

Maximum rigidity, process stability and simplified handling: These are the advantages of the new RF2-A generation. The tool series is mainly suitable for producing RGE profiles. Serration between tool holder and cut knurling head provides extra rigidity and reduced wear on the knurling wheels. A special advantage offers the vertical height adjustment for a flexible use on different shank sizes. Setting aids for fine adjustment of the cut knurling head make the tool setting easy and offer increased process stability for exacting work pieces.

APPLICATION ADVANTAGES:

PROCESS STABILITY:

- Serration between tool holder and cut knurling head – for increased rigidity and precision
- Rigid tool construction allows an exact positioning of the cut knurling tool head – for an optimal tool guiding on the work piece and minimal vibration of the tool. Superb precision and surface quality on the work piece
- Precise positioning of the tool head by means of scaling aid – for an easy presetting and reproducible processes
- Controlled tool change: precise fitting of the knurl and exact location of the knurl holding unit

EFFICIENCY:

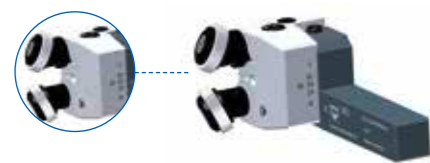
- Universal use – tool designed for machines with both 20 and 25 mm shanks
- Through the vertical height adjustment the tool can be used flexibly for both shank sizes
- Modular cut knurling tool head for right- / left-hand use
- Higher feed and speed rates, reduced production times
- Reduced wear on knurling wheels

TOOL HANDLING:

- Reduced setting time through easy presetting and reproducible setting parameters
- User-friendly fine adjustment of the center height through vertical height adjustment with the setting spindle
- Easy setting of the work piece diameter with the setting scale and the synchronously adjusted setting spindle
- Fine adjustment of the knurl head through setting spindle (with scale) – ensuring a knurling profile parallel to the axis
- Fine-adjustment through adjustable knurling tool head

UNIVERSAL USE:

Vertical height adjustment for center height 20 and 25 mm



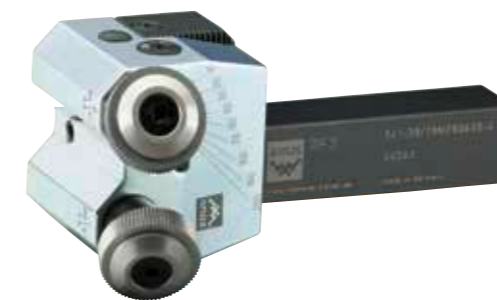
MODULAR USE RIGHT AND LEFT:

Retooling through fast and easy turning of the cut knurling head



zeus® CUT KNURLING TOOL 240/241:

THE SPECIALIST FOR KNURLING APPLICATIONS WITH HIGH DEMANDS ON RIGIDITY AND SURFACE QUALITY!



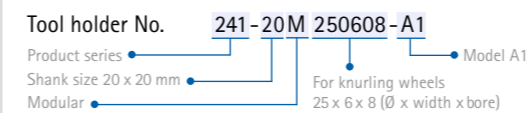
Machine type: Conventional and CNC – suitable for:
 • Automatic short-turning lathes, Universal lathes, Turning- / milling centre
 • Multispindle automatic lathes

Application: Cut knurling (swarf removal)

Knurling profile on work piece DIN 82: RGE30° RGE45°
Knurling wheels: 2 x AA 1 x BL15° / 1 x BR15°

Tool direction: • Feed knurling
Product highlights: • Serration between tool holder and cut knurling head
 • Exchangeable tool head for left- / and right-hand use
 • Setting scale and synchronously adjusted setting spindle for adjustment of the work piece diameter / clearance angle correction
 • Cut knurling head spindle with scaling
 • Fine adjustment of the center height and cut knurling head with setting scale and spindle
 • Carbide bushings
 • Special surface hardening for increased wear resistance
 • Vertical height adjustment for center height 20 and 25 mm (Model 241-20/25M250608-A1)

ORDER EXAMPLE:



TOOL TYPES:

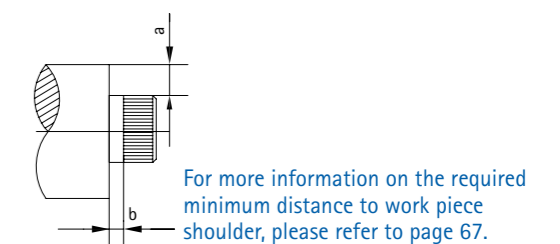
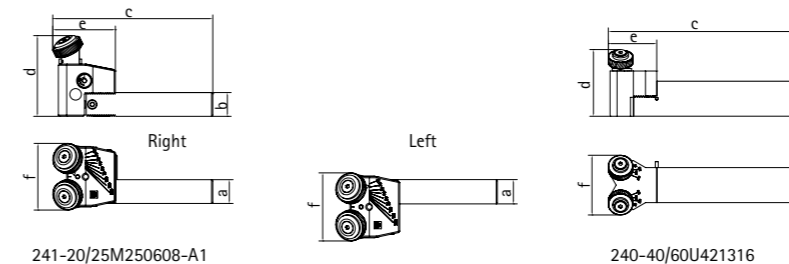
Tool holder No.	Working area Ø mm	a mm	b mm	c mm	d mm	e mm	f mm	Knurling wheels mm (Ø x width x bore)	Spare part E-Kit
241-20M150408-A*	3 - 50	20	20	118	45	38	36	15 x 4 x 8	21BHR0792
241-20/25M250608-A1	10 - 250	20	20	134	68	54	58	25 x 6 x 8	21BHR0506
241-25M250608-A1	10 - 250	20	25	134	68	54	58	25 x 6 x 8	21BHR0506

* Design as 241-08M100306 (see picture on page 39), shank, however, as shown above.

Special tool types for large working diameters:

240-40U421316	50 - 3000	40	60	319	114	86	102	42 x 13 x 16	21BHR0508
240-60U421316-A	50 - 3000	60	60	316	114	83	102	42 x 13 x 16	21BHR0508

Further tool versions with VDI-shank system available on demand.



21BHR0506
21BHR0508
21BHR0792

APPLICATION EXAMPLE:

Housing

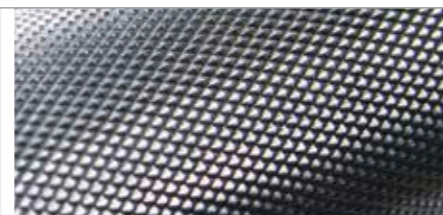


APPLICATION:

Material: 9SMnPb28K
 Knurling Profile/Pitch (DIN 82): RGE30° / P. 1.0
 Machine: Index
 No. of pcs. produced/knurling wheel: 1,000

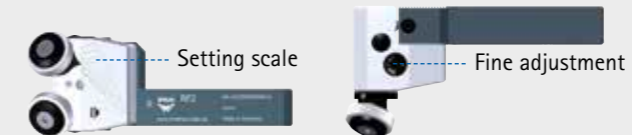
APPLICATION PARAMETERS zeus® RF2:

Knurling tool: 241-20/25M250608-A.1
 Knurling wheel: AA 25x6x8, P. 1.0
 Cycle time: 15 sec/piece
 Speed rate: 47 m/min
 Feed rate: 0.1 mm/rev
 Tool life knurling wheel: 250 min/knurling wheel
 Performance: 1.4 m²/knurling wheel



EASY HANDLING:

Easy presetting for reduced setting time



PROCESS STABILITY:

Stability and precision

