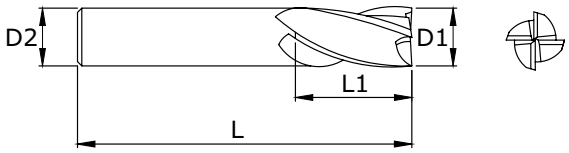
4 Flute

Centre cutting HSM end mill for 30-45 HRc steel

Carbide | REG | 30° | 6535 HA | 30-45 HRC | TiAIN



P2-P4

Unit : mm

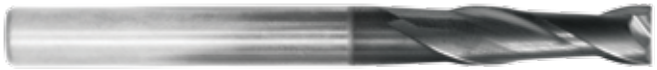
Ø D1 (mm)	L1 (mm)	L (mm)	Ø D2 (mm)	EDP No
1	3	38	3	FBK0501970
1.5	6	38	3	FBK0501971
2	9	38	3	FBK0501972
2.5	12	38	3	FBK0501973
3	12	38	3	FBK0501200
4	14	51	4	FBK0501974
5	20	51	5	FBK0501326
6	20	64	6	FBK0501366
8	20	64	8	FBK0501975
10	25	70	10	FBK0500846
12	25	76	12	FBK0500942
14	30	89	14	FBK0501017
16	30	89	16	FBK0501048
20	38	102	20	FBK0501125

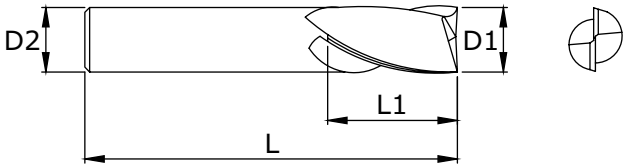
Application data on page no 2.119

2 Flute

Centre cutting HSM end mill for 30-45 HRc Steel

Carbide | REG | 30° | 6535 HA | 30 - 45 HRC | TiAlN





P2-P4

Unit : mm

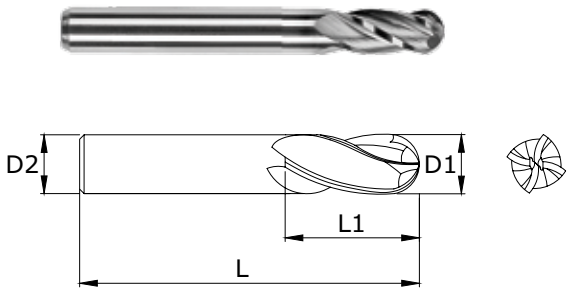
Ø D1 (mm)	L1 (mm)	L (mm)	Ø D2 (mm)	EDP No
1	3	38	3	FBK0501982
1.5	6	38	3	FBK0501983
2	9	38	3	FBK0501984
2.5	12	38	3	FBK0501985
3	12	38	3	FBK0501196
4	14	51	4	FBK0501986
5	20	51	5	FBK0501318
6	20	64	6	FBK0501987
8	20	64	8	FBK0501441
10	25	70	10	FBK0500834
12	25	76	12	FBK0500932
14	30	89	14	FBK0501015
16	30	89	16	FBK0501046
20	38	102	20	FBK0501122

Application data on page no 2.119

4 Flute

Centre cutting HSM ball nose end mill for 30-45 HRc Steel

Carbide | REG | 30° | 6535 HA | 30-45 HRC | TiAlN



P2-P4

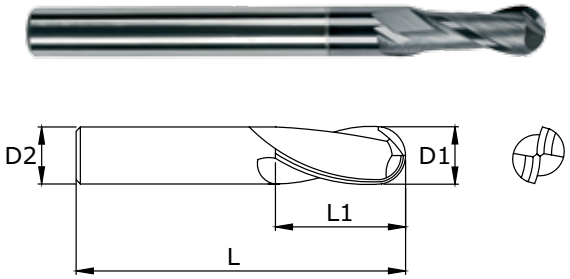
Unit : mm

ØD1 (mm)	L1 (mm)	L (mm)	ØD2 (mm)	EDP No
1	3	38	3	FBK0501976
1.5	6	38	3	FBK0501977
2	9	38	3	FBK0501978
2.5	12	38	3	FBK0501979
3	12	38	3	FBK0501198
4	14	51	4	FBK0501980
5	20	51	5	FBK0501322
6	20	64	6	FBK0501361
8	20	64	8	FBK0501448
10	25	70	10	FBK0500838
12	25	76	12	FBK0500937
16	30	89	16	FBK0501047
20	38	102	20	FBK0501981

Application data on page no 2.119

2 Flute Centre cutting HSM ball nose end mill for 30-45 HRc

Carbide | REG | 30° | 6535 HA | 30 - 45 HRC | TiAlN



P2-P4

Unit : mm

Ø D1 (mm)	L1 (mm)	L (mm)	Ø D2 (mm)	EDP No
1	3	38	3	FBK0501988
1.5	6	38	3	FBK0501989
2	9	38	3	FBK0501990
2.5	12	38	3	FBK0501991
3	12	38	3	FBK0501195
4	14	51	4	FBK0501241
5	20	51	5	FBK0501320
6	20	64	6	FBK0501992
8	20	64	8	FBK0501437
10	25	70	10	FBK0501993
12	25	76	12	FBK0501994
16	30	89	16	FBK0501045
20	38	102	20	FBK0501995

Application data on page no 2.119

Cutting speed & feed rate chart

Centre cutting HSM end mill for 30-45 HRc Steel
Centre cutting HSM ball nose end mill for 30-45 HRc Steel

Material group	TSR (N/mm²)	Hardness HRc	Cutting speed Vc m/min	Coolant
P3	<750	< 30 HRc	90-120	emulsion
P4	<1000	<35-48 HRc	75-90	emulsion
P4	<1400	<35 HRc	60-75	emulsion

Advantages

- Higher tool life
- Consistency
- Better surface finish

Tips:

- All suggested Parameters are starting values and they may be increased based on the rigidity of the setup
- If ap and ae are lesser than the recommended values the feed rates can be increased

FBK0501196		
Workpiece material: P20/P30 35HRc		
	Competitor	Totem
Ø	3mm	3mm
Z	2 Flutes	2 Flutes
Vc	100 m/min	100 m/min
n	10606 rpm	10606 rpm
Fz	0.06 mm/t	0.06 mm/t
Vf	1273mm/min	1273mm/min
ap	0.15mm	0.3mm
ae	0.15mm	0.15mm
Coolant	Air	Air
Q	28.6cm³/min	57.28cm³/min
Tool Life	3.5 Hrs	4.2 Hrs

Ød (mm)	ap max. (mm)	ae max. (mm)	fz (mm/ tooth)
1	0.04	0.50	0.015-0.025
1.5	0.06	0.75	0.022-0.032
2	0.08	1.00	0.030-0.040
2.5	0.10	1.25	0.040-0.050
3	0.30	1.50	0.050-0.060
4	0.40	2.00	0.071-0.081
5	0.50	2.50	0.078-0.088
6	0.60	3.00	0.104-0.111
8	0.80	4.00	0.131-0.141
10	1.00	5.00	0.158-0.168
12	1.20	6.00	0.213-0.223
16	1.60	8.00	0.245-0.255
20	2.00	10.00	0.280-0.290

Turbo - TR

Features

- Variable pitch and Variable helix
- Stable core geometry
- Optimized centre cutting geometry
- New generation coating
- Available in 4 Flutes,5 Flutes,6 Flutes and 7 Flutes
- Available with Neck options

Functions & Benefits

- Higher productivity
- Reinforced core gives the ability to work at higher parameters.
- Superior Tool Life.
- Excellent Surface Finish.
- High MRR