

Stellram® tooling systems
for all your turning
requirements.

The tooling.
New 1A geometry

The material.
Unalloyed steels, alloyed steels,
stainless steels and high temperature
alloys.

The application.
Finishing of unalloyed steels (low
carbon steels) and other materials.
Ideal for precision castings.

THE ADVANTAGES

- Excellent chip control at low depth of cut and low feed.
- High positive geometry for reduced built-up edge.
- Finish machining from 0.008" deep and feed of 0.004".
- Small corner radii from 0.008".
- CVD & new PVD grades for improved tool life.








1A GEOMETRY



1A GEOMETRY

1A Inserts stock availability

	ISO Part Number	ANSI Part Number	CVD Coated		ANSI Part Number	PVD Coated	
			NL25	NL30		SP3036	SP4036
	CNMG CNMG120402E-1A	CNMG430.5A-1A	●		CNMG430.5-1A	●	●
	CNMG120404E-1A	CNMG431A-1A	●	●	CNMG431-1A	●	●
	CNMG120408E-1A	CNMG432A-1A	●	●	CNMG432-1A	●	●
	DNMG DNMG110402E-1A	DNMG330.5A-1A	●		DNMG330.5-1A	●	●
	DNMG110404E-1A	DNMG331A-1A	●	●	DNMG331-1A	●	●
	DNMG150402E-1A	DNMG430.5A-1A	●		DNMG430.5-1A	●	●
	DNMG150404E-1A	DNMG431A-1A	●	●	DNMG431-1A	●	●
	DNMG150408E-1A	DNMG432A-1A	●	●	DNMG432-1A	●	●
	DNMG150602E-1A	DNMG440.5A-1A	●		DNMG440.5-1A	●	●
	DNMG150604E-1A	DNMG441A-1A	●	●	DNMG441-1A	●	●
	DNMG150608E-1A	DNMG442A-1A	●	●	DNMG442-1A	●	●
	TNMG TNMG160302E-1A	TNMG320.5A-1A	●		TNMG320.5-1A	●	●
	TNMG160304E-1A	TNMG321A-1A	●	●	TNMG321-1A	●	●
	TNMG160308E-1A	TNMG322A-1A	●	●	TNMG322-1A	●	●
	TNMG160402E-1A	TNMG330.5A-1A	●		TNMG330.5-1A	●	●
	TNMG160404E-1A	TNMG331A-1A	●	●	TNMG331-1A	●	●
	TNMG160408E-1A	TNMG332A-1A	●	●	TNMG332-1A	●	●
	VNMG VNMG160402E-1A	VNMG330.5A-1A	●		VNMG330.5-1A	●	●
	VNMG160404E-1A	VNMG331A-1A	●	●	VNMG331-1A	●	●
	VNMG160408E-1A	VNMG332A-1A	●	●	VNMG332-1A	●	●
	WNMG WNMG060402E-1A	WNMG330.5A-1A	●		WNMG330.5-1A	●	●
	WNMG060404E-1A	WNMG331A-1A	●	●	WNMG331-1A	●	●
	WNMG060408E-1A	WNMG332A-1A	●	●	WNMG332-1A	●	●
	WNMG080402E-1A	WNMG430.5A-1A	●	●	WNMG430.5-1A	●	●
	WNMG080404E-1A	WNMG431A-1A	●	●	WNMG431-1A	●	●
	WNMG080408E-1A	WNMG432A-1A	●	●	WNMG432-1A	●	●

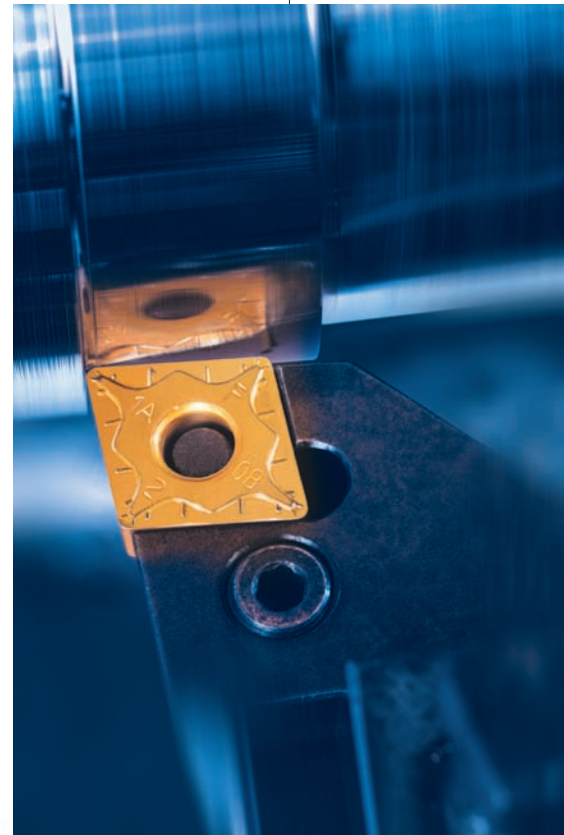
Note: Please note that ANSI part numbers differ for CVD and PVD.

● Available as standard stock.

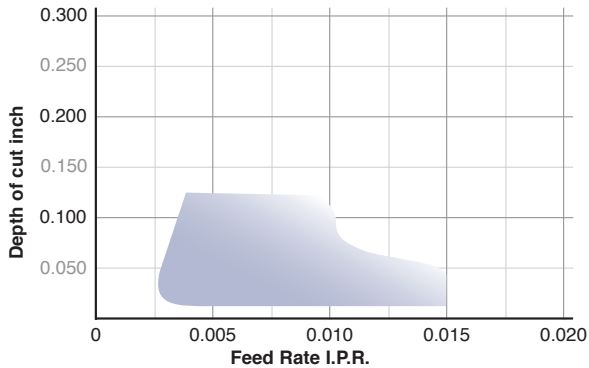
Grade Classification

Materials	Code ISO	Grade Performance Range			
		NL25	NL30	SP3036	SP4036
Low carbon steels, medium carbon steels, alloy steels, tool steels, cast steels and stainless steels with the exception austenitic structure.	C8	P01			
		P05			
		P10			
	C7	P15			
		P20			
		P25			
	C6	P30			
		P35			
	C5	P40			
		P50			
Stainless steels: stainless austenitic/ferritic, steels and cast steels.	M05				
	M10				
	M15				
	M20				
	M30				
	M40				

◀ Optimum Grade Performance



Chip fragmentation for CNMG432A-1A



CVD Coated

- Multi layer coating
- Wear resistance

PVD Coated

- Thin layer TiAlN
- Low friction coefficient
- Retains sharp edge

NL25	NL30
<p>CVD coated grade. Offers wear resistance at higher speeds.</p> <p>For use in:</p> <p>Unalloyed Steels</p> <p>Alloyed Steels</p> <p>Application guide:</p> <p>Wear resistant grade for finishing at high speeds.</p>	<p>CVD coated grade. First choice for general purpose machining.</p> <p>For use in:</p> <p>Unalloyed Steels</p> <p>Alloyed Steels</p> <p>Application guide:</p> <p>For more difficult applications and lower speeds than NL25.</p>

New! SP3036	New! SP4036
<p>PVD coated grade. Sharp edge treatment for reduced built-up edge and cutting forces.</p> <p>For use in:</p> <p>Stainless Steels</p> <p>High temperature alloys</p> <p>Application guide:</p> <p>Stable conditions at higher cutting speeds.</p>	<p>PVD coated grade. Excellent for finishing.</p> <p>For use in:</p> <p>Stainless Steels</p> <p>High temperature alloys</p> <p>Application guide:</p> <p>First choice for stable conditions at higher cutting speeds, lower feeds and depth of cut.</p>

1A Insert Cutting Conditions

Cutting Speed SFM

Material Group	RM & Hardness	NL25		NL30		SP3036		SP4036	
		max	min	max	min	max	min	max	min
Unalloyed Steels	400-600 N/mm ² 120-180 HBN	1330	535	1250	520	1405	665	1450	680
	600-950 N/mm ² 180-280 HBN	865	345	800	335	910	430	940	440
Alloyed Steels	700-950 N/mm ² 200-280 HBN	790	320	750	310	835	395	860	405
	950-1200 N/mm ² 280-355 HBN	720	290	660	280	760	360	-	-
Stainless Steels	Austenitic + Ferritic 300 series	900	360	750	350	950	450	980	460
	Martensitic 400 series	935	375	780	365	990	470	1020	480
High Temperature Alloys	Iron Based	190	75	160	75	200	95	210	100
	Cobalt Based	155	60	130	60	165	80	170	80
	Nickel Based	170	65	140	65	175	85	185	85
	Titanium Based	265	105	220	105	280	130	290	135

The values in blue are the optimum grade application areas.

CVD Coated

- Multi layer coating
- Wear resistance

PVD Coated

- Thin layer TiAlN
- Low friction coefficient
- Retains sharp edge

NL25

Application guide:

Wear resistant grade for finishing at high speeds.

NL30

Application guide:

For more difficult applications and lower speeds than NL25.

SP3036

Application guide:

Stable conditions at higher cutting speeds.

SP4036

Application guide:

First choice for stable conditions at higher cutting speeds, lower feeds and depth of cut.



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LITERATURE RE-ORDER NUMBER

223FLYUSAi-V1

SUPERIOR 05/01 - PRINTED IN THE U.K.