

THE NEW VALUE FRONTIER



用于灰口铸铁和球墨铸铁工件的加工
for Gray and Nodular Cast Iron

新BB涂层技术
New Bright Black (BB) Coating Technology

CA4515 / CA4505

新CVD涂层 New CVD Coated Carbide

宣言

FC/FCD 值得信赖的涂层!

New CVD Coated Carbide for Gray and Nodular Cast Iron

▶ 新BB涂层技术

New Bright Black (BB) Coating Technology

提高了耐熔接性和抗镀膜剥离性
实现了稳定加工，延长了工具寿命

Improved coating adhesion due to the new BB coating technology.
Results in longer and more consistent tool life.



降低加工成本

Reduced manufacturing cost per part.

ADVANCING PRODUCTIVITY

致力于生产效率提高的京瓷

CA45 系列

CA45 series

CA4515

► 高稳定性的首推材质

First choice for stability

► 从连续加工到强断续加工，适用范围广

Wide application range for continuous to heavy interrupted cutting

用于加工FC / FCD的值得信赖的涂层!

New CVD Coated Carbide for Gray / Nodular Cast Iron

CA4505

► 满足高速加工和提高加工效率的需要

Suitable for high-speed and efficient cutting

► 耐磨损性优异，延长了工具使用寿命

Improved tool life through superior wear resistance

新BB涂层技术

New Bright Black (BB) Coating Technology

特殊最表面层 Special top coating

采用基于PICA技术的BB(Bright Black)涂层提高了耐熔接性和抗镀膜剥离性

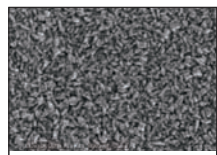
The innovative surface treatment applied to the top layer of the BB Coating prevents adhesion.

特殊最表面层和表面处理

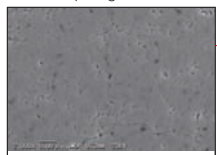
Special top coating and surface finish

PICA技术:提高了耐熔接性

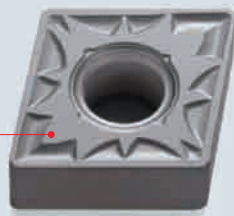
PICA Technology: Promotes a smooth insert surface and reduces built-up-edge.



未处理 Un processed



PICA处理 PICA process



铸铁专用新覆膜

New special coating structure for gray / nodular cast iron

通过本公司特有的对特殊界面层和覆膜结构的优化处理，实现了稳定的加工，延长了工具的使用寿命

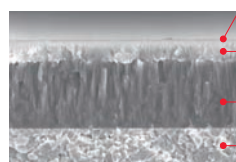
Long and stable tool life is attained through the use of a multi-layer coating structure with a dedicated substrate for cast iron turning.

新BB涂层技术

The New BB Coating (Bright Black) Technology

提高了抗镀膜剥离性 Improved resistance to delamination (coating peeling)

提高了耐崩刃性 Improved chipping resistance



特殊最表面层 Special top coating

α-氧化铝层 α-Aluminum coating

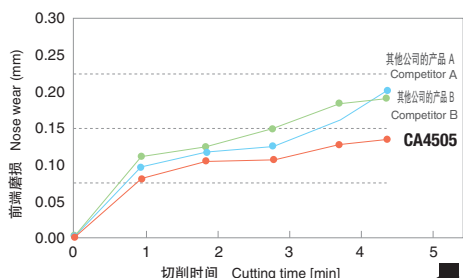
超精TiCN层

Ultra Fine TiCN

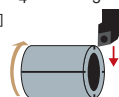
硬质合金母材 Carbide Substrate

■ 耐磨损性比较(FCD450)

Wear Resistance Comparison (Nodular Cast Iron)

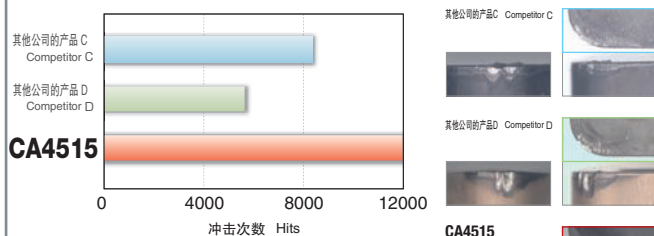


切削条件 Cutting conditions
FCD450 Vc=450m/min ap=1.5mm f=0.35mm/rev Wet
4条凹槽 端面加工 Four slot facing

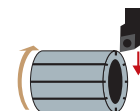


■ 抗崩损性比较(FCD700)

Fracture Resistance Comparison (Nodular Cast Iron)

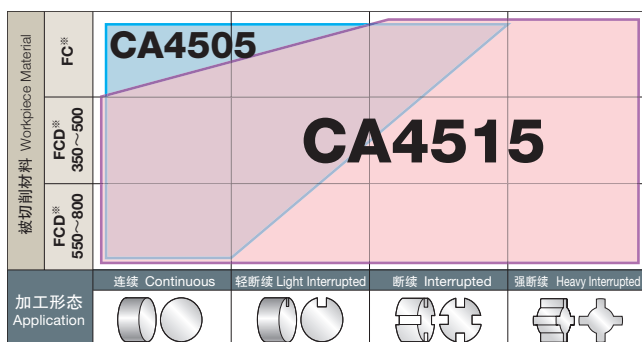


切削条件 Cutting conditions
FCD700 Vc=300m/min ap=1.5mm
f=0.3mm/rev Wet
8条凹槽 端面加工 Eight slot facing



■ 铸铁加工的适用范围图

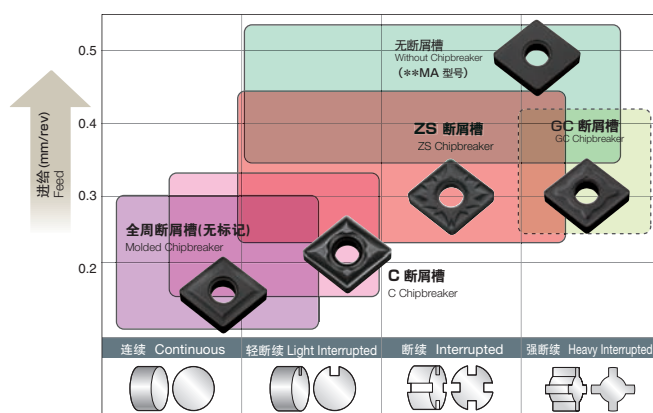
Application Maps for Cast Iron Cutting



※FC: Gray Cast Iron; FCD: Nodular Cast Iron
















■ 断屑槽的选择标准(负角刀片)





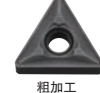








Chipbreaker Selection (Negative Insert)



标准库存型号(负角)

Stock Items (negative)

形状 Insert	型号 Description	尺寸 (mm) Dimension (mm)				CVD 涂层 CVD Coated Carbide	
		内径 I.C.	厚度 Thickness	孔径 Hole	刀尖 R (re) Corner-R(re)	CA4505	CA4515
	CNMG 120408WQ 120412WQ	12.70	4.76	5.16	0.8 1.2	●	●
精加工 - 半精加工 带修光刃 Finishing-Medium With Wiper Edge							
	CNMG 120404 120408 120412 120416	12.70	4.76	5.16	0.4 0.8 1.2 1.6	●	●
粗加工 Roughing	CNMG 160612 160616	15.875	6.35	6.35	1.2 1.6	●	●
	CNMG 190608 190612 190616	19.05	6.35	7.94	0.8 1.2 1.6	●	●
	CNMG 120404C 120408C 120412C 120416C	12.70	4.76	5.16	0.4 0.8 1.2 1.6	●	●
粗加工 Roughing	CNMG 160612C	15.875	6.35	6.35	1.2	●	●
	CNMG 120408ZS 120412ZS	12.70	4.76	5.16	0.8 1.2	●	●
粗加工 Roughing							
	CNMG 120408GC 120412GC	12.70	4.76	5.16	0.8 1.2	●	●
粗加工 Roughing							
	CNMA 120404 120408 120412 120416	12.70	4.76	5.16	0.4 0.8 1.2 1.6	●	●
无断屑槽 Without Chipbreaker							
	DNMG 150404 150408 150412	12.70	4.76	5.16	0.4 0.8 1.2	●	●
粗加工 Roughing	DNMG 150604 150608 150612	12.70	6.35	5.16	0.4 0.8 1.2	●	●
	DNMG 150404C 150408C 150412C	12.70	4.76	5.16	0.4 0.8 1.2	●	●
	DNMG 150604C 150608C 150612C	12.70	6.35	5.16	0.4 0.8 1.2	●	●
粗加工 Roughing							
	DNMG 150408ZS 150412ZS	12.70	4.76	5.16	0.8 1.2	●	●
粗加工 Roughing	DNMG 150608ZS 150612ZS	12.70	6.35	5.16	0.8 1.2	●	●
	DNMG 150408GC 150412GC	12.70	4.76	5.16	0.8 1.2	●	●
	DNMG 150608GC 150612GC	12.70	6.35	5.16	0.8 1.2	●	●
粗加工 Roughing							
	DNMA 150404 150408	12.70	4.76	5.16	0.4 0.8	●	●
无断屑槽 Without Chipbreaker	DNMA 150604 150608	12.70	6.35	5.16	0.4 0.8	●	●
	RNMG 120400	12.70	4.76	5.16	-	●	●
	RNMG 150600	15.875	6.35	6.35	-	●	●
半精加工 - 粗加工 Medium-Roughing							
	SNMG 090308 120404 120408 120412 120416 120420	9.525	3.18	3.81	0.8 0.4 0.8 1.2 1.6 2.0	●	●
粗加工 Roughing							
	SNMG 120408C 120412C	12.70	4.76	5.16	0.8 1.2	●	●
粗加工 Roughing							
	SNMG 120408ZS 120412ZS	12.70	4.76	5.16	0.8 1.2	●	●
粗加工 Roughing							

形状 Insert	型号 Description	尺寸 (mm) Dimension (mm)				CVD 涂层 CVD Coated Carbide	
		内径 I.C.	厚度 Thickness	孔径 Hole	刀尖 R (re) Corner-R(re)	CA4505	CA4515
	SNMG 120408GC 120412GC	12.70	4.76	5.16	0.8 1.2	●	●
粗加工 Roughing							
	SNMA 120404 120408 120412 120416 120420	12.70	4.76	5.16	0.4 0.8 1.2 1.6 2.0	●	●
无断屑槽 Without Chipbreaker							
	SNMN 120408 120412	12.70	4.76	5.16	0.8 1.2	●	●
无断屑槽 Without Chipbreaker							
	TNMG 160404 160408 160412 160416 160420	9.525	4.76	3.81	0.4 0.8 1.2 1.6 2.0	●	●
粗加工 Roughing	TNMG 220404 220408 220412	12.70	4.76	5.16	0.4 0.8 1.2	●	●
	TNMG 160404C 160408C 160412C	9.525	4.76	3.81	0.4 0.8 1.2	●	●
	TNMG 160408ZS 160412ZS	9.525	4.76	3.81	0.8 1.2	●	●
粗加工 Roughing							
	TNMG 160408GC 160412GC	9.525	4.76	3.81	0.8 1.2	●	●
粗加工 Roughing							
	TNMA 160404 160408 160412 160416 160420	9.525	4.76	3.81	0.4 0.8 1.2 1.6 2.0	●	●
无断屑槽 Without Chipbreaker							
	VNMG 160404 160408	9.525	4.76	3.81	0.4 0.8	●	●
粗加工 Roughing							
	WNMG 080404 080408 080412	12.70	4.76	3.81	0.4 0.8 1.2	●	●
粗加工 Roughing							
	WNMG 080404C 080408C 080412C	12.70	4.76	3.81	0.4 0.8 1.2	●	●
粗加工 Cast Iron Roughing							
	WNMG 080408ZS 080412ZS	12.70	4.76	3.81	0.8 1.2	●	●
粗加工 Roughing							
	WNMG 080408GC 080412GC	12.70	4.76	3.81	0.8 1.2	●	●
粗加工 Roughing							
	WNMA 080408 080412	12.70	4.76	3.81	0.8 1.2	●	●
无断屑槽 Without Chipbreaker							

● : 标准库存 Standard Stock

标准库存型号(正角)

Stock Items (positive)

形状 Insert	型号 Description	尺寸 (mm) Dimension (mm)					CVD 涂层 CVD Coated Carbide	
		内接圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖 R(re) Corner-R(re)	后角 Relief Angle	CA4505	CA4515
精加工 - 半精加工 Finishing-Medium	CCMT 060204GK	6.35	2.38	2.8	0.4	7°		●
	CCMT 09T304GK	9.525	3.97	4.4	0.4	7°		●
	CCMT 120404GK	12.70	4.76	5.5	0.4	7°		●
	120408GK							●
半精加工 Medium cutting	CCMT 09T308	9.525	3.97	4.4	0.8	7°	●	●
半精加工 Medium cutting	CPMH 080204 080208	7.94	2.38	3.5	0.4 0.8	11°		●
	CPMH 090304 090308	9.525	3.18	4.5	0.4 0.8	11°	●	●
精加工 - 半精加工 Finishing-Medium	DCMT 070204GK 070208GK	6.35	2.38	2.8	0.4 0.8	7°	●	●
	DCMT 11T304GK 11T308GK						9.525	3.97
	DCMT 11T308	9.525	3.97	4.4	0.8	7°		
半精加工 Medium cutting	RCMX 1204M0	12.0	4.76	4.2	-	7°	●	●

形状 Insert	型号 Description	尺寸 (mm) Dimension (mm)					CVD 涂层 CVD Coated Carbide	
		内接圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖 R(re) Corner-R(re)	后角 Relief Angle	CA4505	CA4515
无断屑槽 Without Chipbreaker	SPMN 120304	12.70	3.18	-	0.4	11°		●
	120308						●	●
	SPMN 120408	12.70	4.76	-	0.8	11°		●
	120412							●
精加工 - 半精加工 Finishing-Medium	TCMT 110204HQ 110208HQ	6.35	2.38	2.8	0.4	7°		●
	TCMT 16T308HQ 16T312HQ						9.525	3.97
	TPMT 110304HQ 110308HQ	6.35	3.18	3.3	0.4	11°		
	TPMT 160304HQ 160408HQ						9.525	3.18
	TPMR 110304 110308	6.35	3.18	-	0.4	11°		
	TPMR 160304 160308						9.525	3.18
TPMN 110304 110308	6.35	3.18	-	0.4	11°			
TPMN 160304 160308						9.525	3.18	-
TPMN 160312								

● : 标准库存 Standard Stock

加工实例 Case Studies

FC250

- 发电机零件
Generator part
- Vc= 53~168m/min
- ap= 1.5~2mm
- f = 0.25mm/rev
- 湿式 Wet
- CNMG120408C
(CA4505)

CA4505

85个/刀刃(8小时)
85pcs/edge (8hrs)

其他公司的产品E (CVD涂层)
Competitor E (CVD coating)

65个/刀刃(6小时)
65pcs/edge (6hrs)

其他公司的产品E只有6小时的使用寿命，而CA4505的使用寿命达到了8小时以上，耐磨损性优异，切削阻力也比较低，性能良好。

CA4505 provided an additional 2 hours of tool life and resulted in 20 more parts per edge than competitor E's CVD coated insert.

用户评价 Evaluation by the user

CA4505	其他公司的产品 E Competitor E
(85个 / 刀刃) 85pcs / edge	(65个 / 刀刃) 65pcs / edge

FCD450

- 皮带轮
Pulley
- Vc= 200m/min
- ap= 2mm
- f = 0.3mm/rev
- 干式 Dry
- WNMG080412ZS
(CA4515)

CA4515

620个/刀刃
620 pcs/edge

其他公司的产品F (CVD涂层)
Competitor F (CVD coating)

350个/刀刃
350 pcs/edge

比较其他公司的产品F，CA4515加工数量提高到了1.7倍以上。

CA4515 achieved 70% longer tool life than Competitor F's CVD grade!

用户评价 Evaluation by the user

CA4515	其他公司的产品 F Competitor F
(620个 / 刀刃) 620 pcs / edge	(350个 / 刀刃) 350 pcs / edge

切削工具相关资讯

400-650-6400-5

● 受理时间 8:45-11:45 · 12:45-17:30
● 周六、日以及法定节假日期间不受理业务。

※个人信息的使用: 回答用户咨询问题, 提高服务品质, 提供产品信息。
※咨询时, 请确认电话号码的正确性。

KYOCERA

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