





CUT KNURLING



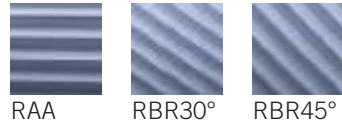
OVERVIEW OF CUT KNURLING

With the product finder for cut knurling you can find your desired QUICK product even faster. You receive all relevant tool data, as well as possible profiles, the corresponding knurling wheels and the possible direction of machining at a glance.

Tool series	Workpiece Ø [mm]	Profile on workpiece	Profile on knurling wheel	
 C601 (LA/FL)	1.5 – 12	RAA RBR30° RBR45°	1 x BR30° 1 x AA 1 x BL15°	
 C602 (LA/KF)	1.5 – 12	RGE30° RGE45°	2 x AA 1 x BR15° / 1 x BL15°	
 C611 (A1/FL) (A2/FL)	3 – 50 5 – 250	RAA RBR30° RBL30° RBR45° RBL45°	Right-hand use: 1 x BR30° 1 x AA 1 x BL15°	Left-hand use: 1 x BL30° 1 x AA 1 x BR15°
 C612 (A1/KF) (A2/KF)	3 – 50 5 – 250	RGE30° RGE45°	2 x AA 1 x BR15° / 1 x BL15°	
 C621 (M/FL)	20 – 3000	RAA RBR30° RBR45°	1 x BR30° 1 x AA 1 x BL15°	
 C622 (MI/KF) (MII/KF)	20 – 1000 30 – 3000	RGE30° RGE45°	2 x AA 1 x BR15° / 1 x BL15°	
 C693 (STR-A)	3.5 – 20	RGE30° RGE45°	3 x AA 1 x BR15° / 2 x BL15° or 2 x BR15° / 1 x BL15°	

Shank [mm]	Knurling wheel Ø [mm]	Knurling	 RAA	 RBL	 RBR	 RGE
10 / 12	8.9	Starting at the workpiece Starting after plunge cut	● ●	– –	● ●	– –
10 / 12	8.9	Starting at the workpiece Starting after plunge cut	– –	– –	– –	● ●
10 / 12 / 16 20 / 25	14.5 21.5	Starting at the workpiece Starting after plunge cut	● ●	● ●	● ●	– –
10 / 12 / 16 20 / 25	14.5 21.5	Starting at the workpiece Starting after plunge cut	– –	– –	– –	● ●
27	42	Starting at the workpiece Starting after plunge cut	● ●	– –	● ●	– –
40 57	32 42	Starting at the workpiece Starting after plunge cut	– –	– –	– –	● ●
Ø15 Ø20 Ø25	14.5	Starting at the workpiece Starting after plunge cut	– –	– –	– –	● –

CUT KNURLING TOOL C601




ADDED VALUES

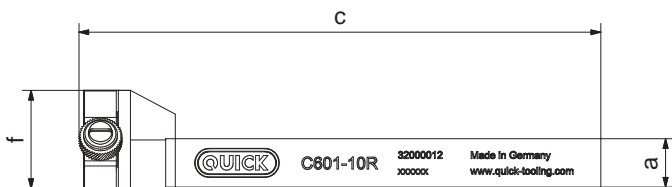
- Developed for minimal installation space and maximum stability
- Designed for smallest workpiece diameters
- User-friendly handling

Order no.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				a	b	c	d	e	f
32000012	C601-10R	1.5 – 12	8.9 x 2.5 x 4	10	10	108	23.5	20	20,3
32000014	C601-12R	1.5 – 12	8.9 x 2.5 x 4	12	12	108	23.5	20	22

Left-hand version of all shank dimensions available on request.

E-KIT

Order no.	
22BHR0506	



CUT KNURLING TOOL C602



RGE30°



RGE45°


ADDED VALUES

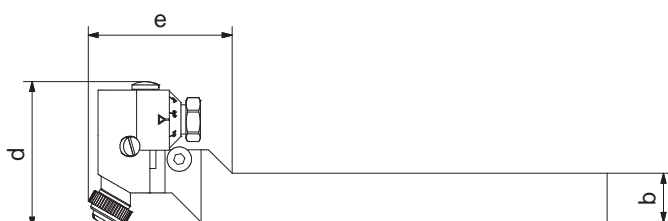
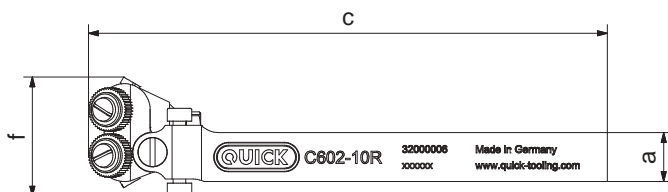
- Developed for minimal installation space and maximum stability
- Designed for smallest workpiece diameters
- Easy fine adjustment of the knurl holder

Bestell-Nr.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				a	b	c	d	e	f
32000006	C602-10R	1.5 – 12	8.9 x 2.5 x 4	10	10	106	29.7	29.4	24.3
32000008	C602-12R	1.5 – 12	8.9 x 2.5 x 4	12	12	106	29.7	29.4	24.3

Left-hand version of all shank dimensions available on request.

E-KIT

Order no.	
22BHR0506	



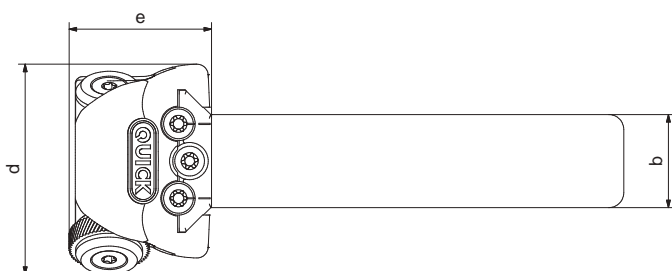
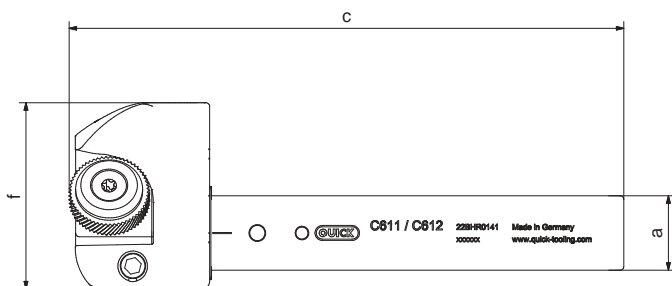
CUT KNURLING TOOL C611



ADDED VALUES

- Adaptable, patented QUICK cooling unit
- Multifunctional: For use in front of and behind the rotation centre
- Flexible shank variation
- Head and shank fully exchangeable due to compatible interface

Order no.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				a	b	c	d	e	f
32000037	C611-10M	3 – 50	14.5 x 3 x 5	10	16	106	35	25.6	32
32000038	C611-12M	3 – 50	14.5 x 3 x 5	12	16	106	35	25.6	32
32000039	C611-16M	3 – 50	14.5 x 3 x 5	16	16	106	35	25.6	32
32000043	C611-20M	5 – 250	21.5 x 5 x 8	20	25	149	56.5	38.3	50
32000044	C611-25M	5 – 250	21.5 x 5 x 8	25	25	149	56.5	38.3	50



E-KIT

Order no.	Knurling wheel (Ø x w x b) [mm]	
22BHR0507	14.5 x 3 x 5	
22BHR0508	21.5 x 5 x 8	

ADAPTER

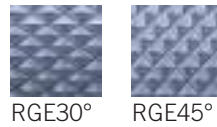
Order no.	Description	
22BHR0152	Adapter 10 x 10	
22BHR0151	Adapter 12 x 12	
22BHR0150	Adapter 16 x 16	

COOLANT NOZZLE

Order no.	Knurling wheel (Ø x w x b) [mm]	
22BHR0145	14.5 x 3 x 5	
22BHR0136	21.5 x 5 x 8	

The adjustable coolant nozzle ensures the precise supply of coolant to the workpiece and the knurling wheels.

CUT KNURLING TOOL C612



RGE30° RGE45°


ADDED VALUES

- Adaptable, patented QUICK cooling unit
- Multifunctional: For use in front of and behind the rotation centre
- Flexible shank variation
- Head and shank fully exchangeable due to compatible interface
- Synchronised knurl holder for adjusting the working range

Order no.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				a	b	c	d	e	f
32000034	C612-10M	3 – 50	14.5 x 3 x 5	10	16	115	36	34.7	35.8
32000035	C612-12M	3 – 50	14.5 x 3 x 5	12	16	115	36	34.7	35.8
32000036	C612-16M	3 – 50	14.5 x 3 x 5	16	16	115	36	34.7	35.8
32000041	C612-20M	5 – 250	21.5 x 5 x 8	20	25	158	64.4	47.7	50
32000042	C612-25M	5 – 250	21.5 x 5 x 8	25	25	158	64.4	47.7	50

E-KIT

Order no.	Knurling wheel (Ø x w x b) [mm]
22BHR0507	14.5 x 3 x 5
22BHR0508	21.5 x 5 x 8




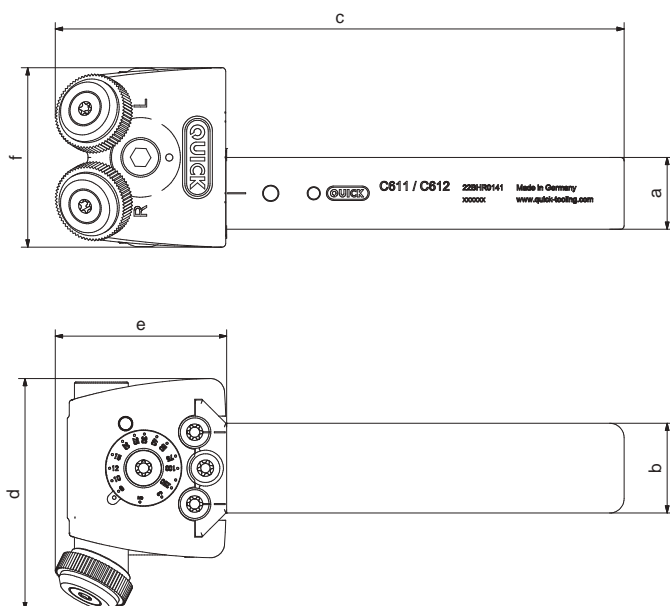
ADAPTER

Order no.	Description
22BHR0149	Adapter 10 x 10
22BHR0148	Adapter 12 x 12
22BHR0147	Adapter 16 x 16



COOLANT NOZZLE

Order no.	Knurling wheel (Ø x w x b) [mm]
22BHR0145	14.5 x 3 x 5
22BHR0136	21.5 x 5 x 8

The adjustable coolant nozzle ensures the precise supply of coolant to the workpiece and the knurling wheels.

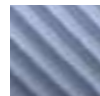
CUT KNURLING TOOL C621



RAA



RBR30°




RBR45°

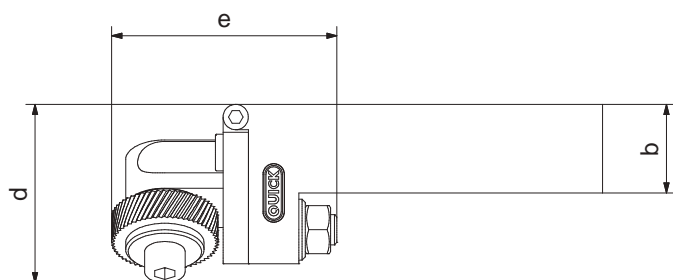
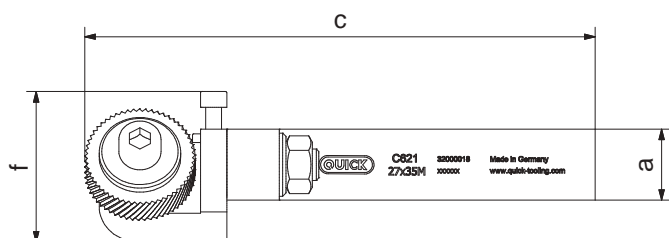
ADDED VALUES

- Designed for the largest possible working ranges
- Ideal for heavy-duty and roll turning lathes etc.
- Maximum stability due to solid construction

Order no.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				a	b	c	d	e	f
32000018	C621-27R	20 – 3000	42 x 12 x 18	27	35	194	70.5	89	57.2

E-KIT

Order no.	
22BHR0510	



CUT KNURLING TOOL C622



RGE30°




RGE45°

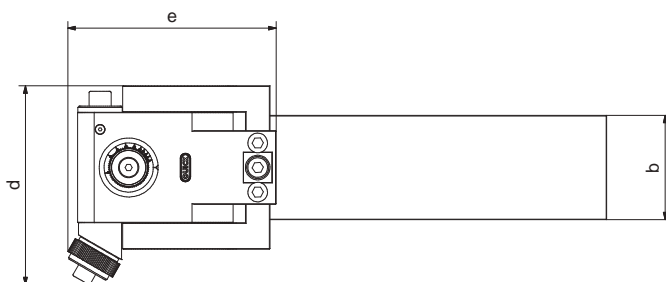
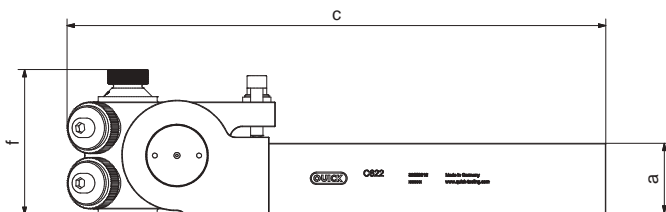
ADDED VALUES

- Designed for the largest possible working ranges
- Ideal for heavy-duty and roll turning lathes etc.
- Maximum stability due to solid construction
- Synchronised knurl holder for adjusting the working range

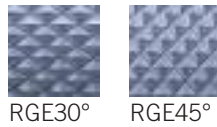
Order no.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				a	b	c	d	e	f
32000015	C622-40R	20 – 1000	32 x 8 x 14	40	45	275.5	109	115.5	79
32000016	C622-57R	30 – 3000	42 x 12 x 18	57	85	438.5	161.5	169.5	118

E-KIT

Order no.	Knurling wheel (Ø x w x b) [mm]	
22BHR0509	32 x 8 x 14	
22BHR0511	42 x 12 x 18	



CUT KNURLING TOOL C693




RGE30° RGE45°

ADDED VALUES

- Knurl holders individually adjustable
- Maximum process stability
- All knurling processes can be used by conversion of the knurl holder jaws
- Suitable for very small installation spaces due to compact design

Order no.	Model	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]	Dimensions [mm]					
				d max.	e	j	k	l	n max.
32000030	C693	3.5 – 20	14.5 x 3 x 5	75	57	20	54	20	38


E-KIT

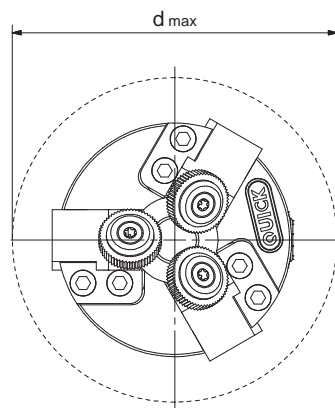
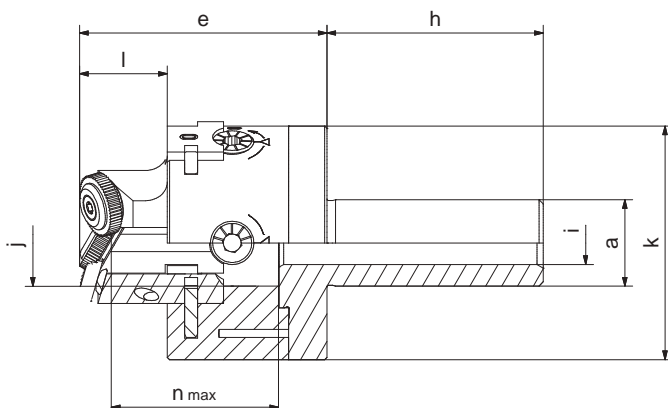
Order no.	
22BHR0507	

SHANK

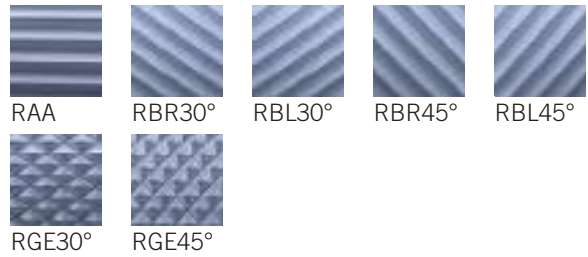
Order no.	Ø „a“ [mm]	Bore „i“ [mm]	Length „h“ [mm]	
22BHR0119	15	9	50	
22BHR0121	20	10	50	
22BHR0122	25	15	50	

JAWS

Order no.	Description	Tool	
22BHR0490	Form knurling	F791	
22BHR0537	Form knurling up to a shoulder	F792	



CUT KNURLING TOOL SET C610



ADDED VALUES

- All common knurl profiles can be produced
- Maximum user flexibility due to numerous possible combinations of head and shank
- Additional, patented QUICK cooling unit for optimised chip flow


Order no.	Model	Shank [mm]	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]
32000040	C611	10 / 12 / 16	3 – 50	14.5 x 3 x 5
	C612		3 – 50	14.5 x 3 x 5

Coolant nozzle (order no. 22BHR0145) included in set.


Order no.	Model	Shank [mm]	Workpiece Ø [mm]	Knurling wheel (Ø x w x b) [mm]
32000045	C611	20 / 25	5 – 250	21.5 x 5 x 8
	C612		5 – 250	21.5 x 5 x 8

Coolant nozzle (order no. 22BHR0145) included in set.

E-KIT

Order no.	Knurling wheel (Ø x w x b) [mm]	
22BHR0507	14.5 x 3 x 5	
22BHR0508	21.5 x 5 x 8	

ADAPTER

Order no.	Description	Tool	
22BHR0152	Adapter 10 x 10	C611	
22BHR0151	Adapter 12 x 12	C611	
22BHR0150	Adapter 16 x 16	C611	
22BHR0149	Adapter 10 x 10	C612	
22BHR0148	Adapter 12 x 12	C612	
22BHR0147	Adapter 16 x 16	C612	

In knurling technology there are two different processes: cut knurling and form knurling.

Both processes have their special applications and areas of utilisation.

Possible knurling profiles on the workpiece:



FORM KNURLING

In form knurling the surface of the workpiece is adapted in a non-cutting process. Cold forming is used to shape the material, which limits its use to materials that are suitable for cold forming.

ADDED VALUES

- Machining of the workpiece by cold forming, which compresses the surface of the workpiece
- Knurling is possible all the way to a workpiece shoulder
- All knurling profiles according to DIN 82 can be produced
- Knurling is possible at any position on the workpiece
- Knurling of inner and end faces is possible
- Conical knurling is possible