RAPID

KNURLING TOOLS & TOOL HOLDERS

"To Analyse, Innovate and Provide best solutions to customers by adding value in engineering products"

1. Scope :

Specifies the types and dimensions for knurls.

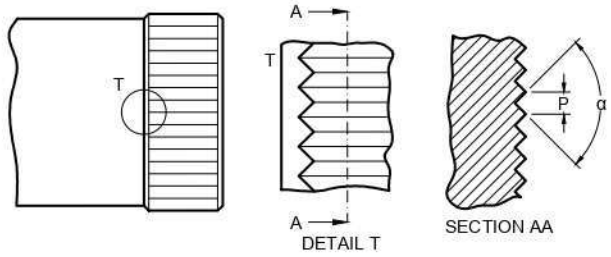
2. Types :

Type RAA - Knurl with grooves paralled to axis.
Type RBL - Left-hand knurl
Type RBR - Right-hand knurl
Type RGE - Left-hand/right-hand knurl, points raised
Type RGV -Left-hand/right-hand knurl, points indented
Type RKE - Cross-knurl, points raised
Type RKV - Cross-knurl, points indented.

2.1. Representation of types

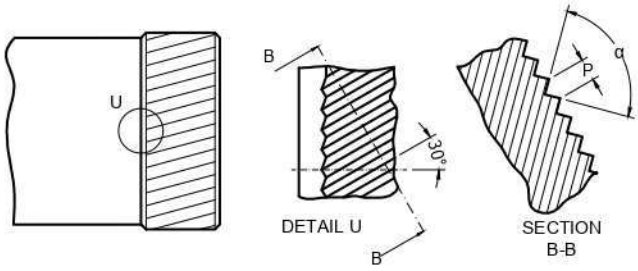
Type: RAA

Knurling with grooves parallel to axis



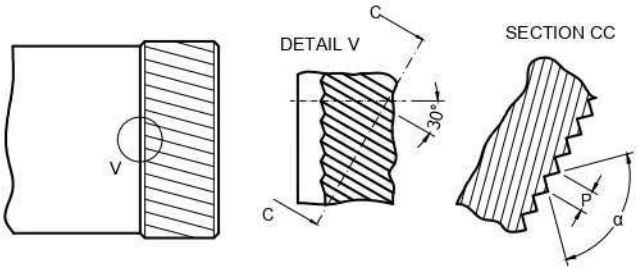
Type: RBL

Left hand knurling



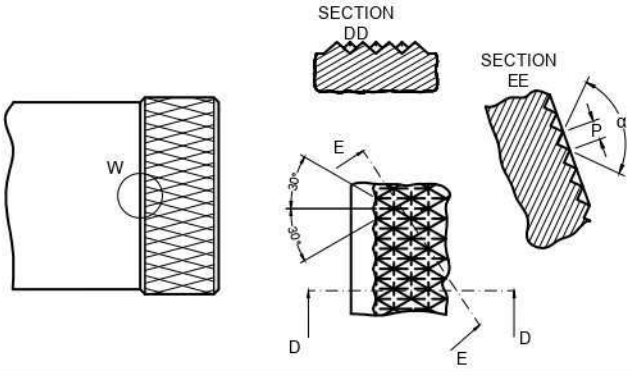
Type: RBR

Right hand knurling



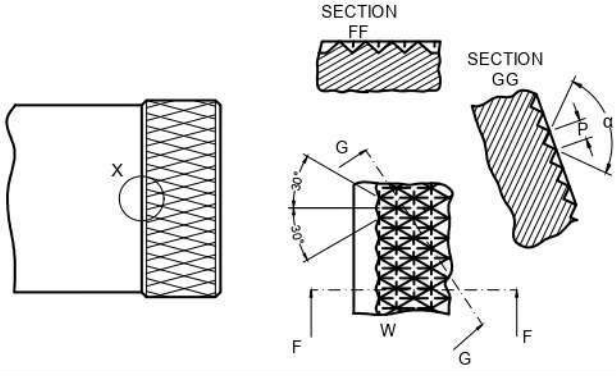
Type: RGE

Left hand/Right hand knurling,
Points raised

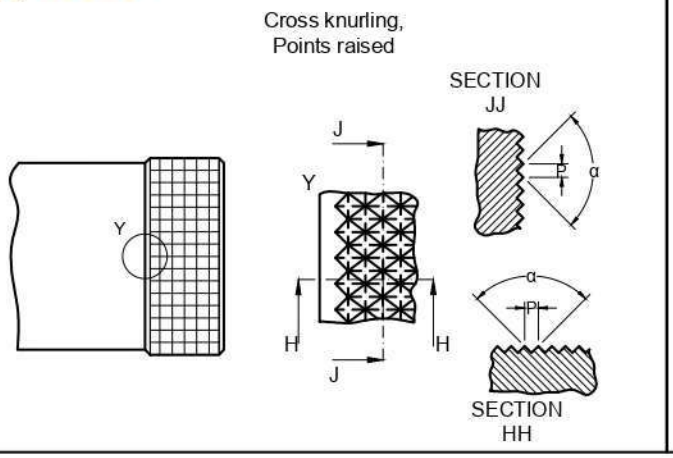


Type: RGV

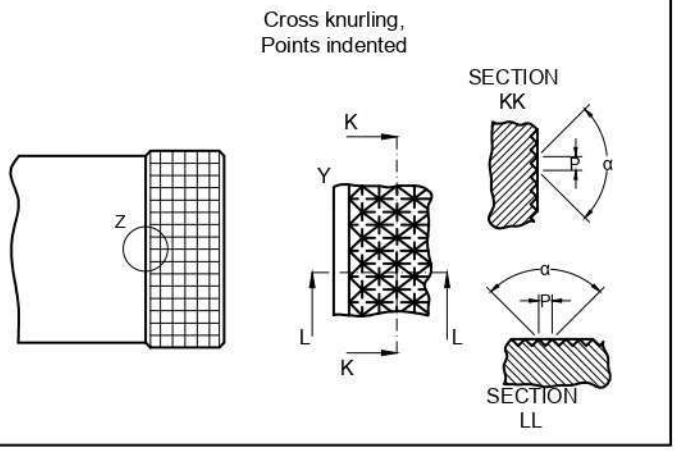
Left hand/Right hand knurling,
Points indented



Type: RKE



Type: RKV



3. Dimensions

3.1 **Profile Angle** : Profile angle α = 90°

3.2 **Pitch** : P.

3.3 **Nominal Diameter** d_1 :

The nominal diameter d_1 stated in the workshop drawing shall be the outside diameter of the finished knurl; this dimension is a function of the design.

3.4 **Initial Diameter** d_2 :

The initial diameter d_2 of the work piece prior to knurling shall be smaller than the nominal diameter d_1 , because the initial diameter undergoes enlargement through displacement of the material during the knurling operation.

The initial diameter d_2 for knurls with profile angle α = 90° can be calculated from the formulae in the following table, depending on the type of knurl and the size of pitch:

TYPE OF KNURL		INITIAL DIAMETER d_2
RAA	Knurl with grooves parallel to axis	d_1 - 0.5P
RBL	Left-hand knurl	
RBR	Right-hand knurl	
RGE	Left-hand/right-hand knurl, points raised	d_1 - 0.67P
RGV	Left-hand/right-hand knurl, points indented	d_1 - 0.33P
RKE	Cross-knurl, points raised	d_1 - 0.67P
RKV	Cross-knurl, points indented	d_1 - 0.33P

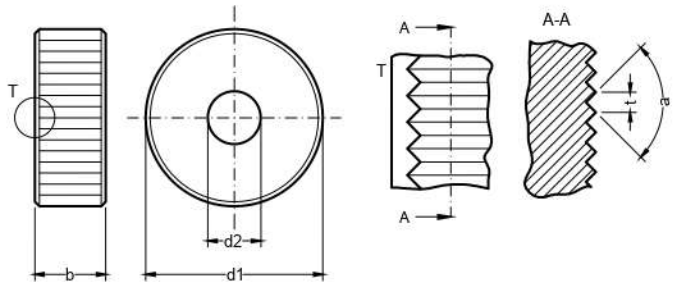
The factors in the formulae, however, do not take into account the rounding of the grooves resulting from the knurling operation or the specific properties of the materials to be knurled.

4. Designation :

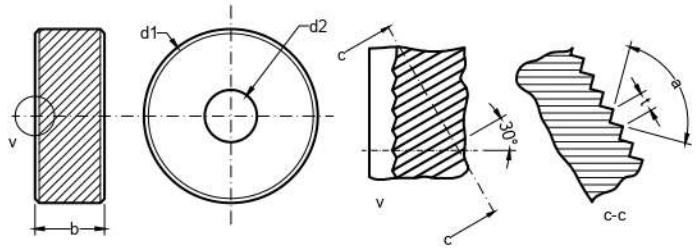
A cross-knurl, points indented (Type RKV) with pitch P = 0.8 mm and conforming to this standard shall be designated as: Knurl **RKV 08 IS : 3468**

KNURLING WHEELS AS PER DIN82

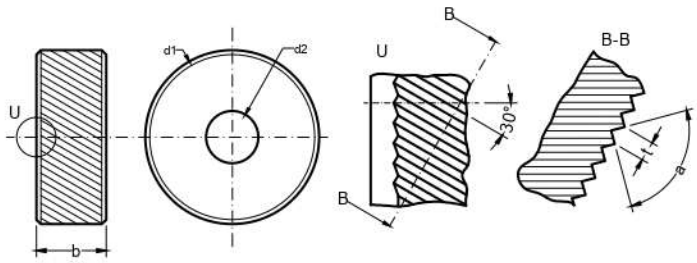
AA (STRAIGHT KNURLING WHEEL)



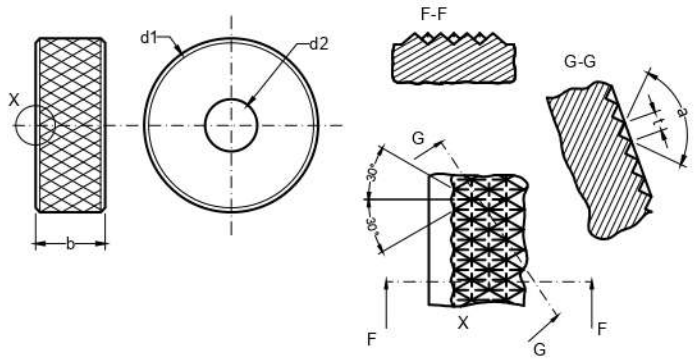
BL (LEFT HAND KNURLING WHEEL)



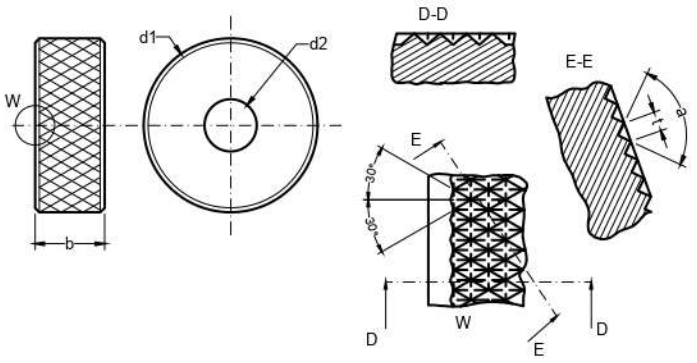
BR (RIGHT HAND KNURLING WHEEL)



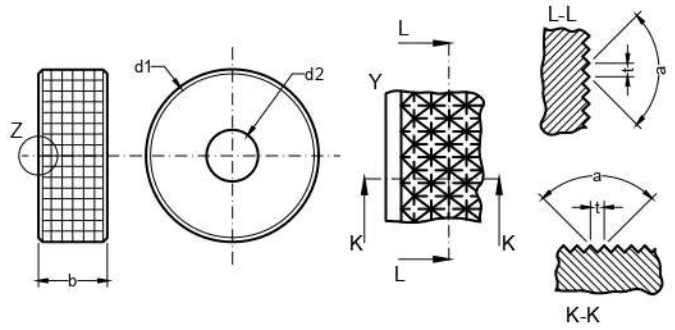
GE (MALE DIAMOND KNURLING WHEEL)



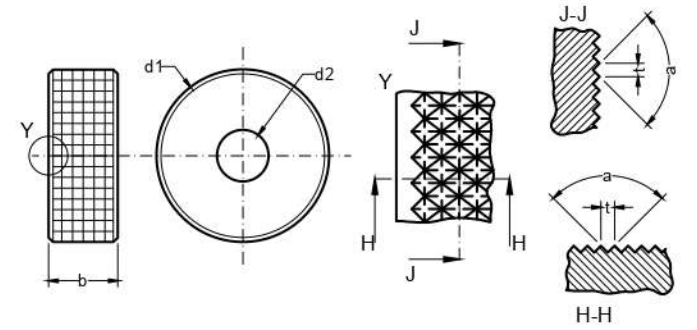
GV (FEMALE DIAMOND KNURLING WHEEL)



KE (MALE SQUARE KNURLING WHEEL)



KV (FEMALE SQUARE KNURLING WHEEL)



FORM KNURLS

KNURL PROFILE :

KNURL SIZE :

10x04x04, 15x04x04, 20x08x06, 20x10x06

KNURL PITCH :

0.4, 0.5, 0.6,0.7, 0.8, 0.9, 1.0, 1.2, 1.5, 1.6, 1.8, 2.0, 2.5

(0.1, 0.2, 0.3 Non-Standard size also available.Price on request)

RAPID KNURLS FEATURES:

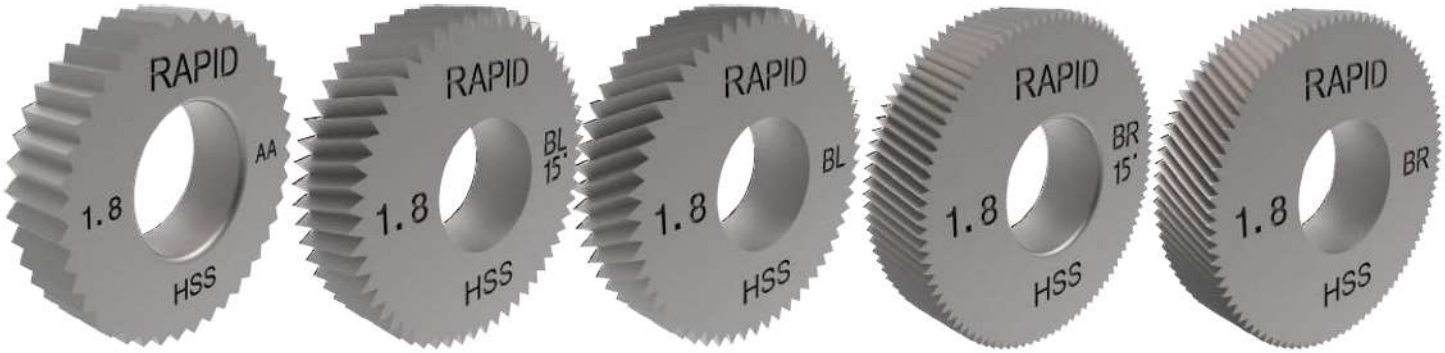
- HSS knurls with Bore and Face ground
- Milled sharp Edge Profile
- better Form Profile
- Highest Productivity on ferrous & non ferrous material
- long life of tool on job which offer cost per part is negligible

*** Further pitch sizes and customized knurling wheels available on demand**

*** Standard knurls are without chamfers**

CUT KNURLS

KNURL PROFILE :



KNURL SIZE :

15x03x08, 21.5x5x10

KNURL PITCH :

0.4, 0.5, 0.6,0.7, 0.8, 0.9, 1.0, 1.2, 1.5, 1.6, 1.8, 2.0, 2.5

RAPID CUT KNURLS FEATURES:

- HSS knurls with Bore and Face ground
- Milled sharp Edge Profile For better cutting operations
- Reduced tool setup time
- Highest Productivity on ferrous & non ferrous material

SPECIAL KNURLS

Individual customer requirements call for expertise and flexibility. For this reason, special pitches and dimensions are available to our customers on request and in consultation with our Technical team.