

TURNING

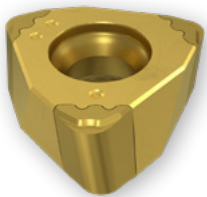
04-2026

MARCH 2026

METRIC

NPA

New Product Announcement



Double Sided
Insert



6 Cutting Edges



Dovetail



MINIPTURN
POSITIVE DOUBLE SIDED

Double-Sided Positive Insert with CBN Tips



TECHNICZNA NAWIGACJA W PRODUKCJI CNC

Potrzebujesz ceny, dostępności lub doboru?

Podeślij numer katalogowy, rysunek detalu lub opis aplikacji.

Dobiorę rozwiązanie, sprawdzę dostępność i przygotuję ofertę.

01

CENA I DOSTĘPNOŚĆ

szybka wycena i termin dostawy

02

DOBÓR NARZĘDZI

dobór do detalu, materiału i
maszyny

03

OPTYMALIZACJA

wydajność, trwałość i koszt detalu

KONTAKT

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INFORMACJE I WSPARCIE

coropilot.pl

PRODUKTY B2B

coropilot.com



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Highlights

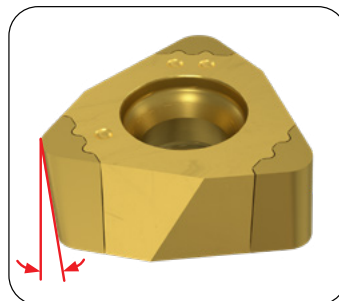
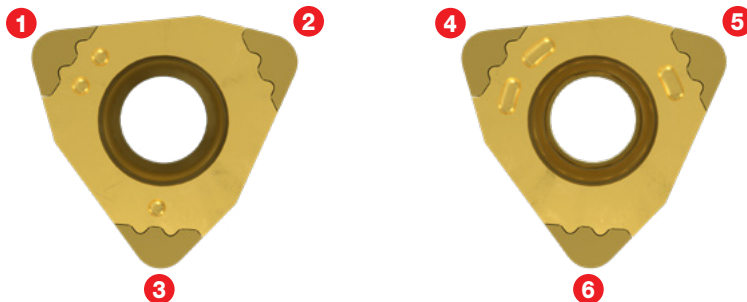
New “Ultra-Joint” CBN Inserts Boost Strength & Security in MINI-P-TURN Line.

Double-Sided “Ultra-Joint” Inserts Handle Both Heavy Cuts and Super Finishes on Hardened Steels

Product Features and Advantages

Enhanced Stability

The **MINI-P-TURN** Ultra-Joint CBN design features six cutting edges in a dovetail configuration, which boosts tool stability and ensures precise, reliable cutting. In addition, the new design includes double-sided positive inserts.

**Double-sided positive inserts****6-edged insert with dovetail design**[Click for Short Video](#)



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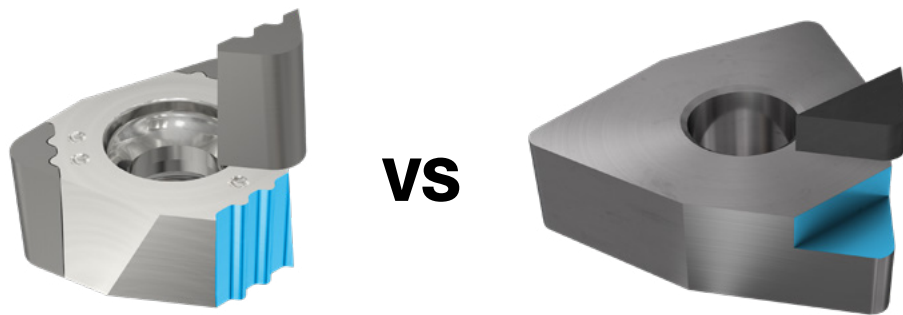
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Ultra-Joint

Advanced brazing technology enhances machining efficiency by allowing a maximum depth of cut up to 0.8mm. This innovation reduces the required number of passes, thereby increasing overall productivity.

The advanced Ultra-Joint brazing technology effectively prevents CBN tips from debrazing, thereby eliminating sudden insert fractures during challenging dry machining. This ensures stable and reliable hard turning operations.



CBN Tip Size: The CBN tip size is increased by **200%** to enhance the wear resistance of the cutting edge.

Brazing Area: Engineered for strength **160%** larger brazing area ensures superior bonding and reliability under the toughest conditions.



The “ultra-joint” contact surface enhances the brazing strength

Application range ID turning of hardened steel

Cost-effective double-sided CBN inserts are offered for DMIN sizes ranging from 12 to 32mm.



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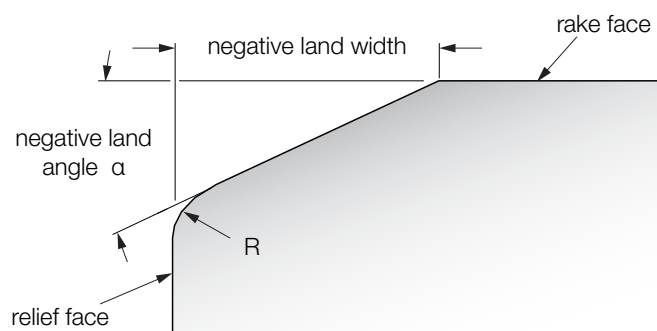
Advanced Edge Preparation

The 'SP' edge preparation is engineered to deliver smooth cutting performance. It features a high rake angle, which is comparable to that found in positive ISO inserts when mounted on the toolholder.

MINI-P-TURN Ultra-Joint CBN inserts now come with SP (S01310) and E (honing) edge prep, offering a high rake angle like standard ISO positive inserts for smoother cutting.

0.18				HH
0.13	SP	SF	Standard / S	HS
0.05		LF		LC
W (MM) α	10°	15°	25°	35°

ISO Mini P Turn



S

Cutting edge:
S, SP, SF-chamfered + honing
E- honing

0 1 3

W- negative land width

1 0

α : negative land angle

Example: SP → 10°/0,13 mm width negative land with honing

Reduced Cutting Loads and Smooth Machining

The specialized edge treatment serves to minimize cutting loads, which guarantees consistently smooth machining operations. This results in improved efficiency and reduced stress on the tool and workpiece.

Optimized Geometry for Extended Tool Life

The geometry of the tool has been optimized to extend its operational lifespan and enhance overall efficiency. This optimization contributes to longer tool life and sustained performance during demanding machining tasks.

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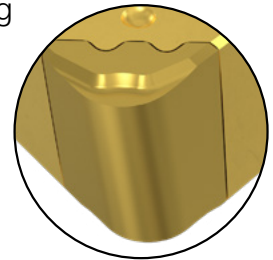
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New Product Announcement

P Chipbreaker

Designed for finish machining of hardened parts with close tolerances.

- P chipbreaker delivers excellent surface quality and reliable chip control.
- Optimized chipbreaker geometry significantly reduces cutting forces on the edge, ensuring extended tool life.
- Special edge preparation minimizes cutting forces for chatter-free machining and close tolerances.
- P chipbreaker - ensures superior **chip control** during finish machining of hardened steel parts, preventing chip packing in continuous I.D. turning operations.



Insert: WNGP 040304SP R-6J IB12HC

Toolholder: E10M SWLNL-04

Workpiece material: SCM420 / 42CrMo4 (**60HRC**)

Cutting speed: $V_c = 180\text{m/min}$

Feed: 0.1mm/rev

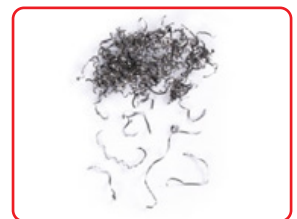
Depth of cut: 0.1mm

Coolant: Wet

Application: Continuous cut, I.D. turning



P chipbreaker



Competitor's CBN with chipbreaker

- P chipbreaker - **prevents chattering** and provides the finest machined surface.

Insert: WNGP 040304SP R-6J IB12HC

Toolholder: E10M SWLNL-04

Workpiece material: SCM420 / 18CrMo4 (**58HRC**)

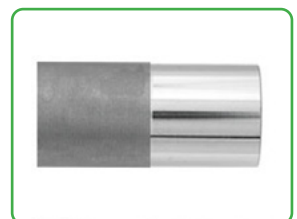
Cutting speed: $V_c = 150\text{m/min}$

Feed: 0.15mm/rev

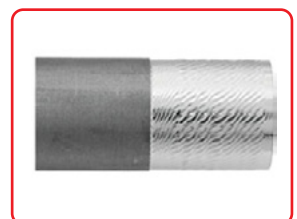
Depth of cut: 0.15mm

Coolant: Wet

Application: External continuous cutting



P chipbreaker



Competitor (without breaker)

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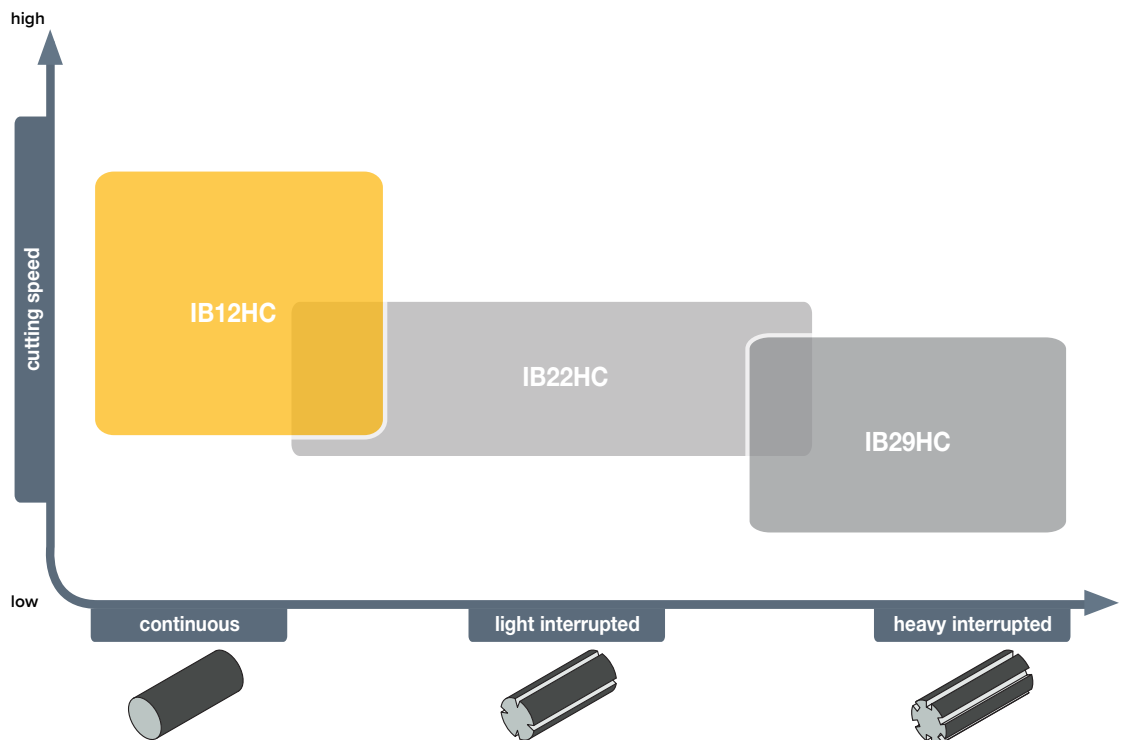
POSITIVE DOUBLE SIDED

New Product Announcement

Grades for Hardened Steel Machining

(Coated CBN series for a wide range of hard part turning)

The **MINI-P-TURN** Ultra-Joint CBN inserts are available in three distinct grades, each tailored to address the full spectrum of hardened steel machining—from continuous to heavy interrupted cutting:



• IB12HC:

- Designed for **continuous to light interrupted** machining.
- This grade provides exceptional thermal stability and wear resistance.
- Enabling cutting speeds of up to 230m/min.



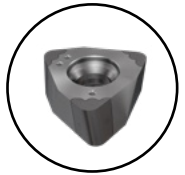
• IB22HC:

- Well-suited for **continuous to heavy interrupted** machining.
- This grade offers outstanding resistance to wear and chipping.



• IB29HC:

- The optimal selection for **heavy interrupted** cuts.
- Distinguished by its excellent fracture resistance.
- This grade allows for cutting speeds up to 150m/min.
- This grade is presently designated as make-to-order.



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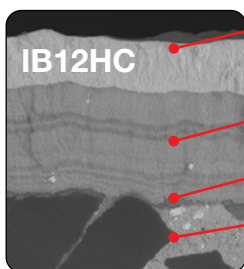
Dovetail

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Grade Properties

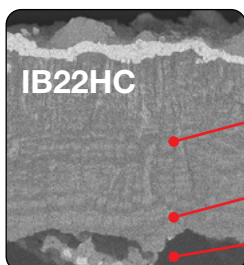


TiCN coating with high thermal stability and wear resistance

Multilayer TiAlN coating with good adhesion and resistance to delamination and chipping

Strong coating-substrate adhesion prevents delamination

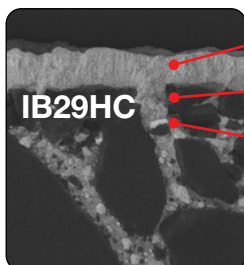
Dedicated CBN substrate with excellent flank wear and crater wear resistance



Thick multilayer TiAlN coating with superior wear and chipping resistance

Strong coating-substrate adhesion prevents delamination

Dedicated CBN substrate with excellent flank wear and crater wear resistance



Multilayer AlCrN coating with excellent fracture resistance

Strong coating-substrate adhesion prevents delamination

Dedicated CBN substrate with excellent chipping and fracture resistance

Standard Cutting Conditions

Workpiece Material	Grade	Workpiece Condition	Application	Cutting Speed V_c (m/min)	Depth of Cut a_p (mm)	Feed f (mm/rev)
H	IB12HC	continuous		100 - 230	0.05 - 0.5	0.03 - 0.3
		light interrupted		100 - 230	0.05 - 0.5	0.03 - 0.2
	IB22HC	continuous		60 - 180	0.05 - 0.5	0.03 - 0.3
		interrupted		60 - 180	0.05 - 0.5	0.03 - 0.2
	IB29HC	heavy interrupted		50-150	0.05-0.3	0.05-.2

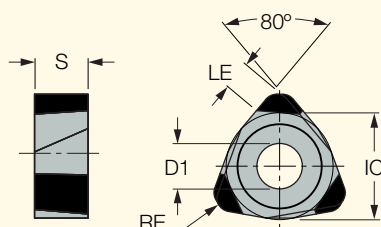
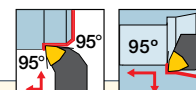
MINI^PTURN POSITIVE DOUBLE SIDED

ISCAR CBN LINE

WNGP-6J

Double-Sided Trigon CBN Inserts for Hardened Steel, Featuring "Ultra-Joint" Brazing Technology

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5618&mapp=IS&GFSTYP=M&srch=1>



Designation	Dimensions						Hard ↔ Tough		
	L	IC	S	RE	D1	CEDC	IB12HC	IB22HC	IB29HC
WNGP 040308SP R/L-6J	1.70	6.35	3.18	0.80	2.70	6	•	•	•
WNGP 040302SP R/L-6J	1.80	6.35	3.18	0.20	2.70	6	•	•	•
WNGP 040304SP R/L-6J	1.80	6.35	3.18	0.40	2.70	6	•	•	•

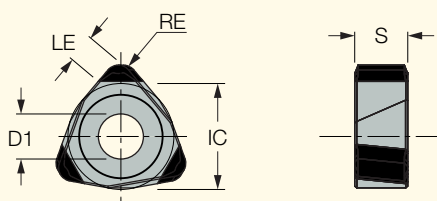
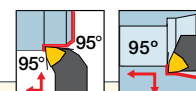
ISCAR CBN LINE

WNGP-6JP

Double-Sided Trigon CBN Insert with Chipbreaker for Finishing Hardened Steel,

Featuring "Ultra-Joint" Brazing Technology

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5619&mapp=IS&GFSTYP=M&srch=1>



Designation	Dimensions						Hard ↔ Tough		
	L	IC	S	RE	D1	CEDC	IB12HC	IB22HC	IB29HC
WNGP 040308E R/L-6JP	1.70	6.35	3.18	0.80	2.70	6	•	•	•
WNGP 040304E R/L-6JP	1.80	6.35	3.18	0.40	2.70	6	•	•	•