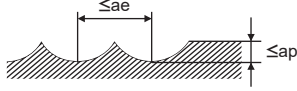


Recommended Cutting Conditions

(inch)

Workpiece Material		Carbon Steel, Alloy Steel (180—280HB) Alloy steel ($\leq 350\text{HB}$), Pre-hardened steel (35—45HRC) Hardened steel (45—62HRC)						Hardened steel (62—70HRC)					
Corner Radius RE		$\alpha \leq 15^\circ$		$\alpha > 15^\circ$		Depth of cut ap	Depth of cut ae	$\alpha \leq 15^\circ$		$\alpha > 15^\circ$		Depth of cut ap	Depth of cut ae
(mm)	(inch)	Revolution (min ⁻¹)	Feed rate (IPM)	Revolution (min ⁻¹)	Feed rate (IPM)			Revolution (min ⁻¹)	Feed rate (IPM)	Revolution (min ⁻¹)	Feed rate (IPM)		
0.5	.020	40000	31.5	40000	31.5	.0003	.0003	40000	22.0	40000	22.0	.0002	.0002
0.75	.030	40000	31.5	40000	31.5	.0004	.0004	40000	22.0	40000	22.0	.0003	.0003
1	.039	35000	41.3	35000	41.3	.0004	.0004	35000	27.6	35000	27.6	.0004	.0004
1.25	.049	35000	41.3	35000	41.3	.0005	.0005	35000	27.6	35000	27.6	.0004	.0004
1.5	.059	35000	41.3	35000	41.3	.0006	.0006	35000	27.6	35000	27.6	.0005	.0005
2	.079	25000	39.4	25000	39.4	.0007	.0007	25000	29.5	25000	29.5	.0006	.0006
2.5	.098	25000	39.4	25000	39.4	.0008	.0008	25000	29.5	25000	29.5	.0006	.0006
3	.118	25000	39.4	25000	39.4	.0008	.0008	25000	29.5	25000	29.5	.0006	.0006
Depth of cut													

Note 1) The tools are recommended for use only in finish machining.

Note 2) Air blowing or oil mist is recommended as coolants.

Note 3) Note the following points when using the tools.

- Avoid using equipment abruptly without proper preparation. After sufficiently energizing equipment, ensure that there will be no changes to the depth of cut such as due to elongation of the main axis during machining.
- If the tools are used immediately after rough machining of a surface, large uneven areas (cusp heights) will cause deflection of the tools and waviness of the machined surface. Therefore, it is recommended to add a medium finish machining process which uses the same value of ae as indicated in the table above.

Note 4) α is the inclination angle of the machined surface.

