

EPDRP-TH

エポックペンシルディープラジラス Epoch Pencil Deep Radius

標準切削条件表 Recommended Cutting Conditions

高能率切削条件 High efficiency cutting condition

被削材 Work				1		2		3		4		5		6	
				銅 Copper		炭素鋼・合金鋼 Carbon Steels, Alloy Steels (180~250HB)		ステンレス鋼・工具鋼 Stainless Steels, Tool Steels (25~35HRC)		プリハードン鋼 Pre-harden Steels (35~45HRC)		焼き入れ鋼 Hardened Steels (45~55HRC)		焼き入れ鋼 Hardened Steels (55~65HRC)	
切り込み比率 Ratio to standard depth of cut				120%		100%		90%		80%		65%		60%	
刃径 Mill Dia. (mm)	R (mm)	首下長 Under neck Length (mm)	基本切り込み Standard depth of Cut (mm)	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min
0.2	0.05	2	0.007	50,000	1,244	49,500	1,232	44,550	1,109	42,075	1,047	37,125	821	34,650	671
0.4	0.05	4	0.009	45,144	1,498	37,620	1,248	33,858	1,123	31,977	1,061	28,215	832	26,334	680
		5	0.007	40,128	1,183	33,440	986	30,096	888	28,424	733	25,080	647	23,408	518
	0.1	4	0.009	47,520	1,577	39,600	1,314	35,640	1,182	33,660	1,117	29,700	876	27,720	715
		5	0.007	42,240	1,246	35,200	1,038	31,680	934	29,920	772	26,400	681	24,640	545
0.5	0.1	5	0.013	45,619	1,816	38,016	1,514	34,214	1,362	32,314	1,045	28,512	780	26,611	629
		8	0.008	36,495	1,130	30,413	942	27,372	848	25,851	650	22,810	486	21,289	391
		10	0.007	27,372	848	22,810	706	20,529	636	19,388	488	17,107	364	15,967	294
0.6	0.1	12	0.01	30,565	1,318	25,471	1,099	22,924	989	21,650	759	19,103	566	17,830	457
		15	0.006	25,091	1,082	20,909	902	18,818	812	17,772	623	15,682	465	14,636	375
0.8	0.2	6	0.045	47,520	1,807	39,600	1,505	35,640	1,355	33,660	1,280	29,700	1,004	27,720	820
		12	0.02	42,240	1,557	35,200	1,298	31,680	1,168	29,920	965	26,400	852	24,640	681
1	0.2	8	0.04	42,768	2,439	35,640	2,032	32,076	1,829	30,294	1,727	26,730	1,355	24,948	1,106
		10	0.035	42,768	2,661	35,640	2,217	32,076	1,995	30,294	1,885	26,730	1,478	24,948	1,207
		15	0.028	38,016	2,102	31,680	1,752	28,512	1,577	26,928	1,303	23,760	1,150	22,176	920
		20	0.02	28,512	1,380	23,760	1,150	21,384	1,035	20,196	907	17,820	739	16,632	575
		25	0.017	23,760	1,150	19,800	958	17,820	862	16,830	756	14,850	616	13,860	479
		30	0.017	23,760	1,150	19,800	958	17,820	862	16,830	756	14,850	616	13,860	479
	0.3	8	0.04	42,768	2,439	35,640	2,032	32,076	1,829	30,294	1,727	26,730	1,355	24,948	1,106
		15	0.028	38,016	2,102	31,680	1,752	28,512	1,577	26,928	1,303	23,760	1,150	22,176	920
		25	0.017	23,760	1,150	19,800	958	17,820	862	16,830	756	14,850	616	13,860	479
		30	0.017	23,760	1,150	19,800	958	17,820	862	16,830	756	14,850	616	13,860	479
1.5	0.2	10	0.05	32,525	1,798	27,104	1,499	24,394	1,349	23,038	1,115	20,328	984	18,973	787
		15	0.045	29,568	1,635	24,640	1,362	22,176	1,226	20,944	1,013	18,480	894	17,248	715
		20	0.042	26,020	1,439	21,683	1,199	19,515	1,079	18,431	892	16,262	787	15,178	629
		25	0.032	22,176	1,073	18,480	894	16,632	805	15,708	706	13,860	575	12,936	447
		30	0.028	18,480	894	15,400	745	13,860	671	13,090	588	11,550	479	10,780	373
	0.3	10	0.05	32,525	1,798	27,104	1,499	24,394	1,349	23,038	1,115	20,328	984	18,973	787
		20	0.042	26,020	1,439	21,683	1,199	19,515	1,079	18,431	892	16,262	787	15,178	629
		25	0.032	22,176	1,073	18,480	894	16,632	805	15,708	706	13,860	575	12,936	447
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切り込み比率 Ratio to standard depth of cut				120%		100%		90%		80%		65%		60%	
刃径 Mill Dia. (mm)	R (mm)	首下長 Under neck Length (mm)	基本切り込み Standard depth of Cut (mm)	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min	回転数 n min ⁻¹	送り速度 Vf mm/min
2	0.2	30	0.045	20,160	2,090	16,800	1,742	15,120	1,568	14,280	1,295	12,600	1,143	11,760	914
		40	0.035	15,120	1,372	12,600	1,143	11,340	1,029	10,710	902	9,450	735	8,820	572
		50	0.017	12,600	1,143	10,500	953	9,450	857	8,925	752	7,875	612	7,350	476
	0.3	12	0.088	31,298	3,130	26,082	2,608	23,474	2,347	22,170	1,951	19,562	1,643	18,257	1,461
		20	0.054	25,039	2,504	20,866	2,087	18,779	1,878	17,736	1,561	15,649	1,315	14,606	1,168
		30	0.045	20,160	2,322	16,800	1,935	15,120	1,742	14,280	1,439	12,600	1,270	11,760	1,016
		40	0.035	15,120	1,524	12,600	1,270	11,340	1,143	10,710	1,002	9,450	816	8,820	635
	0.5	50	0.017	12,600	1,270	10,500	1,058	9,450	953	8,925	835	7,875	680	7,350	529
		8	0.17	31,298	3,130	26,082	2,608	23,474	2,347	22,170	1,951	19,562	1,643	18,257	1,461
		12	0.088	31,298	3,130	26,082	2,608	23,474	2,347	22,170	1,951	19,562	1,643	18,257	1,461
		16	0.088	26,604	2,660	22,170	2,217	19,953	1,995	18,844	1,658	16,627	1,397	15,519	1,242
		20	0.054	25,039	2,504	20,866	2,087	18,779	1,878	17,736	1,561	15,650	1,315	14,606	1,168
		25	0.054	21,909	2,191	18,257	1,826	16,432	1,643	15,519	1,366	13,693	1,150	12,780	1,022
	3	0.2	40	0.07	15,360	1,593	12,800	1,327	11,520	1,194	10,880	987	9,600	871	8,960
50			0.05	11,520	1,045	9,600	871	8,640	784	8,160	687	7,200	560	6,720	435
60			0.03	9,600	871	8,000	726	7,200	653	6,800	573	6,000	467	5,600	363
0.3		40	0.07	15,360	1,769	12,800	1,475	11,520	1,327	10,880	1,097	9,600	968	8,960	774
		50	0.05	11,520	1,161	9,600	968	8,640	871	8,160	764	7,200	622	6,720	484
		60	0.03	9,600	968	8,000	806	7,200	726	6,800	636	6,000	518	5,600	403
0.5		40	0.07	15,360	1,769	12,800	1,475	11,520	1,327	10,880	1,097	9,600	968	8,960	774
		50	0.05	11,520	1,161	9,600	968	8,640	871	8,160	764	7,200	622	6,720	484
		60	0.03	9,600	968	8,000	806	7,200	726	6,800	636	6,000	518	5,600	403

基本切り込みは被削材グループ2での目安を示しています。その他のグループの場合は、上表の切り込み比率を目安に調整して下さい。
Standard cutting depth is shown as the criteria for Group 2 workpieces. For other groups, adjust the cutting depth according to the cutting depth factors in the above table.

【注意】 この標準切削条件表は切削条件の目安を示すものです。実際の加工では加工形状、目的、使用機械等により条件を調整してください。機械の回転数が足りない場合は、回転数と送り速度を同じ比率で下げてください。

1. These Recommended Cutting Conditions indicate only the rule of a thumb for the cutting conditions. In actual machining, the condition should be adjusted according to the machining shape, purpose and the machine type.
2. If the rpm of the machine is low, lower the feed rate also to put the rpm and feed rate in the same ratio.