T-TURN™

NEW GRADE TT8105

Inserts
- CNMX43.52/43.53 (Gold-Duty)
- CNMG431/432/433
- DNMG431/432/433
- TNMG331/332/333
- VNMG332
- WNMG431/432/433

Chipbreakers
- PC for general purpose
- FC (or FX for VNMG) for finishing

ISO Grade Class
- P01 - P15

Featuring GOLD-LIFE+™ Technology

TT8105: A New Grade for Turning Steel at High Cutting Speeds

Ingersoll introduces a new grade, TT8105, that provides maximum wear resistance in steel machining applications.

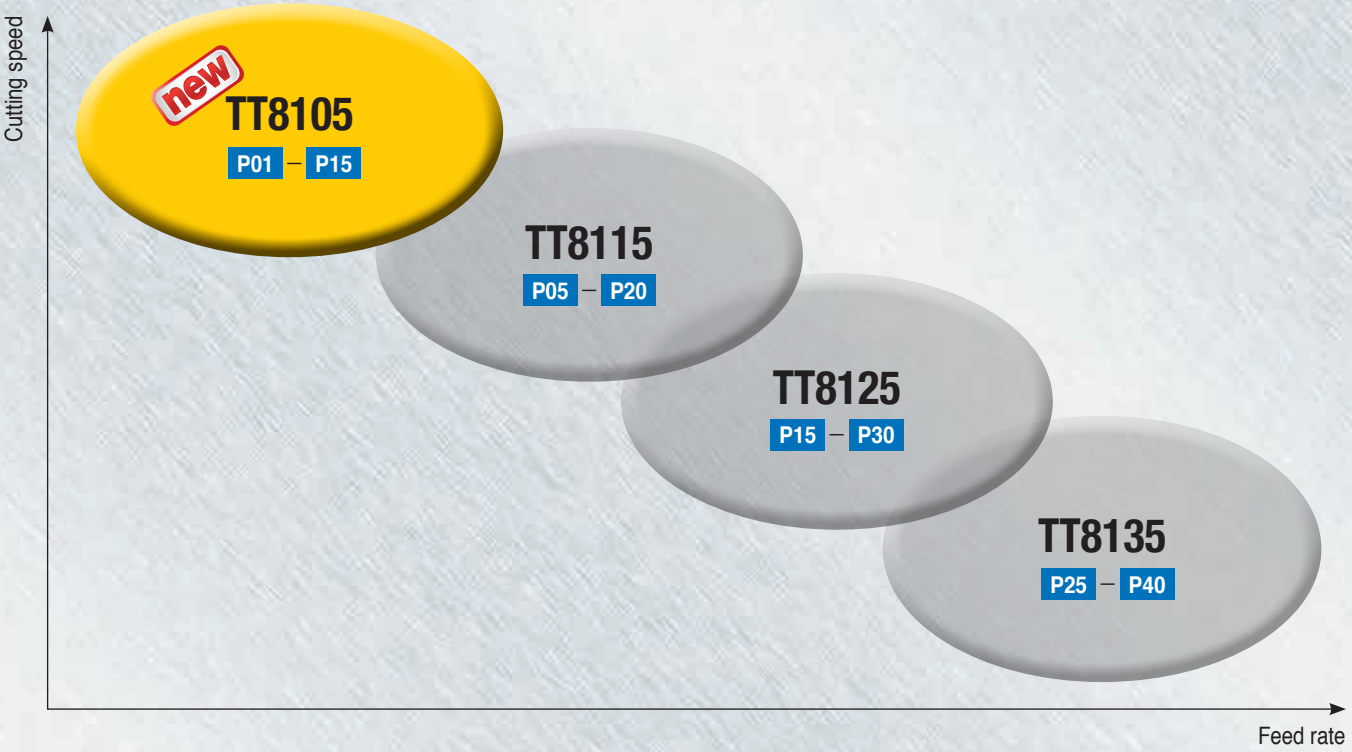
Grade TT8105 was developed to achieve maximum productivity by allowing higher cutting speeds to be applied in steel applications. The grade features our special Gold-Life+ coating structure in addition to the post-coat, GoldRush treatment that exists within the entire TT81xx family of grades. The result is a more durable insert that provides longer tool life, 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 Gold-Life+ structured coating technology
- Includes GoldRush treatment for smooth & stable cutting edge
- Complements/Expands our existing TT81xx series grades to a broader range of applications

NEW PRODUCT ANNOUNCEMENT ·2014·

Member IMC Group Ingersoll Cutting Tools

APPLICATION RANGE



RECOMMENDED CUTTING CONDITIONS

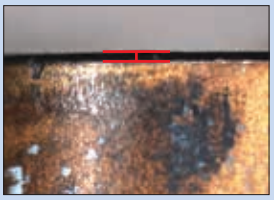
ISO	Material		Tensile strength (N/mm²)	Brinell HB	Material group No.	TT8105 Cutting speed (SFM)
P	Non-alloy steel, cast steel, free cutting steel <0.25%C	Annealed	420	125	1	1020-1900
	Non-alloy steel, cast steel, free cutting steel >=0.25%C	Annealed	650	190	2	880-1740
	Non-alloy steel, cast steel, free cutting steel <0.55%C	Quenched and tempered	850	250	3	750-1600
	Non-alloy steel, cast steel, free cutting steel >=0.55%C	Annealed	750	220	4	820-1640
	Non-alloy steel, cast steel, free cutting steel	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
	Low alloy steel and cast steel (less than 5% of alloying elements)	Quenched and tempered	930	275	7	600-1080
	Low alloy steel and cast steel (less than 5% of alloying elements)	Quenched and tempered	1000	300	8	525-980
	Low alloy steel and cast steel (less than 5% of alloying elements)	Quenched and tempered	1200	350	9	490-920
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	690-1380
	High alloy steel, cast steel and tool steel	Quenched and tempered	1100	325	11	330-650

Steel

GOLD•LIFE+™

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"

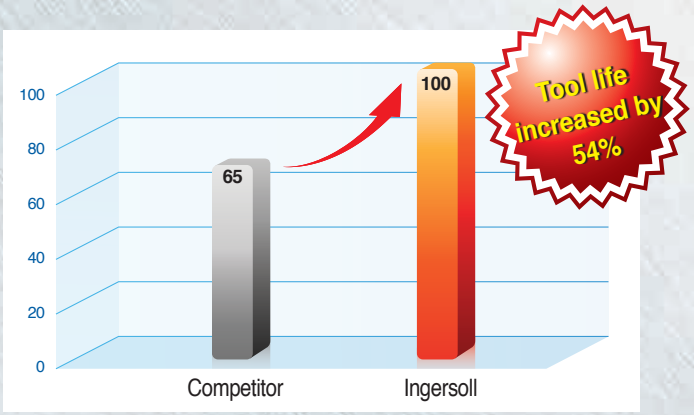
Improved wear resistance

CASE STUDY 2

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

Operation #1

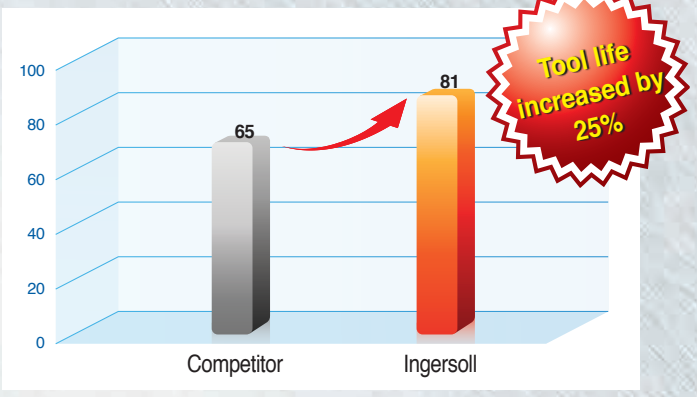
	Competitor	Ingersoll
Insert	TNMG 332 P05 Grade	TNMG 332 FC TT8105
Cutting speed (SFM)	920	
Feed (IPR)	.008	
Depth of cut (inch)	.120	
Tool life (pcs/edge)	65	100



Tool life increased by 54%

Operation #2

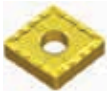
	Competitor	Ingersoll
Insert	TNMG 332 P05 Grade	TNMG 332 FC TT8105
Cutting speed (SFM)	820	
Feed (IPR)	.008	
Depth of cut (inch)	.060	
Tool life (pcs/edge)	65	81



Tool life increased by 25%

GOLD•LIFE+™

INSERT LIST

Insert	Designation	feed (ipr)	ap (inch)	TT8105
	**CNMX43.52 (120508) HB**	.010-.032	.060-.240	●
	CNMX43.53 (120512) HB	.010-.032	.060-.240	●
	**CNMG431 (120404) FC**	.002-.012	.008-.098	●
	CNMG432 (120408) FC	.003-.014	.012-.098	●
	**CNMG431 (120404) PC**	.004-.016	.016-.197	●
	CNMG432 (120408) PC	.006-.020	.020-.197	●
	CNMG433 (120412) PC	.007-.022	.024-.197	●
	**DNMG431 (150404) FC**	.002-.012	.008-.098	●
	DNMG432 (150408) FC	.003-.014	.012-.098	●
	DNMG442 (150608) FC	.003-.014	.012-.098	●
	**DNMG431 (150404) PC**	.004-.016	.016-.157	●
	DNMG432 (150408) PC	.004-.016	.016-.157	●
	DNMG433 (150412) PC	.006-.020	.020-.157	●
	DNMG441 (150604) PC	.004-.016	.016-.157	●
	DNMG442 (150608) PC	.006-.020	.020-.157	●
	**TNMG331 (160404) FC**	.002-.012	.008-.098	●
	TNMG332 (160408) FC	.003-.014	.012-.098	●
	TNMG333 (160412) FC	.004-.016	.012-.098	●
	**TNMG331 (160404) PC**	.005-.020	.020-.177	●
	TNMG332 (160408) PC	.006-.020	.020-.177	●
	TNMG333 (160412) PC	.007-.022	.024-.177	●
	**VNMG332 (160408) FX**	.002-.008	.008-.079	●
	**VNMG332 (160408) PC**	.006-.016	.024-.157	●
	**WNMG431 (080404) FC**	.003-.008	.012-.079	●
	WNMG432 (080408) FC	.003-.014	.012-.098	●
	**WNMG432 (080408) PC**	.006-.020	.020-.157	●
	WNMG433 (080412) PC	.007-.020	.020-.157	●

● : Standard item