

**ISO
Turning
Grade**

New leader of steel turning

NC3010

Features

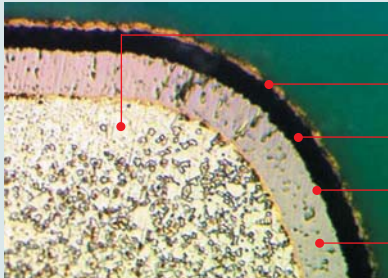
- NC3010 is newly innovated grade for steel turning at high speed operation(P10).
- Thanks to high tensile strength substrate & new CVD coated technology, NC3010 performs stable operation at high speed.
- Superb wear resistance and toughness of NC3010 guarantee better tool life comparing conventional NC3010.



NC3010 ^{New}

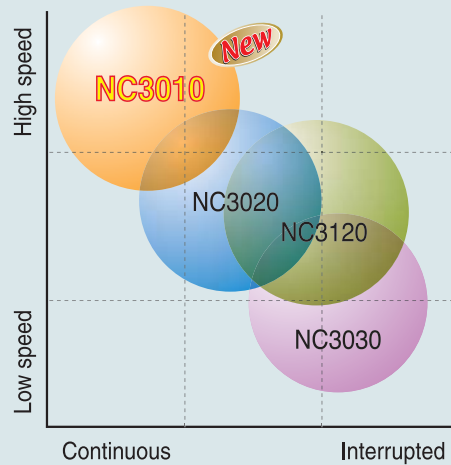
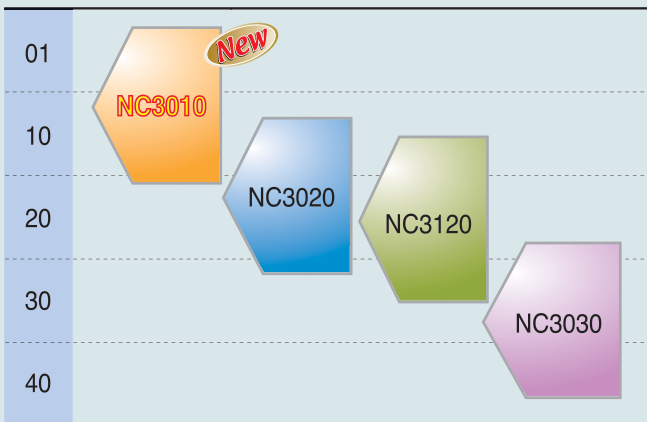
NC 3010^{New} Gold coated | NC3000 series | Recommended cutting condition

NC 3010^{New} Gold coated



- High tensile substrate with reinforced layer mechanism
- Applied TiN layer with fine surface, lubrication and clearly visible wear on cutting edge
- New Al₂O₃ film shows oxidation resistance in high speed turning
- Excellent bonding power of film is achieved
- Columnar MT-CVD film with improved wear resistance and toughness

NC3000 series



Recommended cutting condition

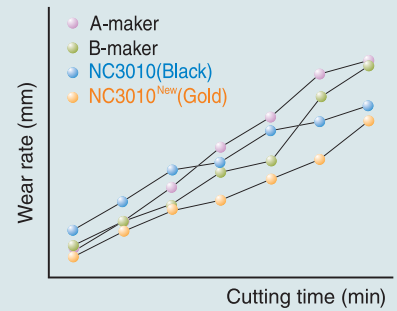
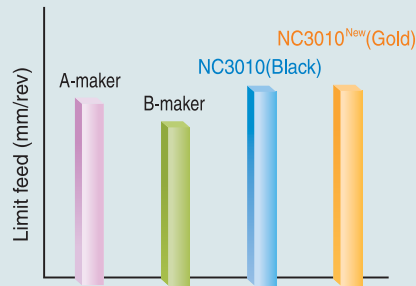
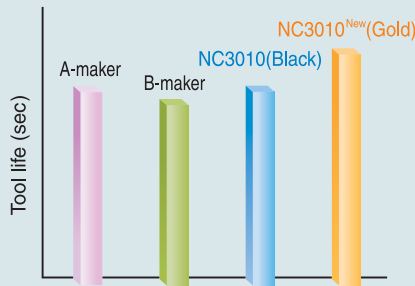
Condition \ Grade	Cutting speed (vc:m/min)					Feed (fn:mm/rev)					Depth of cut (ap:mm)				
	30 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400	400 ~	0.03 ~ 0.10	0.10 ~ 0.20	0.20 ~ 0.30	0.30 ~ 0.40	0.40 ~	0.1 ~ 1.0	1.0 ~ 2.0	2.0 ~ 3.0	3.0 ~ 4.0	4.0 ~
NC3010 ^{New}															



NC3010 ^{New}

Cutting performance | Machining examples

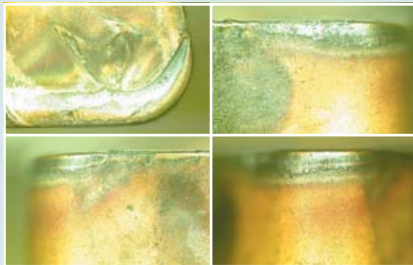
NC3010^{New} Cutting performance



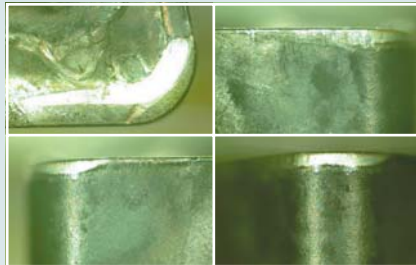
• Impact resistance, Dry
SCM440-4G, $vc=230$, $fn=0.25$, $ap=2.0$

• Limit feed (mm/rev), Dry
SCM440-4G, $vc=100$, $ap=2.0$

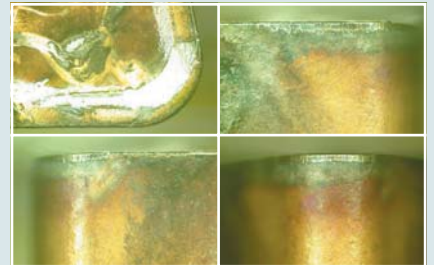
• Wear resistance (mm), Wet
SCM440, $vc=300$, $fn=0.25$, $ap=2.0$



B-maker



NC3010(Black)



NC3010^{New}(Gold)

NC3010^{New} Machining examples

Insert	DNMG150608-VM	
Workpiece	Gear(SCM772H2)	
vc	250m/min	
fn	0.15~0.25mm/rev	
ap	2.0mm	
Coolant	Wet	

Insert	CNMG120408-VM	
Workpiece	Automobile part (SM45C)	
vc	260m/min	
fn	0.3mm/rev	
ap	2.5mm	
Coolant	Wet	

Insert	DNMG150608-VM	
Workpiece	Automobile part (Forged steel)	
vc	200~300m/min	
fn	0.23mm/rev	
ap	1.0mm	
Coolant	Wet	

Insert	DNMG150608-VM	
Workpiece	Automobile part (SM45C)	
vc	380~420m/min	
fn	0.28mm/rev	
ap	1.5~2.0mm	
Coolant	Wet	

NC3010^{New} Stock items

Old inserts(NC310, NC3015) covered by NC3010 ^{New} (Gold)				NC3010 ^{New} (Gold) Insert	
Designation	Grade	Designation	Grade	Designation	Grade
CCMT060202-HMP	NC3015			CCMT060202-HMP	NC3010
CCMT060204-C25	NC3015	CCMT060204-C25	NC310	CCMT060204-C25	NC3010
CCMT060204-HMP	NC3015	CCMT060204-HMP	NC310	CCMT060204-HMP	NC3010
CCMT060208-HMP	NC3015			CCMT060208-HMP	NC3010
CCMT09T302-HMP	NC3015			CCMT09T302-HMP	NC3010
CCMT09T304-C25	NC3015	CCMT09T304-C25	NC310	CCMT09T304-C25	NC3010
CCMT09T304-HMP	NC3015	CCMT09T304-HMP	NC310	CCMT09T304-HMP	NC3010
		CCMT09T308-C25	NC310	CCMT09T308-C25	NC3010
CCMT09T308-HMP	NC3015	CCMT09T308-HMP	NC310	CCMT09T308-HMP	NC3010
CCMT120404-C25	NC3015			CCMT120404-C25	NC3010
CCMT120404-HMP	NC3015			CCMT120404-HMP	NC3010
CCMT120408-C25	NC3015			CCMT120408-C25	NC3010
CCMT120408-HMP	NC3015	CCMT120408-HMP	NC310	CCMT120408-HMP	NC3010
		CNMA120408	NC310	CNMA120408	NC3010
		CNMA120412	NC310	CNMA120412	NC3010
CNMG090304-HF	NC3015			CNMG090304-VF	NC3010
CNMG090304-HM	NC3015			CNMG090304-VM	NC3010
CNMG090308-HM	NC3015			CNMG090308-VM	NC3010
CNMG120404-B25	NC3015	CNMG120404-B25	NC310	CNMG120404-B25	NC3010
CNMG120404-HC	NC3015			CNMG120404-HC	NC3010
		CNMG120404-HF	NC310	CNMG120404-VF	NC3010
CNMG120404-HM	NC3015	CNMG120404-HM	NC310	CNMG120404-VM	NC3010
CNMG120404-HW	NC3015			CNMG120404-VW	NC3010
CNMG120408-B25	NC3015	CNMG120408-B25	NC310	CNMG120408-B25	NC3010
CNMG120408-B25K	NC3015			CNMG120408-B25K	NC3010
CNMG120408-GM	NC3015	CNMG120408-GM	NC310	CNMG120408-GM	NC3010
CNMG120408-GR	NC3015	CNMG120408-GR	NC310	CNMG120408-GR	NC3010
CNMG120408-HC	NC3015	CNMG120408-HC	NC310	CNMG120408-HC	NC3010
CNMG120408-HM	NC3015	CNMG120408-HM	NC310	CNMG120408-VM	NC3010
CNMG120408-HR	NC3015			CNMG120408-HR	NC3010
CNMG120408-HW	NC3015			CNMG120408-LW, VW	NC3010
				CNMG120408-VF	NC3010
CNMG120412-B25	NC3015			CNMG120412-B25	NC3010
		CNMG120412-GM	NC310	CNMG120412-GM	NC3010
		CNMG120412-GR	NC310	CNMG120412-GR	NC3010
CNMG120412-HM	NC3015			CNMG120412-VM	NC3010
CNMG120412-HR	NC3015			CNMG120412-HR	NC3010
CNMG120412-HW	NC3015			CNMG120412-LW	NC3010
CNMG160608-B25	NC3015			CNMG160608-B25	NC3010
		CNMG160608-GR	NC310	CNMG160608-GR	NC3010
CNMG160608-HM	NC3015			CNMG160608-VM	NC3010
CNMG160608-HR	NC3015			CNMG160608-HR	NC3010
CNMG160612-GR	NC3015	CNMG160612-GR	NC310	CNMG160612-GR	NC3010
CNMG160612-HR	NC3015			CNMG160612-HR	NC3010
CNMG160616-HR	NC3015			CNMG160616-HR	NC3010
CNMG190604-B25	NC3015			CNMG190604-B25	NC3010
CNMG190608-B25	NC3015			CNMG190608-B25	NC3010



NC3010 ^{New}

NC3010^{New} Stock items

Old inserts(NC310, NC3015) covered by NC3010 ^{New} (Gold)				NC3010 ^{New} (Gold) Insert	
Designation	Grade	Designation	Grade	Designation	Grade
CNMG190608-HR	NC3015			CNMG190608-HR	NC3010
CNMG190612-B25	NC3015			CNMG190612-B25	NC3010
CNMG190612-GR	NC3015	CNMG190612-GR	NC310	CNMG190612-GR	NC3010
CNMG190612-HR	NC3015			CNMG190612-HR	NC3010
CNMG190616-B25	NC3015			CNMG190616-B25	NC3010
		CNMG190616-GR	NC310	CNMG190616-GR	NC3010
CNMG190616-HR	NC3015			CNMG190616-HR	NC3010
CNMM190612-GH	NC3015	CNMM190612-GH	NC310	CNMM190612-GH	NC3010
DCGT11T308-HFP	NC3015			DCGT11T308-HFP	NC3010
DCMT070202-HMP	NC3015			DCMT070202-HMP	NC3010
DCMT070204-HMP	NC3015			DCMT070204-HMP	NC3010
DCMT070208-HMP	NC3015			DCMT070208-HMP	NC3010
DCMT11T302-HMP	NC3015			DCMT11T302-HMP	NC3010
DCMT11T304-C25	NC3015	DCMT11T304-C25	NC310	DCMT11T304-C25	NC3010
DCMT11T304-HMP	NC3015	DCMT11T304-HMP	NC310	DCMT11T304-HMP	NC3010
DCMT11T308-C25	NC3015	DCMT11T308-C25	NC310	DCMT11T308-C25	NC3010
DCMT11T308-HMP	NC3015			DCMT11T308-HMP	NC3010
		DNMA150608	NC310	DNMA150608	NC3010
DNMG110404-HM	NC3015			DNMG110404-VM	NC3010
DNMG110408-HM	NC3015			DNMG110408-VM	NC3010
DNMG150404-HC	NC3015			DNMG150404-HC	NC3010
		DNMG150404-HF	NC310	DNMG150404-VF	NC3010
DNMG150404-HM	NC3015			DNMG150404-VM	NC3010
DNMG150408-HC	NC3015			DNMG150408-HC	NC3010
DNMG150408-HM	NC3015			DNMG150408-VM	NC3010
DNMG150604-B25	NC3015			DNMG150604-B25	NC3010
DNMG150604-HC	NC3015			DNMG150604-HC	NC3010
DNMG150604-HF	NC3015			DNMG150604-VF	NC3010
DNMG150604-HM	NC3015	DNMG150604-HM	NC310	DNMG150604-VM	NC3010
DNMG150608-B25	NC3015	DNMG150608-B25	NC310	DNMG150608-B25	NC3010
DNMG150608-GM	NC3015	DNMG150608-GM	NC310	DNMG150608-GM	NC3010
		DNMG150608-GR	NC310	DNMG150608-GR	NC3010
DNMG150608-HC	NC3015			DNMG150608-HC	NC3010
DNMG150608-HFK	NC3015			DNMG150608-VF	NC3010
DNMG150608-HM	NC3015	DNMG150608-HM	NC310	DNMG150608-VM	NC3010
DNMG150608-HR	NC3015			DNMG150608-HR	NC3010
		DNMG150612-HF	NC310	DNMG150612-VF	NC3010
DNMG150612-HM	NC3015			DNMG150612-HM	NC3010
DNMG150612-HR	NC3015			DNMG150612-HR	NC3010
KNUX160405-L11	NC3015	KNUX160405-L11	NC310	KNUX160405-L11	NC3010
KNUX160405-R11	NC3015	KNUX160405-R11	NC310	KNUX160405-R11	NC3010
KNUX160410-L11	NC3015			KNUX160410-L11	NC3010
KNUX160410-R11	NC3015			KNUX160410-R11	NC3010
MGMN300-M	NC3015			MGMN300-M	NC3010
RCMX2006M0	NC3015			RCMX2006M0	NC3010
				SCGT09T304-HFP	NC3010
				SCMT09T304-HFP	NC3010

NC3010 New

NC3010^{New} Stock items

Old inserts(NC310, NC3015) covered by NC3010 ^{New} (Gold)				NC3010 ^{New} (Gold) Insert	
Designation	Grade	Designation	Grade	Designation	Grade
SCMT09T308-C25	NC3015	SCMT09T308-C25	NC310	SCMT09T308-C25	NC3010
SCMT09T308-HMP	NC3015			SCMT09T308-HMP	NC3010
SCMT120404-HMP	NC3015			SCMT120404-HMP	NC3010
		SCMT120408-C25	NC310	SCMT120408-C25	NC3010
SCMT120408-HMP	NC3015			SCMT120408-HMP	NC3010
		SNMA120408	NC310	SNMA120408	NC3010
		SNMA120412	NC310	SNMA120412	NC3010
				SNMA250724T	NC3010
SNMG090304-HM	NC3015			SNMG090304-VM	NC3010
SNMG090308-HM	NC3015			SNMG090308-VM	NC3010
SNMG120404-HF	NC3015			SNMG120404-VF	NC3010
SNMG120404-HM	NC3015			SNMG120404-VM	NC3010
SNMG120408-B25	NC3015	SNMG120408-B25	NC310	SNMG120408-B25	NC3010
		SNMG120408-GM	NC310	SNMG120408-GM	NC3010
		SNMG120408-GR	NC310	SNMG120408-GR	NC3010
SNMG120408-HC	NC3015			SNMG120408-HC	NC3010
		SNMG120408-HF	NC310	SNMG120408-VF	NC3010
SNMG120408-HM	NC3015	SNMG120408-HM	NC310	SNMG120408-VM	NC3010
SNMG120412-HM	NC3015			SNMG120412-VM	NC3010
SNMG120412-HR	NC3015			SNMG120412-HR	NC3010
SNMG150608-HR	NC3015			SNMG150608-HR	NC3010
SNMG150612-GR	NC3015			SNMG150612-GR	NC3010
SNMG150612-HR	NC3015			SNMG150612-HR	NC3010
SNMG190608-B25	NC3015			SNMG190608-B25	NC3010
SNMG190612-B25	NC3015			SNMG190612-B25	NC3010
SNMG190612-HR	NC3015			SNMG190612-HR	NC3010
SNMG190616-B25	NC3015			SNMG190616-B25	NC3010
SNMG190616-HR	NC3015			SNMG190616-HR	NC3010
				SNMG250716-B25	NC3010
		SNMM190616-GH	NC310	SNMM190616-GH	NC3010
		SPGN120308	NC310	SPGN120308	NC3010
SPMR090304-F	NC3015			SPMR090304-F	NC3010
SPMR090308-M	NC3015			SPMR090308-M	NC3010
SPMR120304-F	NC3015			SPMR120304-F	NC3010
SPMR120308-M	NC3015	SPMR120308-M	NC310	SPMR120308-M	NC3010
TCMT090204-C25	NC3015	TCMT090204-C25	NC310	TCMT090204-C25	NC3010
TCMT090208-C25	NC3015			TCMT090208-C25	NC3010
TCMT110204-C25	NC3015	TCMT110204-C25	NC310	TCMT110204-C25	NC3010
TCMT110204-HMP	NC3015	TCMT110204-HMP	NC310	TCMT110204-HMP	NC3010
		TCMT110208-C25	NC310	TCMT110208-C25	NC3010
TCMT110208-HMP	NC3015			TCMT110208-HMP	NC3010
TCMT16T304-C25	NC3015	TCMT16T304-C25	NC310	TCMT16T304-C25	NC3010
TCMT16T304-HMP	NC3015	TCMT16T304-HMP	NC310	TCMT16T304-HMP	NC3010
TCMT16T308-C25	NC3015	TCMT16T308-C25	NC310	TCMT16T308-C25	NC3010
TCMT16T308-HMP	NC3015	TCMT16T308-HMP	NC310	TCMT16T308-HMP	NC3010
				TCMX220408EN-X156	NC3010
		TNMA160408	NC310	TNMA160408	NC3010



NC3010 New

NC3010^{New} Stock items

Old inserts(NC310, NC3015) covered by NC3010 ^{New} (Gold)				NC3010 ^{New} (Gold) Insert	
Designation	Grade	Designation	Grade	Designation	Grade
		TNMA220408	NC310	TNMA220408	NC3010
		TNMA220412	NC310	TNMA220412	NC3010
TNMG110308-HM	NC3015			TNMG110308-VM	NC3010
TNMG160404-B25	NC3015			TNMG160404-B25	NC3010
		TNMG160404-GM	NC310	TNMG160404-GM	NC3010
TNMG160404-HC	NC3015	TNMG160404-HC	NC310	TNMG160404-HC	NC3010
TNMG160404-HF	NC3015	TNMG160404-HF	NC310	TNMG160404-VF	NC3010
TNMG160404-HM	NC3015	TNMG160404-HM	NC310	TNMG160404-VM	NC3010
TNMG160408-B25	NC3015	TNMG160408-B25	NC310	TNMG160408-B25	NC3010
		TNMG160408-GM	NC310	TNMG160408-GM	NC3010
		TNMG160408-GR	NC310	TNMG160408-GR	NC3010
TNMG160408-HC	NC3015	TNMG160408-HC	NC310	TNMG160408-HC	NC3010
TNMG160408-HM	NC3015	TNMG160408-HM	NC310	TNMG160408-VM	NC3010
TNMG160408-HR	NC3015			TNMG160408-HR	NC3010
				TNMG160408-VF	NC3010
TNMG160412-HM	NC3015			TNMG160412-VM	NC3010
TNMG220404-B25	NC3015			TNMG220404-B25	NC3010
TNMG220404-HM	NC3015			TNMG220404-VM	NC3010
TNMG220408-B25	NC3015	TNMG220408-B25	NC310	TNMG220408-B25	NC3010
		TNMG220408-GM	NC310	TNMG220408-GM	NC3010
TNMG220408-HC	NC3015			TNMG220408-HC	NC3010
TNMG220408-HM	NC3015			TNMG220408-VM	NC3010
TNMG220408-HR	NC3015			TNMG220408-HR	NC3010
TNMG220412-HM	NC3015			TNMG220412-VM	NC3010
TNMG220412-HR	NC3015			TNMG220412-HR	NC3010
		TPGN160308	NC310	TPGN160308	NC3010
TPMR110304-F	NC3015	TPMR110304-F	NC310	TPMR110304-F	NC3010
TPMR110308-M	NC3015	TPMR110308-M	NC310	TPMR110308-M	NC3010
TPMR160304-F	NC3015	TPMR160304-F	NC310	TPMR160304-F	NC3010
TPMR160308-M	NC3015	TPMR160308-M	NC310	TPMR160308-M	NC3010
		TPUN160304	NC310	TPUN160304	NC3010
VBMT110304-HMP	NC3015			VBMT110304-HMP	NC3010
VBMT160404	NC3015	VBMT160404	NC310	VBMT160404	NC3010
VBMT160404-HMP	NC3015			VBMT160404-HMP	NC3010
VBMT160408	NC3015	VBMT160408	NC310	VBMT160408	NC3010
VBMT160408-HMP	NC3015			VBMT160408-HMP	NC3010
VCMT160404-HMP	NC3015			VCMT160404-HMP	NC3010
VCMT160408-X50	NC3015			VCMT160408-X50	NC3010
		VNMG160404-HF	NC310	VNMG160404-VF	NC3010
VNMG160404-HM	NC3015			VNMG160404-VM	NC3010
VNMG160408-HM	NC3015			VNMG160408-VM	NC3010
		WNMA080408	NC310	WNMA080408	NC3010
WNMG060404-HC	NC3015			WNMG060404-HC	NC3010
		WNMG060404-HF	NC310	WNMG060404-VF	NC3010
WNMG060404-HM	NC3015			WNMG060404-VM	NC3010
		WNMG060408-GM	NC310	WNMG060408-GM	NC3010
WNMG060408-HF	NC3015			WNMG060408-VF	NC3010



NC3010 New

NC3010^{New} Stock items

Old inserts(NC310, NC3015) covered by NC3010 ^{New} (Gold)				NC3010 ^{New} (Gold) Insert	
Designation	Grade	Designation	Grade	Designation	Grade
WNMG060408-HM	NC3015	WNMG060408-HM	NC310	WNMG060408-HM	NC3010
		WNMG080404-HF	NC310	WNMG080404-VF	NC3010
WNMG080404-HM	NC3015			WNMG080404-VM	NC3010
				WNMG080404-VW	NC3010
		WNMG080408-GM	NC310	WNMG080408-GM	NC3010
WNMG080408-GR	NC3015	WNMG080408-GR	NC310	WNMG080408-GR	NC3010
WNMG080408-HC	NC3015			WNMG080408-HC	NC3010
WNMG080408-HM	NC3015	WNMG080408-HM	NC310	WNMG080408-VM	NC3010
WNMG080408-HR	NC3015			WNMG080408-HR	NC3010
WNMG080408-HW	NC3015			WNMG080408-LW, VW	NC3010
		WNMG080412-GM	NC310	WNMG080412-GM	NC3010
		WNMG080412-GR	NC310	WNMG080412-GR	NC3010
WNMG080412-HM	NC3015	WNMG080412-HM	NC310	WNMG080412-VM	NC3010
WNMG080412-HR	NC3015			WNMG080412-HR	NC3010
				WNMG080416-GR	NC3010

● Order-made items are available

