

Machining TOOLOX33



TOOLOX 33 can be machined using conventional machines. It is important that sharp tools are used, with a positive cutting angle and that vibration is avoided. Use the following recommendations as guidelines and the starting point for your own evaluation of best practice.

Milling

Cemented carbide cutter ISO class P 20

Always use a positive cutting angle

Cutting speed $V_c = 150-250$ m/min

Feed $f = 0.10-0.20$ mm/tooth

Speed (rpm) $n = \frac{V_c \times 1000}{\pi \times D}$



Roughing

Use milling cutters with circular inserts



Finishing

Use milling cutters with a 45° setting angle

Drilling

Carbide

Cutting speed $V_c = 40-50$ m/min

$f = 0.10-0.18$ mm/revolution

Feed (f) and speed (rpm) (n) are dependent on the drill bit diameter D

Use coolant



High speed steel HSS-Co

Cutting speed $V_c = 13-15$ m/min

Speed (rpm) $n = \frac{V_c \times 1000}{\pi \times D}$

Use coolant



D [mm]	Feed, f [mm/revolution]
5	0.10
10	0.10
15	0.16
20	0.23
25	0.30
30	0.35

Threading

Thread milling

Cutting speed $V_c = 30$ m/min

Feed (f) = 0.03 mm/tooth



Threading HSS-Co

Cutting speed $V_c = 7-9$ m/min



Dimension	Speed
M6	450
M8	300
M10	250
M12	200
M16	150

Gas cutting / Welding

Recommended preheat temperature when gas cutting and welding. **Minimum 175 °C**

Recommended stress relief annealing (after slow cooling to room temperature)

after gas cutting and welding. **580 °C**

For further information see Best Practice or please contact SSAB Oxelösund.