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Hard Part Turning Made Easy

Next-Generation Coated CBN Grade

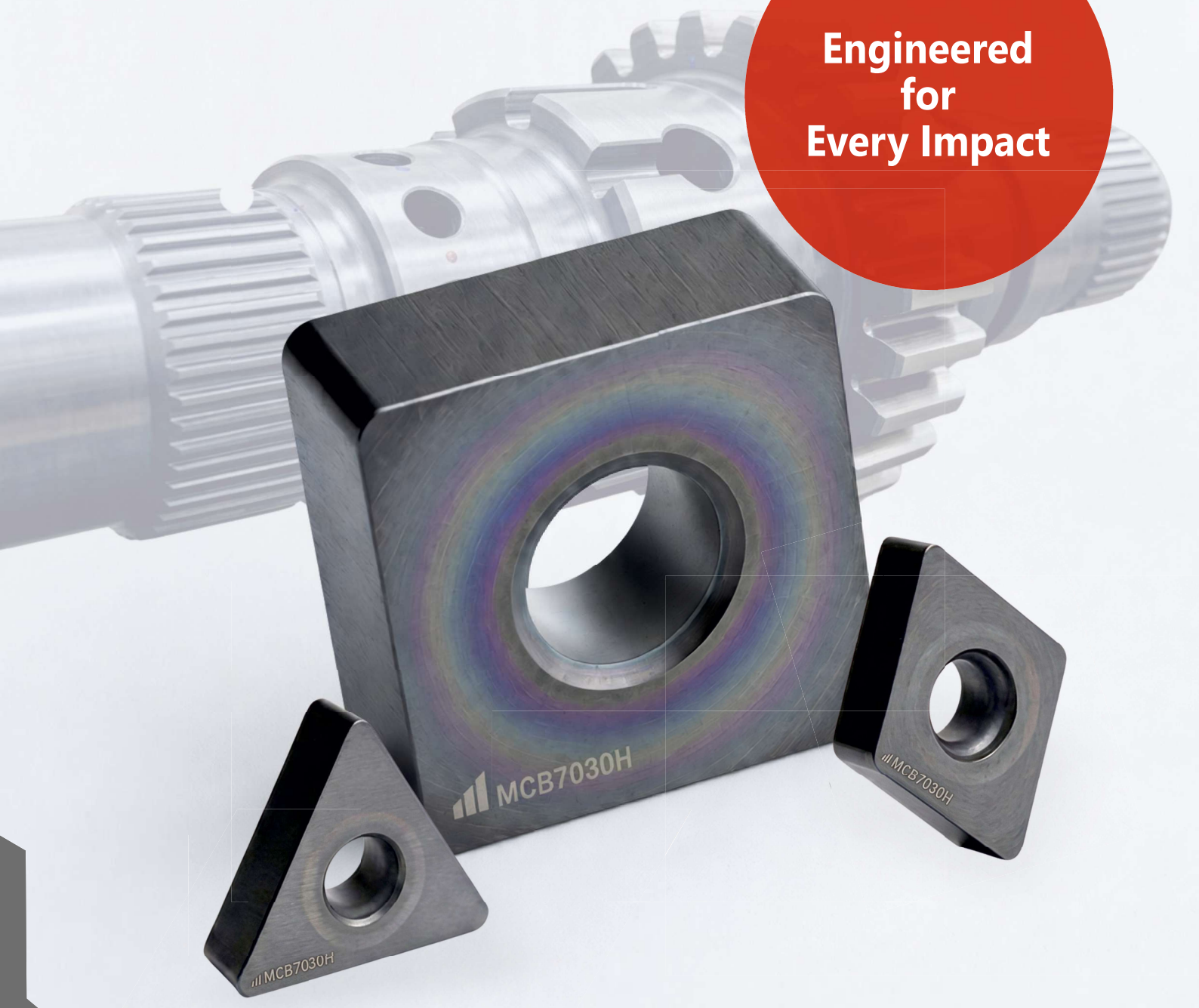
MCB7030H

ISO H

with unique KAVACH surface solution

Made in Bharat

Engineered for Every Impact



Brochure/MTTL/2025/001/26

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MCB7030H – When Toughness Matters Most

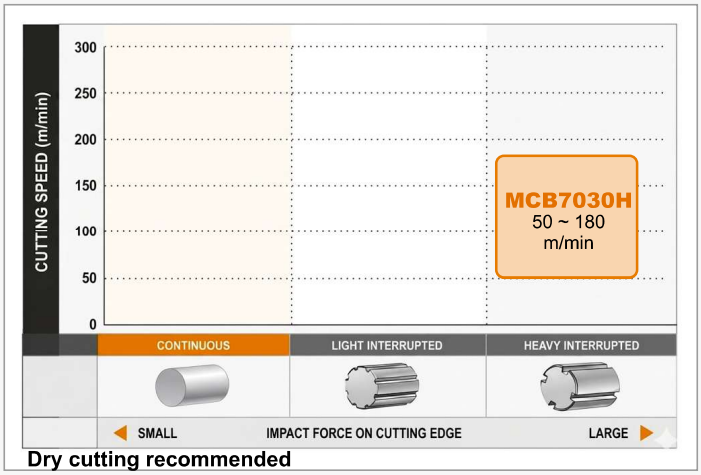
Next Generation Coated CBN grade for Heavily Interrupted Hardened Steel Machining.

- **High-CBN content** provides outstanding toughness for interrupted hard turning.
- **Optimized grain size** enhances edge strength and resists chipping under high impact conditions.
- **Ceramic Binder** improves edge integrity and mechanical stability during interrupted cutting.
- **Excellent resistance** to edge chipping and catastrophic breakage.
- **Performs reliably** under high mechanical impact and unstable cutting conditions.



(Structure of MCB7030H)

Application Range - ISO H30



Dry cutting recommended

MCB7030H is engineered for hard turning applications involving heavy interrupted cuts and unstable machining conditions where edge toughness is the primary requirement.

Key Benefits:

- **Heavy Interrupted Cut Performance -** Ensures reliable machining performance even in demanding and vibration-prone operations.
- **Advanced Kavach Coating + Tough CBN Substrate -** Provides exceptional resistance to edge chipping and catastrophic tool breakage.
- **Optimized Grade Architecture -** Delivers consistent machining reliability and improved process stability.
- **Extended Tool Life -** Enhances tool life and reduces downtime and tooling replacement costs

RECOMMENDED Cutting parameters

Work material	Application	Grade	Cutting parameters								
			Ap (mm)			Feed (mm/rev)			Speed (m/min)		
			Min.	Ideal	Max.	Min.	Ideal	Max.	Min.	Ideal	Max.
ISO H	H30	MCB7030H	0.05	0.20	0.30	0.05	0.15	0.50	50	120	180

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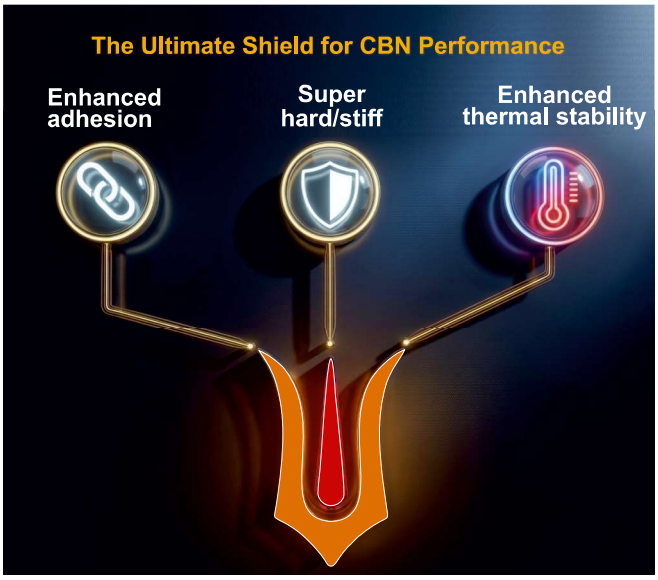
MADE IN BHARAT MADE IN

Introducing

KAVACH Surface Solution

Inspired by the Sanskrit word **KAVACH**, meaning "**Shield**," our **next-generation surface solution**, is engineered with advanced CBN coating to protect where it matters most. **KAVACH** uniquely combines **exceptional hardness with outstanding toughness - two properties that rarely coexist in a single coating.**

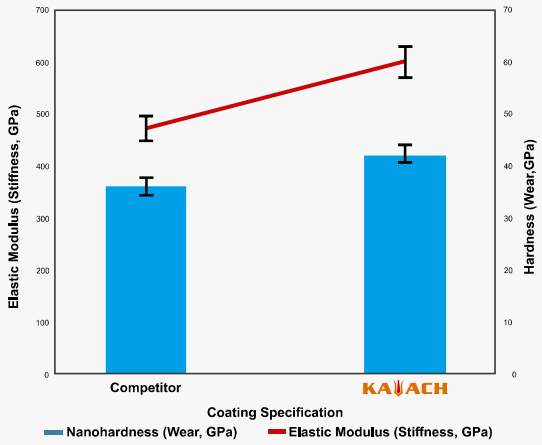
- **Shield Against Wear**
  Exceptional wear resistance for prolonged performance at high cutting temperatures.
- **Shield Against Breakage**
  Superior toughness minimizes edge chipping and unexpected insert failure.
- **Shield Against Short Tool Life**
  Long-lasting cutting edges deliver more components per insert and lower tooling costs.
- **Shield for Superior Surface Finish**
  Maintains cutting-edge integrity to produce consistent, high-quality surface finishes throughout tool life.



Not just a coating - it's an innovation in CBN Surface Engineering Technology

KAVACH doesn't just coat the cutting edge, it becomes an integral part of it. Its exceptional adhesion, verified through **indentation and scratch testing**, delivers lasting protection against delamination, enabling **superior wear resistance**, **longer tool life** and **uncompromised machining performance.**

Mechanical Properties



Kavach achieves a rare balance of high nano hardness and superior elastic modulus, delivering exceptional wear resistance, outstanding edge stability, and longer tool life in demanding machining applications.

Nano Scratch Test



Competitor



KAVACH

• Extensive coating damage	• Minimal coating damage
• Edge chipping observed	• No visible edge chipping
• Higher scratch-induced failure	• Superior scratch resistance.

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Success Case

MCB7030H - Engineered to Keep Cutting Longer

Application : Facing

Hardness : 55-58 HRC

EN24 (ISO H)

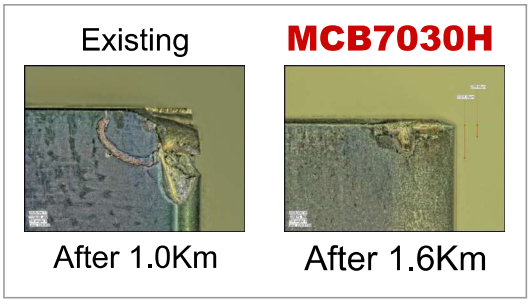
Insert: 4NC-CNGA20408-MCB7030H

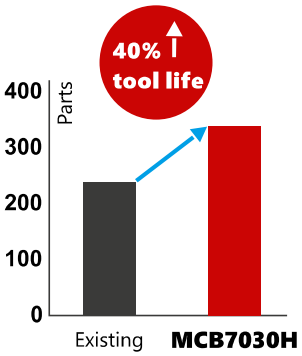
Vc=120m/min, f=0.15mm/rev, Ap=0.3mm, Dry

Customer benefits:

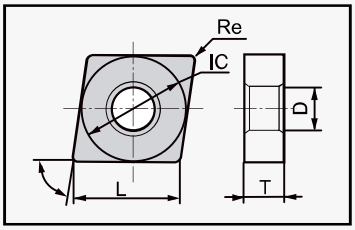
- 40% Longer Tool Life
- Better Surface Finish
- Lower Cost per Component







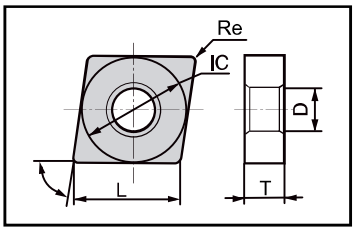
Product range



Stocked - ● Non-stocked - ○ **(All dimensions are in mm)**

Shape	Description	Edge Geometry	No. of cutting edges	Re Nose Radius	MCB 7030H	IC Inscribed Circle	T Thickness	D Hole Dia.
Positive Inserts								
C 80°	2NC-CCGW060204	STD	2	0.4	●	6.35	2.38	2.8
	2NC-CCGW09T304	STD	2	0.4	●	9.525	3.97	4.4
	2NC-CCGW09T304HS	HS	2	0.4	●	9.525	3.97	4.4
	2NC-CCGW09T308	STD	2	0.8	●	9.525	3.97	4.4
D 55°	2NC-DCGW11T302	STD	2	0.2	●	9.525	3.97	4.4
	2NC-DCGW11T304HS	HS	2	0.4	●	9.525	3.97	4.4
	2NC-DCGW11T308	STD	2	0.8	●	9.525	3.97	4.4
	2NC-DCGW11T308HS	HS	2	0.8	●	9.525	3.97	4.4
T 60°	3NC-TPGW110308HS	HS	3	0.8	●	6.35	3.18	3.4
V 35°	2NC-VBGW160404	STD	2	0.4	●	9.525	4.76	4.4
	2NC-VBGW160408	STD	2	0.8	●	9.525	4.76	4.4

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Stocked - ● Non-stocked - ○ **(All dimensions are in mm)**

Shape	Description	Edge Geometry	No. of cutting edges	Re Nose Radius	MCB 7030H	IC Inscribed Circle	T Thickness	D Hole Dia.
Negative Inserts								
C 80°	2NC-CNGA120408HS	HS	2	0.8	●	12.7	4.76	5.16
	4NC-CNGA120404	STD	4	0.4	●	12.7	4.76	5.16
	4NC-CNGA120408	STD	4	0.8	●	12.7	4.76	5.16
	4NC-CNGA120408HS	HS	4	0.8	●	12.7	4.76	5.16
	4NC-CNGA120412	STD	4	1.2	●	12.7	4.76	5.16
	4NC-CNGA120412HS	HS	4	1.2	●	12.7	4.76	5.16
D 55°	2NC-DNGA150408	STD	2	0.8	●	12.7	4.76	5.16
	4NC-DNGA150408	STD	4	0.8	●	12.7	4.76	5.16
	4NC-DNGA150608	STD	4	0.8	●	12.7	6.35	5.16
T 60°	3NC-TNGA160408	STD	3	0.8	●	9.525	4.76	3.81
	3NC-TNGA160408HS	HS	3	0.8	●	9.525	4.76	3.81
	6NC-TNGA160408HS	HS	6	0.8	●	9.525	4.76	3.81
	6NC-TNGA160412HS	HS	6	1.2	●	9.525	4.76	3.81
V 35°	4NC-VNGA160404	STD	4	0.4	●	9.525	4.76	3.81
	4NC-VNGA160404HS	HS	4	0.4	●	9.525	4.76	3.81
	4NC-VNGA160408HS	HS	4	0.8	●	9.525	4.76	3.81

*Other ISO shapes and sizes are also available. Contact MTTL representative.

Geometry matrix

	STD	L type	H type
Insert type – Negative / Positive			
Notation	-	LS	HS
ISO Specification	S01225	S00515	S01735

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