



TURNING GRADES FOR GRAY AND DUCTILE CAST IRON

ISO Class

TT7005: K01-K15

TT7015: K10-K25

TT7025: K20-K35

More than 500 Unique Inserts

Positive: CCMT, CPMT, DCMT, RCMT/X,
SCMT, TCMT, TPMR/T, VBMT

Negative: CNMA/G, DNMA/G, HNMG,
SNMA/G, TNMA/G, VNMG/X, WNMA/G/X

Sizes (IC):

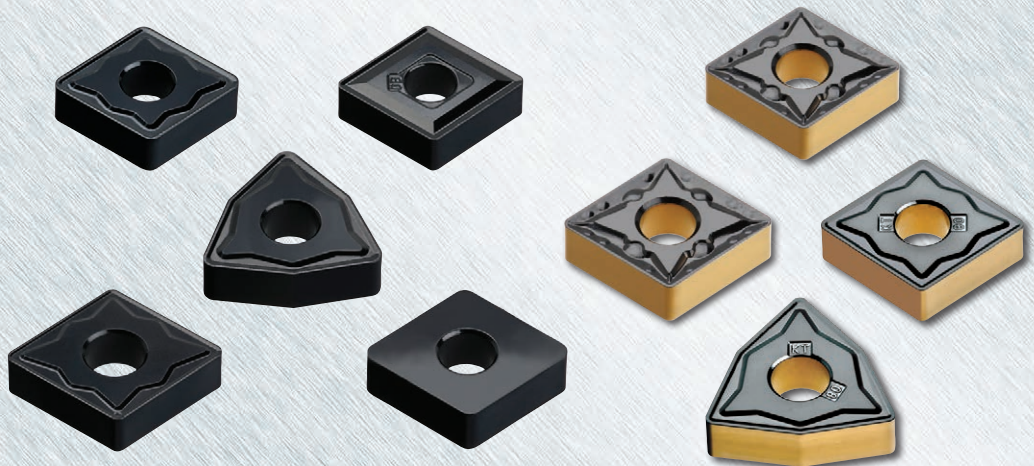
.250", .375", .500", .625", .750"

Chip Breakers

Common Style, MT, RT, KT, Flat Top,
PC (Positive Inserts Only), Wipers

Materials

Cast Iron



TT7005 / TT7015

TT7025

FEATURES & BENEFITS:

- Special "Black Rush" alumina CVD coating eliminates flaking and crater wear
- Post coat surface treatment reduces build up and provides longer, more consistent tool life

TT7005:

- Maximum wear resistance in gray and ductile cast iron

TT7015:

- General purpose applications in gray and ductile cast iron. Suitable for continuous to interrupted machining
- Now includes Gold-Life+ Technology

TT7025:

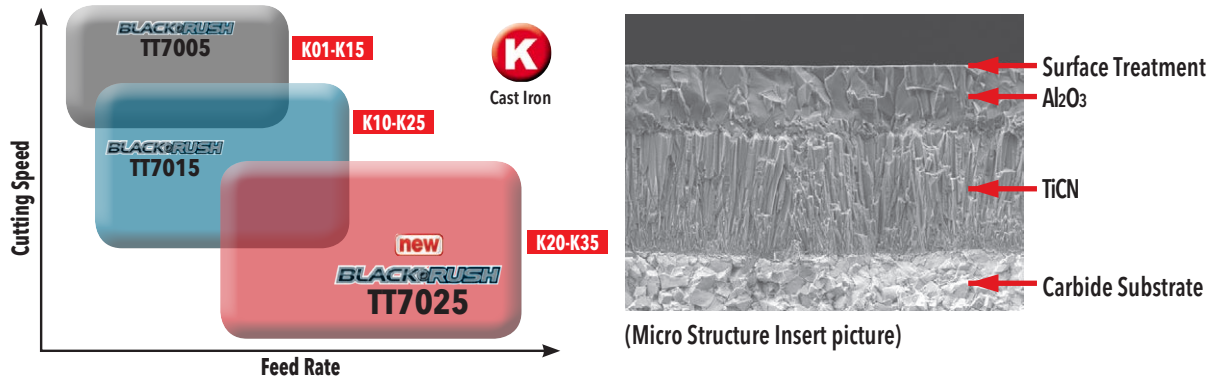
- Tough substrate ideal for low speed and heavy interruptions
- Multi-colored inserts facilitate easy wear detection

PRODUCT
ANNOUNCEMENT

UPDATE

2018

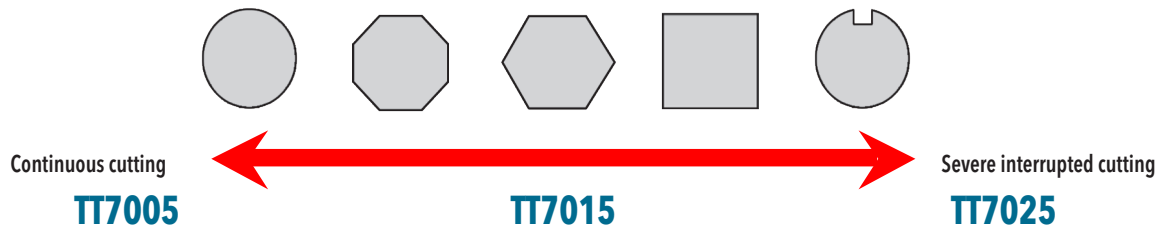
Application Range:



Application:

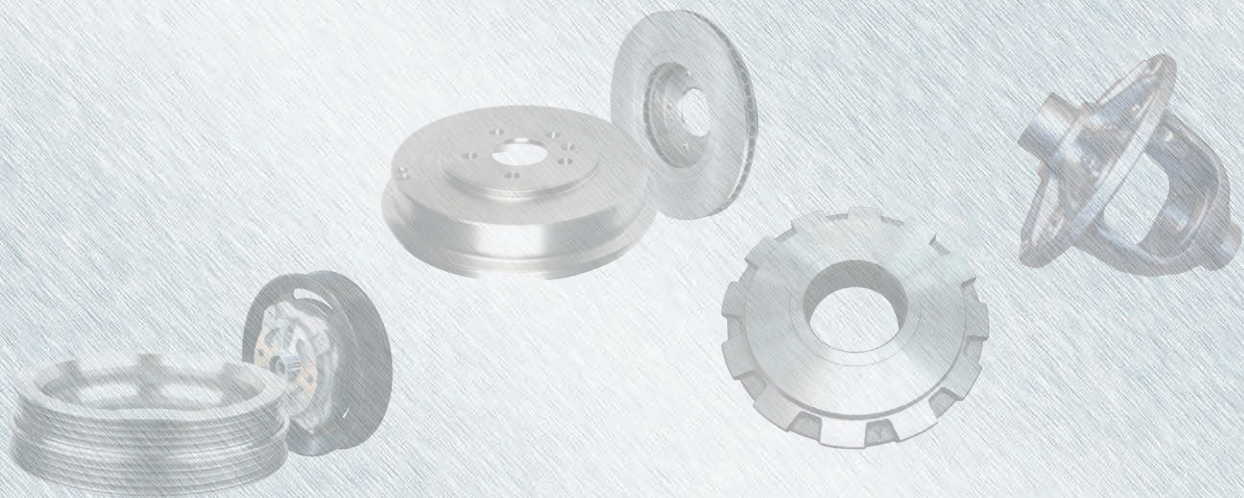
Grade	ISO Range	Application
TT7005	K01-K15	<p>For high speed machining of gray and ductile cast iron</p> <ul style="list-style-type: none"> - Excellent wear resistant coated grade assures optimum performance in high speed continuous machining of cast iron
TT7015	K10-K25	<p>For general machining of gray and ductile cast iron</p> <ul style="list-style-type: none"> - Improved chipping resistance and higher toughness during interrupted cutting thanks to coating layer's strong binding force - For continuous and interrupted machining of gray and ductile cast iron
TT7025	K20-K35	<p>For low speed and heavy interruptions of gray and ductile cast iron</p> <ul style="list-style-type: none"> - Very tough substrate provides extra strength under difficult conditions. Ideal grade for ductile iron.

Grade Choice By Shape Of Workpiece:



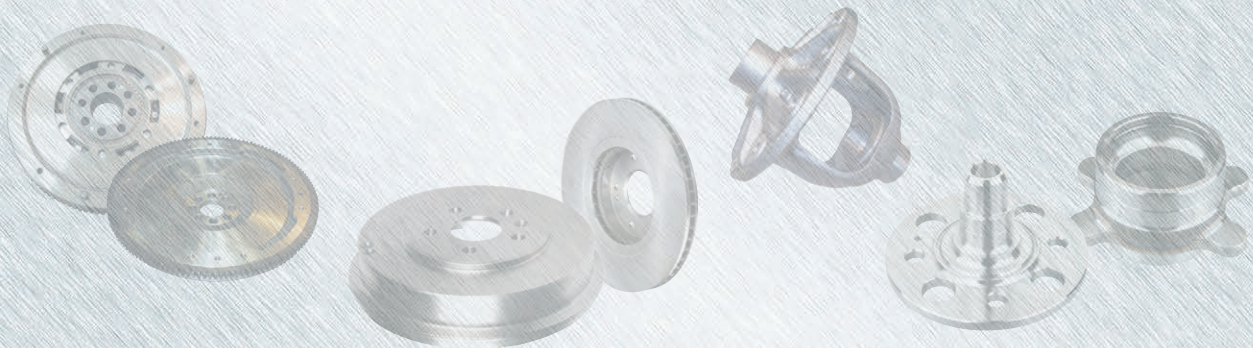
TT7005 Grade Test Results

Material	Component	V(sfm)	f(ipr)	Depth Of Cut (inch)	Operation	Coolant	Insert Designation	Tool Life (pcs/corner)
Gray Cast Iron	Piston Ring	2300	0.012	0.100	Ext & Facing	Yes	Competitor	400
							WNMG431(080404) MT TT7005	500 25% ↑
	Pulley	1600	0.010	0.060	Int Turning & Finishing	No	Competitor	50-60
							DNMG442(150608) TT7005	73 22% ↑
	Brake Disc	2460	0.016	0.040	Ext Turning & Finishing	Yes	Competitor	23
							SNMA432(120408) TT7005	52 126% ↑
		2460	0.016	0.040	Facing & Interrupted Cut	Yes	Competitor	9
							WNMA432(080408) TT7005	15 67% ↑
		2460	0.016	0.040	Facing & Interrupted Cut	Yes	Competitor	22
							WNMA432(080408) TT7005	51 131% ↑
	2460	0.016	0.040	Ext Turning	Yes	Competitor	50	
						SNMA432(120408) TT7005	67 34% ↑	
	2300	0.018	0.060-0.080	Facing	Yes	Competitor	22	
						CNMG433(120412) RT TT7005	25 14% ↑	
Pressure Plate	1480	0.012	0.060	Facing & Interrupted Cut	No	Competitor	120	
						SNMG432(120408) RT TT7005	140 170% ↑	
1480	0.012	0.100-0.120	Int Turning & Continuous Cut	No	Competitor	120		
					SNMG432(120408) RT TT7005	140 17% ↑		
Machine Component	760	0.006	0.080	Facing & Interrupted Cut	Yes	Competitor	520	
						CNMG432(120408) TT7005	550 5% ↑	
Ductile Cast Iron	Pump	560	0.007	0.080-0.100	Ext & Finishing	Yes	Competitor	40
							CNMA432(120408) TT7005	40 Equal
	Collar	650	0.008	0.100	Int & Continuous	Yes	Competitor	20
							CNMA432(120408) TT7005	24 20% ↑
Differential Case	1210	0.014	0.080	Ext turning	Yes	Competitor	125	
						SNMA432(120408) TT7015	145 16% ↑	



TT7015 Grade Test Results

Material	Component	V(sfm)	f(ipr)	Depth Of Cut (inch)	Operation	Coolant	Insert Designation	Tool Life (pcs/corner)
Gray Cast iron	Brake Disc	1030	0.012	0.100-0.120	Int Turning & Facing	Yes	Competitor	19
							CNMG433(120412) RT TT7015	26 37% ↑
		1740	0.014	0.100-0.120	Ext Turning & Facing	Yes	Competitor	35
							CNMA433(120412) TT7015	45 29% ↑
	1300-350	0.012-0.014	0.080	Ext Turning & Facing	No	Competitor	10	
						WNMG433(080412) RT TT7015	15 50% ↑	
	1310	0.008-0.013	0.060	Ext Turning & Facing	Yes	Competitor	40	
						CNMG433(120412) TT7015	57 42% ↑	
	Drum	1310	0.010-0.012	0.060-0.070	Ext Turning & Facing	Yes	Competitor	30
							CNMG433(120412) TT7015	40 33% ↑
		1300-1080	0.010-0.012	0.080	Int Turning & Facing	Yes	Competitor	25
	CNMG432(120408) TT7015						36 44% ↑	
	1230-510	0.012	0.060	Int Turning & Facing	Yes	Competitor	40	
						CNMG432(120408) TT7015	80 100% ↑	
Fly Wheel	1150	0.010	0.120	Ext Turning & Roughing	Yes	Competitor	6	
						CNMA432(120408) TT7015	8 33% ↑	
Brake Drum	850	0.014	0.080	Ext Turning & Roughing	Yes	Competitor	6	
						CNMG432(120408) TT7015	9 50% ↑	
Bottom Housing	1360	0.020	0.080	Ext Turning & Roughing	Yes	Competitor	25	
						CNMA433(120412) TT7015	36 44% ↑	
Ductile Cast iron	Differential Case	1100	0.006	0.040	Int Turning	Yes	Competitor	60
							TNMG332(160408) TT7015	80 33% ↑
	Hub	1150	0.010	0.020	Int turning & Finishing	Yes	Competitor	25
							CNMA433(120412) TT7015	33 32% ↑
	Rear Hub	590	0.012-0.016	0.080-0.120	Ext Turning & Roughing	Yes	Competitor	6-7
							CNMG433(120412) MT TT7015	10 13% ↑



ITEM LIST

Description	Grade		
	TT7005	TT7015	TT7025
CCMT21.51(060204)	•	•	
CCMT21.51(060204) MT	•	•	
CCMT21.52(060208) MT	•	•	
CCMT32.51(09T304) FG	•	•	
CCMT32.51(09T304) MT	•	•	•
CCMT32.52(09T308) FG	•		
CCMT32.52(09T308) MT	•	•	•
CCMT32.52(09T308) WT	•		
CCMT431(120404) MT	•	•	
CCMT432(120408) FG	•		
CCMT432(120408) MT	•	•	•
CCMT433(120412) MT	•		
CNMA332(090408)	•	•	
CNMA333(090412)	•	•	
CNMA431(120404)	•	•	
CNMA432(120408)	•	•	•
CNMA432(120408) WT	•		
CNMA433(120412)	•	•	•
CNMA434(120416)	•	•	
CNMA543(160612)	•	•	•
CNMA544(160616)	•	•	
CNMA642(190608)	•	•	
CNMA643(190612)	•	•	•
CNMA644(190616)	•	•	
CNMG53.52(160508)		•	
CNMG331(090404)	•	•	
CNMG331(090404) WA	•	•	
CNMG332(090408)	•	•	
CNMG332(090408) WA	•	•	
CNMG333(090412)	•	•	
CNMG333(090412) WA	•	•	
CNMG431(120404)	•	•	
CNMG431(120404) FG	•	•	
CNMG431(120404) MT	•	•	•
CNMG432(120408)	•	•	•
CNMG432(120408) FG	•	•	
CNMG432(120408) KT	•	•	•
CNMG432(120408) MC		•	
CNMG432(120408) MP	•	•	
CNMG432(120408) MT	•	•	•
CNMG432(120408) RT	•	•	•
CNMG432(120408) WT	•	•	•
CNMG433(120412)	•	•	

Description	Grade		
	TT7005	TT7015	TT7025
CNMG433(120412) KT	•	•	•
CNMG433(120412) MT	•	•	
CNMG433(120412) RT	•	•	•
CNMG433(120412) WT	•		
CNMG434(120416) KT	•	•	•
CNMG434(120416) RT		•	
CNMG542(160608) MT	•		
CNMG543(160612) KT	•	•	•
CNMG543(160612) MT	•	•	
CNMG544(160616) RT	•	•	
CNMG642(190608)	•	•	
CNMG642(190608) MT	•		
CNMG642(190608) RT	•		
CNMG643(190612)	•	•	
CNMG643(190612) KT	•	•	•
CNMG643(190612) MT	•		
CNMG643(190612) RT	•	•	•
CNMG644(190616) KT	•	•	
CNMG644(160416) MT		•	
CNMG644(190616) RT	•	•	
CNMM432(120408) RH		•	
CPMT21.51(060204) PC	•	•	
CPMT21.52(060208) PC	•	•	
CPMT32.51(09T304) PC	•	•	
CPMT32.52(09T308) PC	•	•	
DCMT32.51(11T304) FG	•	•	
DCMT32.52(11T308) FG	•	•	
DCMT32.51(11T304) MT	•	•	
DCMT32.52(11T308) MT	•	•	•
DCMT32.53(11T312) MT	•	•	
DNMA432(150408)	•	•	
DNMA433(150412)	•	•	
DNMA442(150608)	•	•	
DNMA443(150612)	•	•	
DNMG3.53.51(130504)	•	•	
DNMG3.53.51(130504) WA	•	•	
DNMG3.53.52(130508)	•	•	
DNMG3.53.52(130508) WA	•	•	
DNMG3.53.53(130512)	•	•	
DNMG3.53.53(130512) WA	•	•	
DNMG332(110408) MT	•	•	
DNMG333(110412) MT	•		
DNMG431(150404)	•	•	

Description	Grade		
	TT7005	TT7015	TT7025
DNMG431(150404) FG	•	•	
DNMG431(150404) MT		•	
DNMG432(150408)	•	•	
DNMG432(150408) FG	•	•	
DNMG432(150408) KT	•	•	•
DNMG432(150408) MT	•	•	•
DNMG432(150408) RT	•	•	
DNMG432(150408) WS	•	•	
DNMG433(150412)	•		
DNMG433(150412) KT	•	•	•
DNMG433(150412) MT		•	
DNMG433(150412) RT		•	•
DNMG441(150604)	•	•	
DNMG441(150604) MT	•	•	
DNMG442(150608)	•	•	•
DNMG442(150608) KT	•	•	•
DNMG442(150608) MT	•	•	•
DNMG442(150608) RT	•	•	
DNMG443(150612)	•	•	
DNMG443(150612) KT	•	•	•
DNMG443(150612) MT	•	•	•
DNMG443(150612) RT	•	•	
DNMG443(150612) RT	•	•	
HNMG432(050408) GU	•	•	
HNMG643(100612) GU	•	•	
KNUX3331(160405) R11	•		
KNUX3332(160410) R11		•	
RCMT10T300 MT	•	•	
RCMT120400 MT	•	•	
RCMT160600 MT		•	
RCMX100300	•	•	
RCMX120400	•	•	
RCMX160600	•	•	
RCMX200600	•	•	
RCMX250700	•	•	
RCMX320900	•		
SCMT32.51(09T304) MT	•	•	
SCMT32.52(09T308) MT	•	•	•
SCMT431(120404) MT	•		
SCMT432(120408) MT	•	•	•
SCMT433(120412) MT	•	•	
SNMA432(120408)	•	•	
SNMA433(120412)	•	•	
SNMA434(120416)	•	•	

• Marked : Standard item

ITEM LIST

Description	Grade		
	TT7005	TT7015	TT7025
SNMA543(150612)	•		
SNMA544(150616)		•	
SNMA643(190612)	•	•	
SNMA644(190616)		•	
SNMA856(250724)		•	
SNMA866(250924)		•	
SNMG332(090408)	•	•	
SNMG333(090412)	•	•	
SNMG431(120404)	•	•	
SNMG432(120408)	•	•	•
SNMG432(120408) KT	•	•	•
SNMG432(120408) MT	•	•	
SNMG432(120408) RT	•	•	
SNMG433(120412)	•	•	
SNMG433(120412) KT	•	•	•
SNMG433(120412) MT	•		
SNMG433(120412) RT	•	•	
SNMG434(120416) KT	•	•	
SNMG543(150612) KT	•	•	
SNMG543(150612) RT		•	
SNMG544(150616) KT	•	•	
SNMG642(190608)	•	•	
SNMG643(190612)	•	•	
SNMG643(190612) RT	•		
SNMG644(190616) KT	•	•	
TCMT21.52(110208) FG	•	•	
TCMT32.51(16T304) FG	•	•	
TCMT32.52(16T308) FG	•	•	
TCMT432(220408) MT		•	
TCMT731(090204) MT	•	•	
TCMT732(090208) MT	•	•	
TCMT21.51(110204) MT	•	•	
TCMT21.52(110208) MT	•	•	
TCMT32.51(16T304) MT	•	•	
TCMT32.52(16T308) MT	•	•	
TCMT32.53(16T312) MT	•		
TNMA331(160404)	•	•	
TNMA332(160408)	•	•	
TNMA333(160412)	•	•	•
TNMA334(160416)	•	•	
TNMA432(220408)	•	•	

Description	Grade		
	TT7005	TT7015	TT7025
TNMA433(220412)	•	•	
TNMA434(220416)	•	•	
TNMG2.531(130404)	•	•	
TNMG2.531(130404) WA	•	•	
TNMG2.532(130408)	•	•	
TNMG2.532(130408) WA	•	•	
TNMG2.533(130412)	•	•	
TNMG2.533(130412) WA	•	•	
TNMG331(160404)	•	•	
TNMG331(160404) MT	•	•	
TNMG332(160408)	•	•	
TNMG332(160408) KT	•	•	•
TNMG332(160408) MT	•	•	•
TNMG332(160408) RT	•	•	•
TNMG333(160412) KT	•	•	•
TNMG333(160412) MT	•		
TNMG333(160412) RT	•	•	
TNMG431(220404)	•		
TNMG432(220408)	•	•	
TNMG432(220408) KT	•	•	
TNMG432(220408) MT	•		
TNMG432(220408) RT		•	
TNMG433(220412)	•		
TNMG433(220412) KT	•	•	
TNMG433(220412) RT	•	•	
TNMG434(220416)		•	
TNMG543(270612) MT		•	
TNMG544(270616)		•	
TPMR732(090208)		•	
TPMR221(110304)	•	•	
TPMR222(110308)		•	
TPMR321(160304)	•	•	
TPMR322(160308)	•	•	
TPMR432(220408)	•		
TPMT21.51(110204) PC	•	•	
TPMT21.52(110208) PC	•	•	
TPMT222(110308) PC		•	
TPMT221(110304) FG	•		
VBMT331(160404) FG	•	•	
VBMT332(160408) FG	•	•	
VBMT333(160412) MT	•		

Description	Grade		
	TT7005	TT7015	TT7025
VNMG2.531(130404) MT	•	•	
VNMG2.532(130408) MT	•		
VNMG331(160404)	•	•	
VNMG331(160404) FG			
VNMG331(160404) MT			•
VNMG332(160408) FG	•	•	
VNMG332(160408) MT	•	•	•
VNMG333(160412)	•	•	
VNMG432(220408)		•	
VNMX2.532(130408) MT	•	•	
VNMX2.533(130412) MT	•	•	
WNMA332(060408)	•	•	
WNMA333(060412)	•		
WNMA432(080408)	•	•	
WNMA433(080412)	•	•	
WNMA434(080416)	•	•	
WNMG331(060404) MT	•	•	
WNMG332(060408) MT	•		
WNMG332(060408) WT	•		
WNMG333(060412) MT	•		
WNMG333(060412) WT		•	
WNMG431(080404)	•	•	
WNMG431(080404) MT	•	•	
WNMG432(080408)	•	•	
WNMG432(080408) FG	•	•	
WNMG432(080408) KT	•	•	•
WNMG432(080408)MP	•	•	
WNMG432(080408) MT	•	•	•
WNMG432(080408) RT	•	•	
WNMG432(080408) WT	•	•	
WNMG433(080412)	•	•	
WNMG433(080412) KT	•	•	•
WNMG433(080412) MT	•	•	•
WNMG433(080412) RT	•	•	•
WNMG433(080412) WT	•	•	
WNMG434(080416) KT	•	•	
WNMG434(080416) RT	•		
WNMX331(060404) WA	•	•	
WNMX332(060408) MT	•	•	
WNMX332(060408) WA	•	•	
WNMX333(060412) MT	•	•	

• Marked : Standard item

Availability

In stock

Price

Available in the GAL system