Cutting Conditions

NACHI นาชิ

• GSX MILL Four Flutes 1.5D/2D L9160, L9172

	Work Material / Milling Condition / Dia. of Mill mm		Structural Steels SS		Carbon Steels Cast Irons S-C, FC- (150~250HB)		Alloy Steels Heat treated Steels SCM, NAK, HPM (25~35HRC)		Haedened Steels (35~45HRC)		Haedened Steels (45~55HRC)		Stainless Steels (SUS304, 316)		Nickel Alloys Titanium Alloys	
			Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min
Side Milling	1		26000	510	26000	510	24200	330	17700	220	13700	160	15800	150	13700	110
	2		14000	630	14000	630	13600	430	1000	280	7600	190	8800	200	7600	140
	4		7600	820	7600	820	7200	550	5200	350	4000	250	4600	250	4000	160
	6		5100	870	5100	870	4800	580	3500	370	2700	260	3200	270	2700	180
	8		3800	870	3800	870	3600	580	2600	370	2000	260	2400	270	2000	180
	10		3000	840	3000	840	2900	580	2100	370	1600	260	1900	270	1600	180
	12		2500	840	2500	840	2500	580	1800	370	1400	260	1600	270	1300	180
	16		1800	690	1800	690	1800	470	1300	330	1000	210	1200	220	1000	150
	20		1500	670	1500	670	11450	430	1050	310	800	190	950	190	800	120
	Depth of cut	ap	1.5D								1D					
		ae	0.05D								0.02D					
Grooving	1		26000	420	26000	510	24200	330	17700	220	13700	160	158000	110	8400	50
	2		14000	500	14000	630	13600	430	10000	280	7600	190	8800	130	4600	60
	4		7600	640	7600	820	7200	550	5200	350	4000	250	4600	160	2400	80
	6		5100	690	5100	870	4800	580	3500	370	2700	260	3200	190	1600	100
	8		3800	690	3800	870	3600	580	2600	370	2000	260	2400	190	1200	100
	10		3000	670	3000	840	2900	580	2100	370	1600	260	1900	190	1000	100
	12		2500	670	2500	840	2500	580	1800	370	1400	260	1600	190	800	100
	16		1800	550	1800	690	1800	470	1300	330	1000	210	1200	160	600	80
	20		1500	530	1500	670	1450	430	1050	310	800	190	950	130	500	75
	Depth of cut	ap	0.2D		0.5D				0.2D		0.05D		0.2D			
High Speed Milling	1		26000	420	26000	510	24200	330	17700	220	13700	160	158000	110	8400	50
	2		14000	500	14000	630	13600	430	10000	280	7600	190	8800	130	4600	60
	4		7600	640	7600	820	7200	550	5200	350	4000	250	4600	160	2400	80
	6		5100	690	5100	870	4800	580	3500	370	2700	260	3200	190	1600	100
	8		3800	690	3800	870	3600	580	2600	370	2000	260	2400	190	1200	100
	10		3000	670	3000	840	2900	580	2100	370	1600	260	1900	190	1000	100
	12		2500	670	2500	840	2500	580	1800	370	1400	260	1600	190	800	100
	16		1800	550	1800	690	1800	470	1300	330	1000	210	1200	160	600	80
	20		1500	530	1500	670	1450	430	1050	310	800	190	950	130	500	75
	Side Milling	ap	1.5D								0.5D				-	
		ae	0.5D								0.02D				-	
	Surface Milling	ap	1.01D													
		ae	0.8D													

• GSX MILL Two Flutes 2.5D/3D L9170

	Work Material / Milling Condition / Dia. of Mill mm		Structural Steels SS		Carbon Steels Cast Irons S-C, FC- (150~250HB)		Alloy Steels Heat treated Steels SCM, NAK, HPM (25~35HRC)		Haedened Steels (35~45HRC)		Haedened Steels (45~55HRC)		Stainless Steels (SUS304, 316)		Nickel Alloys Titanium Alloys	
			Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min
Side Milling	1		14000	150	14000	150	13000	110	8900	60	6400	38	8000	43	6400	30
	2		8000	210	8000	210	7700	170	5300	85	3800	50	4600	60	3800	43
	4		4600	280	4600	280	4300	210	2900	100	2100	65	2600	75	2100	44
	6		3400	340	3400	340	3100	260	2200	130	1600	85	2000	95	1600	70
	8		2600	340	2600	340	2400	260	1600	130	1200	85	1400	95	1200	70
	10		2000	340	2000	340	1900	260	1300	130	940	85	1100	95	940	70
	12		1700	340	1700	340	1600	260	1100	130	810	85	940	95	810	70
	16		1300	280	1300	280	1200	210	800	100	600	65	720	75	600	50
	20		1000	240	1000	240	940	190	640	95	470	55	550	64	470	47
	Depth of cut	ap	2.5D								2D					
		ae	0.02D								0.01D					
Grooving	1		14000	100	14000	130	13000	95	8900	50	6400	30	8000	26	3200	9
	2		8100	140	8100	170	7700	120	5300	70	3800	43	4600	34	1900	13
	4		4600	190	4600	230	4300	160	2900	95	2100	55	2600	43	1050	17
	6		3400	230	3400	280	3100	205	2200	100	1600	70	1900	50	800	22
	8		2600	230	2600	280	2400	205	1600	100	1200	70	1400	50	600	22
	10		2000	230	2000	280	1900	205	1300	100	940	70	1100	50	450	22
	12		1700	230	1700	280	1600	205	1100	100	770	70	940	50	380	22
	16		1300	180	1300	230	1200	160	800	95	600	50	730	43	300	17
	20		1000	150	1000	200	940	145	640	80	480	47	550	34	240	13
	Depth of cut	ap	0.1D		0.2D						0.05D		0.1D			