

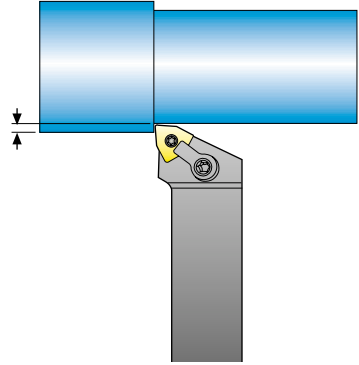
Turning - Technical information

Cutting depth

The maximum cutting depth that can be used depends on a number of factors, including machine power, stability, workpiece material, insert shape and size, nose radius, chipbreaker, grade and setting angle.

Start with the insert size to get an indication and proceed with the recommendations for the chosen chipbreaker. This will give a suitable maximum cutting depth.

The minimum cutting depth should not be less than the nose radius.



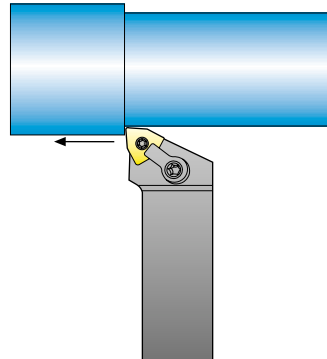
Feed rate

The maximum feed rate that can be used depends on a number of factors including machine power, stability, workpiece material, insert shape and size, nose radius, chipbreaker, grade and setting angle.

Another, very important factor is the required surface finish. Start by looking at the recommendations for the chosen chipbreaker. Then look in the surface finish table below to be sure that the required surface finish can be achieved.

The maximum feed rate should always be considerably smaller than the nose radius.

A feed rate that is too low can result in poor chipbreaking and tool life.



Surface finish table

A large nose radius normally produces a better surface finish.

The table gives recommended maximum feed rates to achieve a specified Ra-value.

Surface finish Ra value (μ inch)	Nose radius, r_n (inch)					
	.008	.016	.032	.047	.062	.094
	Feed rate, f (inch/rev)					
24	.002	.003	.004	.005	.006	.007
64	.003	.005	.006	.008	.009	.011
128	.005	.006	.009	.011	.013	.016
250	–	.009	.013	.016	.018	.022
320	–	–	.016	.019	.022	.027