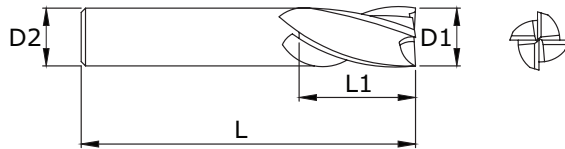


# 4 Flute

## Centre cutting regular length end mill



P0-P6

K1-K3

S1-S4

H1-H4

N1-N6

M1-M3

Unit : mm

ØD1	L1	L	ØD2	EDP No	EDP No	EDP No
(mm)	(mm)	(mm)	(mm)	Uncoated	TiN Coated	TiAlN Coated
1	3	38	3	FBK0500001	FBK0500002	FBK0500003
1.5	6	38	3	FBK0500004	FBK0500005	FBK0500006
2	9	38	3	FBK0500007	FBK0500008	FBK0500009
2.5	12	38	3	FBK0500010	FBK0500011	FBK0500012
3	12	38	3	FBK0500013	FBK0500014	FBK0500015
3.5	12	51	4	FBK0500016		FBK0500017
4	14	51	4	FBK0500018	FBK0500019	FBK0500020
4.5	14	51	5	FBK0500021	FBK0500022	FBK0500023
5	20	51	5	FBK0500024	FBK0500025	FBK0500026
5.5	20	64	6	FBK0500027	FBK0500028	FBK0500029
6	20	64	6	FBK0500030	FBK0500031	FBK0500032
6.5	20	64	8	FBK0500033	FBK0500034	FBK0500035
7	20	64	8	FBK0500036		FBK0500037
8	20	64	8	FBK0500038	FBK0500039	FBK0500040
9	20	64	9	FBK0500041	FBK0500042	FBK0500043
10	25	70	10	FBK0500044	FBK0500045	FBK0500046
11	25	70	11	FBK0500047		FBK0500048
12	25	76	12	FBK0500049	FBK0500050	FBK0500051
13	30	89	13	FBK0500052		FBK0500053
14	30	89	14	FBK0500054	FBK0500055	FBK0500056
15	30	89	15	FBK0500057	FBK0500058	FBK0500059
16	30	89	16	FBK0500060	FBK0500061	FBK0500062
18	35	102	18	FBK0500063	FBK0500064	FBK0500065
20	35	102	20	FBK0500066	FBK0500067	FBK0500068
22	40	102	22	FBK0500069		FBK0500070
25	40	102	25	FBK0500071		FBK0500072

Application data on page no 2.177

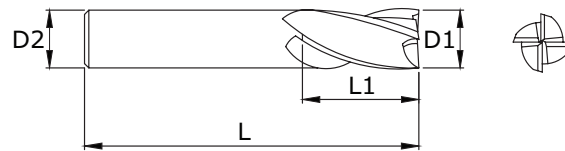
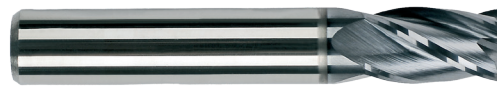
Also available in uncoated & TiN

4 Flute

Centre cutting stub length end mill



END MILLS



P0-P6

K1-K3

S1-S4

H1-H4

N1-N6

M1-M3

Unit : mm

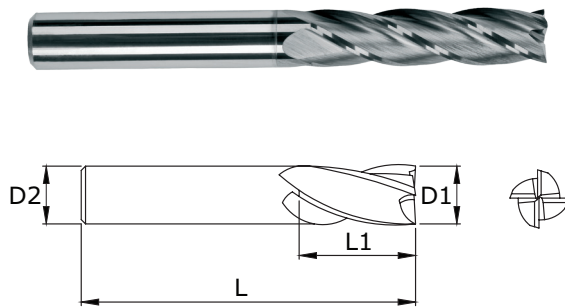
ØD1	L1	L	ØD2	EDP No	EDP No
(mm)	(mm)	(mm)	(mm)	Uncoated	Coated
1	2	38	3	FBK0502013	FBK0502014
1.5	3	38	3	FBK0500532	FBK0500533
2	4	38	3	FBK0500534	FBK0500535
2.5	5	38	3	FBK0500536	FBK0500537
3	6	38	3	FBK0500538	FBK0500539
4	8	51	4	FBK0500540	FBK0500541
5	11	51	5	FBK0500542	FBK0500543
6	13	51	6	FBK0500544	FBK0500545
8	13	51	8	FBK0500546	FBK0500547
10	14	51	10	FBK0500548	FBK0500549
12	16	64	12	FBK0500550	FBK0500551
14	18	70	14	FBK0500552	FBK0500553
16	20	76	16	FBK0500554	FBK0500555
20	25	76	25	FBK0500556	FBK0500557

4 Flute

Centre cutting long length end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

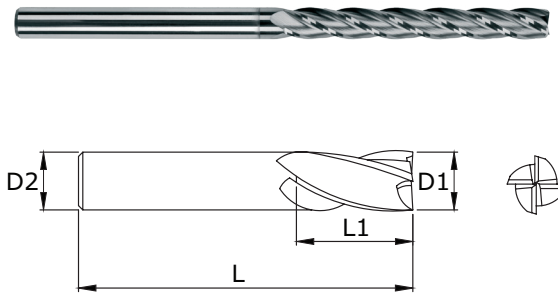
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No		
				Uncoated	TiN Coated	TiAlN Coated
3	25	64	3	FBK0500334	FBK0500335	FBK0500336
4	25	64	4	FBK0500337	FBK0500338	FBK0500339
5	25	64	5	FBK0500340	FBK0500341	FBK0500342
6	30	76	6	FBK0500343	FBK0500344	FBK0500345
7	30	83	7	FBK0500346		FBK0500347
8	35	83	8	FBK0500348	FBK0500349	FBK0500350
9	35	89	9	FBK0500351		FBK0500352
10	40	89	10	FBK0500353	FBK0500354	FBK0500355
11	40	102	11	FBK0500356		FBK0500357
12	50	102	12	FBK0500358	FBK0500359	FBK0500360
14	65	117	14	FBK0500361		FBK0500362
16	65	117	16	FBK0500363	FBK0500364	FBK0500365
20	80	152	20	FBK0500366	FBK0500367	FBK0500368
25	80	152	25	FBK0500369		FBK0500370

4 Flute

Centre cutting extra long end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

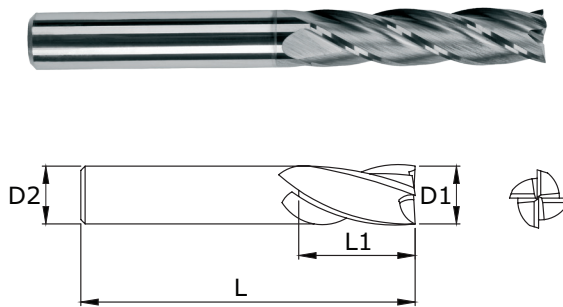
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No TiAlN Coated
3	40	100	3	FBK0502681
4	40	100	4	FBK0502682
5	40	100	5	FBK0502683
6	40	100	6	FBK0502684
8	50	100	8	FBK0502685
8	75	150	8	FBK0501481
10	40	100	10	FBK0500888
10	75	152	10	FBK0502686
12	75	152	12	FBK0502687
16	75	152	16	FBK0502688
20	75	152	20	FBK0502689

4 Flute

Centre cutting long reach end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

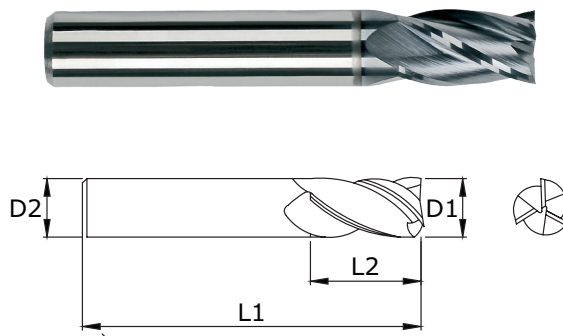
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAIN Coated
3	6	64	3	FBK0500454	FBK0500455
4	9	76	4	FBK0500456	FBK0500457
5	15	76	5	FBK0500458	FBK0500459
6	15	76	6	FBK0500460	FBK0500461
8	20	101	8	FBK0500462	FBK0500463
10	25	101	10	FBK0500464	FBK0500465
12	25	152	12	FBK0500466	FBK0500467
16	30	152	16	FBK0500468	FBK0500469
18	40	152	18	FBK0500470	FBK0500471
20	40	152	20	FBK0500472	FBK0500473

# 3 Flute

## Centre cutting regular length end mill



END MILLS



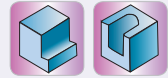
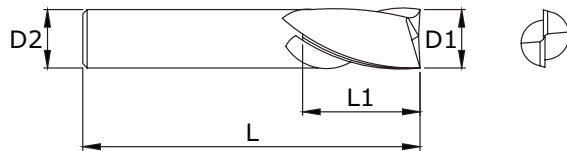
- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

ØD1 (mm)	L2 (mm)	L1 (mm)	ØD2 (mm)	EDP No		EDP No
				Uncoated	TiN Coated	TiAlN Coated
1	3	38	3	FBK0500138	FBK0500139	FBK0500140
1.5	6	38	3	FBK0500141	FBK0500142	FBK0500143
2	9	38	3	FBK0500144	FBK0500145	FBK0500146
2.5	12	38	3	FBK0500147	FBK0500148	FBK0500149
3	12	38	3	FBK0500150	FBK0500151	FBK0500152
3.5	12	51	4	FBK0500153		FBK0500154
4	14	51	4	FBK0500155	FBK0500156	FBK0500157
4.5	20	51	5	FBK0500158		FBK0500159
5	20	51	5	FBK0500160	FBK0500161	FBK0500162
6	20	63	6	FBK0500163	FBK0500164	FBK0500165
6.5	20	64	8	FBK0500166	FBK0500167	FBK0500168
8	20	63	8	FBK0500169	FBK0500170	FBK0500171
9	20	64	9	FBK0500172		FBK0500173
10	25	70	10	FBK0500174	FBK0500175	FBK0500176
11	25	70	11	FBK0500177		FBK0500178
12	25	76	12	FBK0500179	FBK0500180	FBK0500181
14	30	89	14	FBK0500182	FBK0500183	FBK0500184
15	30	89	15	FBK0500185		FBK0500186
16	30	89	16	FBK0500187	FBK0500188	FBK0500189
18	35	102	18	FBK0500190	FBK0500191	FBK0500192
20	38	102	20	FBK0500193	FBK0500194	FBK0500195
25	40	102	25	FBK0500196	FBK0500197	FBK0500198

# 2 Flute

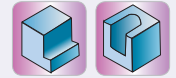
## Centre cutting stub length end mill


**END MILLS**

**P0-P6**
**K1-K3**
**S1-S4**
**H1-H4**
**N1-N6**
**M1-M3**
**Unit : mm**

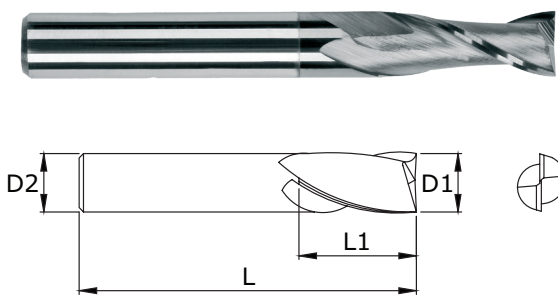
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
1	2	38	3	FBK0502015	FBK0502016
1.5	3	38	3	FBK0500558	FBK0500559
2	4	38	3	FBK0500560	FBK0500561
2.5	5	38	3	FBK0500562	FBK0500563
3	6	38	3	FBK0500564	FBK0500565
4	8	51	4	FBK0500566	FBK0500567
5	11	51	5	FBK0500568	FBK0500569
6	13	51	6	FBK0500570	FBK0500571
8	13	51	8	FBK0500572	FBK0500573
10	14	51	10	FBK0500574	FBK0500575
12	16	64	12	FBK0500576	FBK0500577
14	18	70	14	FBK0500578	FBK0500579
16	20	76	16	FBK0500580	FBK0500581
20	25	76	25	FBK0500582	FBK0500583

2 Flute

Centre cutting regular length end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

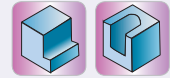
Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No		
				Uncoated	TiN Coated	TiAlN Coated
1	3	38	3	FBK0500073	FBK0500074	FBK0500075
1.5	6	38	3	FBK0500076	FBK0500077	FBK0500078
2	9	38	3	FBK0500079	FBK0500080	FBK0500081
2.5	12	38	3	FBK0500082	FBK0500083	FBK0500084
3	12	38	3	FBK0500085	FBK0500086	FBK0500087
3.5	12	51	4	FBK0500088		FBK0500089
4	14	51	4	FBK0500090	FBK0500091	FBK0500092
4.5	20	51	5	FBK0500093		FBK0500094
5	20	51	5	FBK0500095	FBK0500096	FBK0500097
5.5	20	64	6	FBK0500098		FBK0500099
6	20	64	6	FBK0500100	FBK0500101	FBK0500102
6.5	20	64	8	FBK0500103		FBK0500104
7	20	64	8	FBK0500105		FBK0500106
8	20	64	8	FBK0500107	FBK0500108	FBK0500109
9	20	64	9	FBK0500110		FBK0500111
10	25	70	10	FBK0500112	FBK0500113	FBK0500114
11	25	70	11	FBK0500115		FBK0500116
12	25	76	12	FBK0500117	FBK0500118	FBK0500119
14	30	89	14	FBK0500120	FBK0500121	FBK0500122
15	30	89	15	FBK0500123		FBK0500124
16	30	89	16	FBK0500125	FBK0500126	FBK0500127
18	35	102	18	FBK0500128	FBK0500129	FBK0500130
20	35	102	20	FBK0500131	FBK0500132	FBK0500133
22	35	102	22	FBK0500134		FBK0500135
25	35	102	25	FBK0500136		FBK0500137

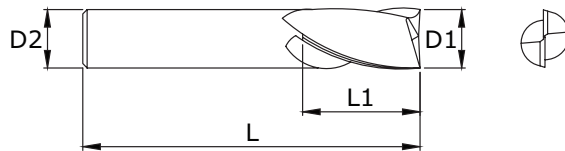


2 Flute

Centre cutting long length end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No Uncoated	EDP No TiN Coated	EDP No TiAlN Coated
3	25	64	3	FBK0500371		FBK0500372
4	25	64	4	FBK0500373	FBK0500374	FBK0500375
5	25	64	5	FBK0500376	FBK0500377	FBK0500378
6	30	76	6	FBK0500379		FBK0500380
7	30	83	7	FBK0500381		FBK0500382
8	35	83	8	FBK0500383	FBK0500384	FBK0500385
9	35	89	9	FBK0500386		FBK0500387
10	40	89	10	FBK0500388	FBK0500389	FBK0500390
12	50	102	12	FBK0500391	FBK0500392	FBK0500393
16	65	117	16	FBK0500394	FBK0500395	FBK0500396
20	80	133	20	FBK0500397		FBK0500398

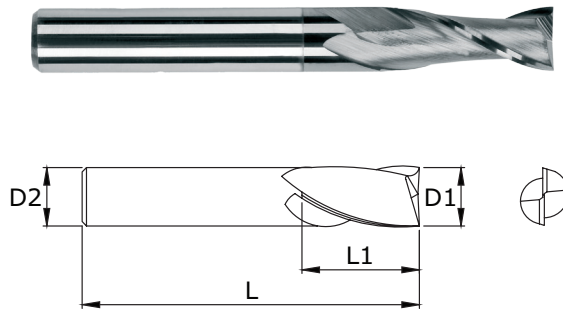


# 2 Flute

## Centre cutting long reach end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

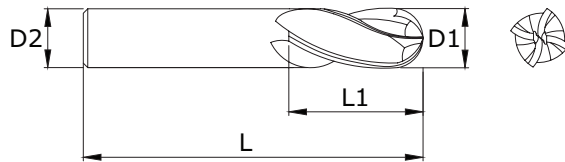
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
3	6	64	3	FBK0500474	FBK0500475
4	9	76	4	FBK0500476	FBK0500477
5	15	76	5	FBK0500478	FBK0500479
6	15	76	6	FBK0500480	FBK0500481
8	20	101	8	FBK0500482	FBK0500483
10	25	101	10	FBK0500484	FBK0500485
12	25	152	12	FBK0500486	FBK0500487
16	30	152	16	FBK0500488	FBK0500489
20	40	152	20	FBK0500490	FBK0500491

4 Flute

Centre cutting ball nose stub length end mill



END MILLS



P0-P6

K1-K3

S1-S4

H1-H4

N1-N6

M1-M3

Unit : mm

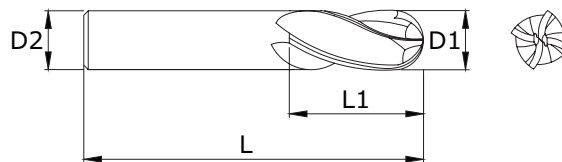
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
1	2	38	3	FBK0502017	FBK0502018
1.5	3	38	3	FBK0500584	FBK0500585
2	4	38	3	FBK0500586	FBK0500587
2.5	5	38	3	FBK0500588	FBK0500589
3	6	38	3	FBK0500590	FBK0500591
4	8	51	4	FBK0500592	FBK0500593
5	11	51	5	FBK0500594	FBK0500595
6	13	51	6	FBK0500596	FBK0500597
8	13	51	8	FBK0500598	FBK0500599
10	14	51	10	FBK0500600	FBK0500601
12	16	64	12	FBK0500602	FBK0500603
14	18	70	14	FBK0500604	FBK0500605
16	20	76	16	FBK0500606	FBK0500607
20	25	76	25	FBK0500608	FBK0500609

4 Flute

Centre cutting ball nose regular length end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

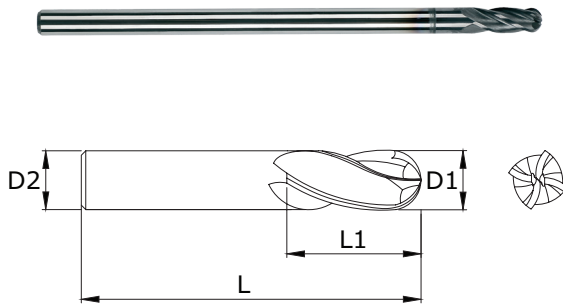
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No		EDP No
				Uncoated	TiN Coated	TiAlN Coated
1	3	38	3	FBK0500199	FBK0500200	FBK0500201
1.5	6	38	3	FBK0500202	FBK0500203	FBK0500204
2	9	38	3	FBK0500205	FBK0500206	FBK0500207
2.5	12	38	3	FBK0500208	FBK0500209	FBK0500210
3	12	38	3	FBK0500211	FBK0500212	FBK0500213
3.5	12	51	4	FBK0500214	FBK0500215	FBK0500216
4	14	51	4	FBK0500217	FBK0500218	FBK0500219
4.5	20	51	5	FBK0500220	FBK0500221	FBK0500222
5	20	51	5	FBK0500223	FBK0500224	FBK0500225
5.5	20	64	6	FBK0500226	FBK0500227	FBK0500228
6	20	64	6	FBK0500229	FBK0500230	FBK0500231
6.5	20	64	8	FBK0500232	FBK0500233	FBK0500234
7	20	64	8	FBK0500235	FBK0500236	FBK0500237
8	20	64	8	FBK0500238	FBK0500239	FBK0500240
9	20	64	9	FBK0500241		FBK0500242
10	25	70	10	FBK0500243	FBK0500244	FBK0500245
11	25	70	11	FBK0500246		FBK0500247
12	25	76	12	FBK0500248	FBK0500249	FBK0500250
13	30	89	13	FBK0500251		FBK0500252
14	30	89	14	FBK0500253	FBK0500254	FBK0500255
15	30	89	15	FBK0500256		FBK0500257
16	30	89	16	FBK0500258	FBK0500259	FBK0500260
18	35	102	18	FBK0500261	FBK0500262	FBK0500263
20	35	102	20	FBK0500264	FBK0500265	FBK0500266
22	35	102	22	FBK0500267		FBK0500268
25	35	102	25	FBK0500269		FBK0500270

4 Flute

Centre cutting ball nose long reach end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

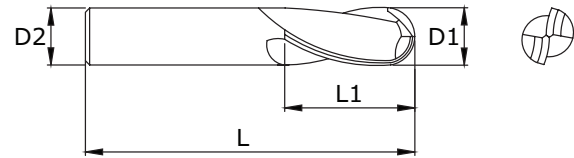
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
3	6	64	3	FBK0500492	FBK0500493
4	9	76	4	FBK0500494	FBK0500495
5	15	76	5	FBK0500496	FBK0500497
6	15	76	6	FBK0500498	FBK0500499
8	20	101	8	FBK0500500	FBK0500501
10	25	101	10	FBK0500502	FBK0500503
12	25	152	12	FBK0500504	FBK0500505
16	30	152	16	FBK0500506	FBK0500507
18	40	152	18	FBK0500508	FBK0500509
20	40	152	20	FBK0500510	FBK0500511

# 2 Flute

## Centre cutting ball nose regular length end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

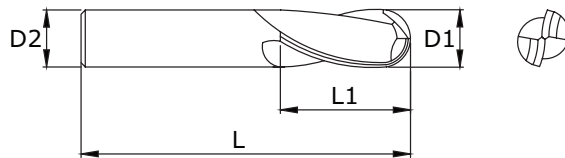
ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No		
				Uncoated	TiN Coated	TiAlN Coated
1	3	38	3	FBK0500271	FBK0500272	FBK0500273
1.5	6	38	3	FBK0500274	FBK0500275	FBK0500276
2	9	38	3	FBK0500277	FBK0500278	FBK0500279
2.5	12	38	3	FBK0500280	FBK0500281	FBK0500282
3	12	38	3	FBK0500283	FBK0500284	FBK0500285
3.5	12	51	4	FBK0500286		FBK0500287
4	14	51	4	FBK0500288	FBK0500289	FBK0500290
4.5	20	51	5	FBK0500291		FBK0500292
5	20	51	5	FBK0500293	FBK0500294	FBK0500295
5.5	20	64	6	FBK0500296		FBK0500297
6	20	64	6	FBK0500298	FBK0500299	FBK0500300
6.5	20	64	8	FBK0500301		FBK0500302
7	20	64	8	FBK0500303		FBK0500304
8	20	64	8	FBK0500305	FBK0500306	FBK0500307
9	20	64	9	FBK0500308		FBK0500309
10	25	70	10	FBK0500310	FBK0500311	FBK0500312
11	25	70	11	FBK0500313		FBK0500314
12	25	76	12	FBK0500315	FBK0500316	FBK0500317
14	30	89	14	FBK0500318	FBK0500319	FBK0500320
16	30	89	16	FBK0500321	FBK0500322	FBK0500323
18	35	102	18	FBK0500324	FBK0500325	FBK0500326
20	35	102	20	FBK0500327	FBK0500328	FBK0500329
22	35	102	22	FBK0500330		FBK0500331
25	35	102	25	FBK0500332		FBK0500333

2 Flute

Centre cutting ball nose stub length end mill



END MILLS



P0-P6

K1-K3

S1-S4

H1-H4

N1-N6

M1-M3

Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No Uncoated	EDP No TiAlN Coated
1	2	38	3	FBK0502019	FBK0502020
1.5	3	38	3	FBK0500610	FBK0500611
2	4	38	3	FBK0500612	FBK0500613
2.5	5	38	3	FBK0500614	FBK0500615
3	6	38	3	FBK0500616	FBK0500617
4	8	51	4	FBK0500618	FBK0500619
5	11	51	5	FBK0500620	FBK0500621
6	13	51	6	FBK0500622	FBK0500623
8	13	51	8	FBK0500624	FBK0500625
10	14	51	10	FBK0500626	FBK0500627
12	16	64	12	FBK0500628	FBK0500629
14	18	70	14	FBK0500630	FBK0500631
16	20	76	16	FBK0500632	FBK0500633
20	25	76	25	FBK0500634	FBK0500635



Solid Carbide End Mills

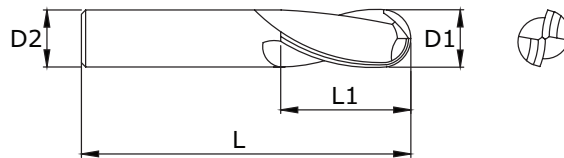
F186 GP Series

**2 Flute**

**Centre cutting ball nose  
long reach end mill**



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
3	6	64	3	FBK0500512	FBK0500513
4	9	76	4	FBK0500514	FBK0500515
5	15	76	5	FBK0500516	FBK0500517
6	15	76	6	FBK0500518	FBK0500519
8	20	101	8	FBK0500520	FBK0500521
10	25	101	10	FBK0500522	FBK0500523
12	25	152	12	FBK0500524	FBK0500525
16	30	152	16	FBK0500526	FBK0500527
18	40	152	18	FBK0500528	FBK0500529
20	40	152	20	FBK0500530	FBK0500531

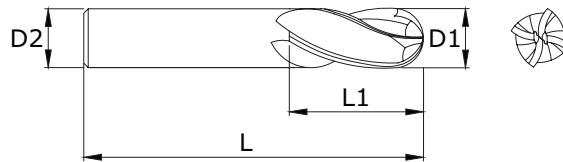


4 Flute

Centre cutting Ball Nose long length end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- N1-N6
- M1-M3

Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No		
				Uncoated	TiN Coated	TiAlN Coated
3	25	64	3	FBK0500399	FBK0500400	FBK0500401
4	25	64	4	FBK0500402	FBK0500403	FBK0500404
5	25	64	5	FBK0500405	FBK0500406	FBK0500407
6	30	76	6	FBK0500408	FBK0500409	FBK0500410
7	30	83	7	FBK0500411	FBK0500412	FBK0500413
8	35	83	8	FBK0500414	FBK0500415	FBK0500416
10	40	89	10	FBK0500417	FBK0500418	FBK0500419
12	50	102	12	FBK0500420	FBK0500421	FBK0500422
16	65	117	16	FBK0500423	FBK0500424	FBK0500425
20	80	133	20	FBK0500426		FBK0500427



Solid Carbide End Mills

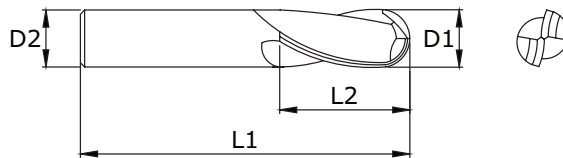
F126 GP Series

**2 Flute**

**Centre cutting Ball Nose long length end mill**



END MILLS



P0-P6

K1-K3

S1-S4

H1-H4

N1-N6

M1-M3

Unit : mm

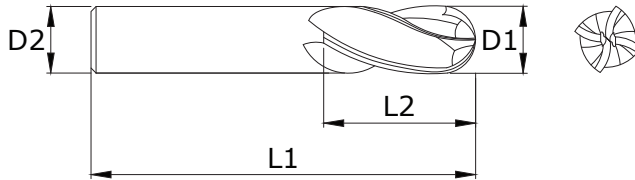
ØD1 (mm)	L2 (mm)	L1 (mm)	ØD2 (mm)	EDP No		EDP No
				Uncoated	TiN Coated	TiAIN Coated
3	25	64	3	FBK0500428	FBK0500429	FBK0500430
4	25	64	4	FBK0500431	FBK0500432	FBK0500433
5	25	64	5	FBK0500434	FBK0500435	FBK0500436
6	30	76	6	FBK0500437	FBK0500438	FBK0500439
8	35	83	8	FBK0500440	FBK0500441	FBK0500442
10	40	89	10	FBK0500443	FBK0500444	FBK0500445
12	50	102	12	FBK0500446		FBK0500447
16	65	117	16	FBK0500448		FBK0500449
20	80	133	20	FBK0500450		FBK0500451
25	80	152	25	FBK0500452		FBK0500453

4 Flute

Centre cutting ball nose extra long end mill



END MILLS



P0-P6

K1-K3

S1-S4

H1-H4

N1-N6

M1-M3

Unit : mm

Ø D1 (mm)	L2 (mm)	L1 (mm)	Ø D2 (mm)	EDP No Uncoated
3	40	100	3	FBK0502690
4	40	100	4	FBK0502961
5	40	100	5	FBK0502691
6	40	100	6	FBK0502692
8	50	100	8	FBK0502693
8	75	150	8	FBK0501480
10	40	100	10	FBK0500887
10	75	152	10	FBK0502694
12	75	152	12	FBK0502695
16	75	152	16	FBK0502696
20	75	152	20	FBK0502697



## Solid Carbide End Mills

### Cutting speed chart

#### General Purpose Technical Metric

	2 Flute Series			3 Flute Series		4 Flute Series		
Stub	F164	F166				F163	F165	
Standard	F121	F150		F116		F111	F140	
long length/reach	F123	F126	F183 / F186			F122	F125	F181 / F184 / F187 / F188

Workpiece Material Group		Example	VC
Steel	P	Steel - Mild (.2 - .3 Carbon) 1018	105 - 150
		Steel - Mild (.4 - .5 Carbon) 4140	75 - 105
		Tool Steels (1.2 carbon) A2/D2/H13/P20	60 - 75
		Forgings	40 - 75
Cast Iron	K	Iron Cast (Soft)	140 - 185
		Iron - Cast (Medium Hard)	90 - 120
		Iron (Hard Chilled)	75 - 90
		Iron (Malleable)	70 - 90
Stainless Steel	M	Stainless Free Machining	90 - 120
		Austenitic Stainless 304/316	55 - 70
		Ferritic	60 - 85
		Martensitic	45 - 60
		PH Stainless 17-4 PH	40 - 60

Workpiece Material Group		Example	Vc m/min
Special Alloys	S	Titanium 6AL-4V	55 - 115
		Cobalt-Based Alloys Stellite	30 - 60
		Nickel-Based Alloys Inconel 625/718	30 - 60
		Iron-Based Alloys Incoloy 800-802	40 - 60
Hardened Steel	H	Hardened Steels 35-45 Rc	60 - 75
		Hardened Steels 45-55 Rc	45 - 60
		Hardened Steels 55-65 Rc	15 - 30
Non-Ferrous	N	Aluminium / Aluminium Alloys	150 - 215
		Brass / Bronze	120 - 185
		Magnesium / Magnesium Alloys	215 - 305
		Plastics / Bakelite	245 - 365

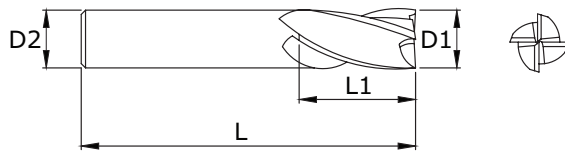
### Feed rate chart

#### General Purpose Technical Metric

Workpiece Material Group		Example	Tool Diameter (mm)								
			3	5	6	8	10	12	16	20	25
			mm/Tooth								
Steel	P	Steel - Mild (.2-.3 Carbon) 1018	.013 - .020	.025 - .030	.038 - .051	.038 - .051	.053 - .076	.051 - .089	.058 - .102	.056 - .109	.081 - .127
		Steel - Mild (.4-.5 Carbon) 4140									
		Tool Steels (1.2 carbon) A2/D2/H13/P20 Forgings	.008 - .013	.020 - .025	.030 - .038	.036 - .046	.046 - .051	.051 - .058	.058 - .076	.061 - .081	.061 - .081
Cast Iron	K	Iron Cast (Soft)	.013 - .020	.025 - .030	.038 - .051	.038 - .051	.053 - .076	.051 - .089	.058 - .102	.056 - .109	.081 - .127
		Iron - Cast (Medium Hard)									
		Iron (Hard Chilled) Iron (Malleable)									
Stainless Steel	M	Stainless Steel Free Machining	.013 - .020	.025 - .030	.038 - .051	.038 - .051	.053 - .076	.051 - .089	.058 - .102	.056 - .109	.081 - .127
		Ferritic									
		Austenitic Stainless 304/316 Martensitic PH Stainless 17-4 PH	.008 - .013	.020 - .025	.030 - .038	.036 - .046	.046 - .051	.051 - .058	.058 - .076	.061 - .081	.061 - .081
Special Alloys	S	Titanium 6AL-4V	.008 - .010	.010 - .015	.015 - .020	.020 - .030	.020 - .030	.030 - .041	.041 - .046	.046 - .051	.051 - .076
		Stellite Inconel 625/718 Incoloy 800-802	.008 - .013	.013 - .038	.013 - .038	.025 - .051	.025 - .051	.025 - .076	.051 - .076	.064 - .089	.064 - .089
Hardened Steel	H	Hardened Steels 35-45 Rc	.008 - .013	.013 - .038	.013 - .038	.025 - .051	.025 - .051	.025 - .076	.051 - .076	.064 - .089	.064 - .089
		Hardened Steels 45-55 Rc									
		Hardened Steels 55-65 Rc									
Non-Ferrous	N	Aluminium/Aluminium Alloys	.020 - .038	.038 - .051	.051 - .064	.064 - .076	.076 - .089	.089 - .127	.127 - .216	.191 - .241	.216 - .254
		Brass/Bronze Magnesium/Magnesium Alloys Plastics/Bakelite									

# 4 Flute

## Centre cutting regular length chip breaker end mill



P0-P6

K1-K3

S1-S4

H1-H4

M1-M3

Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
4	14	51	4	FBK0500636	FBK0504095
5	20	51	5	FBK0500637	FBK0500638
6	20	64	6	FBK0500639	FBK0500640
8	20	64	8	FBK0500642	FBK0500643
9	20	64	9	FBK0500644	FBK0500645
10	25	70	10	FBK0500646	FBK0500647
12	25	76	12	FBK0500648	FBK0500649
14	30	89	14	FBK0500650	FBK0500651
16	30	89	16	FBK0500652	FBK0500653
18	35	102	18	FBK0500654	FBK0504096
20	38	102	20	FBK0500655	FBK0503975



Solid Carbide End Mills

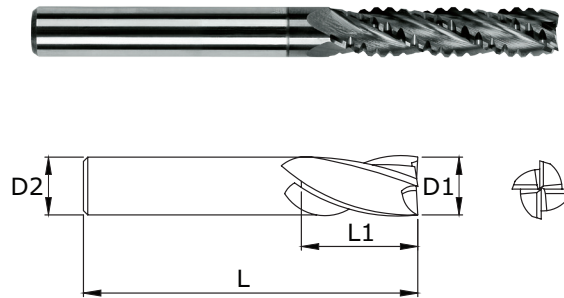
F132CB GP Series

4 Flute

Centre cutting long length chip breaker end mill



END MILLS



- P0-P6
- K1-K3
- S1-S4
- H1-H4
- M1-M3

Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No	
				Uncoated	TiAlN Coated
6	30	76	6	FBK0500656	FBK0500657
8	35	83	8	FBK0500658	FBK0500659
10	40	89	10	FBK0500660	FBK0500661
12	50	102	12	FBK0500662	FBK0500663
16	65	117	16	FBK0500664	FBK0503024

Available in uncoated and TiN coating

Application data on page no 2.180



## Cutting speed chart

### Series F114CB/F132CB METRIC

Workpiece Material Group		Example	Vc m/min
Steel	P	Steel - Mild (.2 - .3 Carbon) 1018	135 - 150
		Steel - Mild (.4 - .5 Carbon) 4140	75 - 90
		Tool Steels (1.2 carbon) A2/D2/H13/P20 Forgings	40 - 75
Cast Iron	K	Iron Cast (Soft)	135 - 185
		Iron - Cast (Medium Hard)	90 - 120
		Iron (Hard Chilled)	75 - 90
Stainless Steel	M	Iron (Malleable)	70 - 90
		Stainless Free Machining	60 - 90
		Austenitic Stainless 304/316	55 - 70
		Ferritic	60 - 85
Special Alloys	S	Martensitic	45 - 60
		PH Stainless 17-4 PH	40 - 60
		Titanium 6AL-4V	55 - 115
		Cobalt-Based Alloys Stellite	25 - 40
Hardened Steel	H	Nickel-Based Alloys Inconel 625/718	25 - 40
		Iron-Based Alloys Incoloy Incoloy 625/718	25 - 40
		Hardened Steels 35-45 Rc	60 - 75
		Hardened Steels 45-55 Rc	45 - 60

#RPM = Vc x 318.057/Tool Dia.

#mm/min = RPM x number of teeth x mm/tooth

## Feed rate chart

### Series F114CB/F132CB METRIC

Workpiece Material Group		Example	Tool Diameter (mm)								
			3	5	6	8	10	14	16	18	25
			mm/Tooth								
Steel	P	Steel - Mild (.2-.3 Carbon) 1018	.013 - .020	.025 - .30	.038 - .051	.038 - .064	.053 - .076	.056 - .076	.058 - .102	.056 - .109	0.081 - .127
		Steel - Mild (.4-.5 Carbon) 4140									
Cast Iron	K	Tool Steels (1.2 carbon) A2/D2/H13/P20 Forgings	.008 - .013	.020 - .025	.030 - .038	.036 - .046	.046 - .051	.051 - .058	.058 - .076	.060 - .081	.060 - .081
		Iron Cast (Soft)									
		Iron - Cast (Medium Hard) Iron (Hard Chilled) Iron (Malleable)	.013 - .020	.020 - .025	.038 - .051	.038 - .064	.053 - .076	.056 - .076	.058 - .102	.056 - .109	.081 - .127
Stainless Steel	M	Stainless Steel Free Machining	.013 - .020	.020 - .025	.038 - .051	.038 - .064	.053 - .076	.056 - .076	.058 - .102	.056 - .109	.081 - .127
		Ferritic									
Special Alloy	S	Austenitic Stainless 304/316	.008 - .013	.020 - .025	.030 - .038	.036 - .046	.046 - .051	.051 - .058	.058 - .076	.060 - .081	.060 - .081
		Martensitic PH Stainless 17-4 PH									
Hardened Steel	H	Titanium 6AL-4V	.008 - .010	.010 - .015	.015 - .020	.020 - .030	.020 - .030	.030 - .041	.041 - .046	.046 - .051	.051 - .076
		Stellite Inconel 625/718 Incoloy 800-802	.008 - .013	.020 - .025	.030 - .038	.036 - .046	.046 - .051	.051 - .058	.058 - .076	.060 - .081	.060 - .081
		Hardened Steels 35-45 Rc	.008 - .013	.013 - .038	.013 - .038	.025 - .051	.025 - .051	.025 - .076	.051 - .076	.064 - .089	.064 - .089
		Hardened Steels 45-55 Rc									
		Hardened Steels 55-65 Rc									