# Solid Carbide Endmill and Drill Fluting

hasdia
DIAMOND AND CBN GRINDING WHEELS


## Hybrid Bond Wheel Specification

D64 P109 (a)
D64 P110 (b)

| | |
|---|---|
| **Operation:** | Helical fluting with high depth of pass |
| **Workpiece:** | Endmills/Drills Ø6-32 |
| **Material:** | Tungsten Carbide |

## Dressing:

| | |
|---|---|
| **Stick:** | White |
| **Use:** | Manual |

## Machine:

| | |
|---|---|
| **Brand:** | - |
| **Spindle:** | ≥12 kW |
| **Coolant:** | Well filtered neat oil |
| **Pressure:** | ≥8 bar |

## Grinding Parameters:

| | |
|---|---|
| **Speed:** | (a) 12 : 16 m/s<br>(b) 15 : 20 m/s |
| **Depth of pass:** | Between 2 mm and 8 mm |
| **Feed:** | Between 60 mm/min and 120 mm/min |

| Parameters | Resin Bonded Wheel Performance | Hybrid Bonded Wheel Performance |
|---|---|---|
| Depth of Pass (mm) | 0,3 : 2,0 | 2,0 : 8,0 |
| Feed (mm/min) | 120 : 40 | 160 : 30 |
| Surface Quality | Frequent burns at the end of pass | Bright and homogeneous |
| Dressing Interval | Frequent | Less frequent |
| Removal (mmc/min) | 250 - 500 | 800 - 1200 |
| Grinding Ratio (ccm/ccm) | 40 - 80 | 100 - 220 |

## Notes:

The extremely high hybrid bonds removal ability with high diamond concentration allows to work with very high depths of pass, not possible with resin bonds, getting the same time an exceptionally good finishing quality. It is necessary, however, to dispose of a sufficiently rigid machine with adequate spindle power and a well suited neat oil cooling system. Under such premises, the fluting operation turns out to become very easy and economic, furthermore you save a dramatic amount of time (at least half of the time you get with other bonding systems) inducing much lower stresses in the workpiece material. Finally, you get a substantial gain in terms of time, wheel cost per piece and material structural integrity through no microfractures.