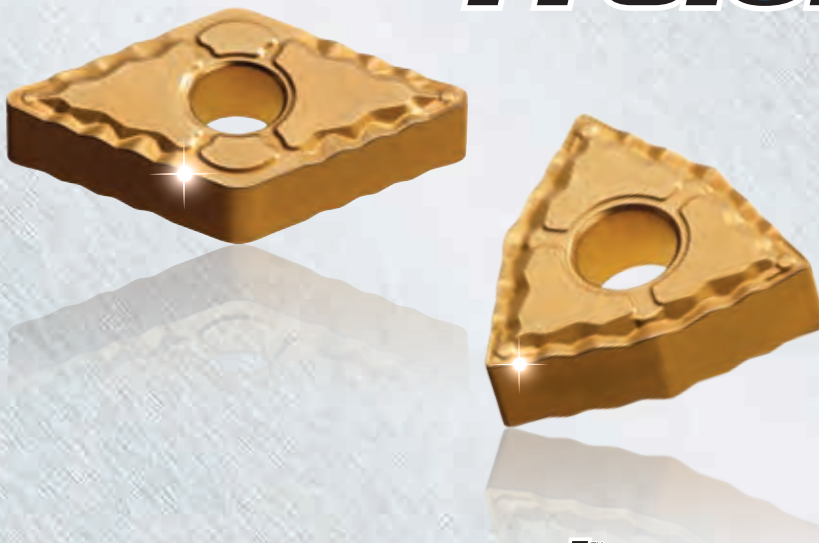


## NEW GRADE TT8105



Featuring **GOLD•LIFE+™** Technology

### TT8105: Expanded Product Line for Turning Steel at High Speeds

Ingersoll is pleased to announce a major expansion of Gold-Life+ turning grade TT8105. The success we've experienced with this grade has led us to increase the number of standard inserts nearly eight-fold.

Now available in more than 200 insert shape/size combinations, grade TT8105 increases productivity by allowing higher cutting speeds to be applied in continuous cut steel applications. This grade features a hard substrate along with a thick, aligned CVD coating structure that provides a robust heat barrier at high cutting speeds. It also features the popular post-coat, Gold-Rush treatment that exists within the entire TT81xx family of grades. The result is a more durable insert that provides maximum wear resistance, better surface finish, less build up on the cutting edge and longer tool life.

#### FEATURES

- High speed turning of steel in continuous cutting applications
- Maximum wear resistant carbide grade for turning steel
- New GoldLife+ aligned structure coating technology
- GoldRush treatment for smooth & stable cutting edge
- Now available in more than 200 insert shape/size combinations

#### Insert Shapes

- Previous:  
CNMG43x  
CNMX43.5x, CNMX55x (Gold-Duty)  
DNMG43x, TNMG33x  
VNMG33x, WNMG43x
- New:  
CCMT21.5x, CCMT32.5x, CCMT43x  
CNMG33x, CNMG54x, CNMG64x  
DNMG3.53.5x  
DCMT21.5x, DCMT32.5x  
SCMT32.5x, SCMT43x  
SNMG 33x, SNMG54x, SNMG64x  
TNMG2.53x, TCMT32.5x,  
TNMG43x, VNMX2.53x,  
VBMT33x, VCMT33x,  
WNMX 33x, YNMG2.53x

#### ChipBreakers

- Previous:  
HB (Gold-Duty), FC, FX, PC
- New:  
FG, FM, FS, FT, MC, MT, RT,  
WA

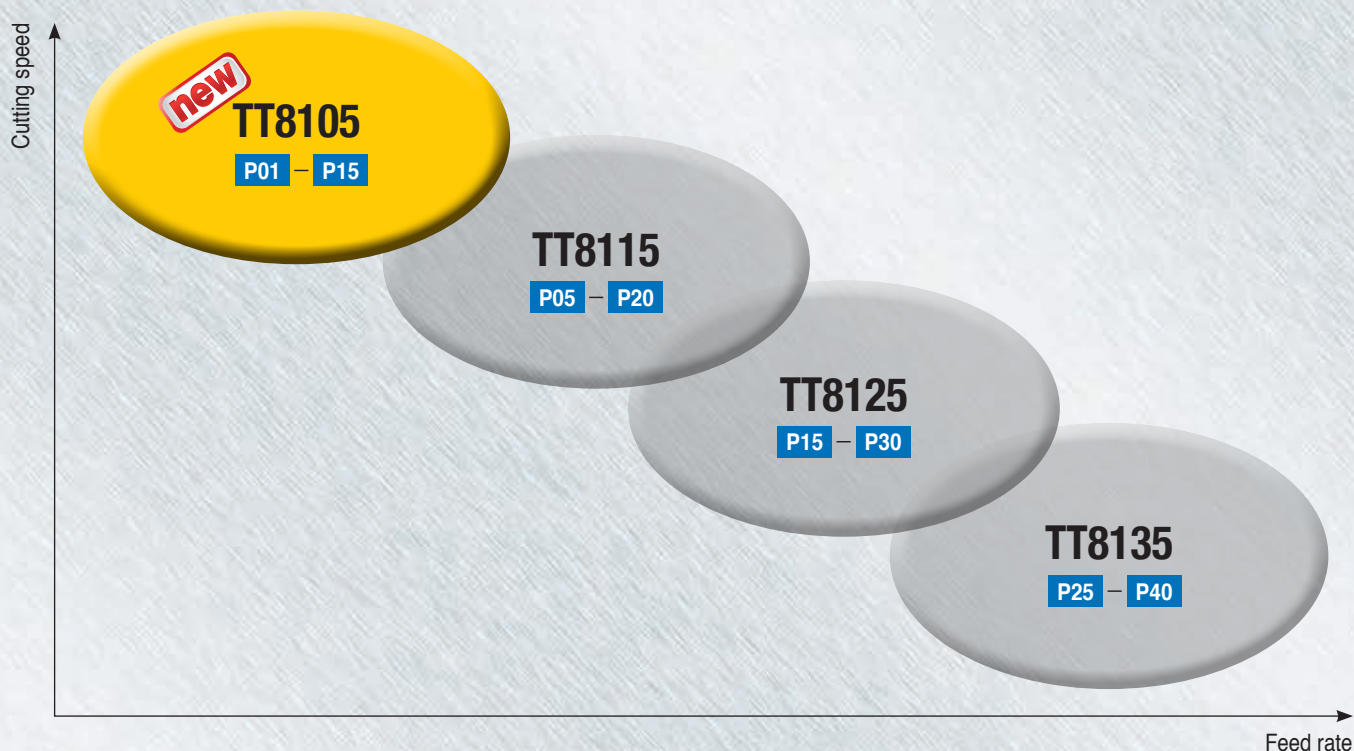
#### ISO Grade Class

- P01 - P15

**NEW  
PRODUCT  
ANNOUNCEMENT  
2016**



## APPLICATION RANGE





## RECOMMENDED CUTTING CONDITIONS

ISO	Material		Tensile strength (N/mm <sup>2</sup> )	Brinell HB	Material group No.	TT8105	
						Cutting speed (SFM)	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	1020-1900
		>=0.25%C	Annealed	650	190	2	880-1740
		<0.55%C	Quenched and tempered	850	250	3	750-1600
		>=0.55%C	Annealed	750	220	4	820-1640
			Quenched and tempered	1000	300	5	690-1540
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	6000	200	6	755-1800
			Quenched and tempered	930	275	7	600-1080
				1000	300	8	525-980
				1200	350	9	490-920
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	690-1380
			Quenched and tempered	1100	325	11	330-650

■ Steel

## CASE STUDY 1

Workpiece: Crank shaft (Alloy steel)  
External turning, wet

	Competitor	Ingersoll
Insert	CNMG 433 P05 Grade	CNMG 433 RT TT8105
Cutting speed (SFM)		600
Feed (IPR)		.016
Depth of cut (inch)		.080
Tool life (pcs/edge)	75	75
Insert wear	 Wear size: .009"	 Wear size: .005"

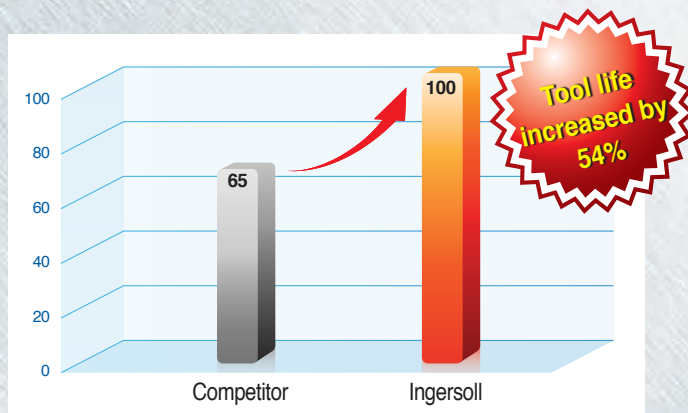


## CASE STUDY 2

Workpiece: Guide Cover (Alloy steel)  
External turning, Wet

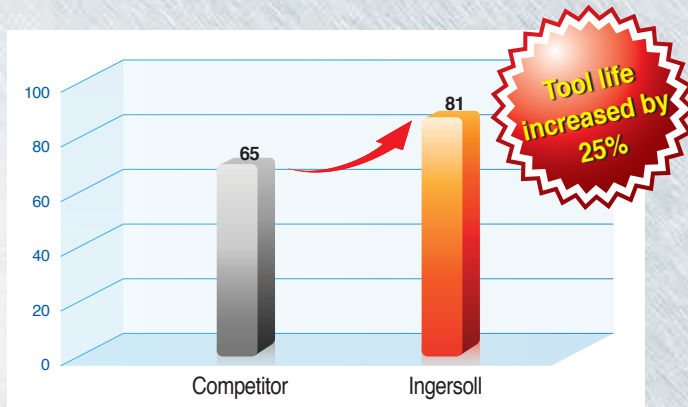
### Operation #1

	Competitor	Ingersoll
Insert	TNMG 332 P05 Grade	TNMG 332 FC TT8105
Cutting speed (SFM)		920
Feed (IPR)		.008
Depth of cut (inch)		.120
Tool life (pcs/edge)	65	100



### Operation #2

	Competitor	Ingersoll
Insert	TNMG 332 P05 Grade	TNMG 332 FC TT8105
Cutting speed (SFM)		820
Feed (IPR)		.008
Depth of cut (inch)		.060
Tool life (pcs/edge)	65	81





## TOTURN™ INSERT LIST

Designation ANSI	Designation ISO	Grades	TT8105	Designation ANSI	Designation ISO	Grades	TT8105
CCMT21.51MT	CCMT060204MT		●	CNMX553HB	CNMX160712HB		●
CCMT21.51PC	CCMT060204PC		●	CNMX554HB	CNMX160716HB		●
CCMT32.51MT	CCMT09T304MT		●	DCMT21.51FG	DCMT070204FG		●
CCMT32.52MT	CCMT09T308MT		●	DCMT32.51FG	DCMT11T304FG		●
CCMT32.52PC	CCMT09T308PC		●	DCMT32.51MT	DCMT11T304MT		●
CCMT432MT	CCMT120408MT		●	DCMT32.52FG	DCMT11T308FG		●
CNMG431FC	CNMG120404FC		●	DNMG431FC	DNMG150404FC		●
CNMG431FG	CNMG120404FG		●	DNMG431FG	DNMG150404FG		●
CNMG431MC	CNMG120404MC		●	DNMG431MT	DNMG150404MT		●
CNMG431MT	CNMG120404MT		●	DNMG431PC	DNMG150404PC		●
CNMG431PC	CNMG120404PC		●	DNMG432FC	DNMG150408FC		●
CNMG432FC	CNMG120408FC		●	DNMG432FG	DNMG150408FG		●
CNMG432FG	CNMG120408FG		●	DNMG432MC	DNMG150408MC		●
CNMG432MC	CNMG120408MC		●	DNMG432MT	DNMG150408MT		●
CNMG432MT	CNMG120408MT		●	DNMG432PC	DNMG150408PC		●
CNMG432PC	CNMG120408PC		●	DNMG432RT	DNMG150408RT		●
CNMG432RT	CNMG120408RT		●	DNMG433FC	DNMG150412FC		●
CNMG433FC	CNMG120412FC		●	DNMG433FG	DNMG150412FG		●
CNMG433MC	CNMG120412MC		●	DNMG433MC	DNMG150412MC		●
CNMG433MT	CNMG120412MT		●	DNMG433MT	DNMG150412MT		●
CNMG433PC	CNMG120412PC		●	DNMG433PC	DNMG150412PC		●
CNMG433RT	CNMG120412RT		●	DNMG433RT	DNMG150412RT		●
CNMG434RT	CNMG120416RT		●	DNMG442FC	DNMG150608FC		●
CNMG542MT	CNMG160608MT		●	DNMG442PC	DNMG150608PC		●
CNMG543MT	CNMG160612MT		●	DNMG443PC	DNMG150612PC		●
CNMG543PC	CNMG160612PC		●	SCMT32.51MT	SCMT09T304MT		●
CNMG543RT	CNMG160612RT		●	SCMT433MT	SCMT120412MT		●
CNMG544MT	CNMG160616MT		●	SNMG431MT	SNMG120404MT		●
CNMG544RT	CNMG160616RT		●	SNMG432FG	SNMG120408FG		●
CNMG642MT	CNMG190608MT		●	SNMG432MC	SNMG120408MC		●
CNMG642RT	CNMG190608RT		●	SNMG432MT	SNMG120408MT		●
CNMG643MT	CNMG190612MT		●	SNMG432PC	SNMG120408PC		●
CNMG643RT	CNMG190612RT		●	SNMG432RT	SNMG120408RT		●
CNMG644MT	CNMG190616MT		●	SNMG433MC	SNMG120412MC		●
CNMG644RT	CNMG190616RT		●	SNMG433PC	SNMG120412PC		●
CNMG866RT	CNMG250924RT		●	SNMG433RT	SNMG120412RT		●
CNMX43.52HB	CNMX120508HB		●	SNMG434RT	SNMG120416RT		●
CNMX43.53HB	CNMX120512HB		●	SNMG543MT	SNMG150612MT		●

● = P   ● = M   ● = K   ● = N   ● = S   ○ = H



## TOTURN™ INSERT LIST

Designation ANSI	Designation ISO	Grades	TT8105	Designation ANSI	Designation ISO	Grades	TT8105
SNMG543MT	SNMG150612MT		●	VBMT332FX	VBMT160408FX		●
SNMG543RT	SNMG150612RT		●	VBMT332MT	VBMT160408MT		●
SNMG643RT	SNMG190612RT		●	VBMT332PC	VBMT160408PC		●
SNMG644RT	SNMG190616RT		●	VBMT333FC	VBMT160412FC		●
TCMT32.52MT	TCMT16T308MT		●	VCMT332PC	VCMT160408PC		●
TNMG331FC	TNMG160404FC		●	VNMG331FG	VNMG160404FG		●
TNMG331FG	TNMG160404FG		●	VNMG331FX	VNMG160404FX		●
TNMG331MT	TNMG160404MT		●	VNMG331MT	VNMG160404MT		●
TNMG332FC	TNMG160408FC		●	VNMG332FG	VNMG160408FG		●
TNMG332FG	TNMG160408FG		●	VNMG332FX	VNMG160408FX		●
TNMG332MC	TNMG160408MC		●	VNMG332MT	VNMG160408MT		●
TNMG332MT	TNMG160408MT		●	VNMG332PC	VNMG160408PC		●
TNMG332PC	TNMG160408PC		●	WNMG431FC	WNMG080404FC		●
TNMG331PC	TNMG16040PC		●	WNMG431FG	WNMG080404FG		●
TNMG333FC	TNMG160412FC		●	WNMG431MT	WNMG080404MT		●
TNMG333FG	TNMG160412FG		●	WNMG432FC	WNMG080408FC		●
TNMG333MT	TNMG160412MT		●	WNMG432FG	WNMG080408FG		●
TNMG333PC	TNMG160412PC		●	WNMG432MC	WNMG080408MC		●
TNMG431MT	TNMG220404MT		●	WNMG432MT	WNMG080408MT		●
TNMG432FG	TNMG220408FG		●	WNMG432PC	WNMG080408PC		●
TNMG432MT	TNMG220408MT		●	WNMG432RT	WNMG080408RT		●
TNMG432PC	TNMG220408PC		●	WNMG433MC	WNMG080412MC		●
TNMG432RT	TNMG220408RT		●	WNMG433MT	WNMG080412MT		●
TNMG433MT	TNMG220412MT		●	WNMG433PC	WNMG080412PC		●
TNMG433PC	TNMG220412PC		●	WNMG433RT	WNMG080412RT		●
TNMG433RT	TNMG220412RT		●	WNMG434MT	WNMG080416MT		●
VBMT331FG	VBMT160404FG		●	WNMG434RT	WNMG080416RT		●
VBMT331MT	VBMT160404MT		●				
VBMT331PC	VBMT160404PC		●				
VBMT332FG	VBMT160408FG		●				

● = P   ● = M   ● = K   ● = N   ● = S   ○ = H



## GOLD RHINO INSERT LIST

Designation ANSI	Designation ISO	Grades	TT8105	Designation ANSI	Designation ISO	Grades	TT8105
CNMG333MT	CNMG090412MT		●	TNMG2.532MT	TNMG130408MT		●
CNMG333PC	CNMG090412PC		●	TNMG2.532PC	TNMG130408PC		●
CNMG333WA	CNMG090412WA		●	TNMG2.532WA	TNMG130408WA		●
DNMG3.53.51FM	DNMG130504FM		●	TNMG2.533FM	TNMG130412FM		●
DNMG3.53.51FT	DNMG130504FT		●	TNMG2.533FT	TNMG130412FT		●
DNMG3.53.51MT	DNMG130504MT		●	TNMG2.533MT	TNMG130412MT		●
DNMG3.53.51PC	DNMG130504PC		●	TNMG2.533PC	TNMG130412PC		●
DNMG3.53.51WA	DNMG130504WA		●	TNMG2.533WA	TNMG130412WA		●
DNMG3.53.52FM	DNMG130508FM		●	VNMX2.531FM	VNMX130404FM		●
DNMG3.53.52FT	DNMG130508FT		●	VNMX2.531MT	VNMX130404MT		●
DNMG3.53.52MT	DNMG130508MT		●	VNMX2.531PC	VNMX130404PC		●
DNMG3.53.52PC	DNMG130508PC		●	VNMX2.532FM	VNMX130408FM		●
DNMG3.53.52WA	DNMG130508WA		●	VNMX2.532FS	VNMX130408FS		●
DNMG3.53.53FM	DNMG130512FM		●	VNMX2.532MT	VNMX130408MT		●
DNMG3.53.53FT	DNMG130512FT		●	VNMX2.532PC	VNMX130408PC		●
DNMG3.53.53MT	DNMG130512MT		●	VNMX2.533MT	VNMX130412MT		●
DNMG3.53.53PC	DNMG130512PC		●	VNMX2.533PC	VNMX130412PC		●
DNMG3.53.53WA	DNMG130512WA		●	WNMX331FM	WNMX060404FM		●
SNMG331FM	SNMG090404FM		●	WNMX331MT	WNMX060404MT		●
SNMG331MT	SNMG090404MT		●	WNMX331PC	WNMX060404PC		●
SNMG331C	SNMG090404PC		●	WNMX331WA	WNMX060404WA		●
SNMG332FM	SNMG090408FM		●	WNMX332FM	WNMX060408FM		●
SNMG332MT	SNMG090408MT		●	WNMX332MT	WNMX060408MT		●
SNMG332PC	SNMG090408PC		●	WNMX332PC	WNMX060408PC		●
SNMG333FM	SNMG090412FM		●	WNMX332WA	WNMX060408WA		●
SNMG333MT	SNMG090412MT		●	WNMX333FM	WNMX060412FM		●
SNMG333PC	SNMG090412PC		●	WNMX333FT	WNMX060412FT		●
TNMG2.531FM	TNMG130404FM		●	WNMX333MT	WNMX060412MT		●
TNMG2.531FT	TNMG130404FT		●	WNMX333PC	WNMX060412PC		●
TNMG2.531MT	TNMG130404MT		●	WNMX333WA	WNMX060412WA		●
TNMG2.531PC	TNMG130404PC		●	YNMG2.531FS	YNMG130404FS		●
TNMG2.531WA	TNMG130404WA		●	YNMG2.532FS	YNMG130408FS		●
TNMG2.532FM	TNMG130408FM		●				
TNMG2.532FT	TNMG130408FT		●				