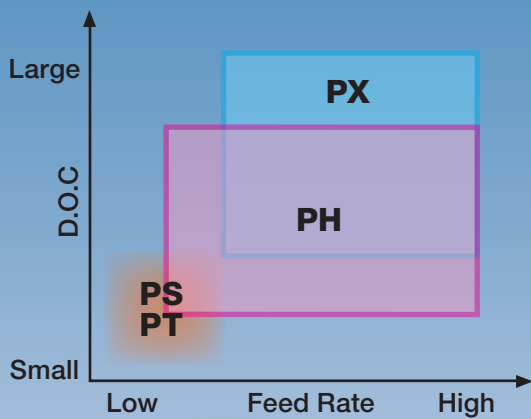




PH/PX CHIPBREAKER

Chipbreaker for Heavy Roughing

- Available with highly-reliable CVD coated carbide, CA55 series.



Single Sided

PX Chipbreaker

Double Sided

PH Chipbreaker

Double Sided Chipbreaker for roughing

PH Chipbreaker

Advantages

- Suitable for heavy interrupted cutting and for workpiece with scale due to strong cutting edge
- Smooth chip control by wide and shallow chipbreaker design
- Prevents crater wear by positive land on insert corner

Positive land on insert corner
Reduces crater wear

Wide land design
High strength

Wide land design / Shallow chipbreaker
Prevents chip clogging at high feed cutting

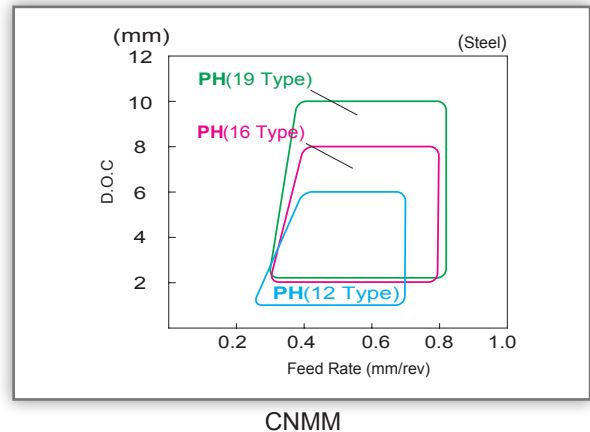
Smooth chip breaking with wide and shallow chipbreaker

Stock Items

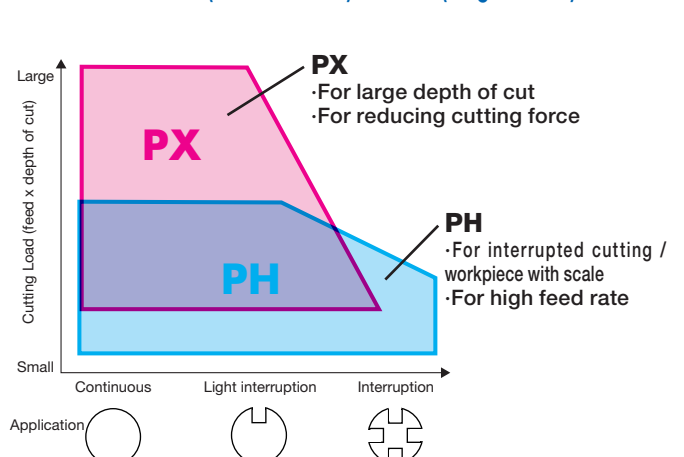
Shape	Description	Dimension(mm)				Stock Grades			
		I.C.	Thickness	Hole	Corner-R (rε)	CVD Coated Carbide			
						CA5505	CA5515	CA5525	CA5535
	CNMG 120408PH 120412PH 120416PH	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●
	CNMG 160608PH 160612PH 160616PH	15.875	6.35	6.35	0.8 1.2 1.6		●	●	●
	CNMG 190608PH 190612PH 190616PH 190624PH	19.05	6.35	7.94	0.8 1.2 1.6 2.4		●	●	●
	DNMG 150408PH 150412PH 150416PH	12.70	4.76	5.16	0.8 1.2 1.6		●	●	
	DNMG 150608PH 150612PH 150616PH	12.70	6.35	5.16	0.8 1.2 1.6		●	●	●
	SNMG 120408PH 120412PH 120416PH	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●
	SNMG 150612PH 150616PH	15.875	6.35	6.35	1.2 1.6		●	●	
	SNMG 190612PH 190616PH 190624PH	19.05	6.35	7.94	1.2 1.6 2.4		●	●	●
	TNMG 160408PH 160412PH	9.525	4.76	3.81	0.8 1.2		●	●	
	TNMG 220408PH 220412PH 220416PH	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●

●: Standard Stock

Applicable Chipbreaker Range



How to use PH (double sided) and PX (single sided)



Single sided Chipbreaker for roughing

PX Chipbreaker

Advantages

- Low cutting force by curved cutting edge design
- Prevents crater wear by positive land on insert corner
- Prevents adhesion by 2-steps dots and reduces load on dots

2-step dots
Chip breaking while preventing adhesion

Curved edge
Cutting force reduction at large ap

Side view

Positive land on insert corner
Cutting force reduction at the point of first contact and controls crater wear

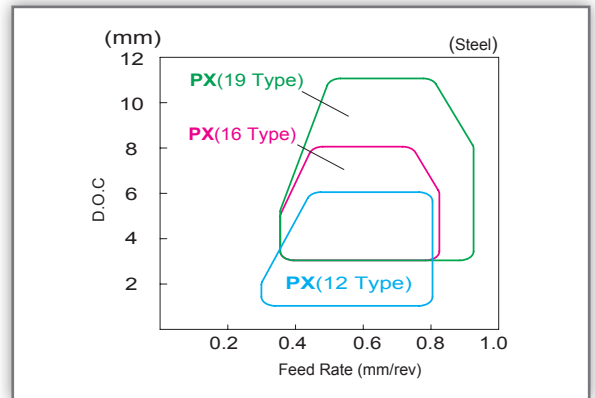
Wide land and large rake angle
Good balance of sharpness and cutting edge strength

Stock Items

Shape	Description	Dimension(mm)				Stock Grades			
		I.C.	Thickness	Hole	Corner-R (r)	CVD Coated Carbide			
						CA5505	CA5515	CA5525	CA5535
	CNMM 120408PX 120412PX 120416PX	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●
	CNMM 160608PX 160612PX 160616PX	15.875	6.35	6.35	0.8 1.2 1.6		●	●	●
	CNMM 190608PX 190612PX 190616PX 190624PX	19.05	6.35	7.94	0.8 1.2 1.6 2.4		●	●	●
	DNMM 150408PX 150412PX 150416PX	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●
	DNMM 150608PX 150612PX 150616PX	12.70	6.35	5.16	0.8 1.2 1.6		●	●	●
	SNMM 120408PX 120412PX 120416PX	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●
	SNMM 150612PX 150616PX	15.875	6.35	6.35	1.2 1.6		●	●	●
	SNMM 190612PX 190616PX 190624PX	19.05	6.35	7.94	1.2 1.6 2.4		●	●	●
	TNMM 160408PX 160412PX	9.525	4.76	3.81	0.8 1.2		●	●	●
	TNMM 220408PX 220412PX 220416PX	12.70	4.76	5.16	0.8 1.2 1.6		●	●	●

●:Standard Stock

Applicable Chipbreaker Range



CNMM

Chip by 100-degree corner (CNMM type)

Workpiece Material: 1.7262
CNMM190616PX, Vc=120m/min
ap=5mm, f=0.5mm/rev, WET

- Chip control using 100-degree corner of CNMM type insert
Chip control has been improved by large dots on chipbreaker when using 100-degree corner of CNMM type.

Chipbreaker for roughing

PH/PX Chipbreaker

Case Studies

1.2127	
<ul style="list-style-type: none"> ·Bearing ·Vc=130m/min ·ap=5~6mm ·f=0.5mm/rev ·WET ·CNMG190616PH (CA5525) 	<p>Facing(with scale)</p>
PH	16~28pcs/insert
Competitor A	8~14pcs/insert
<p>·PH chipbreaker doubled the number of processed workpiece due to double sided design compared with the competitor A (single sided).</p> <p>(Evaluation by the user)</p>	

41CrMo4	
<ul style="list-style-type: none"> ·Connector ·Vc=80m/min ·ap=10mm(roughing) ·ap=3.8mm(finishing) ·f=0.7mm/rev ·DRY ·CNMG190616PH (CA5525) 	
PH	1.5pcs/edge
Competitor B	1pcs/edge
<p>·PH chipbreaker extended the tool life by 1.5 times of the competitor's coated insert B.</p> <p>(Evaluation by the user)</p>	

34CrNiMo6	
<ul style="list-style-type: none"> ·Shaft ·Vc=120m/min ·ap=8mm ·f=0.35mm/rev ·WET ·CNMM190612PX (CA5515) 	<p>With scale</p>
PX	more than 18pcs/edge
Competitor C	10pcs/edge
<p>·For Comp. C, dots on chipbreaker were worn away after processing 10pcs/edge.</p> <p>·PX chipbreaker showed little wear even after processing 18pcs/edge and still available for further processing.</p> <p>(Evaluation by the user)</p>	

C45	
<ul style="list-style-type: none"> ·Shaft ·Vc=230m/min ·ap=4mm ·f=0.5mm/rev ·WET ·CNMM190612PX (CA5515) 	<p>With scale</p>
PX	4pcs/edge
Competitor D	2pcs/edge
<p>·PX chipbreaker showed two times longer tool life compared with Comp. D.</p> <p>(Evaluation by the user)</p>	



KYOCERA Fineceramics GmbH
Cutting Tool Division
Hammfeldstrasse 6, 41460 Neuss, Germany
Phone: +49 (0) 2131 1637-115
Fax: +49 (0) 2131 1637-152
www.kyocera.de / www.kyocera.eu
ceratip@kyocera.de

KYOCERA Fineceramics SAS.
Cutting Tool Division
4, allée du Commandant Mouchotte
Paray-ancienne-poste 91781, Wissous Cedex, France
Phone: +33 (0) 1 45 12 06 93 Fax: +33 (0) 1 56 72 18 94
www.kyocera.fr

KYOCERA Fineceramics GmbH sp. z o.o. Poland Branch Office
Cutting Tool Division
Leg. ul. Europejska 4, 55-220, Jelcz-Laskowice, Poland
Phone: +48-(0) 71-381-12-15 Fax: +48-(0) 71-381-12-16
www.kyocera.eu

KYOCERA Fineceramics GmbH Italy Branch Office
Cutting Tool Division
Via Torino 51, 20123 Milan, Italy
Phone: +39-02 00620 845 Fax: +39-02 00620 848
www.kyocera.it

KYOCERA Fineceramics GmbH Spain Branch Office
Cutting Tool Division
Avenida Manacor 4, 28290 Las Matas, Madrid, Spain
Phone: +34-91-631-83-92-802 Fax: +34-91-631-82-19
www.kyocera.es