Machining Instructions

General

Orkot® materials are readily machinable by conventional machine shop techniques. As a general guide, methods used for brass, aluminium or lignum vitae will apply for Orkot® materials. It is preferable to use tungsten carbide turning tools with cutting speeds of 5.5 metres (19 feet) per second. Orkot® materials must be machined dry without the use of coolant.

Turning

Tungsten carbide tooling of the butt welded type using K20 grade carbide is suitable for most applications. If carbide inserts are used, then aluminium grades with high positive rates give best results e.g. Plansee grade H10T, Sandvik H10A or H13A, Mitsubishi HTI10.

For heavy wall thickness, the internal and external diameters should be machined together to reduce vibration.

No asbestos is used in the manufacturing of Orkot® Marine and the material is completely non toxic. It is however advisable to use adequate dust extraction when machining. If unavailable, operators should wear dust particle masks.

For small volume work and machining of chamfers, radii and other forms, then high speed steel gives good results, but tool life is shorter than with tungsten carbide.

Cutting Angle for Tools

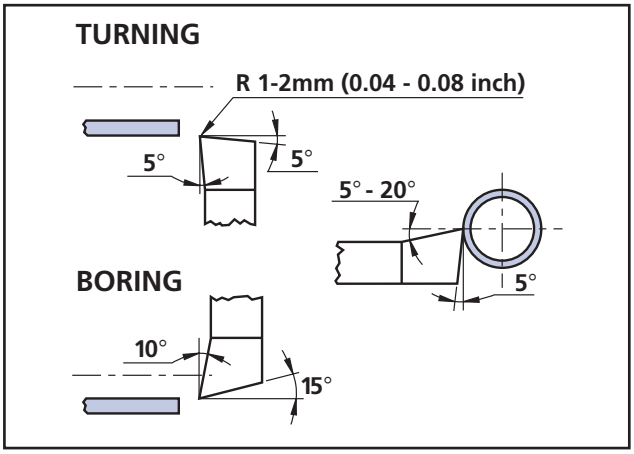

Figure 11: Turning and boring

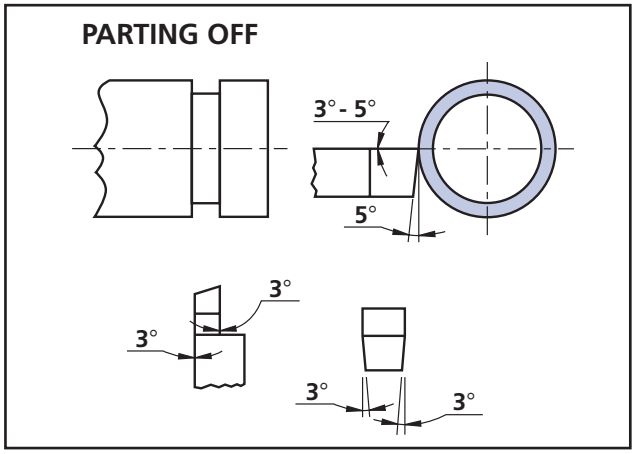

Figure 12: Parting off

Table 14: Speeds in mm

Diameter (mm)	Rpm
0 - 50	2100
50 - 100	1000
100 - 150	700
150 - 200	550
200 - 300	350
300 - 400	250
400 - 500	200
500 - 600	175
600 - 700	150
700 - 800	130
800 - 900	120
900 - 1000	100

Table 15: Speeds in inches

Diameter (inch)	Rpm
0 - 2	2100
2 - 4	1000
4 - 6	700
6 - 8	550
8 - 12	350
12 - 16	250
16 - 20	200
20 - 24	175
24 - 28	150
28 - 32	130
32 - 36	120
36 - 40	100