



鋼加工用 新斷削槽 PP/PQ 斷削槽

Smart Chipbreaker for Steel Cutting PP/PQ Chipbreakers

切削條件廣泛，實現優良切削

Best Balance Design for a Wide Range of Cutting Conditions

針對低進給量～高進給量之廣泛加工領域

Available in a wide range of applications from low to high feed rate

精修～中切削用

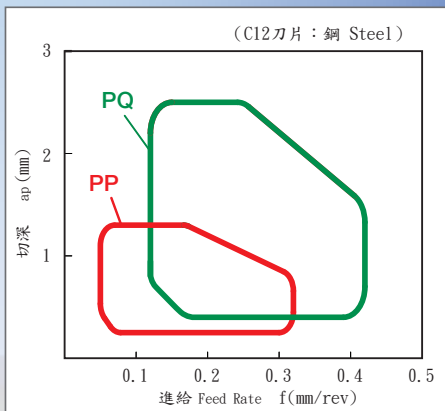
PQ 斷削槽

PQ Chipbreaker for Medium to Finishing

精修用

PP 斷削槽

PP Chipbreaker for Finishing

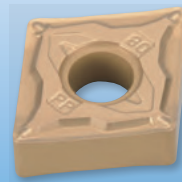


ADVANCING PRODUCTIVITY

生産性向上に貢献する京セラ

PP 斷屑槽

PP Chipbreaker



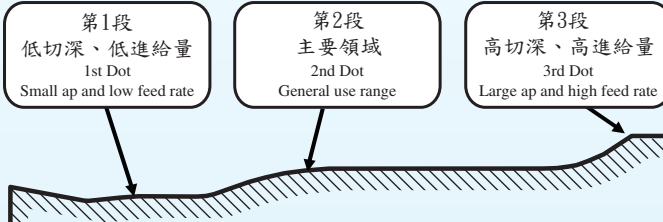
特性 Features

- 3段式靈巧點構造可針對低進給量~高進給量
廣泛領域之鋼精加工
3-step Smart Dot Structure applicable to a wide range of feed rate in steel finishing
- 平滑錐形切刃減少切削阻力
Smooth Taper Cutting Edge reduces cutting force

平滑錐形切刃
減少切削阻力
Smooth Taper Cutting Edge
Reduced Cutting Force

3段式點構造
根據進給量而不同的3種點作用處理切屑
3-step Smart Dot Structure
The 3 different dots provide smooth chip evacuation in a wide range of feed rate

根據加工條件作用位置亦改變
Each dot functions according to the cutting conditions

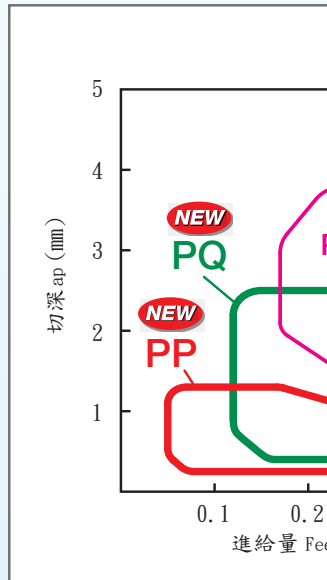
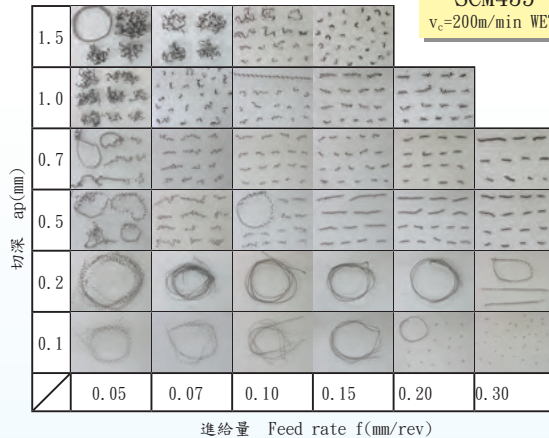


改善低切深・高進給量加工時之堵塞及咬屑問題
Solution for chip entangling in small ap or high feed cuttings

PP

CNMG120404PP 100mm

SCM435
 $v_c=200\text{m/min WET}$



加工實例(切屑處理比較)

Case Studies (Chip Control Comparison)

汽車零件 (SCM420) Automotive part

CNMG120408PP
 $V_c=350\text{m/min}$
 $a_p=0.3\text{mm}$
 $f=0.3\text{mm/rev}$
Wet

他社品 A Competitor A

PP斷屑槽 PP Chipbreaker

改善作業時咬屑問題、實現安定加工
Reduced defective rate and stable cutting due to less chip entanglement
(根據使用者評價) Evaluation by the user

汽車零件 (SCr420H) Automotive part

CNMG120408PP
 $V_c=200\text{m/min}$
 $a_p=0.2-0.3\text{mm}$
 $f=0.2-0.3\text{mm/rev}$
Wet

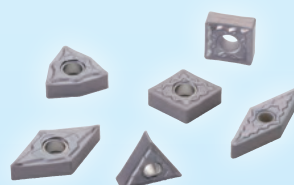
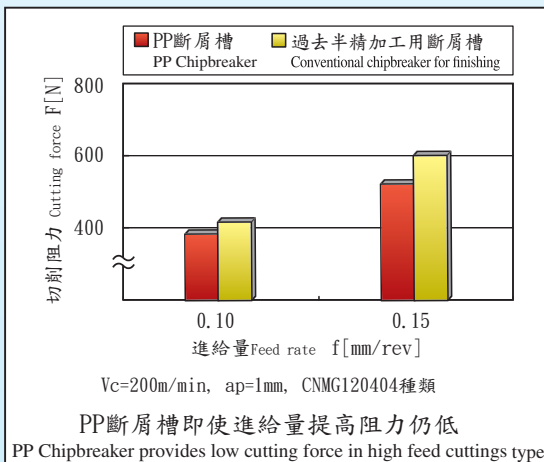
他社品 B Competitor B

PP斷屑槽 PP Chipbreaker

改善作業時咬屑問題、實現安定加工
Reduced defective rate and stable cutting due to less chip entanglement
(根據使用者評價) Evaluation by the user

切削阻力

Cutting Force



MEGACOAT
金屬陶瓷及
PP斷屑槽同用
提升精加工面品質
Improved surface
Finish with
MEGACOAT Cermet
and PP Chipbreaker

PQ 斷屑槽

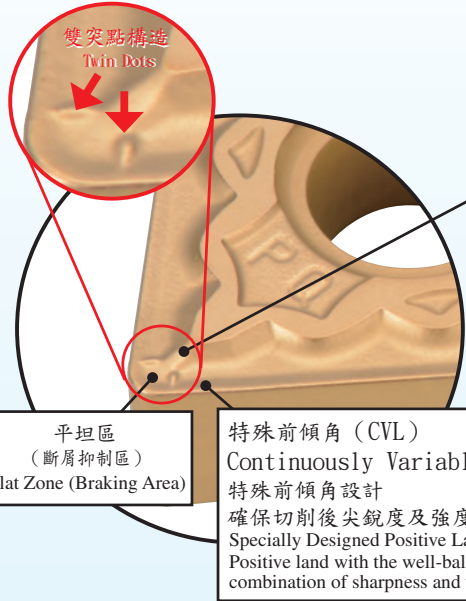
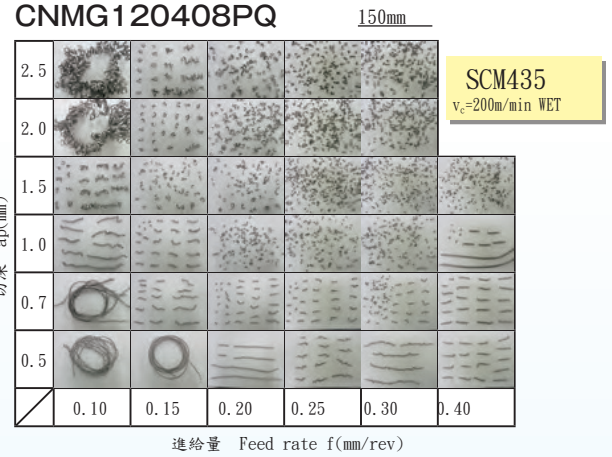
PQ Chipbreaker



特性 Features

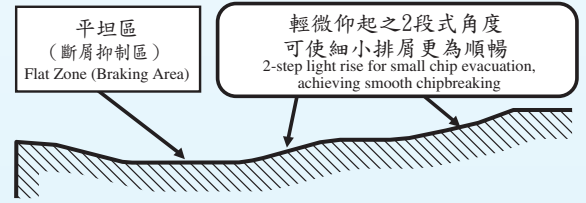
- 新設計之平坦區 (斷屑抑制區) 及2段式仰起壁面
於精加工~半精加工等各種領域皆能流暢排出切屑
Stable chip control in a wide range of applications of medium to finishing due to newly developed "Flat Zone" (Braking Area) and 2-step rising smooth Smart Wall effect
- 透過雙突點設計
控制低切深/高進給量加工時外徑/端面的切屑排出
Twin dots on the edge tip provide smooth chip control at low ap/high feed turning and facing
- 特殊設計確保切削後銳利度及強度 (CVL)
Specially Designed Positive Land with the well-balanced edge sharpness and toughness (CVL)

PQ



2 段式仰起壁面 (2 段式突起平滑表面)
於各種領域皆能精確控制排屑
同時避免於高進給量時之損傷
2-step Smart Wall (2-step rising smooth surface)
Excellent chip control in a wide range of applications, preventing the dots from being damaged at high feed cuttings

- 針對各種領域之切削
Chipbraking efficiency for a wide range of applications



抑制高進給量時之堵塞及阻力擴大問題

Prevents chip entanglement and reduces cutting force at high feed cuttings

加工實例(切屑處理比較)

Case Studies (Chip Control Comparison)

汽車零件 (S45C) Automotive part

DNMG150408PQ
V_c=200m/min
ap=0.5-1.2mm
f=0.3mm/rev
Wet

改善因切屑引起之損害
Minimized fracture caused by chip entanglement
(根據使用者評價) Evaluation by the user

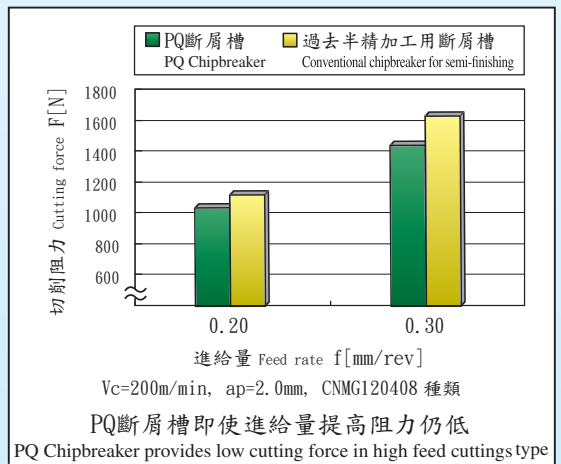
汽車零件 (S45C) Automotive part

WNMG080408PQ
V_c=250m/min
ap=1.0mm
f=0.3mm/rev
Wet

與他社品D相較
PQ斷屑槽能有效斷屑進而提升生產效率
With Competitor D, chips were entangled in the turret and the process was paused frequently, but PQ Chipbreaker can chop chips into small pieces, improving the productivity
(根據使用者評價) Evaluation by the user

切削阻力

Cutting Force



- CVD 塗層硬質合金 CA5515/CA5525 與PQ斷屑槽同用 能延長使用壽命
Long tool life with CVD Coating CA5515/CA5525 and PQ Chipbreaker

標準庫存型號 Standard Stock

形狀 Insert	型號 Description	尺寸 (mm) Dimension				在庫材質 Stock Grades					
						MEGACOAT 金屬陶瓷 MEGACOAT Cemet		金屬陶瓷 Cermet		CVD 硬質合金 CVD Coated Carbide	
		內接 圓徑 I.C.	厚度 Thickness	孔徑 Hole	角R (r ε) Corner-R (r ε)	PV7010	PV7025	TN6010	TN6020	CA5515	CA5525
	CNMG 120402PP	12.70	4.76	5.16	0.2	●	●	●	●	●	●
	120404PP				0.4	●	●	●	●	●	●
	120408PP				0.8	●	●	●	●	●	●
	120412PP				1.2	●	●	●	●	●	●
	DNMG 150402PP	12.70	4.76	5.16	0.2	●	●	●	●	●	
	150404PP				0.4	●	●	●	●	●	
	150408PP				0.8	●	●	●	●	●	
	150412PP				1.2	●	●	●	●	●	
	DNMG 150602PP	12.70	6.35	5.16	0.2	●	●	●	●	●	
	150604PP				0.4	●	●	●	●	●	
	150608PP				0.8	●	●	●	●	●	
	150612PP				1.2	●	●	●	●	●	
	TNMG 160402PP	9.525	4.76	3.81	0.2	●	●	●	●	●	
	160404PP				0.4	●	●	●	●	●	
	160408PP				0.8	●	●	●	●	●	
	160412PP				1.2	●	●	●	●	●	
	VNMG 160402PP	9.525	4.76	3.81	0.2	●	●	●	●	●	
	160404PP				0.4	●	●	●	●	●	
	160408PP				0.8	●	●	●	●	●	
	160412PP				1.2	●	●	●	●	●	
	WNMG 080402PP	12.70	4.76	5.16	0.2	●	●	●	●	●	
	080404PP				0.4	●	●	●	●	●	
	080408PP				0.8	●	●	●	●	●	
	080412PP				1.2	●	●	●	●	●	

形狀 Insert	型號 Description	尺寸 (mm) Dimension				庫存材質 Stock Grades					
						MEGACOAT 金屬陶瓷 MEGACOAT Cemet		金屬陶瓷 Cermet		CVD 硬質合金 CVD Coated Carbide	
		內接 圓徑 I.C.	厚度 Thickness	孔徑 Hole	角R (r ε) Corner-R (r ε)	PV7010	PV7025	TN6010	TN6020	CA5515	CA5525
	CNMG 120404PQ	12.70	4.76	5.16	0.4	●	●	●	●	●	
	120408PQ				0.8	●	●	●	●	●	
	120412PQ				1.2	●	●	●	●	●	
	DNMG 150404PQ	12.70	4.76	5.16	0.4	●	●	●	●	●	
	150408PQ				0.8	●	●	●	●	●	
	150412PQ				1.2	●	●	●	●	●	
	DNMG 150604PQ	12.70	6.35	5.16	0.4	●	●	●	●	●	
	150608PQ				0.8	●	●	●	●	●	
	150612PQ				1.2	●	●	●	●	●	
	SNMG 120404PQ	12.70	4.76	5.16	0.4	●	●	●	●	●	
	120408PQ				0.8	●	●	●	●	●	
	120412PQ				1.2	●	●	●	●	●	
	TNMG 160404PQ	9.525	4.76	3.81	0.4	●	●	●	●	●	
	160408PQ				0.8	●	●	●	●	●	
	160412PQ				1.2	●	●	●	●	●	
	VNMG 160404PQ	9.525	4.76	3.81	0.4	●	●	●	●	●	
	160408PQ				0.8	●	●	●	●	●	
	160412PQ				1.2	●	●	●	●	●	
	WNMG 080404PQ	12.70	4.76	5.16	0.4	●	●	●	●	●	
	080408PQ				0.8	●	●	●	●	●	
	080412PQ				1.2	●	●	●	●	●	

● : 標準庫存 ● : Std.Item

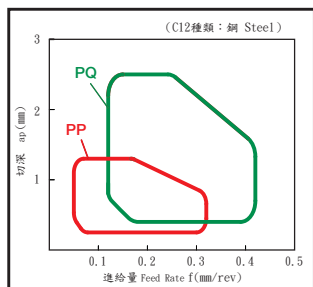
推薦切削條件 Recommended Cutting Condition

PP 斷屑槽 PP Chipbreaker

被切削材質 Workpiece Material	刀片材質 Insert Grade	下限-推薦-上限 Min. - Recommendation - Max.		
		速度 Cutting Speed Vc (m/min)	切深 ap (mm)	進給量 Feed rate f (mm/rev)
碳鋼·合金鋼 Carbon Steel / Alloy Steel	PV7010	210-270-380	0.2-0.5-1.5	0.04-0.16-0.28
	PV7025	190-270-370		
	TN6010	200-270-370		
	TN6020	190-270-360		
	CA5515	160-260-340		
	CA5525	150-240-320		

PQ 斷屑槽 PQ Chipbreaker

被切削材質 Workpiece Material	刀片材質 Insert Grade	下限-推薦-上限 Min. - Recommendation - Max.		
		速度 Cutting Speed Vc (m/min)	切深 ap (mm)	進給量 Feed rate f (mm/rev)
碳鋼·合金鋼 Carbon Steel / Alloy Steel	PV7010	200-260-370	0.5-1.0-2.5	0.15-0.25-0.40
	PV7025	180-250-350		
	TN6010	190-260-360		
	TN6020	180-250-340		
	CA5515	150-240-320		
	CA5525	140-220-300		



切削工具に関する技術的なご相談は

0120-39-6369 ●受付時間 9:00~12:00・13:00~17:00
●土曜・日曜・祝日・会社休日は受付していません
(携帯・PHSからもご利用できます) FAX:075-602-0335 京セラ カスタマーサポートセンター

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※お問合せの際は、番号をお間違えないようお願い申し上げます。

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