Ingersoll TAEGU line INTRODUCES...

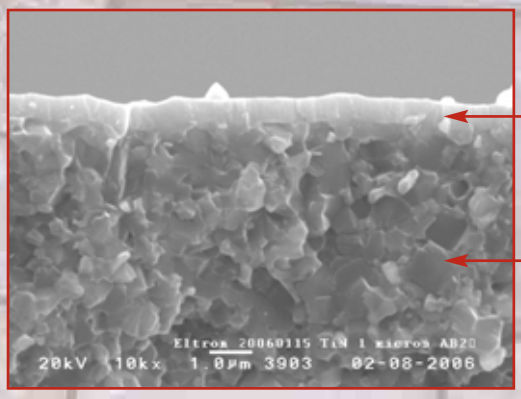
AB2010

A new series of coated ceramic inserts for hard part turning

AB2010 is a new, mixed ceramic grade based on an aluminum oxide and titanium carbon nitride substrate with a PVD-TiN coating. This new grade offers longer tool life on hard materials and makes it possible to run at higher speeds compared to existing, uncoated ceramic grades. The gold coating also makes it easy to identify used corners.

The main application areas for this grade are the turning of hardened materials (>HRC40). Use of this insert can be a cost effective alternative to machining with CBN inserts on hardened parts in continuous cutting.

Micro-structure of AB2010



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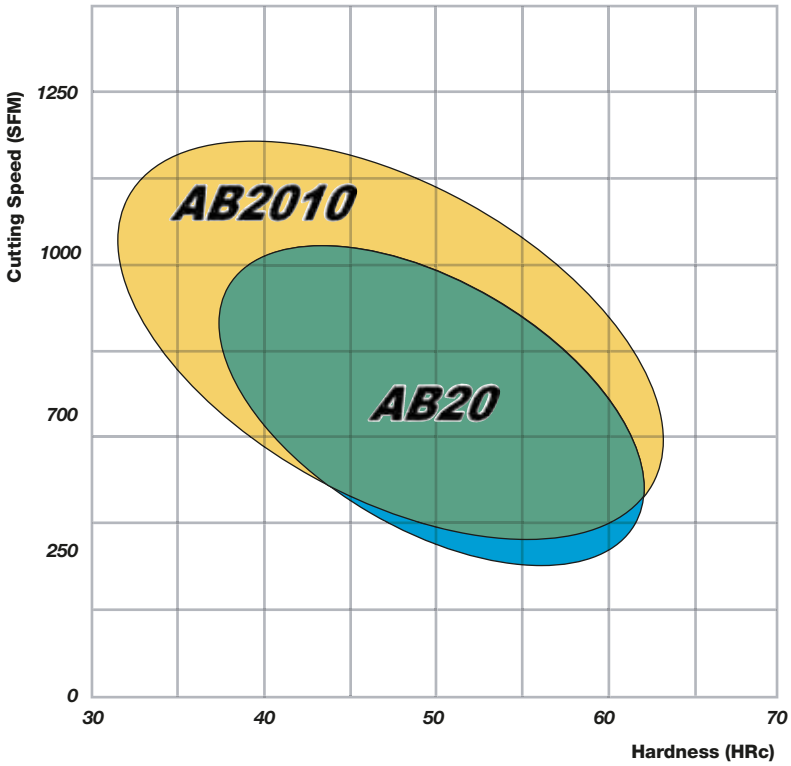
APPLICATION RANGE OF AB2010:



Recommended cutting speed SFM=260-1150.

FEATURES:

- Excellent wear resistance and tool life compared to uncoated ceramic grades when operating at high cutting speeds.
- Very easy to identify used corners due to gold color.
- Overall cost is comparable to CBN inserts on hard materials.
- Very good combination of wear resistance and fracture resistance.
- Ideal for finishing operations in hardened steels and hardened cast irons.

FIELD TEST RESULTS:

Test 1.

Component:	Crank Shaft, Hardened cast iron (HRC 50)	
Cutting Speed (Vc):	656 SFM	
Feed Rate (f):	.0016 IPR	
Depth of Cut (ap):	.020"	
Operation:	Finishing, dry	
Tool Life		
Existing Method:	VNGA 332 KY4400	81 pcs/edge
Test Insert:	VNGA 332 AB2010	86 pcs/edge

Test 2.

Component:	Punch, High speed steel (HRC 62-64)	
Cutting Speed (Vc):	558 SFM	
Feed Rate (f):	.003 IPR	
Depth of Cut (ap):	.020"	
Operation:	Finishing of face, dry	
Tool Life		
Existing Method:	TNGA 332 KY4400	5 pcs/edge
Test Insert:	TNGA 332 AB2010	7 pcs/edge

Test 3.

Component:	Bearing cap, Forged steel (HRC 38-40)	
Cutting Speed (Vc):	850 SFM	
Feed Rate (f):	.0024 IPR	
Depth of Cut (ap):	.008"	
Operation:	Internal finishing, dry	
Tool Life		
Existing Method:	TNG 222 CBN100	65 pcs/edge
Test Insert:	TNGA 332 AB2010	118 pcs/edge

Test 4.

Component:	Piston, Hardened steel (HRC 55-58)	
Cutting Speed (Vc):	590 SFM	
Feed Rate (f):	.006 IPR	
Depth of Cut (ap):	.008"	
Operation:	Finishing, dry	
Tool Life		
Existing Method:	CNGA 432 CTS3110	120 pcs/edge
Test Insert:	CNGA 432 AB2010	400 pcs/edge

FIELD TEST RESULTS:

Test 5.

Component:	Inner ring, Hardened bearing steel (HRC 60)	
Cutting Speed (Vc):	590 SFM	
Feed Rate (f):	.006 IPR	
Depth of Cut (ap):	.012"	
Operation:	Finishing, dry	
Tool Life		
Existing Method:	CNGA 433 LX11	700 pcs/edge
Test Insert:	CNGA 433 AB2010	750 pcs/edge

Test 6.

Component:	Sleeve, Hardened steel (HRC 55-60)	
Cutting Speed (Vc):	354 SFM	
Feed Rate (f):	.004IPR	
Depth of Cut (ap):	.016"	
Operation:	Finishing, dry	
Tool Life		
Existing Method:	CNGA 432 KY4400	180 pcs/edge
Test Insert:	CNGA 432 AB2010	200 pcs/edge

Test 7.

Component:	Roller, Hardened steel (HRC 35-40)	
Cutting Speed (Vc):	443-640 SFM	
Feed Rate (f):	.008 IPR	
Depth of Cut (ap):	.004"-.027"	
Operation:	Finishing of interrupted cut, dry	
Tool Life		
Existing Method:	CNGA 433 A66N	1.5 pcs/edge
Test Insert:	CNGA 432 AB2010	3 pcs/edge

Test 8.

Component:	Sliding Sleeve	
Cutting Speed (Vc):	525 SFM	
Feed Rate (f):	.002 IPR	
Depth of Cut (ap):	.006"	
Operation:	Finishing	
Tool Life		
Existing Method:	VNGA 332 A66N	175 EA/edge
Test Insert:	VNGA 332 AB2010	250 EA/edge

STOCKED ITEMS:

Rockford	Overseas	Item Description ISO	ANSI
•		CNGA 120404	CNGA 431
•		CNGA 120408	CNGA 432
•		CNGA 120408 S7	CNGA 432 S7
•		CNGA 120408 T7-WZ	CNGA 432 T7-WZ
•		CNGA 120412	CNGA 433
•		CNGA 120412 T7-WZ	CNGA 433 T7-WZ
	•	CNGN 120408	CNG 432
	•	CNGN 120708	CNG 452
•		DNGA 150408	DNGA 432
	•	DNGA 150604	DNGA 441
	•	DNGA 150608	DNGA 442
	•	DNGA 150612	DNGA 443
	•	ENGN 130708	ENG 452
•		RNGN 120400	RNG 43
•		RNGN 120700	RNG 45
	•	SNGA 120404	SNGA 431
•		SNGA 120408	SNGA 432
	•	SNGA 120412	SNGA 433
	•	SNGN 120404	SNG 431
	•	SNGN 120408	SNG 432

Rockford	Overseas	Item Description ISO	ANSI
•		SNGN 120412	SNG 433
•		SNGN 120416	SNG 434
	•	SNGN 120708	SNG 452
	•	SNGN 120712	SNG 453
	•	SNGN 120712 S7	SNG 453 S7
•		TNGA 160404	TNGA 431
•		TNGA 160408	TNGA 432
•		TNGA 160412	TNGA 433
•		TNGA 220408	TNGA 432
	•	TNGN 160408	TNG 332
	•	TPGN 110304	TPG 221
	•	TPGN 110308	TPG 222
•		TPGN 160304	TPG 331
•		TPGN 160308	TPG 332
•		VNGA 160404	VNGA 331
•		VNGA 160408	VNGA 332
•		WNGA 080408	WNGA 432
•		WNGA 080408T7-WZ	WNGA 432T7-WZ
•		WNGA 080412	WNGA 433

EDGE PREPARATION:

No designation: .008" x 25°
T7: .008" x 20°
S7: .008" x 20° + honing
WZ: Wiper Geometry

Special edge preparation can be supplied by request.

PRICING:

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

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