

CVD

Roller dresser
& Dressing tool



UNICORN



Anchor[®]

UNICORN series

CVD Roller dresser / CVD修整輪

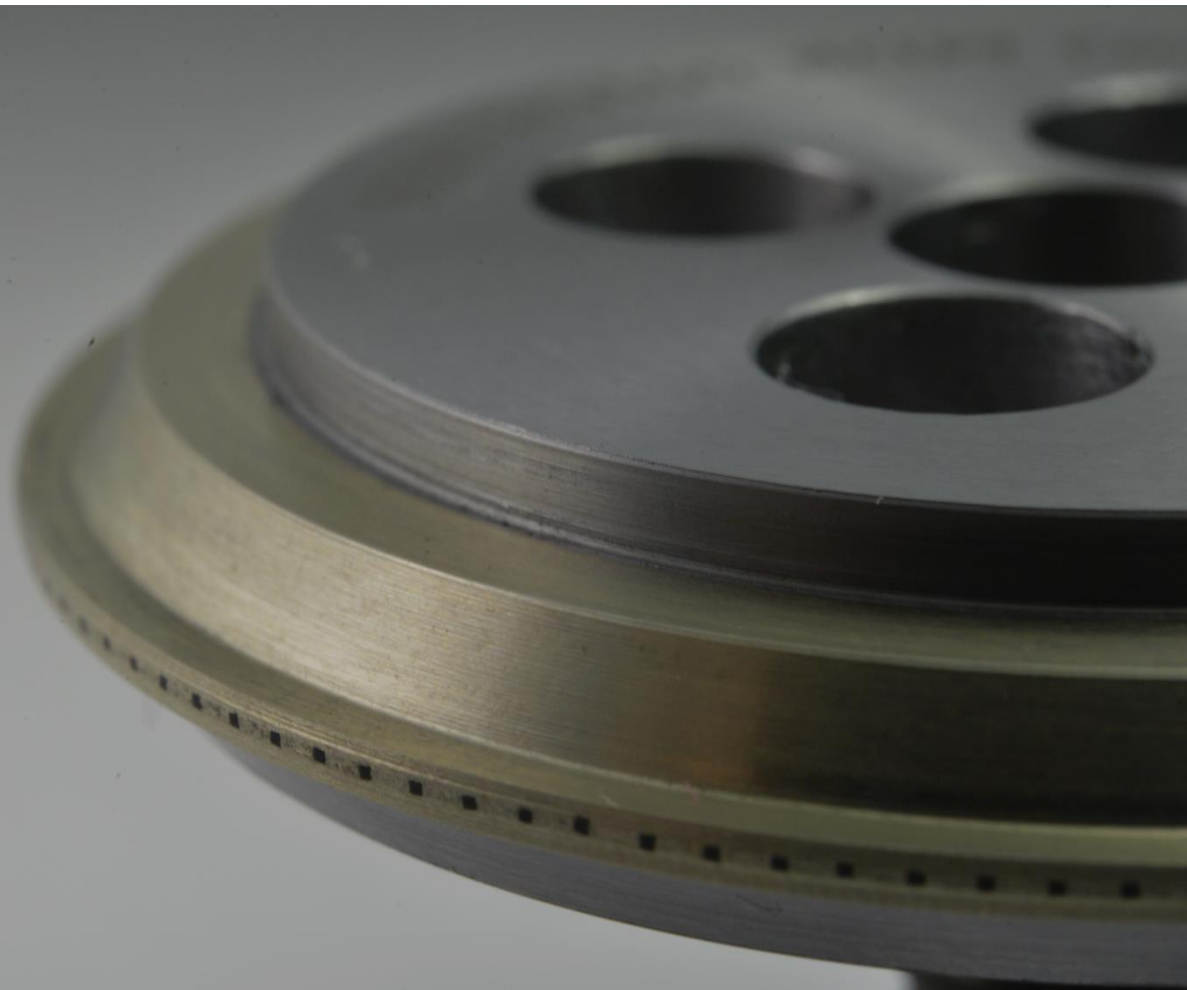
Anchor UNICORN-CVD roller dresser is used to dress the oxide aluminum and silicon carbide bonded, diamond and CBN superabrasive precision grinding wheels. It could be used to dress various shape and high precision grinding wheels, applied in precision components grinding processes such as gear, linear guide way, ball screw, bearing and so on.

嘉寶UNICORN系列CVD修整輪可用於修整各種形狀及高精密的傳統氧化鋁、碳化矽砂輪以及鑽石、CBN超級磨料砂輪，廣泛應用於精密加工研磨製程，如齒輪、線性滑軌、滾珠螺桿以及培林等等。

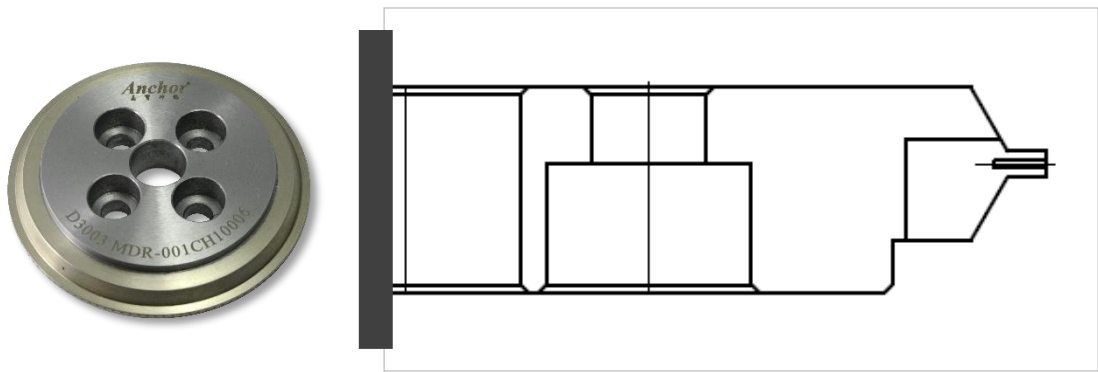
APPLICATION



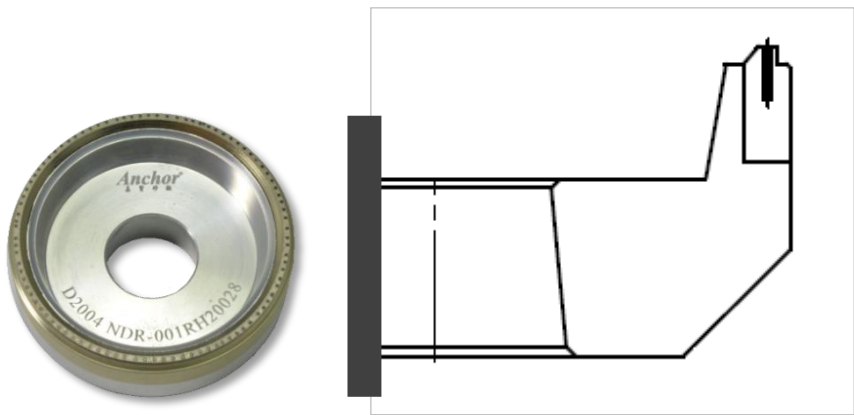
UNICORN



Shapes of CVD Roller dresser / 常見修整輪形緣



Grit 磨粒	Wheel size 尺寸	Tolerance 公差
CVD	Customized (40 to 150 mm)	parallelism (//) 5um verticality (⊥) 5um runout (↗) 5um



Grit 磨粒	Wheel size 尺寸	Tolerance 公差
CVD	Customized (40 to 150 mm)	parallelism (//) 5um verticality (⊥) 5um runout (↗) 5um

- According to the application, the wheel shape and size, the amount, length, diameter, radius of CVD pillar could also be customized.
- 依修整用途不同，修整輪尺寸型緣、晶柱排列角度、數量、大小及R角均可客製化訂製。

UNICORN series

CVD dresser / CVD修刀

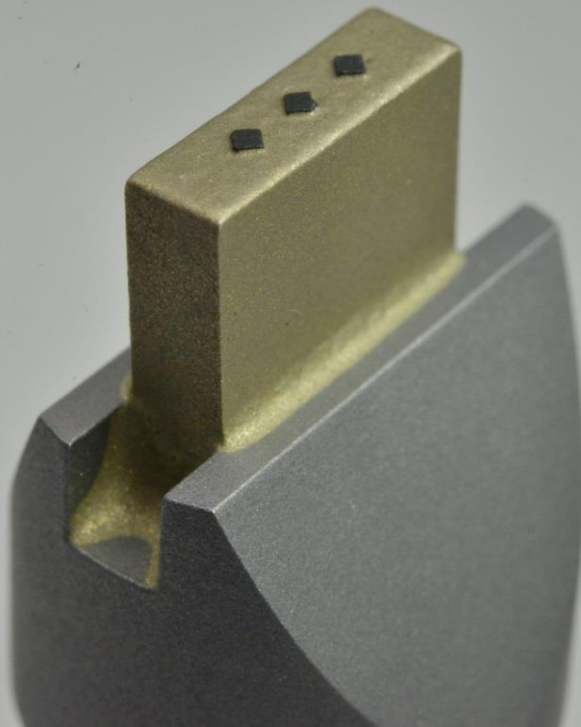
Anchor UNICORN-CVD dresser is used to dress the oxide aluminum and silicon carbide bonded, diamond and CBN super abrasive precision grinding wheels. It could be designed in single-pillar and multi-pillars according to the application. Besides the standing inventory, the quantity of CVD pillars could also be customized. Compare with traditional diamond dresser, it could be closer to customer's requirement and easy to use,

嘉寶UNICORN系列CVD修刀，適用於各種氧化鋁、碳化矽砂輪修整，包含平面、外圓、無心及成型研磨等，依修整用途可分單柱型及多柱型設計，除標準品外，修刀的晶柱數量亦可客製化調整，相較於傳統鑽石修刀，使用上能更貼近客戶的需求，操作便利，提升效率並降低修整成本。

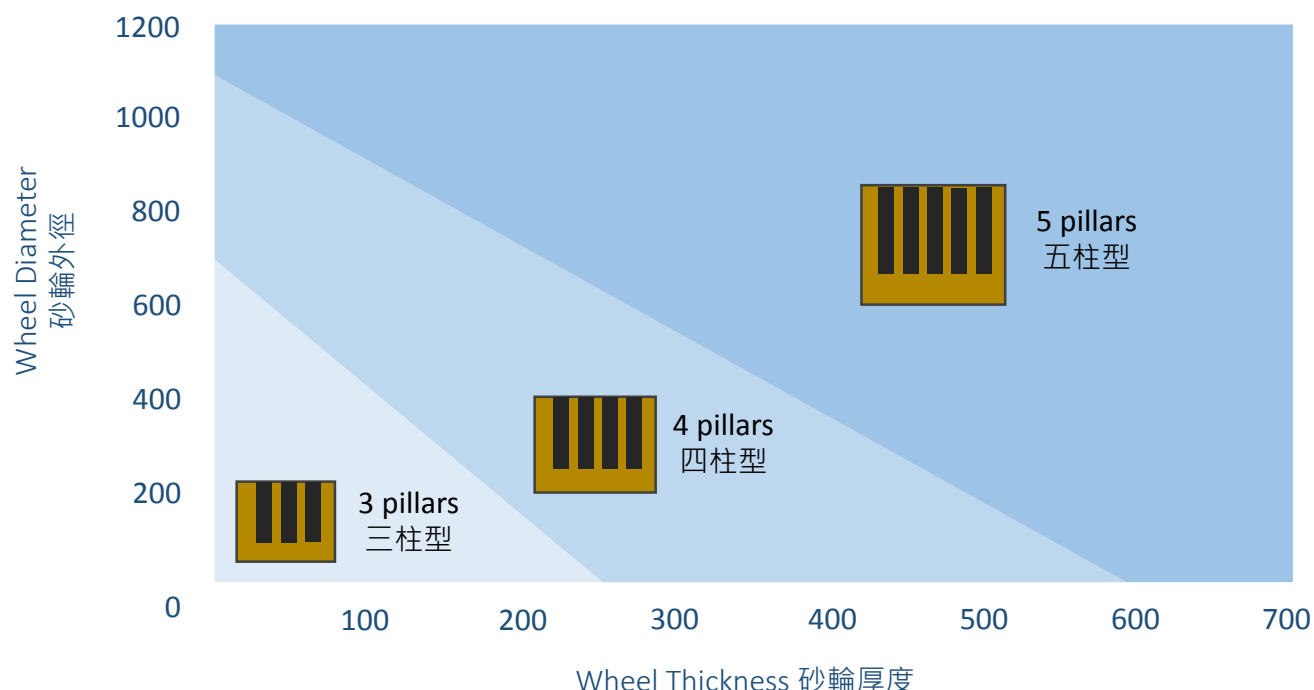
APPLICATION



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How to choose CVD dressers / CVD修刀選擇



The quantity of CVD pillars is related to the size of grinding wheel. The chart above is recommended the minimum quantities, the life time will increase with the quantity of CVD pillars.

鑽石柱的數量選用，和需修整的砂輪體積關係最大，上表是建議使用的最少數量。若選用更多柱數，則修整壽命會更好。

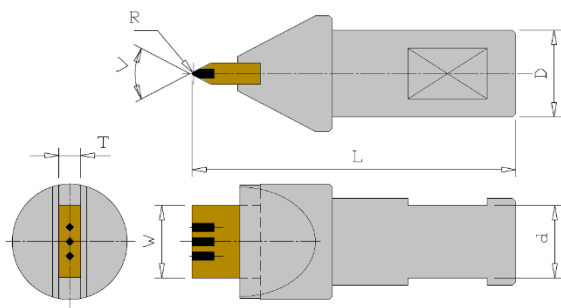
While the CVD dresser is used to dress C, GC, SG or CX (sol gel abrasive) wheels, the quantity of CVD pillars will be suggested upgrade 1 level more than the chart above.

若修整碳化矽(C, GC)或陶瓷微晶磨料(SG, CX)時，建議要依上表再往上加一個級數。

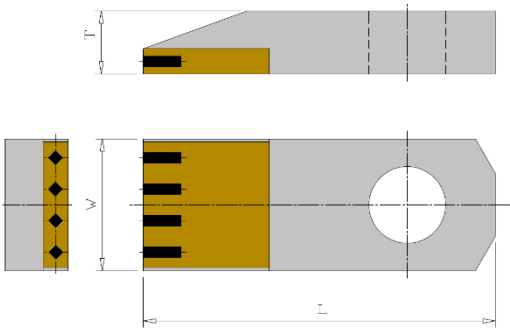
Comparison with diamond dresser / 與一般鑽石修刀比較

	UNICORN-CVD dresser / CVD修刀	Diamond dresser / 鑽石修刀
Material 原料	CVD	Diamond, Synthetic diamond 鑽石、人造鑽石
Hardness 硬度	Lower hardness 硬度較低	Higher hardness 硬度較高
Quality 品質	Stable consumption and high precision 消耗均勻穩定度高、精度高	Natural diamonds are not stable on quality 天然鑽石存在差異性
Operation 操作	Easy to operate, efficient 操作簡單，效率高	Rely on the operator's experience 較依賴人員操作經驗
Price 售價	Higher price and CP ratio 單價較高但CP值高	Lower price and CP ratio 單價較低但CP值低

Size mark of UNICORN-CVD dresser / 尺寸標示



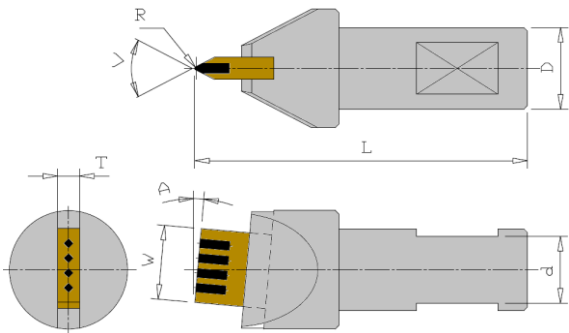
MR-3



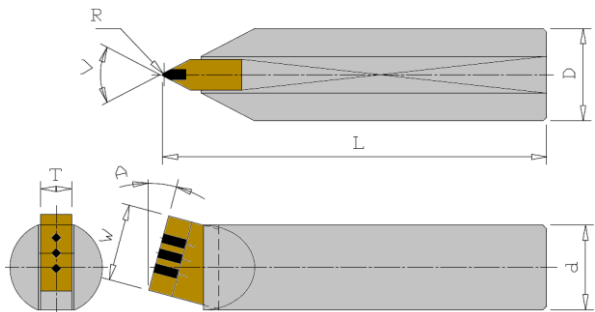
MR-4

Unit : mm

Type / 型號	W	T	D	d	L	V	R	A	Remark / 備註
MR-3	10	3	10	-	45	55°	0.2	-	Angular top 尖頂有頭無斜角
			11			60°	0.3		
			12						
MR-4	10	5	-	-	28	-	-	-	Flat top 平頂無角度



MR-5

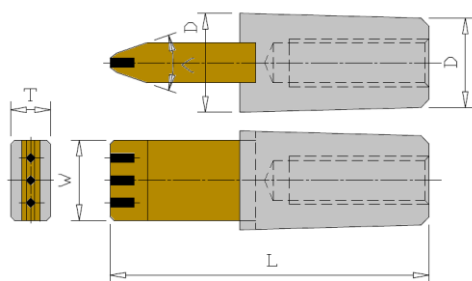


MR-5S

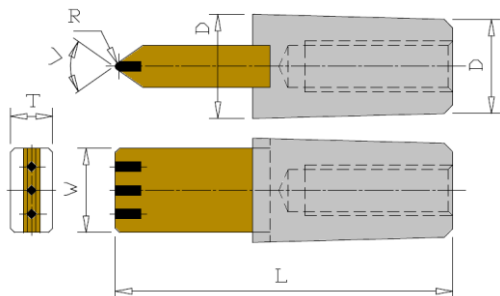
Unit : mm

Type / 型號	W	T	D	d	L	V	R	A	Remark / 備註
MR-5	10	3	8	9	32	55°	0.2	5°	Beveled and angular top 尖頂有頭有斜角
			11		45	60°	0.3	15°	
MR-5S	10	4	12	11	45	55° 60°	0.2 0.3	5° 15°	Beveled and angular top with straight shank 尖頂直柄斜角

Size mark of UNICORN-CVD dresser / 尺寸標示



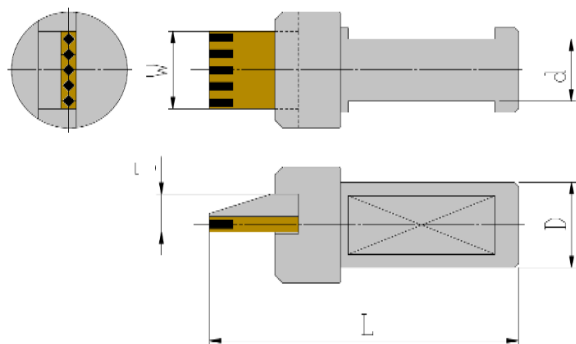
MR-7



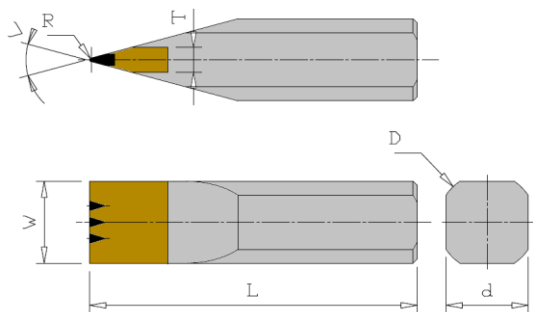
MR-7V

Unit : mm

Type / 型號	W	T	D	d	L	V	R	A	Remark / 備註
MR-7	10	5	11\12	-	40	38°	-	-	Flat top with taper shank 平頂無斜角錐度柄
MR-7V	10	5	11\12	-	40	70°	0.4	-	Angular top with taper shank 有斜角錐度柄



MR-8

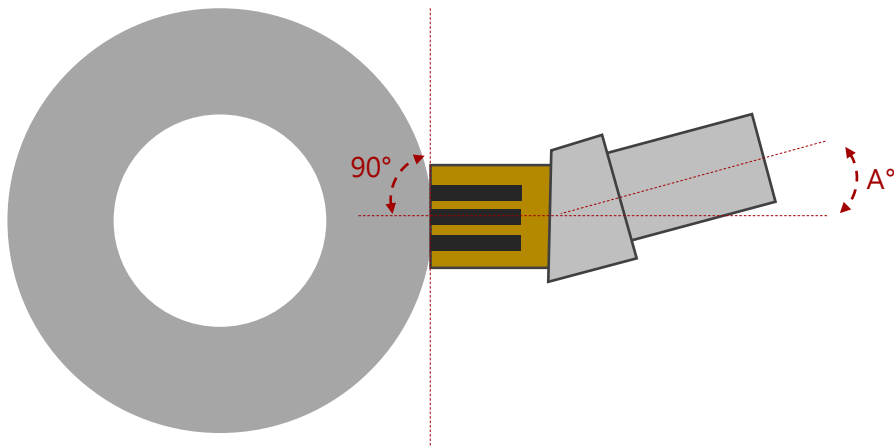
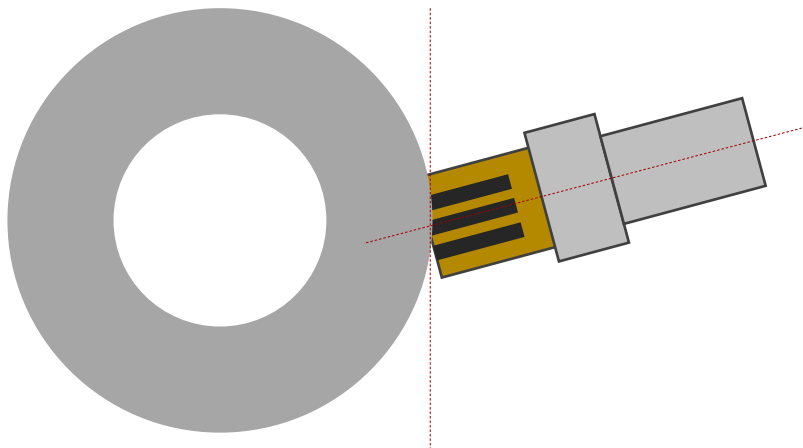
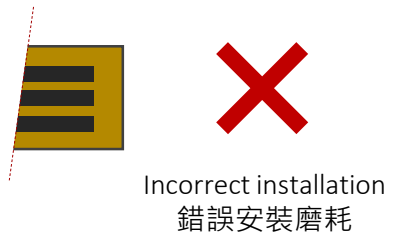
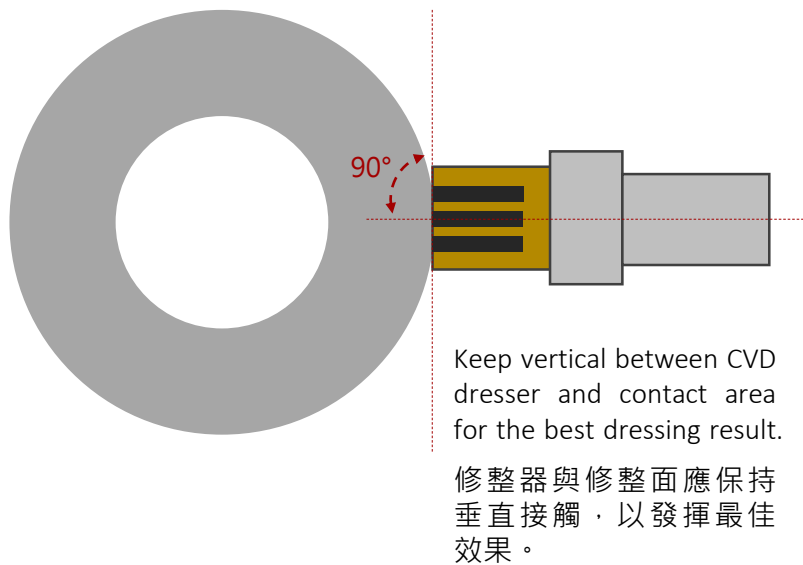


MR-10

Unit : mm

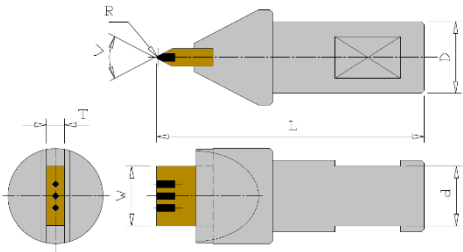
Type / 型號	W	T	D	d	L	V	R	A	Remark / 備註
MR-8	10	4.9	11	8	40	-	-	-	Flat top 平頂有頭無斜角
MR-10	10	3	12	10	35	30°	0.2	-	Angular top with straight shank 尖頂直柄無斜角

Precautions for use / 使用注意事項



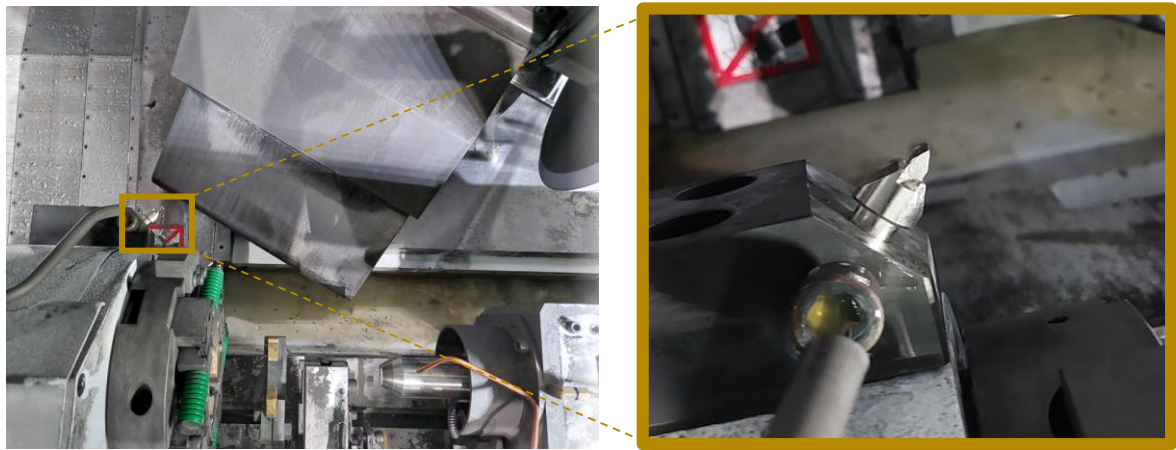
Case study / 使用案例

Machine 機台	Mitsubishi angular type cylindrical Mitsubishi 斜進式磨床
Wheel specification 砂輪規格	29A80J9VLK21N 610 x 55 x 254
Parameter 修整參數	Depth of cut 切深 : 0.035 mm Cylinder 外圓 : 100 mm/min End fane 端面 : 250 mm/min
Material of work 工件材質	Carbon steel 中碳鋼
Hardness of work 工件硬度	HRC 58 - 60
Roughness of work 工件面粗	Cylindrical Ra < 0.8 um 外圓 Ra<0.8 um



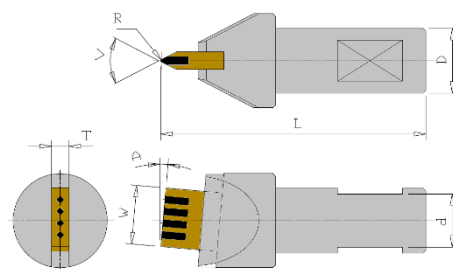
Dresser type
修刀型號

MR-3



Wear resistance comparison / 耐磨耗性比較

Specification CVD修刀規格	D3008 3 MDR MR-5 10 x 4.5 x 9.5 x 11 x 45 x 55 x 0.2
Size of CVD pillar 晶柱尺寸	0.8 x 0.8 x 30 mm
Quantity of pillars 晶柱數量	3
Machine 機台	JAINNHER cylindrical grinder 鍵和外圓磨床
Wheel specification 砂輪規格	C 60 K 5 V 1A
Wheel size 砂輪尺寸	405 x 50 x 127 mm
Wheel speed 砂輪轉速	RPM 1200
Feed rate 橫送速度	300 mm/min
Infeed single side 單邊進刀量	0.02 mm
Stock removal single side 單邊磨除量	45.5 mm



Dresser type
修刀型號 **MR-5**



Anchor MR-5

Competitor

Life time **187%**

The left photo shows that the competitor's dresser has worn much more than Anchor MR-5.

左圖為MR-5與現用競爭品的磨耗測試，可見競爭品明顯磨耗多了許多。



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