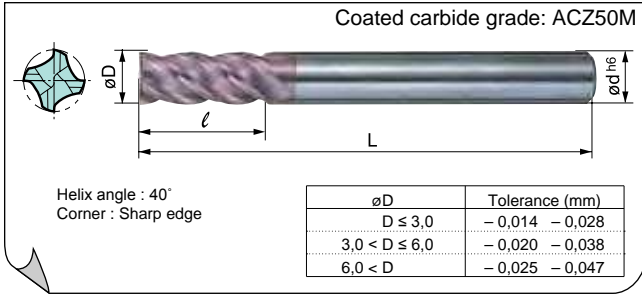
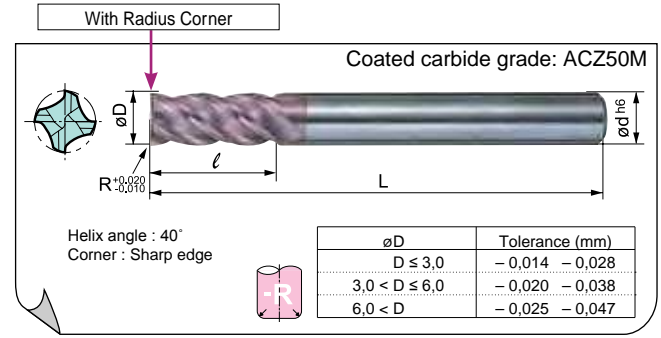


# ZX Coated UP MILL SSUP 4000ZX Type



# ZX Coated UP MILL SSUP 4000ZX-R Type



## Endmills (mm)

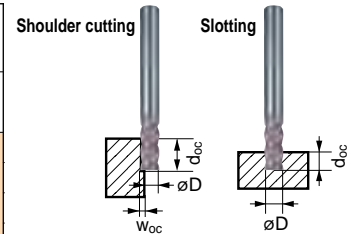
	Cat. No.	Stock	$\varnothing D$	$\ell$	L	$\varnothing d$
4	SSUP 4020ZX	●	2,0	6	50	4
	SSUP 4030ZX	●	3,0	8	50	6
	SSUP 4040ZX	●	4,0	11	50	6
	SSUP 4050ZX	●	5,0	13	60	6
	SSUP 4060ZX	●	6,0	13	60	6
	SSUP 4070ZX	●	7,0	16	70	8
	SSUP 4080ZX	●	8,0	19	80	8
	SSUP 4090ZX	●	9,0	19	90	10
	SSUP 4100ZX	●	10,0	22	90	10
	SSUP 4110ZX	●	11,0	22	90	12
	SSUP 4120ZX	●	12,0	26	90	12
	SSUP 4140ZX	●	14,0	26	110	16
	SSUP 4150ZX	□	15,0	26	110	16
	SSUP 4160ZX	●	16,0	32	115	16
	SSUP 4180ZX	□	18,0	32	120	20
	SSUP 4200ZX	●	20,0	38	125	20

## Endmills (mm)

	Cat. No.	Stock	$\varnothing D$	R	$\ell$	L	$\varnothing d$
4	SSUP 4030ZX-R02	●	3,0	0,2	8	50	6
	SSUP 4030ZX-R05	□	3,0	0,5	8	50	6
	SSUP 4040ZX-R02	●	4,0	0,2	11	50	6
	SSUP 4040ZX-R05	●	4,0	0,5	11	50	6
	SSUP 4040ZX-R10	□	4,0	1,0	11	50	6
	SSUP 4050ZX-R02	●	5,0	0,2	13	60	6
	SSUP 4050ZX-R05	●	5,0	0,5	13	60	6
	SSUP 4050ZX-R10	□	5,0	1,0	13	60	6
	SSUP 4060ZX-R03	●	6,0	0,3	13	60	6
	SSUP 4060ZX-R05	●	6,0	0,5	13	60	6
	SSUP 4060ZX-R10	●	6,0	1,0	13	60	6
	SSUP 4060ZX-R15	□	6,0	1,5	13	60	6
	SSUP 4080ZX-R03	●	8,0	0,3	13	80	8
	SSUP 4080ZX-R05	●	8,0	0,5	13	80	8
	SSUP 4080ZX-R10	●	8,0	1,0	19	80	8
	SSUP 4080ZX-R15	□	8,0	1,5	19	80	8
	SSUP 4080ZX-R20	□	8,0	2,0	19	80	8
	SSUP 4100ZX-R03	●	10,0	0,3	22	90	10
	SSUP 4100ZX-R05	●	10,0	0,5	22	90	10
	SSUP 4100ZX-R10	●	10,0	1,0	22	90	10
	SSUP 4100ZX-R15	□	10,0	1,5	22	90	10
	SSUP 4100ZX-R20	□	10,0	2,0	22	90	10
	SSUP 4120ZX-R05	●	12,0	0,5	26	90	12
	SSUP 4120ZX-R10	●	12,0	1,0	26	90	12
	SSUP 4120ZX-R15	●	12,0	1,5	26	90	12
	SSUP 4120ZX-R20	□	12,0	2,0	26	90	12
	SSUP 4120ZX-R30	□	12,0	3,0	26	90	12
	SSUP 4160ZX-R10	●	16,0	1,0	32	115	16
	SSUP 4160ZX-R15	●	16,0	1,5	32	115	16
	SSUP 4160ZX-R20	□	16,0	2,0	32	115	16
	SSUP 4160ZX-R30	□	16,0	3,0	32	115	16
	SSUP 4200ZX-R10	●	20,0	1,0	38	125	20
	SSUP 4200ZX-R15	□	20,0	1,5	38	125	20
	SSUP 4200ZX-R20	□	20,0	2,0	38	125	20
	SSUP 4200ZX-R30	□	20,0	3,0	38	125	20

## Recommended cutting conditions

Material	Carbon steel, Cast iron (Hb150~250)		Alloy steel, Prehardened steel (HRC25~35)		Hardened steel (HRC40~50)		Stainless steel		Heat resistant alloys Titanium alloy (HRC20~45)	
	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)
2	9000	720	6000	430	4000	320	5500	320	2600	120
4	6600	800	4500	450	3000	380	4000	320	2000	120
6	4800	960	3000	480	2500	380	3000	480	1200	120
8	3600	1000	2200	610	2000	400	2000	520	1000	140
10	2800	1000	1800	610	1500	400	1700	550	800	160
12	2400	950	1500	550	1200	380	1500	500	700	140
14	2200	880	1300	490	1000	360	1200	430	600	130
16	1800	650	1100	420	800	300	1000	360	500	120
18	1600	580	1000	360	750	270	900	340	450	110
20	1400	500	900	330	700	250	820	300	400	100
Shoulder cutting	$d_{oc}$	1,5D								
	$W_{oc}$	0,1D			0,05D		0,1D		0,05D	
Slotting	$d_{oc}$	1,0D								
		1,0D			0,2D		0,3D		0,2D	



- (1) Cutting performance is improved when using a high rigidity machine.
- (2) Speeds and feeds should be reduced when slotting some stainless steels.
- (3) In case of chatter first check the cutting conditions.