



zeus Cut knurling tools

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Cut knurling tools RF1

Perfect efficiency due to modular design, convincing process reliability due to sturdy construction



Series 231



Tool holder Designation

231-10 M 150408-VS-A

- Product series
- Shank size 10 x 10 mm
- Modular
- State of development
- Solid shank
- Design for knurling wheels 15 x 4 x 8 (Ø x width x bore)

Knurling profiles on DIN 82 workpiece:

Feed knurling



Selection of knurling wheels:

1 x BR30° (right-hand use) 1 x AA (left-hand use) 1 x AA (right-hand use)
1 x BL30° (left-hand use)

Product features:

- Scaling and positioning aids
- Adjusting spindle for fine adjustment of the knurl profile
- Set screws in shank for clearance angle correction
- Coated carbide bearing bushes for improved antifrictional property
- Modular shank design: Shank size 10 x 10 mm optionally adaptable

TOOL VERSIONS:

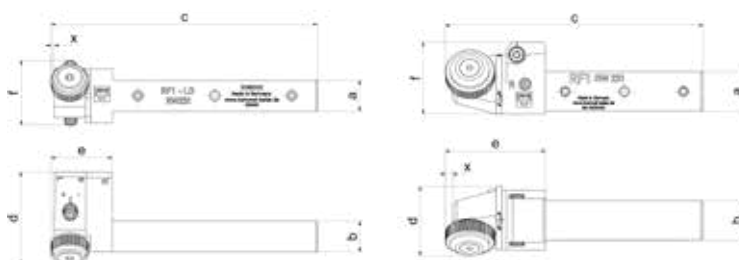
Order no.	Tool holder Designation	Working area Ø [mm]	Dimension [mm]							Knurling wheels (Ø x w x b) [mm]
			a	b	c	d	e	f	x	
31002739	231-10M150408-VS-A	3-50	10	10	103.5	36.2	23.9	25.3	1.4	15 x 4 x 8
31002740	231-12M150408-VS-A	3-50	12	12	103.5	36.2	23.9	25.3	1.4	15 x 4 x 8
31002741	231-16M150408-VS-A	3-50	16	16	103.5	36.2	23.9	29.3	1.4	15 x 4 x 8

Order no.	Tool holder Designation	Working area Ø [mm]	Dimension [mm]							Knurling wheels (Ø x w x b) [mm]
			a	b	c	d	e	f	x	
31002652	231-20M250608-B	10-300	20	20	130.8	35	50.8	36.5	3.7	25 x 6 x 8
31002445	231-25M250608-B	10-300	25	20	130.8	35	50.8	40	3.7	25 x 6 x 8

Other variants available on request

ADAPTER BRACKET FOR BASE SHANK 10 x 10 mm:

Order no.	Shank size [mm]
21BHR1653	12 x 12
21BHR1654	16 x 16





Cut knurling tools RF2

Excellent for stringent requirements –
convincing stability in harsh continuous use



Series 241



Tool holder
Designation

Product series • 241-10 M 150408 -VS -A • State of development
Shank size 10 x 10 mm • Solid shank
Modular • Design for knurling wheels
15 x 4 x 8 (Ø x width x bore)

Knurling profiles on DIN 82 workpiece:

Feed knurling



RGE30° RGE45°

Selection of knurling wheels:

2 x AA 1 x BL15°/ 1 x BR15°

Product features:

- Modular design: Tool can be used as right-hand and left-hand version. Retooling by simply turning the cut knurling head
- Conversion to alternative full shank dimensions is possible
- Modular shank design: Shank size 10 x 10 mm optionally adaptable
- Fine adjustment of centre height of the cut knurling head
- Fine adjustment of the clearance angle by means of synchronous adjustment spindle
- Coated carbide bearing bushes for improved antifrictional property
- Vertical height adjustment for use of shank size 20 mm on 25 mm (version 241-20M250608-A1)

TOOL VERSIONS:

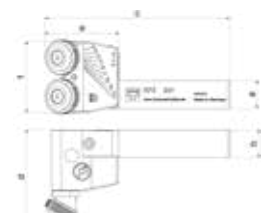
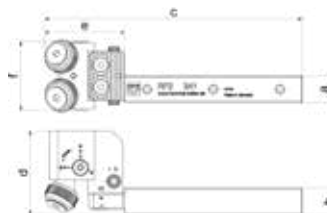
Order no.	Tool holder Designation	Working area Ø [mm]	Dimension [mm]						Knurling wheels (Ø x w x b) [mm]
			a	b	c	d	e	f	
31001926	241-10M150408-VS-A	3-50	10	10	116	36.7	36	31	15 x 4 x 8
31001901	241-12M150408-VS-A	3-50	12	12	116	37.7	36	31	15 x 4 x 8
31001945	241-16M150408-VS-A	3-50	16	16	116	39.7	36	31	15 x 4 x 8

Other variants available on request

Order no.	Tool holder Designation	Working area Ø [mm]	Dimension [mm]						Knurling wheels (Ø x w x b) [mm]
			a	b	c	d	e	f	
31000804	241-20M150408-A	3-50	20	20	116	44.7	36	35.6	15 x 4 x 8
31000666	241-20M250608-A1	10-250	20	20	133.3	68	53.3	53	25 x 6 x 8
31001899	241-25M250608-A1	10-250	25	20	133.3	68	53.3	53	25 x 6 x 8

ADAPTER BRACKET FOR BASE SHANK 10 x 10 mm:

Order no.	Shank size [mm]
21BHR1653	12 x 12
21BHR1654	16 x 16





Cut knurling tool RF3

Maximum stability for exact precision –
ideal for thin-walled workpieces



Series 291



Tool holder
Designation

Product series • 291-12 M 100306-B • State of development
Shank size Ø 12 •
Modular • Design for knurling wheels
10 x 3 x 6 (Ø x width x bore)

Knurling profiles on DIN 82 workpiece:

Feed knurling



RGE30° RGE45°

Selection of knurling wheels:

3 x AA 1 x BL15° / 2 x BR15° oder
1 x BR15° / 2 x BL15°

Product features:

- Easy and precise fine adjustment
- Modular exchangeable knurl holder jaws for conversion to a form knurling tool 191/192 (knurling up to a shoulder)
- Coated carbide bearing bushes for improved antifrictional property

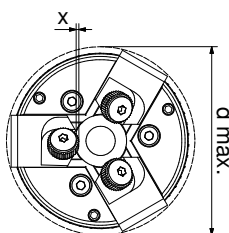
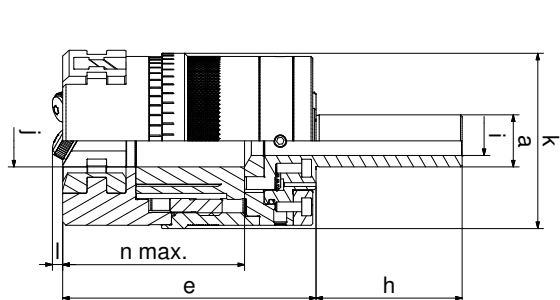
TOOL VERSIONS:

Order no.	Tool holder Designation	Working area Ø [mm]	Dimension [mm]										Knurling wheels (Ø x w x b) [mm]
			a Ø	d max. Ø	e	h	i Ø	j Ø	k Ø	l	n max.	x Ø	
31001946	291-12M100306-B	3.5-13.5	12	57	78	45	9	16	54	3	56	1	10 x 3 x 6

Other variants available on request

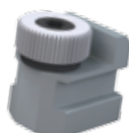
d = for max. workpiece Ø

n = max. workpiece length (with Ø1)



JAWS:

Order no. Form knurling	Order no. Cut knurling up to a shoulder
21BHR1096	21BHR1128



Set 200-12



SET consisting of:

- 1 x tool: 231
- 6 x knurling wheel:
15 x 4 x 8 mm
- 3 x profile: BL30°
- 3 x profile: BR30°
- Pitches: 0.5/0.6/0.8 mm



- 1 x tool: 241
- 6 x knurling wheel:
15 x 4 x 8 mm
- 6 x profile: AA
- Pitches: 0.5/0.6/0.8 mm

Knurling profiles on DIN 82 workpiece for tool 231:

Feed knurling



Selection of knurling wheels:

1 x BR30° (right-hand use)	1 x AA (left-hand use)	1 x AA (right-hand use)
1 x BL30° (left-hand use)		

Knurling profiles on DIN 82 workpiece for tool 241:

Feed knurling



Selection of knurling wheels:

2 x AA

TOOL VERSIONS:

Order no. Set	Order no. Holder	Tool holder Designation	Working area Ø [mm]	Dimension [mm]	Knurling wheels (Ø x b x b) [mm]
31002697	31002740	231-12M150408-VS-A	3-50	see page 21	15 x 4 x 8
	31001901	241-12M150408-VS-A	3-50	see page 22	15 x 4 x 8

Set 200-16



SET consisting of:

- 1 x tool: 231
- 6 x knurling wheel:
15 x 4 x 8 mm
- 3 x profile: BL30°
- 3 x profile: BR30°
- Pitches: 0.6/0.8/1.0 mm



- 1 x tool: 241
- 6 x knurling wheel:
15 x 4 x 8 mm
- 6 x profile: AA
- Pitches: 0.6/0.8/1.0 mm

Knurling profiles on DIN 82 workpiece for tool 231:

Feed knurling



Selection of knurling wheels:

1 x BR30° (right-hand use)	1 x AA (left-hand use)	1 x AA (right-hand use)
1 x BL30° (left-hand use)		

Knurling profiles on DIN 82 workpiece for tool 241:

Feed knurling



Selection of knurling wheels:

2 x AA

TOOL VERSIONS:

Order no. Set	Order no. Holder	Tool holder Designation	Working area Ø [mm]	Dimension [mm]	Knurling wheels (Ø x b x b) [mm]
31002698	31002741	231-16M150408-VS-A	3-50	see page 21	15 x 4 x 8
	31001945	241-16M150408-VS-A	3-50	see page 22	15 x 4 x 8



Cut knurling tools SETS



Set 200-20



SET consisting of:

- 1 x tool: 231
- 6 x knurling wheel:
25 x 6 x 8 mm
- 3 x profile: BL30°
- 3 x profile: BR30°
- Pitches: 0.8/1.0/1.5 mm



- 1 x tool: 241
- 6 x knurling wheel:
25 x 6 x 8 mm
- 6 x profile: AA
- Pitches: 0.8/1.0/1.5 mm

Knurling profiles on DIN 82 workpiece for tool 231:

Feed knurling



Selection of knurling wheels:

1 x BR30° (right-hand use)	1 x AA (left-hand use)	1 x AA (right-hand use)
1 x BL30° (left-hand use)		

Knurling profiles on DIN 82 workpiece for tool 241:

Feed knurling



Selection of knurling wheels:

2 x AA

TOOL VERSIONS:

Order no. Set	Order no. Holder	Tool holder Designation	Working area Ø [mm]	Dimension [mm]	Knurling wheels (Ø x b x b) [mm]
31002699	31002652	231-20M250608-B	10-300	see page 21	25 x 6 x 8
	31000666	241-20M250608-A1	10-250	see page 22	25 x 6 x 8

Set 200-25



SET consisting of:

- 1 x tool: 231
- 6 x knurling wheel:
25 x 6 x 8 mm
- 3 x profile: BL30°
- 3 x profile: BR30°
- Pitches: 0.8/1.0/1.5 mm



- 1 x tool: 241
- 6 x knurling wheel:
25 x 6 x 8 mm
- 6 x profile: AA
- Pitches: 0.8/1.0/1.5 mm

Knurling profiles on DIN 82 workpiece for tool 231:

Feed knurling



Selection of knurling wheels:

1 x BR30° (right-hand use)	1 x AA (left-hand use)	1 x AA (right-hand use)
1 x BL30° (left-hand use)		

Knurling profiles on DIN 82 workpiece for tool 241:

Feed knurling



Selection of knurling wheels:

2 x AA

TOOL VERSIONS:

Order no. Set	Order no. Holder	Tool holder Designation	Working area Ø [mm]	Dimension [mm]	Knurling wheels (Ø x b x b) [mm]
31002700	31002445	231-25M250608-B	10-300	see page 21	25 x 6 x 8
	31001899	241-25M250608-A1	10-250	see page 22	25 x 6 x 8