

 **TIVOLY**<sup>®</sup>

**β-roll**

Forming Taps

**M - MF**



**INNOVATION & TECHNOLOGY**

■ **Our new generation of forming taps**



# Range $\beta$ -roll

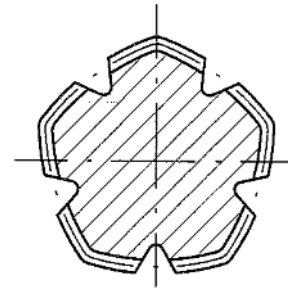
Our new forming taps  $\beta$ -roll are made from the last generation best high speed steels. Thanks to their innovating geometry and their optimized surface, they are the best tapping solution for materials with an elongation coefficient of minimum 10% and a tensile strength until

1 000 N/mm<sup>2</sup>, such as steels, stainless steels, titanium, aluminum, copper, brass ...

Our new forming taps  $\beta$ -roll are the ideal solution for manufacturing long chip materials.

**Our research department has been working in close collaboration with end-users to know and understand their needs.**

Our forming taps  $\beta$ -roll have a specific design which influences the cutting speed. The torque and therefore the generated heat are reduced, thus enabling higher performances.



## ADVANTAGES

- Resistant threading of high quality
  - Tool life increased
  - No chips

The new geometry of the threads allows a better movement of the material fibers. The friction between the tap and the workpiece is reduced. Consequently, the wear is reduced and the tool life is increased.

Thanks to different coatings, specific solutions are adapted to every material to be manufactured.

The new range includes pitches M, MF, with or without grooves, with tolerances 6HX, 6GX

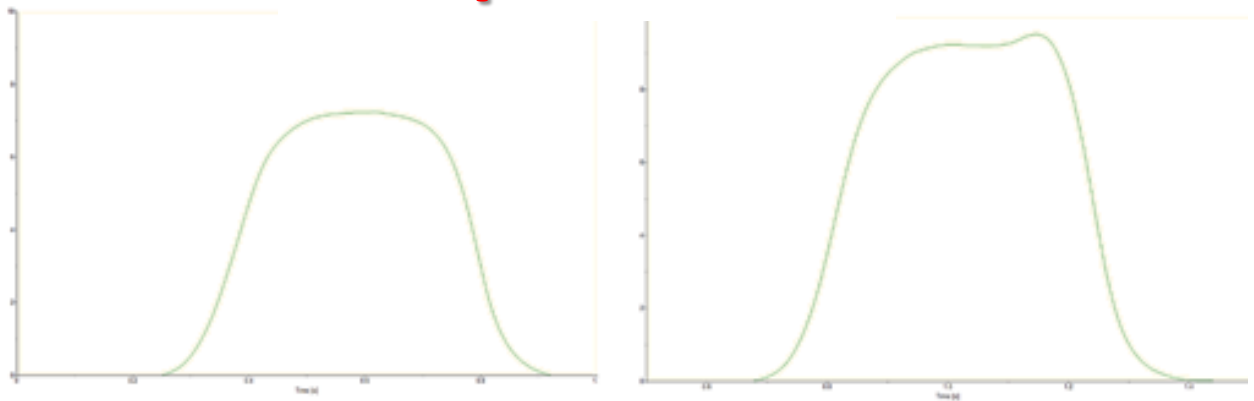
Hole diameter:

$$\varnothing = \varnothing_{\text{nominal}} - 0.40 * p$$



# Range $\beta$ -roll

## Torque - 25 %



Tivoly 960GSH1

Material: 1.1141  
Tap M8 6HX  
Vc= 40 m/ min  
Hole depth: 16 mm

Competitor








■ Tapping of filter  
65.000 pcs

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# β-ROLL 6HX

					
	960GSH1	960SRH1	960IRH1	960ASH1	960ARH1
M	M3-M16	M3-M16	M3-M16	M3-M16	M3-M16
MF	MF8-MF14	MF8-MF14	MF8-MF14	MF8-MF14	MF8-MF14
Steel	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
Cone	2 1/2 - 3	2 1/2 - 3	2 1/2 - 3	2 1/2 - 3	2 1/2 - 3
Grooves	NO	YES	YES	NO	SI
Coating	TiN	TiN	ALINOX	CrN PLUS	CrN PLUS
Type of hole	Blind Through	Blind Through	Blind Through	Blind Through	Blind Through
Depth	3x∅	3x∅	3x∅	3x∅	3x∅
<b>PREVIOUS RANGE</b>	<b>960AT91</b>	<b>960ST91</b>	<b>960IT91</b>	<b>960AT91</b>	

		CUTTING SPEED / m/min				
<b>A</b>	Low Alloyed Steels	20-50	20-50			
<b>B</b>	Alloyed Steel R < 850 N/mm <sup>2</sup>	20-40	20-50			
<b>C</b>	Steels for heat treatment R < 1000 N/mm <sup>2</sup>					
<b>F</b>	Stainless Steels, Ferritic		8-15	10-20		
<b>G</b>	Stainless Steels, Marenitic		8-15	10-20		
<b>H</b>	Stainless Steels, Austenitic R < 850 N/mm <sup>2</sup>		8-15	10-20		
<b>K</b>	Non-alloyed aluminium and aluminium forge	15-40			15-40	
<b>L</b>	Aluminium alloys with Si < 7%		15-40			15-40
<b>N</b>	Pure copper	15-40			15-40	
<b>N</b>	Copper alloys long chip		15-40			15-40

# β-ROLL 6GX

					
	960GSG1	960SRG1	960IRG1	960ASG1	960ARG1
M	M3-M12	M3-M12	M3-M12	M3-M12	M3-M12
MF	HSS-PM	HSS-PM	HSS-PM	HSS-PM	HSS-PM
Steel	6GX	6GX	6GX	6GX	6GX
Cone	2 1/2 - 3	2 1/2 - 3	3 1/2 - 3	2 1/2 - 3	2 1/2 - 3
Grooes	NO	YES	YES	NO	SI
Coating	TiN	ALTOP	ALINOX	CrN	CrN PLUS
Type of hole	Blind Through	Blind Through	Blind Through	Blind Through	Blind Through
Depth	3x∅	3x∅	3x∅	3x∅	3x∅

<b>A</b>	Low Alloyed Steels	20-50				
<b>B</b>	Alloyed Steel R < 850 N/mm <sup>2</sup>	20-40	20-50			
<b>F</b>	Stainless Steels, Ferritic		10-20	10-20		
<b>G</b>	Stainless Steels, Marenitic		10-20	10-20		
<b>H</b>	Stainless Steels, Austenitic R < 850 N/mm <sup>2</sup>		10-20	10-20		
<b>K</b>	Non-alloyed aluminium and aluminium forge	15-40			15-40	
<b>L</b>	Aluminium alloys with Si < 7%		15-40			15-40
<b>N</b>	Pure copper	15-40			15-40	
<b>N</b>	Copper alloys long chip		15-40			15-40