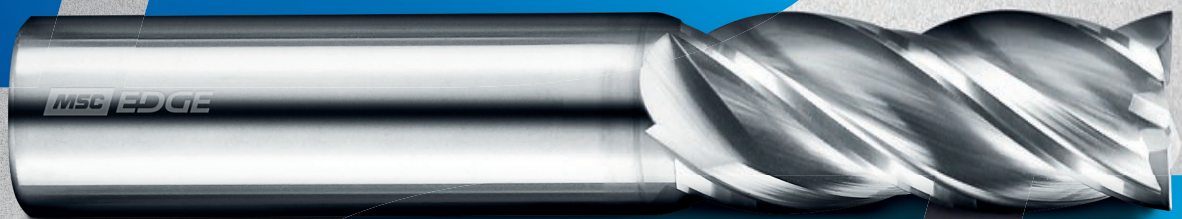


MSC *EDGE*



A NEW BRAND OF CUTTING TOOLS,
DESIGNED BY OUR ENGINEERS, FOR ENGINEERS

mscdirect.co.uk/msc-edge | 0800 66 33 55

MSC | BUILT
TO MAKE
YOU BETTER®

INTRODUCING



POWER IN PERFORMANCE

Giving you a competitive edge

Expertly engineered. Long-lasting. Our brand ambition for MSC Edge is to offer a range of multipurpose cutting tools that have been designed to do 80% of your machining operations, with 20% of the tools, across a wide range of materials. Helping you to rationalise your tooling, so you can do more, with less.

EXPERTLY ENGINEERED

Designed by our engineers for engineers, our new range of drills and milling cutters redefine cutting performance, while saving you time and money. We've designed tools that deliver outstanding results by combining a grade of high-performance carbide substrate with well-known advanced geometries. Including grind type, helix angles, edge preparation and advanced coatings – resulting in versatile cutting tools that last longer and can easily machine various materials commonly used throughout your industry.

ING



EXTENSIVELY TESTED

MSC Edge tools have been thoroughly tested by our time-served engineers, at our UK Technology Centre and with SME manufacturing customers. Each tool has been pushed to its limits using common cutting strategies. They have also been benchmarked against other brands to validate their durability and ability to exceed your expectations across common materials.

PEOPLE POWERED

Behind every product is a team that sets us apart from other suppliers. Our team of time-served engineers identified a growing need for durable, quality cutting tools, at a fair price, from a trusted source. The development of MSC Edge is rooted in their first-hand understanding of the demands within the industry.



SHOP MSC EDGE

TESTED WITH YOU IN MIND

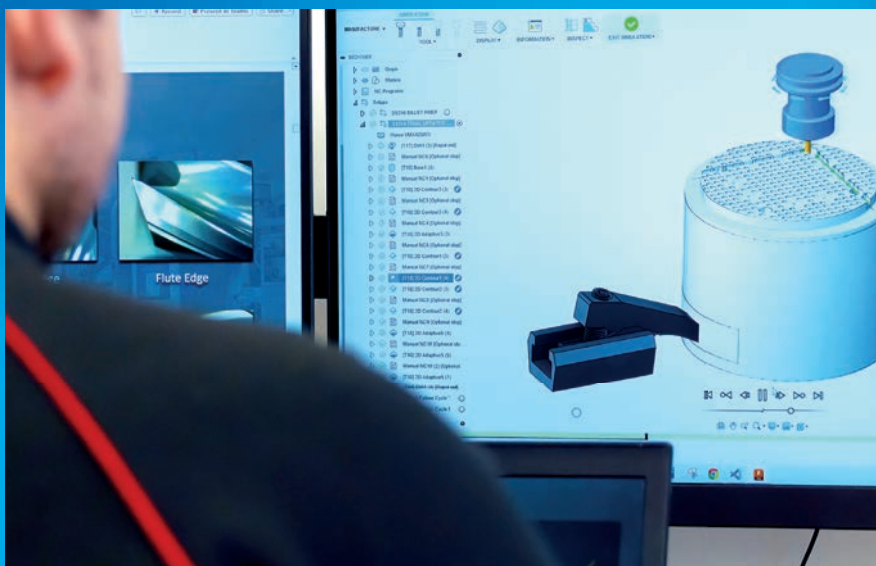
Our tools have completed hundreds of hours of rigorous testing over a six month period.

THE TESTING SET UP

Our tools have been pushed to their limits through a variety of cutting strategies, including drilling, milling, profiling, full-width slotting, and helical milling.

The tests were performed on Hurco's 3 & 5-axis machining centers, carefully chosen for its relevance to the equipment commonly used by SME manufacturers. Every trial was conducted in a controlled environment to guarantee consistent reliable results.

The result? A cutting-edge range designed for performance and reliability, ready to handle your toughest machining tasks, with confidence.



MACHINING CENTRE:

Hurco VMX42RTi
Max RPM 12,000
Max Torque 120 Nm @ 2,900RPM
Max Kw 36.5
Max HP 48



SK40 (DIN69871)
HYDRAULIC



TRIM E950



THE PROGRAMME

From drilling 1,900 holes to assess durability, to machining helical counterbores that push the bottom cutting edge to its limits, every tool in the range has been subjected to real-world engineering demands.

Full-width slotting trials challenged the lower cutting edges with intermittent cuts, simulating extreme wear scenarios. Profiling tests combined heavy step-downs, aggressive step-overs, and advanced trochoidal techniques to validate precision and durability.

HOLES

1,900 holes encouraged wear on the tool to test durability.

PROFILING STRATEGY

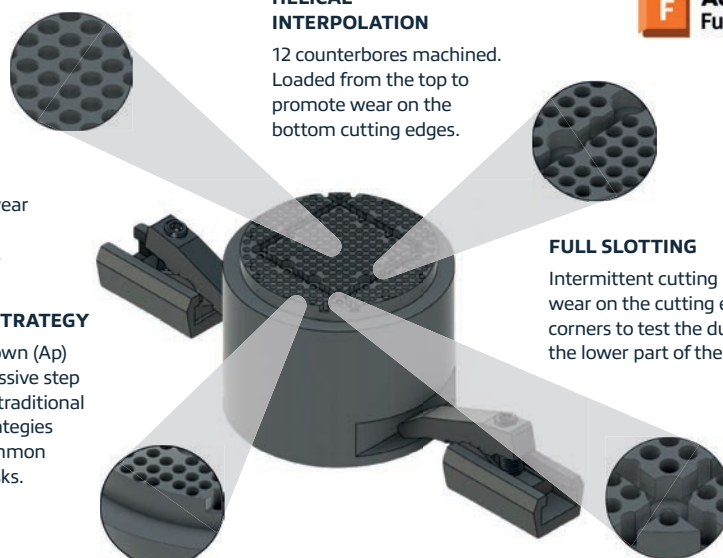
Heavy step down (Ap) with an aggressive step over (Ae) and traditional trochoidal strategies mimicked common machining tasks.

HELICAL INTERPOLATION

12 counterbores machined. Loaded from the top to promote wear on the bottom cutting edges.

FULL SLOTTING

Intermittent cutting promoted wear on the cutting edge and corners to test the durability of the lower part of the cutting tool.



F AUTODESK
Fusion 360

THE RESULTS

Our tools stand out due to rigorous testing

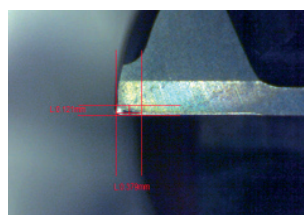
Unlike the standard industry methods, we have gone beyond the benchmark and have conducted extended hours of machine testing, to monitor tool wear under a microscope, every 10 minutes to ensure unmatched durability.

In tests with a 12mm 4 Flute Endmill on EN8 Steel, MSC Edge outperformed other comparative brands. After 200 minutes of cutting, the wear was minimal: only 0.30mm on the flute edge and 0.379mm on the bottom edge.

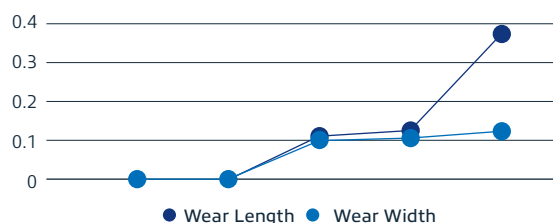
Other sizes of MSC Edge endmills and drills were also tested across multiple common materials and consistently matched or outperformed other brands in cutting performance.

BOTTOM CORNER EDGE WEAR

Contact time (min)				
Bottom Corner Edge Wear Length (Vb max)				
40	80	120	160	200
0	0	0.098	0.121	0.379

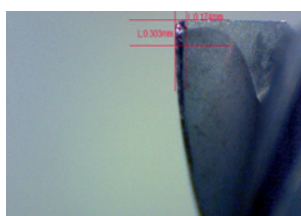


Contact time (min)				
Bottom Corner Edge Wear Width (Vb max)				
40	80	120	160	200
0	0	0.091	0.106	0.121

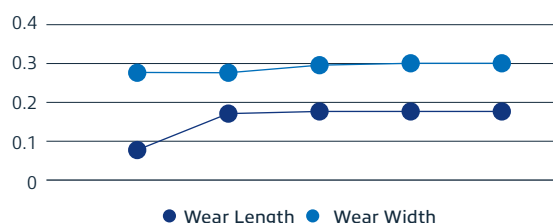


FLUTE CORNER EDGE WEAR

Contact time (min)				
Flute Corner Edge Wear Length (Vb max)				
40	80	120	160	200
0.076	0.167	0.174	0.174	0.174



Contact time (min)				
Flute Corner Edge Wear Width (Vb max)				
40	80	120	160	200
0.273	0.273	0.292	0.303	0.303



COMPARATIVE BRAND RESULTS

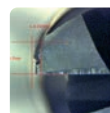
BRAND A

After cutting for 200 minutes, the bottom corner edge wear was L:0.242mm and W:0.303mm, with the flute corner edge at L:0.182mm and W:1.197mm.



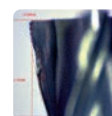
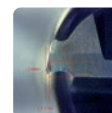
BRAND B

After cutting for 150 minutes, we aborted further testing due to excessive damage. The bottom corner edge wear was L:0.22mm and W:0.917mm, with the flute corner edge at L:0.295mm and W:1.152mm.



BRAND C

After cutting for 100 minutes, we aborted further testing due to excessive damage. The bottom corner edge wear was L:0.121mm and W:0.409mm, with the flute corner edge at L:0.29mm and W:2.765mm.



OUR CUSTOMERS ARE SEEING THE RESULTS

MSC Edge is designed by our engineers for engineers, so our rigorous testing wouldn't have been complete without customer trials and they are already seeing results.

"MSC has created a tool like no other. Not only has it outperformed our previous tooling, its multipurpose use means we've saved time and money."

TOM WHITE

Dace Crown Ltd, Engineering Director.

Dace Crown specialise and excel in the design, manufacture and installation of equipment.



"MSC's new brand of tools has completely exceeded my expectations, outperforming the previous range I was using. I've recently been using a 16mm Endmill, and after nearly 100 hours of contact time, there is hardly any wear on it."

GAVIN LEE

Narvik Developments, Works Manager.

Narvik design and manufacture moulds, tools, patterns and fixtures for automotive and aerospace applications.



GUIDE TO END MILL ICONS

COATING



AlCrSiN Coating

HELIX



30° Helix



45° Helix



Variable Helix

END TYPE



Corner Chamfer



Ballnose



Square

CUTTING CONDITION



For Full Slotting



For Side Milling



For Copy Milling

NO. OF FLUTES



2 Flute Endmills



4 Flute Endmills

WORKPIECE MATERIAL



Steels



Stainless Steels



Cast Iron



Non-Ferrous
Materials

ORDERING CODE KEY

EDG

2

2 = 2 Flute
4 = 4 Flute

1

1 = Standard Length
2 = Extra Flute
3 = Necked

030

030 = 3mm
100 = 10mm

B

B = Ballnose
S = Square End
N = Non-Ferrous

SHANK TYPE	LENGTH/DIAMETER RATIO	COATING
 DIN6535HA Shank	3D 3xD	TiAIN TiAIN Coating
	5D 5xD	

TOOL TYPE	POINT ANGLE	WORKPIECE MATERIAL
 External Coolant Drill	90° 90°	P Steels
 Internal Coolant Drill	120° 120°	M Stainless Steels
	140° 140°	K Cast Iron
		N Non-Ferrous Materials

ORDERING CODE KEY		
EDG	03	030
		A
xD Length Drills 03 = 3xD 05 = 5xD Spot Drills 90 = 90° 12 = 120°	030 = 3mm 065 = 6.5mm 100 = 10mm 125 = 12.5mm	A = Non Through Coolant B = Through Coolant

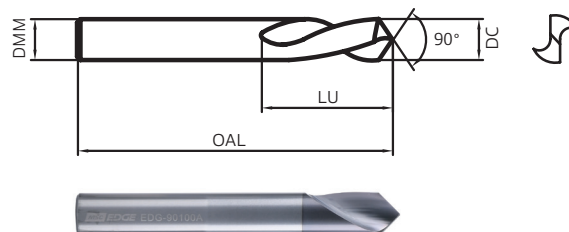
NC SPOT DRILLING

General Purpose Carbide

Spot Drills Key Features:

- Designed for spot drilling and chamfering
- TiAlN coating provides superior wear-resistance and longer tool life

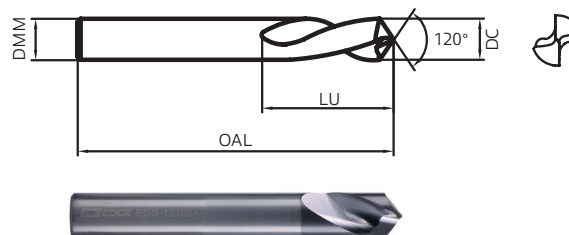
90° Solid Carbide TiAlN Coated NC Spot Drills



P K N

Cutting Diameter/DC (mm)	Shank Diameter/DMM (mm)	Flute Length/LU (mm)	Overall Length/OAL (mm)	Ordering Code	Price
3	3	12	40	EDG-90030A	13.91
4	4	12	40	EDG-90040A	13.91
5	5	16	50	EDG-90050A	14.75
6	6	16	50	EDG-90060A	14.75
8	8	20	60	EDG-90080A	15.95
10	10	22	70	EDG-90100A	20.34
12	12	22	70	EDG-90120A	27.02
16	16	28	80	EDG-90160A	51.75
20	20	30	100	EDG-90200A	76.25

120° Solid Carbide TiAlN Coated NC Spot Drills



P K N

Cutting Diameter/DC (mm)	Shank Diameter/DMM (mm)	Flute Length/LU (mm)	Overall Length/OAL (mm)	Ordering Code	Price
3	3	12	40	EDG-12030A	13.91
4	4	12	40	EDG-12040A	13.91
5	5	16	50	EDG-12050A	14.75
6	6	16	50	EDG-12060A	14.75
8	8	20	60	EDG-12080A	15.95
10	10	22	70	EDG-12100A	20.34
12	12	22	70	EDG-12120A	27.02
16	16	28	80	EDG-12160A	51.75
20	20	30	100	EDG-12200A	76.25

Recommended Cutting Data - NC Spot Drilling

Solid Carbide TiAlN Coated NC Spot Drills

	Workpiece Material	Cutting Speed Vc (M/Min)	Ø3	Ø4	Ø5
P	Low Carbon Steel (<125HB)	60-130	0.12-0.18	0.12-0.18	0.14-0.20
	High and Medium Carbon Steel (<25HRC)	60-110	0.10-0.16	0.10-0.16	0.12-0.18
	Alloy Steel & Tool Steel (35-48HRC)	60-100	0.10-0.16	0.10-0.16	0.12-0.18
K	Grey Cast Iron (<28HRC)	60-140	0.12-0.26	0.12-0.26	0.17-0.32
	Ductile Cast Iron (<45HRC)	60-120	0.10-0.22	0.10-0.22	0.10-0.16
N	Aluminium Alloy (Si<12%)	60-150	0.12-0.26	0.12-0.26	0.17-0.32
	Aluminium Alloy (Si>12%)	60-150	0.10-0.16	0.10-0.16	0.12-0.18
	Copper Alloy (<200HB)	60-150	0.10-0.16	0.10-0.16	0.12-0.18

	Ø6	Ø8	Ø10	Ø12	Ø16	Ø20
P	0.14-0.20	0.16-0.26	0.18-0.30	0.20-0.32	0.28-0.40	0.32-0.45
	0.12-0.18	0.14-0.22	0.16-0.24	0.18-0.30	0.22-0.32	0.26-0.40
	0.12-0.18	0.14-0.20	0.16-0.24	0.18-0.30	0.22-0.32	0.26-0.40
K	0.17-0.32	0.20-0.40	0.25-0.36	0.26-0.38	0.30-0.42	0.32-0.44
	0.10-0.16	0.13-0.21	0.15-0.26	0.17-0.28	0.20-0.33	0.28-0.35
N	0.17-0.32	0.20-0.40	0.25-0.36	0.26-0.38	0.30-0.42	0.32-0.44
	0.12-0.18	0.14-0.22	0.16-0.24	0.18-0.30	0.22-0.32	0.26-0.40
	0.12-0.18	0.14-0.20	0.16-0.24	0.18-0.30	0.22-0.32	0.26-0.40

Recommended Cutting Data - Drilling

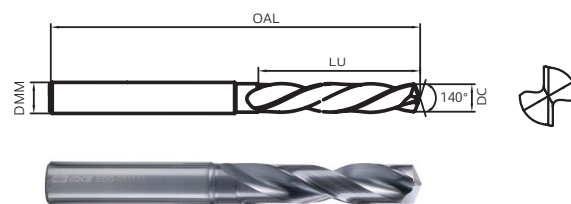
3xD & 5xD Solid Carbide TiAlN Coated Drills



	Workpiece Material	Cutting Speed Vc (M/Min)		Ø3	Ø4
P	Low Carbon Steel (<125HB)	50-120	60-140	0.10-0.20	0.10-0.20
	High and Medium Carbon Steel (<25HRC)	45-120	60-120	0.10-0.20	0.10-0.20
	Alloy Steel & Tool Steel (35-48HRC)	35-80	35-90	0.08-0.14	0.08-0.14
M	Austenitic Stainless Steel (130-200HB)	-	40-80	0.05-0.10	0.06-0.12
	Duplex Stainless Steel (<30HRC)	-	30-60	0.03-0.08	0.04-0.10
K	Grey Cast Iron (<32HRC)	60-140	60-160	0.13-0.20	0.15-0.23
	Ductile Cast Iron (<48HRC)	50-100	50-100	0.06-0.11	0.08-0.13

	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16
P	0.14-0.25	0.16-0.32	0.16-0.35	0.18-0.40	0.22-0.45	0.22-0.45
	0.14-0.25	0.16-0.30	0.16-0.32	0.18-0.38	0.22-0.45	0.22-0.45
	0.08-0.20	0.09-0.25	0.09-0.28	0.11-0.30	0.12-0.32	0.12-0.32
M	0.07-0.14	0.08-0.18	0.09-0.20	0.10-0.22	0.11-0.24	0.12-0.24
	0.05-0.10	0.06-0.12	0.07-0.14	0.08-0.16	0.09-0.18	0.10-0.18
K	0.17-0.30	0.20-0.35	0.23-0.40	0.25-0.45	0.28-0.48	0.30-0.50
	0.10-0.16	0.12-0.20	0.14-0.26	0.16-0.28	0.18-0.30	0.20-0.32

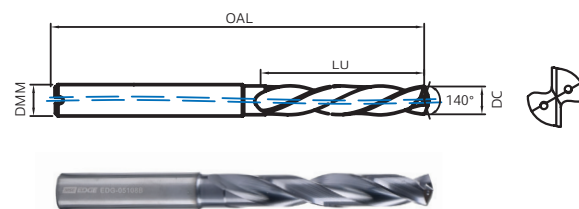
3xD Carbide TiAlN Coated Drills Without Through Coolant



Cutting Diameter/DC (mm)	Shank Diameter/DMM (mm)	Flute Length/LU (mm)	Overall Length/OAL (mm)	Ordering Code	Price
3	6	20	62	EDG-03030A	13.91
3.3	6	20	62	EDG-03033A	13.91
3.4	6	20	62	EDG-03034A	13.91
3.5	6	20	62	EDG-03035A	13.91
3.9	6	24	66	EDG-03039A	13.91
4	6	24	66	EDG-03040A	13.91
4.1	6	24	66	EDG-03041A	13.91
4.2	6	24	66	EDG-03042A	13.91
4.5	6	24	66	EDG-03045A	13.91
4.6	6	24	66	EDG-03046A	13.91
5	6	28	66	EDG-03050A	13.91
5.1	6	28	66	EDG-03051A	13.91
5.5	6	28	66	EDG-03055A	13.91
6	6	28	66	EDG-03060A	13.91
6.5	8	34	79	EDG-03065A	15.95
6.6	8	34	79	EDG-03066A	15.95
6.8	8	34	79	EDG-03068A	15.95
6.9	8	34	79	EDG-03069A	15.95
7	8	34	79	EDG-03070A	15.95
7.5	8	41	79	EDG-03075A	15.95
8	8	41	79	EDG-03080A	15.95
8.5	10	47	89	EDG-03085A	20.34
9	10	47	89	EDG-03090A	20.34
9.5	10	47	89	EDG-03095A	20.34
10	10	47	89	EDG-03100A	20.34
10.3	12	55	102	EDG-03103A	27.02
10.5	12	55	102	EDG-03105A	27.02
10.8	12	55	102	EDG-03108A	27.02
11	12	55	102	EDG-03110A	27.02
11.3	12	55	102	EDG-03113A	27.02
11.5	12	55	102	EDG-03115A	27.02
12	12	55	102	EDG-03120A	27.02
12.5	14	60	107	EDG-03125A	42.16
12.8	14	60	107	EDG-03128A	42.16
13	14	60	107	EDG-03130A	42.16
13.5	14	60	107	EDG-03135A	42.16
14	14	60	107	EDG-03140A	42.16
14.5	16	65	115	EDG-03145A	51.75
14.8	16	65	115	EDG-03148A	51.75
15	16	65	115	EDG-03150A	51.75
15.5	16	65	115	EDG-03155A	51.75
16	16	65	115	EDG-03160A	51.75

Please refer to page 9 for cutting data.

5xD Carbide TiAlN Coated Drills With Through Coolant



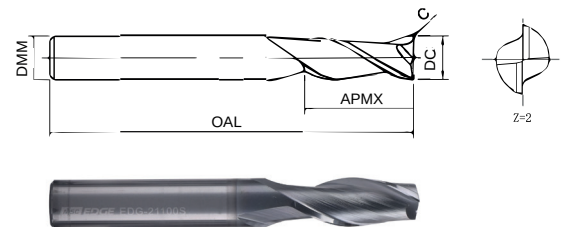
Cutting Diameter/DC (mm)	Shank Diameter/DMM (mm)	Flute Length/LU (mm)	Overall Length/OAL (mm)	Ordering Code	Price
3	6	28	66	EDG-05030B	25.36
3.3	6	28	66	EDG-05033B	25.36
3.4	6	28	66	EDG-05034B	25.36
3.5	6	28	66	EDG-05035B	25.36
3.9	6	36	74	EDG-05039B	25.36
4	6	36	74	EDG-05040B	25.36
4.1	6	36	74	EDG-05041B	25.36
4.2	6	36	74	EDG-05042B	25.36
4.5	6	36	74	EDG-05045B	25.36
4.6	6	36	74	EDG-05046B	25.36
5	6	44	82	EDG-05050B	25.36
5.1	6	44	82	EDG-05051B	25.36
5.5	6	44	82	EDG-05055B	25.36
6	6	44	82	EDG-05060B	25.36
6.5	8	53	91	EDG-05065B	27.34
6.6	8	53	91	EDG-05066B	27.34
6.8	8	53	91	EDG-05068B	27.34
6.9	8	53	91	EDG-05069B	27.34
7	8	53	91	EDG-05070B	27.34
7.5	8	53	91	EDG-05075B	27.34
8	8	53	91	EDG-05080B	27.34
8.5	10	61	103	EDG-05085B	35.20
9	10	61	103	EDG-05090B	35.20
9.5	10	61	103	EDG-05095B	35.20
10	10	61	103	EDG-05100B	35.20
10.3	12	71	118	EDG-05103B	49.31
10.5	12	71	118	EDG-05105B	49.31
10.8	12	71	118	EDG-05108B	49.31
11	12	71	118	EDG-05110B	49.31
11.3	12	71	118	EDG-05113B	49.31
11.5	12	71	118	EDG-05115B	49.31
12	12	71	118	EDG-05120B	49.31
12.5	14	77	124	EDG-05125B	68.44
12.8	14	77	124	EDG-05128B	68.44
13	14	77	124	EDG-05130B	68.44
13.5	14	77	124	EDG-05135B	68.44
14	14	77	124	EDG-05140B	68.44
14.5	16	83	133	EDG-05145B	86.20
14.8	16	83	133	EDG-05148B	86.20
15	16	83	133	EDG-05150B	86.20
15.5	16	83	133	EDG-05155B	86.20
16	16	83	133	EDG-05160B	86.20

Please refer to page 9 for cutting data.

2 Flute End Mill Key Features:

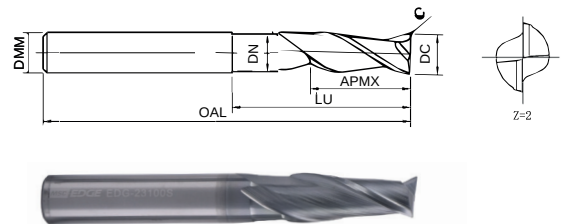
- Designed for slotting, square shoulder milling, profile milling, ramping and helical interpolation
- Manufactured from fine-grained carbide, matched with high-performance AlCrSiN coating to achieve a perfect combination of high performance and good wear resistance

2 Flute Solid Carbide AlCrSiN Coated Standard Length End Mills



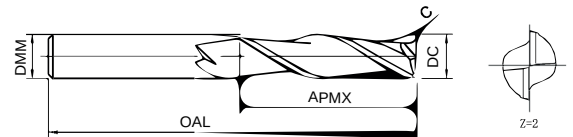
Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Chamfer/ C	Helix Angle	Ordering Code	Price
1	3	4	40	0.02	30°	EDG-21010S	10.71
2	3	8	40	0.02	30°	EDG-21020S	10.71
3	3	12	50	0.03	30°	EDG-21030S	10.71
4	4	16	50	0.04	30°	EDG-21040S	10.71
5	5	16	50	0.05	30°	EDG-21050S	12.11
6	6	20	50	0.06	30°	EDG-21060S	12.11
8	8	22	65	0.08	30°	EDG-21080S	17.84
10	10	25	75	0.1	30°	EDG-21100S	22.93
12	12	25	75	0.1	30°	EDG-21120S	33.12
16	16	38	90	0.1	30°	EDG-21160S	57.33
20	20	38	100	0.1	30°	EDG-21200S	86.63

2 Flute Solid Carbide AlCrSiN Coated Extended Reach End Mills



Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Chamfer/ C	Neck Diameter/ DN (mm)	Neck Length/LU (mm)	Helix Angle	Ordering Code	Price
2	3	7	40	0.02	1.92	10	30°	EDG-23020S	11.25
3	3	12	50	0.03	2.9	20	30°	EDG-23030S	11.25
4	4	16	50	0.04	3.8	20	30°	EDG-23040S	11.25
5	5	16	50	0.05	4.8	20	30°	EDG-23050S	12.72
6	6	16	50	0.06	5.8	25	30°	EDG-23060S	12.72
8	8	22	65	0.08	7.7	30	30°	EDG-23080S	18.73
10	10	25	75	0.1	9.7	32	30°	EDG-23100S	24.08
12	12	25	75	0.1	11.8	38	30°	EDG-23120S	34.78
16	16	32	90	0.1	15.7	45	30°	EDG-23160S	60.20
20	20	40	100	0.1	19.7	55	30°	EDG-23200S	90.96

2 Flute Solid Carbide AlCrSiN Coated Extended Flute End Mills



Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Chamfer/ C	Helix Angle	Ordering Code	Price
3	3	16	50	0.03	30°	EDG-22030S	13.39
4	4	19	50	0.04	30°	EDG-22040S	13.39
5	5	20	63	0.05	30°	EDG-22050S	15.14
6	6	25	75	0.06	30°	EDG-22060S	15.14
8	8	25	75	0.08	30°	EDG-22080S	20.51
10	10	32	75	0.1	30°	EDG-22100S	29.30
12	12	50	100	0.1	30°	EDG-22120S	46.88
16	16	50	120	0.1	30°	EDG-22160S	71.79
20	20	55	125	0.1	30°	EDG-22200S	106.95

Recommended Cutting Data - Full Slotting

2 Flute Solid Carbide AlCrSiN Coated End Mills



	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Cutting Data	3	4	5	8	10	12	16	20
P	Carbon Steel (<35HRC)	Ap<0.8D	100	RPM	10610	7958	5305	3979	3183	2653	1989	1592
		Ae=1D		Feed (Vf) mm/min	531	557	424	398	382	371	438	477
	Alloy Steel	Ap<0.3D	80	RPM	8488	6366	4244	3183	2546	2122	1592	1273
		Ae=1D		Feed (Vf) mm/min	346	382	297	286	280	276	318	306
M	Stainless Steel	Ap<0.3D	70	RPM	7427	5570	3714	2785	2228	1857	1393	1114
		Ae=1D		Feed (Vf) mm/min	178	203	254	254	255	242	215	203
K	Nodular Cast Iron (<32HRC)	Ap<0.5D	80	RPM	8488	6366	4244	3183	2546	2122	1592	1273
		Ae=1D		Feed (Vf) mm/min	340	382	340	320	306	291	275	246
	High Alloy Cast (35-45HRC)	Ap<0.3D	70	RPM	7427	5570	3714	2785	2228	1857	1393	1114
		Ae=1D		Feed (Vf) mm/min	224	278	260	252	245	241	223	201

Recommended Cutting Data - Side Milling

2 Flute Solid Carbide AlCrSiN Coated End Mills



	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Cutting Data	3	4	5	8	10	12	16	20
P	Carbon Steel (<35HRC)	Ap<1.5D	200	RPM	21221	15915	10610	7958	6366	5305	3979	3183
		Ae=0.15D		Feed (Vf) mm/min	1188	1144	1022	1032	1022	954	956	954
	Alloy Steel	Ap<1D	150	RPM	15915	11937	7958	5968	4775	3979	2984	2387
		Ae=0.12D		Feed (Vf) mm/min	704	669	634	714	646	577	472	427
M	Stainless Steel	Ap<1.5D	150	RPM	15915	11937	7958	5968	4775	3979	2984	2387
		Ae=0.15D		Feed (Vf) mm/min	796	761	680	749	704	680	565	531
K	Nodular Cast Iron (<32HRC)	Ap<1.5D	170	RPM	18038	13528	9019	6764	5411	4509	3382	2706
		Ae=0.15D		Feed (Vf) mm/min	902	871	871	796	743	722	647	594
	High Alloy Cast (35-45HRC)	Ap<1D	150	RPM	15915	11937	7958	5968	4775	3979	2984	2387
		Ae=0.12D		Feed (Vf) mm/min	696	717	718	664	621	599	535	492

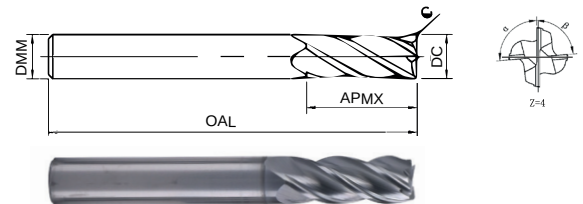
4 Flute End Mill Key Features:

- Optimised flute design with variable helix to reduce chatter with good chip removal
- Designed for slotting, square shoulder milling, profile milling, ramping and helical interpolation
- Manufactured from fine-grained carbide, matched with high-performance AlCrSiN coating to achieve a perfect combination of high performance and good wear resistance

4 Flute Solid Carbide AlCrSiN Coated Standard Length End Mills



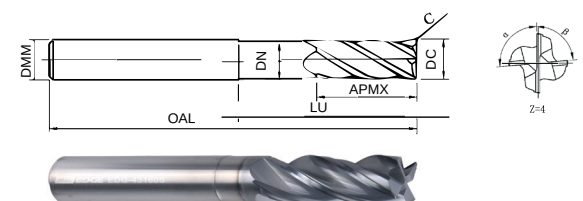
Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Chamfer/ C	Helix Angle	Ordering Code	Price
1	3	4	40	0.02	35/38°	EDG-41010S	10.93
2	3	8	40	0.02	35/38°	EDG-41020S	10.93
3	3	12	50	0.03	35/38°	EDG-41030S	10.93
4	4	16	50	0.04	35/38°	EDG-41040S	10.93
5	5	16	50	0.05	35/38°	EDG-41050S	12.36
6	6	20	50	0.06	35/38°	EDG-41060S	12.36
8	8	22	65	0.08	35/38°	EDG-41080S	18.20
10	10	25	75	0.1	35/38°	EDG-41100S	23.40
12	12	28	75	0.1	35/38°	EDG-41120S	33.80
16	16	38	90	0.1	38°	EDG-41160S	58.50
20	20	38	100	0.1	38°	EDG-41200S	88.40



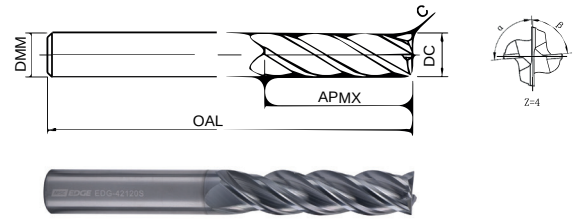
4 Flute Solid Carbide AlCrSiN Coated Extended Reach End Mills



Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Chamfer/ C	Neck Diameter/ DN (mm)	Neck Length/LU (mm)	Helix Angle	Ordering Code	Price
3	3	12	50	0.03	2.9	15	35/38°	EDG-43030S	11.48
4	4	16	50	0.04	3.8	20	35/38°	EDG-43040S	11.48
5	5	16	50	0.05	4.8	20	35/38°	EDG-43050S	12.98
6	6	16	50	0.06	5.8	25	35/38°	EDG-43060S	12.98
8	8	22	65	0.08	7.7	30	35/38°	EDG-43080S	19.11
10	10	25	75	0.1	9.7	32	35/38°	EDG-43100S	26.00
12	12	25	75	0.1	11.8	38	35/38°	EDG-43120S	41.60
16	16	32	90	0.1	15.7	45	38°	EDG-43160S	63.70
20	20	40	100	0.1	19.7	52	38°	EDG-43200S	94.90



4 Flute Solid Carbide AlCrSiN Coated Extended Flute End Mills



Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Chamfer/ C	Helix Angle	Ordering Code	Price
3	3	16	50	0.03	38°	EDG-42030S	13.67
4	4	19	50	0.04	38°	EDG-42040S	13.67
5	5	20	63	0.05	35/38°	EDG-42050S	15.45
6	6	25	75	0.06	35/38°	EDG-42060S	15.45
8	8	25	75	0.08	35/38°	EDG-42080S	20.93
10	10	32	75	0.1	35/38°	EDG-42100S	29.90
12	12	50	100	0.1	35/38°	EDG-42120S	47.84
16	16	50	120	0.1	38°	EDG-42160S	73.26
20	20	55	125	0.1	38°	EDG-42200S	109.17

Recommended Cutting Data - Full Slotting

4 Flute Solid Carbide AlCrSiN Coated End Mills



	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Tool Diameter (mm)	3	4	5	8	10	12	16	20
P	Carbon Steel (<35HRc)	Ap<1D	80	RPM	8490	6370	4250	3190	2550	2120	1590	1270
		Ae=1D		Feed (Vf) mm/min	790	920	730	640	590	570	640	650
	Alloy Steel	Ap<0.5D	60	RPM	6370	4780	3190	2390	1910	1590	1190	960
		Ae=1D		Feed (Vf) mm/min	500	550	450	370	360	360	370	370
M	Stainless Steel	Ap<0.3D	55	RPM	5840	4380	2920	2190	1750	1460	1100	880
		Ae=1D		Feed (Vf) mm/min	320	320	350	340	320	320	280	260
K	Nodular Cast Iron (<32HRc)	Ap<0.8D	55	RPM	5840	4380	2920	2190	1750	1460	1100	880
		Ae=1D		Feed (Vf) mm/min	420	450	420	360	340	340	310	280
	High Alloy Cast (35-45HRc)	Ap<0.5D	50	RPM	5310	3980	2650	1990	1590	1330	1000	800
		Ae=1D		Feed (Vf) mm/min	330	350	360	300	290	290	260	240

Recommended Cutting Data - Side Milling

4 Flute Solid Carbide AlCrSiN Coated End Mills

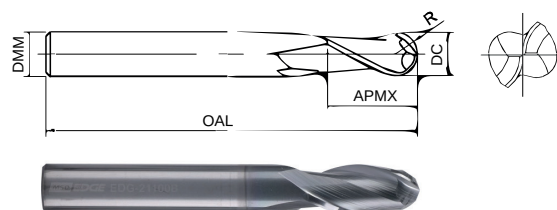


	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Tool Diameter (mm)	3	4	5	8	10	12	16	20
P	Carbon Steel (<35HRc)	Ap<1.5D	200	RPM	21230	15920	10620	7960	6370	5310	3980	3190
		Ae=0.15D		Feed (Vf) mm/min	2720	2610	2250	2230	2170	2120	1990	1980
	Alloy Steel	Ap<1D	150	RPM	15920	11940	7960	5970	4780	3980	2990	2390
		Ae=0.12D		Feed (Vf) mm/min	1720	1580	1430	1550	1400	1240	1020	910
M	Stainless Steel	Ap<1.5D	150	RPM	15920	11940	7960	5970	4780	3980	2990	2390
		Ae=0.15D		Feed (Vf) mm/min	2100	1770	1530	1620	1510	1430	1190	1100
K	Nodular Cast Iron (<32HRc)	Ap<1.5D	170	RPM	18050	13540	9020	6770	5410	4510	3380	2710
		Ae=0.15D		Feed (Vf) mm/min	2170	2000	1910	1730	1600	1530	1350	1250
	High Alloy Cast (35-45HRc)	Ap<1D	150	RPM	15920	11940	7960	5970	4780	3980	2990	2390
		Ae=0.12D		Feed (Vf) mm/min	1720	1670	1590	1460	1340	1270	1140	1020

2 and 4 Flute Ball Nose Key Features:

- Designed for copy milling, slotting, profile milling and ramping
- Manufactured from fine-grained carbide, matched with high-performance AlCrSiN coating to achieve a perfect combination of high performance and good wear resistance

2 Flute Solid Carbide AlCrSiN Coated Standard Length Ballnose



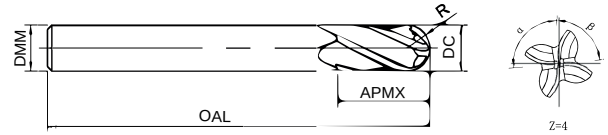
Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Helix Angle	Ordering Code	Price
1	3	4	40	30°	EDG-21010B	12.03
2	3	6	40	30°	EDG-21020B	12.03
3	3	12	50	30°	EDG-21030B	12.03
4	4	16	50	30°	EDG-21040B	12.03
5	5	16	50	30°	EDG-21050B	13.60
6	6	20	50	30°	EDG-21060B	13.60
8	8	20	65	30°	EDG-21080B	19.57
10	10	22	75	30°	EDG-21100B	25.46
12	12	25	75	30°	EDG-21120B	35.72
16	16	32	90	30°	EDG-21160B	58.17
20	20	38	100	30°	EDG-21200B	87.49

Recommended Cutting Data - Copy Milling 2 Flute Solid Carbide AlCrSiN Coated Ballnose



	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Tool Diameter (mm)	3	4	5	8	10	12	16	20
P	Carbon Steel (<35HRC)	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	2800	2800	2800	2800	2800	2800	2800	2800
	Alloy Steel	Ap<0.02D	180	RPM	50000	28660	19110	14330	9550	7170	5730	4780
		Ae=0.02D		Feed (Vf) mm/min	1950	2010	1990	2010	2010	2010	2000	2000
M	Stainless Steel	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	2520	2450	2570	2630	2570	2540	2520	2530
K	Nodular Cast Iron (<32HRC)	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	2520	2450	2570	2630	2570	2540	2520	2530
	High Alloy Cast (35-45HRC)	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	2380	2450	2430	2450	2450	2450	2440	2440

4 Flute Solid Carbide AlCrSiN Coated Standard Length Ballnose



Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Helix Angle	Ordering Code	Price
1	3	4	40	30°	EDG-41010B	12.27
2	3	6	40	30°	EDG-41020B	12.27
3	3	12	50	30°	EDG-41030B	12.27
4	4	16	50	30°	EDG-41040B	12.27
5	5	16	50	30°	EDG-41050B	13.87
6	6	20	50	30°	EDG-41060B	13.87
8	8	20	65	30°	EDG-41080B	19.96
10	10	22	75	30°	EDG-41100B	25.97
12	12	25	75	30°	EDG-41120B	36.43
16	16	32	90	30°	EDG-41160B	59.33
20	20	38	100	30°	EDG-41200B	89.24

Recommended Cutting Data - Copy Milling 4 Flute Solid Carbide AlCrSiN Coated Ballnose

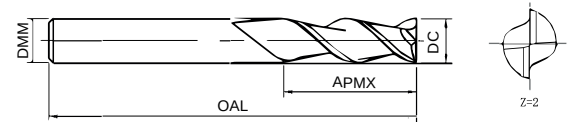


	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Tool Diameter (mm)	3	4	5	8	10	12	16	20
P	Carbon Steel (<35HRc)	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	5040	4900	5140	5260	5140	5080	5040	4906
	Alloy Steel	Ap<0.02D	180	RPM	50000	28660	19110	14330	9550	7170	5730	4780
		Ae=0.02D		Feed (Vf) mm/min	3900	3668	3822	4020	4020	4020	4000	3824
M	Stainless Steel	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	3900	4484	4672	4915	4917	4911	4894	4672
K	Nodular Cast Iron (<32HRc)	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	5040	4900	5140	5260	5140	5080	5040	4906
	High Alloy Cast (35-45HRc)	Ap<0.04D	220	RPM	50000	35030	23360	17520	11680	8760	7010	5840
		Ae=0.04D		Feed (Vf) mm/min	3900	4484	4672	4915	4917	4911	4894	4672

2 Flute High Helix End Mill for Non-Ferrous Key Features:

- Designed for slotting, square shoulder milling, profile milling, ramping and helical interpolation
- Sharp cutting edges, high helix angles designed to effectively reduce built-up edge

2 Flute 45° Solid Carbide Uncoated End Mills



Cutting Diameter/ DC (mm)	Shank Diameter/ DMM (mm)	Flute Length/ APMX (mm)	Overall Length/ OAL (mm)	Helix Angle	Ordering Code	Price
2	3	6	50	45°	EDG-21020N	9.84
3	3	12	50	45°	EDG-21030N	9.84
4	6	12	50	45°	EDG-21040N	9.84
5	6	16	50	45°	EDG-21050N	11.12
6	6	16	57	45°	EDG-21060N	11.12
8	8	20	63	45°	EDG-21080N	14.41
10	10	22	72	45°	EDG-21100N	18.67
12	12	26	83	45°	EDG-21120N	26.44
16	16	38	92	45°	EDG-21160N	48.24
20	20	44	104	45°	EDG-21200N	68.93

Recommended Cutting Data - Full Slotting

2 Flute Solid Carbide End Mills



	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Tool Diameter (mm)	2	4	6	8	10	12	16	20
N	Wrought Aluminium Alloys, Cast Aluminium Alloy (Si<12%)	Ap<1D	150-350	RPM	10000	9000	8000	7800	8000	6800	5000	4000
		Ae=1D		Feed (Vf) mm/min	500	810	920	1100	1280	1300	1310	1200
	Copper Alloy (<HB200)	Ap<0.5D	150-350	RPM	10000	9000	8000	7800	8000	6800	5000	4000
		Ae=1D		Feed (Vf) mm/min	450	800	830	1000	1150	1130	1000	1080

Recommended Cutting Data - Side Milling

2 Flute Solid Carbide End Mills



	Workpiece Material	Ap x Ae (mm)	Vc (M/Min)	Tool Diameter (mm)	2	4	6	8	10	12	16	20
N	Wrought Aluminium Alloys, Cast Aluminium Alloy (Si<12%)	Ap<1.5D	150-350	RPM	12700	12000	10600	10000	9500	9280	7000	5600
		Ae=0.2D		Feed (Vf) mm/min	710	1200	1280	1390	1720	2400	2500	2450
	Copper Alloy (<HB200)	Ap<1.5D	150-350	RPM	12700	12000	10600	10000	9500	9280	7000	5600
		Ae=0.2D		Feed (Vf) mm/min	650	1070	1150	1250	1550	2170	2250	2200

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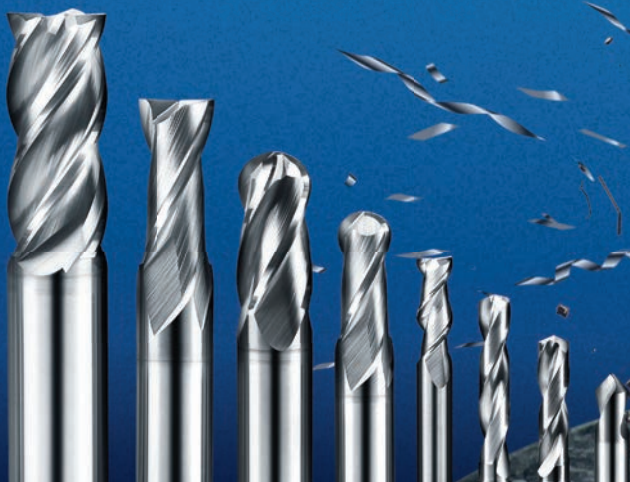
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