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Next-Generation Uncoated CBN Grade

MUB3020K

ISO K

Machine Faster. Produce More.

High-Speed Grey Cast Iron Specialist!



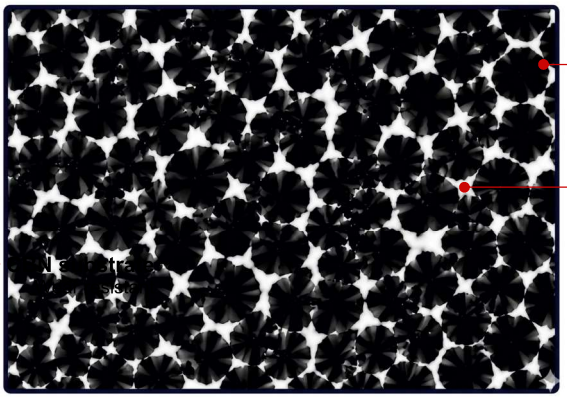
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MUB3020K – The High-Speed Grey Cast Iron Specialist

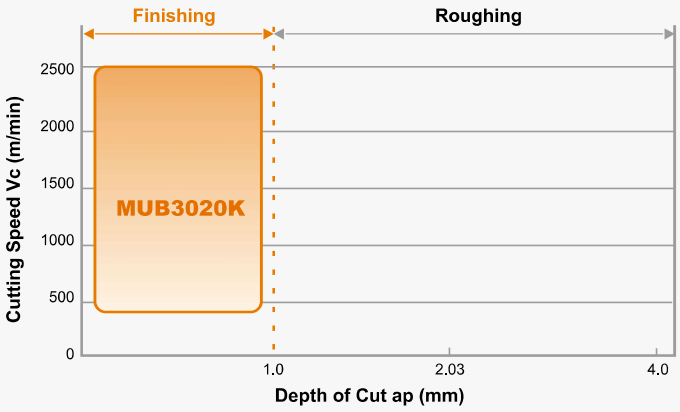
Premium uncoated CBN grade exclusively for high-speed machining of grey cast iron

- **High-CBN content**
  Exceptional abrasion resistance and thermal stability for high-speed machining.
- **Optimized CBN grain size**
  Superior abrasion resistance and consistent edge integrity.
- **Advanced metallic binder**
  Outstanding thermal stability at high cutting temperatures.
- **Maintains cutting-edge integrity**
  Supports superior surface finish and dimensional accuracy.
- **Enables high cutting speeds**
  Delivering reliable and consistent machining performance



(Structure of MUB3020K)

Application Range - ISO K20



Ideal for high-speed machining of grey cast iron in fine boring, turning, milling, and other precision finishing operations, **MUB3020K** delivers exceptional abrasion resistance, thermal stability, and reliable edge integrity for maximum machining productivity.

Key Benefits:

- Exceptional wear resistance for high-speed.
- Superior abrasion resistance and consistent edge integrity.
- Outstanding thermal stability at elevated cutting temperatures.
- Superior surface finish and dimensional accuracy.
- Higher productivity through longer tool life and increased metal removal rates.

RECOMMENDED Cutting parameters

Work Material		Grade	TURNING (Cutting Parameters)								
			Ap (mm)			Feed (mm/rev)			Speed (m/min)		
			Min.	Ideal	Max.	Min.	Ideal	Max.	Min.	Ideal	Max.
Grey Cast Iron	FC200 to FC300 (HB ≤ 230)	MUB3020K	0.05	0.30	1.00	0.08	0.20	0.60	500	700	2500
Alloy Cast Iron	(HB ≥ 200)		0.05	0.20	0.50	0.08	0.15	0.50	200	400	800

Coolant: Yes

Work Material		Grade	MILLING (Cutting Parameters)								
			Ap (mm)			Feed (mm/rev)			Speed (m/min)		
			Min.	Ideal	Max.	Min.	Ideal	Max.	Min.	Ideal	Max.
Grey Cast Iron	250HB	MUB3020K	0.10	0.25	0.50	0.10	0.20	0.30	800	1200	2000

Coolant: Absolute Dry

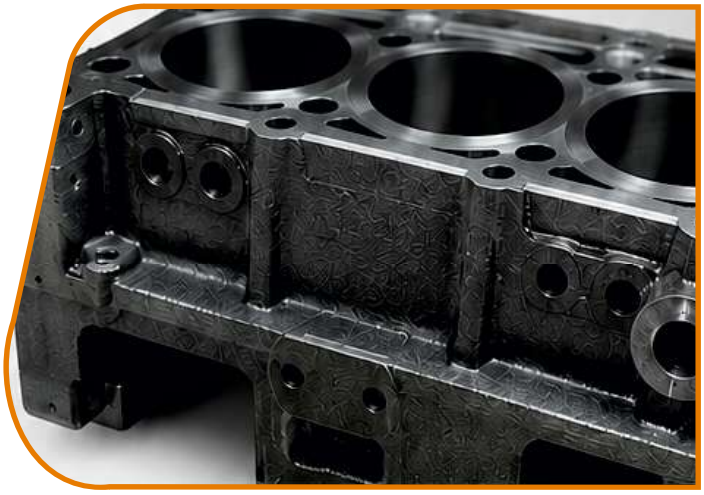
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Success case

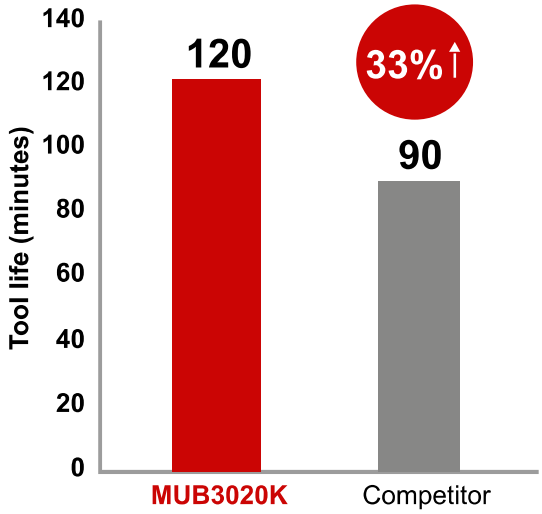
MUB3020K

Up to 33% Longer Tool Life in Grey Cast Iron Machining

In high speed turning of grey cast iron, **MUB3020K** delivered 120 minutes of tool life versus 90 minutes for the competitor—an improvement of up to 33% under identical cutting conditions.



Tool Life Comparison



Life Ratio	MUB3020K	vs.	Competitor
	1.33x		1.00x

Cutting Conditions

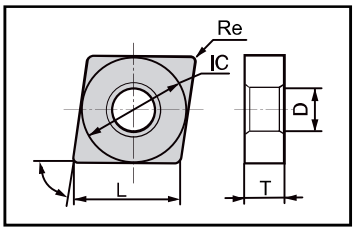
Workpiece		GG25
Hardness		HB 180-190
Insert		CNMA120408
Cutting speed (Vc)		780 m/min
Feed rate (f)		0.2 mm/rev
Depth of cut (ap)		0.5 mm
Coolant		Yes
Tool life criteria	Vb	0.2 mm

Key benefits

- **33% Longer Tool Life –** Extended machining time per cutting edge.
- **Higher Productivity –** Fewer tool changes and reduced downtime.
- **Consistent Process Performance –** Reliable machining at 780 m/min.
- **Lower Cost per Component –** Improved tool utilization and productivity.

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Product range



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

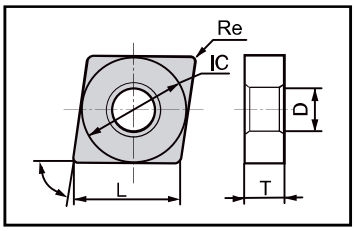
Shape	Description	Edge Geometry	No. of cutting edges	Re Nose Radius	MUB 3020K	IC Inscribed Circle	T Thickness	D Hole Dia.
Positive Inserts								
C 80°	2NU-CCGW060204	STD	2	0.4	●	6.35	2.38	2.8
	2NU-CCGW060208	STD	2	0.8	●	6.35	2.38	2.8
	2NU-CCGW09T304	STD	2	0.4	●	9.525	3.97	4.4
	2NU-CCGW09T308	STD	2	0.8	●	9.525	3.97	4.4
	2NU-CCGW120408	STD	2	0.8	●	12.7	4.76	5.5
	NU-CCGW060204	STD	1	0.4	●	6.35	2.38	2.8
D 55°	2NU-DCGW070204	STD	2	0.4	●	6.35	2.38	2.8
	2NU-DCGW070204LF	LF	2	0.4	●	6.35	2.38	2.8
	2NU-DCGW070208	STD	2	0.8	●	6.35	2.38	2.8
	2NU-DCGW11T308	STD	2	0.8	●	9.525	3.97	4.4
S 90°	4NU-SPGN090308	STD	4	0.8	●	9.525	3.18	-
T 60°	3NU-TCGW090204	STD	3	0.4	●	5.56	2.38	2.5
	3NU-TCGW090208	STD	3	0.8	●	5.56	2.38	2.5
	3NU-TCGW110204	STD	3	0.4	●	6.35	2.38	2.8
	3NU-TCGW110208	STD	3	0.8	●	6.35	2.38	2.8
	3NU-TCGW110304	STD	3	0.4	●	6.35	2.38	2.8
	3NU-TCGW110308	STD	3	0.8	●	6.35	2.38	2.8
	3NU-TCGW16T304	STD	3	0.4	●	9.525	3.97	4.4
	3NU-TCGW16T308	STD	3	0.8	●	9.525	3.97	4.4
	3NU-TPGW090202LF	LF	3	0.2	●	5.56	2.38	2.8
	3NU-TPGW090204	STD	3	0.4	●	5.56	2.38	2.8
	3NU-TPGW110304	STD	3	0.4	●	6.35	3.18	3.4
	3NU-TPGW110308	STD	3	0.8	●	6.35	3.18	3.4
	NU-TCGW06T104	STD	1	0.4	●	3.969	1.98	2.2
	NU-TCGW090204	STD	1	0.4	●	5.56	2.38	2.5
	NU-TCGW110204	STD	1	0.4	●	6.35	2.38	2.8
	NU-TPGW110304	STD	1	0.4	●	6.35	3.18	3.4
V 35°	2NU-VBGW110304	STD	2	0.4	●	6.35	3.18	2.8
	2NU-VCGW160408	STD	2	0.8	●	9.525	4.76	4.4

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



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Product range



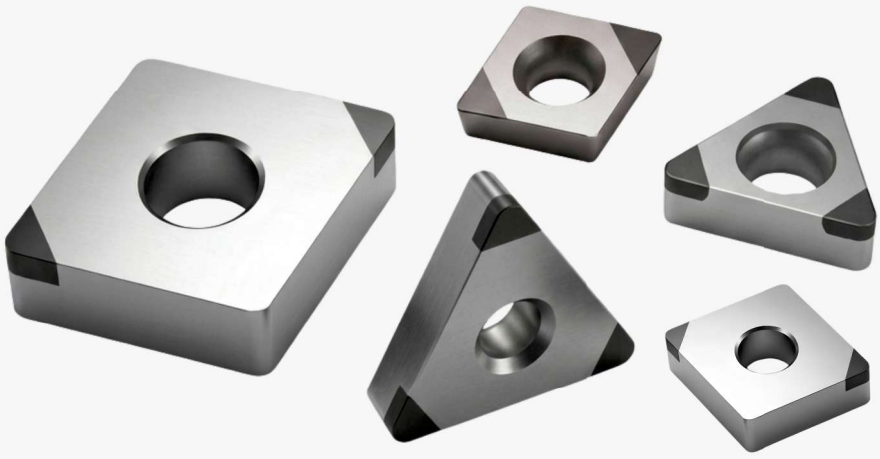
Stocked - ● Non-stocked - ○ **(All dimensions are in mm)**

Shape	Description	Edge Geometry	No. of cutting edges	Re Nose Radius	MUB 3020K	IC Inscribed Circle	T Thickness	D Hole Dia.
Negative inserts								
C 80°	2NU-CNGA12040	STD	2	0.8	●	12.7	4.76	5.16
	4NU-CNGA120408	STD	4	0.8	●	12.7	4.76	5.16

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

Geometry matrix

	STD	L type	H type
Insert type – Negative / Positive			
Notation	-	LF	HS
ISO Specification	T01215	-	S01225



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