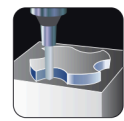


MILLING CONDITIONS

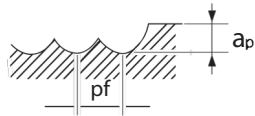
2 flute ball nose carbide end mill (see notes below for long series & coated)

PROFILING



		HYP-EDB,EBDL,EBDXL											
		Aluminium		Cast Iron		Mild Steels Carbon Steels		Pre-hardened Steels Die & Alloy Steels				Hardened Steels	
				< 180 HB		< 180 HB		< 30 HRC		< 40 HRC		< 50 HRC	
Vc		100 m/min		35 m/min		35 m/min		25 m/min		20 m/min		15 m/min	
Ø	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	
1	32,000	190	11,000	90	11,000	80	8,000	45	6,400	26	4,800	24	
2	16,000	190	5,600	90	5,600	80	4,000	45	3,200	26	2,387	24	
3	10,000	190	3,700	100	3,700	90	2,600	50	2,100	35	2,000	30	
4	8,000	190	2,800	100	2,800	90	2,000	50	1,600	35	1,195	30	
5	6,400	190	2,200	100	2,200	90	1,600	50	1,300	35	955	30	
6	5,300	190	1,900	100	1,900	90	1,320	50	1,000	35	800	30	
8	4,000	220	1,400	100	1,400	90	1,000	50	800	35	600	30	
10	3,200	220	1,100	100	1,100	90	800	50	640	35	475	30	
12	2,600	220	930	100	930	90	660	50	530	35	400	30	
16	2,000	220	700	100	700	90	500	50	400	35	300	30	
20	1,600	220	560	100	560	90	400	50	320	35	240	30	
25	1,200	220	450	100	450	90	320	50	250	35	190	30	

Maximum depth of cut



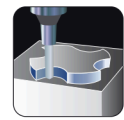
$$a_p = 0.3D$$

$$p_f = 0.7D$$

- (1) Reduce speeds & feeds 20-30% for HYP-EBDL (Long series).
- (2) Reduce speeds & feeds 40-50% for HYP-EBDXL (Extra long series).
- (3) Increase speeds & feeds 20-30% for HYP-EBD-XCEED (coated).
- (4) Column for Hardened Steels (40-50 HRC) is for XCEED coated tools only.

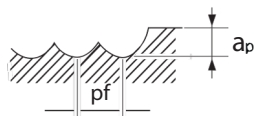
4 flute ball nose carbide end mill (see notes below for long series & coated)

PROFILING



		HYP-EBM,EBML,EBMXL											
		Aluminium		Cast Iron		Mild Steels Carbon Steels		Pre-hardened Steels Die & Alloy Steels				Hardened Steels	
				< 180 HB		< 180 HB		< 30 HRC		< 40 HRC		< 50 HRC	
Vc		100 m/min		35 m/min		35 m/min		25 m/min		20 m/min		15 m/min	
Ø	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	Speed (min-1)	Feed (mm/min.)	
1	32,000	226	11,000	126	11,000	112	8,000	63	6,400	43	4,800	34	
2	16,000	226	5,600	126	5,600	112	4,000	63	3,200	43	2,387	34	
3	10,000	226	3,700	140	3,700	126	2,600	70	2,100	50	2,000	42	
4	8,000	226	2,800	140	2,800	126	2,000	70	1,600	50	1,195	42	
5	6,400	226	2,200	140	2,200	126	1,600	70	1,300	50	955	42	
6	5,300	226	1,900	140	1,900	126	1,320	70	1,000	50	800	42	
8	4,000	308	1,400	140	1,400	126	1,000	70	800	50	600	42	
10	3,200	308	1,100	140	1,100	126	800	70	640	50	475	42	
12	2,600	308	930	140	930	126	660	70	530	50	400	42	
16	2,000	308	700	140	700	126	500	70	400	50	300	42	
20	1,600	308	560	140	560	126	400	70	320	50	240	42	
25	1,200	308	450	140	450	126	320	70	250	50	190	42	

Maximum depth of cut



$$a_p = 0.3D$$

$$p_f = 0.7D$$

- (1) Reduce speeds & feeds 20-30% for HYP-EBML (Long series).
- (2) Reduce speeds & feeds 40-50% for HYP-EBMXL (Extra long series).
- (3) Increase speeds & feeds 20-30% for HYP-EBM-XCEED (coated).
- (4) Column for Hardened Steels (40-50 HRC) is for XCEED coated tools only.