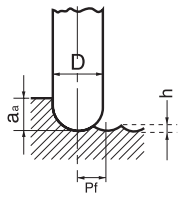
Cutting Conditions



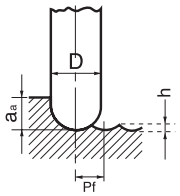
1. Depth of cut (aa & Pf) Calculated to be 0.01 mm (=h) in finishing process.
2. When dry milling, reduce the rotation and feed to 70% of table values.
3. Adjust milling condition when an unusual vibration, different sound occur by cutting.

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• Ball End Mills L6290

	Ball Radius mm	Work Material / Milling Condition: Cut of depth aa	Pf	Rolled Steels SS Carbon Steel S C: Rotation min⁻¹	Feed mm/min	Alloy Steels SCM Pre-Hardened Steels: Rotation min⁻¹	Feed mm/min	Mold Steels Stainless Steels: Rotation min⁻¹	Feed mm/min	Nickel Alloys Titanium Alloys: Rotation min⁻¹	Feed mm/min	Cast Irons FC, FCD: Rotation min⁻¹	Feed mm/min	Aluminium Aluminium Alloys Copper Alloys: Rotation min⁻¹	Feed mm/min
Roughing	R 1	0.8	0.8	4000	57	2800	38	2000	27	1600	18	4400	70	9600	240
	R 2	1.6	1.6	2000	64	1400	40	1000	31	800	19	2200	78	4800	270
	R 3	2.4	2.4	1300	68	930	43	660	33	530	21	1500	82	3200	280
	R 5	4.0	4.0	800	71	560	46	400	36	320	21	880	86	1900	300
	R 8	6.4	6.4	500	71	350	45	250	36	200	21	550	86	1200	300
	R 10	8.0	8.0	400	71	280	44	200	36	160	21	440	86	960	300
	R 12.5	10.0	10.0	320	63	220	39	160	32	130	18	350	83	760	290
	R 15	12.0	12.0	270	46	190	29	130	27	110	15	290	56	640	200
Finishing	R 1	0.2	0.3	6600	330	4600	210	3300	130	2700	81	7300	380	16000	1000
	R 2	0.2	0.4	4600	370	3200	230	2300	150	1800	86	5000	420	11000	1100
	R 3	0.5	0.5	2400	260	1700	170	1200	110	960	63	2600	300	5800	800
	R 5	0.5	0.6	1800	320	1300	210	900	130	730	79	2000	380	4400	1000
	R 8	0.5	0.8	1400	390	1000	250	700	160	570	96	1600	470	3400	1100
	R 10	0.5	0.9	1300	440	890	270	600	160	510	100	1400	500	3100	1300
	R 12.5	0.5	1.0	1100	460	800	300	600	200	450	110	1300	570	2700	1400
	R 15	0.5	1.1	1000	500	730	330	500	200	410	120	1100	580	2500	1500



1. Deph of cut (aa & Pf) Calculated to be 0.01 mm (=h) in finishing process.
2. When dry milling, reduce the rotation and feed to 70% of table values.
3. Adjust milling condition when an unusual vibration, different sound occur by cutting.

• X's-mill Ball L9278

	Ball Radius mm	Work Material / Milling Condition: Cut of depth aa	Pf	Hardended Steels (45~55HRC): Rotation min⁻¹	Feed mm/min	Hardended Steels Mold Steels (35~45HRC): Rotation min⁻¹	Feed mm/min	Carbon Steels Alloy Steels (~35HRC): Rotation min⁻¹	Feed mm/min	Stainless Steels SUS304, 316: Rotation min⁻¹	Feed mm/min	Nickel Alloys Titanium Alloys: Rotation min⁻¹	Feed mm/min	Cast Irons FC, FCD: Rotation min⁻¹	Feed mm/min
Roughing	R 1	0.8	0.8	Not suitable for roughing		5700	115	9700	235	Not suitable for roughing Recommend SG-FAX Ball End Mills.				10600	300
	R 2	1.6	1.6			3200	190	5300	295					5700	365
	R 3	2.4	2.4			2200	210	3500	335					3800	410
	R 5	4.0	4.0			1300	220	2100	355					2300	460
	R 8	6.4	6.4			810	180	1300	335					1400	450
	R 10	8.0	8.0			650	155	1100	285					1100	395
	R 12.5	10.0	10.0			520	115	840	230					910	365
Finishing	R 1	0.2	0.3	5300	105	10600	340	15900	570	8000	160	5300	95	17200	620
	R 2	0.2	0.4	3200	155	7300	585	11000	880	6400	305	4600	185	12800	1000
	R 3	0.4	0.5	1900	180	4300	620	6400	920	3700	355	2700	210	7400	1050
	R 5	0.5	0.6	1300	220	2900	755	4400	1150	2600	440	1800	215	5100	1300
	R 8	0.5	0.8	1000	255	2300	885	3400	1300	2000	510	1400	270	4000	1550
	R 10	0.5	0.9	890	250	2000	880	3100	1350	1800	505	1300	310	3600	1600
	R 12.5	0.5	1.0	880	220	1800	900	2700	1200	1600	440	1100	305	3200	1450