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Milling
2024

a cut above



About **Asphalt**

We, **ASPHALT SYNDICATE LLP**. Specialise In Tools Application Engineering. We Are Mainly Focused In Solid Carbide Endmill & Ballnose, Carbide Drills, Carbide Inserts & Circular Saw Blade. We Are One Of The Pioneers In Tool Engineering And With The Practical Experience In Metal Cutting Tools & Its Various Applications, We Are In A Position To Render Our Technical Services & Bring Down Your Tool Cost Per Component.

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ASPHALT SYNDICATE LLP. Is Bound To Share Their Expertise And Support With Customers To Built A Greater INDIA.



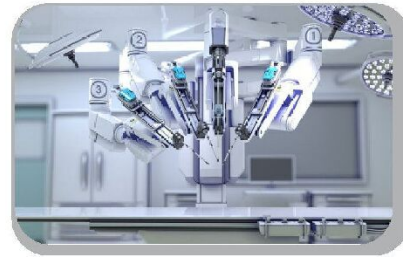
INDUSTRIES WE SERVE



Aerospace



Automotive



Surgical



Oil & Gas



Metal Fabrication



Railway



Heavy Machinery

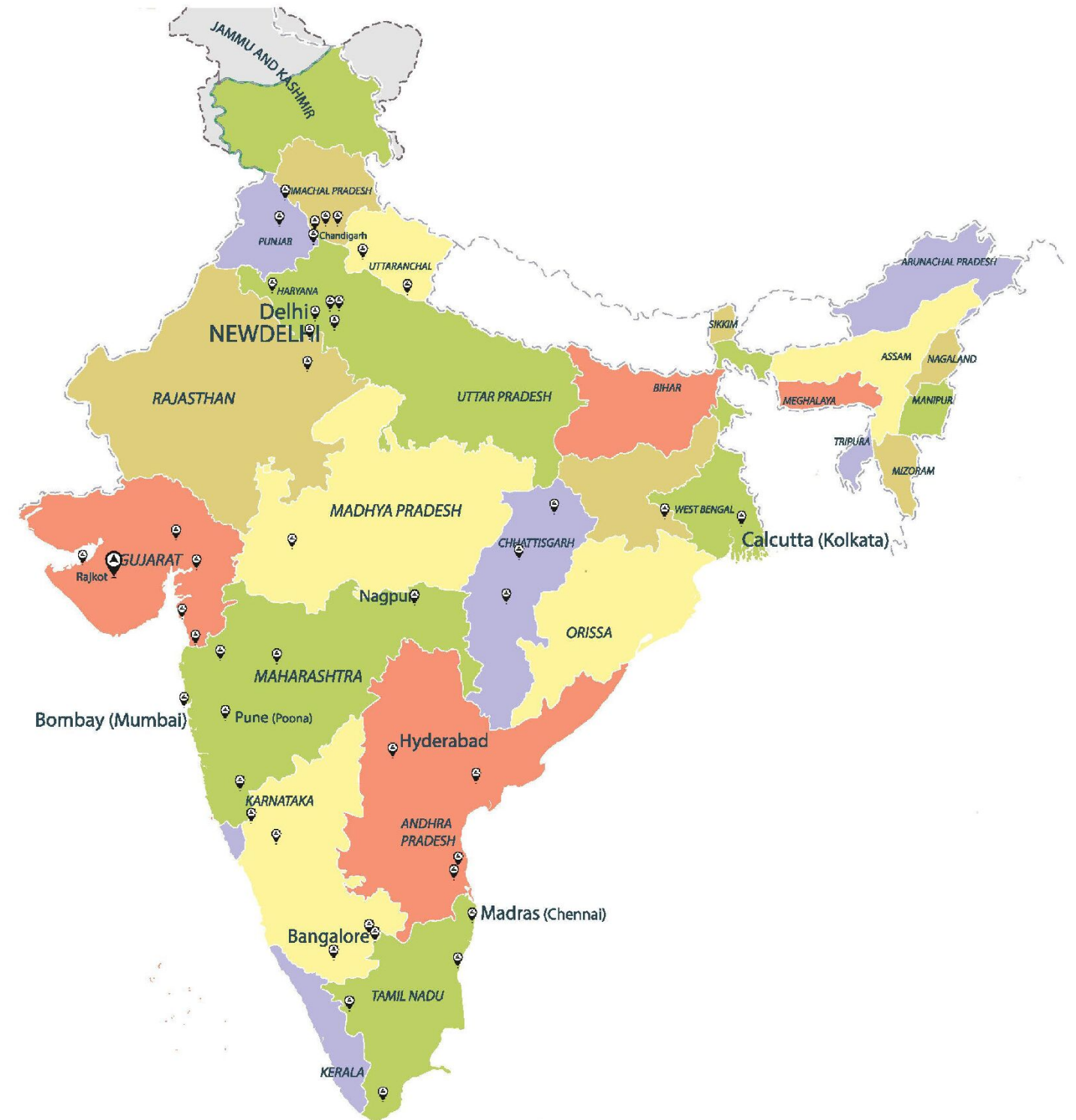


Marine



Construction

IMPACTFUL PRESENCE



INDEX

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Megatron



Megatron

Flat Carbide Endmill

4 Flute

AlTiCrN

Slotting

40°-42°

Pocketing

Unequal

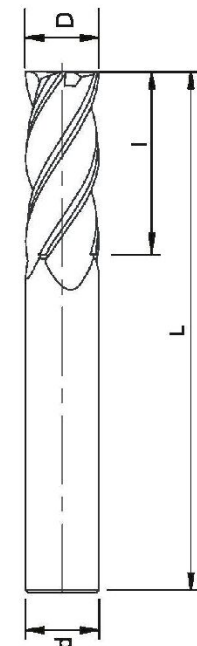
Facing

DIN 6535-HA

Ramping

Stainless Steel

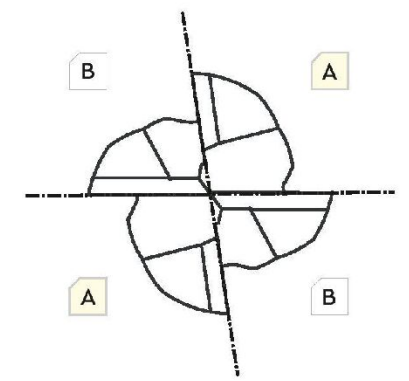
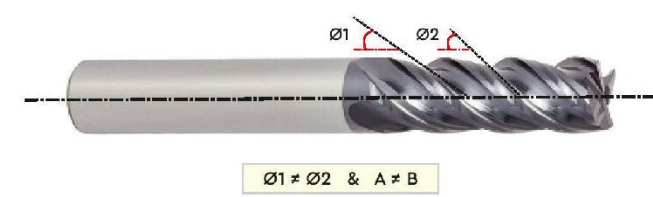
Side Milling



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
3	9	50	4
4	12	50	4
5	15	50	6
6	18	50	6
8	24	60	8
10	30	75	10
12	36	75	12
16	45	100	16
20	50	100	20

Dia(D) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

Unequal Spacing of Teeth and Variable Leads



• Shank Dia (d) Tolerance h6

Applicable Working Material

Carbon Steel ~HB225	Alloy Steel HB225~325	Hardened Steel		High Hardened Steel	Cast Iron	Copper & Aluminium	Stainless Steel	Titanium	Inconel
		HRC~50	HRC~55	HRC~60					
●	●	●			●		●	○	○

● Excellent ○ Good

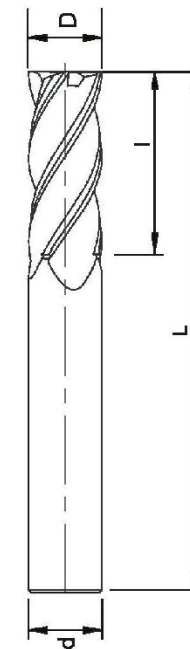
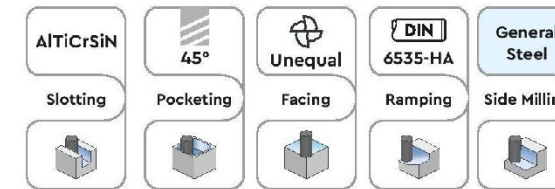
Cyclotron



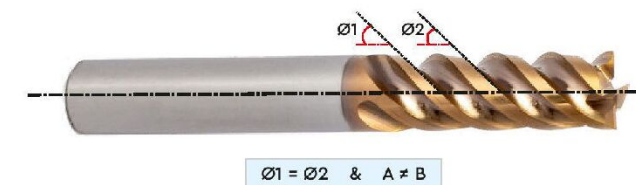
Cyclotron

Flat Carbide Endmill

4 Flute



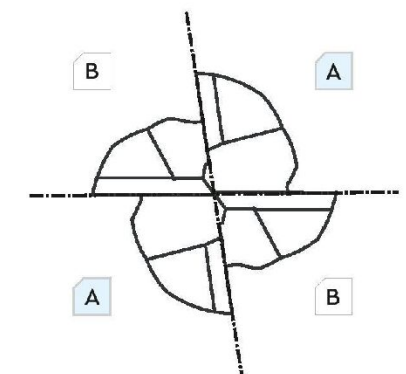
Equal Spacing of Teeth and Variable Leads



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
2	6	50	4
3	9	50	4
4	12	50	4
5	15	50	6
6	18	50	6
8	24	60	8
10	30	75	10
12	36	75	12
16	45	100	16
20	45	100	20

Dia(D) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

• Shank Dia (d) Tolerance h6



Applicable Working Material

Carbon Steel ~HB225	Alloy Steel HB225~325	Hardened Steel		High Hardened Steel	Cast Iron	Copper & Aluminium	Stainless Steel	Titanium	Inconel
		HRC~50	HRC~55	HRC~60					
●	●	●			○		○	○	○

● Excellent ○ Good

Multitron



Multitron

Ballnose Carbide Endmill

2 Flute

AlTiN

30°

2 Flute

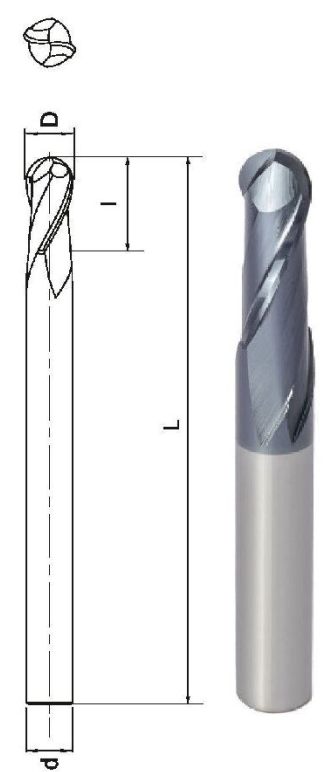
DIN

6535-HA

General Steel

Profiling

Side Milling



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.6	2.4	50	4
R0.7	2.8	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R1	4	50	6
R1.25	5	50	6
R1.5	6	50	6
R1.75	7	50	6
R2	8	50	6
R2.5	10	50	6
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R5	20	75	10
R6	24	75	12
R8	32	100	16
R10	40	100	20

Dia(D) Up to	Tolerance (mm)
6	±0.005
12	±0.01
20	±0.015

• Shank Dia (d) Tolerance h6

Applicable Working Material

Carbon Steel ~HB225	Alloy Steel HB225~325	Hardened Steel		High Hardened Steel	Cast Iron	Copper & Aluminium	Stainless Steel	Titanium	Inconel
		HRC~50	HRC~55	HRC~60					
●	●	●			○		○	○	○

● Excellent ○ Good

Hardtron

Ballnose Carbide Endmill

2 Flute

AlTiCrSiN

30°

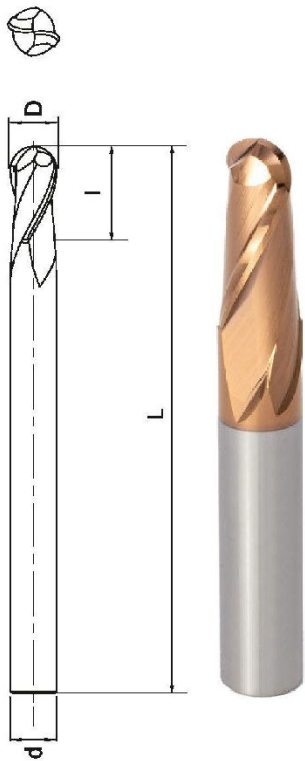
2 Flute

DIN 6535-HA

Hardened Steel

Profiling

Side Milling



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	1.5	50	4
R0.6	2	50	4
R0.7	2	50	4
R0.75	2.5	50	4
R1	3	50	4
R1.25	4	50	4
R1.5	5	50	4
R1.75	5.5	50	4
R2	6	50	4
R0.5	1.5	50	6
R0.6	2	50	6
R0.7	2	50	6
R0.75	2.5	50	6
R1	3	50	6
R1.25	4	50	6
R1.5	5	50	6
R2	6	50	6
R2.5	8	50	6
R3	9	50	6
R3.5	11	60	8
R4	12	60	8
R5	15	75	10
R6	18	75	12

Dia(D) Up to	Tolerance (mm)
6	±0.005
12	±0.01

• Shank Dia (d) Tolerance h6

Applicable Working Material

● Excellent

○ Good

Carbon Steel ~HB225	Alloy Steel HB225~325	Hardened Steel		High Hardened Steel	Cast Iron	Copper & Aluminium	Stainless Steel	Titanium	Inconel
		HRC~50	HRC~55	HRC~65					
			●	●					

Unicorn



Unicorn

Flat Carbide Endmill

4 Flute

AlTiCrN

35°

4 Flute

DIN 6535-HA

Universal

Slotting

Pocketing

Facing

Ramping

Side Milling



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
2	5	50	4
3	7	50	4
4	10	50	4
5	12	50	6
6	15	50	6
6	21	75	6
8	20	60	8
8	28	75	8
8	40	100	8
10	25	75	10
10	35	100	10
12	30	75	12
12	42	100	12
16	40	100	16
16	56	150	16
20	50	100	20
20	70	150	20

Dia(D) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

• Shank Dia (d) Tolerance h6

Applicable Working Material										● Excellent	○ Good
Carbon Steel ~HB225	Alloy Steel HB225~325	Hardened Steel		High Hardened Steel	Cast Iron	Copper & Aluminium	Stainless Steel	Titanium	Inconel		
		HRC~50	HRC~55	HRC~60							
●	●	●			○		●	●	●		

Utron

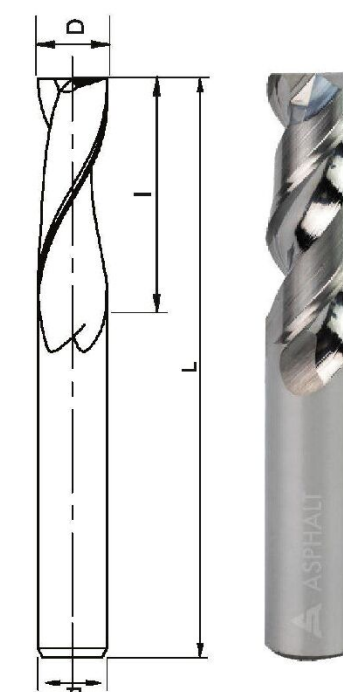
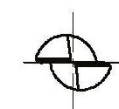
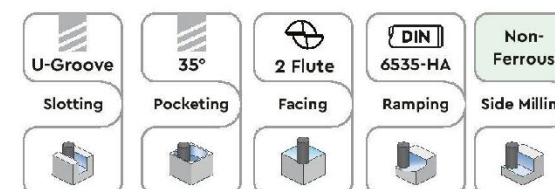


Utron

Flat Carbide

Uncoated U-Groove Endmill

2 Flute - 55 HRC



Dia(D) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

• Shank Dia (d) Tolerance h6

Applicable Working Material

Non-Ferrous	Excellent	Good
●	●	○

ASPHALT

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	5	50	4
2	6	50	4
2.5	8	50	4
3	10	50	3
3	10	50	4
3.5	12	50	4
4	12	50	4
5	15	50	5
6	18	50	6
7	21	60	8
8	24	60	8
9	27	75	10
10	30	75	10
11	33	75	12
12	36	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

1	3	75	4
1.5	5	75	4
2	6	75	4
3	15	75	4
4	15	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

3	12	100	3
4	20	100	4
5	25	100	5
6	30	100	6
6	35	150	6
8	40	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Standard

Long

Extra Long

Utron



Utron

Flat Carbide
Uncoated U-Groove Endmill
3 Flute - 55 HRC

U-Groove
Slotting

35°
Pocketing

3 Flute
Facing

DIN
6535-HA
Ramping

Non-Ferrous
Side Milling



Dia(D) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

• Shank Dia (d) Tolerance h6

Applicable Working Material

Non-Ferrous

● Excellent

○ Good



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	5	50	4
2	6	50	4
2.5	8	50	4
3	10	50	3
3	10	50	4
3.5	12	50	4
4	12	50	4
5	15	50	5
6	18	50	6
7	21	60	8
8	24	60	8
9	27	75	10
10	30	75	10
11	33	75	12
12	36	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

1	3	75	4
1.5	5	75	4
2	6	75	4
3	15	75	4
4	15	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

3	12	100	3
4	20	100	4
5	25	100	5
6	30	100	6
6	35	150	6
8	40	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Standard

Long

Extra Long

Astrot



Astrot

Flat Carbide
DLC Coated U-Groove Endmill
3 Flute - 55 HRC

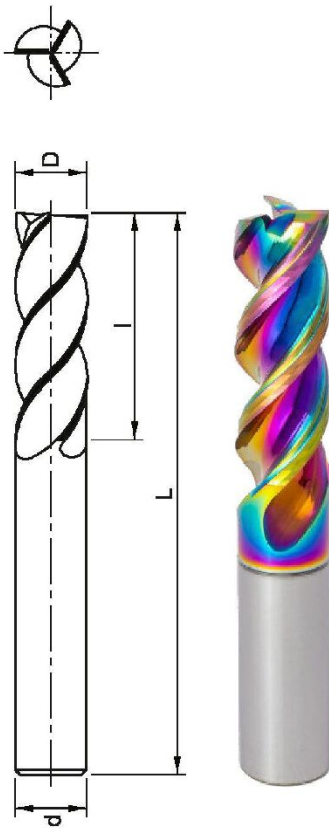
U-Groove
Slotting

35°
Pocketing

3 Flute
Facing

DIN
6535-HA
Ramping

Non-Ferrous
Side Milling



Dia(D) Up to	Tolerance (mm)
6	+0/-0.02
12	+0/-0.025
20	+0/-0.03

• Shank Dia (d) Tolerance h6

Applicable Working Material

Non-Ferrous

●

 Excellent

○

 Good



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	5	50	4
2	6	50	4
2.5	8	50	4
3	10	50	3
3	10	50	4
3.5	12	50	4
4	12	50	4
5	15	50	5
6	18	50	6
7	21	60	8
8	24	60	8
9	27	75	10
10	30	75	10
11	33	75	12
12	36	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

1	3	75	4
1.5	5	75	4
2	6	75	4
3	15	75	4
4	15	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

3	12	100	3
4	20	100	4
5	25	100	5
6	30	100	6
6	35	150	6
8	40	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Standard

Long

Extra Long

Asphalt Premium

Elegance is beauty
that never fades



TiSiN Coated
35° Helix
0.6 µm Particle
DIN 6535 Form HA



Premium

Flat Carbide Endmill

4 Flute - 55 HRC

Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	2.5	50	4
1.5	4	50	4
2	5	50	4
2.5	6.5	50	4
3	7.5	50	3
3	7.5	50	4
3.5	9	50	4
4	10	50	4
5	13	50	5
6	15	50	6
7	20	60	8
8	20	60	8
9	25	75	10
10	25	75	10
11	30	75	12
12	30	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

Standard

1	3	75	4
1.5	5	75	4
2	6	75	4
3	9	75	4
4	14	75	4
5	20	75	5
6	21	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

Long

3	12	100	3
4	18	100	4
5	25	100	5
6	27	100	6
6	40	150	6
8	35	100	8
8	50	150	8
10	55	150	10
12	60	150	12

Extra Long



Premium

Ballnose Carbide Endmill



2 Flute - 55 HRC

Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16
R9	36	100	18
R10	40	100	20

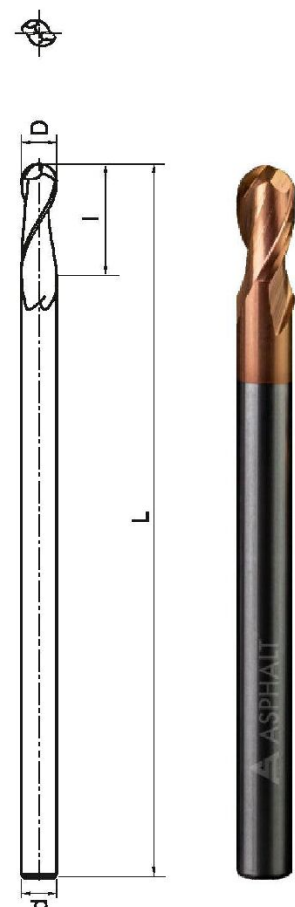
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16
R9	40	150	18
R10	40	150	20

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



Premium

Corner Radius (CR)



Carbide Endmill

4 Flute - 55 HRC

Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium

Dia (D)	CR (r)	Flute Length (l)	Total Length (L)	Shank Dia (d)
3	0.5	8	50	3
3	1	8	50	3
4	0.5	10	50	4
4	1	10	50	4
5	0.5	12	50	5
5	1	12	50	5
6	0.5	15	50	6
6	1	15	50	6
8	0.5	20	60	8
8	1	20	60	8
10	0.5	25	75	10
10	1	25	75	10
10	1.5	25	75	10
12	0.5 / 1	30	75	12
12	1.5	30	75	12
12	2 / 2.5	30	75	12
16	1 / 2 / 2.5	35	100	16

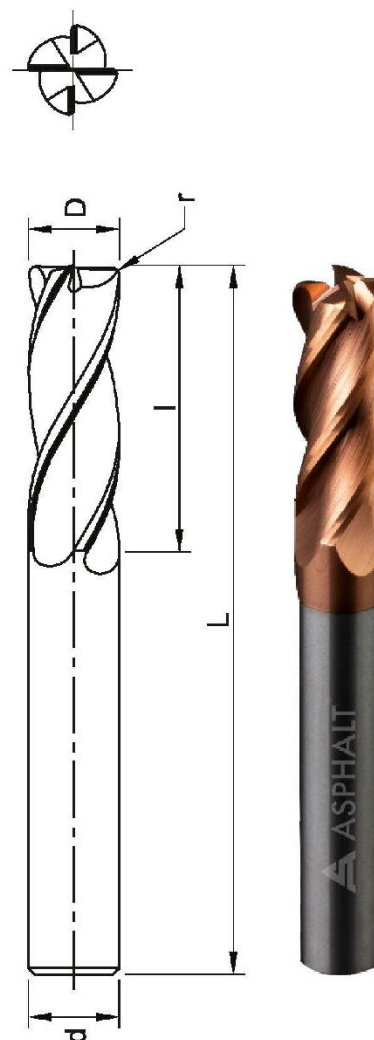
Standard

3	0.5	12	75	3
3	1	12	75	3
4	0.5	20	75	4
4	1	20	75	4
5	0.5	20	75	5
5	1	20	75	5
6	0.5	25	75	6
6	1	25	75	6
8	0.5	30	75	8
8	1	30	75	8
10	0.5	40	100	10
10	1	40	100	10
12	0.5	45	100	12
12	1	45	100	12

Long

3	0.5 / 1	12	100	3
4	0.5 / 1	20	100	4
5	0.5 / 1	20	100	5
6	0.5 / 1	30	100	6
6	1	40	150	6
8	0.5 / 1	35	100	8
8	1	50	150	8
10	1	60	150	10
12	1	60	150	12

Extra Long



Premium

Carbide Endmill

55 HRC - 6 mm Shank



Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium

4F Flat Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	6
1.5	4	50	6
2	5	50	6
2.5	8	50	6
3	8	50	6
3.5	10	50	6
4	10	50	6
5	12	50	6

Standard

1	3	75	6
1.5	5	75	6
2	6	75	6
2.5	6	75	6
3	12	75	6
3.5	12	75	6
4	20	75	6
5	20	75	6

Long

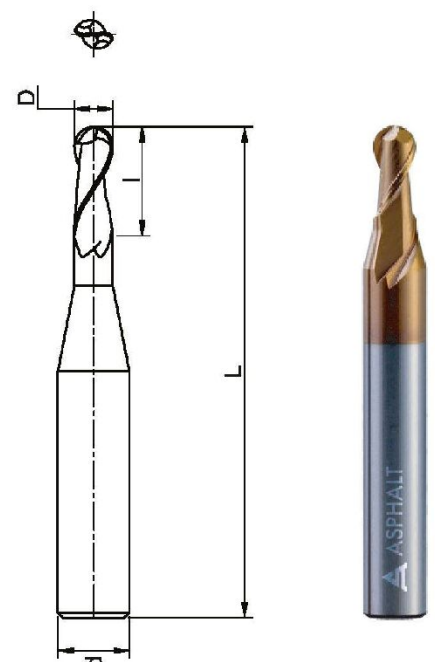
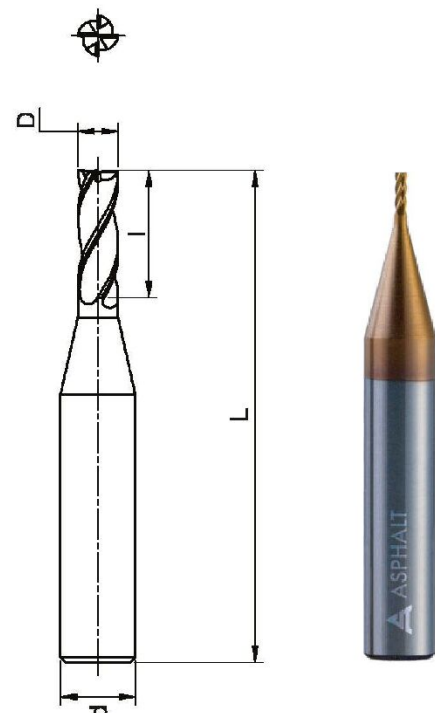
2F Ballnose Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	6
R0.75	3	50	6
R1	4	50	6
R1.25	5	50	6
R1.5	6	50	6
R1.75	7	50	6
R2	8	50	6
R2.5	10	50	6

Standard

R0.5	2	75	6
R0.75	3	75	6
R1	4	75	6
R1.25	5	75	6
R1.5	6	75	6
R1.75	7	75	6
R2	8	75	6
R2.5	10	75	6

Long



Premium

Carbide

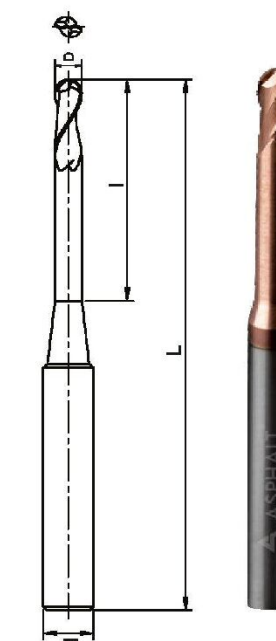
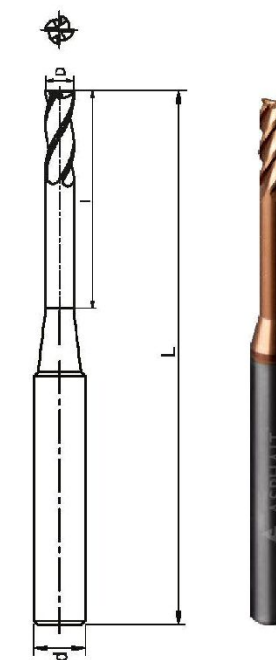
Long Neck Endmill

55 HRC



Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium



4F Flat Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	6/8/10/12/15/20	50	4
1.5	6/8/10/12/15/20	50	4
2	6/8/10/12/15/20	50	4
2.5	6/8/10/12/15/20	50	4
3	10/12/15/20	50	4

Standard

2F Ballnose Endmill

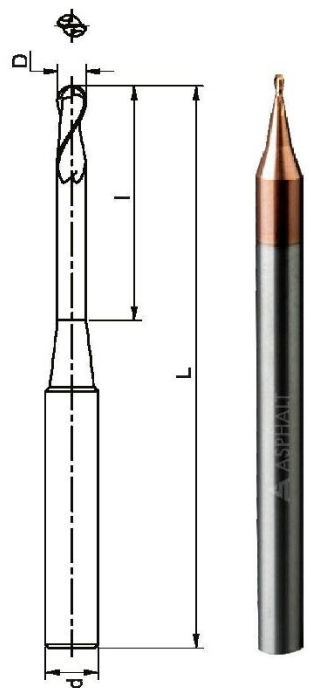
Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	6/8/10/12/15/20	50	4
R0.75	6/8/10/12/15/20	50	4
R1	6/8/10/12/15/20	50	4
R1.25	6/8/10/12/15/20	50	4
R1.5	10/12/15/20	50	4

Standard

Micro Carbide Endmill 2 Flute - 55 HRC



Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium



Standard

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
0.3	2/3/4/6/8/10	50	4
0.4	2/3/4/6/8/10	50	4
0.5	2/3/4/6/8/10	50	4
0.6	2/3/4/6/8/10	50	4
0.7	2/3/4/6/8/10	50	4
0.8	2/3/4/6/8/10	50	4

Standard

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.15	2/3/4/6/8	50	4
R0.2	2/3/4/6/8	50	4
R0.25	2/3/4/6/8	50	4
R0.3	2/3/4/6/8	50	4
R0.35	2/3/4/6/8	50	4
R0.4	2/3/4/6/8	50	4

Note

AlTiSiN Coated
35° Helix
0.4 µm Particle
DIN 6535 Form HA



Premium

Flat Carbide Endmill

4 Flute - 65 HRC

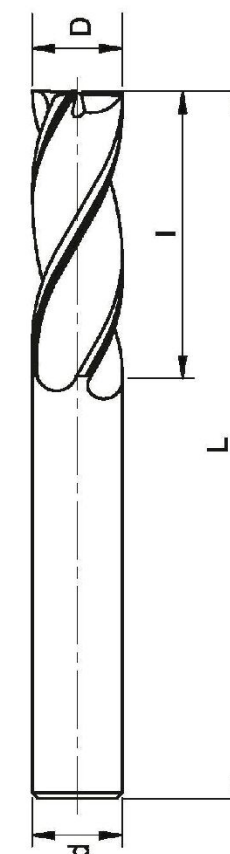
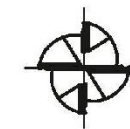


Recommended For

Steel 30-65 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <65 HRC
Hardened Steel
Carbon Steel

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	2.5	50	4
1.5	4	50	4
2	5	50	4
2.5	6.5	50	4
3	7.5	50	3
3	7.5	50	4
3.5	9	50	4
4	10	50	4
5	13	50	5
6	15	50	6
7	20	60	8
8	20	60	8
9	25	75	10
10	25	75	10
11	30	75	12
12	30	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

Standard



1	3	75	4
1.5	5	75	4
2	6	75	4
3	9	75	4
4	13	75	4
5	20	75	5
6	20	75	6
8	24	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

Long

3	12	100	3
4	25	100	4
5	25	100	5
6	25	100	6
6	40	150	6
8	35	100	8
8	50	150	8
10	60	150	10
12	60	150	12

Extra Long

Premium

Ballnose Carbide Endmill

2 Flute - 65 HRC



Recommended For

Steel 30-65 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <65 HRC
Hardened Steel
Carbon Steel

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16
R9	36	100	18
R10	40	100	20

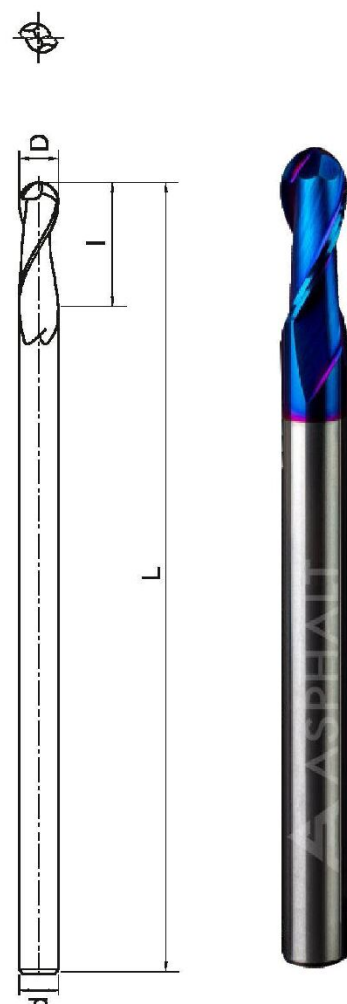
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16
R9	40	150	18
R10	40	150	20

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



Premium

Carbide

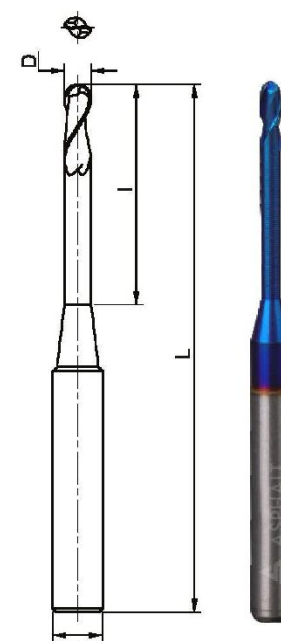
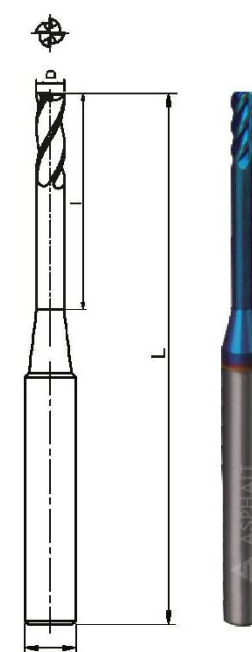
Long Neck Endmill

65 HRC



Recommended For

Steel 30-65 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <65 HRC
Hardened Steel
Carbon Steel



4F Flat Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	6/8/10/12/15/20	50	4
1.5	6/8/10/12/15/20	50	4
2	6/8/10/12/15/20	50	4
2.5	6/8/10/12/15/20	50	4
3	10/12/15/20	50	4

Standard

2F Ballnose Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	6/8/10/12/15/20	50	4
R0.75	6/8/10/12/15/20	50	4
R1	6/8/10/12/15/20	50	4
R1.25	6/8/10/12/15/20	50	4
R1.5	10/12/15/20	50	4

Standard

- AlTiN Coated
- 35° Helix
- 0.6 µm Particle
- DIN 6535 Form HA



Flat Carbide Endmill

4 Flute - 50 HRC



Recommended For

- Mild Steel
- Casting
- Steel 30-45 HRC
- EN Grade Material
- Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	4	50	4
2	5	50	4
2.5	8	50	4
3	8	50	3
3	8	50	4
3.5	10	50	4
4	10	50	4
5	12	50	5
6	15	50	6
7	20	60	8
8	20	60	8
9	25	75	10
10	25	75	10
11	30	75	12
12	30	75	12
14	40	100	14
16	45	100	16
18	45	100	18
20	45	100	20
25	45	100	25

Standard



1	3	75	4
1.5	5	75	4
2	6	75	4
3	12	75	4
4	20	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	40	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	70	150	18
20	70	150	20

Long

3	12	100	3
4	25	100	4
5	25	100	5
6	30	100	6
6	40	150	6
8	35	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Extra Long

Ballnose Carbide Endmill

2 Flute - 50 HRC



Recommended For

Mild Steel
Casting
Steel 30-45 HRC
EN Grade Material
Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16
R9	36	100	18
R10	40	100	20

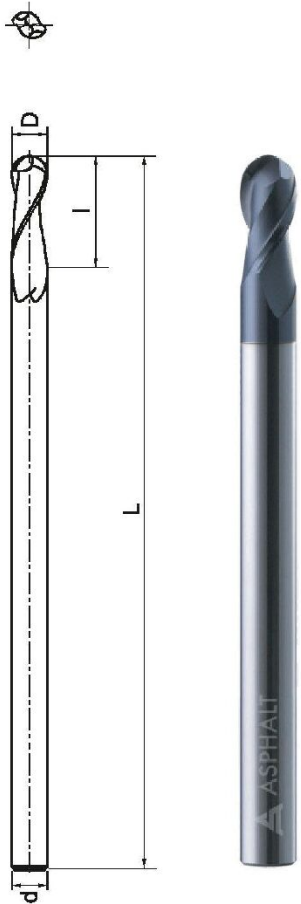
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16
R9	40	150	18
R10	40	150	20

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



Ballnose Carbide Endmill

4 Flute - 50 HRC



Recommended For

Mild Steel
Casting
Steel 30-45 HRC
EN Grade Material
Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16

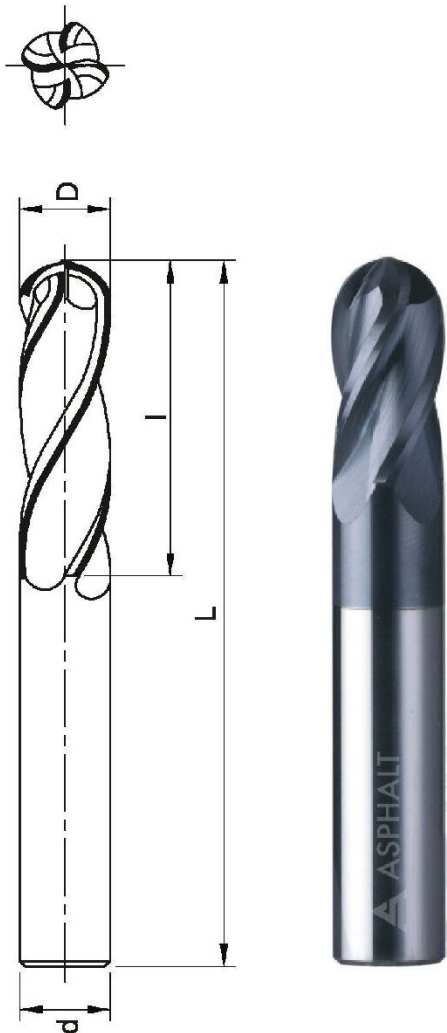
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



Corner Radius (CR) Carbide Endmill 4 Flute - 50 HRC



Recommended For

Mild Steel
Casting
Steel 30-45 HRC
EN Grade Material
Aluminium

Dia (D)	CR (r)	Flute Length (l)	Total Length (L)	Shank Dia (d)
3	0.5	8	50	3 / 4
3	1	8	50	3 / 4
4	0.5	10	50	4
4	1	10	50	4
5	0.5	12	50	5
5	1	12	50	5
6	0.5	15	50	6
6	1	15	50	6
8	0.5	20	60	8
8	1	20	60	8
10	0.5	25	75	10
10	1	25	75	10
10	1.5	25	75	10
12	0.5 / 1	30	75	12
12	1.5	30	75	12
12	2 / 2.5	30	75	12
16	1 / 2 / 2.5	35	100	16

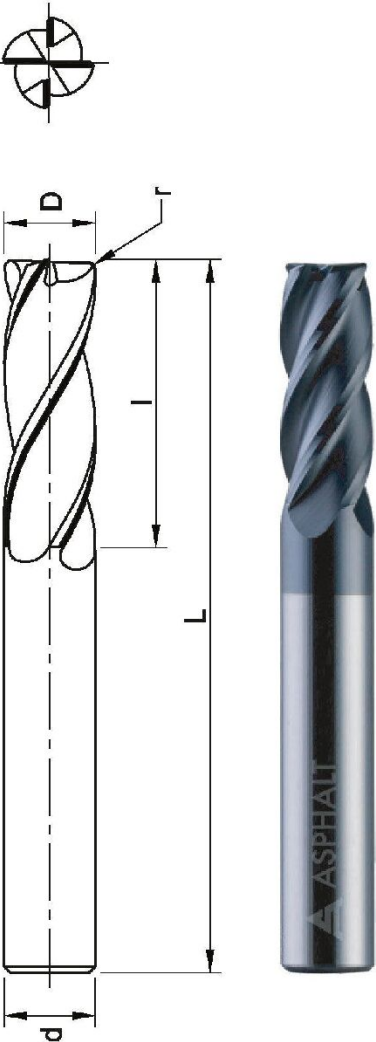
Standard

3	0.5	12	75	3
3	1	12	75	3
4	0.5	20	75	4
4	1	20	75	4
5	0.5	20	75	5
5	1	20	75	5
6	0.5	25	75	6
6	1	25	75	6
8	0.5	30	75	8
8	1	30	75	8
10	0.5	40	100	10
10	1	40	100	10
12	0.5	45	100	12
12	1	45	100	12

Long

3	0.5 / 1	12	100	3
4	0.5 / 1	15 / 20	100	4
5	0.5 / 1	25	100	5
6	0.5 / 1	30	100	6
6	1	40	150	6
8	0.5 / 1	35	100	8
8	1	50	150	8
10	1	60	150	10
12	1	60	150	12

Extra Long

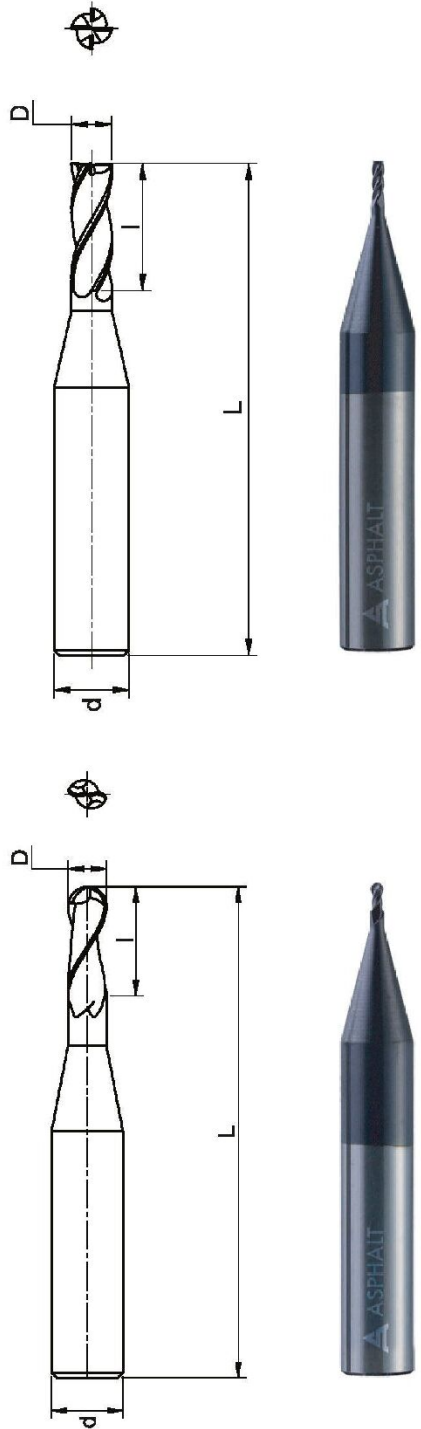


Carbide Endmill 50 HRC - 6mm Shank



Recommended For

Mild Steel
Casting
Steel 30-45 HRC
EN Grade Material
Aluminium



4F Flat Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	6
1.5	4	50	6
2	5	50	6
2.5	8	50	6
3	8	50	6
3.5	10	50	6
4	10	50	6
5	12	50	6

Standard

1	3	75	6
1.5	5	75	6
2	6	75	6
2.5	6	75	6
3	12	75	6
3.5	12	75	6
4	20	75	6
5	20	75	6

Long

2F Ballnose Endmill

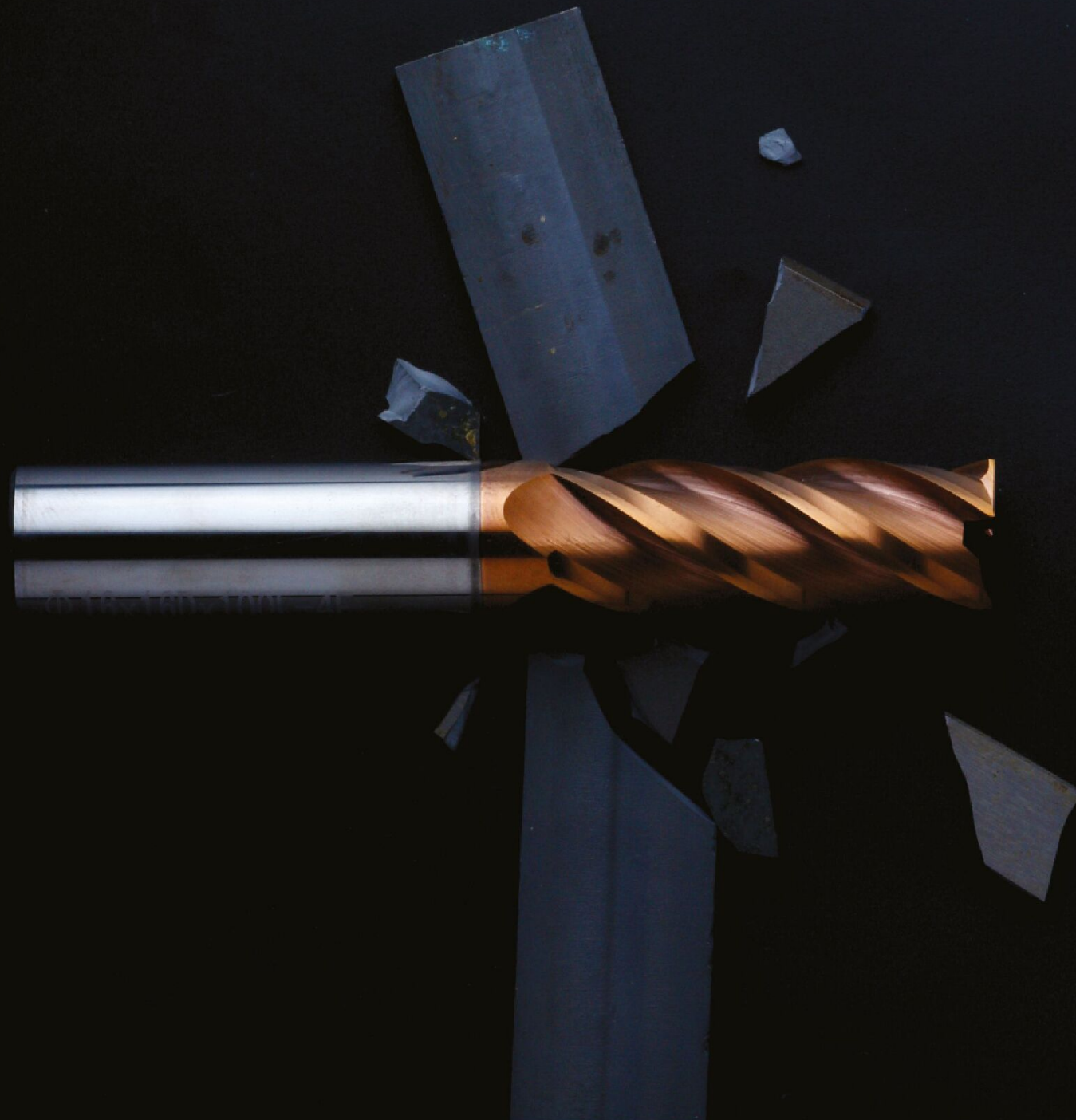
Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	6
R0.75	3	50	6
R1	4	50	6
R1.25	5	50	6
R1.5	6	50	6
R1.75	7	50	6
R2	8	50	6
R2.5	10	50	6

Standard

R0.5	2	75	6
R0.75	3	75	6
R1	4	75	6
R1.25	5	75	6
R1.5	6	75	6
R1.75	7	75	6
R2	8	75	6
R2.5	10	75	6

Long

TiSiN Coated
35° Helix
0.6 µm Particle
DIN 6535 Form HA



Flat Carbide Coated Endmill 2 Flute - 55 HRC

Recommended For
Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	5	50	4
2	6	50	4
2.5	8	50	4
3	10	50	3
3	10	50	4
3.5	12	50	4
4	12	50	4
5	15	50	5
6	18	50	6
7	21	60	8
8	24	60	8
9	27	75	10
10	30	75	10
11	33	75	12
12	36	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

Standard

1	3	75	4
1.5	5	75	4
2	6	75	4
3	15	75	4
4	15	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

Long

3	12	100	3
4	20	100	4
5	25	100	5
6	30	100	6
6	35	150	6
8	40	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Extra Long

Flat Carbide Endmill

4 Flute - 55 HRC



Recommended For	Steel 30-55 HRC
	P20
	Hot Die Steel (H13, H11, H21)
	Stainless Steels <55 HRC
	D2
	Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	4	50	4
2	5	50	4
2.5	8	50	4
3	8	50	3
3	8	50	4
3.5	10	50	4
4	10	50	4
5	12	50	5
6	15	50	6
7	20	60	8
8	20	60	8
9	25	75	10
10	25	75	10
11	30	75	12
12	30	75	12
14	40	100	14
16	45	100	16
18	45	100	18
20	45	100	20
25	45	100	25

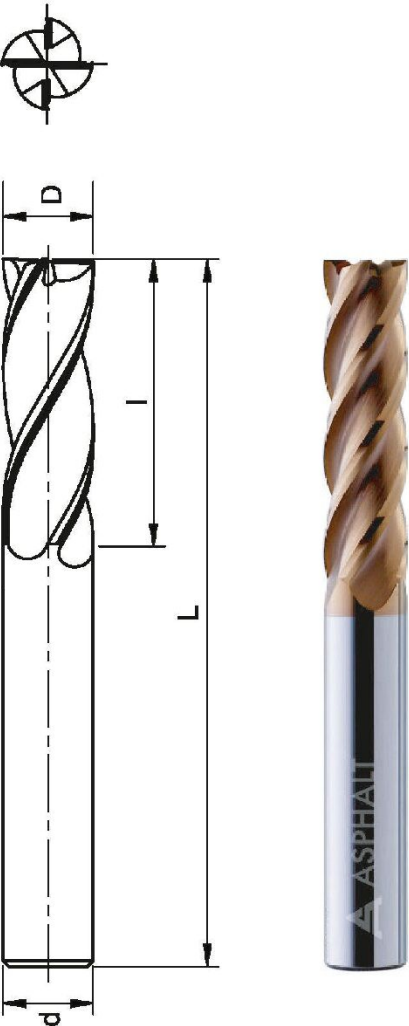
Standard

1	3	75	4
1.5	5	75	4
2	6	75	4
3	12	75	4
4	20	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	40	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	70	150	18
20	70	150	20

Long

3	12	100	3
4	25	100	4
5	25	100	5
6	30	100	6
6	40	150	6
8	35	100	8
8	50	150	8
10	60	150	10
12	60	150	12

Extra Long



Ballnose Carbide Endmill

2 Flute - 55 HRC



Recommended For	Steel 30-55 HRC
	P20
	Hot Die Steel (H13, H11, H21)
	Stainless Steels <55 HRC
	D2
	Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16
R9	36	100	18
R10	40	100	20

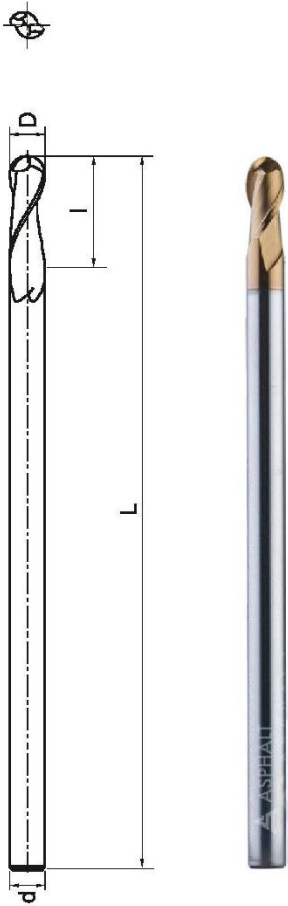
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16
R9	40	150	18
R10	40	150	20

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



Ballnose Carbide Endmill

4 Flute - 55 HRC



Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steels <55 HRC
D2
Aluminium

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16

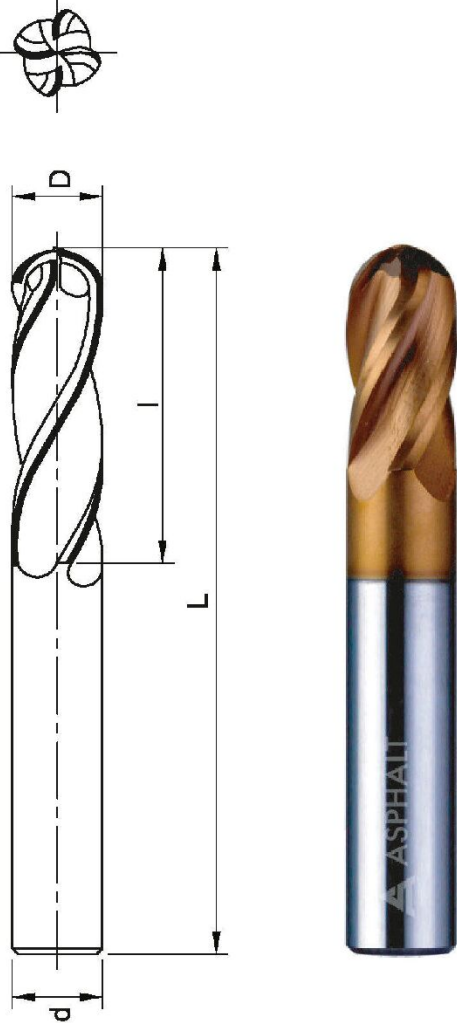
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



Carbide Endmill

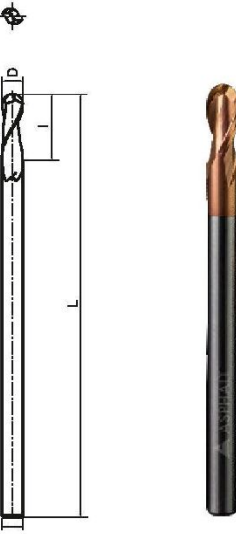
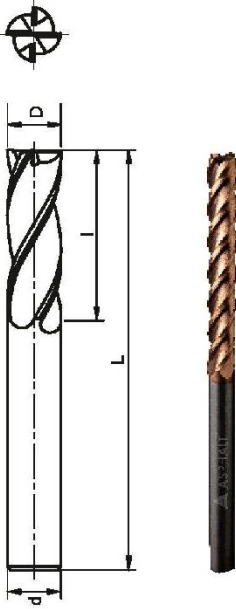
200mm Long

55 HRC



Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium



Flat Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
6	45	200	6
8	70	200	8
10	85	200	10
12	90	200	12
16	100	200	16
20	100	200	20

4 Flute

Ballnose Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R3	12	200	6
R4	16	200	8
R5	20	200	10
R6	24	200	12
R8	32	200	16
R10	40	200	20

2 Flute

Corner Radius (CR) Carbide Endmill 4 Flute - 55 HRC

Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium

Dia (D)	CR (r)	Flute Length (l)	Total Length (L)	Shank Dia (d)
3	0.5	8	50	3 / 4
3	1	8	50	3 / 4
4	0.5	10	50	4
4	1	10	50	4
5	0.5	12	50	5
5	1	12	50	5
6	0.5	15	50	6
6	1	15	50	6
8	0.5	20	60	8
8	1	20	60	8
10	0.5	25	75	10
10	1	25	75	10
10	1.5	25	75	10
12	0.5 / 1	30	75	12
12	1.5	30	75	12
12	2 / 2.5	30	75	12
16	1 / 2 / 2.5	35	100	16

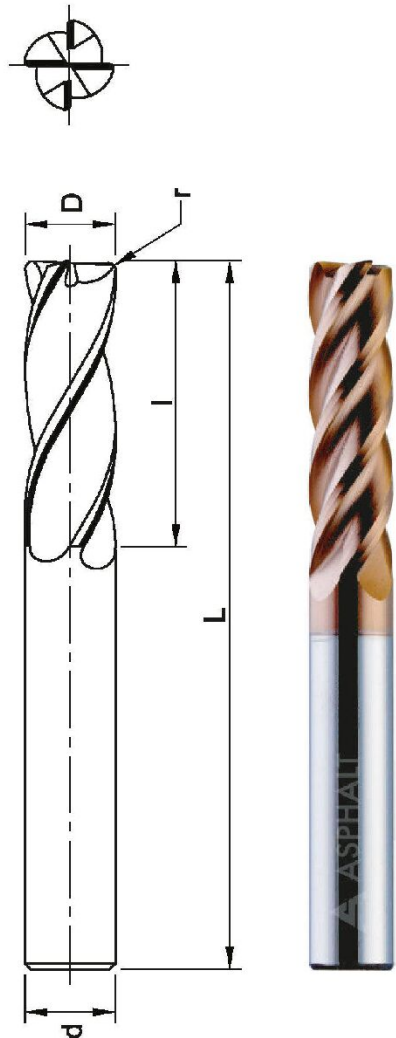
Standard

3	0.5	12	75	3
3	1	12	75	3
4	0.5	20	75	4
4	1	20	75	4
5	0.5	20	75	5
5	1	20	75	5
6	0.5	25	75	6
6	1	25	75	6
8	0.5	30	75	8
8	1	30	75	8
10	0.5	40	100	10
10	1	40	100	10
12	0.5	45	100	12
12	1	45	100	12

Long

3	0.5 / 1	20	100	3
4	0.5 / 1	20	100	4
5	0.5 / 1	25	100	5
6	0.5 / 1	30	100	6
6	1	40	150	6
8	0.5 / 1	35	100	8
8	1	50	150	8
10	1	60	150	10
12	1	60	150	12

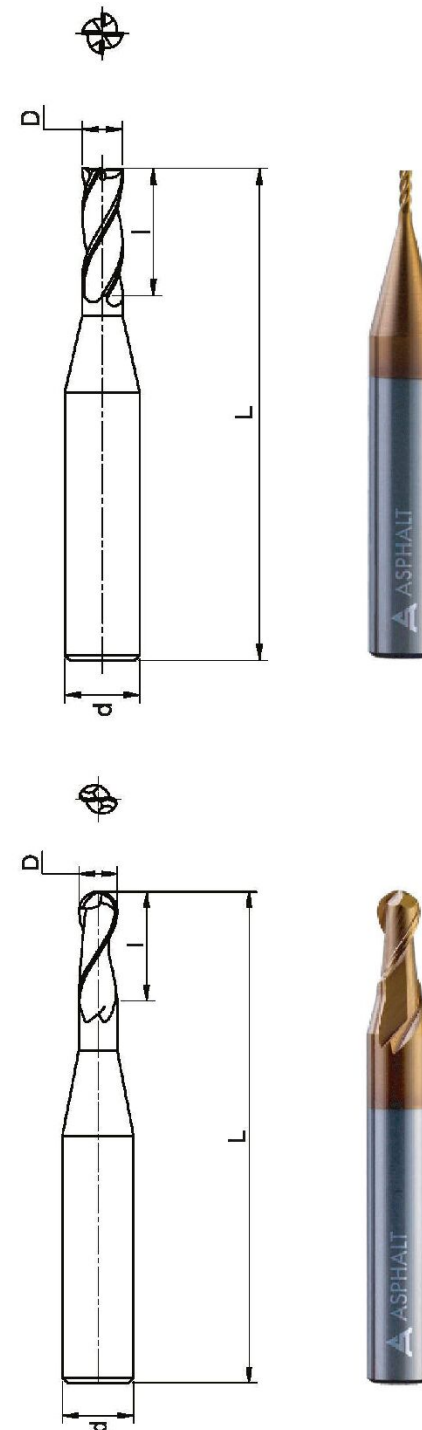
Extra Long



Carbide Endmill 55 HRC - 6mm Shank

Recommended For

Steel 30-55 HRC
P20
Hot Die Steel (H13, H11, H21)
Stainless Steel <55 HRC
D2
Aluminium



4F Flat Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	6
1.5	4	50	6
2	5	50	6
2.5	8	50	6
3	8	50	6
3.5	10	50	6
4	10	50	6
5	12	50	6

Standard

1	3	75	6
1.5	5	75	6
2	6	75	6
2.5	6	75	6
3	12	75	6
3.5	12	75	6
4	20	75	6
5	20	75	6

Long

2F Ballnose Endmill

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	6
R0.75	3	50	6
R1	4	50	6
R1.25	5	50	6
R1.5	6	50	6
R1.75	7	50	6
R2	8	50	6
R2.5	10	50	6

Standard

R0.5	2	75	6
R0.75	3	75	6
R1	4	75	6
R1.25	5	75	6
R1.5	6	75	6
R1.75	7	75	6
R2	8	75	6
R2.5	10	75	6

Long

Recommended For

StandardLong

Extra Long

Note

ASPHALTThis image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

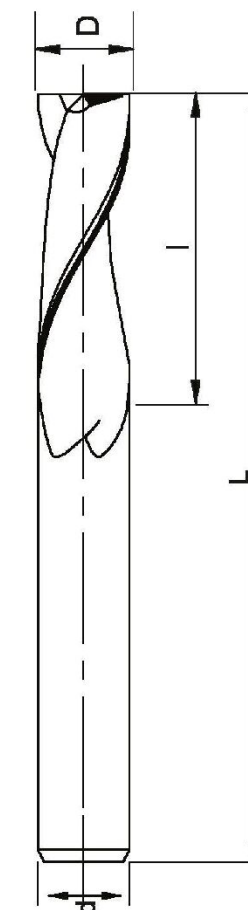
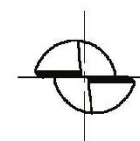
Uncoated
45° Helix
0.6 µm Particle
DIN 6535 Form HA



Flat Carbide Uncoated Endmill 2 Flute - 50 HRC

Recommended For

Aluminium
Wood
Aluminium Alloys



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	5	50	4
2	6	50	4
2.5	8	50	4
3	10	50	3
3	10	50	4
3.5	12	50	4
4	12	50	4
5	15	50	5
6	18	50	6
7	21	60	8
8	24	60	8
9	27	75	10
10	30	75	10
11	33	75	12
12	36	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

Standard

1	3	75	4
1.5	5	75	4
2	6	75	4
3	15	75	4
4	15	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

Long

3	12	100	3
4	20	100	4
5	25	100	5
6	30	100	6
6	35	150	6
8	40	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Extra Long

Flat Carbide
Uncoated Endmill
3 Flute - 50 HRC



Recommended For	Aluminium
	Wood
	Aluminium Alloys

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
1	3	50	4
1.5	5	50	4
2	6	50	4
2.5	8	50	4
3	10	50	3
3	10	50	4
3.5	12	50	4
4	12	50	4
5	15	50	5
6	18	50	6
7	21	60	8
8	24	60	8
9	27	75	10
10	30	75	10
11	33	75	12
12	36	75	12
14	45	100	14
16	45	100	16
18	45	100	18
20	45	100	20

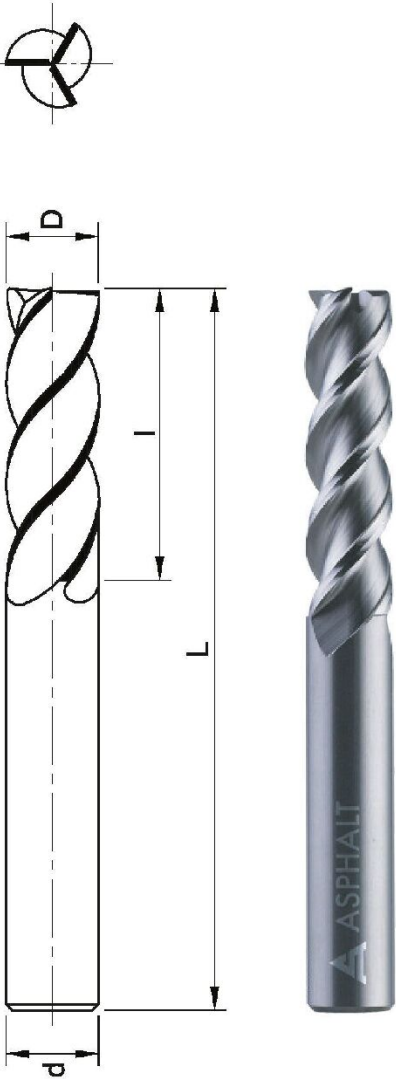
Standard

1	3	75	4
1.5	5	75	4
2	6	75	4
3	15	75	4
4	15	75	4
5	20	75	5
6	25	75	6
8	30	75	8
10	45	100	10
12	45	100	12
14	60	150	14
16	60	150	16
18	60	150	18
20	60	150	20

Long

3	12	100	3
4	20	100	4
5	25	100	5
6	30	100	6
6	40	150	6
8	40	100	8
8	50	150	8
10	50	150	10
12	60	150	12

Extra Long



Ballnose Carbide
Uncoated Endmill
2 Flute - 50 HRC



Recommended For	Aluminium
	Wood
	Aluminium Alloys

Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
R0.5	2	50	4
R0.75	3	50	4
R1	4	50	4
R1.25	5	50	4
R1.5	6	50	3
R1.5	6	50	4
R1.75	7	50	4
R2	8	50	4
R2.5	10	50	5
R3	12	50	6
R3.5	14	60	8
R4	16	60	8
R4.5	18	75	10
R5	20	75	10
R5.5	22	75	12
R6	24	75	12
R7	28	100	14
R8	32	100	16
R9	36	100	18
R10	40	100	20

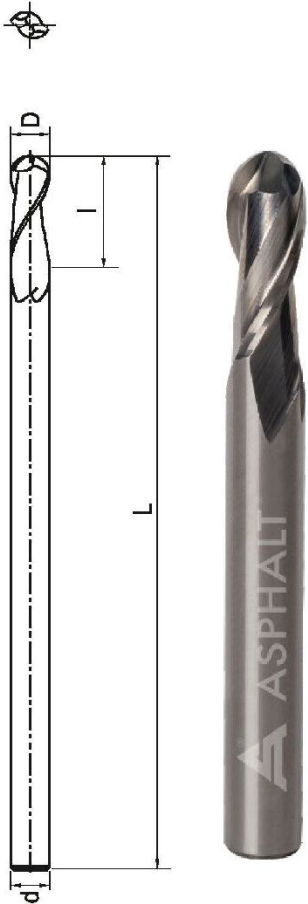
Standard

R0.5	2	75	4
R0.75	3	75	4
R1	4	75	4
R1.5	6	75	4
R2	8	75	4
R2.5	10	75	5
R3	12	75	6
R4	16	75	8
R5	20	100	10
R6	24	100	12
R7	28	150	14
R8	32	150	16
R9	40	150	18
R10	40	150	20

Long

R1.5	6	100	3
R2	8	100	4
R2.5	10	100	5
R3	12	100	6
R3	12	150	6
R4	16	100	8
R4	16	150	8
R5	20	150	10
R6	24	150	12

Extra Long



TiCN Coated
130° Tip Angle
Non - Through Coolant
DIN 6535 Form HA

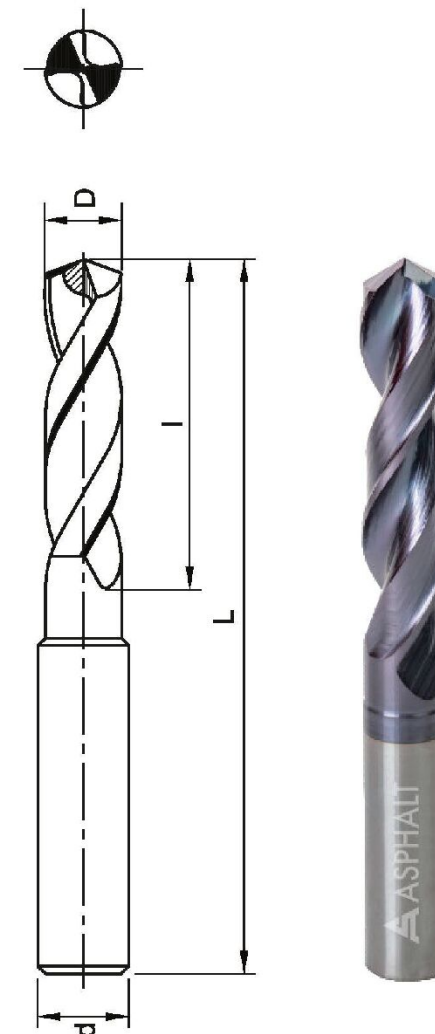


Carbide Drill

55 HRC

Recommended For

Steel 30-55 HRC
P20
Hot Die Steel(H13, H11, H21)
D2
Aluminium



Dia (D)	Flute Length (l)	Total Length (L)	Shank Dia (d)
0.5 ~ 0.9	5	50	3
1.0 ~ 1.5	8	50	3
1.6 ~ 2.0	11	50	3
2.1 ~ 2.5	13	50	3
2.6 ~ 3.0	16	50	3
3.1 ~ 3.5	18	50	4
3.6 ~ 4.0	20	50	4
4.1 ~ 4.5	20	50	6
4.6 ~ 5.0	24	60	6
5.1 ~ 6.0	26	60	6
6.1 ~ 7.0	28	60	8
7.1 ~ 8.0	30	60	8
8.1 ~ 9.0	34	75	10
9.1 ~ 9.5	38	75	10
9.6 ~ 10.0	40	75	10
10.1 ~ 11.0	42	75	12
11.1 ~ 12.0	45	75	12
12.5	52	100	14
13	52	100	14

1.5	13	50	3
1.6 ~ 2.0	20	50	3
2.1 ~ 2.5	22	75	3
2.6 ~ 3.0	26	75	3
3.1 ~ 3.5	28	75	4
3.6 ~ 4.0	32	75	4
4.1 ~ 5.0	36	75	6
5.1 ~ 6.0	40	75	6
6.1 ~ 7.0	48	100	8
7.1 ~ 8.0	50	100	8
8.1 ~ 9.0	56	100	10
9.1 ~ 10.0	58	100	10
10.1 ~ 11.0	60	100	12
11.1 ~ 12.0	65	100	12
12.5	70	120	14

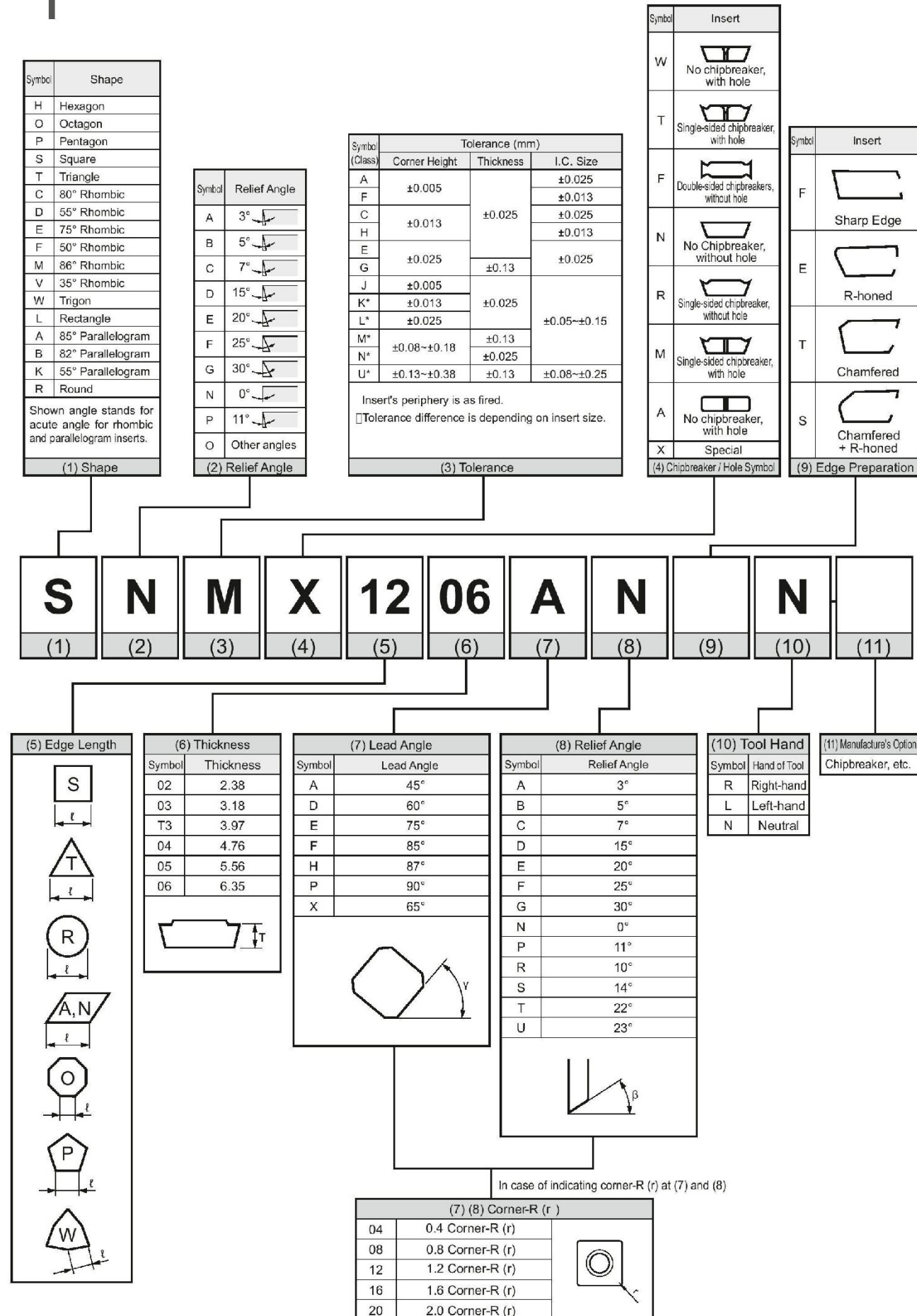
* All Size Are Available In O1 Difference

3D Drill

5D Drill



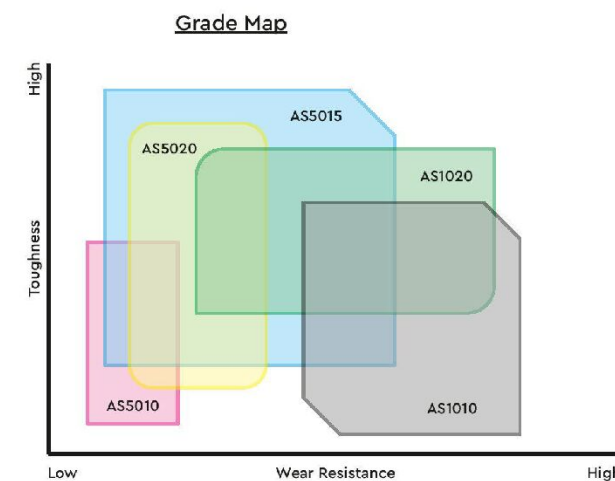
Inserts Identification System



Insert Grades

AS1010	ASPHALT superior CVD coated grade with fine cemented carbide substracts ensures excellent wear resistance, because of its wide working range recommended for general machining of steel and cast iron.
AS1020	Combination of good toughness and strength enhance by its raw substance with Al2O3 added CVD coating improves its wear resistance. Suitable of various operation in steel below 50 HRC.
AS5010	PVD coated cemented carbide with balanced cobalt substracts and post-treatment technology improves wear resistance and toughness. Because of its wear resistance and toughness balance, recommended for graded steel and stainless steel general application.
AS5015	Compact CVD coating with fine cemented carbide substracts gives flexibility for semi finish and roughing application. Recommended for hard alloy steel and stainless steel machining for various semi finish and roughing application.
AS5020	New PVD coating perfectly matched with toughness substracts gives excellent heat resistance and mechanical properties. Recommended for stainless steel and super alloy steel for wide range of application.

Milling Grades		P Steel					M Stainless steel					K Cast iron					S Superalloys				H Hardened Steel				
		P01	P10	P20	P30	P40	P50	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	S01	S10	S20	S30	H01	H10	H20	H30
CVD	AS1010			1010										1010											
	AS1020				1020										1020										
	AS5015					5015					5015					5015				5015				5015	
PVD	AS5010					5010						5010			5010					5010					
	AS5020						5020						5020							5020					



Inserts Geometry

	MSR	Versatile Geometry Very Good Edge Strength For Roughing And Semi Roughing Application Due To Its Sharpness And Big Rack Angle Its Capable For Taking Good Range Of Feed And DOC.
	GM	Sharp Geometry Applicable For Heavy Roughing To Semi Roughing Application Due To Its Sharpness Chip Evacuation Is Good And It Will Take High Doc And High Feed Compared To Regular Insert.
	MO	MO Geometry Have Different Chip Breaker ,toughness And Big Rack Face. Due To Its Toughness Suitable In All Heavy Roughing Application To Semi Roughing And Semi Finish Application.
	HR	Tough Geometry Suitable For Difficult To Cut Material And Hard Part Machining In Most Roughing Application.
	MRR	Strong Cutting Edge Geometry With Good Edge Strength For Roughing And Semi Roughing Application.
	MR	Universal Roughing Geometry For Roughing To Medium Roughing Application.
	PSR	General Roughing Geometry For Roughing And Semi Roughing Application In Cast Iron And Mild Steel Application.
	GR	Sharp And Strong Roughing Geometry For Most Of Roughing Cast Iron And Mild Steel Application.
	UD	Universal Geometry For U-drill And Other Drilling Application.
	PM	Sharp And Positive Rack Angle Geometry Applicable For Roughing And Semi Roughing Application Due To Its Sharpness Chip Evacuation Is Good And It Will Take High DOC.

Milling Insert

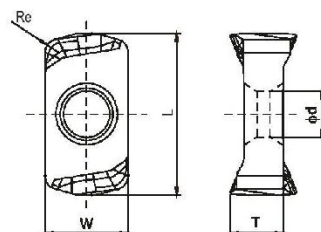
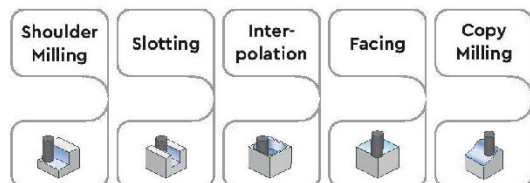
High Feed Mill
Square Shoulder Mill
Copy Mill
Face Mill



High Feed Mill

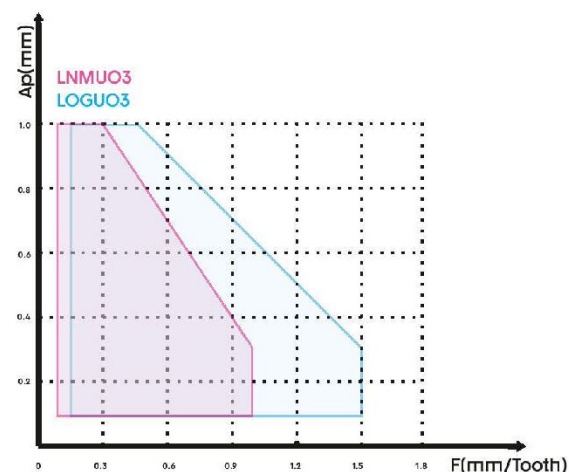


ISO
LNMU
LOGU



Insert	L	W	T	d	Re
LNMU0303ZER	11.9	6.0	3.75	2.85	1.2
LOGU030310ER	11.9	6.2	3.96	3.45	1

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
LNMU0303ZER	MSR	AS1020	●		○				120 - 250
LNMU0303ZER	MSR	AS5010	●	○	○		○		90 - 180
LOGU030310ER	GM	AS1020	●		○				120 - 250



Case Study

Factors	Case-1	Case-2
Model	LNMU0303ZER-MSR-AS5010	LOGU030310ER-GM-AS1020
Operation	Slotting	Pocketing
Material	P20	EN8
Tool Dia	25mm	32mm
Pocket	4	4
Vc	150	170
RPM	1910	1691
DOC (Ap)	0.6	0.5
Feed(mm/tooth)	0.8	1
Engagement(Ae)	100%	100%
Life	1 Hr. 52 Min.	2 Hr. 32 Min.

Cutter Body

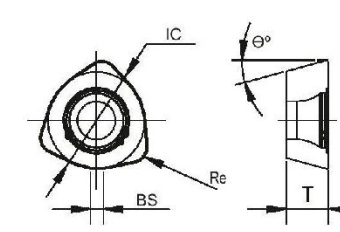
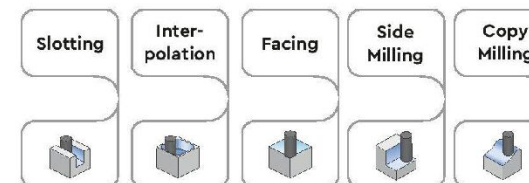
Code	Size	Tooth	LNMU Screw: S2607 Spanner: T03P	LOGU Screw: S3066 Spanner: T03P
ASCB	16x150/200	T2	✓	✓
ASCB	20x150/200	T2	✓	✓
ASCB	25x150/200	T3/T4	✓	✓
ASCB	32x150/200	T4/T5	✓	✓
ASCB	D40	T6	✓	✓
ASCB	D50	T8	✓	✓
ASCB	D63	T10	✓	✓
ASCB	D80	T12	✓	

* Other Sizes Available On Request.

High Feed Mill

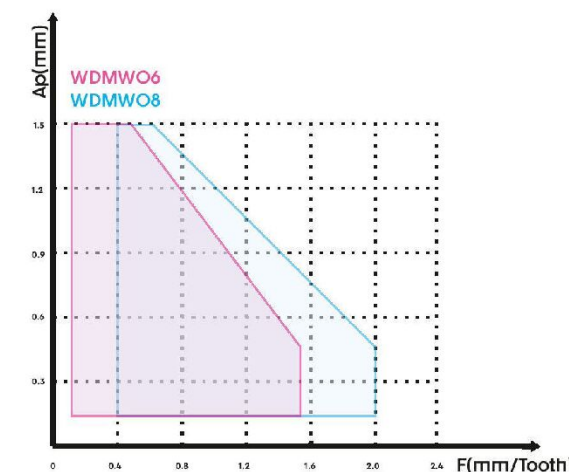


ISO
WDMW



Insert	IC	T	BS	Re	Θ°
WDMW06T320ZTR	9.525	3.97	1.2	2	15
WDMW080520ZTR	12	4.76	2.5	2	15

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
WDMW06T320ZTR	MO	AS5015	●	●	○		●	○	90 - 250
WDMW080520ZTR	MO	AS5020	●	●			○		90 - 250



Case Study

Factors	Case-1	Case-2
Model	WDMW06T320ZTR-MO-AS5015	WDMW06T320ZTR-MO-AS5015
Operation	Profiling	Facing
Material	P20	P20
Tool Dia	25mm	32mm
Pocket	2	3
Vc	180	180
RPM	2300	1800
Feed(mm/tooth)	1.0mm	0.7mm
DOC (Ap)	0.5mm	0.6 mm
Engagement(Ae)	100%	70%
Life	1 Hr. 18 Min	2 Hr. 45 Min

Cutter Body

Code	Size	Tooth	WDMW06 Screw: S3810 Spanner: T15P	WDMW08 Screw: S4010 Spanner: T15P
ASCB	25x150/200	T2	✓	
ASCB	32x150/200	T2	✓	✓
ASCB	D40	T3	✓	✓
ASCB	D50	T4	✓	✓
ASCB	D63	T5	✓	✓
ASCB	D80	T5		✓

* Other Sizes Available On Request.

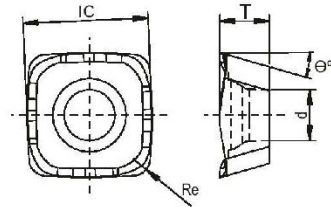
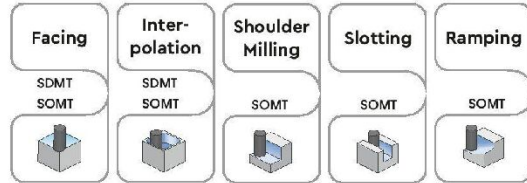


High Feed Mill



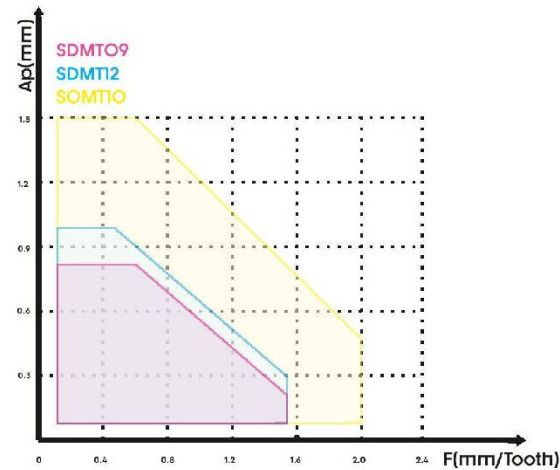
ISO

SDMT
SOMT



Insert	IC	T	d	Re	Θ°
SDMT09T307	9	3.5	3.5	0.7	15
SDMT120512	12.7	5.56	4.4	1.2	15
SOMT100420ER	10.3	4.58	4.6	2	16

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
SDMT09T307	HR	AS5015	●	●	○		●	○	90 - 200
SDMT120512	MRR	AS5020	●	●			○		90 - 220
SOMT100420ER	MR	AS5015	●	●	○		●	○	100 - 230
SOMT100420ER	MR	AS5020	●	●			○		80 - 180



Case Study

Factors	Case-1	Case-2
Model	SDMT120512-MRR-AS5020	SOMT100420ER-MR-AS5015
Operation	Facing	Side Milling
Material	S.S.(316)	Forge Steel
Tool Dia	50mm	50mm
Pocket	4	4
Vc	120	180
RPM	750	1146
DOC (Ap)	0.42	1
Feed(mm/tooth)	0.5	0.7
Engagement(Ae)	60%	60%
Life	1 Hr.36 Min	1 Hr. 38 Min

Cutter Body

Code	Size	Tooth	SDMT09 Screw: S58/O Spanner: T15P	SDMT12 Screw: S40/O Spanner: T15P	SOMT10 Screw: S40/O Spanner: T15P
ASCB	25x150/200	T2/T3	✓		✓
ASCB	32x150/200	T2/T3/T4	✓	✓	✓
ASCB	D40	T3/T4/T5	✓	✓	✓
ASCB	D50	T4/T5	✓	✓	✓
ASCB	D63	T5/T7	✓	✓	✓
ASCB	D80	T6		✓	✓

* Other Sizes Available On Request.

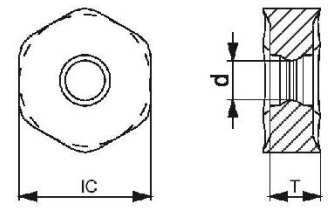


Feed Mill



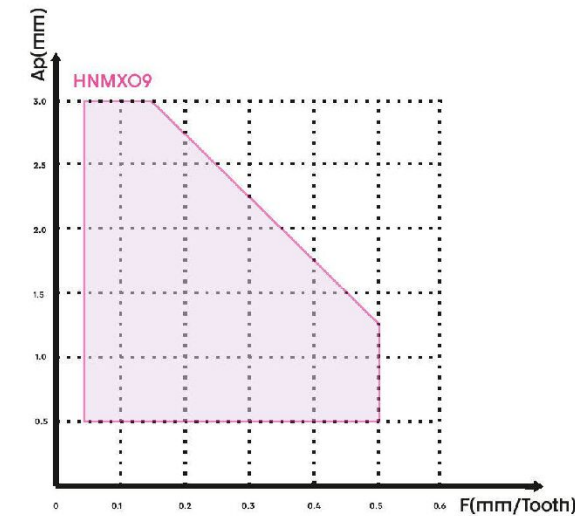
ISO

HNMX



Insert	IC	T	d	Re
HNMX0906ANSN	16.5	6.34	4.9	1.2

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
HNMX0906ANSN	GM	AS5015	●	●	○		●	○	100 - 250



Case Study

Factors	Case
Model	HNMX0906ANSN AS5015
Operation	Facing
Material	S.S.304
Tool Dia	80mm
Pocket	6
Vc	150
RPM	597
Feed(mm/tooth)	0.3
DOC (Ap)	1
Engagement(Ae)	70%
Life	1 Hr. 25 Min

Cutter Body

Code	Size	Tooth	HNMX09 Screw: S48/O Spanner: T15P
ASCB	D50	T4	✓
ASCB	D63	T6	✓
ASCB	D80	T6/T8	✓
ASCB	D100	T6/T8/T10	✓
ASCB	D125	T8/T10/T12	✓
ASCB	D160	T8/T12/T14	✓

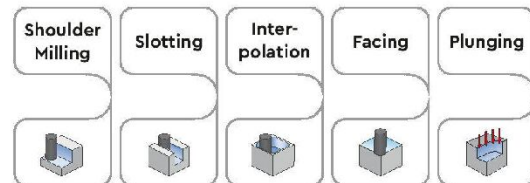
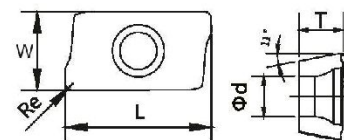
* Other Sizes Available On Request.



Square Shoulder Mill

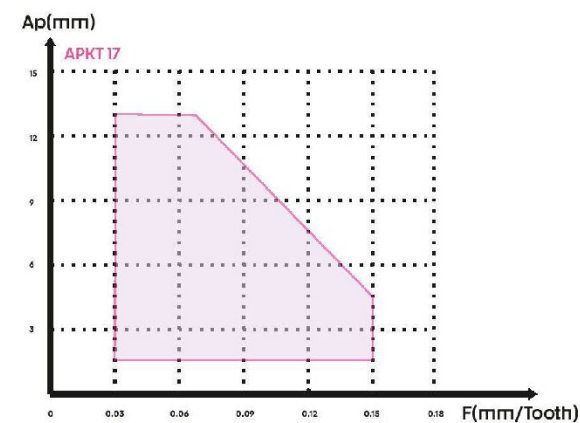
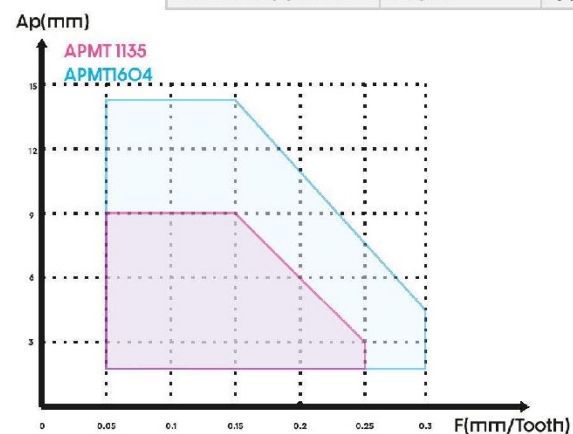


ISO
APMT
APKT



Insert	L	W	T	d	Re
APMT1135PDER	11.25	6.2	3.5	2.8	0.8
APMT1604PDER	17.3	9.3	5.25	4.4	0.8
APKT1705PDER	18.5	10.7	5.56	4.4	0.8

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
APMT1135PDER	MSR	AS1020	●		○				100 - 300
APMT1135PDER	MSR	AS5020	○	●			○		100 - 300
APMT1604PDER	MSR	AS1020	●		○				100 - 300
APMT1604PDER	MSR	AS5020	●	●			○		100 - 300
APKT1705PER	PSR	AS1010	●		○				100 - 230
APKT1705PER	MSR	AS5020	●	●			○		100 - 230



Case Study

Factors	Case-1	Case-2
Model	APMT1135PDER-MSR-AS5020	APMT1604PDER-MSR-AS5020
Operation	Shoulder Milling	Slotting
Material	S.S.Duplex	S.S.Duplex 4A
Tool Dia	25mm	50mm
Pocket	3	4
Vc	95	90
RPM	1210	593
DOC (Ap)	0.5	0.7
Feed(mm/tooth)	0.29	0.29
Engagement(Ae)	70%	100%
Life	33 Min	38 Min

Cutter Body

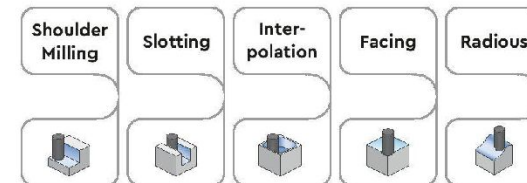
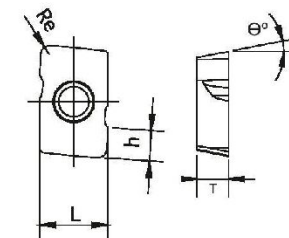
Code	Size	Tooth	APMT11 Screw: S2505 Spanner: T08P	APMT16 Screw: S4010 Spanner: T18P	APKT17 Screw: S4065 Spanner: T18P
ASCB	10/12x100	T1	✓		
ASCB	16x150/200	T2	✓		
ASCB	18x150/200	T2	✓		
ASCB	20x150/200	T2	✓	✓	
ASCB	25x150/200	T2	✓	✓	
ASCB	32x150/200	T2/T3	✓	✓	✓
ASCB	D40	T3/T4		✓	✓
ASCB	D50	T4		✓	✓
ASCB	D63	T4/T5		✓	✓
ASCB	D80/D100	T5/T6		✓	✓
ASCB	D125	T8		✓	

* Other Sizes Available On Request.

Square Shoulder Mill

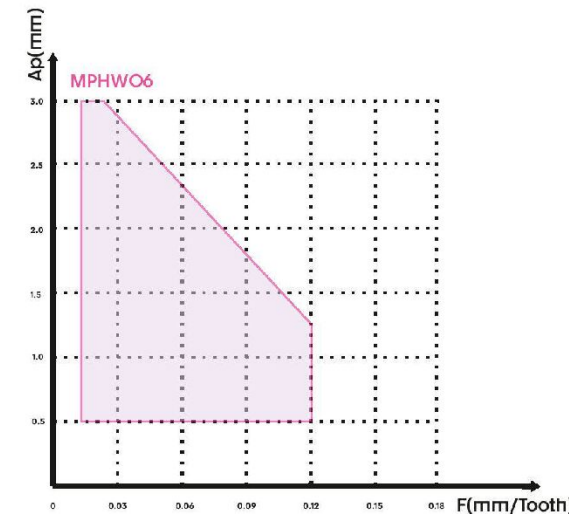


ISO
MPHW



Insert	L	T	h	Re	Θ°
MPHW060308ZEL	6.35	3.18	3	0.8	11

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
MPHW060308ZEL	-	AS5020	●	●			○		130 - 300



Case Study

Factors	Case
Model	MPHW060608-ZEL-AS4010
Operation	Finish Redious
Material	OHNS
Tool Dia	32
Pocket	5
Vc	220
RPM	2188
Feed(mm/tooth)	1
DOC (Ap)	0.08
Engagement(Ae)	70 %
Life	3 Hr.

Cutter Body

Code	Size	Tooth	MPHW Screw: S3610 Spanner: T08P
ASCB	20x150/200	T3	✓
ASCB	25x150/200	T4	✓
ASCB	30x150/200	T4	✓
ASCB	32x150/200	T5	✓

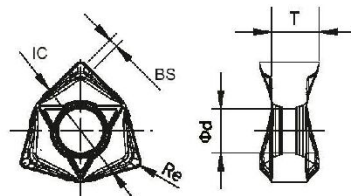
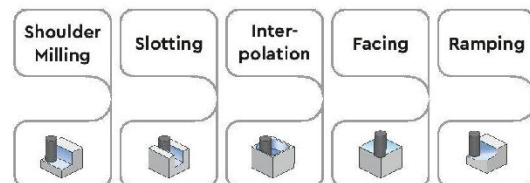
* Other Sizes Available On Request.



Square Shoulder Mill

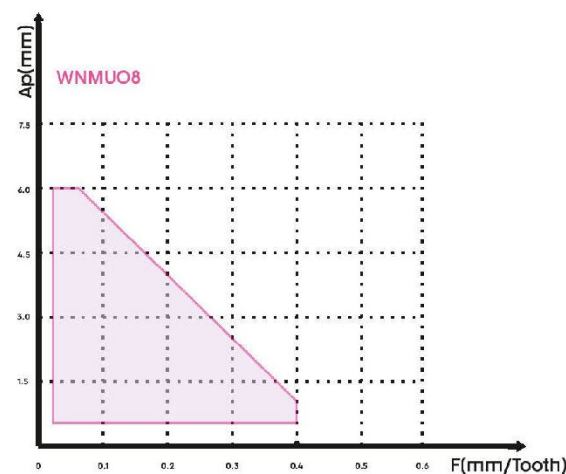


ISO WNMU



Insert	IC	T	d	BS	Re
WNMU080608	14.02	6.65	6.2	1.3	0.8

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
WNMU080608	GM	AS5015	●	●	○		●	○	100 - 250
WNMU080608	GM	AS5020	●	●			○		100 - 200



Case Study

Factors	Case
Model	WNMU080608-GM-AS5005
Operation	Facing
Material	M.S.
Tool Dia	50 mm
Pocket	4
Vc	200
RPM	1273
DOC (Ap)	2.5
Feed(mm/tooth)	0.1
Engagement(Ae)	70 %
Life	1 Hr. 58 Min.

Cutter Body

Code	Size	Tooth	WNMU Screw: S602 Spanner: T20P
ASCB	D40	T3	✓
ASCB	D50	T4	✓
ASCB	D63	T4/T5	✓
ASCB	D80	T6	✓
ASCB	D100	T7	✓
ASCB	D125	T8	✓

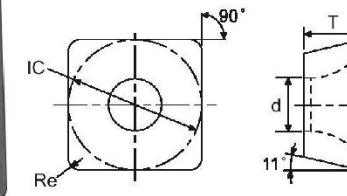
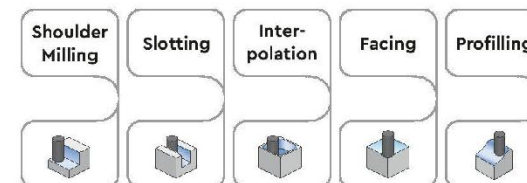
* Other Sizes Available On Request.



90° Shoulder Mill

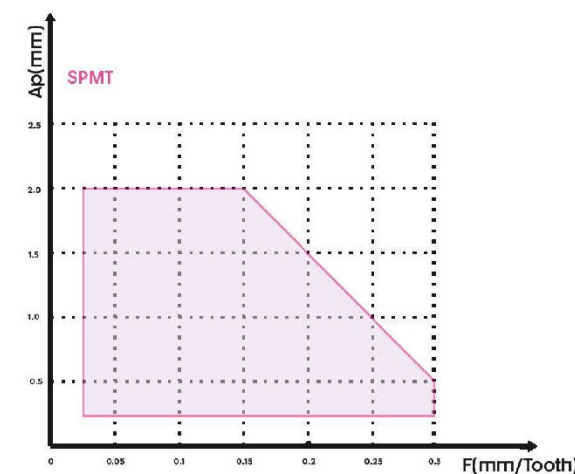


ISO SPMT



Insert	IC	T	d	Re
SPMT120408	12.7	4.76	5.5	0.8
SPMT120412	12.7	4.76	5.5	1.2

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
SPMT120408	PM	AS1020	●		○				120 - 350
SPMT120412	PM	AS1020	●		○				120 - 350



Case Study

Factors	Case
Model	SPMT120408-PM-AS5015
Operation	Facing
Material	M.S.
Tool Dia	100 mm
Pocket	7
Vc	200
RPM	637
Feed(mm/tooth)	3
DOC (Ap)	0.1
Engagement(Ae)	75 %
Life	2 Hr. 8 Min.

Cutter Body

Code	Size	Tooth	SPMT12 Screw: S492 Spanner: T20P
ASCB	D50	T4	✓
ASCB	D63	T5	✓
ASCB	D80	T6	✓
ASCB	D100	T7	✓
ASCB	D125	T8	✓

* Other Sizes Available On Request.

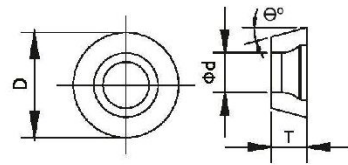
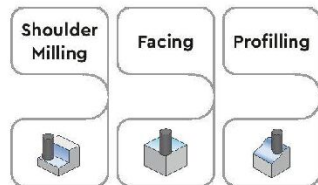


Copy Milling



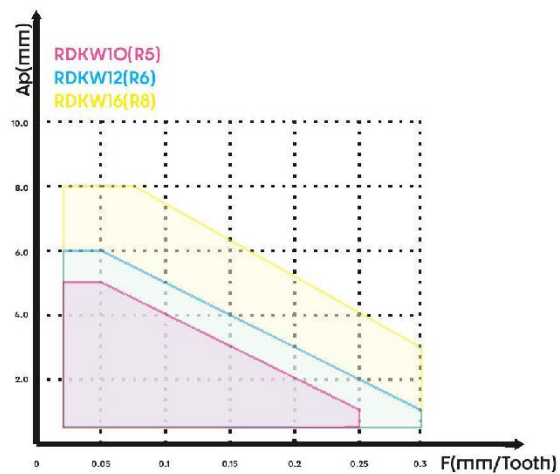
ISO

RDKW



Insert	D	T	d	θ°
RDKW1003(R5)	10	3.97	4.4	15
RDKW1204(R6)	12	4.76	4.4	15
RDKW1606(R8)	16	4.76	5.5	15

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
RDKW1003(R5)	MO	AS5015	●	●	○		●	○	100 - 250
RDKW1204(R6)	MO	AS5015	●	●	○		●	○	100 - 250
RDKW1606(R8)	MO	AS5020	●	●			○		100 - 250



Case Study

Factors	Case-1	Case-2
Model	RDKW1204-MO-AS5015(R6)	RDKW1204-MO-AS5015(R6)
Operation	Profiling	Cavity Milling
Material	P20	P20
Tool Dia	40mm	63mm
Pocket	4	5
Vc	180	200
RPM	1432	1011
Feed(mm/tooth)	0.2mm	0.15mm
DOC (Ap)	1.0mm	1.5 mm
Engagement(Ae)	70 %	70 %
Life	1 Hr. 45 Min	2 Hr. 45 Min

Cutter Body

Code	Size	Tooth	RDKW10 Screw: S4090 Spanner: T15P	RDKW12 Screw: S4100 Spanner: T15P	RDKW16 Screw: S5012 Spanner: T20P
ASCB	20x150/200	T2	✓		
ASCB	25x150/200	T2	✓	✓	
ASCB	32x150/200	T3	✓	✓	
ASCB	D40	T3/T4	✓	✓	✓
ASCB	D50/D52	T4		✓	✓
ASCB	D63	T5		✓	✓
ASCB	D80	T5/T6		✓	✓
ASCB	D100	T6		✓	✓
ASCB	D125	T7/T8		✓	✓

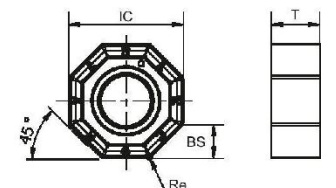
* Other Sizes Available On Request.

Face Mill



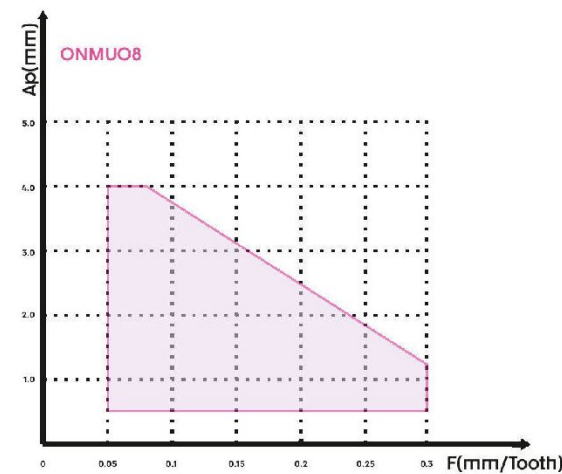
ISO

ONMU



Insert	IC	T	BS	Re
ONMU080608	20.2	6	5.5	0.8

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
ONMU080608	-	AS1020	●		○				120 - 300
ONMU080608	-	AS5015	●	●	○		●	○	100 - 350



Case Study

Factors	Case
Model	ONMU080608-AS5015
Operation	Facing
Material	M.S.
Tool Dia	80 mm
Pocket	6
Vc	180
RPM	716
DOC (Ap)	2.2
Feed(mm/tooth)	0.12
Engagement(Ae)	75 %
Life	1 Hr. 39 Min.

Cutter Body

Code	Size	Tooth	ONMU Screw: S4012 Spanner: T20P
ASCB	D50	T4	✓
ASCB	D63	T5	✓
ASCB	D80	T6	✓
ASCB	D100	T7	✓
ASCB	D125	T8	✓
ASCB	D160	T10/T12	✓

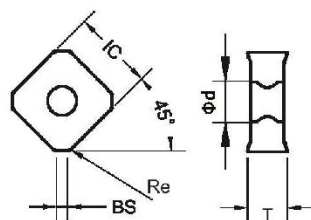
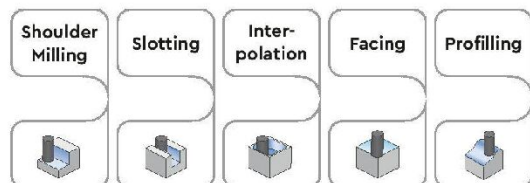
* Other Sizes Available On Request.



Face Mill

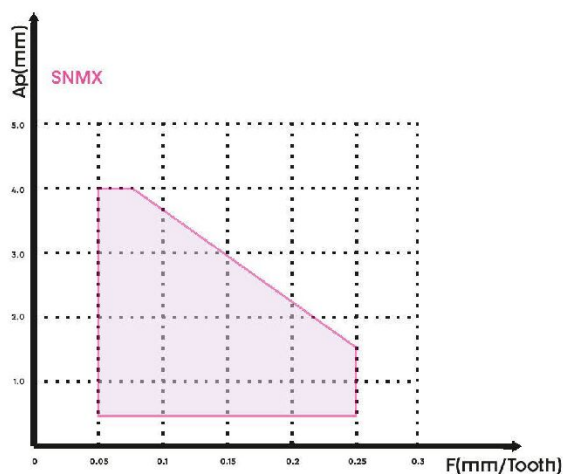
ASPHALT

ISO SNMX



Insert	IC	T	BS	d	Re
SNMX1206ANN	12.7	6.2	1.8	5.5	0.4
SNMX120608	12.7	6.35	-	5.5	0.8
SNMX120612	12.7	6.35	-	5.5	1.2

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
SNMX1206ANN	GR	AS5015	●	●	○		●	○	120 - 300
SNMX120608	GR	AS5015	●	●	○		●	○	120 - 300
SNMX120612	GR	AS5015	●	●	○		●	○	120 - 300



Case Study

Factors	Case
Model	SNMX120612-GR AS5015
Operation	Facing
Material	C.I.
Tool Dia	80 mm
Pocket	6
Vc	300
RPM	1194
Feed(mm/tooth)	0.18
DOC (Ap)	1.5
Engagement(Ae)	70 %
Life	2 Hr. 14 Min.

Cutter Body

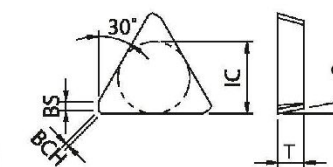
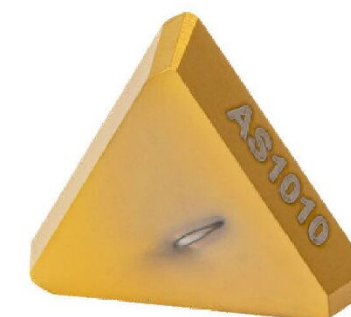
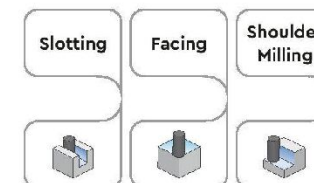
Code	Size	Tooth	SNMX Screw: S6012 Spanner: T20P
ASCB	D50	T4	✓
ASCB	D63	T5/T6	✓
ASCB	D80	T6/T7	✓
ASCB	D100	T8	✓
ASCB	D125	T10	✓

* Other Sizes Available On Request.

Face Mill

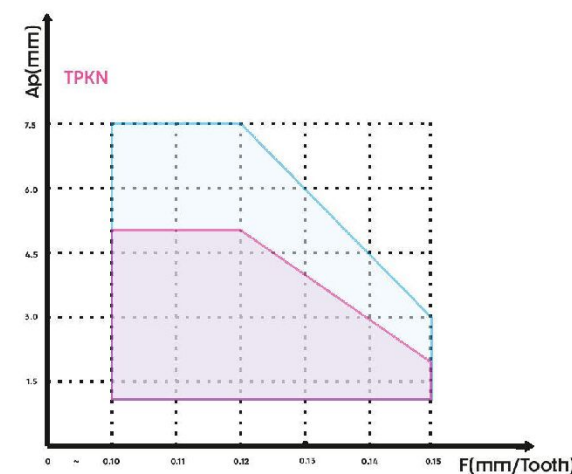
ASPHALT

ISO TPKN



Insert	IC	T	BCH	BS	Θ°
TPKN1603PDR	9.525	3.18	0.7	1.2	11
TPKN2204PDR	12.7	4.76	0.7	1.6	11

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
TPKN1603PDR	-	AS1020	●		●				160 - 260
TPKN2204PDR	-	AS1020	●		●				160 - 260



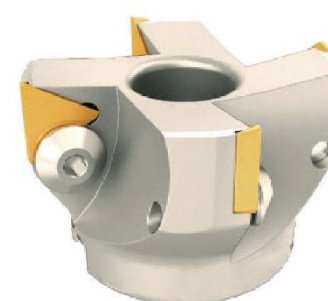
Case Study

Factors	Case
Model	TPKN1603PDR AS1020
Operation	Facing
Material	EN-8
Tool Dia	100 mm
Pocket	8
Vc	170
RPM	550
DOC (Ap)	1
Feed(mm/tooth)	0.15
Engagement(Ae)	60 %
Life	1 Hr. 3 Min.

Cutter Body

Code	Size	Tooth	TPKN16 Screw: M6x0.75 Spanner: A4	TPKN22 Screw: M8x1 Spanner: A5
ASCB	D40	T3	✓	
ASCB	D50	T3	✓	
ASCB	D63	T3		✓
ASCB	D80	T4		✓
ASCB	D100	T5		✓
ASCB	D125	T6		✓

* Other Sizes Available On Request.



* Recommended For Milling Of Steel & Cast Iron, For Semi Finishing, Semi Roughing & Roughing with Medium Or Large Chip Section & Machining in Unfavorable Condition.

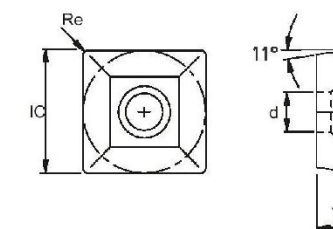
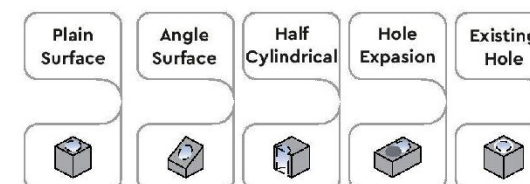
Through Coolant
Electroplated
6:4 Groove Ratio,
For Better Chip Removal



Hole Making

ISO

SPMG



Insert	IC	T	d	Re
SPMG050204	5	2.38	2.25	0.4
SPMG060204	6	2.38	2.61	0.4
SPMG07T308	7.94	3.97	2.85	0.8
SPMG090408	9.80	4.30	4.05	0.8
SPMG110408	11.50	4.80	4.45	0.8
SPMG140512	14.30	5.20	5.75	1.2

Insert	Geometry	Grade	P	M	K	N	S	H	Vc
SPMG050204	UD	AS5015	●	●	○		●	○	50 - 280
SPMG060204	UD	AS5015	●	●	○		●	○	50 - 280
SPMG07T308	UD	AS5015	●	●	○		●	○	50 - 280
SPMG090408	UD	AS5015	●	●	○		●	○	50 - 280
SPMG110408	UD	AS5015	●	●	○		●	○	50 - 280
SPMG140512	UD	AS5015	●	●	○		●	○	50 - 280

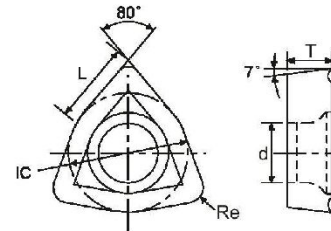


U - Drill

Code	Insert	Screw	Spanner	Size	L/D=2	L/D=3	L/D=4	L/D=5
ASUD	SPMG05	S2250	T06P	12.5 - 15.5	✓	✓	✓	
ASUD	SPMG06	S2255	T07P	16 - 21.5	✓	✓	✓	✓
ASUD	SPMG07	S2580	T08P	22 - 27.5	✓	✓	✓	✓
ASUD	SPMG09	S3590	T15P	28 - 33.5	✓	✓	✓	✓
ASUD	SPMG11	S4010	T15P	34 - 41	✓	✓	✓	✓
ASUD	SPMG14	S5011	T20P	42 - 50	✓	✓	✓	✓

* All Size Are Available In 0.5 Difference
* Other Sizes Available On Request.

ISO	WCMX
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Plain Surface	Angle Surface	Half Cylindrical	Hole Expansion	Existing Hole
				

W10.5-40-120
 HRC 2700 2400
 Lathes 90, 100, 110
 Machine 100 750
 8 2500 11.8
 P 100 110
 100 110

Code	Insert	Screw	Spanner	Size	L/D=2	L/D=3	L/D=4	L/D=5
ASUD	WCMX03	S2550	T08P	14 - 19.5	✓	✓	✓	
ASUD	WCMX04	S2560	T08P	20 - 23.5	✓	✓	✓	✓
ASUD	WCMX05	S3070	T10P	24 - 30.5	✓	✓	✓	✓
ASUD	WCMX06	S3580	T15P	31 - 41	✓	✓	✓	✓
ASUD	WCMX08	S4010	T15P	42 - 60	✓	✓	✓	✓

Note



Note

