

HIGH PERFORMANCE COATING EQUIPMENT

Multipurpose PVD Hard Coating Systems for Tooling Technologies

HIGH PERFORMANCE COATINGS



| | MpC 500 | MpC 600 | MpC 1000 | MpC 1500 | MpC 2500 |
|------------------------------------|----------------|----------------|-----------------|-----------------|-----------------|
| Usefull volume | Ø 350 x 500 mm | Ø 450 x 500 mm | Ø 650 x 500 mm | Ø 650 x 1140 mm | Ø 900 x 1140 mm |
| Load | 150 kg | 400 kg | 1000 kg | 1500 kg | 3000 kg |
| QTY / batch End Mills Ø 10 x 70 | 360 | 576 | 864 | 1782 | 2376 |
| Cycle time | 3,5 h | 3,5 h | 4,5 h | 6 h | 7 h |
| # of sources* | 1 to 3 | 2 or 4 | 4 | 6 | 6-8 |
| Technology | | | | | |
| ARC | ✓ | ✓ | ✓ | ✓ | ✓ |
| ARC / Sputter hybrid | | ✓ | ✓ | | |
| Duplex (PN + Hard coating) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sputter | ✓ | ✓ | ✓ | | |

*depending on coating type and configuration

PD2i Europe

Dirk Haack
info@pd2i.com
Tel +49 (0) 2421 692 3000

PD2i France

Pierre Collignon
info@pd2i.com
Tel +33 (0) 153 75 45 05

North America

Dave Schwab
dave.schwab@pd2i.com
Tel +1 847 668 7279

South East Asia

Leong Sai Yeong
syleong@nanogrind.com
Tel +60 12 482 2006

China

Hee Choon Tan
heechoon.tan@pd2i.com
Tel +86 136 0005 6796

Taiwan

David Tseng
panfolksdavid@gmail.com
Tel +886 937 759 426

Korea

Yeojong Yoon
Yeojong.Yoon@pd2i.com
Tel +821 054 576 691

Coating Portfolio



| | | Main Properties | Micro Hardness HV 0,025 | Friction Coeff | Max Service Temp. °C | Color |
|------------------------------------|-------------------|---|-------------------------|----------------|----------------------|------------------|
| TiN | TiN | tough & multi purpose | 2300 | 0,5 | 600 | gold light |
| | TiN HP | higher toughness & hardness | 2700 | 0,5 | 750 | brown |
| TiCN | TiCN G | very hard & tough | 3400 | 0,3 | 450 | grey |
| | TiCN P | hard & very tough | 3100 | 0,3 | 450 | pink |
| | MpC C-Form | hard & lubricant | 3100 | 0,17 | 450 | anthracite |
| ZrN | ZrN | low sticking & chemical inert | 2400 | 0,4 | 600 | light yellow |
| | ZrCN | incr. hardness, low sticking & inert | 2600 | 0,4 | 600 | light brown |
| CrN | CrN | tough & chemical inert | 2000 | 0,3 | 0,4 | metal silver |
| AlTiN | ALTiN nano | oxidation resistant & hot hardness | 3200 | 0,5 | 900 | violet grey |
| | AlTiCN | low sticking | 3200 | 0,5 | 800 | dark grey |
| | GearCut | against crater wear | 3200 | 0,5 | 900 | dark grey |
| AlCrN based AlTiCrN | MpC+4 | shock resistant & tough | 3300 | 0,5 | 1000 | anthracite |
| | MpC+4 G | lower thermal conductivity | 3300 | 0,5 | 1100 | grey |
| AlTiSiN | HardMill Plus | lowest thermal conductivity, hot hardness & oxidation resistant | 3800 | 0,5 | > 1100 | green |
| | HardMill Micro | | 3800 | 0,4 | > 1100 | brown |
| | HardDrill | | 3800 | 0,5 | > 1100 | dark brown |
| | HardGearCut | | 3800 | 0,5 | > 1100 | brown |
| Nanocomposite Micro Alloyed | Micral 5 | thermal stable, against cold welding | 3300 | 0,5 | 1100 | purple |
| | Micral 5 micro | thermal stable, against cold welding | 3300 | 0,5 | 1100 | dark grey |
| | Micral Cast | high oxidation resistant & low thermal conductivity | 3800 | 0,5 | > 1100 | dark brown |
| | Micral Titan Plus | very tough & heat resistant | 3500 | 0,5 | 1100 | blue |
| ta-C | Ta:C | high wear resistance, very low friction, chemical inert | > 5500 | 0,1 | 500 | rainbow <-> grey |

PD2i Europe
Dirk Haack
info@pd2i.com
Tel +49 (0) 2421 692 3000

PD2i France
Pierre Collignon
info@pd2i.com
Tel +33 (0) 153 75 45 05

North America
Dave Schwab
dave.schwab@pd2i.com
Tel +1 847 668 7279

South East Asia
Leong Sai Yeong
syleong@nanogrind.com
Tel +60 12 482 2006

China
Hee Choon Tan
heechoon.tan@pd2i.com
Tel +86 136 0005 6796

Taiwan
David Tseng
panfolksdavid@gmail.com
Tel +886 937 759 426

www.PD2i.com

Korea
Yeojong Yoon
Yeojong.Yoon@pd2i.com
Tel +821 054 576 691

