

Recommended Cutting Data

Type	Roughing cut	Finishing cut, contour cut
1200 1000 850	$n = 8.000 - 15.000$ 1/min $v_f = 2.000 - 3.000$ mm/min $a_p = 1,0 - 3,0$ mm 2 flute carbide milling cutter	$n = 8.000 - 18.000$ 1/min $v_f = 1.000 - 3.000$ mm/min $a_p = 0,2 - 0,5$ mm 2 or 3 flute ball nose carbide milling cutter
480 720	$n = 8.000 - 15.000$ 1/min $v_f = 2.000 - 3.000$ mm/min $a_p = 3,0 - 5,0$ mm 2 flute carbide milling cutter	$n = 8.000 - 18.000$ 1/min $v_f = 1.000 - 3.000$ mm/min $a_p = 0,2 - 0,5$ mm 2 or 3 flute ball nose carbide milling cutter

Key: n = spindle speed, v_f = feed rate, a_p = depth of cut

Metal working machines

1.1 Roughing: Straight-shank milling cutter, carbide or HSS

Diameter : 25 - 40 mm
Speed : $n = 1500 - 2000$ rpm⁻¹
Feed : $v_f = 2 - 3$ m/min
Depth of cut : 10 - 15 mm, up to 100 mm depth

1.2 Finishing: Carbide spherical cutter

a) Diameter : 6 mm
Speed : $n = 3000 - 6000$ rpm⁻¹
Feed : $v_f = 0,8 - 2$ m/min
b) Speed : $n = 2000 - 5000$ rpm⁻¹
Feed : $v_f = 1 - 2$ m/min

General Remarks:

The cutting speed $v = n \times Jt \times d$ (m/min) should not exceed 250 m/min for HSS cutters and 1000 m/min for carbide cutters.

Refer to and comply with the manufacturer's specifications.

Wood or plastic working machines

e.g. Carbide milling cutter

Diameter : 10 mm, face-cutting
Speed : $n = 2000 - 15000$ rpm⁻¹
Feed : $v_f = 3 - 5$ m/min
Depth of cut : Roughing 10 - 15 mm
Finishing : up to max. 3 mm

High speed milling

e.g. Carbide milling cutter

Diameter : 20 mm,
Radius R : = 10 mm
Speed : $n > 20000$ rpm⁻¹
Feed : $v_f = 12$ bis 15 m/min
Cell spacing : 0,5 mm
Depth of cut : 1 mm

All mentioned data are recommended indicative values where OBO is achieving the best results.

According to the machine type, tool and work piece all parameter have to be proven by the person in charge of machining.

The working values should not exceed the recommended max. values of the machine manufacturer.

All data relating to the material as well as machining and processing are provided to the best of our knowledge without obligation and should not be considered as an assurance of either material properties or as machining and processing options in individual cases.

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