



Stellram® tooling systems
for all your turning
requirements.

The tooling.
New -3F Geometry.

The material.
Stainless steels, non-ferrous
and high temperature alloys.

The application.
Semi-finishing and finishing.
Ideal for high accuracy machining.

THE ADVANTAGES

- Periphery ground edges for high accuracy profiling and excellent indexability.
- Sharp edges and positive geometry for reduced edge build-up and improved surface finish.
- Small radii available for light depths of cut and to produce small corner radii.
- New PVD grades ideal for aerospace and high temperature alloys.

-3F GEOMETRY

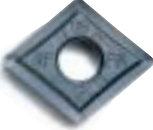





 **Stellram**
An Allegheny Technologies Company

STELLRAM®

-3F GEOMETRY

-3F Inserts stock availability

	ISO Part Number	ANSI Part Number	SP1064	PVD Coated SP3064	SP4064	
	CNGG/ CNGP	CNGG120401-3F	CNGP430.2-3F	028013	027125	027124
		CNGG120402-3F	CNGP430.5-3F	028014	027128	027127
		CNGG120404-3F	CNGP431-3F	028015	027131	027130
		CNGG120408-3F	CNGP432-3F	028016	027134	027133
	DNGG/ DNGP	CNGG120412-3F	CNGP433-3F	028017	-	-
		DNGG150401-3F	DNGP430.2-3F	028018	027463	027462
		DNGG150402-3F	DNGP430.5-3F	028019	027467	027466
		DNGG150404-3F	DNGP431-3F	028020	027471	027470
		DNGG150408-3F	DNGP432-3F	028021	027475	027474
		DNGG 150601F-3F	DNGP 440.2-3F	028022	028026	-
	VNGG/ VNGP	DNGG 150602F-3F	DNGP 440.5-3F	028023	028027	-
		DNGG 150604F-3F	DNGP 441-3F	028024	028028	-
		DNGG 150608F-3F	DNGP 442-3F	028025	028029	-
		VNGG160401F-3F	VNGP 330.2-3F	028030	028034	-
	WNGG/ WNGP	VNGG 160402F-3F	VNGP 330.5-3F	028031	028035	-
		VNGG160404F-3F	VNGP 331-3F	028032	028036	-
		VNGG 160408F-3F	VNGP 332-3F	028033	028037	-
		WNGG 080401F-3F	WNGP 430.2-3F	028038	028042	-
	WNGG 080402F-3F	WNGP 430.5-3F	028039	028043	-	
	WNGG 080404F-3F	WNGP 431-3F	028040	028044	-	
	WNGG 080408F-3F	WNGP 432-3F	028041	028045	-	

For DNGG1504.. inserts, please check size of anvil in toolholder. Use Anvil: 3714 - UKNS055226.

*EDP # = Internal Item Number: Please quote this number when ordering

PVD Coated

■ Single-layer TiAlN ■ Low friction coefficient ■ Retains sharp edge



New!

SP1064

PVD coated grade.
Extremely hard grade for
finishing applications in
high temperature alloys.

Primary Materials

Stainless steels

High temperature alloys

Application guide:

**First choice for high speed
machining with smaller radii**

New!

SP3064

PVD coated grade.
Excellent wear resistance
and sharp edge treatment
for reduced built-up edge
and cutting forces.

Primary Materials

Stainless steels

High temperature alloys

Application guide:

**First choice for stainless
steels and for high
temperature alloys when
excessive tool pressure is
an issue.**

New!

SP4064

PVD coated grade. Wear
resistant coating and sharp
edge treatment for finishing
applications.

Primary Materials



Stainless steels

High temperature alloys

Application guide:

**First choice for
unfavorable conditions.**

Grade Classification

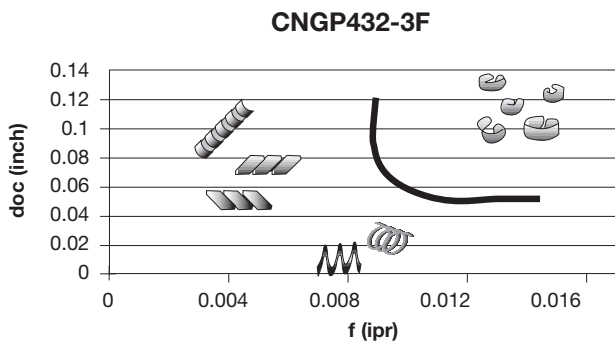
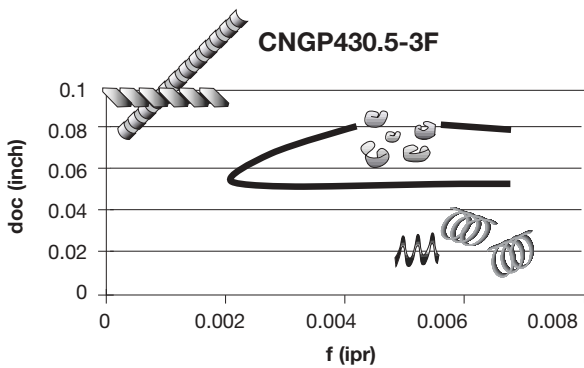
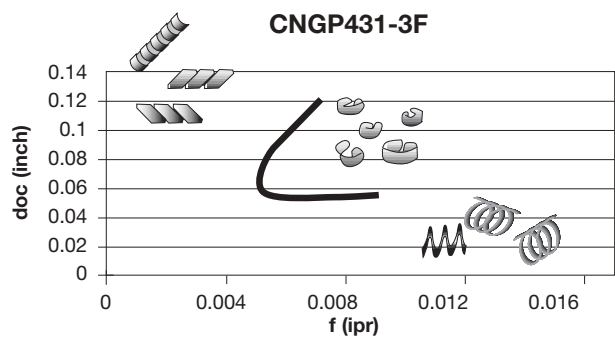
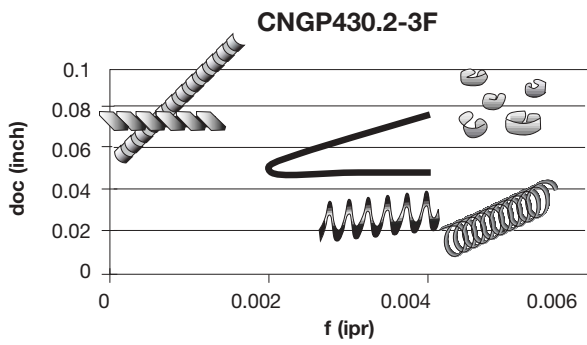
Materials	Code	Coated PVD HC SP1064	Coated PVD HC SP3064	Coated PVD HC SP4064
 Stainless Steels M	M05	←	→	→
	M10		→	→
	M15		→	→
	M20		→	→
	M30			
	M40			
 High Temperature Alloys S	S01	←	←	→
	S05	←	←	→
	S10		←	→
	S15			
	S20			
	S25			
	S30			

← Optimum Grade Performance

Note: Under 0.016" nose radius, reduce speed by 20%



Chip Fragmentation in Titanium



For optimum chip control, machining parameters should remain within the curve shown on the chart.

Cutting Conditions

(Vc) SFM Cutting Speeds	F	ap > 0.010" - 0.120"	fn > 0.004" - 0.016"/rev
	M	ap > 0.040" - 0.160"	fn > 0.008" - 0.018"/rev
	R	ap > 0.120"	fn > 0.012" - 0.024"/rev

Material	Rm & Hardness	PVD								
		(ISO - HC) SP1064			(ISO - HC) SP3064			(ISO - HF) SP4064		
		F	M	R	F	M	R	F	M	R
M Stainless Steel	Austenitic & Ferritic 300 Series	1000	735	-	950	700	-	980	720	-
	Martensitic 400 Series	1040	765	-	990	730	-	1020	750	-
N Nonferrous Metal	<16% Silicon 116 HBN	3500	2350	-	-	-	-	-	-	-
	>16% Silicon	-	-	-	-	-	-	-	-	-
S High Temperature Alloys	Iron Based	215	155	-	205	150	-	210	155	-
	Cobalt Based	175	125	-	165	130	-	170	125	-
	Nickel Based	185	140	-	175	130	-	185	135	-
	Titanium Based	295	215	-	280	205	-	285	210	-

Note: Under 0.016" nose radius, reduce speed by 20%

PVD Coated

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

<p>New!</p> <p>SP1064</p> <p>Application guide:</p> <p>First choice for high speed machining with smaller radii.</p>	<p>New!</p> <p>SP3064</p> <p>Application guide:</p> <p>First choice for stainless steels and for high temperature alloys when excessive tool pressure is an issue.</p>	<p>New!</p> <p>SP4064</p> <p>Application guide:</p> <p>First choice for unfavorable conditions.</p>
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