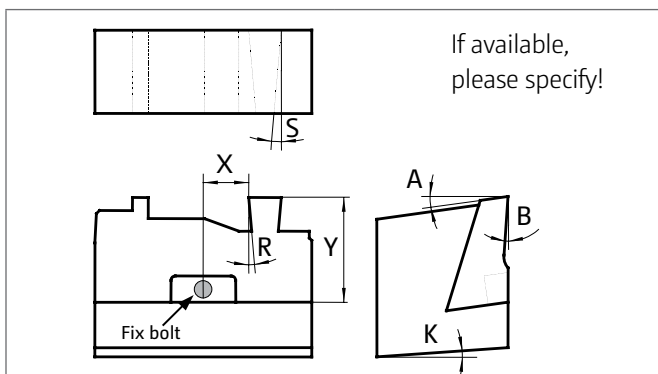
Customer drawing number: _____

Material: _____

Important: Mark the part-off side in the drawing with "XXX"!

Width for parting off: _____ mm

Side for parting off: _____



A = Front relief angle: _____ °

B = Effective rake angle: _____ °

S = Side clearance: _____ °

R = Radial relief angle: _____ °

K = Tilt angle (tool in the machine): _____ °

X = Position to the bolt: _____ mm

Y = Max. length of insert: _____ mm

Please send the completed data sheet by email to Markus Fuchs: mfuchs@leistriz.com
 or by fax to **+49 (0) 9654 89-10**

please detach here →

YOUR CONTACT FOR INQUIRIES AND ORDERS

Markus Fuchs

mfuchs@leistritz.com · +49 9654 / 89-855

DESIGN SPECIFICATIONS IN YOUR DRAWING TEMPLATE FOR FLAT FORM TOOLS

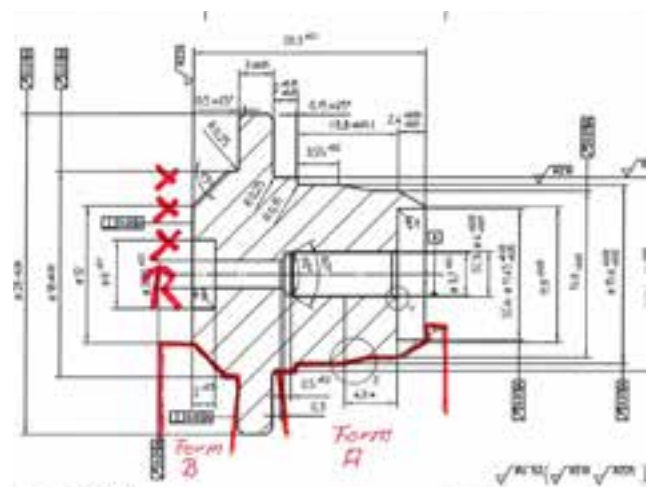
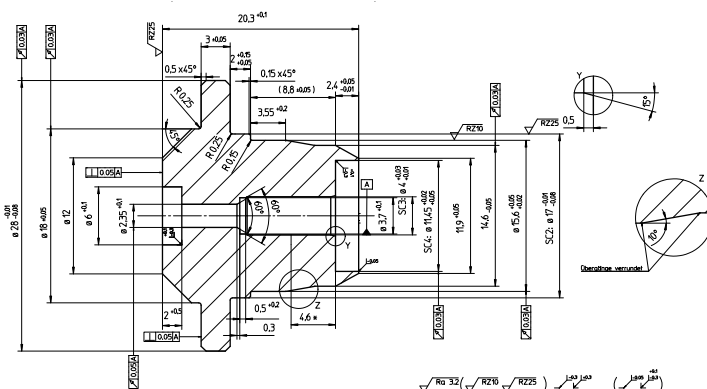
1. Draw the entire workpiece!

Please make sure that everything is clearly legible.

2. Indicate the desired machining in the workpiece drawing!

XXX for cut-off end

R for clockwise rotation of the machine



* Passlänge für $\varnothing 4 \pm 0.03/+0.01$
restlicher Bereich der Bohrung, $\varnothing 4 \pm 0.05$

Vorgeglühtes Stangenmaterial
Werkstoff: 1.0718 DIN EN 10277-3
Kerzilhfeldstärke: max.280 A/m
(gemessen am Stangenmaterial)

Pos.	Menge	Bezeichnung	Maßstab	Blatt Nr.	Blattinh.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.	Blattanz.



LEISTRITZ **REGRINDING SERVICE**

What do we do with your delivered inserts?

- We assess whether they are still economically regrindable.
- We regrind the chip breakers, according to the wear mark.
- We recoat.*
- We label with insert height.
- We laser the chip breaker true to contour.*

** if necessary*



worn cutting edge



reground and recoated

YOUR CONTACT FOR THE REGRINDING SERVICE

Levent Birol

lbirol@leistriz.com · +49 9654 / 89-917

Shipping address:

Leistriz Produktionstechnik GmbH
Leistrizstr. 1-11 · 92714 Pleystein



We combine inserts with the same profile, group them according to the height of the wear mark and regrind them to have the same point height. You benefit from low setup costs. A further advantage of this service: The holder needs to be adjusted for height inside the machine only once.

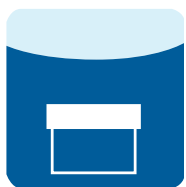
Lasering of chip breakers true to contour for new tools as well as regrinding



Coating service

At Leistriz, reground tools can of course be recoated with their original coating. Using our service guarantees that the original cutting edge geometry - e.g. relief and rake angle, cutting edge preparation, etc. - as well as the specified coating are maintained. For our customers this means: **consistent quality and long tool life!**

Shipping service



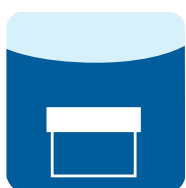
Put defective tools into the Leistriz regrinding box



Shipping to Leistriz



Testing, regrinding and recoating of tools



Reworked tools are put into the Leistriz regrinding box



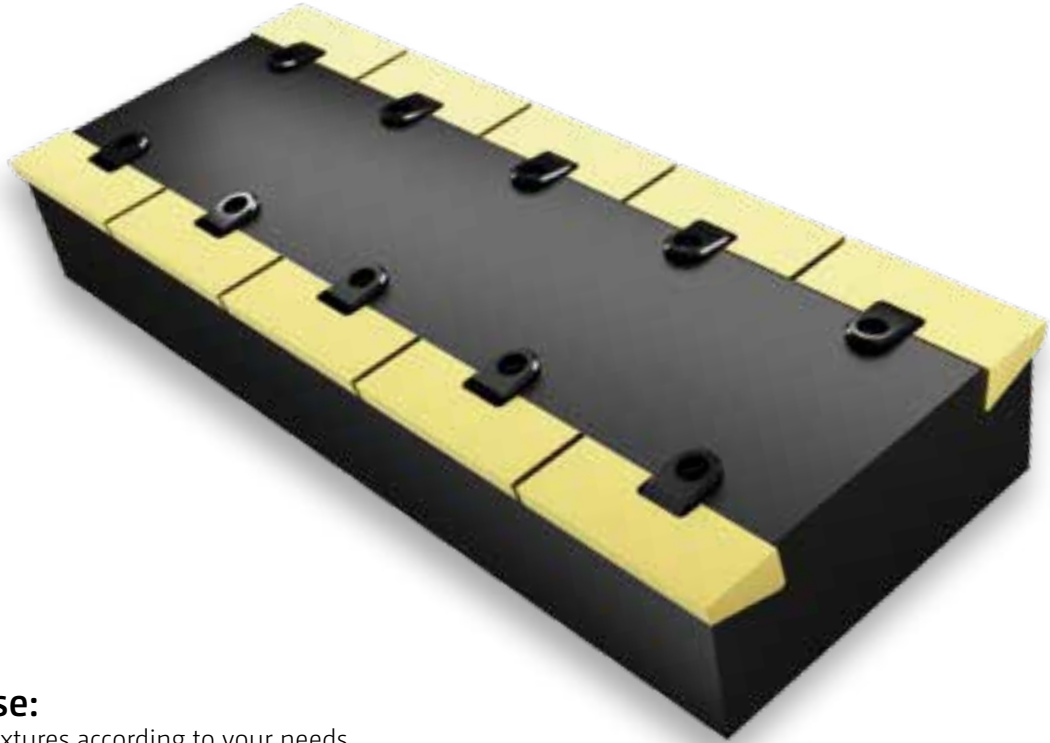
Shipping to the customer



Tools are available again to the customer

FIXTURES FOR REGRINDING

Can be fitted on 2 sides



Examples of use:

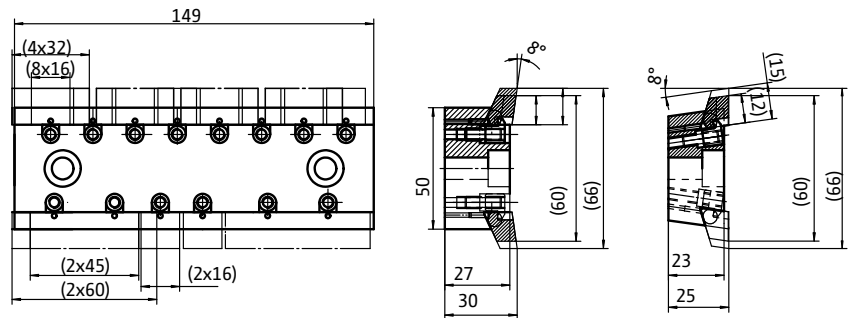
We manufacture the fixtures according to your needs.

Side A with:

- 4 inserts, widths 18 - 32 mm
- 8 inserts, widths < 16 mm

Side B with:

- 2 inserts, width 60 mm
- 2 inserts, widths 38 - 45 mm
- 6 inserts ≤ 16 mm



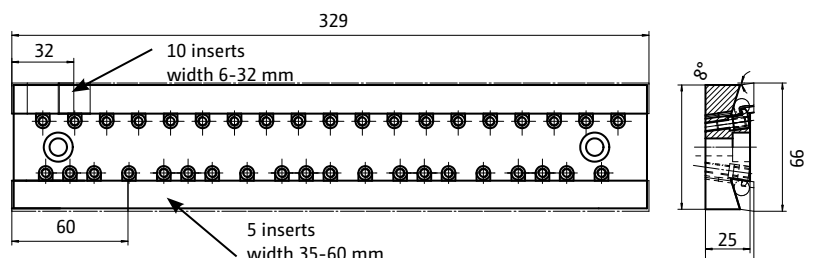
Order number	Angles for clamped inserts		Availability	Item no.:
	Relief angle	Rake angle		
SK 5538	0°	8°	●	07101632
SK 5539	8°	0°	●	07101633

Side A with:

- 10 inserts, widths 18 - 32 mm
- 19 inserts, widths 6 - 16 mm

Side B with:

- 5 inserts, widths 38 - 60 mm
- 8 inserts, widths 28 - 32 mm
- 10 inserts, widths 14 - 25 mm
- 20 inserts, widths 6 - 12 mm



Order number	Angles for clamped inserts		Availability	Item no.:
	Relief angle	Rake angle		
SK 5426	8°	0°		

CUTTING VALUE TABLE FOR PROFILE GROOVING WITH FLAT FORM INSERTS

Benchmarks for cutting speed and feed

Material			"Vc = Cutting speed in m/min"		f = Feed in mm per rev. on condition		
	Grade / designation	No.:	K10F	WA10/WK10	optimal	normal	minimal
Table for steel and gray cast iron							
Structural steels: DIN 1652, DIN 17100	St 37	10.120	130	170	0.04	0.03	0.02
	St 37-2	10.161	130	170	0.04	0.03	0.02
	St 42	10.140	130	170	0.04	0.03	0.02
	St 42-2	10.181	130	170	0.04	0.03	0.02
	St 50	10.531	120	150	0.04	0.03	0.02
	St 50-2	10.533	120	150	0.04	0.03	0.02
	St 60-2	10.543	120	150	0.035	0.025	0.02
	St 70-2	10.633	100	130	0.035	0.025	0.02
High-grade and quality case-hardening steels; non-alloy DIN 17210	C 10	10.301	130	170	0.04	0.03	0.02
	C k 10	11.121	130	170	0.04	0.03	0.02
	C 15	10.401	130	170	0.04	0.03	0.02
	C k 15	11.141	130	170	0.04	0.03	0.02
High-grade and quality quenched and tempered steels non-alloy DIN 1652, DIN17210	C 35	10.501	120	150	0.04	0.03	0.02
	C k 35	11.191	120	150	0.04	0.03	0.02
	C 45	10.503	120	150	0.04	0.03	0.02
	C k 45	11.191	120	150	0.04	0.03	0.02
	C 60	10.601	100	130	0.035	0.025	0.02
	C k 60	11.221	100	130	0.035	0.025	0.02
Stainless steels DIN 17440	X 20 Cr 13	14.021	100	130	0.03	0.025	0.015
	X 40 Cr 13	14.034	100	130	0.03	0.025	0.015
	X 12 Cr Mo S 17	14.104	100	130	0.03	0.025	0.015
	X 8 Cr 17	14.016	100	130	0.03	0.025	0.015
	X 12 Cr Ni S 1808	14.305	110	140	0.03	0.025	0.015
	X 5 Cr Ni Mo 1810	14.401	90	120	0.03	0.025	0.015
	X 10 Cr Ni Mo Ti 1810	14.571	60	80	0.03	0.025	0.015
Rolling bearing steel	100 Cr 6 (W3)	1.3505	100	130	0.025	0.02	0.015
Gray cast iron DIN 1691	GG- 10	0.6010	80	100	0.05	0.03	0.02
	GG- 20	0.6020	80	100	0.05	0.03	0.02
	GG- 30	0.6030	70	90	0.05	0.03	0.02
	GG- 40	0.6040	70	90	0.05	0.03	0.02
	GGG- 40	0.7040	120	160	0.05	0.03	0.02
Cast iron DIN 1693	GGG- 50	0.7050	80	100	0.05	0.03	0.02
	GGG- 60	0.7060	80	100	0.05	0.03	0.02
	GGG- 70	0.7070	60	80	0.05	0.03	0.02
	GGG- 80	0.7080	60	80	0.05	0.03	0.02
Free-cutting steels: DIN 1651	9 S 20	10.711	130	170	0.05	0.04	0.02
	9 S Mn 28	10.715	120	150	0.05	0.04	0.02
	9 S Mn Pb 28	10.718	170	200	0.05	0.04	0.02
	9 S Mn Pb 28 Te		170	200	0.05	0.04	0.02
	9 S Mn 36	10.736	160	190	0.05	0.04	0.02
	9 S Mn Pb 36	10.737	160	200	0.05	0.04	0.02
	10 S 20	10.721	140	180	0.04	0.03	0.02
	10 S Pb 20	10.722	140	180	0.04	0.03	0.02
	35 S 20	10.726	120	150	0.04	0.03	0.02
	45 S 20	10.727	100	130	0.04	0.03	0.02
	60 S 20	10.728	100	130	0.04	0.03	0.02

All data are considered rough benchmarks, which strongly depend on the existing underlying conditions. Values that are 30-35% above or below these figures are quite realistic. The values should be adjusted to the condition of the machine tool.

CUTTING VALUE TABLE FOR PROFILE GROOVING WITH FLAT FORM INSERTS

Benchmarks for cutting speed and feed

Material		No.:	"Vc = Cutting speed in m/min"	f = Feed in mm per rev. on condition		
Grade / designation	K10F		optimal	normal	minimal	
Table for non-ferrous metals						
Aluminum, wrought and cast alloys DIN 1725	Al Mg Si Pb	3.0615	500	0.08	0.04	0.02
	Al Cu Mg Pb	3.1645	500	0.08	0.04	0.02
	Al Cu Bi Pb	3.1655	500	0.08	0.04	0.02
	Al Mg 5	3.3555	700	0.08	0.04	0.02
	G - Al Si 12	3.2581.01	200	0.08	0.04	0.02
High-grade zinc casting alloy DIN 1743	G - Zn A14 Cu3	2.2143.01	350	0.08	0.04	0.02
Copper-zinc alloys / brass DIN 17660	"Cu Zn 40 Pb 3 (MS58)"	2.0405	400	0.08	0.04	0.02
	"Cu Zn 36 (MS63)"	2.0335	350	0.08	0.04	0.02
	"Cu Zn 36 Pb 3 (MS63Pb)"	2.0375	400	0.08	0.04	0.02
	"Cu Zn 40 Mn Pb (So Ms 58 Pb)"	2.0580	400	0.08	0.04	0.02
Copper alloys DIN 17666	Cu SP	2.1498	350	0.08	0.04	0.02
	Cu Te P (SF cu Te)	2.1546	350	0.08	0.04	0.02
Cast tin bronze, DIN 1705	G - Sn Bz 14	2.1056.01	350	0.05	0.03	0.02
	G - Sn Bz 12	2.1052.01	350	0.05	0.03	0.02
	G - Sn Bz 10	2.1050.01	350	0.05	0.03	0.02

All data are considered rough benchmarks, which strongly depend on the existing underlying conditions. Values that are 30-35% above or below these figures are quite realistic. The values should be adjusted to the condition of the machine tool.

END FINISHING TOOLS



TOP TURN

The perfect end finishing of workpieces with a diameter of 1 mm or more.

The two-piece tool consists of a basic holder, which can be manufactured with customized shank designs, and an exchangeable form insert with up to four cutting edges. The unused cutting edges are safely protected by an enclosing seat pocket. The actual innovation lies in the special cutting edge geometry of the form inserts. Whether classic facing and chamfering, or a specific profile contour – many things can be manufactured in just one operation.

Customer benefits:

- no displacement of the workpiece
- free of protruding materials
- up to four cutting edges per changeable insert
- unused cutting edges are protected in the insert seat pocket
- basic body can be designed with different machine interfaces
- various profile inserts can be used in one basic body
- optionally with internal coolant supply
- extremely high change accuracy

» Up to four cutting edges per insert ensure maximum profitability and efficiency!

NEW

clamping finger

Leistritz

customized machine interface
designable with internal coolant supply

basic body made of steel

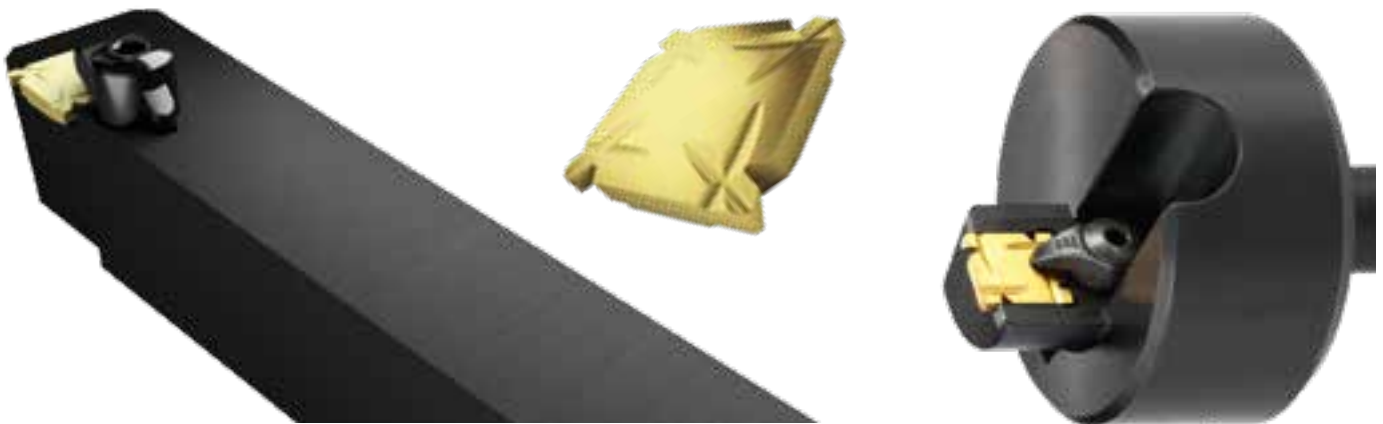
carbide cutting
insert

YOUR CONTACT FOR
INQUIRIES AND ORDERS

Markus Fuchs

mfuchs@leistritz.com · +49 9654 / 89-855

TUBE END-FINISHING WITH TUBE-CHAMFERING INSERTS

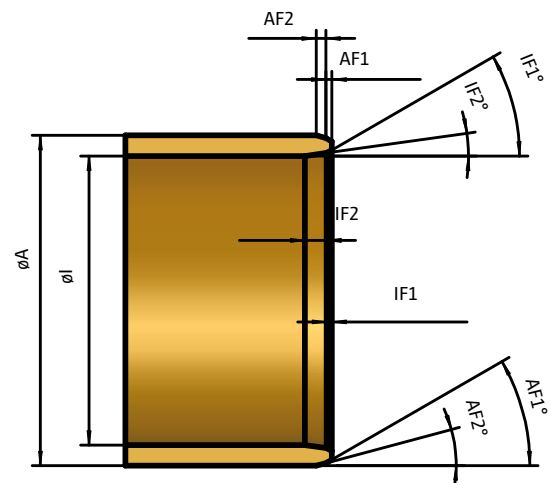


END FINISHING

We profile your tube-chamfering insert for you!

- from inner tube - \varnothing 4 mm
- wall thickness 0.8 - 2 mm
- radii and special designs possible

\varnothing - A in mm	
\varnothing - I in mm	
AF1 - in $^{\circ}$	
AF1 - in mm	
AF2 - in $^{\circ}$	
AF2 - in mm	
IF1 - in $^{\circ}$	
IF1 - in mm	
IF2 - in $^{\circ}$	
IF2 - in mm	



Other versions:



Tube-chamfering head with cylindrical holder



Hollow shank taper, steep taper or matching the holding fixture of your machine



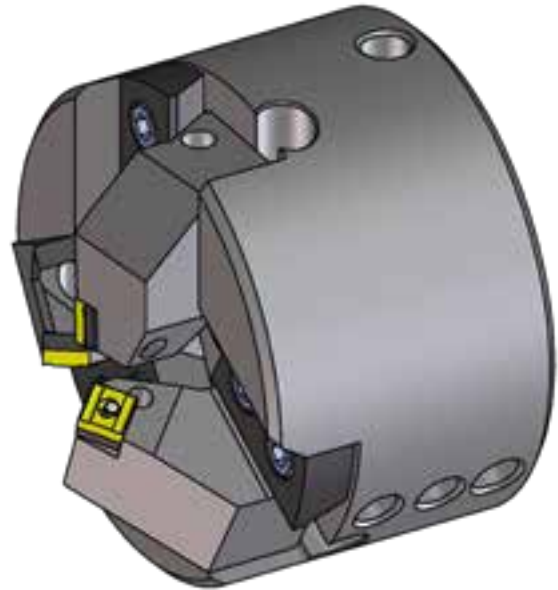
Holder for end finishing, designed to fit your existing tool

TOOL SYSTEM

End finishing tools can be adjusted very flexibly and are suitable for a wide range of machining operations.

CUSTOMER BENEFITS

- up to 5 working operations in one operation
- different workpiece diameters machined with the same tool, as these are radially adjustable
- easy adjustment of the tools
- flexible tooling thanks to a modular system
- tool heads, insert holders and adapters are available from stock
- tool is adaptable to all machines



FIELDS OF APPLICATION

- machining of tubes, shafts and housings
- turning or sharpening of bars
- turning of axle ends
- facing and centering as a preparation for turning between centers

END USERS

- tube / pipe fittings manufacturers
- manufacturing of long tubes
- automotive industry
- fittings industry
- steel manufacturers

OUR SERVICE

Our experienced team of design and application engineers will be happy to assemble from our stock the tool that is best for you.

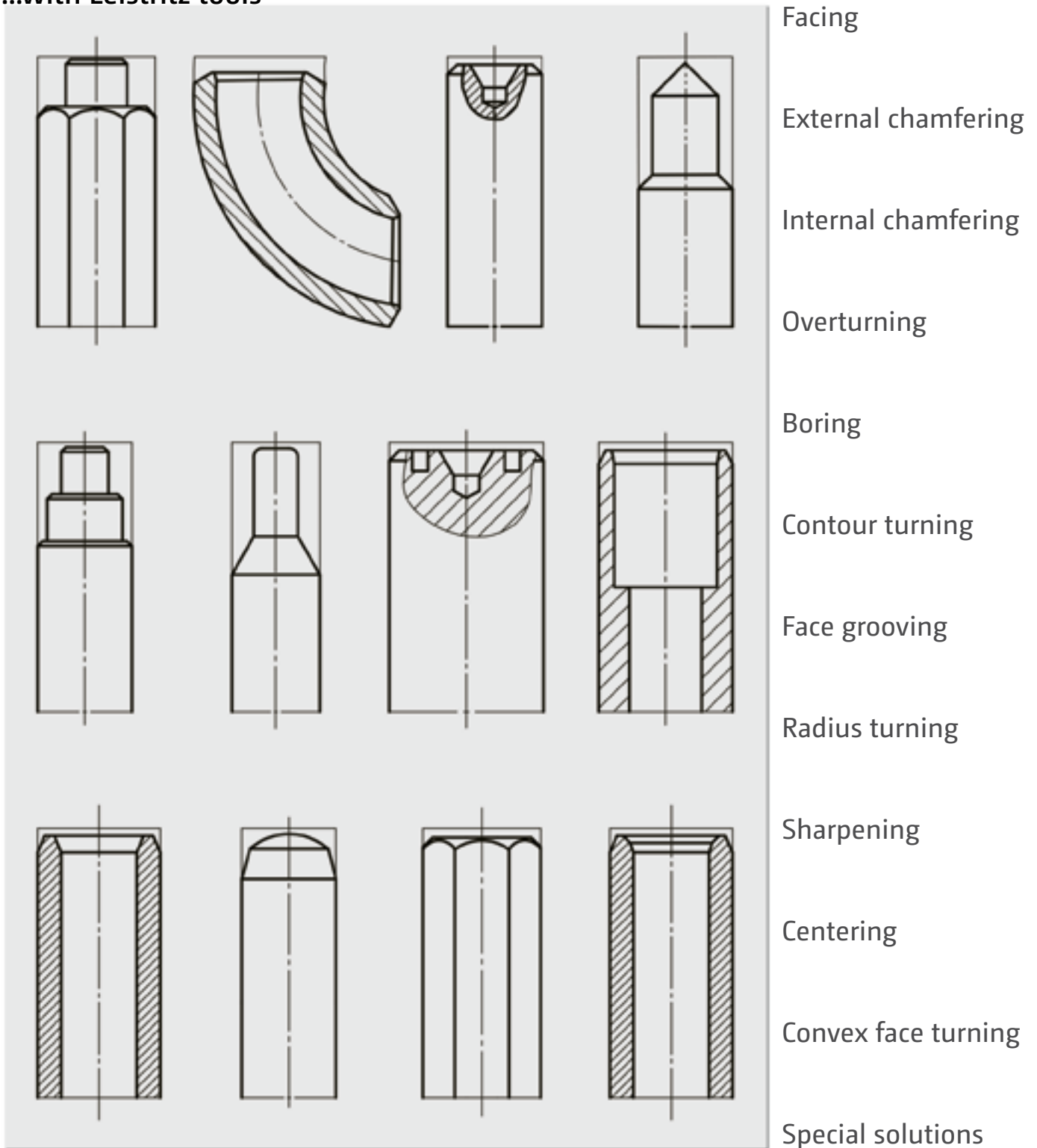
If required, we will supplement it with customized components.

» Try us! We will find a solution also for your task.

PRACTICAL EXAMPLES

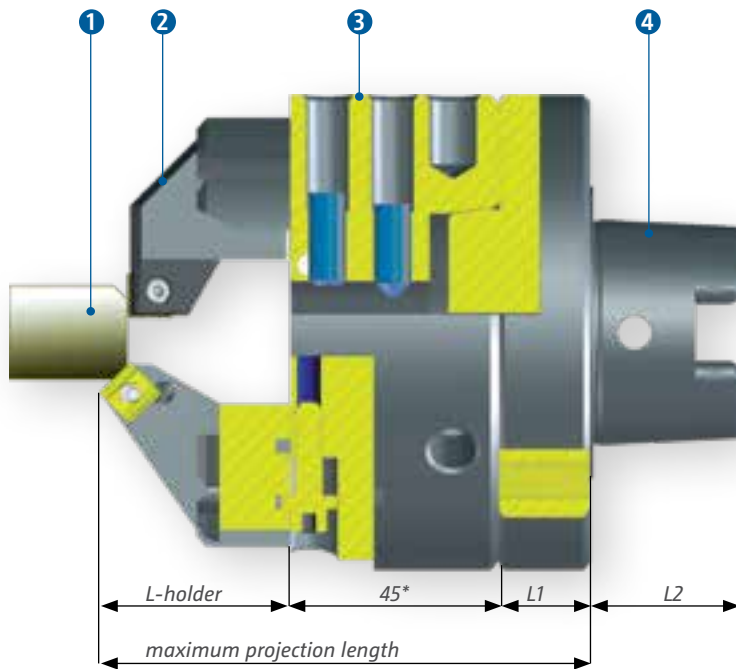
END FINISHING

...with Leistritz tools



➤ End finishing tool

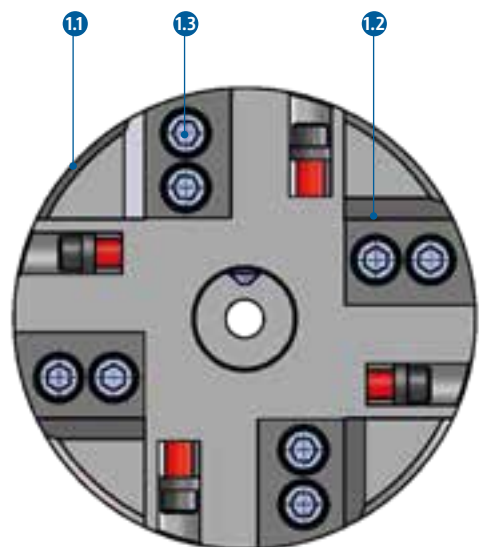
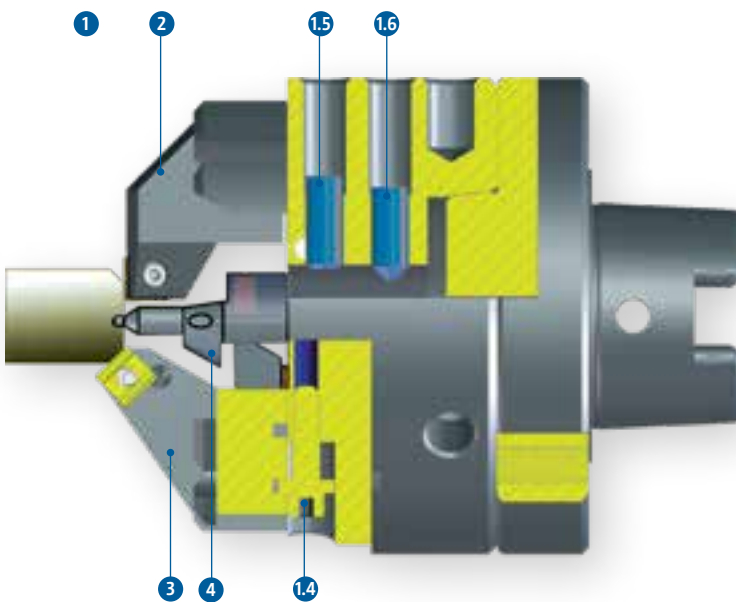
OVERVIEW



- ① workpiece
- ② insert holder
- ③ tool head
- ④ adapter

* applies to all EK 102-1002/3/4
EK 120-1002/3/4
EK 140-1002/3/4

DESIGN OF THE TOOL

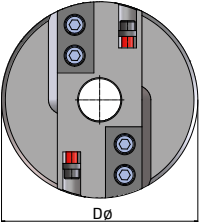


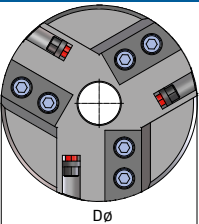
- ① tool head (complete)
- ①.1 basic body
- ①.2 clamping bar
- ①.3 cylinder screw
- ①.4 adjusting screw
- ①.5 set screw (clamping)
- ①.6 set screw (adjustment)
- ② holder for facing operation
- ③ holder for external chamfering
- ④ clamping sleeve

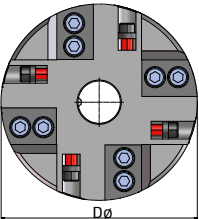
Insert holders on the tool head are radially adjustable, so a variety of workpieces with different diameters can be machined with the same holder.

Also, the holders are interchangeable between the various tool heads. This allows you to remain flexible for future machining tasks.

The adjustment range is determined by the tool head diameter. The following pages show the corresponding adjustment ranges to simplify your choice.

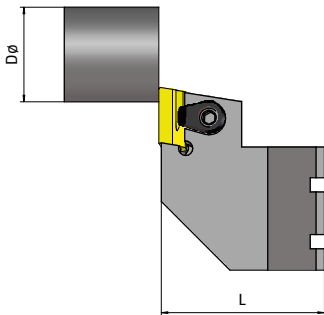
<i>For 2 clamping holders</i>	Program number	Workpiece ϕ (mm)	Tool D ϕ (mm)	Avail.	Item number	Spare parts	
						K	V
	EK 102-1002	0-50	102	●	00060059	1	1
	EK 120-1002	0-70	120	●	00060642	2	2
	EK 140-1002	0-90	140	●	00060933	3	2

<i>For 3 clamping holders</i>	Program number	Workpiece ϕ (mm)	Tool D ϕ (mm)	Avail.	Item number	Spare parts	
						K	V
	EK 102-1003	0-50	102	●	00060060	1	1
	EK 120-1003	0-70	120	●	00060068	2	2
	EK 140-1003	0-90	140	●	00060643	3	2

<i>For 4 clamping holders</i>	Program number	Workpiece ϕ (mm)	Tool D ϕ (mm)	Avail.	Item number	Spare parts	
						K	V
	EK 102-1004	0-50	102	●	00060067	4	1
	EK 120-1004	0-70	120	●	00060071	5	2
	EK 140-1004	0-90	140	●	00060075	3	2

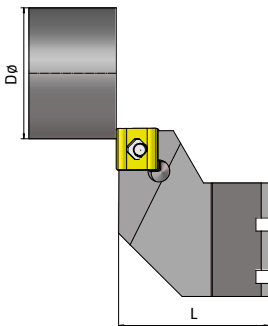
➤ End finishing tool holders

For facing operation



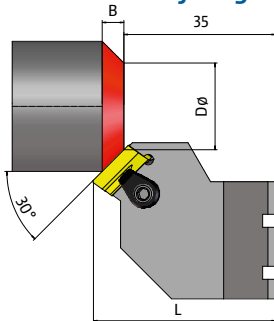
Program number			Tool head ø (mm)			Avail.	Item number	Spare parts		
	L	B	ø102 D	ø120 D	ø140 D			S	D	U
EP 2112 - 9190	35		0-40	0-55	0-75	●	00060076	5	1	1
EP 2112 - 9290	35		20-50	20-70	20-90	●	00060082	5	1	1
matching indexable inserts --> W 2112-xxxx RY										
EP 2115 - 9190	35		0-45	0-60	0-80	●	07102581	6	1	2
EP 2115 - 9290	35		20-55	20-75	20-95	●	07101595	6	1	2

For facing operation



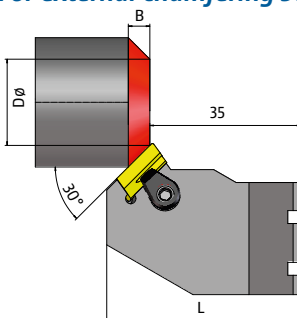
Program number			Tool head ø (mm)			Avail.	Item number	Spare parts		
	L	B	ø102 D	ø120 D	ø140 D			S	D	U
EP 0809 - 9190	35		0-40	0-55	0-75	●	00060107	8	-	3
EP 0809 - 9290	35		20-50	20-70	20-90	●	00060644	8	-	3
matching indexable inserts --> W 0809-xxxx										

For external chamfering 30°



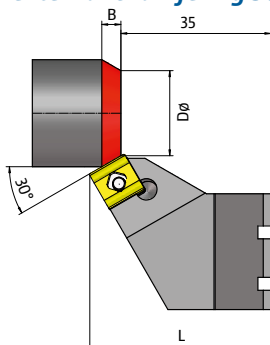
Program number			Tool head ø (mm)			Avail.	Item number	Spare parts		
	L	B	ø102 D	ø120 D	ø140 D			S	D	U
EA 2112 - 8130	44,7	9,5	8-35	11-53	11-73	●	07108898	5	1	4
EA 2112 - 8230	44,7	9,5	15-44	22-61	22-82	●	07102485	5	1	4
matching indexable inserts --> W 2112-xxxx LY										

For external chamfering 30°



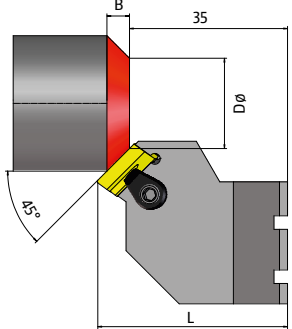
Program number			Tool head ø (mm)			Avail.	Item number	Spare parts		
	L	B	ø102 D	ø120 D	ø140 D			S	D	U
EA 2112 - 9130	47	9.5	10-30	10-48	10-68	●	07103702	5	1	1
EA 2112 - 9230	47	9.5	30-40	30-60	30-80	●	07103701	5	1	1
matching indexable inserts --> W 2112-xxxx RY										

For external chamfering 30°



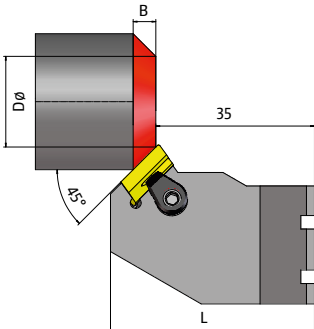
Program number			Tool head ø (mm)			Avail.	Item number	Spare parts		
	L	B	ø102 D	ø120 D	ø140 D			S	D	U
EA 0809 - 8130	42.1	7	10-25	15-45	15-65	●	00060096	8	-	3
EA 0809 - 8230	42.1	7	25-40	30-60	30-80	●	00060097	8	-	3
EA 0809 - 8330	42.1	7	35-50	40-70	40-90	●	00060098	8	-	3
matching indexable inserts --> W 0809-xxxx										

For external chamfering 45°



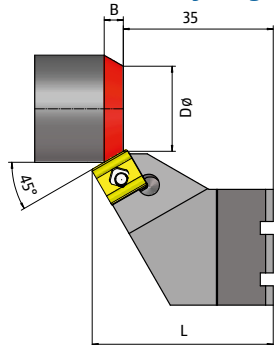
Program number	L	B	Tool head ø (mm)			Avail.	Item number	Spare parts		
			ø102 D	ø120 D	ø140 D			S	D	U
EA 2112 - 8145	42.2	7.5	10-30	10-48	10-68	●		5	1	4
EA 2112 - 8245	42.2	7.5	30-50	30-78	30-88	●		5	1	4
matching indexable inserts --> W 2112-xxxx LY										

For external chamfering 45°



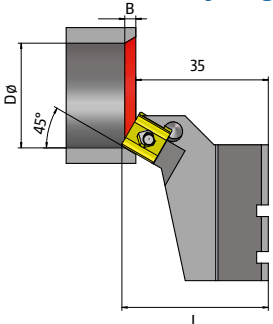
Program number	L	B	Tool head ø (mm)			Avail.	Item number	Spare parts		
			ø102 D	ø120 D	ø140 D			S	D	U
EA 2112 - 9145	45	7.5	10-30	10-48	10-68	●	07103700	5	1	1
EA 2112 - 9245	45	7.5	30-40	30-60	30-80	●	07103699	5	1	1
matching indexable inserts --> W 2112-xxxx RY										

For external chamfering 45°



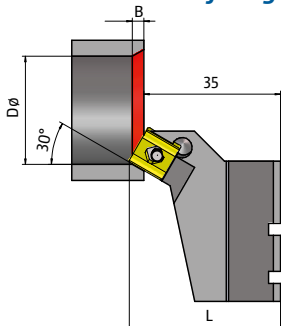
Program number	L	B	Tool head ø (mm)			Avail.	Item number	Spare parts		
			ø102 D	ø120 D	ø140 D			S	D	U
EA 0809 - 8145	41	5.5	10-25	10-40	10-60	●	00060083	8	-	3
EA 0809 - 8245	41	5.5	25-40	30-45	30-75	●	00060088	8	-	3
EA 0809 - 8345	41	5.5	40-50	40-70	40-90	●	00060089	8	-	3
matching indexable inserts --> W 0809-xxxx										

For internal chamfering 45°



Program number	L	B	Tool head ø (mm)			Avail.	Item number	Spare parts		
			ø102 D	ø120 D	ø140 D			S	D	U
EI 0809 - 6145	36.4	5.5	10-25	15-45	15-65	●	00060100	9	-	5
EI 0809 - 6245	36.4	5.5	25-40	30-60	30-80	●	00060101	9	-	5
EI 0809 - 6345	36.4	5.5	35-50	40-70	40-90	●	00060102	9	-	5
matching indexable inserts --> W 0809-xxxx										

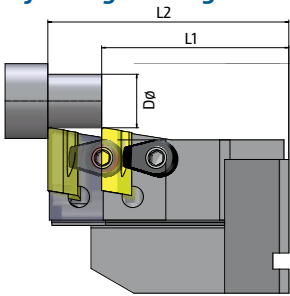
For internal chamfering 30°



Program number	L	B	Tool head ø (mm)			Avail.	Item number	Spare parts		
			ø102 D	ø120 D	ø140 D			S	D	U
EI 0809 - 6130	37.8	7	15-30	15-45	15-67	●	07109007	9	-	5
EI 0809 - 6230	37.8	7	25-45	30-65	30-85	●	07106097	9	-	5
matching indexable inserts --> W 0809-xxxx										

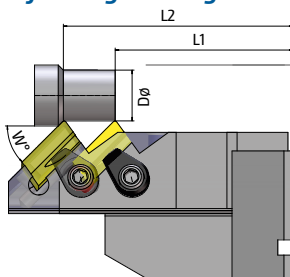
➤ End finishing tool holders

Adjustable holder for long. turning 90°



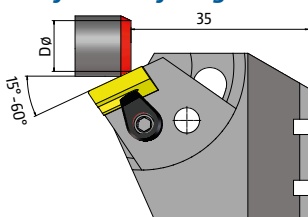
Program number	Tool head ø (mm)			Holder length		Item number	Spare parts		
	ø102	ø120	ø140	L1 - L2	Avail.		S	D	U
EÜ 2112 - 1090	10-30	15-50	15-60	35 - 45	●	10030150	5	1	1
EÜ 2112 - 2090	10-30	15-50	15-60	45 - 55	●	07107282	5	1	1
EÜ 2112 - 3090	10-30	15-50	15-60	55 - 65	●	10021418	5	1	1
matching indexable inserts → W 2112-xxxx RY									

Adjustable holder for long. turning 45°



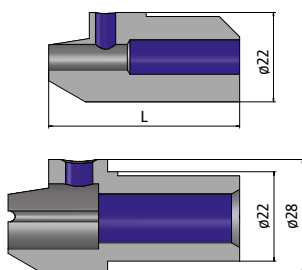
Program number	Tool head ø (mm)			Holder length		Item number	Spare parts		
	ø102	ø120	ø140	L1 - L2	Avail.		S	D	U
EÜ 2112 - 1045	10-30	15-50	15-60	46 - 56	●		5	1	1
EÜ 2112 - 2045	10-30	15-50	15-60	56 - 66	●		5	1	1
EÜ 2112 - 3045	10-30	15-50	15-60	66 - 76	●		5	1	1
matching indexable inserts --> W 2112-xxxx RY									

Adjustable holder for chamfering 45°



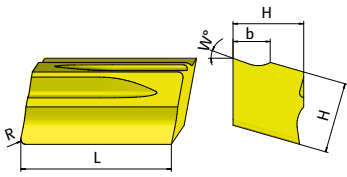
Program number	Tool head ø (mm)			Holder angle	Avail.	Item number	Spare parts		
	ø102	ø120	ø140				S	D	U
EV 2112 - 1560	12-32	22-52	22-72	15°-60°	●	00060583	5	6	-
matching indexable inserts → W 2112-xxxx RY									

Clamping sleeve for center drills



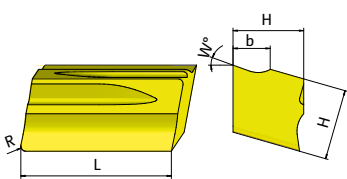
Program number	Dimensions (mm)			Matching center drill	Avail.	Item number	Spare parts	
	d	D	L				A	F
ES 0040 - 160	1.6	4.0	47	EZ 333 - 160	●	00060043	1	7
ES 0050 - 200	2.0	5.0	47	EZ 333 - 200	●	00060046	2	6
ES 0063 - 250	2,5	6.3	47	EZ 333 - 250	●	00060053	3	5
ES 0080 - 315	3.15	8.0	47	EZ 333 - 315	●	00060054	4	4
ES 0100 - 400	4.0	10.0	47	EZ 333 - 400	●	00060058	5	3
ES 0125 - 500	5.0	12.5	51	EZ 333 - 500	●	07101334	6	2
ES 0160 - 630	6.3	16.0	57	EZ 333 - 630		07101274	7	1

Indexable insert



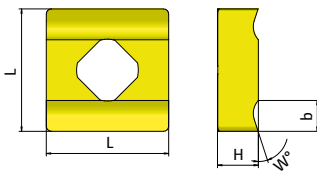
Program number	Dimensions (mm)					Avail.	Item number	Coating
	L	H	R	b	W			
W 2112 - 0422 3121 LY	12	5.5	0.4	2.2	10	●	00060295	uncoated
W 2112 - 0426 3121 LY	12	5.5	0.4	2.2	10	●	00060307	TiAlN
W 2112 - 0830 3121 RY	12	5.5	0.8	3.0	10	●	00066207	uncoated
W 2112 - 0426 1721 RY	12	5.5	0.4	2.6	10	●	07200190	TiAlN

Indexable insert



Program number	Dimensions (mm)					Avail.	Item number	Coating
	L	H	R	b	W			
W 2115 - 0830 3121 RY	15	6,5	0,8	3.0	10	●	00066246	uncoated

Indexable insert



Program number	Dimensions (mm)					Avail.	Item number	Coating
	L	H	R	b	W			
W 0809 - 0000 3026 N	9.52	3.18	0.4	2.4	18	●	00060029	uncoated
W 0809 - 0000 3026 N	9.52	3.18	0.4	2.4	18	●	07207313	TiN
W 0809 - 0000 3126 N	9.52	3.18	0.4	2.4	18	●	07203270	TiAlN

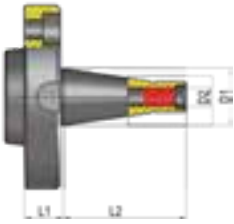
Center drill



Program number	Dimensions (mm)		Item number
	ød	øD	
EZ 333 - 160	1.6	4.0	00060029
EZ 333 - 200	2.0	5.0	00060030
EZ 333 - 250	2.5	6.3	00060031
EZ 333 - 315	3.15	8.0	00060032
EZ 333 - 400	4.0	10.0	00060036
EZ 333 - 500	5.0	12.5	07900386
EZ 333 - 630	6.3	16.0	07900387

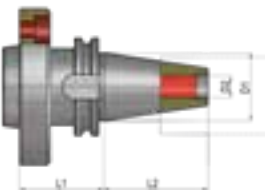
➤ Standard adapters

**"SK" adapter
DIN 2080-1**



Program number	Size	L1	L2	D1	D2	Avail.	Item number
EZF 030-2080	SK 30	21.6	68.4	31.75	M12	●	07101414
EZF 040-2080	SK 40	21.6	93.4	44.45	M16	●	00060556
EZF 050-2080	SK 50	33.2	126.8	69.85	M24	●	07105006

"SK" adapter



Program number	Size	L1	L2	D1	D2	Avail.	Item number
EY 10287	SK 40	55	68.4	44.45	M16	●	07100306

"HSK" adapter



Program number	Size	L1	L2	D1		Avail.	Item number
EZF 063-69893-C	HSK 63	20	32	48.01		●	07109005
EZF 080-69893-C	HSK 80	20	40	60.01		●	07109006

IMPORTANT: When using these adapters, the end machining head needs to be modified!

➤➤ *We adapt any machine - further adapters available on request!*

Clamping bar



Group		Program number	Avail.	Item number
K	1	Y 9802	●	00060557
	2	Y 10014	●	00060650
	3	Y 10047	●	00060651
	4	Y 9967	●	00060652
	5	Y 9890	●	00060653

Adjustment screw



Group		Program number	Avail.	Item number
V	1	Y 9801	●	00066161
	2	Y 10142	●	00066984

Carbide supporting device



Group		Program number	Avail.	Item number
U	1	U 2112 R	●	00063793
	2	U 2115 R	●	00062969
	3	U 0809	●	00061275
	4	U 2112 L	●	00063794
	5	U 9962	●	00060695

Stopper / centering sleeve



Group		Program number	Avail.	Item number
A	1	Y 9502	●	00060654
	2	Y 9503	●	00060655
	3	Y 9504	●	00060656
	4	Y 9505	●	00060657
	5	Y 10027	●	00060658
	6	Y 10720	●	07100507
	7	Y 10573	●	07101846

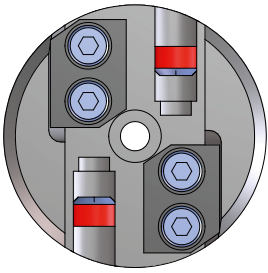
Locking screw for center drills



Group		Program number	Avail.	Item number
F	1		●	07762083
	2		●	07762083
	3		●	07762083
	4		●	07762083
	5		●	07762233
	6		●	07762233
	7		●	07762233

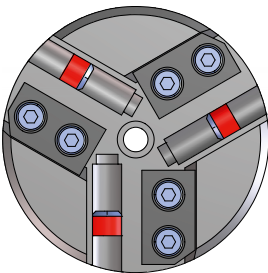
➤ Mini end finishing tool

FOR 2 clamping holders



Program number	Avail.	Item number	Workpiece \varnothing (mm)	Tool \varnothing (mm)	Spare parts	
					K	V
EK 045 - 1002	●	07104495	0-23	45	6	3

FOR 3 clamping holders



Program number	Avail.	Item number	Workpiece \varnothing (mm)	Tool \varnothing (mm)	Spare parts	
					K	V
EK 065-1003	●	07104499	0-43	65	7	3

Clamping bar



Group		Program number	Avail.	Item number
K	1	Y 9802	●	00060557
	2	Y 10014	●	00060650

Adjustment screw



Group		Program number	Avail.	Item number
V	3	Y 11436	●	07104366

Stopper / centering sleeve



Group		Program number	Avail.	Item number
A	8	Y 11447	●	07104494
	9	Y 11448	●	07104493

Torx screw



Group		Program number	Avail.	Item number
S	5	M2,5 X 5,5	●	07762156

Allen screw



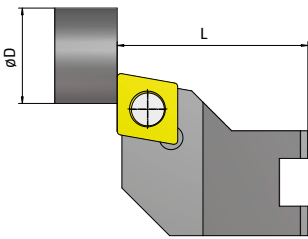
Group		Program number	Avail.	Item number
S	8	M4 X 16	●	07760361

Set screw



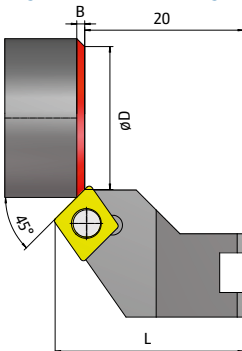
Group		Program number	Avail.	Item number
M	6	M6 X 12	●	07760323

Holder for facing operation



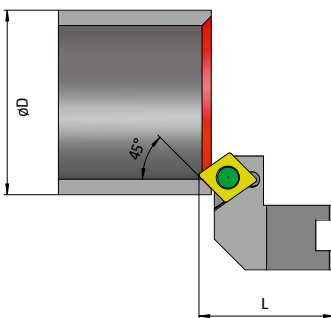
Program number	L	B	Cham. angle	Avail.	Item number	Adjust. range for head		Spare parts S
						$\varnothing 45$	$\varnothing 65$	
EP CCMT - 0602 9190	20			●	07104489	0-20	0-40	5

Holder for external chamfering



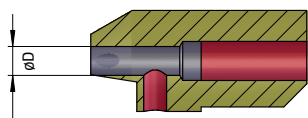
Program number	L	B	Cham. angle	Avail.	Item number	Adjust. range for head		Spare parts S
						$\varnothing 45$	$\varnothing 65$	
EA CCMT - 0602 8145	23.8	3	45°	●	07104488	2-10	2-30	5
EA CCMT - 0602 8245	23.8	3	45°	●	07104925	10-15	10-35	5
EA CCMT - 0602 8345	23.8	3	45°	●	07104487	15-20	16-41	5
EA CCMT - 0602 8130	24.6	3	30°	●	07104486	2-11	2-30	5
EA CCMT - 0602 8230	24.6	3	30°	●	07104926	10-17	10-37	5
EA CCMT - 0602 8330	24.6	3	30°	●	07104927	17-23	17-43	5

Holder for internal chamfering



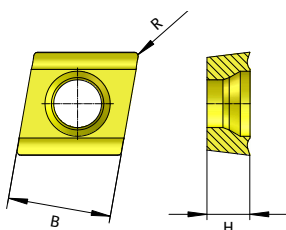
Program number	L	B	Cham. angle	Avail.	Item number	Adjust. range for head		Spare parts S
						$\varnothing 45$	$\varnothing 65$	
EA CCMT - 0602 8145	22	2	45°	●	07104488	7-15	7-33	5
EA CCMT - 0602 8145	22	2	45°	●	07104925	15-23	13-40	5

Clamping sleeve for center drills



Program number	D	Avail.	Item number	Spare parts	
				A	B
ES1 0040-160	4	●	07104492	8	6
ES1 0050-200	5	●	07104491	9	6
ES1 0063-250	6.3	●	07104490	9	6

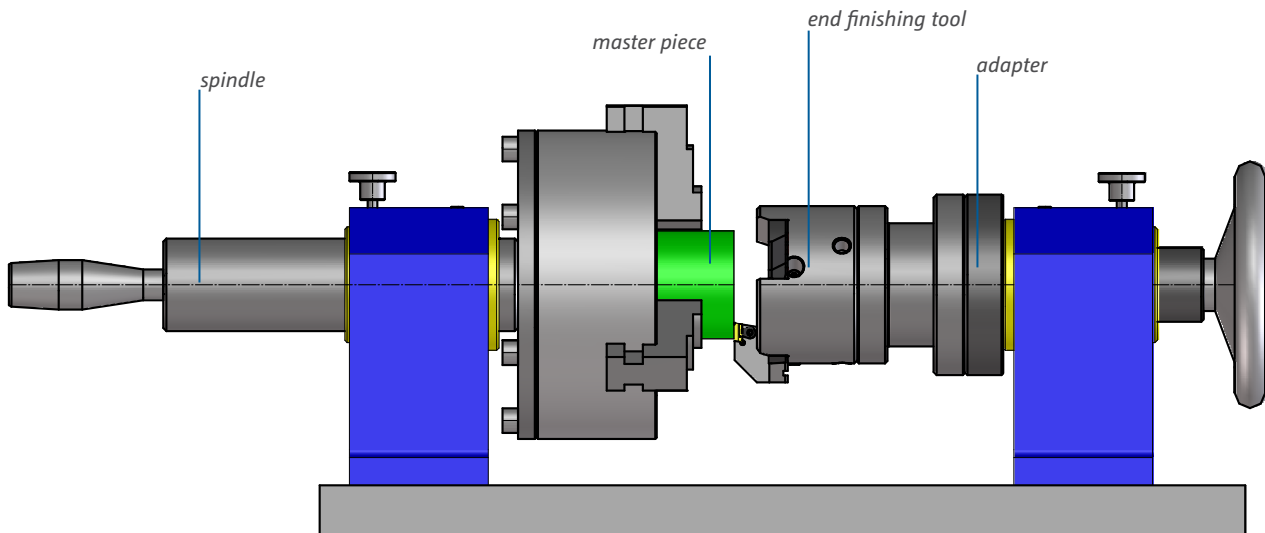
Indexable insert



Program number	B	H	R	Avail.	Item number
CCMT 0602 04	6	2	0.4	●	

ADJUSTING DEVICE

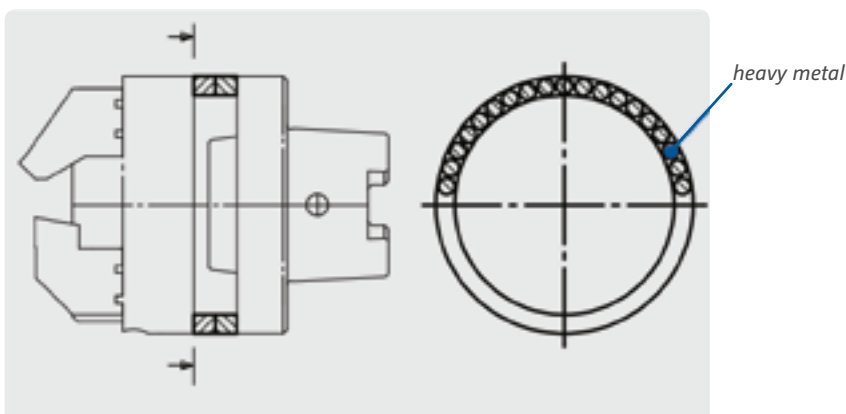
The adjusting device makes it possible to pre-set tools outside the machine



- Save time by pre-setting the next tool during machining
- Prevents crashes during setting routines
- All holders can be pre-set mechanically as opposed to visually, because when transmitted light is used, the holders are mutually blocking the view.

BALANCING RING PAIR

The imbalance caused by adjustments of an end finishing tool poses no problems for a very stable machine. However, the effects of the imbalance become increasingly noticeable when the machine is of a weaker design or when an absolutely precise plane surface is required. With this pair of balancing rings on the tool head, the end finishing tool can, after adjusting the holders to the desired dimensions, be balanced on a balancing machine or with a flexible balancing device, without having to drill holes.



YOUR CONTACT FOR
INQUIRIES AND ORDERS

Markus Fuchs
mfuchs@leistritz.com · +49 9654 / 89-855



DATA SHEET FOR **END FINISHING TOOL**

Company: _____
 Street: _____
 Postal code: _____ City: _____

Name: _____
 E-mail: _____
 Phone: _____

TOOL

Tool diameter max.: _____ mm
 Tool length max.: _____ mm
 Tool holder: _____

Workpiece drawing enclosed: Yes No
 Customer drawing number: _____
 Material: _____

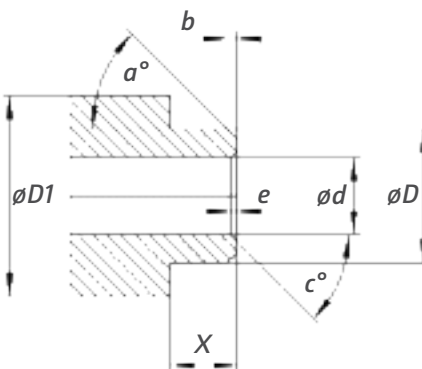
OTHER DETAILS:

MACHINE

Manufacturer: _____

Machine type: _____

PROCESSING REQUIRED



- Facing:** Diameter d : _____ mm
- External chamfer:** Angle a : _____ ° Length b : _____ mm
- Internal chamfer:** Angle c : _____ ° Length e : _____ mm
- Long turning:** Diameter D : _____ mm Length x : _____ mm
- Centering:** DIN 332 form: _____ Size: _____
 Diameter $D1$: _____ mm

NUMBER OF ITEMS

Tool holders: _____ Pcs
 Holders: _____ Pcs

Indexing inserts: _____
 Desired delivery date: _____

Please send the completed data sheet by email to Markus Fuchs: mfuchs@leistriz.com
 or by fax to +49 9654 89-10



WORK REST BLADES

WORK REST BLADES

CERAMIC-TIPPED **WORK REST BLADE**

For a significantly longer service life and a higher workpiece quality

Compared to carbide-tipped work rest blades, the ceramic version impresses with its high resistance to temperature and wear. As a result, one can achieve significantly higher feed and delivery rates. **This will reduce machining times considerably and save you a lot of money!**

Another plus is the very low adhesive tendency between ceramics and steel — an important factor that has a particularly positive effect on the surface finish of the workpiece: As a result, a surface roughness $< Ra\ 0.2$ can be achieved. **This is not possible with conventional carbide-tipped work rest blades.**

All ceramic blades can be reground or re-tipped in the same way as carbide-tipped blades. This is where our proven repair service comes in.

NEW

» *Both through-feed and plunge cut blades can be tipped with ceramics.*



**YOUR CONTACT FOR
INQUIRIES AND ORDERS**

Markus Fuchs
mfuchs@leistrütz.com · +49 9654 / 89-855

WORK REST BLADES

Precision and efficiency in centerless grinding

In series production, the grinding of rotationally symmetrical components is usually done with centerless grinding machines. Components from the rolling bearing industry, such as rollers, inner and outer races, are predestined for this. But also in the automotive sector, jet needles, valves, camshafts, piston pins, etc. are ground to the highest precision in the centerless grinding process (as well as needles in the textile industry).

In the past, centerless grinding used to be a domain of large series and quantities only, whereas nowadays it is increasingly being used for small and very small batch sizes. In the process, **work rest blades** are used, or also "guiding

templates" or "grinding templates" – there is a variety of terms used in the industry. In addition to the regulating and the grinding wheel, the work rest blade is one of the most important parameters in the grinding process. Its precision, surface quality, and wear resistance guarantees a high dimensional and geometrical accuracy of the work-pieces that will be ground.

For decades, Leistriz has been producing work rest blades for all centerless grinding machines for through-feed grinding, in-feed grinding and step grinding. We have a vast knowledge of designing and manufacturing this sophisticated product.

ACCURACIES & DESIGN

Standard blades

- flatness, angularity and parallelism tolerances $\leq 10 \mu\text{m}$ per 100 mm in length
- maximum length: 3,000 mm

High-precision blades

- flatness, angularity, and parallelism tolerances $\leq 1 \mu\text{m}$ per 100 mm in length
- maximum length: 1,600 mm

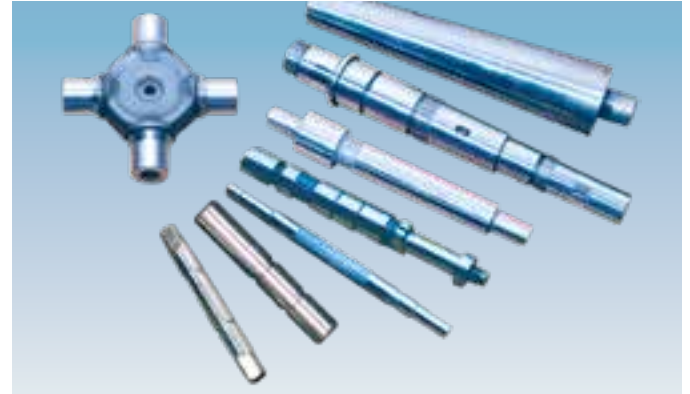
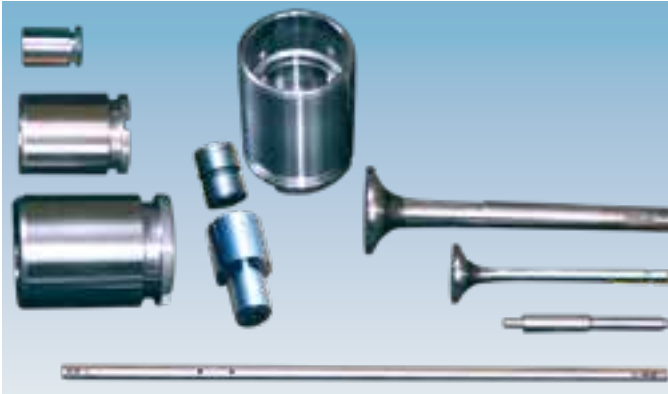
Variants

- carbide-tipped
- industrial diamond, PCD-tipped
- tool steel, hardened
- solid bronze material, e.g. Ampco
- ceramic-tipped



Example: work rest blade in use during grinding process

➤ Work rest blades



The workpieces determine the type and design of the customized work rest blades.

DIFFERENT VERSIONS OF WORK REST BLADES



THROUGH-FEED BLADES

These work rest blades are used for workpieces whose diameter needs to be ground uniformly.

PRISM BLADES

These work rest blades are primarily used in through-feed grinding. For the workpiece, the prismatic guide of the prism blade (usually 120°, carbide-tipped on both sides) ensures a simple and clean feed to and removal from the grinding process. However, the workpiece is lifted from the prism during the grinding process, and is in contact with the blade only on one side, i.e. the side of the grinding wheel.

SIMPLE PLUNGE CUT BLADES

These blades are used for workpieces whose diameter needs to be ground uniformly, but cannot be through-feed ground (component-wise with projection or the like).

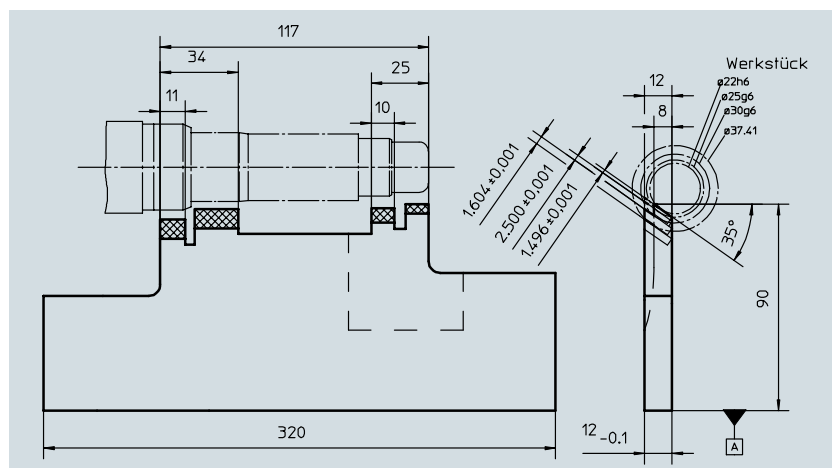


Examples: Plunge cut blades (in-feed blades), Stepped blades

These blades are used for workpieces which need to be ground with a varying diameter.



Example: Design of a stepped blade





SPECIAL PRODUCTS

... are our challenge

These can be: **Complex stepped blades** with adjustable stops for workpiece fixation and support plates for positioning the workpiece. **Multi-chamber blades** for simultaneous grinding of several workpieces: **High-precision blades** with progressive-ratio tolerances in the μ -range.

CORRUGATED BLADES

These blades stabilize the blade body with low A-dimensions < 1.0 mm in the grinding process. The regulating wheel must be adjusted accordingly.



THROUGH-FEED BLADES

Here with A-dimension of 0.3 mm for needle grinding; for workpiece diameters of 0.35 mm.



THROUGH-FEED BLADES

Example of a through-feed blade in screw version with clamping plate for customer-exchangeable hard metal.



Carbide inserts with a basic thickness of 2 mm are ground in A-dimension (carbide thickness) in accordance with the workpieces that will be ground. In this example, it is 0.5 mm. Various inserts can be stocked and changed by the customer.



WORK REST BLADES

SPECIAL SHAPE

A particular challenge are work rest blades for barrel-shaped workpieces. This example is used for through-feed grinding with a 30° inclination.

In order that, during through-feed grinding, the barrel-shaped workpieces can be processed, a large radius must be ground on the work rest blade on both the regulating wheel side and the grinding wheel side.

Additionally, in the hard metal, a radius below 30 ° will be ground.





THREAD ROLL SUPPORTS

On special thread rolling machines, the material is cold-formed on the workpieces by two forming rolls. As in the case of centerless grinding, a thread roll support is required in the rolling process as a supporting element of the workpieces.

SPECIAL COMPONENTS

These parts are individually manufactured according to customer requirements: Bearing rails, clamping jaws, paper cutters, special cutters, supporting shells, machine components.



GRINDING STARS & ABRASIVE SEGMENTS

These machine components are used in double-disc surface grinders. Star and segment are carbide-tipped for wear protection. These are primarily used in the ball bearing industry.



OUR STRENGTH: **PRECISION**

High design competence

The main thing in the production of work rest blades is the design or shop drawing. The Leistriz Blades Center designs the blades on demand and on customer request, and creates the required drawings. In doing so, we are relying on our decades of experience.



» *With complicated geometries it gets really interesting.
We are proud of our many years of manufacturing know-how.*

OUR PRODUCTS FOR ALL CENTERLESS-GRINDING MACHINES

Leistriz manufactures work rest blades for all centerless-grinding machines by:

- | | | |
|-----------------|-------------|------------|
| ➤ Agathon | ➤ Koyo | ➤ Schumag |
| ➤ Cincinnati | ➤ Lidköping | ➤ Seny |
| ➤ ESO | ➤ Mikrosa | ➤ SLR |
| ➤ Estrarta | ➤ Modler | ➤ Tschudin |
| ➤ Ghiringhelli | ➤ Monza | ➤ Viking |
| ➤ Hartex | ➤ Nomoco | ➤ Wedalco |
| ➤ Herminghausen | ➤ Palmary | and more |
| ➤ Junker | ➤ Paragon | |
| ➤ König + Bauer | ➤ PeTeWe | |

MANUFACTURING STEPS

Extensive, modern machine park

MILLING

The blade body is milled according to the shop drawing: the contour, the recesses in the regulating and grinding wheels (if necessary), the insert seat for carbide mounting, the slotted holes for fixing, etc.



BRAZING

Brazing the carbide requires a lot of experience and skilled craftsmanship. The temperature must be sufficiently high and, wherever possible, the carbide is to be brazed without distortion. The challenge: the different expansion coefficients of steel and carbide.



MANUFACTURING STEPS

High Accuracy & Quality



GRINDING

Grinding the blade involves many operations: flat, thickness, base, carbide and step grinding. During production, measurements are repeatedly taken and dimensions and adherence to tolerances are checked.



WORK REST BLADES



CONTROL AND QA

In the air-conditioned measuring room, dimensional inspection and quality control are carried out on modern measuring machines.



RECONDITIONING

Work rest blades as good as new

Work rest blades are subject to harsh operating conditions. Due to high workpiece throughput rates, grinding pressure and abrasive components in the grinding emulsion, a wear of the work rest blades is inevitable. Therefore, professional maintenance is essential for an optimal grinding result. For work rest blades, but also for all Leistriz tools and components, Leistriz offers three services: regrinding, partial tipping or total tipping.

Regrinding

In worn work rest blades, the wear, which becomes apparent as a "groove" in the carbide, has to be ground. The carbide (or PCD) is reground according to the wear mark. Here, small carbide break-outs can be smoothed as well. For the parallelism (base support), the base of the blade is also reground.

A crash in the grinding process usually leads to massive break-outs in the carbide or PCD, having mostly a partial effect. Depending on the size and design of the work rest blade, this means that, for example, in longer blades only a third or half of the carbide needs to be replaced.

In the case of stepped blades, only the damaged steps may have to be reworked. If the remaining carbide is still sufficiently thick, a **partial tipping** will be carried out. Due to repeated regrinding of the work rest blades, the height of the carbide is of course reduced along the entire blade length. If the remaining height of the carbide is not sufficient, the work rest blade will be **re-tipped**.



Carbide-tipped in-feed plate: before, with the carbide chipped, and after, with a partial carbide tipping

YOUR CONTACT FOR THE RECONDITIONING SERVICE

Levent Birol

lbirol@leistriz.com · +49 9654 / 89-917

Shipping address:

Leistriz Produktionstechnik GmbH
Leistrizstr. 1-11 · 92714 Pleystein

Partial / Total Tipping

Based on the overall condition of the work rest blade, it is decided whether a partial tipping is possible or a total tipping is required. In this process the old carbide is brazed off, the insert seat is remilled and cleaned, and new carbide is brazed on.

The work rest blade is then entirely reground. The end user receives an OEM quality work rest blade that is as good as new.



Carbide-tipped stepped blade: previously, after total crash (the remaining carbide tipping is not worth preserving), and afterwards, completely re-tipped



END MILLS / DRILLS

END MILLS / DRILLS



LEISTRITZ *PERFORMANCE TOOLS*

The customized tool solution for your production

Thanks to our many years of experience, especially in the in-house construction of machines and the manufacturing of turbine blades, we know exactly what is important for metal cutting tools. Together with our customers, we develop individual solutions and manufacturing processes that help them optimize their manufacture, reduce production costs and thus gain a competitive advantage.

In doing so, we maintain close contact with both our customers and our partners in order to jointly find the perfect solution. Our partners include many of the most renowned carbide and coatings manufacturers. In this way, we are able to draw on the latest technologies and processes.

COUNT ON:

- the highest quality
- short delivery times
- attractive prices

» *Come to us with your requirements and we will jointly find the optimal solution!*

**YOUR CONTACT FOR
INQUIRIES AND ORDERS**

Markus Fuchs

mfuchs@leistriz.com · +49 9654 / 89-855



FORM CUTTERS

The specialists for challenging tasks

With decades of experience in manufacturing turbine blades for aircraft and steam turbines, we know exactly what matters when it comes to milling tools for hard-to-cut materials such as Inconel or titanium.

Our experienced team of engineers will design the tool according to your component. Thanks to our modern machine park and state-of-the-art measurement technology, we guarantee the highest quality.

SEMI-STANDARD MILLING CUTTERS

Economical and cost-effective

You need a milling cutter with special dimensions or characteristics? Then you have come to the right place!

We design the milling cutters according to your needs and help you to produce in an economical, cost-effective and time-saving way. Of course we will also choose the right carbide and the optimal coating for your application.

THE FOLLOWING ADJUSTMENTS ARE POSSIBLE:

- cutting diameter
- cutting length
- corner radii or chamfers
- rake angle
- helix angle
- roughing teeth NF / NR



STEP AND *FORM DRILLS*

Multiple steps at a time

A particularly economical solution are our step and form drills, which allow you to drill several holes with different diameters in one single process. As with all our special-purpose tools, here too we design the cutting geometry specifically for your application!

This means time-consuming tool changes are a thing of the past, which reduces production time and thus saves money.



CUSTOMIZED AND **SPECIAL TOOLS**

“Impossible“ is not an option

When you reach the limits of feasibility when manufacturing your components with conventional tools, a special tool is often the only solution. We rise to the challenge and will, together with you, find the solution for your machining needs.



**YOUR CONTACT FOR
THE REGRINDING SERVICE**

Levent Birol

lbirol@leistritz.com · +49 9654 / 89-917

Shipping address:

Leistritz Produktionstechnik GmbH
Leistritzstr. 1-11 · 92714 Pleystein

» Customized solutions are our specialty!



WHIRLING / KEYSEATING



WHIRLING

Efficient manufacture of helical geometries

In the whirling process, an eccentrically laid whirling ring circles around the slowly rotating workpiece – in most cases without the use of a coolant. This has the advantage that, due to the special cutting curve, most of the cutting heat is dissipated with the chip and cannot penetrate into the workpiece.

Other advantages: The process is designed to achieve

optimum results with low energy input during machining. In addition, there is no change in the workpiece surfaces (compressive stress). As a result, a very high surface quality can be achieved.

Leistritz has developed internal and external whirling into an uncompromising high-end process.

» *High cutting speeds and a favorable axial offset between the rotating tool and workpiece ensure high feed rates and short machining times at the highest surface quality.*

ANYTHING BUT STANDARD!

We offer optimally matched tools for Leistritz whirling machines. Since we are a process supplier with system responsibility, you receive custom-fit quality products manufactured with precise workmanship. We are happy to assist you in finding the right tool solution.

YOUR CONTACT MACHINES FOR WHIRLING + KEYSEATING

Patrick Schuka

pschuka@leistritz.com · + 49 9654 / 89-403

YOUR CONTACT FOR WHIRLING TOOLS

Sandra Kühn

skuehn@leistritz.com · +49 9654 / 89-836

Shipping address:

Leistritz Produktionstechnik GmbH
Leistritzstr. 1-11 · 92714 Pleystein · Germany

EXAMPLES OF USE

Whirling of EPS steering worms

Requirements for an economical production of EPS steering worms:

- finishing
- surface in finish quality
- high profile and pitch accuracy
- short set-up and tool change times
- high process capability
- long tool life
- dry cutting
- whirling of hardened materials



Radial whirling tool for machining hardened ball screws

Peeling of single-start rotors

Requirements for an economical production of single-start rotors:

- finishing
- surface in finish quality
- high profile accuracy
- short set-up and tool change times
- long tool life
- dry and wet cutting on one machine
- short machining time



Whirling tool for machining rotors



Whirling of hydraulic steering worms

Requirements for an economical production of hydraulic steering worms:

- finishing
- surface in finish quality
- high profile and pitch accuracy
- short set-up and tool change times
- high process capability
- long tool life
- dry cutting
- whirling of hardened materials



Whirling tool for machining hydraulic steering worms

Hard whirling of internal profiles

Requirements for an economical production of internal profiles:

- finishing
- surface in grinding quality
- high profile and pitch accuracy
- short set-up and tool change times
- flexibility for small batch sizes
- long tool life
- dry cutting
- whirling of hardened materials



Hard whirling of ball screws

Requirements for an economical production of ball screws:

- finishing
- surface in finish quality
- high profile and pitch accuracy
- short set-up and tool change times
- flexibility for small batch sizes
- long tool life
- dry cutting
- whirling of hardened materials



Whirling tool for machining ball screws

Whirling of masonry drills

Requirements for an economical production of masonry drills:

- flexibility in the application range $D = 9 \text{ mm} - 48 \text{ mm}$, $L = 200 \text{ mm} - 3,000 \text{ mm}$
- workpiece pitch up to 45°
- tool change time $\leq 10 \text{ min}$
- set-up time $\leq 30 \text{ min}$
- no cooling lubricant required
- deburring of the drill spiral integrated in the tool
- finishing



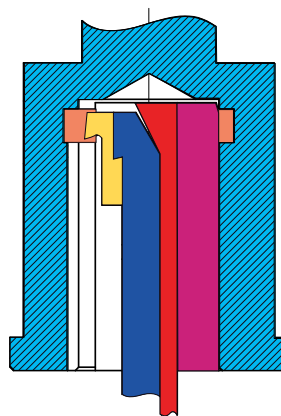
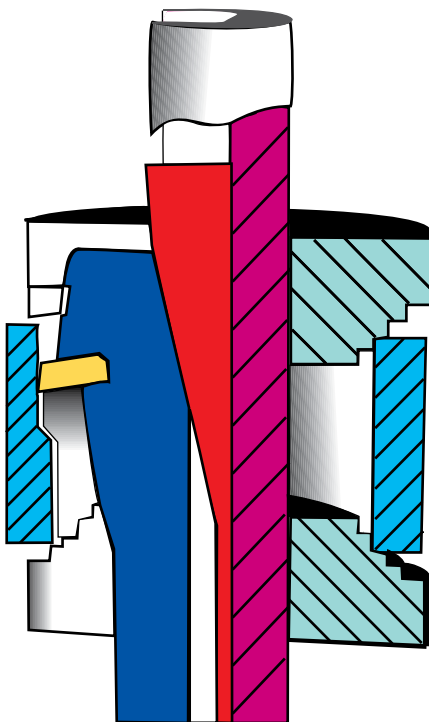


KEYSEATING

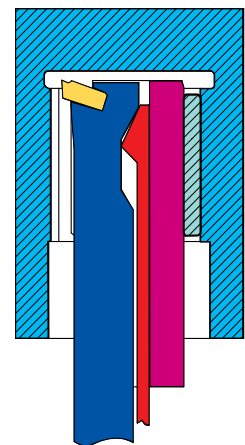
In the keyseating process, the keyway is created step by step. A cutter is drawn vertically with a continuous lifting motion along the bore hole in conjunction with a horizontal feed motion. After each vertical lift, the feed is delivered by a feed bar that thrusts the cutter in steps between the cutter guide bar and the cutter bar. To ensure gentle machining for the tool and workpiece, the cutter is automatically lifted before the upward movement.

The keyseating machines are equipped with a twin-column hydraulic guidance system. The in-line arrangement of tool and tool slide creates a fully linear alignment of forces within the tool and machine system. This avoids lateral forces and leverage, so that the machine is extremely long-lasting and virtually free of wear.

BASIC FUNCTION – KEYSEATING



*Additional function -
blind hole cutting*



*Additional function -
blind hole slotting*

red feed bar
pink cutter guide bar

yellow Cutters
teal centerings

blue cutter bar
light blue workpiece

orange undercut

ADVANTAGES OVER SLOTTING

PRECISE

- significantly higher precision, since the tool is guided over the entire keyway length (offset, depth, axis parallelism)
- higher surface quality, as tool and workpiece form a single unit due to the centering elements

ECONOMICAL

- higher cutting values, since the cutter cannot deviate from its path while cutting (cutting speed, feed)
- workpiece and tool are clamped into a single unit, resulting in
 - longer tool lives
 - optimized process parameters

FLEXIBLE

- significantly wider and longer keyways can be cut (length up to 1500 mm and width up to 125 mm)

ADVANTAGES OVER BROACHING

PRECISE

- CNC-controlled machining of
 - keyways into blind holes
 - helical keyways
 - oil grooves
- in the best quality

ECONOMICAL

- small footprint, even for large keyway lengths and widths
- gentle cutting of the workpiece (no warp)
- low tool costs, since the customer can sharpen the cutters
- short delivery times for tools and reasonable prices for special sizes
- inexpensive elements for workpiece centering and clamping

FLEXIBLE

- super-easy automation through the installation of quick-clamping units (hydraulic/pneumatic)
- flexibility in adapting tool widths

YOUR CONTACT FOR KEYSEATING TOOLS

Natalie Janker

njanker@leistritz.com · +49 9654 / 89-988

Shipping address:

Leistritz Produktionstechnik GmbH

Leistritzstr. 1-11 · 92714 Pleystein · Germany

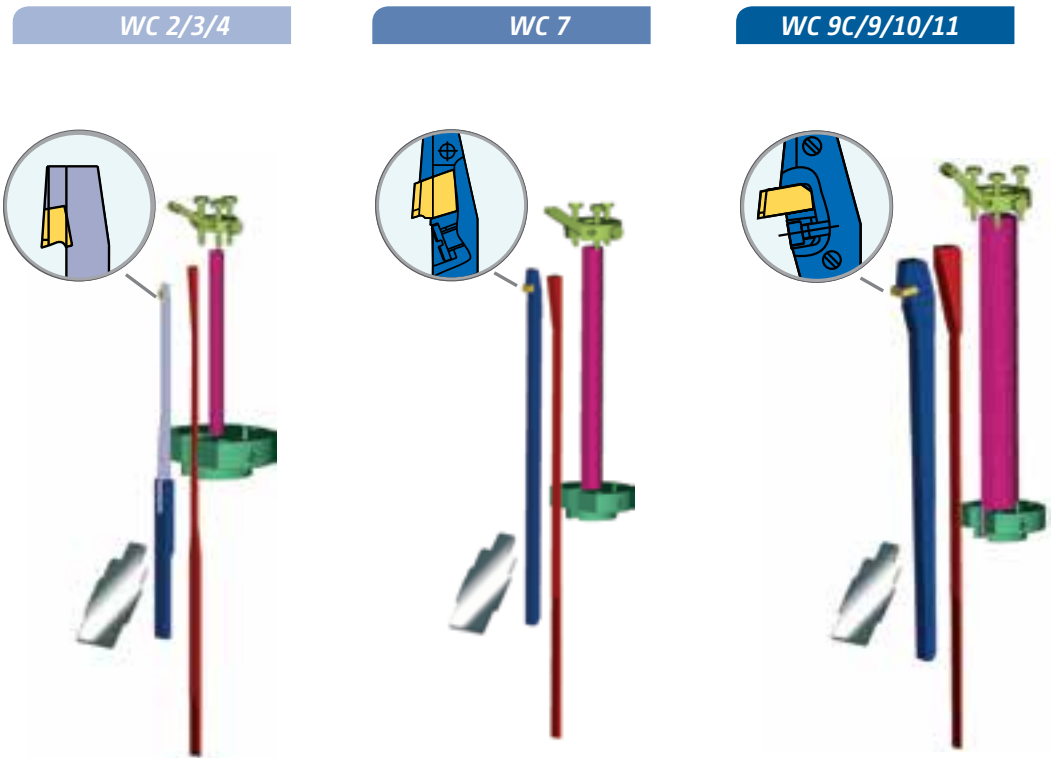
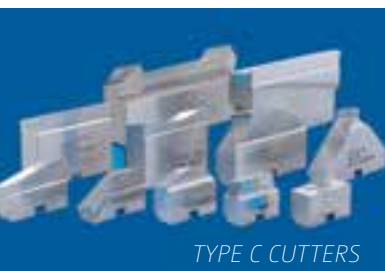
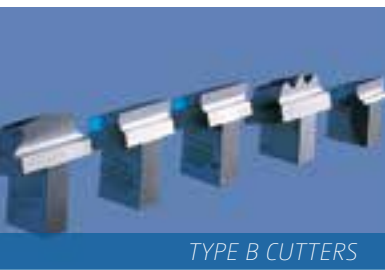
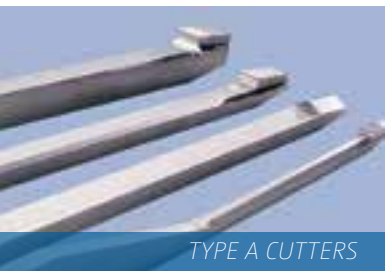
TOOL SETS, CUTTERS AND CENTERING SETS

Each set of tools covers a specific machining area:

- groove width
- bore diameter
- slot length

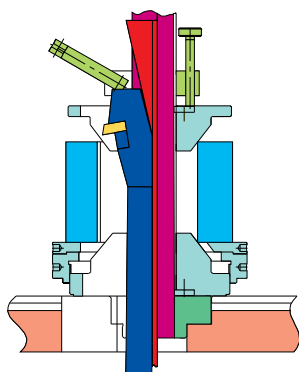
The respective tool set is selected depending on the machining task. The cutter required for the machining task is selected according to the specified tool set.

Standard tool kit for the production of keyways and internal profiles



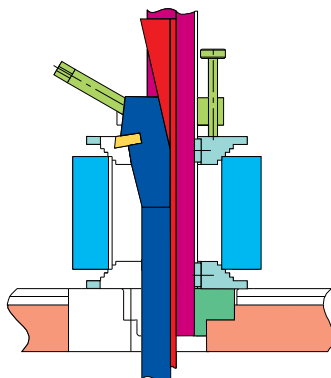
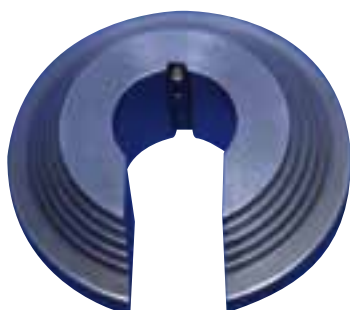
Tool sets complete equipment	WC 2	WC 3	WC 4	WC 7	WC 9c	WC 9	WC 10	WC 11
Maximum slot length (mm)	100	100	150	500	800	1000	1200	1500
Groove width (mm)	2 - 3	3 - 6	6 - 12	12 - 22	22 - 50	22 - 50	56 - 100	56 - 125
Bore ϕ (mm)	10 - 13	13 - 20	20 - 40	40 - 85	80 - 230	85 - 230	200 - 500	230 - 750
Cutter guide bar ϕ (mm)	10	13	20	40	70	85	110	140

CONE



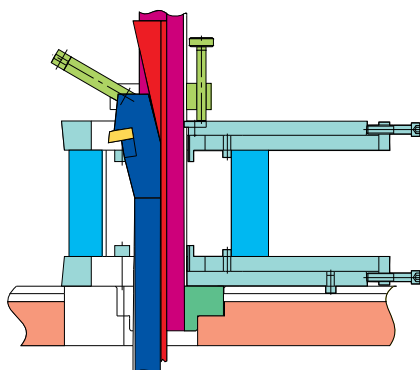
The cone steplessly centers the workpiece against the bore chamfer, positively locating it relative to the cutter.

STEPPED BUSH



The workpiece is centered by its bore. The stepped bush clamps the top face of the workpiece and positively locates it relative to the cutter.

INFINITELY ADJUSTABLE



A three-point clamping system with fixed and adjustable clamping elements clamps the workpiece eccentrically and firmly by its bore.

POSSIBLE APPLICATIONS OF THE CENTERINGS FOR WORKPIECE BORES

Tool sets complete equipment		WC 2	WC 3	WC 4	WC 7	WC 9c	WC 9	WC 10	WC 11
Cone	(mm)	10.5 - 13	14 - 20	21 - 40	41 - 85	80 - 230	85 - 260	-	-
Stepped bush		-	14 - 20	25 - 40	45 - 85	80 - 230	90 - 200	-	-
Infinitely adjustable centerings	(mm)	-	-	40 - 160	60 - 200	100 - 300	130 - 400	200 - 500	200 - 500 230 - 750

- table insert bush
- cutter guide bar
- Cutters
- clamping piece
- cutter bar / holder
- feed bar
- cutter shaft
- centerings
- chip remover

CUTTERS TYPE A

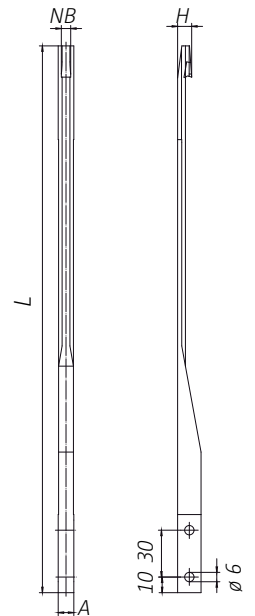
Cutting material carbide / ASP 60

Rake angle 18°

Dimensions

Type	WC Tool set	NB Groove width mm	Diameter range mm	Tolerance JS9	Tolerance P9	H Height mm	L mm	A mm
A 31	WC3	3	13	07440133	07440074	5	265	5
A 32		4	13 - 15	07440134	07440075	5	265	5
A 33		5	13 - 15	07440135	07440076	5.3	265	5
A 34		5	15 - 17	07440136	07440077	6.4	265	5
A 35		6	17 - 20	07440137	07440078	7.3	265	5
A 41	WC4	6	20 - 22	07440138	07440079	9	335	10
A 42		8	22 - 26	07440139	07440080	10	335	10
A 43		8	26 - 30	07440140	07440081	12	335	10
A 44		10	30 - 34	07440141	07440082	13.5	335	10
A 45		10	34 - 38	07440142	07440083	15.5	335	10
A 46		12	38 - 40	07440143	07440084	16.5	335	10

Drawing



CUTTERS TYPE B

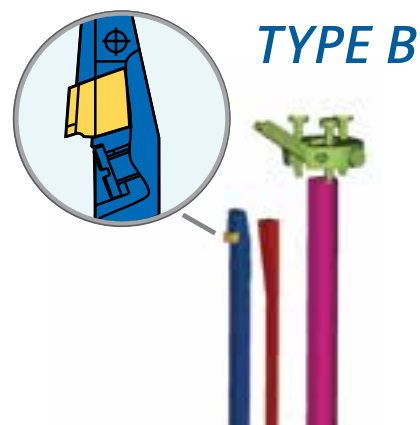
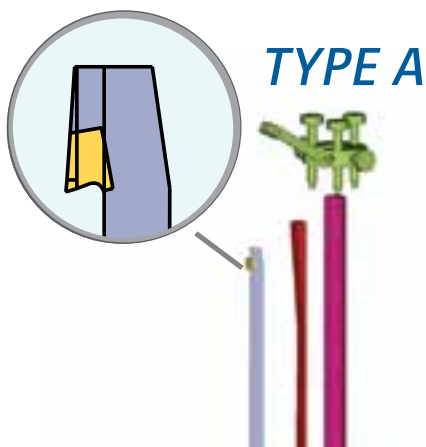
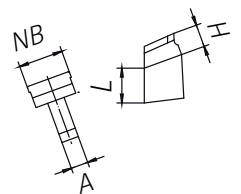
Cutting material ASP 60

Rake angle 18°

Dimensions

Type	WC Tool set	NB Groove width mm	Diameter range mm	Tolerance JS9	Tolerance P9	H Height mm	L mm	A mm
B 70	WC7 weak	10	40 - 44	07440144	07440102	6	10.25	7
B 71		12	40 - 44	07440145	07440103	6	10.25	7
B 72		14	44 - 50	07440146	07440104	6	10.25	7
B 73		16	50 - 58	07440147	07440105	8	10.25	7
B 74	WC7 strong	18	58 - 65	07440148	07440106	9.1	14	7
B 75		20	65 - 75	07440149	07440107	12	14	7
B 76		22	75 - 85	07440150	07440108	16.5	14	7

Drawing



CUTTERS TYPE C

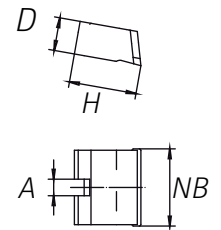
Cutting material ASP 60

Rake angle 15°

Dimensions

Type	WC Tool set	NB Groove width mm	Diameter range mm	Tolerance JS9	Tolerance P9	H Height mm	D mm	A mm
C 801	WC9 + WC9c weak	22	80 - 85	07440154	07440109	20.5	12	6
C 802		24	80 - 90	07440155	07440110	21.5	12	6
C 803		25	85 - 95	07440156	07440111	21.5	12	6
C 804		26	80 - 95	07440157	07440112	21.5	12	6
C 805		28	95 - 110	07440158	07440113	24.5	12	6
C 806		30	110 - 115	07440159	07440114	24.5	12	6
C 807		32	110 - 130	07440367	07440365	26	12	6
C 901	WC9 + WC9c strong	32	130 - 150	07440164	07440119	29	14	6
C 902		36	130 - 150	07440165	07440120	29	14	6
C 903		40	150 - 170	07440166	07440121	33	14	6
C 904		45	170 - 200	07440167	07440122	35	14	6
C 905		50	200 - 230	07440168	07440123	37	14	6
C 1001	WC10	56	230 - 260	07440169	07440124	40	18	6
C 1002		63	260 - 290	07440170	07440125	40	18	6
C 1003		70	290 - 330	07440171	07440126	40	18	6
C 1004		80	330 - 380	07440172	07440127	40	18	6
C 1005		90	380 - 440	07440173	07440128	40	18	6
C 1006		100	440 - 500	07440174	07440129	40	18	6

Drawing



TYPE C



LEISTRITZ GROUP

One company — dynamic, innovative, reliable, based on partnership

What is special about Leistriz: It was founded in 1905 as a family business. Even today, we are an owner-managed company where dynamic development and innovative solutions matter, values such as reliability and partnership.

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» *Four business units — one movement: rotation!*

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AND COMPRESSORS



PUMP TECHNOLOGY

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AND SCREW PUMP SYSTEMS



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