

Material applications

Unalloyed Steels

Alloyed Steels

Hard Materials

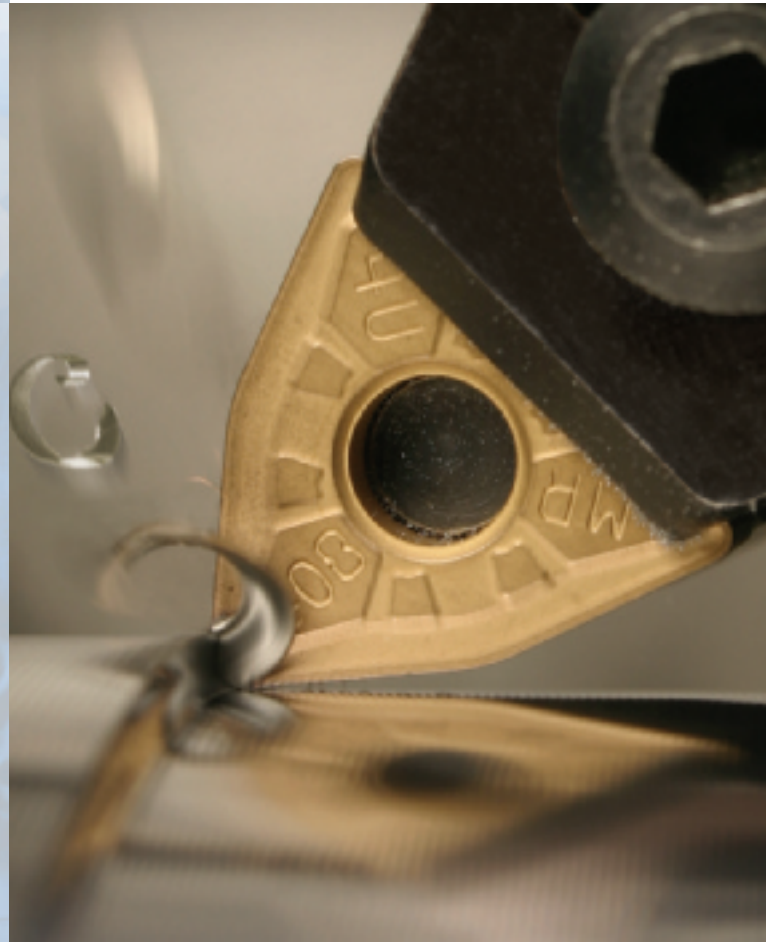


NL37

Nitro-Lok™ Ultra

New grade for an unmatched performance when machining steels and alloyed steels.

Increase your
cutting speeds
by up to 30%



Stellram® tooling systems for
all your tooling requirements.

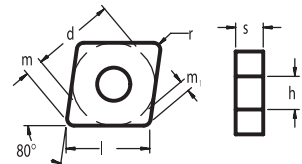


PERFORMANCE BENEFITS

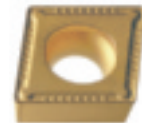
- **Improved Tool Life** – NL37’s capability to resist heat and abrasion can increase tool life by as much as 200%.
- **Reduced Component Costs** – Cutting speeds can be increased by up to 30% to reduce cycle times.
- **Better Machine Productivity** – NL37 requires less frequent tool changes providing up to 100% improvement in machine run time.
- **Higher Quality, Lower Scrap** – NL37 resists edge breakdown, providing consistent surface finishes and maintaining dimensional tolerances.
- **Lower Environmental Cost** – NL37 can be used without coolant reducing disposal costs.
- **Reduced Processing** – NL37 can be used (under stable conditions) to machine hardened steels from 52 HRc to 56 HRc and at cutting speeds up to 220 SFM, eliminating the need for further costly material processes.

Insert Styles Available

ISO Part Number	ANSI Part Number	Coating	EDP #	Dimensions						
				d (Inch)	l (Inch)	s (Inch)	r (Inch)	m (Inch)	m ₁ (Inch)	h (Inch)



CCMT09T308E-3G	CCMT32.52A-3G	NL37	029647		0.375	0.377	0.156	0.031	0.087	0.048	0.173
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CNMG120404E-2N	CNMG431A-2N	NL37	029702	NEW	0.500	0.508	0.188	0.016	0.130	0.072	0.203
CNMG120404E-3G	CNMG431A-3G	NL37	029701	NEW	0.500	0.508	0.188	0.016	0.130	0.072	0.203
CNMG120404E-4T	CNMG431A-4T	NL37	029703	NEW	0.500	0.508	0.188	0.016	0.130	0.072	0.203
CNMG120408E-2N	CNMG432A-2N	NL37	029648		0.500	0.508	0.188	0.031	0.122	0.067	0.203
CNMG120408E-3G	CNMG432A-3G	NL37	029649		0.500	0.508	0.188	0.031	0.122	0.067	0.203
CNMG120408E-3M	CNMG432A-3M	NL37	029650		0.500	0.508	0.188	0.031	0.122	0.067	0.203
CNMG120408E-4T	CNMG432A-4T	NL37	029651		0.500	0.508	0.188	0.031	0.122	0.067	0.203
CNMG120408E-4U	CNMG432A-4U	NL37	029652		0.500	0.508	0.188	0.031	0.122	0.067	0.203
CNMG120412E-2N	CNMG433A-2N	NL37	029704	NEW	0.500	0.508	0.188	0.047	0.113	0.062	0.203
CNMG120412E-3G	CNMG433A-3G	NL37	029654		0.500	0.508	0.188	0.047	0.113	0.062	0.203
CNMG120412E-3M	CNMG433A-3M	NL37	029653		0.500	0.508	0.188	0.047	0.113	0.062	0.203
CNMG120412E-4T	CNMG433A-4T	NL37	029655		0.500	0.508	0.188	0.047	0.113	0.062	0.203
CNMG120412E-4U	CNMG433A-4U	NL37	029656		0.500	0.508	0.188	0.047	0.113	0.062	0.203
CNMG120412E-5V	CNMG433A-5V	NL37	029705	NEW	0.500	0.508	0.188	0.047	0.113	0.062	0.203
CNMG120416E-4T	CNMG434A-4T	NL37	029706	NEW	0.500	0.508	0.188	0.063	0.104	0.057	0.203
CNMG160612E-2N	CNMG543A-2N	NL37	029708	NEW	0.625	0.634	0.250	0.047	0.148	0.081	0.250
CNMG160612E-4T	CNMG543A-4T	NL37	029707	NEW	0.625	0.634	0.250	0.047	0.148	0.081	0.250
CNMG160612E-5V	CNMG543A-5V	NL37	029709	NEW	0.625	0.634	0.250	0.047	0.148	0.081	0.250
CNMG160616E-4T	CNMG544A-4T	NL37	029710	NEW	0.625	0.634	0.250	0.063	0.139	0.076	0.250

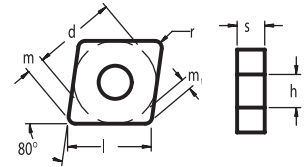


DCMT070204E-3G	DCMT21.51A-3G	NL37	029657		0.250	0.303	0.094	0.016	0.128	-	0.110
DCMT11T304E-3G	DCMT32.51A-3G	NL37	029658		0.375	0.457	0.156	0.016	0.200	-	0.173
DCMT11T308E-3G	DCMT32.52A-3G	NL37	029659		0.375	0.457	0.156	0.031	0.182	-	0.173



Insert Styles Available

ISO Part Number	ANSI Part Number	Coating	EDP #		Dimensions						
					d (Inch)	l (Inch)	s (Inch)	r (Inch)	m (Inch)	m ₁ (Inch)	h (Inch)



DNMG110408E-2N	DNMG332A-2N	NL37	029711	NEW	0.375	0.433	0.188	0.031	0.182	-	0.150
DNMG150404E-3G	DNMG431A-3G	NL37	029660		0.500	0.610	0.188	0.016	0.273	-	0.203
DNMG150408E-2N	DNMG432A-2N	NL37	029716	NEW	0.500	0.610	0.188	0.031	0.255	-	0.203
DNMG150408E-3G	DNMG432A-3G	NL37	029661		0.500	0.610	0.188	0.031	0.255	-	0.203
DNMG150408E-3G	DNMG432A-3G	NL37	029715	NEW	0.500	0.610	0.188	0.031	0.255	-	0.203
DNMG150408E-4T	DNMG432A-4T	NL37	029717	NEW	0.500	0.610	0.188	0.031	0.255	-	0.203
DNMG150412E-3G	DNMG433A-3G	NL37	029662		0.500	0.610	0.188	0.047	0.237	-	0.203
DNMG150412E-4T	DNMG433A-4T	NL37	029718	NEW	0.500	0.610	0.188	0.047	0.237	-	0.203
DNMG150608E-2N	DNMG442A-2N	NL37	029663		0.500	0.610	0.250	0.031	0.255	-	0.203
DNMG150608E-4T	DNMG442A-4T	NL37	029712	NEW	0.500	0.610	0.250	0.031	0.255	-	0.203
DNMG150612E-2N	DNMG443A-2N	NL37	029664		0.500	0.610	0.250	0.047	0.237	-	0.203
DNMG150612E-3G	DNMG443A-3G	NL37	029714	NEW	0.500	0.610	0.250	0.047	0.237	-	0.203
DNMG150612E-4T	DNMG443A-4T	NL37	029713	NEW	0.500	0.610	0.250	0.047	0.237	-	0.203

SCMT09T308E-3G	SCMT32.52A-3G	NL37	029665		0.375	0.375	0.156	0.031	0.065	-	0.173
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SNMG120408E-2N	SNMG432A-2N	NL37	029722	NEW	0.500	0.500	0.188	0.031	0.091	-	0.203
SNMG120408E-4T	SNMG432A-4T	NL37	029720	NEW	0.500	0.500	0.188	0.031	0.091	-	0.203
SNMG120412E-2N	SNMG433A-2N	NL37	029721	NEW	0.500	0.500	0.188	0.047	0.084	-	0.217
SNMG120412E-4T	SNMG433A-4T	NL37	029719	NEW	0.500	0.500	0.188	0.047	0.084	-	0.217
SNMG150612E-2N	SNMG543A-2N	NL37	029724	NEW	0.625	0.625	0.250	0.047	0.110	-	0.250
SNMG150612E-4T	SNMG543A-4T	NL37	029723	NEW	0.625	0.625	0.250	0.047	0.110	-	0.250

TNMG160408E-2N	TNMG332A-2N	NL37	029725	NEW	0.375	0.650	0.188	0.031	0.531	-	0.150
TNMG160408E-3G	TNMG332A-3G	NL37	029666		0.375	0.650	0.188	0.031	0.531	-	0.150
TNMG160408E-4T	TNMG332A-4T	NL37	029726	NEW	0.375	0.650	0.188	0.031	0.531	-	0.150






VBMT160404E-3G	VBMT331A-3G	NL37	029667		0.375	0.654	0.188	0.016	0.400	-	0.173
VBMT160408E-3G	VBMT332A-3G	NL37	029668		0.375	0.654	0.188	0.016	0.400	-	0.173

VNMG160404E-3G	VNMG331A-3G	NL37	029677		0.375	0.650	0.188	0.016	0.400	-	0.150
VNMG160408E-3G	VNMG332A-3G	NL37	029678		0.375	0.650	0.188	0.031	0.363	-	0.150
VNMG160412E-3G	VNMG333A-3G	NL37	029679		0.375	0.650	0.188	0.047	0.327	-	0.150

WNMG060408E-2N	WNMG332A-2N	NL37	029728	NEW	0.375	0.257	0.188	0.031	0.087		0.150
WNMG080408E-2N	WNMG432A-2N	NL37	029670		0.500	0.342	0.188	0.031	0.122		0.203
WNMG080408E-3G	WNMG432A-3G	NL37	029669		0.500	0.342	0.188	0.031	0.122		0.203
WNMG080408E-3M	WNMG432A-3M	NL37	029671		0.500	0.342	0.188	0.031	0.122		0.203
WNMG080408E-4T	WNMG432A-4T	NL37	029672		0.500	0.342	0.188	0.031	0.122		0.203
WNMG080408E-4U	WNMG432A-4U	NL37	029673		0.500	0.342	0.188	0.031	0.122		0.203
WNMG080412E-3G	WNMG433A-3G	NL37	029674		0.500	0.342	0.188	0.047	0.113		0.203
WNMG080412E-3M	WNMG433A-3M	NL37	029675		0.500	0.342	0.188	0.047	0.113		0.203
WNMG080412E-4T	WNMG433A-4T	NL37	029729	NEW	0.500	0.342	0.188	0.047	0.113		0.203
WNMG080412E-4U	WNMG433A-4U	NL37	029676		0.500	0.342	0.188	0.047	0.113		0.203
WNMG080416E-4T	WNMG434A-4T	NL37	029730	NEW	0.500	0.342	0.188	0.063	0.104		0.203







NL37 Primary Grade application with suggested starting point cutting data

ISO	Materials	R _m and Hardness	Cutting Data	Finishing 	Medium 	Roughing 
			Geometry	3M (New)	2N	4T
	Unalloyed Steels	<600 N/mm ² <180HBN	D.O.C. (in) Feed f _n (inch/rev) V _c (SFM)	0.030 - 0.160 0.005 - 0.016 335 - 1400	0.030 - 0.155 0.005 - 0.018 335 - 850	0.047 - 0.250 0.009 - 0.020 335 - 560
		<950 N/mm ² <280HBN	Geometry	3M (New)	2N	4T
	Alloyed Steels	700 - 950 N/mm ² 200 - 280 HBN	D.O.C. (in) Feed f _n (inch/rev) V _c (SFM)	0.030 - 0.160 0.005 - 0.016 190 - 825	0.030 - 0.155 0.005 - 0.018 190 - 495	0.047 - 0.250 0.009 - 0.020 190 - 330
		950 - 1200 N/mm ² 280 - 355 HBN	Geometry	2N	4U	4T
		1200 - 1400 N/mm ² 355 - 415 HBN				
	Hard Steels	>1400 N/mm ² >415 HBN	D.O.C. (in) Feed f _n (inch/rev) V _c (SFM)	0.030 - 0.155 0.005 - 0.018 145 - 220	0.050 - 0.180 0.007 - 0.017 145 - 175	0.047 - 0.250 0.008 - 0.016 145 - 155
	Chilled Cast Irons	1400 N/mm ² 400 HBN				

Note: D.O.C. (in) & Feed f_n (inch/rev) data based on CNMG432A.

NL37 Secondary Grade application with suggested starting point cutting data

ISO	Materials	R _m and Hardness	Cutting Data	Finishing 	Medium 	Roughing 
			Geometry	4U	4U	4T
	Cast Irons	Grey GG-Ft	D.O.C. (in) Feed f _n (inch/rev) V _c (SFM)	0.020 - 0.160 0.004 - 0.016 300 - 1380	0.020 - 0.160 0.004 - 0.016 300 - 830	0.047 - 0.255 0.009 - 0.020 300 - 550
		Spheroidal-Ductile GGG-FGS				
		Malleable GTS - MN/MP				

Note: D.O.C. (in) & Feed f_n (inch/rev) data based on CNMG432A.

For more technical information see the 2006 Tooling Catalogue or contact your local Sales Engineer.

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REF NUMBER
392FLYUSA.V2
PRINTED IN THE U.K.

