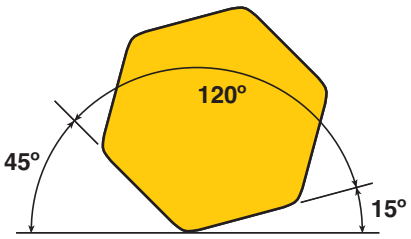
Ingersoll TaeguLine introduces HEX-TURN, a new, unique addition to the turning product line that offers exceptional performance and cost saving benefits. The 12 cutting edges of this hexagonal, negative insert provide dramatically reduced production costs. Each corner of the insert contains wiper geometry that enhances the quality of the machined surface even on high feed applications.

HEX-TURN has been designed with two main chip breakers.
GU chip breaker has a strong cutting edge and is for general turning applications on steel and cast iron. SU chip breaker has high positive rake geometry to minimize built up edge and reduce cutting forces. This makes it ideal for machining nickel based super alloys and stainless steels.

The external and internal tool holders utilize Ingersoll's T-Type clamping system that provides exceptional clamping force with fast, accurate indexing.

HEX-TURN™



FEATURES AND BENEFITS:

- Very economical solution with 12 cutting edges.
- Wiper geometry provides exceptional productivity and high quality surface finish.
- 120 degree included angle provides a strong insert design and excellent resistance against notching.
- When used in conjunction with the T-Type holders, HEX-TURN provides a 45 degree lead angle for both turning and facing operations.
- 45° lead angle makes chamfer operations fast and simple, especially on manual lathes.

KITS:

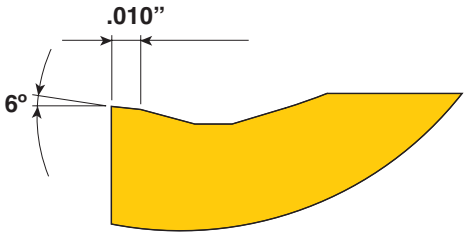
Kits have been prepared for the HEX-TURN introduction.
Each kit contains one right-handed, 1.00" external T-Type holder, ten inserts and a wrench.

KIT ITEM DESCRIPTION	HOLDER	INSERT
KITTHSNR16-4D-GU TT1300	THSNR16-4D	HNMG432GU TT1300
KITTHSNR16-4D-GU TT3500	THSNR16-4D	HNMG432GU TT3500
KITTHSNR16-4D-GU TT5100	THSNR16-4D	HNMG432GU TT5100
KITTHSNR16-4D-SU TT5030	THSNR16-4D	HNMG432SU TT5030
KITTHSNR16-4D-SU TT5100	THSNR16-4D	HNMG432SU TT5100

PRICING:

Please refer to GAL system or "Ask Margaret" for kit and individual component prices.

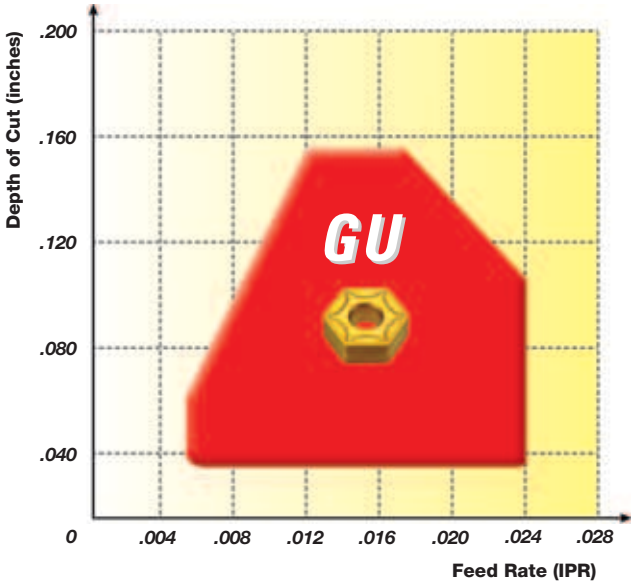
GU - GENERAL MACHINING



GU is designed for general machining in various materials such as steel, alloy steel and cast iron. Its 6 degree top rake angle is very secure and shows good performance in medium to roughing applications.

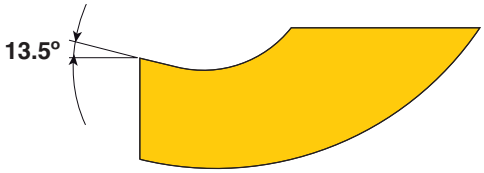
Main GRADES:
T-CAST **TT1300**
TT3500

CHIP CONTROL RANGE:



Recommended Cutting Conditions:
- HNMG432GU
- ap= .080" (.040" ~ .138")
- f= .014" (.006" ~ .024") IPR

SU - EXOTIC MATERIALS

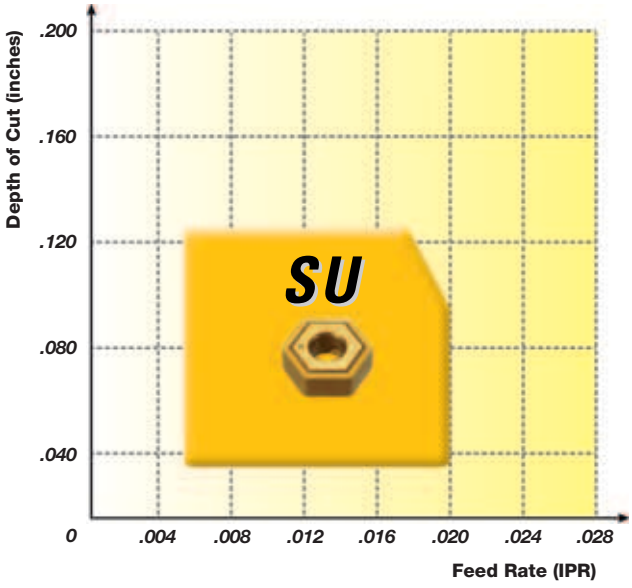


SU is designed for machining exotic materials such as Inconel. Its very sharp geometry reduces built-up-edges created while machining. The very smooth chipbreaker shape delivers chip control in sticky material and reduces crater wear.

When combined with the T-Type holder, the 45 degree lead angle helps reduce notch wear which is one of the primary failure modes of inserts in difficult-to-cut material.

Main GRADES:
TT5100
TT5030

CHIP CONTROL RANGE:

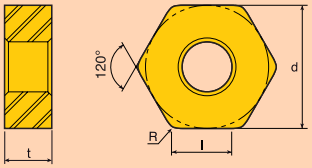


Recommended Cutting Conditions:
- HNMG432SU
- ap= .060" (.020" ~ .138")
- f= .008" (.004" ~ .020") IPR

STOCKED ITEMS:

HNMG GU CHIPBREAKER

NEGATIVE 120° HEXAGONAL INSERTS FOR MEDIUM ROUGHING



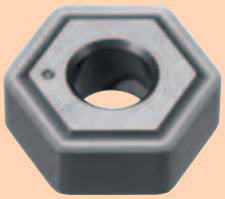
Designation	l	d	t	R
HNMG432GU	.244	.500	.187	.031

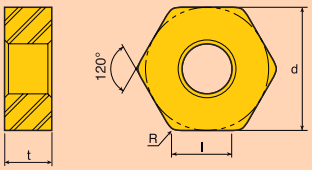
Designation		Recommended Machining Conditions			P M K N S H											
		feed (ipr)	ap (inch)	Grades & Vc (sfm)												
ANSI	ISO			PV3010	CT3000		TT1300	TT1500	TT3500	TT5030	TT5100	TT7100	TT8020		P10	P20	K10	K20
HNMG 432 GU	HNMG050408GU	.014 (.006-.024)	.080 (.020-.138)				• 900		• 920		• 705 495							

• Marked: Stocked Standard Items

HNMG SU CHIPBREAKER

NEGATIVE 120° HEXAGONAL INSERTS FOR MEDIUM ROUGHING





Designation	l	d	t	R
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ANSI	ISO			PV3010	CT3000		TT1300	TT1500	TT3500	TT5030	TT5100	TT7100	TT8020		P10	P20	K10	K20
HNMG 432 SU	HNMG050408SU	.008 (.004-.020)	.060 (.020-.138)							• 200 525	• 705 495							

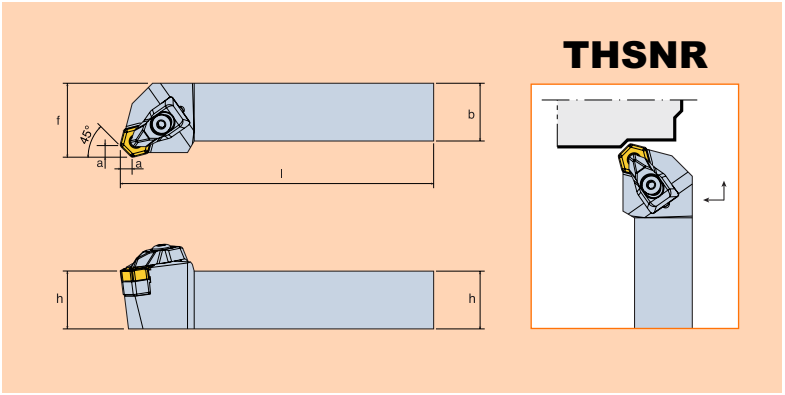
• Marked: Stocked Standard Items

Carbon Steel C: 0.45%
Aluminum
Austenitic Stainless Steel
Inconel
High Tensile Cast Iron
Hardened Steel

STOCKED ITEMS:

EXTERNAL TOOL HOLDERS

HEXAGON INSERT

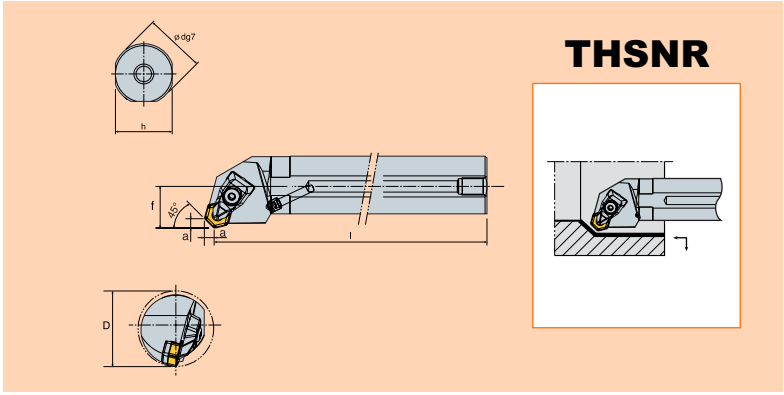


Designation	Stock		Dimensions (inch)					Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Clamp Wrench
	R	L	h	b	l	f	a	120°						
THSNR/L 16-4D	●	●	1.00	1.00	6.00	1.25	.165	HN□G 43□	DLM4	DLS4	TSH44	SO40050I	DSP4	L-W 3
THSNR/L 20-4D	●	●	1.25	1.25	6.00	1.57	.165							

● Marked: Stocked Standard Items

BORING BARS

HEXAGON INSERT



Designation	Stock		Dimensions (inch)						Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Clamp Wrench
	R	L	d	h	l	f	D	a	120°							
A20U-THSNR/L-4	●	●	1.25	1.18	14.0	.87	1.57	.165	HN□G 43□	DLM4	DLS4	TSH42	SO40050I	DSP4	NZ62	L-W 3
A24U-THSNR/L-4	●	●	1.50	1.45	14.0	1.06	1.96	.165				TSH44			NZ104	

● Marked: Stocked Standard Items

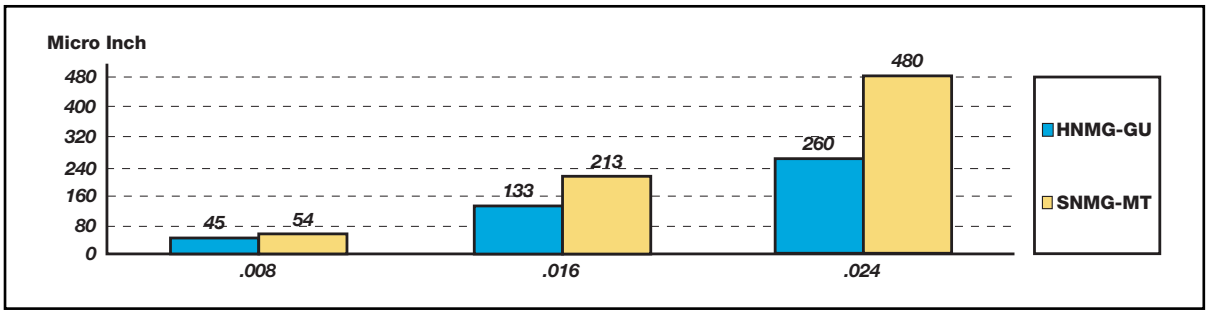
TEST RESULTS:

Surface Finish Test from Tech Center

Insert: HNMG432GU TT5100
SNMG432MT TT5100

Cutting Parameters: V= 650 SFM
f= various
d= .080"

Material: 0.45% Carbon Steel

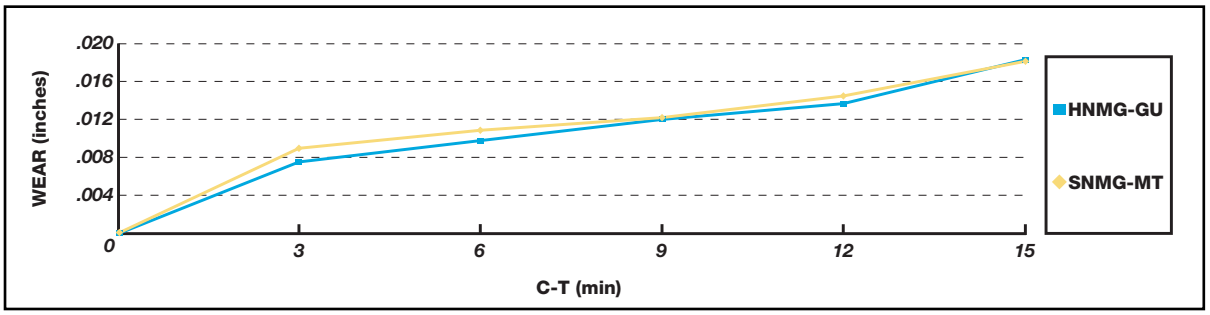


Tool Life Test 1 from Tech Center

Insert: HNMG432GU TT1300
SNMG432MT TT1300

Cutting Parameters: V= 1475 SFM
f= .012 IPR
d= .080"
Ext. Turning
Wet

Material: Gray Cast Iron

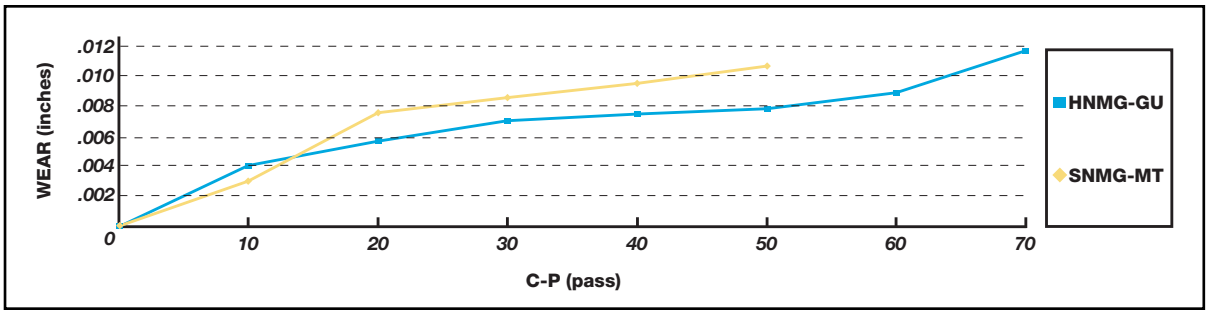


Tool Life Test 2 from Tech Center

Insert: HNMG432GU TT1300
SNMG432MT TT1300

Cutting Parameters: V= 1150 SFM
f= .012 IPR
d= .060"
Face Interruption
Wet

Material: Gray Cast Iron



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