

Side Chipper

SIC_{TYPE}

■ RECOMMENDED CUTTING CONDITIONS

● SICM2513 TYPE (END MILL TYPE)

Work Materials	Insert Grades	Cutting conditions	Shoulder Milling	Slotting
Carbon steel S50C, S55C (C50, C55) 150-280HB	JC5040	n (min ⁻¹)	1,910	1,790
		V_f (mm/min)	860	650
		a_p (mm)	4	~4
		a_e (mm)	8	—
Alloy steel SCM440 (1.7223) 150-280HB	JC5040	n (min ⁻¹)	1,910	1,790
		V_f (mm/min)	690	540
		a_p (mm)	4	~4
		a_e (mm)	8	—
Mold steel NAK, P20 (1.2311, P20) 280-400HB	JC5040 JC5015	n (min ⁻¹)	1,530	1,400
		V_f (mm/min)	560	420
		a_p (mm)	2.5	~2.5
		a_e (mm)	8	—
Tool & Die steel SKD61, SKD11 (1.2344, 1.2379) 150-255HB	JC5040	n (min ⁻¹)	1,530	1,400
		V_f (mm/min)	560	420
		a_p (mm)	2.5	~2.5
		a_e (mm)	8	—
Stainless steel SUS304, SUS316 150-250HB	JC5015 (JC5040)	n (min ⁻¹)	1,400	1,280
		V_f (mm/min)	510	390
		a_p (mm)	2.5	~2.5
		a_e (mm)	8	—
Cast iron FC250, FC300 (GG25, GG30) 160-260HB	JC5015 (JC5040)	n (min ⁻¹)	2,040	1,910
		V_f (mm/min)	1,040	580
		a_p (mm)	4	~4
		a_e (mm)	8	—
Nodular cast iron FCD600, FCD700 (GGG60, GGG70) 170-300HB	JC5015 (JC5040)	n (min ⁻¹)	1,910	1,790
		V_f (mm/min)	860	650
		a_p (mm)	4	~4
		a_e (mm)	8	—
Aluminium alloy 50-110HB	FZ15	n (min ⁻¹)	3,820	3,820
		V_f (mm/min)	2,000	1,380
		a_p (mm)	4	~4
		a_e (mm)	8	—

n : Spindle speed (min⁻¹), V_f : Feed speed (mm/min)

- Note) 1. The cutting parameters to be adjusted according to the machine rigidity or work rigidity.
 2. In case of using long type holder, reduce depth of cut by 60% to 40% or feed speed.

Side Chipper

SIC_{TYPE}

RECOMMENDED CUTTING CONDITIONS

FACE MILL TYPE

Work Materials	Insert Grades	Cutting speed V _c (m/min)	Feed per tooth f _z (mm/t)	Depth of cut a _p (mm)	Pick feed a _e (mm)
Carbon steel S50C, S55C (C50, C55) 150-280HB	JC5040	150 (80~200)	0.20 (0.1~0.25)	5	0.6Dc
Tool & Die steel SKD61, SKD11 (1.2344, 1.2379) 150-255HB	JC5040	120 (80~150)	0.15 (0.1~0.2)	3	0.6Dc
Cast iron FC250, FC300 (GG25, GG30) 160-260HB	JC5040 JC5015	150 (80~200)	0.20 (0.1~0.25)	5	0.6Dc
Stainless steel SUS304, SUS316 150-250HB	JC5015 (JC5040)	110 (80~200)	0.10 (0.05~0.15)	3	0.6Dc
Aluminium alloy 50-110HB	FZ15	300 (200~500)	0.20 (0.1~0.25)	5	0.6Dc

RECOMMENDED CUTTING CONDITIONS FOR PCD INSERT (JDA10)

NOTE

- 1) Max. depth of cut: a_p=Up to 4mm
- 2) Max. cutting speed: V_c=Up to 1,000m/min

① SICM○○10 TYPE (END MILL TYPE) / SHOULDER MILLING

Work Materials	Insert Grades	Cutting Conditions	Dimensions (mm)					
			φ 16	φ 20	φ 25	φ 32	φ 40	φ 50
Aluminium alloy 50-110HB	JDA10	n (min ⁻¹)	6,000	4,780	3,820	3,000	2,400	1,900
		V _f (mm/min)	1,800	2,150	2,300	2,250	2,000	1,900
		a _p (mm)	3	3	3	3	3	3
		a _e (mm)	5	6	8	10	12	15

② SICM○○10 TYPE (END MILL TYPE) / SLOTTING

Work Materials	Insert Grades	Cutting Conditions	Dimensions (mm)					
			φ 16	φ 20	φ 25	φ 32	φ 40	φ 50
Aluminium alloy 50-110HB	JDA10	n (min ⁻¹)	6,000	4,780	3,820	3,000	2,400	1,900
		V _f (mm/min)	1,200	1,430	1,530	1,500	1,440	1,330
		a _p (mm)	~2	~2	~2	~2	~2	~2

n: Spindle speed, V_f: Feed speed, a_p: Depth of cut, a_e: Width of cut

- Note) 1. The cutting parameters to be adjusted according to the machine rigidity or work rigidity.
 2. In case of using long type holder, reduce depth of cut by 60% to 40% or feed speed.