



Innovative Tool Sales

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Technical Support Page

SELECTING NUMBER OF FLUTES

Number of flutes of end mills should be determined by:

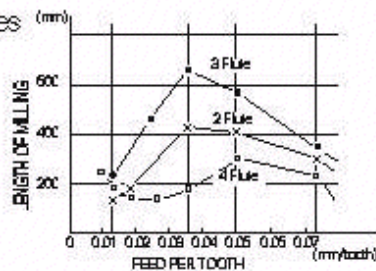
- Milled material
- Dimension of workpiece
- Milling conditions

Number of Flutes

END MILL Ø 10mm	2 FLUTE	3 FLUTE	4 FLUTE
PROJECTION CHART			
SECTION ACREAGE	41mm	44mm	49mm
SECTION ACREAGE AREA OF CIRCLE X 100	52%	56%	61%

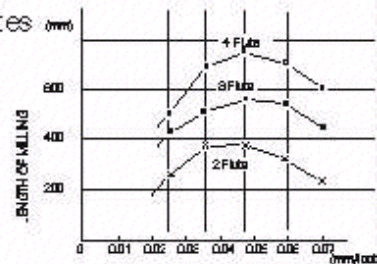
Number of Flutes and Tool Life in Slotting

Conclusion:
Prefer 3 flutes or 2 as compromise



Number of Flutes and Tool Life in Profiling

Conclusion:
Prefer as many flutes as possible



Number of flutes and section area

2 Flutes: Big chip space

- Easy Chip Ejection
- Good for Slot Milling
- Good for Heavy-Duty Milling
- Less Rigidity due to small section area
- Lower surface finish

3 Flutes: Chip space almost as big as 2 flutes

- Bigger section area - higher rigidity than 2 flutes
- Improved surface finish

4 Flutes (multi flutes): Highest rigidity

- Biggest section area - small chip space
- Gives highest surface finish
- Recommended for profiling, side milling and shallow slotting.