

KORLOY TECH-NEWS

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No: 166-1



The best solution for heavy-duty turning

Fono: 055 787169

www.itachile.com

NC500H

CVD
Brand-new



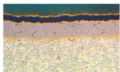
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NC500H

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Features of NC500H CVD coating film and substrate



Al₂O₃ Suitability for operation with high temperature

MT-TiCN Wear resistance and less chipping coating layer

Exclusive substrate High toughness with good mechanical shock resistance, plastic deformation resistance and heat resistance

NC500H Application range

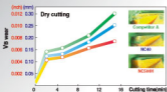


- NC500H is designed to reduce plastic deformation thanks to improved hardness & heat resistance. It guarantees better performance than conventional NC40.
- Great performance is guaranteed in high speed & severe intermittent cutting thanks to the comprehensive substrate with high toughness.

NC500H test examples

Wear resistance

	Metric	inch
Designation	CNMG120408-HR	CNMG120408-HR
Workpiece	40CrMnSi	AISI4140
V	180m/min	6000ft/min
f	0.25mm/rev	0.010in/rev
D.O.C	2.0mm	0.0787in



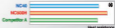
Shock resistance

	Metric	inch
Designation	CNMG120408-HR	CNMG120408-HR
Workpiece	40CrMnSi	AISI4140 (quenched)
V	180m/min	6000ft/min
f	0.25mm/rev	0.010in/rev
D.O.C	2.0mm	0.0787in



Heat resistance

	Metric	inch
Designation	CNMG120408-HR	CNMG120408-HR
Workpiece	40CrMnSi	AISI4140 (quenched)
V	180m/min	6000ft/min
f	0.25mm/rev	0.010in/rev
D.O.C	2.0mm	0.0787in



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NC500H Recommended cutting condition



1. Cutting speed (V)

		Condition	min/min	30 - 50	50 - 100	100 - 300	300 - 500	500 -
			min	100 - 165	165 - 295	295 - 990	990 - 1650	1650 -
NC500H	Heavy		←—————→					

2. Feed rate (f)

		Condition	mm/rev	0.1 - 0.2	0.2 - 0.4	0.4 - 0.7	0.7 - 1.0	1.0 -
			ipr	0.004 - 0.008	0.008 - 0.016	0.016 - 0.028	0.028 - 0.04	0.04 -
NC500H	Heavy		←—————→					

3. Depth of cut (d)

		Condition	mm	1 - 2	2 - 4	4 - 7	7 - 10	10 -
			inch	0.04 - 0.08	0.08 - 0.16	0.16 - 0.28	0.28 - 0.4	0.4 -
NC500H	Heavy		←—————→					

Chip breaker for NC500H

1. Chip breaker match



KH(Heavy duty)



GH(heavy duty)



HR(roughing)



B25(General)

2. Various geometry application(heavy duty)



RCMX



KNJX

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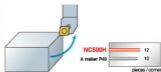
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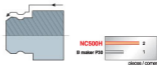
NC500H Machining examples



Designation	CNMG190612-HR	CNMG 643-HR
Workpiece	Block (bridge building)	
	Low carbon steel	
V	10 - 100 m/min	33 - 350 sfm
f	0.20 mm/rev	0.0112 ipr
D.O.C	10 mm	0.4 inch
Coolant	Wet	



Designation	SNMM250724-GH	SNMM 856-GH
Workpiece	Crank shaft	
	HRS1 (forged)	
V	47 - 67 m/min	155 - 290 sfm
f	0.42 - 0.6 mm/rev	0.0168 - 0.024 ipr
D.O.C	10.0 - 22.0 mm	0.4 - 0.88 inch
Coolant	Wet	



Stock management item for NC500H

Shape	ISO	ASA	C/B	Stock
CNMG	120408	432	B25	●
	120412	433	HR	●
	190612	643	B25	●
	190612	643	HR	●
CNMM	190612	643	GH	●
	250624	866	GH	●
SNMG	190612	643	B25	●
	190612	643	HR	●
SNMM	250724	856	GH	●
	250624	866	GH	●
TNMG	220408	432	B25	●
	220412	433	HR	●
KNMX	160405	---	R11	●
RCMX	2507M0	---	---	●
SPS00	---	---	---	●
SPMR	120308	---	M	●

● : Stock item ○ : Under preparing for stock
Order-made items are available.

KORLOY Inc.

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