

Milling | Indexables | Cutting conditions

Side milling $L/D \leq 5$

PXVC

Side milling $5 < L/D \leq 6$

1. Use a rigid and precise machine and holder.
2. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used
3. Please adjust the cutting condition when the overhang length is longer.
4. Please consider the overhang length as the total length of replaceable head and overhang length of shank holder.

Side milling $6 < L/D \leq 7$

1. Use a rigid and precise machine and holder.
2. Please adjust the speed and feed when the cutting depth is large or when machines with low rigidity are used
3. Please adjust the cutting condition when the overhang length is longer.
4. Please consider the overhang length as the total length of replaceable head and overhang length of shank holder.


CUTTING CONDITIONS

Milling | Indexables | Cutting conditions

PXVC

Slotting


$L/D \leq 5$

	Mild steel - Carbon steel Cast iron SS400 · S55C · FC250 ~750 N/mm2		Alloy steel Tool steel SCM · SKT · SKS · SKD ~30 HRC		Stainless steel Hardened steel SUS304 · SKD ~45 HRC		Hardened steel Titanium alloy steel (wet) Ti-6Al-4V 45~55 HRC		
	Ø	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)
	10	4.780	960	3.820	770	3.180	640	2.390	480
	12	3.980	800	3.180	640	2.650	530	1.990	400
	14	3.410	680	2.730	550	2.270	450	1.710	340
	16	2.980	600	2.390	480	1.990	400	1.490	300
	18	2.650	530	2.120	420	1.770	350	1.330	270
	20	2.390	480	1.910	380	1.590	320	1.190	240
	22	2.170	430	1.740	350	1.450	290	1.090	220
	25	1.910	380	1.530	310	1.270	250	950	190
	32	Not recommended (due to the large number of flutes)							
Max cutting depth	<div>ap</div>		<div>ap</div>		<div>ap</div>		<div>ap</div>		
	≤ 0,5 D		≤ 0,4 D		≤ 0,3 D		≤ 0,3 D		

PXVC

Slotting

$5 < L/D \leq 6$


	Mild steel - Carbon steel Cast iron SS400 · S55C · FC250 ~750 N/mm2		Alloy steel Tool steel SCM · SKT · SKS · SKD ~30 HRC		Stainless steel Hardened steel SUS304 · SKD ~45 HRC		Hardened steel Titanium alloy steel (wet) Ti-6Al-4V 45~55 HRC		
	Ø	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)
	10	3.820	770	3.190	640	2.550	510	2.070	420
	12	3.190	640	2.660	540	2.130	430	1.730	350
	14	2.730	550	2.280	460	1.820	370	1.480	300
	16	2.390	480	1.990	400	1.600	320	1.300	260
	18	2.130	430	1.770	360	1.420	290	1.150	230
	20	1.910	390	1.600	320	1.280	260	1.040	210
	22	1.740	350	1.450	290	1.160	240	950	190
	25	1.530	310	1.280	260	1.020	210	830	170
	32	Maximum length of L/D=5 in combination with the standard shank							
Max cutting depth	<div>ap</div> <div>≤ 0,5 D</div>		<div>ap</div> <div>≤ 0,4 D</div>		<div>ap</div> <div>≤ 0,3 D</div>		<div>ap</div> <div>≤ 0,3 D</div>		

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$6 < L/D \leq 7$

	Mild steel - Carbon steel Cast iron SS400 · S55C · FC250 ~750 N/mm2		Alloy steel Tool steel SCM · SKT · SKS · SKD ~30 HRC		Stainless steel Hardened steel SUS304 · SKD ~45 HRC		Hardened steel Titanium alloy steel (wet) Ti-6Al-4V 45~55 HRC		
	Ø	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)
	10	3.190	640	2.550	510	2.230	450	1.910	390
	12	2.660	540	2.130	430	1.860	380	1.600	320
	14	2.280	460	1.820	370	1.600	320	1.370	280
	16	1.990	400	1.600	320	1.400	280	1.200	240
	18	1.770	360	1.420	290	1.240	250	1.070	220
	20	1.600	320	1.280	260	1.120	230	960	200
	22	1.450	290	1.160	240	1.020	210	870	180
	25	1.280	260	1.020	210	900	180	770	160
	32	Maximum length of L/D=5 in combination with the standard shank							
Max cutting depth	<div>ap</div> <div>≤ 0,3 D</div>		<div>ap</div> <div>≤ 0,3 D</div>		<div>ap</div> <div>≤ 0,25 D</div>		<div>ap</div> <div>≤ 0,2 D</div>		

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