

# KENNA UNIVERSAL – A4 Groove & Turn



## 3 Easy Steps to Greater Productivity in Grooving and Turning

### 1st Step – Select Chipbreaker Style and Feed Rate

Choose Chipbreaker Based on Material Type.

Steel	Stainless Steel	Cast Iron	High-Temp Alloys
GMN	GMP	GMN	GMP

#### Depth of Cut and Feed Guidelines for Square Inserts (A4G...):

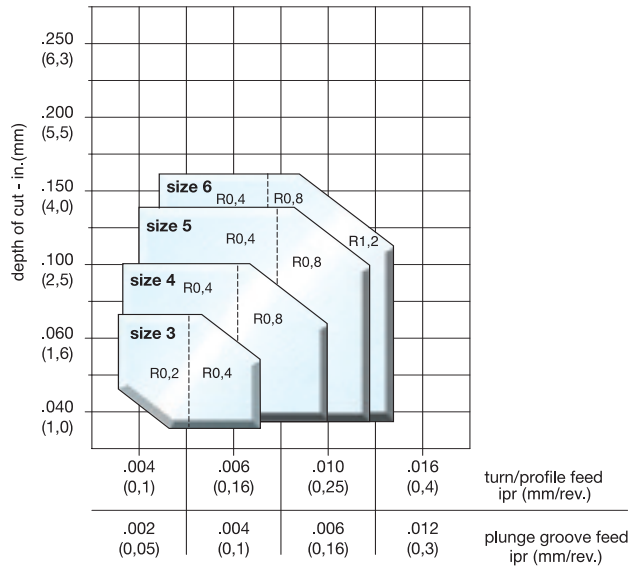
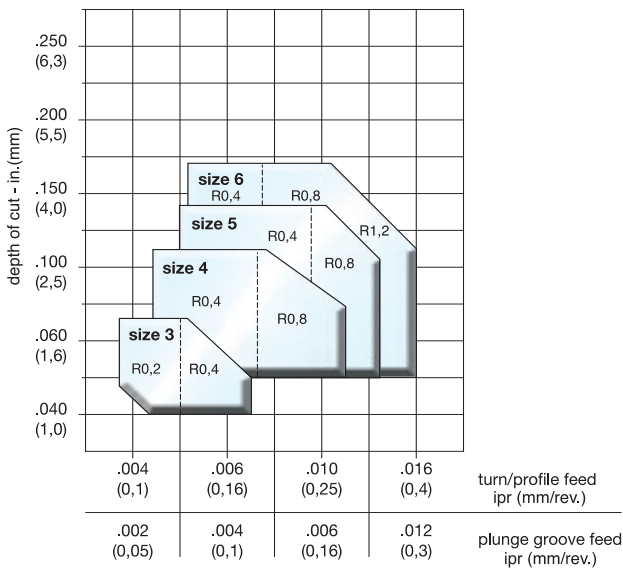
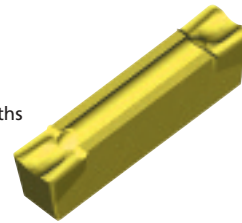
##### GMN Chipbreaker

- Groove & turn molded inserts
- Stable cutting edge
- Available in metric widths only



##### GMP Chipbreaker

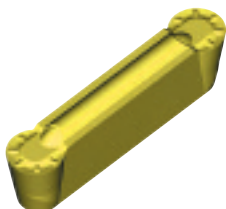
- Groove & turn molded inserts
- Positive rake angle
- Available in inch and metric widths



NOTE: Select feed based on nose radius. Diagram explanation: R0,2 - R = corner radius; 0,2 = 0,2 mm radius; see page A72 for further references.

#### Depth of Cut and Feed Guidelines for Full Radius Inserts (A4R...):

##### GMN Chipbreaker



Maximum turning and profiling depth of cut equals half the insert width.

The maximum turn and profile feed rate depends on the material to be machined and the depth of cut. For easy-to-machine materials, feed can be increased up to 1.5 times.



KENLOC INSERTS  
 SCREW-ON INSERTS  
 TOOL HOLDERS  
 BORING BARS  
 TOP NOTCH GROOVING  
 TOP NOTCH HOLDERS  
 A4  
 A2  
 LT THREADING  
 TOP NOTCH THREADING

### 2nd Step – Select Speed

#### Recommended KENNA UNIVERSAL Grade

Cutting Conditions		Grades
heavily interrupted cut		KU30T
lightly interrupted cut		KU30T
varying depth of cut, casting or forging skin		KU30T
smooth cut, pre-turned surface		KU30T

#### Recommended KENNA UNIVERSAL Cutting Speeds

Material Group	Grade	Speed - sfm (m/min)					Starting Conditions	
		150 (45)	300 (90)	450 (140)	600 (185)	750 (230)	sfm	m/min
P	KU30T						400	120
M	KU30T						350	105
K	KU30T						650	200
S	KU30T						200	60

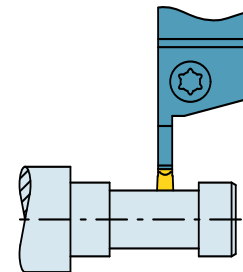
### 3rd Step – Select Insert and Holder from Catalog Page

#### Example for A4 – Groove and Turn

material: low-alloyed steel  
 workpiece OD: 1.5 in. (38 mm)  
 groove depth: .5 in. (12 mm)  
 groove width: .850 in. (22 mm)  
 operation: lightly interrupted cut

#### Recommendation:

insert: A4G0405M04U08GMN  
 grade: KU30T  
 insert width: .159 in. (4,05 mm)  
 insert seat size: 4  
  
 toolholder: A45MR160417  
 grooving depth: .670 in. (17 mm)  
 seat size: 4



speed: 400 sfm (120 m/min)  
 turn feed: .010 ipr (0,25 mm)  
 plunge feed: .006 ipr (0,14 mm)

NOTE: The insert seat size must match the seat size of your toolholder selection.

To place an order, contact your authorized Kennametal distributor or visit [www.kennametal.com](http://www.kennametal.com).