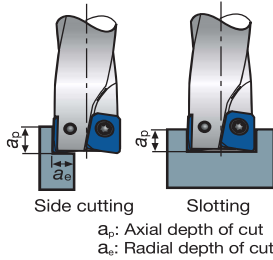


EVH

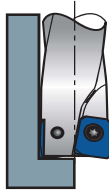
Standard cutting conditions

Shoulder milling, Slotting



Work material	Carbon steels and alloy steels		Alloy steels and prehardened steels		Stainless steels		Cast irons		Aluminum alloys (Si < 13%)		Aluminum alloys (Si ≥ 13%)	
Hardness	< 30HRC		30 ~ 40HRC		< 250HB		-		-		-	
Cutting speed	$V_c = 160 \sim 400$ SFM		$V_c = 100 \sim 330$ SFM		$V_c = 160 \sim 400$ SFM		$V_c = 200 \sim 140$ SFM		$V_c = 330 \sim 980$ SFM		$V_c = 330 \sim 650$ SFM	
Conditions	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min
	$\phi.394$	2550 15	1910 8	2550 15	3180 20	6370 40	4770 26					
	$\phi.500$	2120 13	1590 6	2120 13	2650 17	5300 33	3980 22					
Tool dia. (in)	$\phi.625$	1590 9	1190 5	1590 9	1990 13	3980 25	2980 17					
	Side cutting	$a_p < .25D$ $a_e < .2D$		$a_p < .25D$ $a_e < .2D$		$a_p < .25D$ $a_e < .2D$		$a_p < .25D$ $a_e < .3D$		$a_p < .25D$ $a_e < .3D$		
	Slotting	$a_p < .1D$		$a_p < .1D$		$a_p < .1D$		$a_p < .006D$		$a_p < .2D$		

Drilling • Plunging

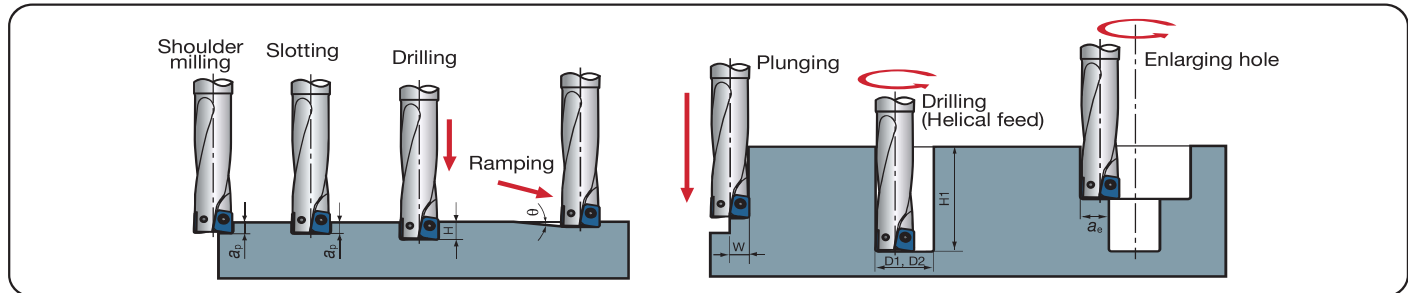


Work material	Carbon steels and alloy steels		Alloy steels and prehardened steels		Stainless steels		Cast irons		Aluminum alloys (Si < 13%)		Aluminum alloys (Si ≥ 13%)	
Hardness	< 30HRC		30 ~ 40HRC		< 250HB		-		-		-	
Cutting speed	$V_c = 160 \sim 400$ SFM		$V_c = 100 \sim 330$ SFM		$V_c = 160 \sim 400$ SFM		$V_c = 200 \sim 460$ SFM		$V_c = 330 \sim 980$ SFM		$V_c = 330 \sim 980$ SFM	
Conditions	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min	No. of rev. n / min ⁻¹	Feed V_f / in/min
	$\phi.394$	2550 5	1910 3	2550 5	3180 7	6370 18	4770 11					
	$\phi.500$	2120 4	1590 3	2120 4	2650 6	5300 15	3980 9					
Tool dia. (in)	$\phi.625$	1590 3	1190 2	1590 3	1990 5	3980 11	2980 7					

- Note:
- In slotting or pocketing where chips tend to stay in the cutting zone, use an air blast to remove chips to prevent chip recutting.
 - When chips tend to weld excessively on the cutting edge such as in machining aluminum alloys, use a water soluble cutting fluid.
 - In the case of cutting a casting skin or a heavily interrupted work surface, decrease the feed per tooth and the maximum

- depth of cut to 1/2 to 2/3 times the values shown in the table.
- Tool overhang length must be as short as possible to avoid chatter. When the tool overhang length is long, decrease the number of revolutions and feed.
- Cutting conditions are generally limited by the rigidity and power of the machine and the rigidity of the workpiece. When setting the conditions, start from half of the values of the standard cutting conditions and then increase the value

Machining modes



Cat. No.	Tool dia.	Effective edge length a_p (in)	Max. drilling depth H (in)	Max. cutting width in plunging W (in)	Max. ramping angle θ	Min. machinable hole dia. ϕD_1 (in)	Min. machinable hole dia. ϕD_2 (in)	Max. cutting width in enlarging hole a_e (in)	Max. depth of boring H_1 (in)
EVH06R039U0050-02	$\phi.394$	.118	.196	.196	5	.472	.749	.354	1.12
EVH07R050U0050-02	$\phi.500$	.138	.236	.236	5	.551	.906	.433	1.42
EVH09R063U0063-02	$\phi.625$	.177	.315	.315	5	.708	1.22	.590	1.89