

NPN

New Product News

expansion

T-TURN

TT3005, TT3010 and TT3020 Grades Expands to Positive Insert Line



KEY POINT

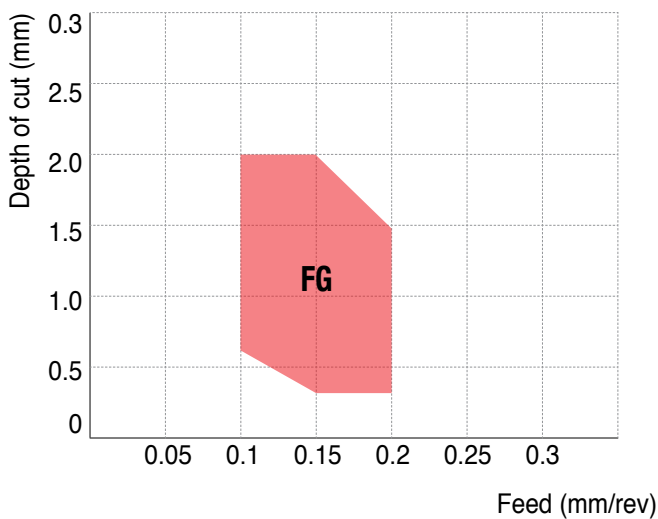
TaeguTec has expanded the range of positive inserts using TT3005, TT3010 and TT3020 grades for heat resistant super alloys machining.

The expanded range of inserts include the positive CCMT 09, DCMT 11 and VBMT 16 FG chip breakers dedicated from a range of finishing to medium machining conditions.

As a result, TaeguTec now has a widened range of chip breakers including both the negative EA, MGS, and ET inserts, as well as the positive FGS and FG inserts for super alloys machining.

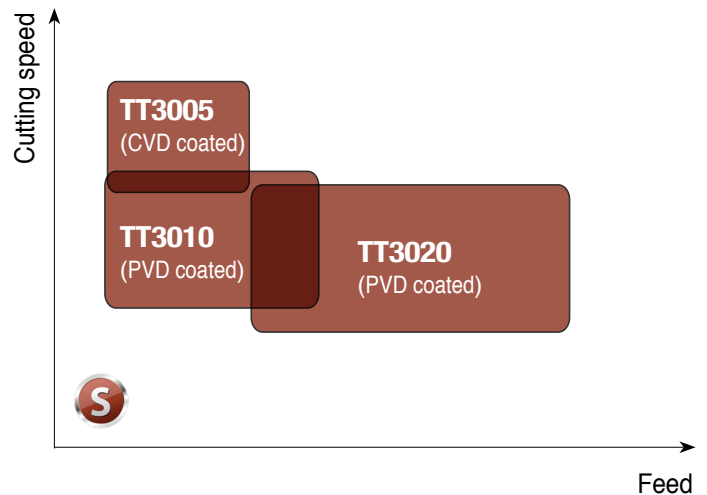
Positive inserts

Range of finishing to medium applications



- Insert: CCMT 09T304(32.51) FG
- Cutting speed: 50 m/min
- Material: Inconel 718 (HB 340-360)

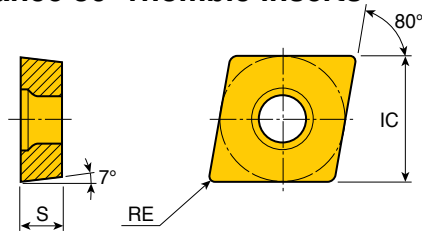
Coated grades for super alloys




Type	Designation	Chip breaker	CVD coated	PVD coated	
			TT3005	TT3010	TT3020
Negative	CNMG 120404, 08	EA		•	•
	CNMG 120408, 12	ET		•	•
	CNMG 120408, 12	MGS	•	•	•
	CNMG 090408 (RHINOTURN)	MK		•	•
	DNMG 150604, 08	EA		•	•
	DNMG 150608, 12	ET		•	•
	DNMG 150408, 150608, 12	MGS	•	•	•
	DNMG 130508 (RHINOTURN)	MK		•	•
	SNMG 120408, 12	ET		•	•
	SNMG 120408, 12, 16	MGS		•	•
	TNMG 160404, 08, 12	MP		•	•
	VNMG 160404, 08	EA		•	•
	WNMG 080408, 12	MGS	•	•	•
Positive	CCMT 09T304, 08 new	FG	•	•	•
	DCMT 11T304, 08 new	FG	•	•	•
	RCMT 080300, 120400	MGS	•	•	•
	VBGT 160404, 08, 12	FGS	•	•	•
	VBMT 160404, 08 new	FG	•	•	•

CCMT

Positive 7° clearance 80° rhombic inserts



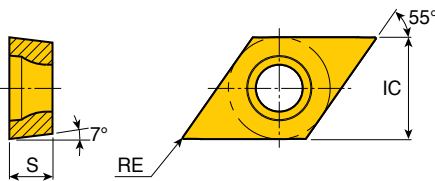
Size	Dimension (mm)		
	IC	S	RE
09	9.52	3.97	0.4-0.8

Insert	Designation	ap (mm)	Feed (mm/rev)	CVD coated	PVD coated	
				TT3005	TT3010	TT3020
 Finishing	CCMT 09T304 FG	0.4-2.0	0.10-0.20	●	●	●
	09T308 FG	0.6-2.0	0.12-0.20	●	●	●


● : Standard items

DCMT

Positive 7° clearance 55° rhombic inserts



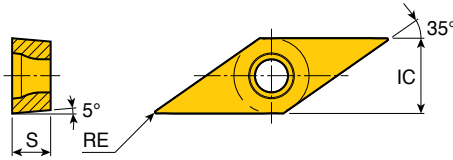
Size	Dimension (mm)		
	IC	S	RE
11	9.52	3.97	0.4-0.8

Insert	Designation	ap (mm)	Feed (mm/rev)	CVD coated	PVD coated	
				TT3005	TT3010	TT3020
 Finishing	DCMT 11T304 FG	0.4-1.5	0.10-0.20	●	●	●
	11T308 FG	0.6-1.5	0.12-0.20	●	●	●


● : Standard items

VBMT

Positive 5° clearance 35° rhombic inserts



Size	Dimension (mm)		
	IC	S	RE
16	9.52	4.76	0.4-0.8

Insert	Designation	ap (mm)	Feed (mm/rev)	CVD coated	PVD coated	
				TT3005	TT3010	TT3020
	VBMT 160404 FG	0.2-1.5	0.07-0.18	●	●	●
	160408 FG	0.4-1.5	0.10-0.18	●	●	●
Finishing						

● : Standard items

Recommended Cutting Conditions

Machining data for turning grades

ISO	Material	Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)				
						Coated				
						TT3005	TT3010	TT3020		
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1				
		>=0.25%C	Annealed	650	190	2				
		<0.55%C	Quenched and tempered	850	250	3				
		>=0.55%C	Annealed	750	220	4				
			Quenched and tempered	1000	300	5				
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed		600	200	6			
					930	275	7			
			Quenched and tempered		1000	300	8			
					1200	350	9			
	High alloy steel, cast steel and tool steel		Annealed	680	200	10				
Quenched and tempered			1100	325	11					
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12					
		Martensitic	820	240	13					
		Austenitic	600	180	14					
K	Gray cast iron (GG)	Ferritic		160	15					
		Pearlitic		250	16					
	Cast iron nodular (GGG)	Ferritic		180	17					
		Pearlitic		260	18					
	Malleable cast iron	Ferritic		130	19					
		Pearlitic		230	20					
N	Aluminum - wrought alloy	Not cureable		60	21					
		Cured		100	22					
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23				
			Cured		90	24				
		>12% Si	High temp.		130	25				
	Copper alloys	>1% Pb	Free cutting		110	26				
			Brass		90	27				
			Electrolitic copper		100	28				
	Non-metallic		Duroplastics, fiber plastics			29				
			Hard rubber			30				
S	High temp. alloys	Fe based	Annealed		200	31	60-200	50-170	40-165	
			Cured		280	32	50-180	40-150	30-145	
		Ni or Co based	Annealed		250	33	55-120	45-90	35-85	
			Cured		350	34	45-110	35-80	30-75	
	Titanium, Ti alloys		Cast		320	35	40-100	30-70	30-65	
			Alpha+beta alloys cured	Rm 1050		37	60-120	50-90	40-85	
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