

TurnLine



# T-CBN HARDBREAKER HP

[www.tungaloy.com/us](http://www.tungaloy.com/us)

Tungaloy Report No. 518S1-US

**Now available in BXA10** for effective chipbreaking in hard turning

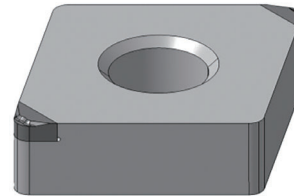


**INDUSTRY 4.0**  
*FEED the SPEED!*



## Available in new BXA10 allowing wider application coverage

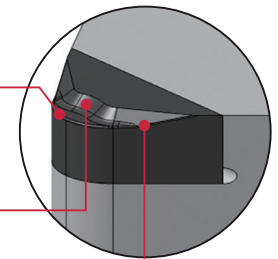
- 1 By separating the chipbreaker from the cutting edge, the cutting force imposed on the cutting edge during machining is significantly reduced, thus providing long tool life.
- 2 The cutting edge preparation is designed to ensure easy cutting at low cutting forces, while maintaining close tolerances with no deviations.
- 3 The **HP** style chipbreaker, combined with built-in wipers, yields excellent surface quality and good chip control.



Optimized edge preparation for low cutting force

HP chipbreaker

Wiper



## CUTTING PERFORMANCE

Chip control is stable for a long time

**HARDBREAKER HP** Vs. **Competitor**

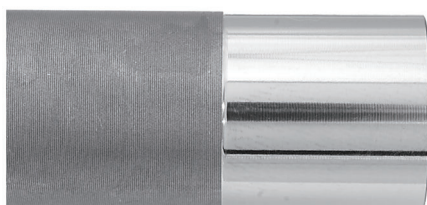
40 min.

80 min.

Insert	: 2QP-CNGM432-HP
Workpiece material	: JIS SCM420 58HRC
Cutting speed	: $V_c = 591$ sfm
Feed	: $f = 0.006$ ipr
Depth of cut	: $a_p = 0.006$ "
Holder	: ACLNR2525M12-A
Coolant	: Wet
Machining	: External continuous cutting

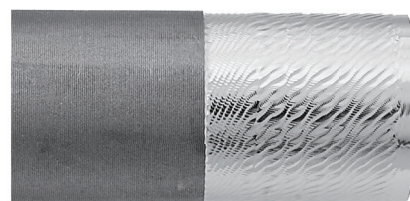
Chatter stability

## HARDBREAKER HP



Due to low cutting force, chatter stability is greatly improved


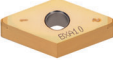



Competitor (without breaker)









● : Continuous cutting  
 ● : Light interrupted cutting  
 ✱ : Heavy interrupted cutting

## INSERT NEGATIVE TYPE

		P	M	K	N	S	H																		
		Steel	Stainless	Cast iron	Non-ferrous	Superalloy	Hard material	●	●	●	●	●	●	●	●	●	●	●	●						
Shape	Designation	Dimension (in)					Edge prep.					No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LFLC	H	Wiper	Chipbreaker	
		Inch	Metric	BXA10	BXA20	BXM10	Standard	Sharp edge	L	LFLC	H														
	<b>2QP-CNGM**-H*</b> 2QP-CNGM 431-HP 2QP-CNGM120404-HP	●	●	●							2	0.091	0.016	0.500	0.187	0.203									○
	2QP-CNGM 432-HP 2QP-CNGM120408-HP	●	●	●							2	0.087	0.031	0.500	0.187	0.203									○
	2QP-CNGM 433-HP 2QP-CNGM120412-HP	●	●	●							2	0.094	0.047	0.500	0.187	0.203									○
	2QP-CNGM 432 WL HP 2QP-CNGM120408WL-HP	●	●	●							2	0.087	0.031	0.500	0.187	0.203									○
	<b>2QP-DNGM**-H*</b> 2QP-DNGM 431-HP 2QP-DNGM150404-HP	●	●	●							2	0.098	0.016	0.500	0.187	0.203									○
	2QP-DNGM 432-HP 2QP-DNGM150408-HP	●	●	●							2	0.083	0.031	0.500	0.187	0.203									○
	2QP-DNGM 433-HP 2QP-DNGM150412-HP	●	●	●							2	0.079	0.047	0.500	0.187	0.203									○
	2QP-DNGM 442-HP 2QP-DNGM150608-HP	●	●	●							2	0.083	0.031	0.500	0.250	0.203									○
	<b>2QP-GNGG**-HP</b> 2QP-GNGG 431-HP 2QP-GNGG120404-HP	●	●	●							2	0.083	0.016	0.500	0.187	0.203									○
	1) 2QP-GNGG 432-HP 2QP-GNGG120408-HP	●	●	●							2	0.083	0.031	0.500	0.187	0.203									○
	2QP-GNGG 433-HP 2QP-GNGG120412-HP	●	●	●							2	0.087	0.047	0.500	0.187	0.203									○
																									○
	<b>3QP-TNGM**-H*</b> 3QP-TNGM 331-HP 3QP-TNGM160404-HP	●	●	●							3	0.087	0.016	0.375	0.187	0.150									○
	3QP-TNGM 332-HP 3QP-TNGM160408-HP	●	●	●							3	0.075	0.031	0.375	0.187	0.150									○
	3QP-TNGM 333-HP 3QP-TNGM160412-HP	●	●	●							3	0.094	0.047	0.375	0.187	0.150									○
	<b>2QP-VNGM**-H*</b> 2QP-VNGM 331-HP 2QP-VNGM160404-HP	●	●	●							2	0.122	0.016	0.375	0.187	0.150									○
	2QP-VNGM 332-HP 2QP-VNGM160408-HP	●	●	●							2	0.087	0.031	0.375	0.187	0.150									○

1) Tungaloy standard

## POSITIVE TYPE

		P	M	K	N	S	H																		
		Steel	Stainless	Cast iron	Non-ferrous	Superalloy	Hard material	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Shape	Designation	Dimension (in)					Edge prep.					No. of corners	LE	RE	IC	S	D1	Standard	Sharp edge	L	LFLC	H	Wiper	Chipbreaker	
		Inch	Metric	BXA10	BXA20	BXM10	Standard	Sharp edge	L	LFLC	H														
	<b>2QP-CCGT**-HP</b> 2QP-CCGT 21.51 HP 2QP-CCGT060204-HP	●	●	●							2	0.091	0.016	0.250	0.094	0.110									○
	2QP-CCGT 32.51 HP 2QP-CCGT09T304-HP	●	●	●							2	0.091	0.016	0.375	0.156	0.173									○
	2QP-CCGT 32.52 HP 2QP-CCGT09T308-HP	●	●	●							2	0.087	0.031	0.375	0.156	0.173									○
	2QP-CCGT 32.51 WL HP 2QP-CCGT09T304WL-HP	●	●	●							2	0.091	0.016	0.375	0.156	0.173									○
	2QP-CCGT 32.52 WL HP 2QP-CCGT09T308WL-HP	●	●	●							2	0.087	0.031	0.375	0.156	0.173									○
	<b>2QP-DCGT**-HP</b> 2QP-DCGT 21.51 HP 2QP-DCGT070204-HP	●	●	●							2	0.098	0.016	0.250	0.094	0.110									○
	2QP-DCGT 32.51 HP 2QP-DCGT11T304-HP	●	●	●							2	0.098	0.016	0.375	0.156	0.173									○
	2QP-DCGT 32.52 HP 2QP-DCGT11T308-HP	●	●	●							2	0.083	0.031	0.375	0.156	0.173									○
	<b>3QP-TPGT**-HP</b> 3QP-TPGT 221 HP 3QP-TPGT110304-HP	●	●	●							3	0.087	0.016	0.250	0.125	0.134									○
	3QP-TPGT 222 HP 3QP-TPGT110308-HP	●	●	●							3	0.075	0.031	0.250	0.125	0.134									○
	<b>2QP-VBGT**-HP</b> 2QP-VBGT 221 HP 2QP-VBGT110304-HP	●	●	●							2	0.118	0.016	0.250	0.125	0.110									○
	2QP-VBGT 222 HP 2QP-VBGT110308-HP	●	●	●							2	0.087	0.031	0.250	0.125	0.110									○
	2QP-VBGT 331 HP 2QP-VBGT160404-HP	●	●	●							2	0.118	0.016	0.375	0.187	0.173									○
	2QP-VBGT 332 HP 2QP-VBGT160408-HP	●	●	●							2	0.087	0.031	0.375	0.187	0.173									○

● : New product  
 ● : Line up

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