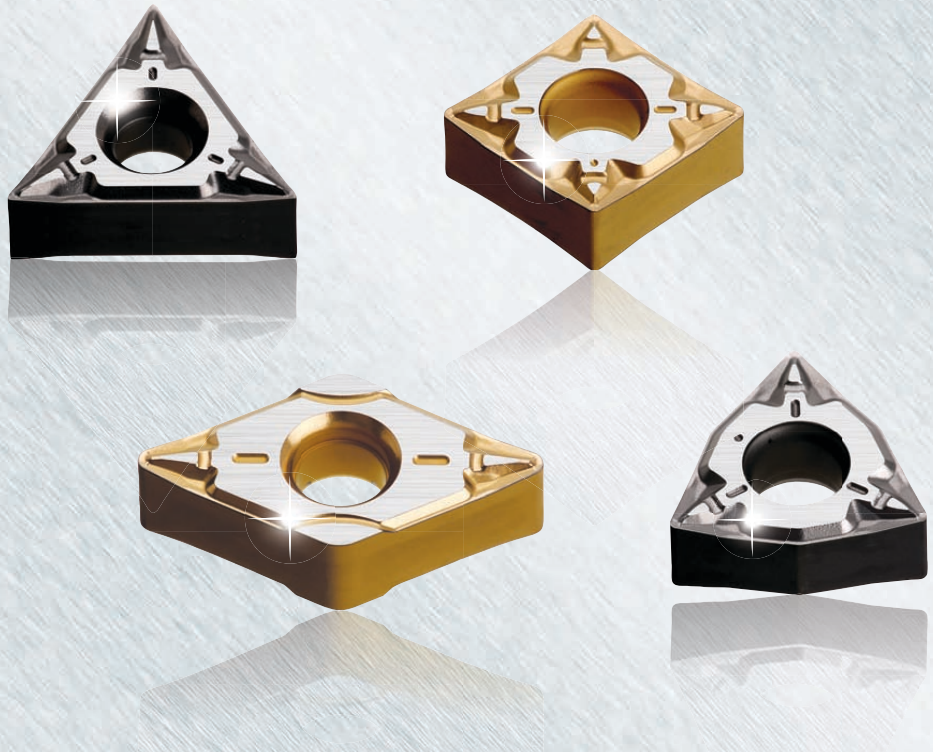
GOLD RHINO



Insert Shapes
CNMG
DNMG
TNMG
VNMX
WNMX

Corner Radii
.008″
.016″
.031″

Feed Rates
.002 - .012 ipr

Depth of Cut Range
.008″ - .080″

NEW PRODUCT ANNOUNCEMENT •2015•

NEW FS Chipbreaker for Fine Finishing Applications

Ingersoll has expanded the Gold-Rhino™ product line to include a new FS chipbreaker for finish turning in steel.

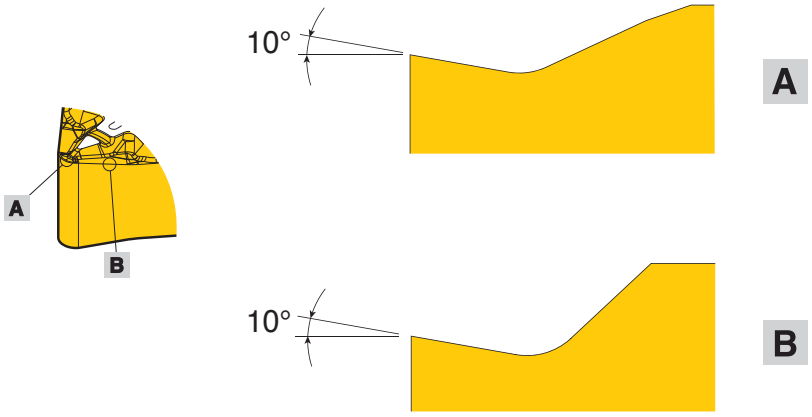
The FS chipbreaker is specifically designed to break chips under low feed and low depth of cut conditions, eliminating "birds nests" and tangled chips that contribute to lower surface quality and inefficiency, particularly in cells where the work piece is automatically transferred to the next machining operation.

The FS chipbreaker inserts are available in five different shapes and feature corner radii as small as .008" to further improve chip control in finishing applications.

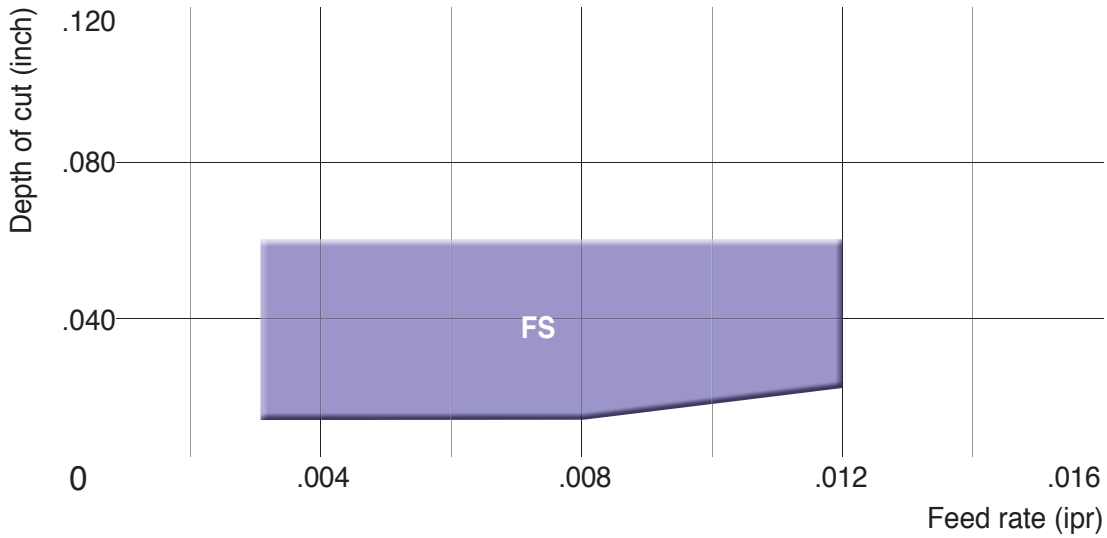
This chipbreaker geometry also features a sharp, 10 degree positive cutting edge that reduces radial and tangential pressure during machining, resulting in minimal vibration and excellent surface finish.

Member IMC Group
Ingersoll Cutting Tools

Edge geometry of FS chip breaker

Chip breaker	Edge geometry
 FS	

Chip breaker range

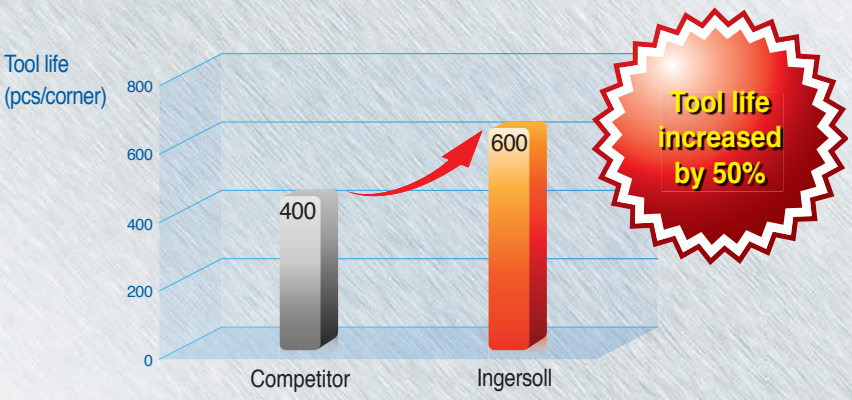


- Insert: CNMG 331 FS
- Cutting speed (V): 650 sfm
- Material: 0.45% Carbon steel (HB200~230)

GOLD RHINO

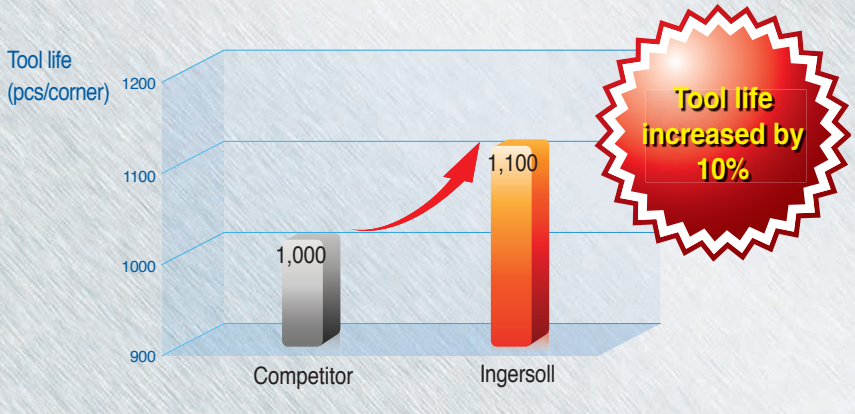
Case Study 1

		Competitor	Ingersoll
Workpiece material		Cr alloy steel (SCr420HB)	
Tool		S20U-MTFNR-3	A20U-HTFNR-2.53
Insert		TNMG 331	TNMG 2.531 FS
Grade		Coated Cermet	PV3010
Cutting speed	V (sfm)	750	750
Feed rate	f (ipr)	.003	.003
Depth of cut	ap (inch)	.008 ~ .012	.008 ~ .012
Coolant		Yes	Yes
Tool life (pcs/corner)		400	600

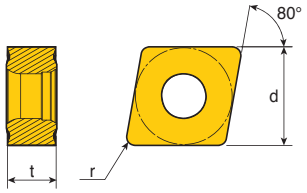


Case Study 2

		Competitor	Ingersoll
Workpiece material		Cr alloy steel (SCr420HB)	
Tool		A10R-STFPR-2	A10R-HCLNR-33
Insert		TPMT 110308 (positive)	CNMG 332 FS (negative)
Grade		Coated Cermet	PV3010
Cutting speed	V (sfm)	775	815
Feed rate	f (ipr)	.007	.008
Depth of cut	ap (inch)	.006	.006
Coolant		Yes	Yes
Tool life (pcs/corner)		1,000	1,100



CNMG Negative 80° Rhombic Inserts

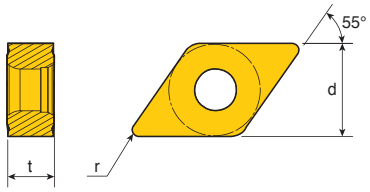


Size	Dimension (in)		
	d	t	r
CNMG 330.5	.375	.187	.008
CNMG 331	.375	.187	.016
CNMG 332	.375	.187	.031

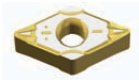
Insert	Designation		feed (ipr)	ap (inch)	Cermet		CVD coated	
					PV3010	CT3000	TT8115	TT8125
	CNMG	330.5 (090402) FS	.002-.010	.008-.060	●	●	●	●
		331 (090404) FS	.003-.012	.012-.060	●	●	●	●
		332 (090408) FS	.004-.012	.020-.060	●	●	●	●

● : Standard items

DNMG Negative 55° Rhombic Inserts

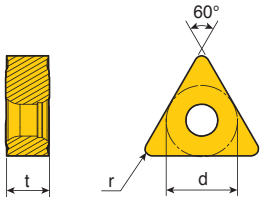


Size	Dimension (in)		
	d	t	r
DNMG 3.53.50.5	.437	.219	.008
DNMG 3.53.51	.437	.219	.016
DNMG 3.53.52	.437	.219	.031

Insert	Designation		feed (ipr)	ap (inch)	Cermet		CVD coated	
					PV3010	CT3000	TT8115	TT8125
	DNMG	3.53.50.5 (130502) FS	.002-.010	.008-.080	●	●	●	●
		3.53.51 (130504) FS	.003-.012	.012-.080	●	●	●	●
		3.53.52 (130508) FS	.004-.012	.020-.080	●	●	●	●

● : Standard items

TNMG Negative Triangular Inserts

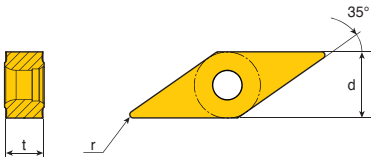


Size	Dimension (in)		
	d	t	r
TNMG 2.530.5	.312	.187	.008
TNMG 2.531	.312	.187	.016
TNMG 2.532	.312	.187	.031

Insert	Designation		feed (ipr)	ap (inch)	Cermet		CVD coated	
					PV3010	CT3000	TT8115	TT8125
	TNMG	2.530.5 (130402) FS	.002-.010	.008-.040	●	●	●	●
		2.531 (130404) FS	.003-.012	.012-.040	●	●	●	●
		2.532 (130408) FS	.004-.012	.020-.040	●	●	●	●

● : Standard items

VNMX Negative 35° Rhombic Inserts

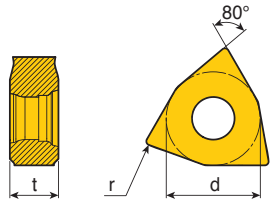


Size	Dimension (in)		
	d	t	r
VNMX 2.530.5	.312	.187	.008
VNMX 2.531	.312	.187	.016
VNMX 2.532	.312	.187	.031

Insert	Designation		feed (ipr)	ap (inch)	Cermet		CVD coated	
					PV3010	CT3000	TT8115	TT8125
	VNMX	2.530.5 (130402) FS	.002-.010	.008-.039	●	●	●	●
		2.531 (130404) FS	.003-.012	.012-.039	●	●	●	●
		2.532 (130408) FS	.004-.012	.020-.039	●	●	●	●

● : Standard items

WNMX Negative 80° Trigon Inserts



Size	Dimension (in)		
	d	t	r
WNMX 331	.375	.187	.016
WNMX 332	.375	.187	.031

Insert	Designation		feed (ipr)	ap (inch)	Cermet		CVD coated	
					PV3010	CT3000	TT8115	TT8125
	WNMX	331 (060404) FS	.003-.012	.012-.060	●	●	●	●
		332 (060408) FS	.004-.012	.020-.060	●	●	●	●

● : Standard items