



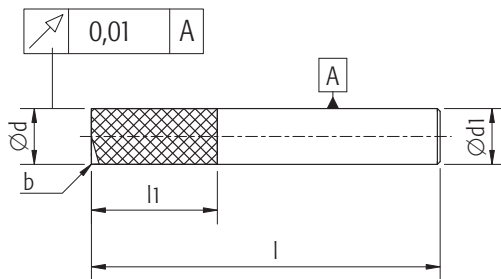
Solid Carbide End Mills

2 Flute

Centre cutting high performance 2 flute rougher for graphite



N5-N7



Ød (mm)	EDP No	b (mm)	Ød1 (mm)	L (mm)	L1 (mm)	L2 (mm)	a (mm)	z	γ (°)
Standard									
4	FBK0504668	0.25	4	60	12	-	-	2	
6	FBK0504669	0.3	6	78	18	-	-	2	
8	FBK0504670	0.35	8	78	24	-	-	2	
10	FBK0504671	0.4	10	78	30	-	-	2	
12	FBK0504672	0.5	12	89	36	-	-	2	
12	FBK0504673	0.5	12	150	36	50	0.3	2	
16	FBK0504674	0.5	16	150	36	70	0.4	2	

Tolerance chart

Diameter range	Shank	Cutting diameter	Cutting diameter	Cutting diameter	Cutting diameter
	Ød1-h5	Ød-e8	Ød-f7	Ød-g7	ØFHC
d ≤ 3	0	-0.014	-0.006	-0.002	0
	-0.004	-0.028	-0.016	-0.012	-0.025
3 < d ≤ 6	0	-0.020	-0.010	-0.004	0
	-0.005	-0.038	-0.022	-0.016	-0.030
6 < d ≤ 10	0	-0.025	-0.013	-0.005	0
	-0.006	-0.047	-0.028	-0.02	-0.036
10 < d ≤ 18	0	-0.032	-0.016	-0.006	0
	-0.008	-0.059	-0.034	-0.024	-0.043
18 < d ≤ 30	0	-0.040	-0.020	-0.006	0
	-0.009	-0.073	-0.041	-0.024	-0.052

Tensile strength: N/mm² | Hardness: HRC

P0	P1	P2	P3	P4	P5	P6	M1	M2	M3	K1	K2	K3
<530	<530	<530	600-850	850-1400	600-900	900-1350	<600	600-800	<800	125-500	<600	>600
-	-	<25	<35	35-48	<35	35-48	-	<25	<30	<32	<28	<43

N1	N2	N3	N4	N5	N6	N7	S1-Fe Based	S2-Co Based	S3-Ni Based	S4-Ti Based	H1	H2	H3	H4
Wrought Al	Si<12.2%	Si>12.2%	Cu, Zn Alloy	Ny, Pt, Ru, Re, Fg C, Gr, CFRP, Comp	NMC		500-1200	1000-1500	600-1700	900-1600	-	-	-	-
-	-	-	-	-	-	-	25-48	25-48	<48	33-48	44-48	48-55	56-60	61-70



Solid Carbide End Mills

3 Flute

Centre cutting high performance 3 flute end mill for graphite



HPM
HSM



40°



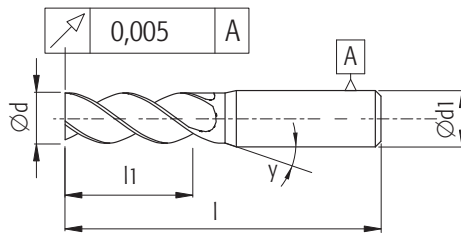
FHC

6535 HA

h5

D

N5-N7



Ød (mm)	EDP No	r (mm)	Ød1 (mm)	L (mm)	L1 (mm)	L2 (mm)	a (mm)	γ (°)
Standard								
2	FBK0503940	-	3	50	10	-	-	15
3	FBK0503941	-	3	50	10	-	-	-
4	FBK0503942	-	4	60	15	-	-	-
5	FBK0503943	-	5	60	20	-	-	-
6	FBK0503944	-	6	78	30	-	-	-
8	FBK0503945	-	8	78	30	-	-	-
10	FBK0503946	-	10	78	30	-	-	-
12	FBK0503947	-	12	89	30	-	-	-

Tensile strength: N/mm² | Hardness: HRC

P0	P1	P2	P3	P4	P5	P6	M1	M2	M3	K1	K2	K3
<530	<530	<530	600-850	850-1400	600-900	900-1350	<600	600-800	<800	125-500	<600	>600
-	-	<25	<35	35-48	<35	35-48	-	<25	<30	<32	<28	<43

N1	N2	N3	N4	N5	N6	N7	S1-Fe Based	S2-Co Based	S3-Ni Based	S4-Ti Based	H1	H2	H3	H4
Wrought Al	Si<12.2%	Si>12.2%	Cu, Zn Alloy	Ny, Pt, Ru, Re, FgC, Gr, CFRP, Comp	NMC		500-1200	1000-1500	600-1700	900-1600	-	-	-	-
-	-	-	-	-	-	-	25-48	25-48	<48	33-48	44-48	48-55	56-60	61-70



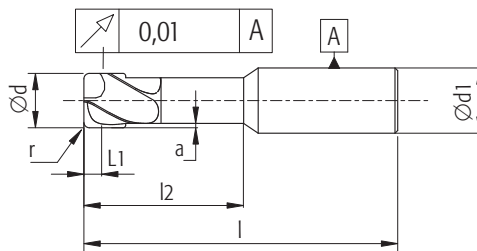
Solid Carbide End Mills

Optimum Flutes

Centre cutting high performance end mill with corner radius for graphite



N5-N7



Ød (mm)	EDP No	r (mm)	Ød1 (mm)	L (mm)	L1 (mm)	L2 (mm)	a (mm)	z	γ (°)
Short									
2	FBK0504675	0.1	3	50	3	10	0.1	2	15
3	FBK0504676	0.1	6	51	4	10	0.1	2	15
4	FBK0504677	0.2	6	51	4	10	0.1	4	15
5	FBK0504678	0.2	6	51	5	10	0.15	4	15
6	FBK0504679	0.3	6	51	6	10	0.2	4	-
8	FBK0504680	0.3	8	64	8	15	0.3	4	-
10	FBK0504681	0.3	10	78	10	20	0.3	4	-
12	FBK0504682	0.3	12	78	10	20	0.3	4	-
Standard									
2	FBK0504683	0.1	2	50	10	-	-	3	-
2	FBK0504684	0.1	3	50	10	-	-	3	15
2	FBK0504685	0.1	3	50	10	15	0.1	3	10
2	FBK0506035	0.1	3	50	10	20	0.1	3	15
2	FBK0504686	0.1	3	65	10	30	0.1	3	15
2	FBK0504687	0.1	3	80	10	30	0.1	3	15
3	FBK0504688	0.1	3	50	10	-	-	3	-

Tensile strength: N/mm² | Hardness: HRC

P0	P1	P2	P3	P4	P5	P6	M1	M2	M3	K1	K2	K3
<530	<530	<530	600-850	850-1400	600-900	900-1350	<600	600-800	<800	125-500	<600	>600
-	-	<25	<35	35-48	<35	35-48	-	<25	<30	<32	<28	<43

N1	N2	N3	N4	N5	N6	N7	S1-Fe Based	S2-Co Based	S3-Ni Based	S4-Ti Based	H1	H2	H3	H4
Wrought Al	Si<12.2%	Si>12.2%	Cu, Zn Alloy	Ny, Pt, Ru, Re, Fg	C, Gr, CFRP, Comp	NMC	500-1200	1000-1500	600-1700	900-1600	-	-	-	-
-	-	-	-	-	-	-	25-48	25-48	<48	33-48	44-48	48-55	56-60	61-70



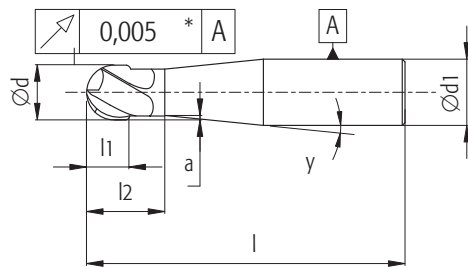
Solid Carbide End Mills

Optimum Flutes

Centre cutting high performance ball nose for graphite



N5-N7



Ød (mm)	EDP No	r (mm)	Ød1 (mm)	L (mm)	L1 (mm)	L2 (mm)	a (mm)	z	γ (°)
Short									
2	FBK0504272	1	3	50	3	10	0.1	2	15
3	FBK0504273	1.5	6	51	4	10	0.1	2	15
4	FBK0504274	2	6	51	4	10	0.1	4	15
5	FBK0504275	2.5	6	51	5	10	0.15	4	15
6	FBK0504276	3	6	51	6	10	0.2	4	-
8	FBK0504277	4	8	64	8	15	0.3	4	-
10	FBK0504278	5	10	78	10	20	0.3	4	-
12	FBK0504279	6	12	78	10	20	0.3	4	-
Standard									
2	FBK0504280	1	2	50	10	-	-	3	-
2	FBK0504281	1	3	50	10	-	-	3	15
2	FBK0506037	1	3	50	10	15	0.1	3	15
2	FBK0506038	1	3	50	10	20	0.1	3	15
2	FBK0506039	1	3	65	10	30	0.1	3	15
3	FBK0504282	1.5	3	50	10	-	-	3	-
3	FBK0506037	1.5	3	50	10	15	0.1	3	-
3	FBK0506038	1.5	3	50	10	20	0.1	3	-

Tensile strength: N/mm² | Hardness: HRC

P0	P1	P2	P3	P4	P5	P6	M1	M2	M3	K1	K2	K3
<530	<530	<530	600-850	850-1400	600-900	900-1350	<600	600-800	<800	125-500	<600	>600
-	-	<25	<35	35-48	<35	35-48	-	<25	<30	<32	<28	<43

N1	N2	N3	N4	N5	N6	N7	S1-Fe Based	S2-Co Based	S3-Ni Based	S4-Ti Based	H1	H2	H3	H4
Wrought Al	Si<12.2%	Si>12.2%	Cu, Zn Alloy	Ny, Pt, Ru, Re, Fg C, Gr, CFRP, Comp	NMC		500-1200	1000-1500	600-1700	900-1600	-	-	-	-
-	-	-	-	-	-	-	25-48	25-48	<48	33-48	44-48	48-55	56-60	61-70



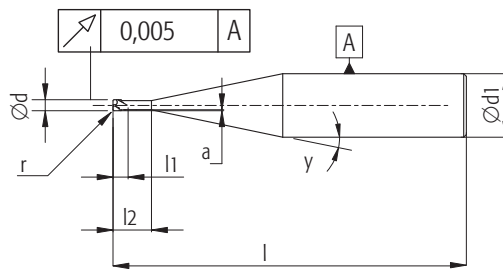
Solid Carbide End Mills

2 Flute

Centre cutting high performance micro end mill with corner radius for graphite



N5-N7



Ød (mm)	EDP No	r (mm)	Ød1 (mm)	L (mm)	L1 (mm)	L2 (mm)	a (mm)	z	γ (°)	Effective length compared with Inclined Angle			
										0.5°	1.0°	2.0°	3.0°
0.3	FBK0504298	0.05	6	64	1	-	-	2	7	1.743	1.896	2.304	2.944
0.3	FBK0504299	0.05	6	64	1.5	2.5	0.01	2	7	2.908	3.148	3.771	4.710
0.3	FBK0504300	0.05	6	64	1.5	5	0.01	2	8	5.562	5.967	6.988	8.436
0.4	FBK0504301	0.05	6	64	1.5	-	-	2	6	1.744	1.900	2.319	2.985
0.4	FBK0504302	0.05	6	64	1.5	2.5	0.01	2	7	2.912	3.156	3.797	4.773
0.4	FBK0504303	0.05	6	64	1.5	5	0.01	2	8	5.568	5.982	7.029	8.529
0.5	FBK0504304	0.05	6	64	1.5	-	-	2	6	2.286	2.492	3.043	3.918
0.5	FBK0504305	0.05	6	64	1.5	3.5	0.01	2	7	3.984	4.310	5.158	6.429
0.5	FBK0504306	0.05	6	64	1.5	7	0.01	2	8	7.671	8.192	9.480	11.256
0.5	FBK0504307	0.05	6	64	1.5	10	0.01	2	10	10.772	11.375	12.813	14.671
0.6	FBK0504308	0.05	6	64	1.5	-	-	2	6	2.890	3.157	3.878	5.036
0.6	FBK0504309	0.05	6	64	2	3.5	0.025	2	7	4.185	4.534	5.442	6.815
0.6	FBK0504310	0.05	6	64	2	7	0.025	2	8	7.864	8.405	9.750	11.614
0.6	FBK0504311	0.05	6	64	2	10	0.025	2	10	10.959	11.582	13.070	15.001
0.8	FBK0504312	0.05	6	64	2	-	-	2	6	3.435	3.760	4.642	6.078
0.8	FBK0504313	0.05	6	64	2	5	0.025	2	7	5.787	6.253	7.456	9.240

Tensile strength: N/mm² | Hardness: HRC

P0	P1	P2	P3	P4	P5	P6	M1	M2	M3	K1	K2	K3
<530	<530	<530	600-850	850-1400	600-900	900-1350	<600	600-800	<800	125-500	<600	>600
-	-	<25	<35	35-48	<35	35-48	-	<25	<30	<32	<28	<43

N1	N2	N3	N4	N5	N6	N7	S1-Fe Based	S2-Co Based	S3-Ni Based	S4-Ti Based	H1	H2	H3	H4
Wrought Al	Si<12.2%	Si>12.2%	Cu, Zn Alloy	Ny, Pt, Ru, Re, Fg	C, Gr, CFRP, Comp	NMC	500-1200	1000-1500	600-1700	900-1600	-	-	-	-
-	-	-	-	-	-	-	25-48	25-48	<48	33-48	44-48	48-55	56-60	61-70



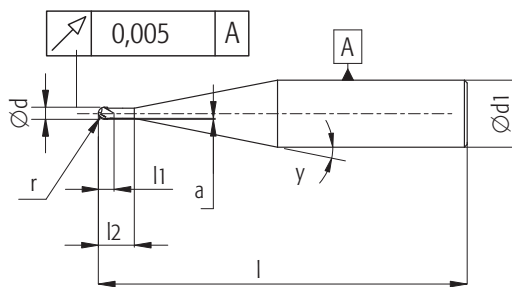
Solid Carbide End Mills

2 Flute

Centre cutting high performance micro ball nose for graphite



N5-N7



Ød (mm)	EDP No	r (mm)	Ød1 (mm)	L (mm)	L1 (mm)	L2 (mm)	a (mm)	z	y (°)	Effective length compared with Inclined Angle			
										0.5°	1.0°	2.0°	3.0°
0.3	FBK0504330	0.15	6	64	1	-	-	2	6	1.736	1.886	2.292	2.946
0.3	FBK0504331	0.15	6	64	1.5	2.5	0.01	2	7	2.901	3.131	3.731	4.635
0.3	FBK0504332	0.15	6	64	1.5	5	0.01	2	8	5.555	5.953	6.953	8.373
0.4	FBK0504333	0.2	6	64	1.5	-	-	2	6	1.731	1.880	2.283	2.942
0.4	FBK0504334	0.2	6	64	1.5	2.5	0.01	2	7	2.900	3.131	3.735	4.656
0.4	FBK0504335	0.2	6	64	1.5	5	0.01	2	8	5.557	5.959	6.976	8.432
0.5	FBK0504336	0.25	6	64	1.5	-	-	2	6	2.272	2.472	3.020	3.928
0.5	FBK0504337	0.25	6	64	1.5	3.5	0.01	2	7	3.968	4.277	5.078	6.28
0.5	FBK0504338	0.25	6	64	1.5	7	0.01	2	8	7.658	8.164	9.417	11.143
0.5	FBK0504339	0.25	6	64	1.5	10	0.01	2	10	10.761	11.353	12.762	14.584
0.6	FBK0504340	0.3	6	64	1.5	-	-	2	6	2.871	3.131	3.849	5.055
0.6	FBK0504341	0.3	6	64	2	3.5	0.025	2	7	4.166	4.492	5.341	6.624
0.6	FBK0504342	0.3	6	64	2	7	0.025	2	8	7.848	8.371	9.670	11.47
0.6	FBK0504343	0.3	6	64	2	10	0.025	2	10	10.946	11.554	13.006	14.89
0.8	FBK0504344	0.4	6	64	2	-	-	2	6	3.413	3.731	4.625	6.177
0.8	FBK0504345	0.4	6	64	2	5	0.025	2	7	5.761	6.196	7.320	8.987

Tensile strength: N/mm² | Hardness: HRC

P0	P1	P2	P3	P4	P5	P6	M1	M2	M3	K1	K2	K3
<530	<530	<530	600-850	850-1400	600-900	900-1350	<600	600-800	<800	125-500	<600	>600
-	-	<25	<35	35-48	<35	35-48	-	<25	<30	<32	<28	<43

N1	N2	N3	N4	N5	N6	N7	S1-Fe Based	S2-Co Based	S3-Ni Based	S4-Ti Based	H1	H2	H3	H4
Wrought Al	Si<12.2%	Si>12.2%	Cu, Zn Alloy	Ny, Pt, Ru, Re, Fg, C, Gr, CFRP, Comp	NMC	NMC	500-1200	1000-1500	600-1700	900-1600	-	-	-	-
-	-	-	-	-	-	-	25-48	25-48	<48	33-48	44-48	48-55	56-60	61-70