

PCD Metalworking

Syndite 70 Plus Disc

A new addition to the Syndite range of PCD cutting tool blanks.

The new Syndite 70 Plus Disc has been developed by Element Six in response to the ever-increasing requirements of the metalwork industry for PCD cutting blanks with a guaranteed depth of PCD layer. The 70 Plus Disc will ultimately supercede the existing 74 mm discs currently available.

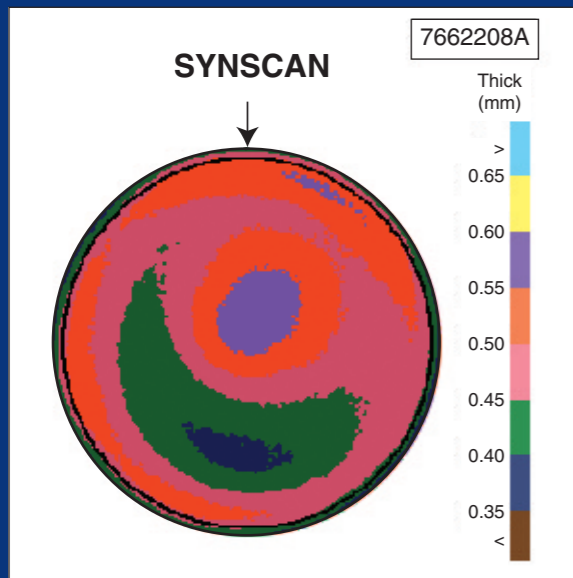
The new PCD product has an outside diameter of 76mm with a concentric inner 70mm diameter of usable PCD of a guaranteed layer thickness. The PCD layer thickness is confirmed with an individual, disc-specific multi-colour ultrasonic scan of the PCD layer.

A key advantage of the 3mm outer annulus is that it can be used as a clamping zone when EDM cutting, this ensures that the full area of the 70mm PCD can be accessed in one cutting operation. An extra benefit is that on completion of the cutting of the 70 mm central area, this outer layer provides an extra area of PCD which can be utilised at the discretion of the toolmaker.



Advantages

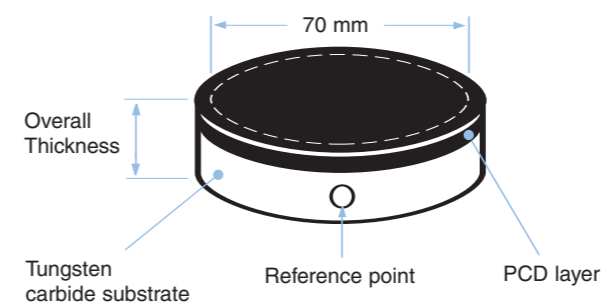
- 70 mm diameter central annulus of usable PCD to a guaranteed thickness
- Specification of guaranteed usable PCD confirmed by a detailed multi-colour ultrasonic scan
- 3 mm wide outer area gives a total disc diameter of 76 mm
- Clamping area can be used for additional EDM cutting



SYNSCAN

An individual ultrasonic scan of the disc including more than 10000 separate measurement points of the PCD layer is provided with each disc with a reference point on both the scan and the disc. This gives the user the exact profile of the PCD layer which can then be tailored to produce particular tool specifications, if required.

Each disc is individually numbered; this number will appear on the synscan, facilitating the full tractability of each disc.



Product availability

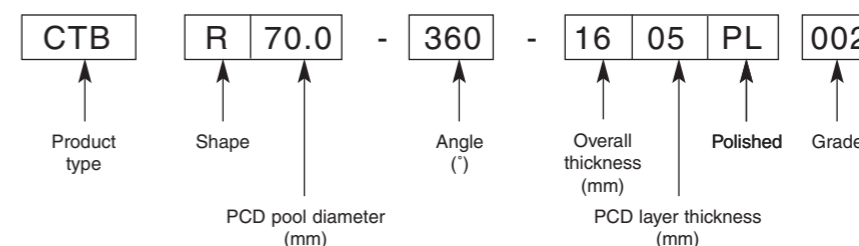
All Syndite metalworking discs are available with a lapped or polished surface.



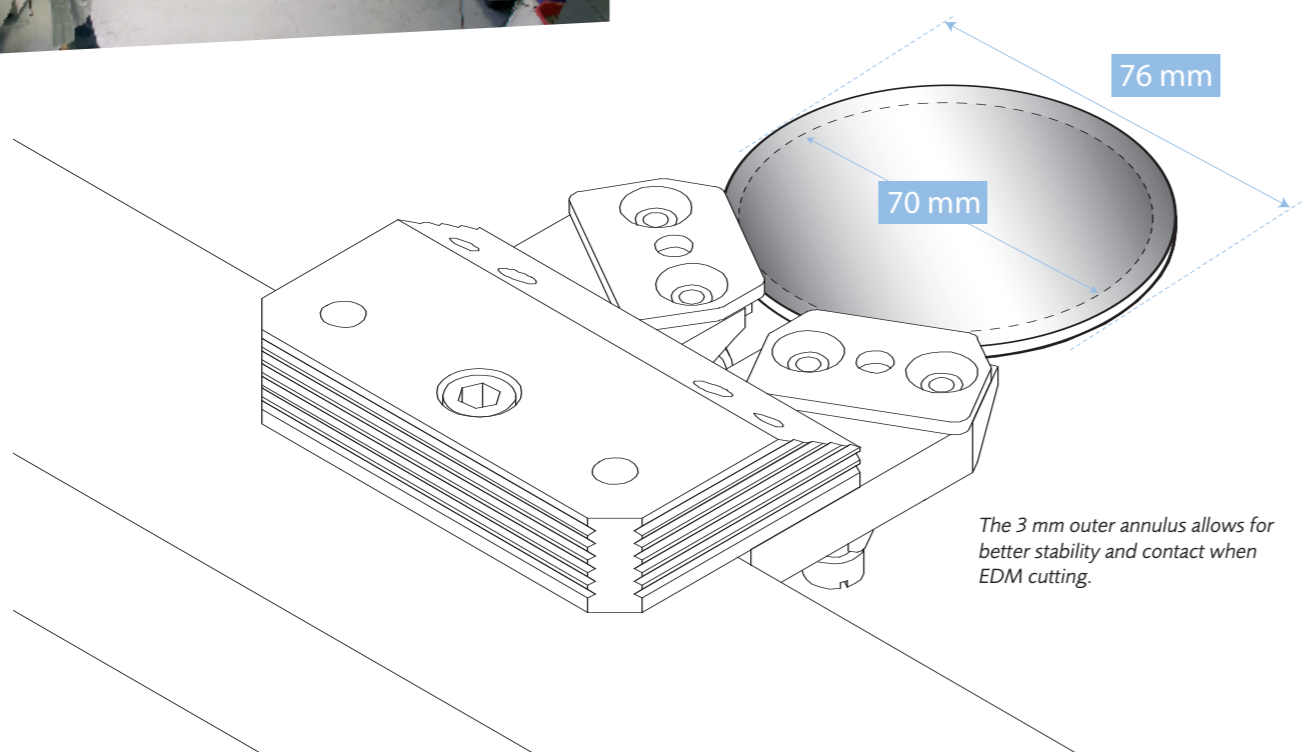
CLAMPING ANNULUS

The 70 Plus disc comes with a 3 mm outside ring of PCD at no extra cost which allows the user to clamp the disc in this area. This increases electrical conductivity which improves both EDM cutting performance and the stability of the disc during cutting.

The following product codes should be used for the ordering of Syndite products:



Thanks to its unrivalled expertise in PCD synthesis technology, Element Six is able to offer the new Syndite 70 Plus disc in 4 separate grades:



Syndite Metalworking Disc Product Range							
Diameter	Grade	PCD layer	Standard Non - Standard	Standard Total Thickness			
				1.6mm	2.0mm	3.18mm	8.00mm
70mm	CTB002	0.3mm	Non - Standard	✓	✓	✗	✗
		0.5mm	Standard	✓	✓	✓	✗
		0.7mm	Non - Standard	✓	✓	✓	✗
	CTB010	0.3mm	Non - Standard	✓	✓	✗	✗
		0.5mm	Standard	✓	✓	✓	✗
		0.7mm	Non - Standard	✓	✓	✓	✓
		1.0mm	Non - Standard	✗	✗	✓	✗
	CTH025	0.5mm	Standard	✓	✓	✓	✗
	CTM302	0.5mm	Standard	✓	✓	✗	✗
		0.7mm	Non - Standard	✗	✗	✓	✓
		1.5mm	Non - Standard	✗	✗	✓	✓

Total thickness tolerance on standard discs ± 0.05 mm
PCD Layer thickness tolerance nominally ± 0.1 mm