

# NPA

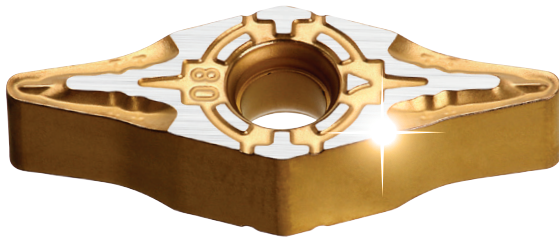
June 2015  
www.taegutec.com

New Product Announcement No. 2015-16



## RHINO•RUSH

Now Available, New YNMG 1304 Insert Line



TaeguTec is pleased to announce the expansion of the RHINORUSH line with the introduction of a new geometry, the YNMG 1304 insert.

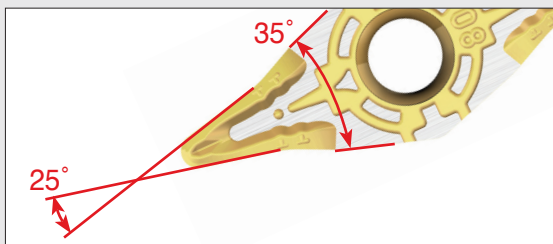
The newly launched YNMG 1304 insert is designed with a 25 degree geometry shape enabling several profile and groove machining applications under 35 degrees as well as uninterrupted undercut machining applications.

Available as standard items, the YNMG 1304 FS chip breaker has a sharp cutting edge and wide shape appropriate for finish machining with excellent chip control ability.

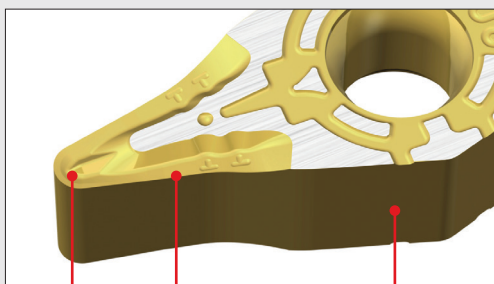
Additionally, the new YNMG 1304 inserts are interchangeable with the VNMX 1304 insert's holders.

### FEATURES

- **New profile machining concept: 25 degree geometry shape enables for several machining applications**

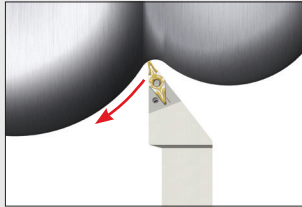


- **A sharp cutting edge and wide chip breaker shape for excellent chip control**

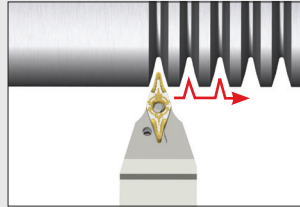


- 1 Chip breaker shape for chip control
- 2 Positive rake angel
- 3 Interchangeable with the VNMX 1304 insert's holder pocket

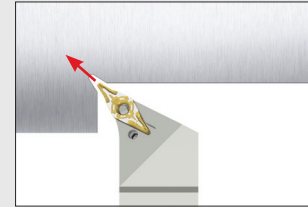
### ■ Main applications



Profiling



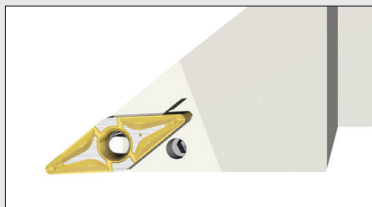
Profiling



Undercut machining

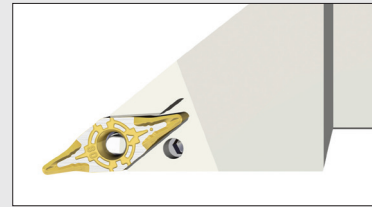
➔ Improved productivity and cost savings

- Interchangeable with the recently launched VNMX 1304 insert's holders  
(All VNMX 1304 holder types: T-holder, hook lever and screw clamp types)



VNMX 1304 insert setting

➔  
Can be fastened  
to the same holder



YNMG 1304 insert setting

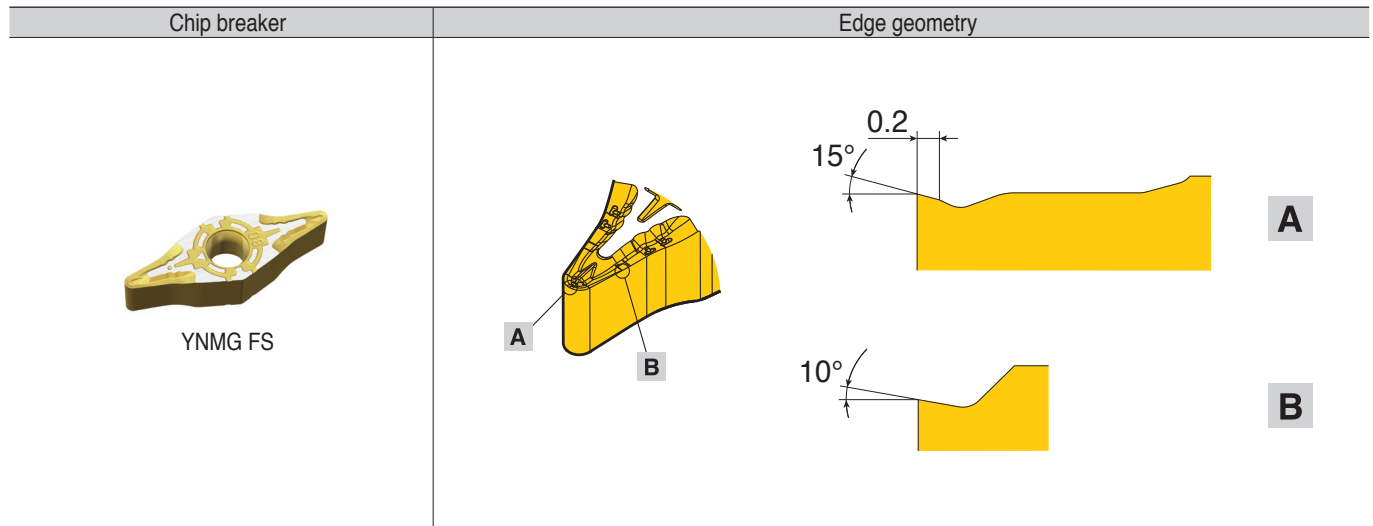
- YNMG 1304 insert's cutting edge length



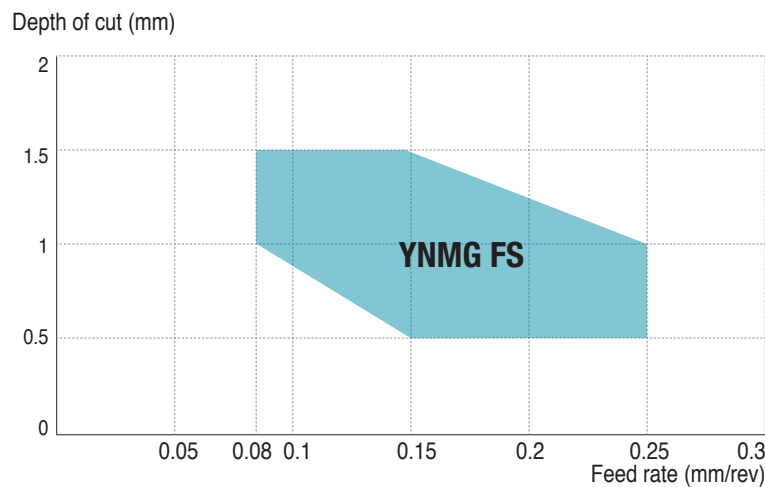
- Corner R0.4 ➔ E.L = 4.7mm

- Corner R0.8 ➔ E.L = 4.2mm

### YNMG FS chip breaker's edge geometry



### Chip breaker range



- Insert : YNMG 130408 FS
- Cutting speed (V) : 200m/min
- Material : 0.45% Carbon steel (HB200~230)

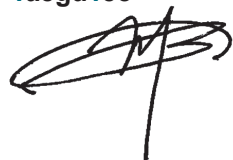
#### Availability

In stock

#### Price

Available in the GAL system

Sincerely,  
TaeguTec



**Park Hong-sik**

Rotating & Non-Rotating Product Manager

Sincerely,  
TaeguTec

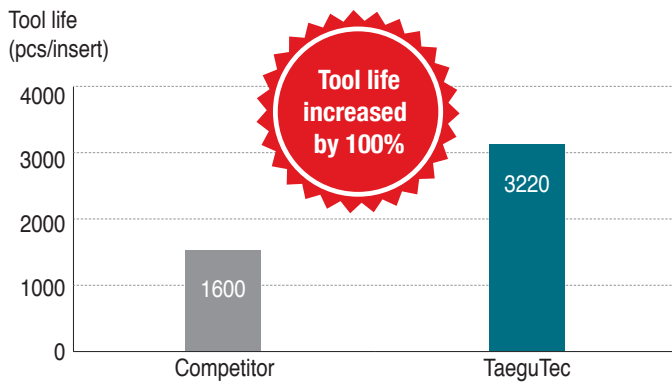


**Cho Ho-hyoun**

Turning Product Manager

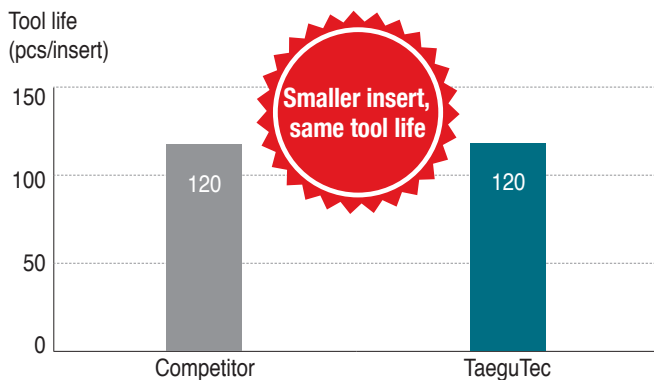
### Case study 1

		Competitor	TaeguTec
Workpiece		Pulley	
Workpiece material		Carbon steel (S40C, AISI 1040)	
Insert		'Y' type positive insert (2 corners)	YNMG 130404 FS (4 corners)
Grade		P25 tungsten carbide coated	PV3010
Cutting speed	V (m/min)	400	
Feed rate	F (mm/rev)	0.2	
Depth of cut	ap (mm)	0.2	
Coolant		Dry	
Tool life (pcs/insert)		1600	3220



### Case study 2

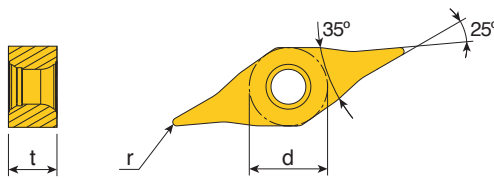
		Competitor	TaeguTec
Workpiece		Shaft	
Workpiece material		Magnesium alloy	
Insert		YNMG 160404 (4 corners)	YNMG 130404 FS (4 corners)
Grade		P10 cermet grade	PV3010
Cutting speed	V (m/min)	260	
Feed rate	F (mm/rev)	0.06	
Depth of cut	ap (mm)	0.5	
Coolant		Dry	
Tool life (pcs/insert)		120	120





### YNMG 13

#### Negative 25° rhombic inserts



Size	Dimension (mm)			
	d	t	r	
13	7.94	4.76	0.4-0.8	

Insert	Designation	Recommended machining conditions		Cermet		CVD coated	PVD coated
		Feed (mm/rev)	ap (mm)	PV3010	CT3000	TT8115	TT5080
	<b>YNMG 130404 FS</b>	0.08-0.20	0.3-1.0	●	●	●	●
	<b>130408 FS</b>	0.08-0.25	0.5-1.5	●	●	●	●

● : Standard items

### Recommended Cutting Conditions

ISO	Material	Condition	Tensile strength (N/mm <sup>2</sup> )	Hardness HB	Material No.	Cutting speed Vc(m/min)				
						Cermet		Coated		
						PV3010	CT3000	TT8115	TT5080	
P	Non-alloy steel, cast steel, free cutting steel	< 0.25%C Annealed	420	125	1	350-650	300-570	280-530		
		≥ 0.25%C Annealed	650	190	2	270-520	250-500	240-480		
		< 0.55%C Quenched and tempered	850	250	3	240-480	220-460	200-440		
		≥ 0.55%C Annealed	750	220	4	260-500	240-470	220-450		
		Quenched and tempered	1000	300	5	240-460	220-440	180-420		
	Low alloy steel and cast steel (less than 5% of alloying elements)	Annealed		600	200	6	240-540	220-520	200-500	
				930	275	7	190-330	170-300	150-280	
		Quenched and tempered		1000	300	8	170-300	150-270	130-250	
				1200	350	9	140-270	130-250	120-230	
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	260-405	250-395	190-380		
		Quenched and tempered	1100	325	11	140-205	130-195	90-180		
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	200-300	180-270		160-390	
		Martensitic	820	240	13	200-270	170-250		160-280	
		Austenitic	600	180	14	170-260	150-240		100-250	
K	Gray cast iron (GG)	Ferritic		160	15	230-330	220-320			
		Pearlitic		250	16	215-290	205-280			
	Cast iron nodular (GGG)	Ferritic		180	17	170-265	160-255			
		Pearlitic		260	18	180-240	170-230			
	Malleable cast iron	Ferritic		130	19	145-220	135-200			
		Pearlitic		230	20	105-150	95-140			
N	Aluminum - wrought alloy	Not cureable		60	21					
		Cured		100	22					
	Aluminum-cast, alloyed	<=12% Si Not cureable		75	23					
		Cured		90	24					
	Copper alloys	>12% Si High temp.		130	25					
		>1% Pb Free cutting		110	26					
	Non-metallic	Duroplastics, fiber plastics	Brass		90	27				
			Electrolitic copper		100	28				
			Hard rubber			30				
	S	High temp. alloys	Fe based	Annealed		200	31			50-180
Cured					280	32			40-160	
Ni or Co based			Annealed		250	33			45-100	
			Cured		350	34			35-90	
Titanium, Ti alloys		Cast		320	35			30-80		
		Alpha+beta alloys cured	Rm 400		36			110-200		
H	Hardened steel	Hardened		55HRC	38					
				60HRC	39					
	Chilled cast iron	Cast		400	40					
	Cast iron nodular	Hardened		55HRC	41					

■ Steel   
 ■ Stainless steel   
 ■ Cast iron   
 ■ Nonferrous   
 ■ High temp. alloys   
 ■ Hardened steel