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KNURLING



The chameleon of knurling tools.

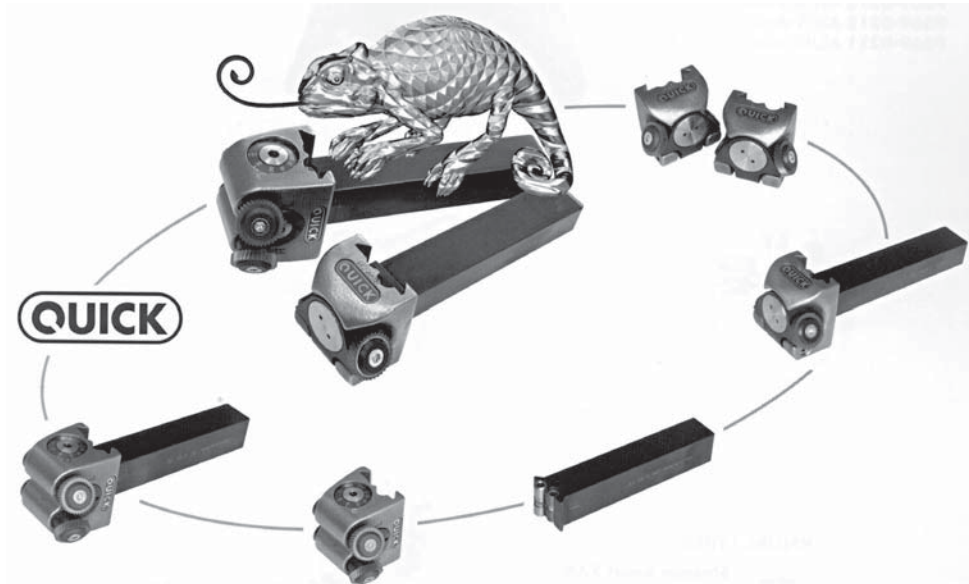
- P669-0200** A1/KF shank 10
- P669-0201** A1/KF shank 12
- P669-0202** A1/KF shank 16
- P669-0203** A1/FL shank 10
- P669-0204** A1/FL shank 12
- P669-0205** A1/FL shank 16



P669-0206 Set A1
consisting of:
A1/KF shank 16
A1/FL shank 12
shank 10

TECHNICAL DATA

Model	A1/FL - A1/KF
for workpiece \varnothing	3-50 mm
for pitches	0,4-1,2 mm
knurling wheel \varnothing	14,5 mm
shank \varnothing	10, 12 or 16 mm
shanklength	80 mm



The chameleon of knurling tools.

- P669-0212** A2/FL shank 20
- P669-0210** A2/KF shank 20
- P669-0213** A2/FL shank 25
- P669-0211** A2/KF shank 25



P669-0214 Set A2
consisting of:
A2/KF shank 25
A2/FL shank 20

TECHNICAL DATA

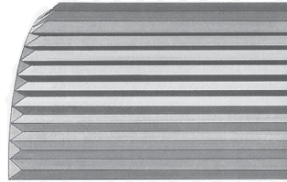
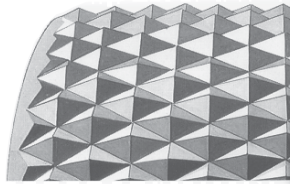
Model	A2/FL - A2/KF
for workpiece \varnothing	5-250 mm
for pitches	0,4-2,0 mm
knurling wheel \varnothing	21,5 mm
shank \varnothing	20 or 25 mm
shanklength	110 mm



KNURLING

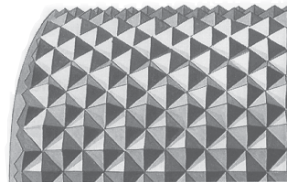
STRAIGHT KNURL

This pattern corresponds with DIN 82, section knurl RAA and is produced with all QUICK models FL, STR and STABIL. These tools require knurling cutters with a 30° spiral.



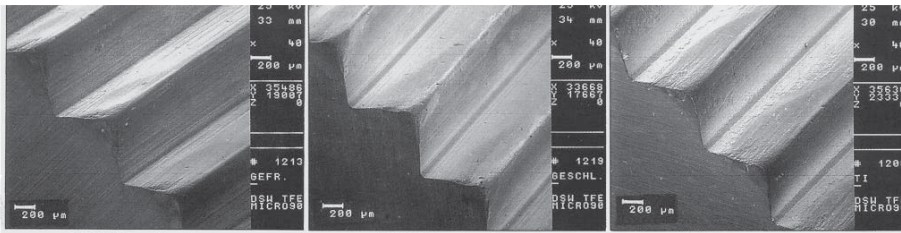
DIAMOND KNURL

This pattern corresponds with DIN 82, section RGE. It crosses at an angle of 30° to the center axis. Diamond knurls are produced with QUICK models KF, STR, STABIL and require straight knurling cutters.



CROSS KNURL

This pattern crosses at a 45° angle to the center axis and therefore does not correspond with DIN 82, section RKE. Cross knurls are cut with QUICK Models KF, STR, STABIL and require cutters with a 15° spiral.



QUICK Knurling Cutter milled HRC 63.5

QUICK Knurling Cutter ground HRC 63.5

QUICK Knurling Cutter ground and TIN-coated HRC 63.5

The above 3 illustrations clearly demonstrates the difference between milled, ground and ground + TIN coated Knurling Cutters. They are based on the following test example:

MACHINING DATA: Material CK 45 759 N/mm² Pitch of knurl: 1.0 mm Surface speed: v = 43 m per minute/min
Actual knurling time: 150 minutes Feed: 0.21 mm per revolution

QUICK KNURLING CUTTERS AVAILABLE SIZES AND PITCHES EITHER WITH MILLED TEETH, GROUND TEETH, OR GROUND + TIN COATED TEETH		
DIAMETER	TOOTH ANGLE	AVAILABLE PITCHES
8.9 mm	90° Straight cut	0.3 - 0.4 - 0.5 - 0.6 - 0.8 - 1.0
8.9 mm	15° L (left hand spiral)	0.3 - 0.4 - 0.5 - 0.6 - 0.8 - 1.0
8.9 mm	15° R (right hand spiral)	0.3 - 0.4 - 0.5 - 0.6 - 0.8 - 1.0
8.9 mm	30° L (left hand spiral)	0.3 - 0.4 - 0.5 - 0.6 - 0.8 - 1.0
8.9 mm	30° R (right hand spiral)	0.3 - 0.4 - 0.5 - 0.6 - 0.8 - 1.0
14.5 mm	90° Straight cut	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2
14.5 mm	15° L (left hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2
14.5 mm	15° R (right hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2
14.5 mm	30° L (left hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2
14.5 mm	30° R (right hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2
21.5 mm	90° Straight cut	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2 - 1.5 - 1.6 - 2.0
21.5 mm	15° L (left hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2 - 1.5 - 1.6 - 2.0
21.5 mm	15° R (right hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2 - 1.5 - 1.6 - 2.0
21.5 mm	30° L (left hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2 - 1.5 - 1.6 - 2.0
21.5 mm	30° R (right hand spiral)	0.4 - 0.5 - 0.6 - 0.8 - 1.0 - 1.2 - 1.5 - 1.6 - 2.0

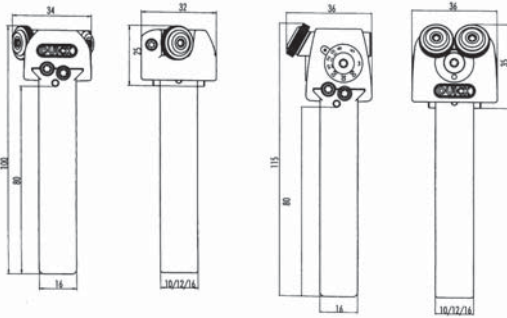
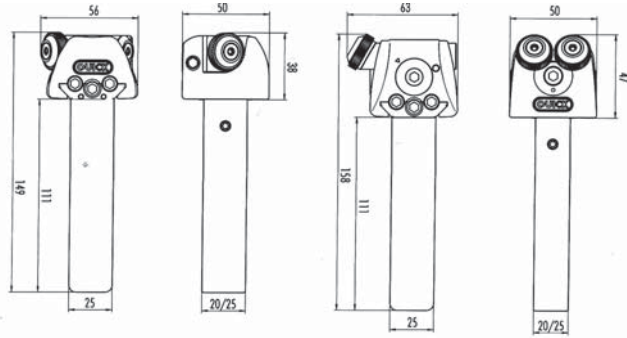
KNURLING



Cross knurl RKE:
1 pc. knurling wheel 15°L
1 pc. knurling wheel 15°R



Diamond knurl RGE:
2 pcs. knurling wheels 90°



KNURL TYPES



Straight knurl RAA:
right hand tool
1 pc. knurling wheel 30°R
left hand tool
1 pc. knurling wheel 30°L



Spiral knurl RBR:
right hand tool
1 pc. knurling wheel 15°R
1 pc. knurling wheel 90°



Spiral knurl RBL:
left hand tool
1 pc. knurling wheel 15°L
1 pc. knurling wheel 90°

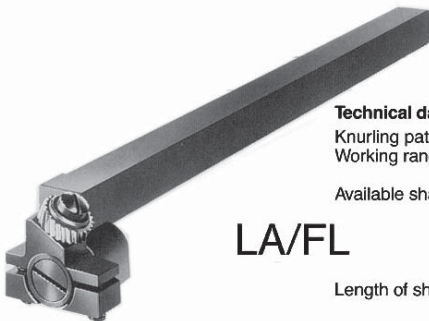


LA/KF

Technical data:

Knurling pattern: Cross and diamond
Working range: 1.5–12 mm Ø
(0.060–0.472")
Available shank: 6x6 (0.240")
7x7 (0.280")
8x8 (0.320")
10x10 (0.390")
12x12 (0.470")
Length of shank: Approx. 80 mm (3.150")

Knurling cutter:
8.9 mm Ø (0.350") (11/32")
Cross: 1 pc. 15° right hand spiral
1 pc. 15° left hand spiral
Diamond: 2 pcs. 90° straight cut.
Available Pitches (teeth per inch):
0.3 mm (85) 0.4 mm (63) 0.5 mm (51)
0.6 mm (42) 0.8 mm (32) 1.0 mm (25)
Weight of tool: Approx. 140 grams.



LA/FL

Technical data:

Knurling pattern: Straight
Working range: 1.5–12 mm Ø
(0.060–0.472")
Available shank: 6x6 (0.240")
7x7 (0.280")
8x8 (0.320")
10x10 (0.390")
12x12 (0.470")
Length of shank: Approx. 80 mm
(3.150")

Knurling cutter:
8.9 mm Ø (0.350") (11/32")
1 pc. 30° left hand spiral for left hand cutting
and 30° right hand spiral for right hand cutting tools.
Available Pitches (teeth per inch):
0.3 mm (85) 0.4 mm (63) 0.5 mm (51)
0.6 mm (42) 0.8 mm (32) 1.0 mm (25)
Weight of tool: Approx. 110 grams.