EPBT / EPHT | Recommended Cutting Conditions

NOTE
1. Use a highly rigid and accurate machine as possible.
2. These conditions are for general guidance; in actual machining conditions adjust the parameters according to your actual machine and work-piece conditions.
3. If the rpm available is lower than recommended please reduce the feed rate to the same ratio.

NOTA
1. Usate centri di lavoro più precisi e rigidi possibile
2. Le condizioni di taglio sono valori generali. Per ottimizzare il processo di lavoro rispettate le geometrie dello stampo e la macchina disponibile.
3. Quando I giri della macchina disponibili sono più bassi rispetto al valore espresso regolate l´avanzamento con lo stesso rapporto.

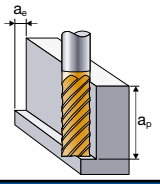
ANMERKUNG
1. Benutzen Sie für die Bearbeitung jeweils die Maschine mit der höchsten Genauigkeit und der höchsten Stabilität.
2. Die angegebenen Schnittwerte stellen eine generelle Empfehlung dar. Die Werte sollten immer an die jeweilige Bearbeitung, deren Form und die verwendete Maschine angepasst werden.
3. Ist die Ihnen verfügbare Drehzahl niedriger als der in der Tabelle angegebene Wert, sollte der Vorschub im gleichen Verhältnis reduziert werden.

OBSERVACIONES
1. Utilizar la máquina más rígida y precisa posible.
2. Las condiciones de corte de la tabla son una orientación general. Para un trabajo específico hay que ajustar las condiciones en función de la geometría de la pieza, el resultado esperado y el tipo de máquina que vamos a utilizar.
3. Si las rpm máximas de la maquina son inferiores, hay que ajustar el avance en proporción a las mismas.

NOTE
1. Utiliser une machine aussi rigide et fiable que possible.
2. Ces conditions sont indicatives : en utilisation, ajuster les conditions en fonction de la machine et de la pièce usinée.
3. Si la rotation possible est inférieure à celle recommandée, ajuster l'avance dans la même proportion.

NOTA
1. Use uma máquina rígida e o mais precisa possível.
2. Estas condições são para orientação geral, em condições de maquinação real ajustar os parâmetros de acordo com a sua máquina e com as condições das peças a maquinar.
3. Se o número de rotações disponível na máquina for menor do que o recomendado por favor reduza avanço na mesma proporção.

EPHT | Recommended Cutting Conditions | Side Milling



Work piece Material		Condition Range	a_p a_e	Cutting Condition	Tool D (mm)									
					D 1	D 2	D 3	D 4	D 6	D 8	D 10	D 12	D 16	D 20
II	Tool Steel (25-35HRC)	High Speed	a_p=1.5-2D	**n** (min^{-1})	79,600	39,800	26,500	22,300	14,900	11,100	8,900	7,400	5,600	4,500
				V_c (m/min)	250	250	250	280	280	280	280	280	280	280
			a_e=0.1D	**V_f** (mm/min)	2,550	2,870	3,070	3,750	5,360	5,330	5,340	4,880	4,370	4,590
				f_z (mm/tooth)	0.008	0.018	0.029	0.042	0.060	0.080	0.100	0.110	0.130	0.170
		General	a_p=1.5-2D	**n** (min^{-1})	19,100	19,100	12,700	11,100	7,400	5,600	4,500	3,700	2,800	2,200
				V_c (m/min)	60	120	120	140	140	140	140	140	140	140
			a_e=0.1D	**V_f** (mm/min)	610	1,380	1,470	1,860	2,890	2,860	2,700	2,440	2,180	2,240
				f_z (mm/tooth)	0.008	0.018	0.029	0.042	0.065	0.085	0.100	0.110	0.130	0.170
III	Pre-hardened steel (35-45HRC)	High Speed	a_p=1.5-2D	**n** (min^{-1})	79,600	39,800	26,500	20,700	13,800	10,400	8,300	6,900	5,200	4,100
				V_c (m/min)	250	250	250	260	260	260	260	260	260	260
			a_e=0.1D	**V_f** (mm/min)	2,550	2,550	2,760	3,150	4,550	4,680	4,480	4,140	3,430	3,690
				f_z (mm/tooth)	0.008	0.016	0.026	0.038	0.055	0.075	0.090	0.100	0.110	0.150
		General	a_p=1.5-2D	**n** (min^{-1})	19,100	15,900	10,600	9,600	6,400	4,800	3,800	3,200	2,400	1,900
				V_c (m/min)	60	100	100	120	120	120	120	120	120	120
			a_e=0.1D	**V_f** (mm/min)	380	700	760	1,000	1,540	1,580	1,480	1,340	1,150	1,200
				f_z (mm/tooth)	0.005	0.011	0.018	0.026	0.040	0.055	0.065	0.070	0.080	0.105
IV	Hardened steel (45-55HRC)	High Speed	a_p=1.5-2D	**n** (min^{-1})	63,700	31,800	21,200	18,300	12,200	9,200	7,300	6,100	4,600	3,700
				V_c (m/min)	200	200	200	230	230	230	230	230	230	230
			a_e=0.03D	**V_f** (mm/min)	1,780	1,780	1,950	2,420	3,660	3,590	3,500	3,290	2,760	2,890
				f_z (mm/tooth)	0.007	0.014	0.023	0.033	0.050	0.065	0.080	0.090	0.100	0.130
		General	a_p=1.5-2D	**n** (min^{-1})	19,100	12,700	8,500	8,000	5,300	4,000	3,200	2,700	2,000	1,600
				V_c (m/min)	60	80	80	100	100	100	100	100	100	100
			a_e=0.06D	**V_f** (mm/min)	380	510	540	740	1,110	1,080	1,060	970	840	860
				f_z (mm/tooth)	0.005	0.010	0.016	0.023	0.035	0.045	0.055	0.060	0.070	0.090
V	Hardened steel (55-65HRC)	High Speed	a_p=1-1.5D	**n** (min^{-1})	47,800	23,900	15,900	14,300	9,600	7,200	5,700	4,800	3,600	2,900
				V_c (m/min)	150	150	150	180	180	180	180	180	180	180
			a_e=0.02D	**V_f** (mm/min)	1,150	1,240	1,340	1,720	2,590	2,590	2,390	2,300	1,940	2,090
				f_z (mm/tooth)	0.006	0.013	0.021	0.030	0.045	0.060	0.070	0.080	0.090	0.120
		General	a_p=1-1.5D	**n** (min^{-1})	19,100	9,600	6,400	6,400	4,200	3,200	2,500	2,100	1,600	1,300
				V_c (m/min)	60	60	60	80	80	80	80	80	80	80
			a_e=0.04D	**V_f** (mm/min)	310	350	380	540	760	770	750	690	620	620
				f_z (mm/tooth)	0.004	0.009	0.015	0.021	0.030	0.040	0.050	0.055	0.065	0.080
V	Hardened steel (65-70HRC)	High Speed	a_p=1-1.5D	**n** (min^{-1})	31,800	15,900	10,600	10,400	6,900	5,200	4,100	3,500	2,600	2,100
				V_c (m/min)	100	100	100	130	130	130	130	130	130	130
			a_e=0.02D	**V_f** (mm/min)	640	760	810	1,120	1,660	1,720	1,600	1,470	1,250	1,390
				f_z (mm/tooth)	0.005	0.012	0.019	0.027	0.040	0.055	0.065	0.070	0.080	0.110
		General	a_p=1-1.5D	**n** (min^{-1})	12,700	6,400	4,200	4,800	3,200	2,400	1,900	1,600	1,200	1,000
				V_c (m/min)	40	40	40	60	60	60	60	60	60	60
			a_e=0.04D	**V_f** (mm/min)	200	200	220	360	580	580	510	480	400	450
				f_z (mm/tooth)	0.004	0.008	0.013	0.019	0.030	0.040	0.045	0.050	0.055	0.075