



NPA

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YGTURN

INDEXABLE INSERT

New CVD Turning Grade for Ductile Cast Iron

YG1020

New technology developed by YG-1 results in the most efficient performance and stable CVD ductile Cast Irons grade in the market





New CVD coated grade **YG1020**

Grade Information

The Optimal Turning Grade for Ductile Cast Irons

YG1 has launched YG1020, first recommended grade for a wide range of ductile cast iron turning applications.

Its fracture toughness has been significantly improved through advanced substrate technology, while a newly developed coating provides exceptional wear resistance during ductile cast iron machining.

This innovative coating ensures stable performance and excellent durability. Combined with the enhanced substrate, it delivers reliable machining even under demanding conditions, thanks to the optimal synergy between substrate and coating.

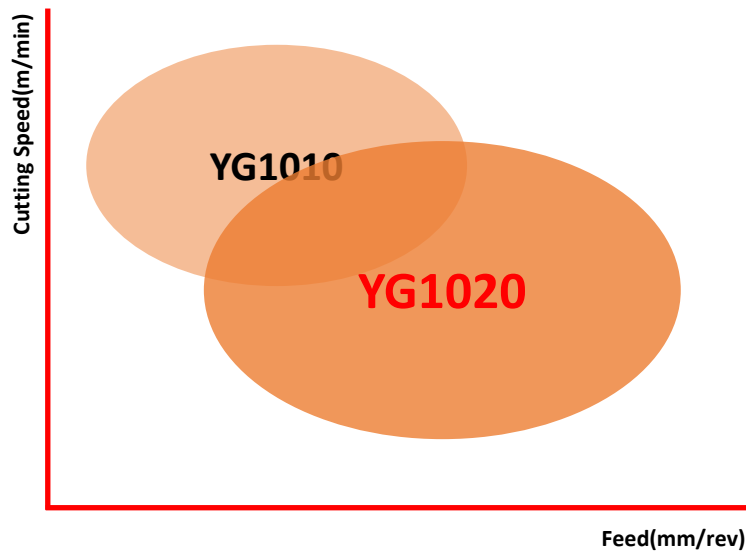
Additionally, YG1020 features advanced post-treatment technology that improves chipping resistance at the cutting edge. The gold-colored side surface allows for easy wear detection on the used corners. UC, UR, and KR negative chip breakers are specifically optimized for effective chip control in ductile cast iron.

In short, YG1020 is the best choice for ductile cast iron machining.

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Grade Information

Application range (ISO range : K15~K25)



Advantage

- ✓ Excellent machining performance on ductile cast irons.
- ✓ Very good combination of substrate and coating applied high fracture toughness.
- ✓ Stable tool life in continuous cut and interrupted cut on ductile cast irons
- ✓ Can be applied for machining on gray cast irons.

Recommended cutting speeds.

Material	Cutting speed(m/min)	Cutting speed(sfm)
Gray cast iron	180-350	590 ~ 1,148
Ductile cast iron	100-280	328 ~ 918



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Grade Information

Applicable component

- Best choice for ductile cast irons, providing predictable tool life and toughness for a variety of component sizes and conditions.
- Reliable inserts with consistent tool life in high productivity environments for automotive and ship builder industry
- Excellent adaptability suitable for high or low cutting speed in a variety of workpieces from large to small diameters.



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Success stories

Success stories(Metric)

No.	Material	Competitor Description	YG-1	Cutting condition			Result(%)
				Vc (m/min)	F (mm/rev)	Ap (mm)	
1	GG250	WNMG080412 K15 CVD	UC/YG1020	240	0.25	2.0	115%
2	GGG600	WNMG080412 K15 CVD	UC/YG1020	280	0.3	1.0	100%
3	GG250	WNMG080412 K1 5CVD	UC/YG1020	280	0.25	2.5	100%
4	GG250	VNMG160404 K15 CVD	UC/YG1020	200	0.15	0.3	100%
5	GGG600	VNMG160404 K15 CVD	UC/YG1020	390	0.16	0.5	107%
6	GGG600	VNMG160404 K15 CVD	UC/YG1020	300	0.18	1.0	100%
7	GG250	VNMG160408 K15 CVD	UC/YG1020	320	0.15	1.0	100%
8	GGG480	CNMA120412 K15CVD	MA-/YG1020	200	0.35	0.2	100%
9	GGG250	CNMG120408-GK K15CVD	UG/YG1020	450	0.23	0.5	125%
10	GGG250	CNMG120408 K15CVD	UC/YG1020	350	0.34	4	100%



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Success stories

Success stories(Inch)

No.	Material	Competitor Description	YG-1	Cutting condition			Result(%)
				Vc (sfm)	F (ipr)	Ap (inch)	
1	GG250	WNMG432 K15 CVD	UC/YG1020	787	.010	.079	115%
2	GGG600	WNMG433 K15 CVD	UC/YG1020	919	.012	.039	100%
3	GG250	WNMG433 K15 CVD	UC/YG1020	919	.010	.098	100%
4	GG250	VNMG331 K15 CVD	UC/YG1020	656	.006	.012	100%
5	GGG600	VNMG331 K15 CVD	UC/YG1020	1280	.006	.020	107%
6	GGG600	VNMG331 K15 CVD	UC/YG1020	984	.007	.039	100%
7	GG250	VNMG332 K15 CVD	UC/YG1020	1050	.006	.039	100%
8	GGG480	CNMA433 K15 CVD	MA-/YG1020	656	.014	.008	100%
9	GGG250	CNMG432-GK K15 CVD	UG/YG1020	1476	.009	.020	125%
10	GGG250	CNMG432 K15 CVD	UC/YG1020	1148	.013	.157	100%

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Item Standard List

Stock Item List

EDP	Description	Standard	EDP	Description	Standard
22003426	CNMA120412-YG1020/CNMA433	●	22003456	CNMA190616-YG1020/CNMA644	●
22003427	SNMA120408-YG1020/SNMA432	●	22003457	SNMG120412-KR-YG1020/SNMG433-KR	●
22003428	SNMA120412-YG1020/SNMA433	●	22003458	TNMG160408-UG-YG1020/TNMG332-UG	●
22003429	CNMG120412-UC-YG1020/CNMG433-UC	●	22003459	TNMG160412-UG-YG1020/TNMG333-UG	●
22003430	CNMG120412-UR-YG1020/CNMG433-UR	●	22003460	WNMG080416-UC-YG1020/WNMG434-UC	●
22003431	CNMG120412-KR-YG1020/CNMG433-KR	●	22003461	CNMA120416-YG1020/CNMA434	●
22003432	TNMG160408-UR-YG1020/TNMG332-UR	●	22003462	SNMG120416-KR-YG1020/SNMG434-KR	●
22003433	CNMA160612-YG1020/CNMA543	●	22003463	TNMG160404-UC-YG1020/TNMG331-UC	●
22003434	CNMG160612-UR-YG1020/CNMG543-UR	●	22003464	WNMG060412-UR-YG1020/WNMG333-UR	●
22003435	CNMA120404-YG1020/CNMA431	●	22003465	SNMA190616-YG1020/SNMA644	●
22003436	CNMG120404-UC-YG1020/CNMG431-UC	●	22003466	CCMT060204-UG-YG1020/CCMT21.51-UG	●
22003437	CNMG120408-UG-YG1020/CNMG432-UG	●	22003467	DNMA150412-YG1020/DNMA433	●
22003438	DNMG150608-UC-YG1020/DNMG442-UC	●	22003468	DNMA150612-YG1020/DNMA443	●
22003439	SNMG120412-UC-YG1020/SNMG433-UC	●	22003469	SNMA150612-YG1020/SNMA543	●
22003440	TNMG160408-UC-YG1020/TNMG332-UC	●	22003470	WNMG060408-UC-YG1020/WNMG332-UC	●
22003441	TNMG160412-UC-YG1020/TNMG333-UC	●	22003471	CCMT120408-UG-YG1020/CCMT432-UG	●
22003442	WNMA080404-YG1020/WNMA431	●	22003472	CNMG120408-UC-YG1020/CNMG432-UC	●
22003443	WNMA080408-YG1020/WNMA432	●	22003473	CNMA120408-YG1020/CNMA432	●
22003444	WNMA080412-YG1020/WNMA433	●	22003474	TNMA160412-YG1020/TNMA333	●
22003445	WNMG080404-UC-YG1020/WNMG431-UC	●	22003475	TNMA160408-YG1020/TNMA332	●
22003446	WNMG080408-UC-YG1020/WNMG432-UC	●	22003476	SNMG120408-UC-YG1020/SNMG432-UC	●
22003447	WNMG080408-UG-YG1020/WNMG432-UG	●	22003477	CNMG120408-KR-YG1020/CNMG432-KR	●
22003448	WNMG080412-UC-YG1020/WNMG433-UC	●	22003478	CNMG160612-KR-YG1020/CNMG543-KR	●
22003449	WNMG080412-UG-YG1020/WNMG433-UG	●	22003479	DNMG150612-UC-YG1020/DNMG443-UC	●
22003450	WNMG080408-KR-YG1020/WNMG432-KR	●	22003480	DNMG150612-UR-YG1020/DNMG443-UR	●
22003451	WNMG080412-KR-YG1020/WNMG433-KR	●	22003481	DNMG150612-UG-YG1020/DNMG443-UG	●
22003452	CNMA160616-YG1020/CNMA544	●	22003482	DNMG150412-UC-YG1020/DNMG433-UC	●
22003453	CNMG160616-UR-YG1020/CNMG544-UR	●	22003483	DNMG150412-UR-YG1020/DNMG433-UR	●
22003454	VNMG160408-UC-YG1020/VNMG332-UC	●	22003484	DNMG150412-UG-YG1020/DNMG433-UG	●
22003455	VNMG160408-UG-YG1020/VNMG332-UG	●	22003485	CNMG120416-UR-YG1020/CNMG434-UR	●



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Item Standard List

Stock Item List

EDP	Description	Standard	EDP	Description	Standard
22003486	CNMG120408-UR-YG1020/CNMG432-UR	●	22003516	TNMG220412-UR-YG1020/TNMG433-UR	●
22003487	CCMT09T308-UG-YG1020/CCMT32.52-UG	●	22003517	SNMG120412-UG-YG1020/SNMG433-UG	●
22003488	DNMA150608-YG1020/DNMA442	●	22003518	TNMG220408-UG-YG1020/TNMG432-UG	●
22003489	DNMA150404-YG1020/DNMA431	●	22003519	TNMG220412-UG-YG1020/TNMG433-UG	●
22003490	DNMA150408-YG1020/DNMA432	●	22003520	TNMG220416-UG-YG1020/TNMG434-UG	●
22003491	VNMA160408-YG1020/VNMA332	●	22003521	VNMG160404-UG-YG1020/VNMG331-UG	●
22003492	CNMG120404-UG-YG1020/CNMG431-UG	●	22003522	WNMG060408-UG-YG1020/WNMG332-UG	●
22003493	CNMG120412-UG-YG1020/CNMG433-UG	●	22003523	TNMG160412-UR-YG1020/TNMG333-UR	●
22003494	WNMG080404-UG-YG1020/WNMG431-UG	●	22003524	TNMG220416-UR-YG1020/TNMG434-UR	●
22003495	DNMA150604-YG1020/DNMA441	●	22003525	VNMG160412-UG-YG1020/VNMG333-UG	●
22003496	TNMA160404-YG1020/TNMA331	●	22003526	CCMT060208-UG-YG1020/CCMT21.52-UG	●
22003497	VNMG160412-UC-YG1020/VNMG333-UC	●	22003527	CNMG190612-UR-YG1020/CNMG643-UR	●
22003498	CNMG160616-KR-YG1020/CNMG544-KR	●	22003528	CNMG190616-UR-YG1020/CNMG644-UR	●
22003499	DNMG150408-UG-YG1020/DNMG432-UG	●	22003529	DCMT11T304-UG-YG1020/DCMT32.51-UG	●
22003500	DNMG150608-UG-YG1020/DNMG442-UG	●	22003530	DCMT11T308-UG-YG1020/DCMT32.52-UG	●
22003501	SNMG120408-UG-YG1020/SNMG432-UG	●	22003531	RCMT1204M0-YG1020/RCMT1204M0	●
22003502	DNMG150408-UC-YG1020/DNMG432-UC	●	22003532	SCMT09T304-UG-YG1020/SCMT32.51-UG	●
22003503	VNMG160404-UC-YG1020/VNMG331-UC	●	22003533	SCMT09T308-UG-YG1020/SCMT32.52-UG	●
22003504	WNMG080408-UR-YG1020/WNMG432-UR	●	22003534	SCMT120408-UG-YG1020/SCMT432-UG	●
22003505	WNMG080412-UR-YG1020/WNMG433-UR	●	22003535	SNMG190616-UR-YG1020/SNMG644-UR	●
22003506	CNMA190612-YG1020/CNMA643	●	22003536	TCMT110204-UG-YG1020/TCMT21.51-UG	●
22003507	DNMG150404-UG-YG1020/DNMG431-UG	●	22003537	TCMT16T304-UG-YG1020/TCMT32.51-UG	●
22003508	DNMG150604-UG-YG1020/DNMG441-UG	●	22003538	TCMT16T308-UG-YG1020/TCMT32.52-UG	●
22003509	TNMG160404-UG-YG1020/TNMG331-UG	●	22003539	VBMT160404-UG-YG1020/VBMT331-UG	●
22003510	DNMG150408-UR-YG1020/DNMG432-UR	●	22003540	VBMT160408-UG-YG1020/VBMT332-UG	●
22003511	DNMG150608-UR-YG1020/DNMG442-UR	●	22003541	CCMT09T304-UG-YG1020/CCMT32.51-UG	●
22003512	SNMG120408-UR-YG1020/SNMG432-UR	●	22003542	CCMT120404-UG-YG1020/CCMT431-UG	●
22003513	SNMG120412-UR-YG1020/SNMG433-UR	●	22003543	CCMT120412-UG-YG1020/CCMT433-UG	●
22003514	WNMG080416-UR-YG1020/WNMG434-UR	●	22003544	CNMG190608-UR-YG1020/CNMG642-UR	●
22003515	VNMG160412-UR-YG1020/VNMG333-UR	●	22003545	DCMT070204-UG-YG1020/DCMT21.51-UG	●



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EDP	Description	Standard	EDP	Description	Standard
22003546	DCMT070208-UG-YG1020/DCMT21.52-UG	●	22003553	CNMM190616-UT-YG1020/CNMM644-UT	●
22003547	TCMT110208-UG-YG1020/TCMT21.52-UG	●	22003554	CNMM190624-UT-YG1020/CNMM646-UT	●
22003548	VCMT160408-UG-YG1020/VCMT332-UG	●	22003555	CNMM250924-UT-YG1020/CNMM866-UT	●
22003549	RCMT0602M0-YG1020/RCMT0602M0	●	22003556	SNMM190612-UT-YG1020/SNMM643-UT	●
22003550	RCMT0803M0-YG1020/RCMT0803M0	●	22003557	SNMM190616-UT-YG1020/SNMM644-UT	●
22003551	RCMT10T3M0-YG1020/RCMT10T3M0	●	22003558	SNMM190624-UT-YG1020/SNMM646-UT	●
22003552	CNMM190612-UT-YG1020/CNMM643-UT	●	22003559	SNMM250924-UT-YG1020/SNMM866-UT	●

● marked: Available stocks

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