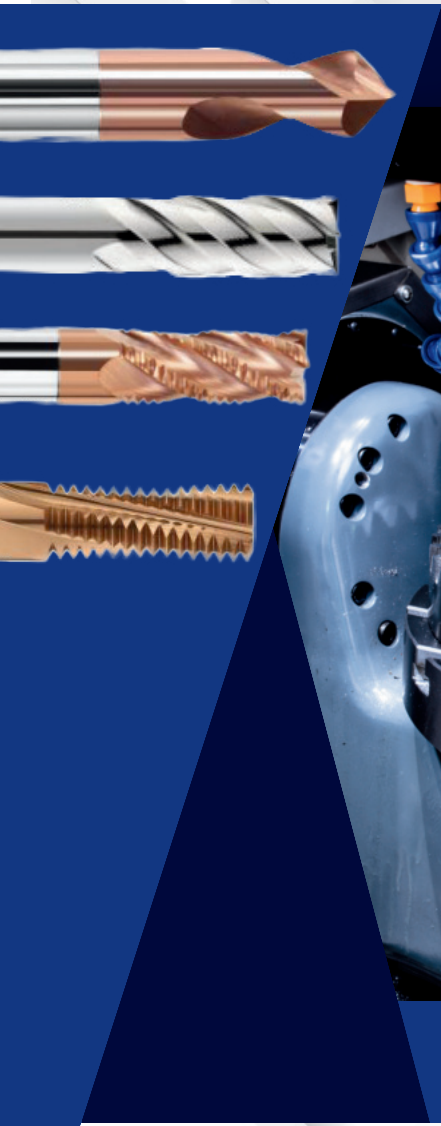
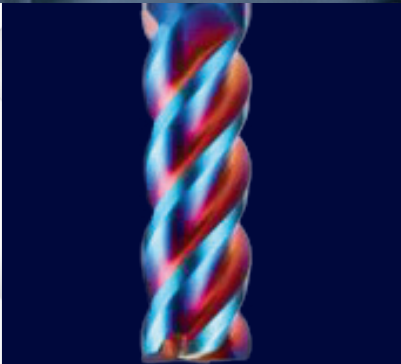




ANH KIM CNC PRODUCTION SERVICE
TRADING JOINT STOCK COMPANY



CATALOGUE



2025
2025
2025

**55HRC****Suitable for ordinary steel, cast iron materials processing series**

The special tool design is very suitable for ordinary steel, cast iron materials processing

Cutting Parameters: P5-26

**60HRC****Suitable for various steels universal processing series**

The design of large helix angle and special edge, very suitable for all kinds of steel general processing

Cutting Parameters: P27-45

**65HRC****Suitable for stainless steel, cast iron high-efficiency processing series**

The special tool design is very suitable for stainless steel, cast iron materials processing

Cutting Parameters: P46-52

**70-72HRC****Hard steel, stainless steel high-speed and efficiency processing series**

Special cutting design, very suitable for hard steel Stainless steel high-speed and efficiency processing

Cutting Parameters: P53-59

**Ceramic****Stainless steel, die steel high-speed and efficiency processing series**

The special tool design is very suitable for stainless steel, die steel materials processing

Cutting Parameters: P60-62

**Alumium****Super bright aluminum processing series**

Applicable to aluminum alloy material efficient ultra-bright processing

Cutting Parameters: P63-79





Rough End Mill

Rough processing for steel and cast iron materials series

Suitable for roughing of hard steel
and cast iron

Cutting Parameters: P80-82



Chamfer

Suitable for steel and cast iron materials processing series

Suitable for steel and cast iron

Cutting Parameters: P83-86



Spot Drill

Suitable for steel and cast iron materials processing series

Suitable for steel and cast iron

Cutting Parameters: P87-90



Internal R End Mill

Suitable for steel and cast iron materials processing series

Suitable for steel and cast iron

Cutting Parameters: P91-93





T-Slot End Mill

Suitable for various steels universal processing series

The special tool design is very suitable for various steels universal processing

Cutting Parameters: P94-96



Dovetail End Mill

Suitable for various steels universal processing series

The special tool design is very suitable for various steels universal processing

Cutting Parameters: P97-99



Thread End Mill

Suitable for various steels universal processing series

The special tool design is very suitable for various steels universal processing

Cutting Parameters: P100-104



Corn End Mill For Composite Material

Suitable for various steels universal processing series

The special tool design is very suitable for various steels universal processing

Cutting Parameters: P105-106



Twist Drill

Stainless steel, die steel high-speed and efficiency processing series

The special tool design is very suitable for stainless steel, die steel materials processing

Cutting Parameters: P107-111





Icon Type And Identification

Processed Marteria

P	Steel, high-alloyed	P
M	Steel Stainless steel	M
K	Grey cast iron, spheroidal graphite iron / malleable cast iron	K
N	Aluminium and other non-ferrous metals	N
S	Special, super and titanium alloys	S
H	Hardened steel and chilled cast iron	H

Coating

AlTiN

TiSiN

NACO

AlCrSiN

AL

Series

HRC55

HRC60

HRC65

700

750

AL

CPD

SGXj

DJXD

DXZ

NRD

TXD

YWXD

LWXD

YMXD

Shank

C = 50mm

D = 60mm

E = 75mm

H = 100mm

M = 150mm

R = 200mm



HRC55

GRENERAL MACHINING END MILL

**NEW
TiSiN**

- Suitable for processing ordinary steel, P20 and cast iron materials.
- High performance TiSiN coating. High temperature resistance and high wear resistance.
- Ultra-fine grained carbide material.

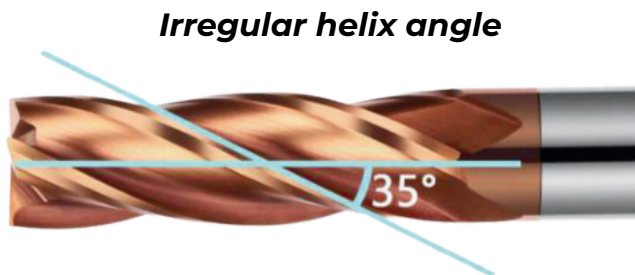
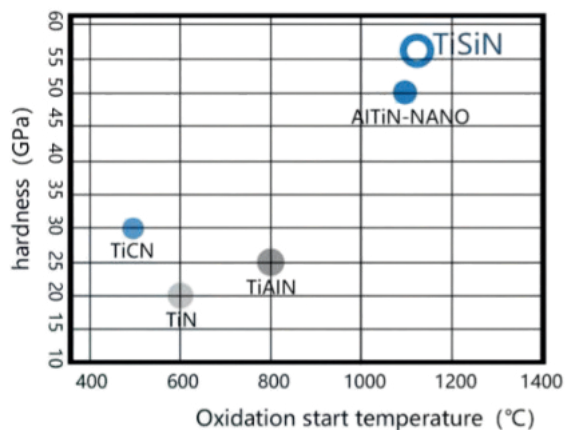
WORLDWIDE RELIABL PARTNERS



General processing of various steels

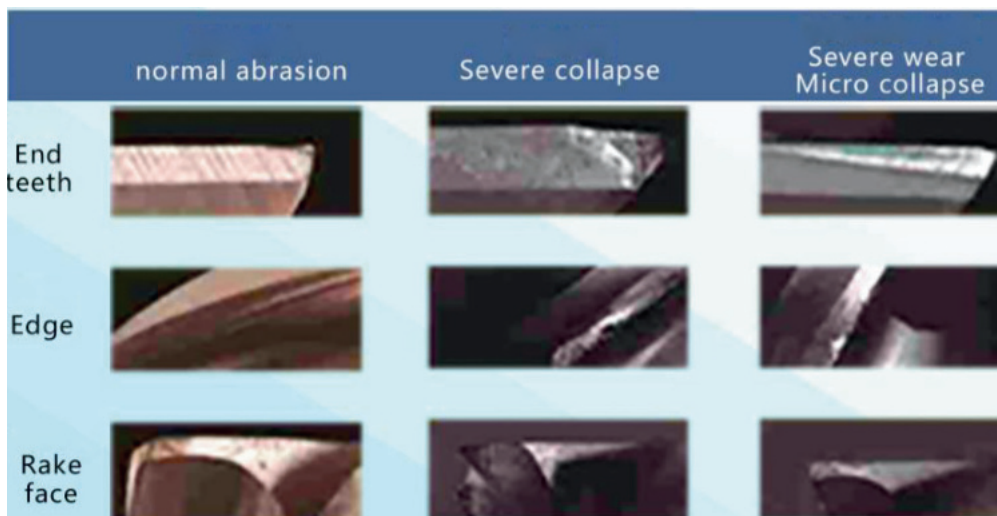
Strong anti-sticking ability, improve tool life,

35° helix angle design, Smooth cutting without chip accumulation



[Improved productivity with effective machining due to less vibration]

Wear condition after processing



Wear comparison of the rear rake face





MICRO DIAMETER — DEEP GROVE SERIES



- Suitable for deep groove processing various steel and cast iron.
- High-performance TiSiN coating for high temperature and wear resistance.
- Long neck design avoids collision with workpiece, Suitable for deep pocket milling of mold rib.



Fine grinding, high precise sizes

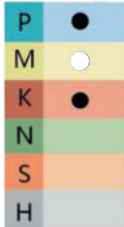
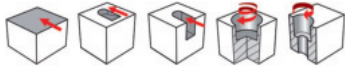
WORLD WIDE RELIABLE PARTNERS



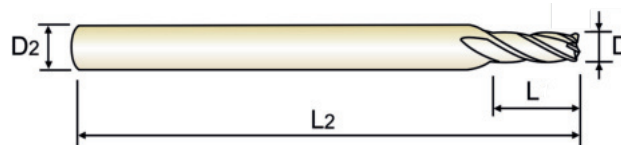
SS-2AKE

ORDINARY STEEL, CAST IRON

Micro Diameter Square End Mill (Standard)



Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D	L	D2	L2
	mm	mm	mm	mm
SS-2AKE 002 004 S04C	0.2	0.4	4	50
SS-2AKE 003 006 S04C	0.3	0.6	4	50
SS-2AKE 004 008 S04C	0.4	0.8	4	50
SS-2AKE 005 010 S04C	0.5	1	4	50
SS-2AKE 006 012 S04C	0.6	1.2	4	50
SS-2AKE 007 014 S04C	0.7	1.4	4	50
SS-2AKE 008 016 S04C	0.8	1.6	4	50
SS-2AKE 009 018 S04C	0.9	1.8	4	50

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	Carbon steel alloy steel (<45HRC) (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



S-2&4AKE

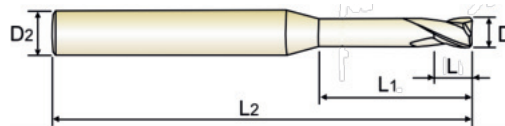
ORDINARY STEEL, CAST IRON

Carbide 2 & 4 Flutes Square Long Neck End Mill



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	L1 mm	D2 mm	L2 mm
S-2AKE 002 010 S04C	0.2	0.3	1	4	50
S-2AKE 002 020 S04C	0.2	0.3	2	4	50
S-2AKE 003 010 S04C	0.3	0.5	1	4	50
S-2AKE 003 020 S04C	0.3	0.5	2	4	50
S-2AKE 003 030 S04C	0.3	0.5	3	4	50
S-2AKE 004 020 S04C	0.4	0.6	2	4	50
S-2AKE 004 030 S04C	0.4	0.6	3	4	50
S-2AKE 004 040 S04C	0.4	0.6	4	4	50
S-2AKE 004 060 S04C	0.4	0.6	6	4	50
S-2AKE 005 020 S04C	0.5	0.7	2	4	50
S-2AKE 005 030 S04C	0.5	0.7	3	4	50
S-2AKE 005 040 S04C	0.5	0.7	4	4	50
S-2AKE 005 050 S04C	0.5	0.7	5	4	50
S-2AKE 005 060 S04C	0.5	0.7	6	4	50
S-2AKE 005 080 S04C	0.5	0.7	8	4	50
S-2AKE 006 020 S04C	0.6	0.9	2	4	50
S-2AKE 006 030 S04C	0.6	0.9	3	4	50
S-2AKE 006 040 S04C	0.6	0.9	4	4	50
S-2AKE 006 050 S04C	0.6	0.9	5	4	50
S-2AKE 006 060 S04C	0.6	0.9	6	4	50
S-2AKE 006 080 S04C	0.6	0.9	8	4	50

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



S-2&4AKE

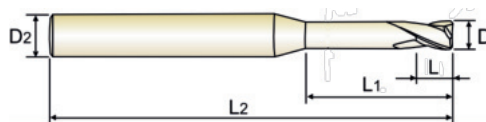
ORDINARY STEEL, CAST IRON

Carbide 2 & 4 Flutes Square Long Neck End Mill



P	●
M	●
K	●
N	
S	
H	

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2AKE 008 030 S04C	0.8	1.2	3	4	50
S-2AKE 008 040 S04C	0.8	1.2	4	4	50
S-2AKE 008 050 S04C	0.8	1.2	5	4	50
S-2AKE 008 060 S04C	0.8	1.2	6	4	50
S-2AKE 008 080 S04C	0.8	1.2	8	4	50
S-2AKE 008 100 S04C	0.8	1.2	10	4	50
S-2&4AKE 010 050 S04C	1	1.5	5	4	50
S-2&4AKE 010 060 S04C	1	1.5	6	4	50
S-2&4AKE 010 080 S04C	1	1.5	8	4	50
S-2&4AKE 010 100 S04C	1	1.5	10	4	50
S-2&4AKE 010 120 S04C	1	1.5	12	4	50
S-2&4AKE 010 140 S04C	1	1.5	14	4	50
S-2&4AKE 010 160 S04C	1	1.5	16	4	50
S-2&4AKE 010 200 S04C	1	1.5	20	4	50
S-2&4AKE 015 060 S04C	1.5	2.3	6	4	50
S-2&4AKE 015 080 S04C	1.5	2.3	8	4	50
S-2&4AKE 015 100 S04C	1.5	2.3	10	4	50
S-2&4AKE 015 120 S04C	1.5	2.3	12	4	50
S-2&4AKE 015 140 S04C	1.5	2.3	14	4	50
S-2&4AKE 015 160 S04C	1.5	2.3	16	4	50
S-2&4AKE 015 200 S04C	1.5	2.3	20	4	50

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



S-2&4AKE

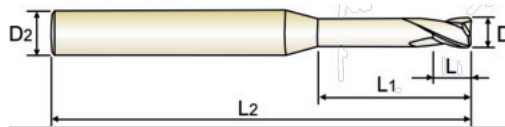
ORDINARY STEEL, CAST IRON

Carbide 2 & 4 Flutes Square Long Neck End Mill



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2&4AKE 020 080 S04C	2	3	8	4	50
S-2&4AKE 020 100 S04C	2	3	10	4	50
S-2&4AKE 020 120 S04C	2	3	12	4	50
S-2&4AKE 020 140 S04C	2	3	14	4	50
S-2&4AKE 020 160 S04C	2	3	16	4	50
S-2&4AKE 020 200 S04C	2	3	20	4	50
S-2&4AKE 025 120 S04C	2.5	3.8	12	4	50
S-2&4AKE 025 160 S04C	2.5	3.8	16	4	50
S-2&4AKE 025 200 S04C	2.5	3.8	20	4	50
S-2&4AKE 030 120 S04C	3	4.5	12	4	50
S-2&4AKE 030 160 S04C	3	4.5	16	4	50
S-2&4AKE 030 200 S04C	3	4.5	20	4	50
S-2&4AKE 040 160 S06D	4	6	16	6	60
S-2&4AKE 040 200 S06D	4	6	20	6	60
S-2&4AKE 040 260 S06E	4	6	26	6	75
S-2&4AKE 040 300 S06E	4	6	30	6	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 0.5D	90	rote speed (min-1) feed velocity (mm/min)	19900	31850	28600	23890	13270	9950	8850	7960
		ap ≤ 0.05D			400	1150	1150	1100	370	400	410	400
		ap ≤ 0.5D	70	rote speed (min-1) feed velocity (mm/min)	15920	24770	22290	18580	10620	7960	7080	6370
M	stainless steel	ap ≤ 0.5D			250	840	850	820	250	290	300	290
		ap ≤ 0.03D	60	rote speed (min-1) feed velocity (mm/min)	13930	21230	19110	15920	9290	6970	6190	5570
					250	760	760	730	240	260	270	270
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.5D	90	rote speed (min-1) feed velocity (mm/min)	15920	31850	28660	23890	10620	9100	7960	6370
		ap ≤ 0.05D			320	1150	1150	1100	300	310	320	320
		ap ≤ 0.5D	80	rote speed (min-1) feed velocity (mm/min)	11940	28310	25480	21230	7960	6800	5970	4780
		ap ≤ 0.05D			210	850	820	760	210	220	230	230

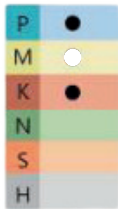
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



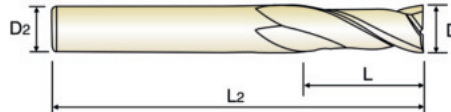
2AKE

ORDINARY STEEL, CAST IRON

Carbide 2 Flutes Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D mm	L mm	D2 mm	L2 mm
2AKE 010 030 S04C	1	3	4	50
2AKE 015 050 S04C	1.5	5	4	50
2AKE 020 060 S04C	2	6	4	50
2AKE 025 080 S04C	2.5	8	4	50
2AKE 030 090 S04C	3	9	3	50
2AKE 030 090 S04C	3	9	4	50
2AKE 035 110 S04C	3.5	11	4	50
2AKE 040 100 S04C	4	10	4	50
2AKE 050 130 S05C	5	13	5	50
2AKE 050 130 S06C	5	13	6	50
2AKE 060 150 S06C	6	15	6	50
2AKE 070 200 S08D	7	20	8	60
2AKE 080 200 S08D	8	20	8	60
2AKE 090 250 S10E	9	25	10	75
2AKE 100 250 S10E	10	25	10	75
2AKE 110 250 S12E	11	25	12	75
2AKE 120 300 S12E	12	30	12	75
2AKE 140 450 S14H	14	45	14	100
2AKE 150 450 S16H	15	45	16	100
2AKE 160 450 S16H	16	45	16	100
2AKE 180 450 S18H	18	45	18	100
2AKE 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		ap ≤ 0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		ap ≤ 1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
M	stainless steel	ap ≤ 1.5D	130	rote speed (min-1)	610	580	550	620	560	500	410	370
		ap ≤ 0.15D		feed velocity (mm/min)								
		ap ≤ 1D		rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	rote speed (min-1)	690	660	590	650	610	590	490	460
		ap ≤ 0.15D		feed velocity (mm/min)								
		ap ≤ 1D	140	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		ap ≤ 0.12D		feed velocity (mm/min)	850	820	750	750	700	680	610	560
				rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
				feed velocity (mm/min)	650	670	670	620	580	560	500	460

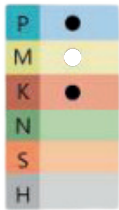
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



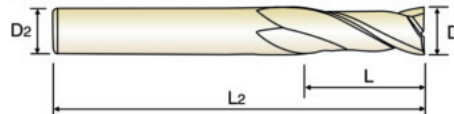
2AKL

ORDINARY STEEL, CAST IRON

Carbide 2 Flutes Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
2AKL 030 120 S03E	3	12	3	75
2AKL 040 160 S04E	4	16	4	75
2AKL 050 180 S05E	5	18	5	75
2AKL 060 240 S06E	6	24	6	75
2AKL 080 250 S08E	8	25	8	75
2AKL 030 120 S03H	3	12	3	100
2AKL 040 200 S04H	4	20	4	100
2AKL 050 300 S05H	5	30	5	100
2AKL 060 300 S06H	6	30	6	100
2AKL 080 350 S08H	8	35	8	100
2AKL 100 400 S10H	10	40	10	100
2AKL 120 450 S12H	12	45	12	100
2AKL 060 450 S06H	6	45	6	150
2AKL 080 500 S08H	8	50	8	150
2AKL 100 550 S10M	10	55	10	150
2AKL 120 550 S12M	12	55	12	150
2AKL 140 700 S14M	14	70	14	150
2AKL 160 800 S16M	16	80	16	150
2AKL 180 800 S18M	18	80	18	150
2AKL 200 800 S20M	20	80	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		ap ≤ 0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		ap ≤ 1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
M	stainless steel	ap ≤ 1.5D	130	rote speed (min-1)	610	580	550	620	560	500	410	370
		ap ≤ 0.15D		feed velocity (mm/min)								
		ap ≤ 1D		rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	rote speed (min-1)	690	660	590	650	610	590	490	460
		ap ≤ 0.15D		feed velocity (mm/min)								
		ap ≤ 1D	140	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		ap ≤ 0.15D		feed velocity (mm/min)	850	820	750	750	700	680	610	560
		ap ≤ 1D		rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
		ap ≤ 0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460

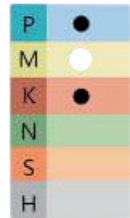
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



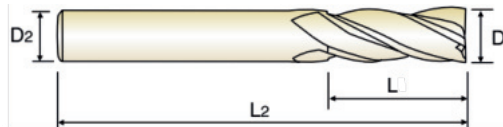
4AKM

ORDINARY STEEL, CAST IRON

Carbide 4 Flutes Square 45° Helix End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D mm	L mm	D2 mm	L2 mm
4AKM 010 030 S04C	1	3	4	50
4AKM 015 050 S04C	1.5	5	4	50
4AKM 020 060 S04C	2	6	4	50
4AKM 025 080 S04C	2.5	8	4	50
4AKM 030 090 S03C	3	9	3	50
4AKM 030 090 S04C	3	9	4	50
4AKM 035 110 S04C	3.5	11	4	50
4AKM 040 100 S04C	4	10	4	50
4AKM 050 130 S05C	5	13	5	50
4AKM 050 130 S06C	5	13	6	50
4AKM 060 150 S06C	6	15	6	50
4AKM 070 200 S08D	7	20	8	60
4AKM 080 200 S08D	8	20	8	60
4AKM 080 240 S08D	8	24	8	60
4AKM 090 250 S10E	9	25	10	75
4AKM 100 250 S10E	10	25	10	75
4AKM 100 300 S10E	10	30	10	75
4AKM 110 300 S12E	11	30	12	75
4AKM 120 300 S12E	12	30	12	75
4AKM 120 350 S12E	12	35	12	75
4AKM 130 450 S14H	13	45	14	100
4AKM 140 440 S14H	14	45	14	100
4AKM 150 450 S16H	15	45	16	100
4AKM 160 450 S16H	16	45	16	100
4AKM 180 450 S18H	18	45	18	100
4AKM 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	180	rote speed (min-1) feed velocity (mm/min)	19110 1070	14330 1030	9550 920	7170 930	5730 920	4780 860	3580 860	2870 860
		ap ≤ 0.15D										
		ap ≤ 1D	130	rote speed (min-1) feed velocity (mm/min)	13800 610	10350 580	6900 550	5180 620	4140 560	3450 500	2590 410	2070 370
		ap ≤ 0.12D										
M	stainless steel	ap ≤ 1.5D	130	rote speed (min-1) feed velocity (mm/min)	13800 690	10350 660	6900 590	5180 650	4140 610	3450 590	2590 490	2070 460
		ap ≤ 0.15D										
		ap ≤ 1D	160	rote speed (min-1) feed velocity (mm/min)	16990 850	12740 820	8490 820	6370 750	5100 700	4250 680	3190 610	2550 560
		ap ≤ 0.12D	140	rote speed (min-1) feed velocity (mm/min)	14860 650	11150 670	7430 670	5570 620	4460 580	3720 560	2790 500	2230 460
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	rote speed (min-1) feed velocity (mm/min)	16990 850	12740 820	8490 820	6370 750	5100 700	4250 680	3190 610	2550 560
		ap ≤ 0.15D										
		ap ≤ 1D	140	rote speed (min-1) feed velocity (mm/min)	14860 650	11150 670	7430 670	5570 620	4460 580	3720 560	2790 500	2230 460
		ap ≤ 0.12D										

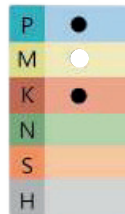
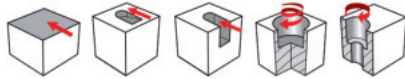
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



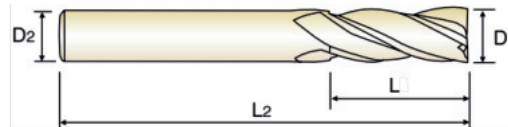
4AKE

ORDINARY STEEL, CAST IRON

Carbide 4 Flutes Square 45° Helix End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4AKE 010 030 S04C	1	3	4	50
4AKE 015 050 S04C	1.5	5	4	50
4AKE 020 060 S04C	2	6	4	50
4AKE 025 080 S04C	2.5	8	4	50
4AKE 030 090 S03C	3	9	3	50
4AKE 030 090 S04C	3	9	4	50
4AKE 035 110 S04C	3.5	11	4	50
4AKE 040 100 S04C	4	10	4	50
4AKE 050 130 S05C	5	13	5	50
4AKE 050 130 S06C	5	13	6	50
4AKE 060 150 S06C	6	15	6	50
4AKE 070 200 S08D	7	20	8	60
4AKE 080 200 S08D	8	20	8	60
4AKE 080 240 S08D	8	24	8	60
4AKE 090 250 S10E	9	25	10	75
4AKE 100 250 S10E	10	25	10	75
4AKE 100 300 S10E	10	30	10	75
4AKE 110 300 S12E	11	30	12	75
4AKE 120 300 S12E	12	30	12	75
4AKE 120 350 S12E	12	35	12	75
4AKE 130 450 S14H	13	45	14	100
4AKE 140 440 S14H	14	45	14	100
4AKE 150 450 S16H	15	45	16	100
4AKE 160 450 S16H	16	45	16	100
4AKE 180 450 S18H	18	45	18	100
4AKE 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	180	rote speed (min-1) feed velocity (mm/min)	19110	14330	9550	7170	5730	4780	3580	2870
		ap ≤ 0.15D			1070	1030	920	930	920	860	860	860
		ap ≤ 1D	130	rote speed (min-1) feed velocity (mm/min)	13800	10350	6900	5180	4140	3450	2590	2070
		ap ≤ 0.12D			610	580	550	620	560	500	410	370
M	stainless steel	ap ≤ 1.5D	130	rote speed (min-1) feed velocity (mm/min)	13800	10350	6900	5180	4140	3450	2590	2070
		ap ≤ 0.15D			690	660	590	650	610	590	490	460
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	rote speed (min-1) feed velocity (mm/min)	16990	12740	8490	6370	5100	4250	3190	2550
		ap ≤ 0.15D			850	820	820	750	700	680	610	560
		ap ≤ 1D	140	rote speed (min-1) feed velocity (mm/min)	14860	11150	7430	5570	4460	3720	2790	2230
		ap ≤ 0.12D			650	670	670	620	580	560	500	460

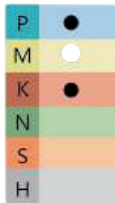
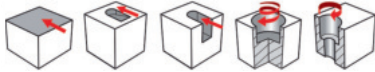
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



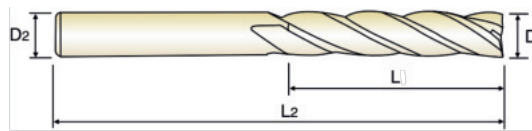
4AKL

ORDINARY STEEL, CAST IRON

Carbide 4 Flutes Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
4AKL 030 120 S03E	3	12	3	75
4AKL 035 110 S04E	3.5	11	4	75
4AKL 040 160 S04E	4	16	4	75
4AKL 050 180 S05E	5	18	5	75
4AKL 060 240 S06E	6	24	6	75
4AKL 080 250 S08E	8	25	8	75
4AKL 030 120 S03H	3	12	3	100
4AKL 040 200 S04H	4	20	4	100
4AKL 050 300 S05H	5	30	5	100
4AKL 060 300 S06H	6	30	6	100
4AKL 080 350 S08H	8	35	8	100
4AKL 100 400 S10H	10	40	10	100
4AKL 100 500 S10H	10	50	10	100
4AKL 120 450 S12H	12	45	12	100
4AKL 120 500 S12H	12	50	12	100
4AKL 060 450 S06M	6	45	6	150
4AKL 080 500 S08M	8	50	8	150
4AKL 100 550 S10M	10	55	10	150
4AKL 120 550 S12M	12	55	12	150
4AKL 140 700 S14M	14	70	14	150
4AKL 160 800 S16M	16	80	16	150
4AKL 180 800 S18M	18	80	18	150
4AKL 200 800 S20M	20	80	20	150
4AKL 060 500 S06R	6	50	6	200
4AKL 080 600 S08R	8	60	8	200
4AKL 100 650 S10R	10	65	10	200
4AKL 120 700 S12R	12	70	12	200
4AKL 140 800 S14R	14	80	14	200
4AKL 160 850 S16R	16	85	16	200
4AKL 200 900 S20R	20	90	20	200

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		ap ≤ 0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		ap ≤ 1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
M	stainless steel	ap ≤ 1.5D	130	rote speed (min-1)	610	580	550	620	560	500	410	370
		ap ≤ 0.15D		feed velocity (mm/min)								
					13800	10350	6900	5180	4140	3450	2590	2070
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	rote speed (min-1)	690	660	590	650	610	590	490	460
		ap ≤ 0.15D		feed velocity (mm/min)								
		ap ≤ 1D	140	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		ap ≤ 0.12D		feed velocity (mm/min)	850	820	820	750	700	680	610	560
					14860	11150	7430	5570	4460	3720	2790	2230
					650	670	670	620	580	560	500	460

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



SS-2AKB

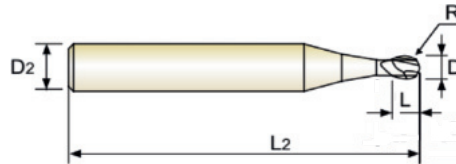
ORDINARY STEEL, CAST IRON

Micro Diameter Ball Nose End Mill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)
R	R
Tol	±0.015



Order Number	D	R	D2	L2
	mm	mm	mm	mm
SS-2AKB 003 006 S04C	0.3	0.15	4	50
SS-2AKB 004 008 S04C	0.4	0.2	4	50
SS-2AKB 005 010 S04C	0.5	0.25	4	50
SS-2AKB 007 014 S04C	0.7	0.35	4	50
SS-2AKB 008 016 S04C	0.8	0.4	4	50
SS-2AKB 009 018 S04C	0.9	0.45	4	50

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					0.6	0.8	1.0	1.2	1.6	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.02D	80	rote speed (min-1)	42460	15920	25480	21230	6370	12740
		ap≤0.02D		feed velocity (mm/min)	1400	1960	1430	1490	1620	1400
		ap≤0.01D	70	rote speed (min-1)	37150	10350	22290	5970	4780	11150
M	stainless steel	ap≤0.02D		feed velocity (mm/min)	1190	1180	1160	1160	1050	1160
		ap≤0.02D	70	rote speed (min-1)	34500	35030	20700	17520	11680	10350
		ap≤0.02D		feed velocity (mm/min)	1170	2450	1160	2630	2570	1140
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.02D	80	rote speed (min-1)	42460	31850	25480	17520	11680	12740
		ap≤0.02D		feed velocity (mm/min)	1440	1460	1430	2630	2570	1400
		ap≤0.02D	70	rote speed (min-1)	37150	27870	22290	17520	11680	11150
		ap≤0.02D		feed velocity (mm/min)	1190	1170	1160	2450	2450	1160

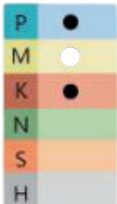
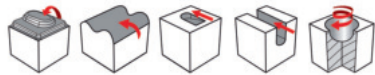
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



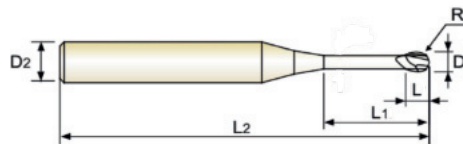
S-2AKB

ORDINARY STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2AKB 002 010 S04C	0.2 x R0.1	0.2	1	4	50
S-2AKB 002 020 S04C	0.2 x R0.1	0.2	2	4	50
S-2AKB 003 010 S04C	0.3 x R0.15	0.3	1	4	50
S-2AKB 003 020 S04C	0.3 x R0.15	0.3	2	4	50
S-2AKB 003 030 S04C	0.3 x R0.15	0.3	3	4	50
S-2AKB 004 0200 S04C	0.4 x R0.2	0.4	2	4	50
S-2AKB 004 030 S04C	0.4 x R0.2	0.4	3	4	50
S-2AKB 004 040 S04C	0.4 x R0.2	0.4	4	4	50
S-2AKB 004 060 S04C	0.4 x R0.2	0.4	6	4	50
S-2AKB 005 020 S04C	0.5 x R0.25	0.5	2	4	50
S-2AKB 005 030 S04C	0.5 x R0.25	0.5	3	4	50
S-2AKB 005 040 S04C	0.5 x R0.25	0.5	4	4	50
S-2AKB 005 050 S04C	0.5 x R0.25	0.5	5	4	50
S-2AKB 005 060 S04C	0.5 x R0.25	0.5	6	4	50
S-2AKB 005 080 S04C	0.5 x R0.25	0.5	8	4	50
S-2AKB 006 020 S04C	0.6 x R0.3	0.6	2	4	50
S-2AKB 006 030 S04C	0.6 x R0.3	0.6	3	4	50
S-2AKB 006 040 S04C	0.6 x R0.3	0.6	4	4	50
S-2AKB 006 050 S04C	0.6 x R0.3	0.6	5	4	50
S-2AKB 006 060 S04C	0.6 x R0.3	0.6	6	4	50
S-2AKB 006 080 S04C	0.6 x R0.3	0.6	8	4	50

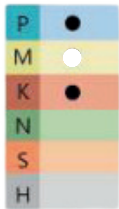
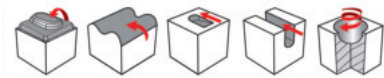
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



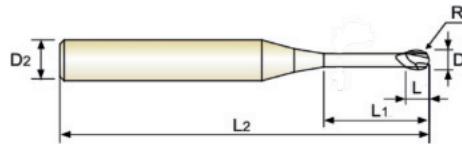
S-2AKB

ORDINARY STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2AKB 008 030 S04C	0.8 x R0.4	0.8	3	4	50
S-2AKB 008 040 S04C	0.8 x R0.4	0.8	4	4	50
S-2AKB 008 050 S04C	0.8 x R0.4	0.8	5	4	50
S-2AKB 008 060 S04C	0.8 x R0.4	0.8	6	4	50
S-2AKB 008 080 S04C	0.8 x R0.4	0.8	8	4	50
S-2AKB 008 100 S04C	0.8 x R0.4	0.8	10	4	50
S-2AKB 010 040 S04C	1 x R0.5	1	4	4	50
S-2AKB 010 060 S04C	1 x R0.5	1	6	4	50
S-2AKB 010 080 S04C	1 x R0.5	1	8	4	50
S-2AKB 010 100 S04C	1 x R0.5	1	10	4	50
S-2AKB 010 120 S04C	1 x R0.5	1	12	4	50
S-2AKB 010 150 S04C	1 x R0.5	1	14	4	50
S-2AKB 010 160 S04C	1 x R0.5	1	16	4	50
S-2AKB 010 200 S04C	1 x R0.5	1	20	4	50
S-2AKB 015 080 S04C	1.5 x R0.75	1.5	6	4	50
S-2AKB 015 060 S04C	1.5 x R0.75	1.5	8	4	50
S-2AKB 015 100 S04C	1.5 x R0.75	1.5	10	4	50
S-2AKB 015 120 S04C	1.5 x R0.75	1.5	12	4	50
S-2AKB 015 140 S04C	1.5 x R0.75	1.5	14	4	50
S-2AKB 015 160 S04C	1.5 x R0.75	1.5	16	4	50
S-2AKB 015 200 S04C	1.5 x R0.75	1.5	20	4	50

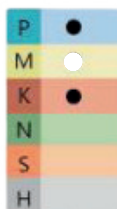
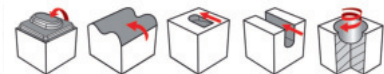
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



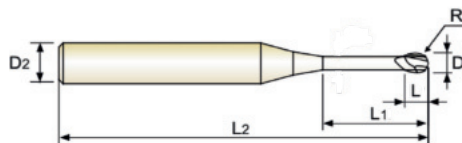
S-2AKB

ORDINARY STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2AKB 020 080 S04C	2 x R1	2	8	4	50
S-2AKB 020 100 S04C	2 x R1	2	10	4	50
S-2AKB 020 120 S04C	2 x R1	2	12	4	50
S-2AKB 020 140 S04C	2 x R1	2	14	4	50
S-2AKB 020 160 S04C	2 x R1	2	16	4	50
S-2AKB 020 200 S04C	2 x R1	2	20	4	50
S-2AKB 030 120 S04C	3 x R1.5	3	12	4	50
S-2AKB 030 160 S04C	3 x R1.5	3	16	4	50
S-2AKB 030 200 S04C	3 x R1.5	3	20	4	50
S-2AKB 030 120 S04C	3 x R1.5	3	12	6	60
S-2AKB 030 160 S06D	3 x R1.5	3	16	6	60
S-2AKB 030 200 S06D	3 x R1.5	3	20	6	60
S-2AKB 030 260 S06E	3 x R1.5	3	26	6	75
S-2AKB 030 300 S06E	3 x R1.5	3	30	6	75
S-2AKB 040 160 S06D	4 x R2	4	16	6	60
S-2AKB 040 200 S06D	4 x R2	4	20	6	60
S-2AKB 040 260 S06E	4 x R2	4	26	6	75
S-2AKB 040 300 S06E	4 x R2	4	30	6	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					0.6	0.8	1.0	1.2	1.6	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 0.02D	80	转速 rote speed (min-1)	42460	15920	25480	21230	6370	12740
		ap ≤ 0.02D		进给转速 feed velocity (mm/min)	1400	1960	1430	1490	1620	1400
		ap ≤ 0.01D	70	转速 rote speed (min-1)	37150	10350	22290	5970	4780	11150
		ap ≤ 0.01D		进给转速 feed velocity (mm/min)	1190	1180	1160	1160	1050	1160
M	stainless steel	ap ≤ 0.02D	70	转速 rote speed (min-1)	34500	35030	20700	17520	11680	10350
		ap ≤ 0.02D		进给转速 feed velocity (mm/min)	1170	2450	1160	2630	2570	1140
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.02D	80	转速 rote speed (min-1)	42460	31850	25480	17520	11680	12740
		ap ≤ 0.02D		进给转速 feed velocity (mm/min)	1440	1460	1430	2630	2570	1400
		ap ≤ 0.02D	70	转速 rote speed (min-1)	37150	27870	22290	17520	11680	11150
		ap ≤ 0.02D		进给转速 feed velocity (mm/min)	1190	1170	1160	2450	2450	1160

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2AKB

ORDINARY STEEL, CAST IRON

Carbide Long Neck Ball Mill



P	●
M	○
K	●
N	○
S	○
H	○

Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
To1	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2AKB 010 020 S04C	1	0.5	4	50
2AKB 015 030 S04C	1.5	0.75	4	50
2AKB 020 040 S04C	2	1	4	50
2AKB 025 050 S04C	2.5	1.25	4	50
2AKB 030 060 S03C	3	1.5	3	50
2AKB 030 060 S04C	3	1.5	4	50
2AKB 035 070 S04C	3.5	1.75	4	50
2AKB 040 080 S04C	4	2	4	50
2AKB 050 100 S05C	5	2.5	5	50
2AKB 050 100 S06C	5	2.5	6	50
2AKB 060 120 S06C	6	3	6	50
2AKB 070 140 S08D	7	3.5	8	60
2AKB 080 160 S08D	8	4	8	60
2AKB 100 200 S10E	10	5	10	75
2AKB 120 240 S12E	12	6	12	75
2AKB 140 280 S14H	14	7	14	100
2AKB 160 320 S16H	16	8	16	100
2AKB 180 360 S18H	18	9	18	100
2AKB 200 400 S20H	20	10	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)									
					4	5	6	7	8	9	10	11	12	
														
P	(<45HRC)	ap≤0.2D	160	rote speed (min-1)	12740	10190	8490	7280	6370	5660	5100	4630	4250	
	Carbon steel alloy steel	ap≤0.3D		feed velocity (mm/min)	1020	1020	1020	1020	1020	1020	1020	1020	1020	
	(50HRC)	ap≤0.15D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190	
	Alloy Steel	ap≤0.15D		feed velocity (mm/min)	610	640	660	630	620	610	610	610	610	
M	stainless steel	ap≤0.2D	110	rote speed (min-1)	8760	7010	5840	5010	4380	3890	3500	3190	2920	
		ap≤0.2D		feed velocity (mm/min)	610	630	640	630	630	620	630	640	640	
K	(<32HRC)	ap≤0.2D	140	rote speed (min-1)	11150	8920	7430	6370	5570	4950	4460	4050	3720	
	Gry cast Iron, nodular cast iron	ap≤0.2D		feed velocity (mm/min)	780	800	820	800	800	790	800	810	820	
	(35-45HRC)	ap≤0.1D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190	
	High alloy cast iron	ap≤0.1D		feed velocity (mm/min)	610	640	660	660	670	650	650	660	670	

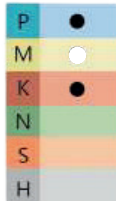
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



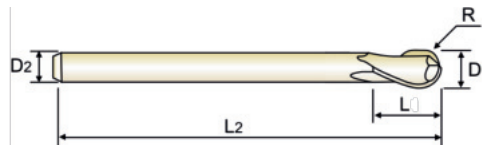
2AKB

ORDINARY STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)			
R	R ≤ 1.5	1.5 < R < 3	R ≥ 3	
Tol	0	0	0	
	-0.015	-0.015	-0.02	



Order Number	D mm	R mm	D2 mm	L2 mm
2AKB 030 060 S03E	3	1.5	3	75
2AKB 040 080 S04E	4	2	4	75
2AKB 050 100 S05E	5	2.5	5	75
2AKB 060 120 S05E	6	3	6	75
2AKB 080 160 S08E	8	4	8	75
2AKB 030 060 S03H	3	1.5	3	100
2AKB 040 080 S04H	4	2	4	100
2AKB 050 100 S05H	5	2.5	5	100
2AKB 060 120 S06H	6	3	6	100
2AKB 080 160 S08H	8	4	8	100
2AKB 100 200 S10H	10	5	10	100
2AKB 120 240 S12H	12	6	12	100
2AKB 060 120 S06M	6	3	6	150
2AKB 080 160 S08M	8	4	8	150
2AKB 100 200 S10M	10	5	10	150
2AKB 120 240 S12M	12	6	12	150
2AKB 140 280 S14M	14	7	14	150
2AKB 160 320 S16M	16	8	16	150
2AKB 180 360 S18M	18	9	18	150
2AKB 200 400 S20M	20	10	20	150
2AKB 060 120 S06R	6	3	6	200
2AKB 080 160 S08R	8	4	8	200
2AKB 100 200 S10R	10	5	10	200
2AKB 120 240 S12R	12	6	12	200
2AKB 160 320 S16R	16	8	16	200

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	Tool Diameter (mm)									
				4	5	6	7	8	9	10	11	12	
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 0.2D	160	rote speed (min-1)	12740	10190	8490	7280	6370	5660	5100	4630	4250
		ap ≤ 0.3D	120	feed velocity (mm/min)	1020	1020	1020	1020	1020	1020	1020	1020	1020
M	stainless steel	ap ≤ 0.15D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190
		ap ≤ 0.15D	120	feed velocity (mm/min)	610	640	660	630	620	610	610	610	610
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.2D	110	rote speed (min-1)	8760	7010	5840	5010	4380	3890	3500	3190	2920
		ap ≤ 0.2D	110	feed velocity (mm/min)	610	630	640	630	630	620	630	640	640
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.1D	140	rote speed (min-1)	11150	8920	7430	6370	5570	4950	4460	4050	3720
		ap ≤ 0.1D	120	feed velocity (mm/min)	780	800	820	800	800	790	800	810	820
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.1D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190
		ap ≤ 0.1D	120	feed velocity (mm/min)	610	640	660	660	670	650	650	660	670

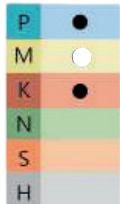
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



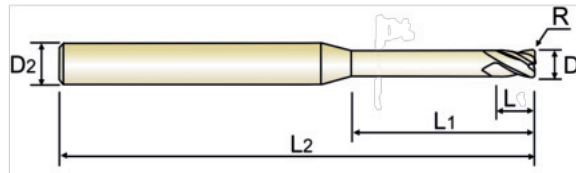
S-2&4AKR

ORDINARY STEEL, CAST IRON

Carbide 2 & 4 Flutes Long Neck Corner Radius End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2&4AKR 010 001 040 S04C	1 x R0.1	1.5	4	4	50
S-2&4AKR 010 001 060 S04C	1 x R0.1	1.5	6	4	50
S-2&4AKR 010 001 080 S04C	1 x R0.1	1.5	8	4	50
S-2&4AKR 010 002 040 S04C	1 x R0.2	1.5	4	4	50
S-2&4AKR 010 002 060 S04C	1 x R0.2	1.5	6	4	50
S-2&4AKR 010 002 080 S04C	1 x R0.2	1.5	8	4	50
S-2&4AKR 010 002 100 S04C	1 x R0.2	1.5	10	4	50
S-2&4AKR 015 001 060 S04C	1.5 x R0.1	2.3	6	4	50
S-2&4AKR 015 001 080 S04C	1.5 x R0.1	2.3	8	4	50
S-2&4AKR 015 001 100 S04C	1.5 x R0.1	2.3	10	4	50
S-2&4AKR 015 002 060 S04C	1.5 x R0.2	2.3	6	4	50
S-2&4AKR 015 002 080 S04C	1.5 x R0.2	2.3	8	4	50
S-2&4AKR 015 002 100 S04C	1.5 x R0.2	2.3	10	4	50
S-2&4AKR 015 002 120 S04C	1.5 x R0.2	2.3	12	4	50
S-2&4AKR 020 001 080 S04C	2 x R0.1	3	8	4	50
S-2&4AKR 020 001 100 S04C	2 x R0.1	3	10	4	50
S-2&4AKR 020 001 120 S04C	2 x R0.1	3	12	4	50
S-2&4AKR 020 001 160 S04C	2 x R0.1	3	16	4	50
S-2&4AKR 020 002 080 S04C	2 x R0.2	3	8	4	50
S-2&4AKR 020 002 100 S04C	2 x R0.2	3	10	4	50
S-2&4AKR 020 002 120 S04C	2 x R0.2	3	12	4	50
S-2&4AKR 020 002 160 S04C	2 x R0.2	3	16	4	50

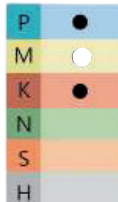
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



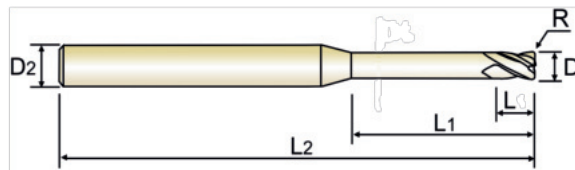
S-2&4AKR

ORDINARY STEEL, CAST IRON

Carbide 2 & 4 Flutes Long Neck Corner Radius End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2&4AKR 030 002 160 S04C	3 x R0.2	4.5	16	4	50
S-2&4AKR 030 002 200 S04C	3 x R0.2	4.5	20	4	50
S-2&4AKR 030 002 160 S06D	3 x R0.2	4.5	16	6	60
S-2&4AKR 030 002 200 S06D	3 x R0.2	4.5	20	6	60
S-2&4AKR 030 005 120 S04C	3 x R0.5	4.5	12	4	50
S-2&4AKR 030 005 160 S04C	3 x R0.5	4.5	16	4	50
S-2&4AKR 030 005 200 S04C	3 x R0.5	4.5	20	4	50
S-2&4AKR 030 005 160 S06D	3 x R0.5	4.5	16	6	60
S-2&4AKR 030 005 200 S06D	3 x R0.5	4.5	20	6	60
S-2&4AKR 030 005 260 S06E	3 x R0.5	4.5	26	6	75
S-2&4AKR 030 005 300 S06E	3 x R0.5	4.5	30	6	75
S-2&4AKR 040 002 160 S06D	4 x R0.2	6	16	6	60
S-2&4AKR 040 002 200 S06D	4 x R0.2	6	20	6	60
S-2&4AKR 040 005 160 S06D	4 x R0.5	6	16	6	60
S-2&4AKR 040 005 200 S06D	4 x R0.5	6	20	6	60
S-2&4AKR 040 005 260 S06E	4 x R0.5	6	26	6	75
S-2&4AKR 040 005 300 S06E	4 x R0.5	6	30	6	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 0.5D	90	rote speed (min-1) feed velocity (mm/min)	19900	31850	28600	23890	13270	9950	8850	7960
		ap ≤ 0.05D			400	1150	1150	1100	370	400	410	400
		ap ≤ 0.5D	70	rote speed (min-1) feed velocity (mm/min)	15920	24770	22290	18580	10620	7960	7080	6370
		ap ≤ 0.05D			250	840	850	820	250	290	300	290
M	stainless steel	ap ≤ 0.5D	60	rote speed (min-1) feed velocity (mm/min)	13930	21230	19110	15920	9290	6970	6190	5570
		ap ≤ 0.03D			250	760	760	730	240	260	270	270
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.5D	90	rote speed (min-1) feed velocity (mm/min)	15920	31850	28600	23890	10620	9100	7960	6370
		ap ≤ 0.05D			320	1150	1150	1100	300	310	320	320
		ap ≤ 0.5D	80	rote speed (min-1) feed velocity (mm/min)	11940	28310	25480	21230	7960	6800	5970	4780
		ap ≤ 0.05D			210	850	820	760	210	220	230	230

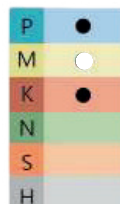
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



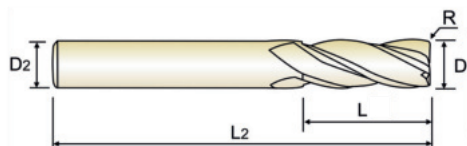
4AKR

ORDINARY STEEL, CAST IRON

Carbide Corner Radius End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
To1	0	0
	-0.015	-0.02



Order Number	D	R	L	D2	L2
	mm	mm	mm	mm	mm
4AKR 010 002 S04C	1	0.2	3	4	50
4AKR 015 002 S04C	1.5	0.2	5	4	50
4AKR 020 002 S04C	2	0.2	6	4	50
4AKR 020 005 S04C	2	0.5	6	4	50
4AKR 025 002 S04C	2.5	0.2	8	4	50
4AKR 025 005 S04C	2.5	0.5	8	4	50
4AKR 030 002 S03C	3	0.2	9	3	50
4AKR 030 002 S04C	3	0.2	9	4	50
4AKR 030 005 S03C	3	0.5	9	3	50
4AKR 030 005 S04C	3	0.5	9	4	50
4AKR 035 005 S04C	3.5	0.5	11	4	50
4AKR 040 002 S04C	4	0.2	10	4	50
4AKR 040 005 S04C	4	0.5	10	4	50
4AKR 050 005 S05C	5	0.5	13	5	50
4AKR 050 005 S06C	5	0.5	13	6	50
4AKR 050 010 S05C	5	1	13	5	50
4AKR 050 010 S06C	5	1	13	6	50
4AKR 060 002 S06C	6	0.2	15	6	50
4AKR 060 003 S06C	6	0.3	15	6	50
4AKR 060 050 S06C	6	0.5	15	6	50
4AKR 060 010 S06C	6	1	15	6	50
4AKR 080 005 S08D	8	0.5	20	8	60
4AKR 080 010 S08D	8	1	20	8	60
4AKR 080 020 S08D	8	2	20	8	60
4AKR 100 005 S10E	10	0.5	25	10	75
4AKR 100 010 S10E	10	1	25	10	75
4AKR 100 020 S10E	10	2	25	10	75
4AKR 100 030 S10E	10	3	25	10	75
4AKR 120 005 S12E	12	0.5	30	12	75
4AKR 120 010 S12E	12	1	30	12	75
4AKR 120 020 S12E	12	2	30	12	75
4AKR 120 030 S12E	12	3	30	12	75

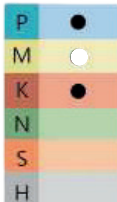
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Feed (mm/min)							
P	Carbon steel alloy steel (S45C)	aps1.5D	100	rate speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		aps0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		aps1D	130	rate speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		aps0.12D		feed velocity (mm/min)	610	580	550	820	560	500	410	370
M	stainless steel	aps1.5D	130	rate speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		aps0.15D		feed velocity (mm/min)	690	660	590	650	590	590	490	460
		aps1.5D	100	rate speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560
K	Gray cast iron, nodular cast iron (HT-40/HTC)	aps1D	140	rate speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
		aps0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460
		aps1.5D	100	rate speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560



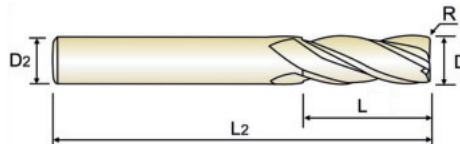
4AKR

ORDINARY STEEL, CAST IRON

Carbide Corner Radius End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D	R	L	D2	L2
	mm	mm	mm	mm	mm
4AKR 030 005 S03E	3	0.5	9	3	75
4AKR 040 005 S04E	4	0.5	10	4	75
4AKR 050 005 S05E	5	0.5	13	5	75
4AKR 060 006 S06E	6	0.5	15	6	75
4AKR 080 005 S08E	8	0.5	20	8	75
4AKR 040 005 S04H	4	0.5	9	4	100
4AKR 040 010 S04H	4	1	9	4	100
4AKR 050 005 S05H	5	0.5	13	5	100
4AKR 050 010 S04H	5	1	13	5	100
4AKR 060 005 S06H	6	0.5	15	6	100
4AKR 060 010 S06H	6	1	15	6	100
4AKR 080 005 S08H	8	0.5	20	8	100
4AKR 080 010 S08H	8	1	20	8	100
4AKR 100 005 S10H	10	0.5	25	10	100
4AKR 100 010 S10H	10	1	25	10	100
4AKR 120 005 S12H	12	0.5	30	12	100
4AKR 120 010 S12H	12	1	30	12	100
4AKR 080 005 S08M	8	0.5	20	8	100
4AKR 080 010 S08M	8	1	20	8	150
4AKR 100 005 S10M	10	0.5	25	10	150
4AKR 100 010 S10M	10	1	25	10	150
4AKR 120 005 S12M	12	0.5	30	12	150
4AKR 120 010 S12M	12	1	30	12	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)									
					3	4	6	8	10	12	16	20		
P	Carbon steel alloy steel (50HRC) Alloy Steel	aps1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870		
		aps0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860		
		aps1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070		
		aps0.12D		feed velocity (mm/min)	610	580	550	620	560	500	410	370		
M	stainless steel	aps1.5D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070		
		aps0.15D		feed velocity (mm/min)	690	660	590	650	610	590	490	460		
		aps1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550		
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560		
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	aps1.5D	140	rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230		
		aps0.15D		feed velocity (mm/min)	650	670	670	620	580	560	500	460		
		aps1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870		
		aps0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860		

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.

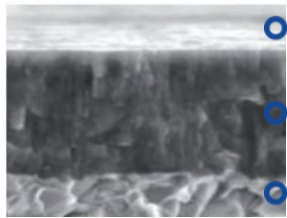


SOLID AND MILLS

HRC60

NEW COATING

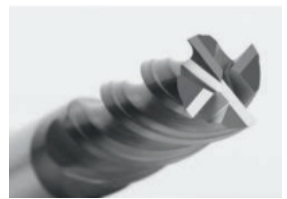
Newly-developed NACO4 coating with improved wear resistance. The smoothing treatment of the coating layer reduces the cutting resistance and improves chip discharge significantly. This next-generation coating offers longer tool life and higher efficiency in machining difficult-to-cut materials.



Smoothed Surface

Newly Developed NACO4 Coating

Ultrafine Substrates



Unique surface treatment technology

A good balance of smooth surfaces and sharp edges enables smooth chip evacuation and reduced cutting resistance, increasing machining efficiency and tool life.



DLC COATING



Hardness similar to that of CVD diamond coating achieved with high adhesion strength

ALTIN+TISIN COATING

The coating has good high temperature resistance and low friction coefficient. It is suitable for coating on high-speed steel or carbide drill bits, and is suitable for deep hole drilling and milling.

ALTISIN COATING

The coating has good performance in drilling and milling cast iron or ordinary steel, reducing the phenomenon of sticking. Suitable for coating on HSS or carbide drills; also suitable for deep hole drilling and milling.

ALTIN COATING

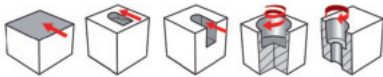
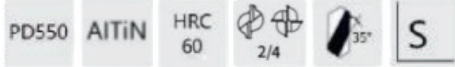
The coating can exert excellent performance on difficult-to-machine materials such as cutting hardness between 45HRC and 50HRC; especially suitable for high-speed cutting.



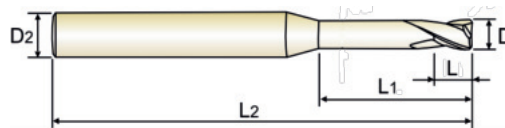
S-2&4 ACE

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 & 4 Flutes Square Long Neck End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ACE 002 010 S04C	0.2	0.3	1	4	50
S-2ACE 002 020 S04C	0.2	0.3	2	4	50
S-2ACE 003 010 S04C	0.3	0.5	1	4	50
S-2ACE 003 020 S04C	0.3	0.5	2	4	50
S-2ACE 003 030 S04C	0.3	0.5	3	4	50
S-2ACE 004 020 S04C	0.4	0.6	2	4	50
S-2ACE 004 030 S04C	0.4	0.6	3	4	50
S-2ACE 004 040 S04C	0.4	0.6	4	4	50
S-2ACE 004 060 S04C	0.4	0.6	6	4	50
S-2ACE 005 020 S04C	0.5	0.7	2	4	50
S-2ACE 005 030 S04C	0.5	0.7	3	4	50
S-2ACE 005 040 S04C	0.5	0.7	4	4	50
S-2ACE 005 050 S04C	0.5	0.7	5	4	50
S-2ACE 005 060 S04C	0.5	0.7	6	4	50
S-2ACE 005 080 S04C	0.5	0.7	8	4	50
S-2ACE 006 020 S04C	0.6	0.9	2	4	50
S-2ACE 006 030 S04C	0.6	0.9	3	4	50
S-2ACE 006 040 S04C	0.6	0.9	4	4	50
S-2ACE 006 050 S04C	0.6	0.9	5	4	50
S-2ACE 006 060 S04C	0.6	0.9	6	4	50
S-2ACE 006 080 S04C	0.6	0.9	8	4	50

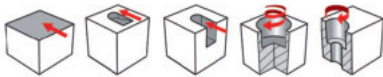
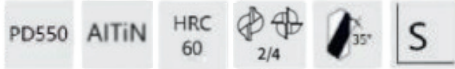
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



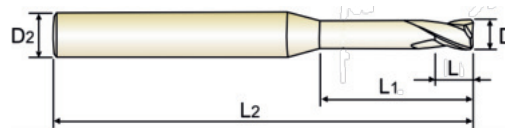
S-2&4ACE

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 & 4 Flutes Square Long Neck End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D mm	L mm	L1 mm	D2 mm	L2 mm
S-2ACE 008 030 S04C	0.8	1.2	3	4	50
S-2ACE 008 040 S04C	0.8	1.2	4	4	50
S-2ACE 008 050 S04C	0.8	1.2	5	4	50
S-2ACE 008 060 S04C	0.8	1.2	6	4	50
S-2ACE 008 080 S04C	0.8	1.2	8	4	50
S-2ACE 008 100 S04C	0.8	1.2	10	4	50
S-2&4ACE 010 050 S04C	1	1.5	5	4	50
S-2&4ACE 010 060 S04C	1	1.5	6	4	50
S-2&4ACE 010 080 S04C	1	1.5	8	4	50
S-2&4ACE 010 100 S04C	1	1.5	10	4	50
S-2&4ACE 010 120 S04C	1	1.5	12	4	50
S-2&4ACE 010 140 S04C	1	1.5	14	4	50
S-2&4ACE 010 160 S04C	1	1.5	16	4	50
S-2&4ACE 010 200 S04C	1	1.5	20	4	50
S-2&4ACE 015 060 S04C	1.5	2.3	6	4	50
S-2&4ACE 015 080 S04C	1.5	2.3	8	4	50
S-2&4ACE 015 100 S04C	1.5	2.3	10	4	50
S-2&4ACE 015 120 S04C	1.5	2.3	12	4	50
S-2&4ACE 015 140 S04C	1.5	2.3	14	4	50
S-2&4ACE 015 160 S04C	1.5	2.3	16	4	50
S-2&4ACE 015 200 S04C	1.5	2.3	20	4	50

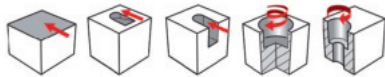
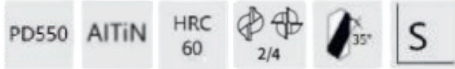
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



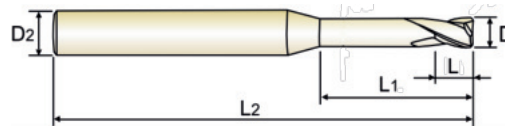
S-2&4ACE

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 & 4 Flutes Square Long Neck End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	L1 mm	D2 mm	L2 mm
S-2&4ACE 020 080 S04C	2	3	8	4	50
S-2&4ACE 020 100 S04C	2	3	10	4	50
S-2&4ACE 020 120 S04C	2	3	12	4	50
S-2&4ACE 020 140 S04C	2	3	14	4	50
S-2&4ACE 020 160 S04C	2	3	16	4	50
S-2&4ACE 020 200 S04C	2	3	20	4	50
S-2&4ACE 025 120 S04C	2.5	3.8	12	4	50
S-2&4ACE 025 160 S04C	2.5	3.8	16	4	50
S-2&4ACE 025 200 S04C	2.5	3.8	20	4	50
S-2&4ACE 030 120 S04C	3	4.5	12	4	50
S-2&4ACE 030 160 S04C	3	4.5	16	4	50
S-2&4ACE 030 200 S04C	3	4.5	20	4	50
S-2&4ACE 040 160 S06D	4	6	16	6	60
S-2&4ACE 040 200 S06D	4	6	20	6	60
S-2&4ACE 040 260 S06E	4	6	26	6	75
S-2&4ACE 040 300 S06E	4	6	30	6	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 0.5D	90	rote speed (min-1)	19900	31850	28600	23890	13270	9950	8850	7960
		ap ≤ 0.05D		feed velocity (mm/min)	400	1150	1150	1100	370	400	410	400
		ap ≤ 0.5D		rote speed (min-1)	15920	24770	22290	18580	10620	7960	7080	6370
M	stainless steel	ap ≤ 0.5D	60	rote speed (min-1)	13930	21230	19110	15920	9290	6970	6190	5570
		ap ≤ 0.03D		feed velocity (mm/min)	250	760	760	730	240	260	270	270
		ap ≤ 0.5D		rote speed (min-1)	15920	31850	28600	23890	10620	9100	7960	6370
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.5D	90	rote speed (min-1)	320	1150	1150	1100	300	310	320	320
		ap ≤ 0.05D		feed velocity (mm/min)	11940	28310	25480	21230	7960	6800	5970	4780
		ap ≤ 0.5D		rote speed (min-1)	210	850	820	760	210	220	230	230

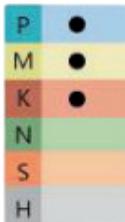
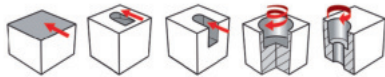
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



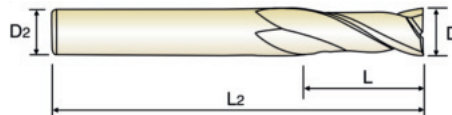
2ACE

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 Flutes Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
2ACE 010 030 S04C	1	3	4	50
2ACE 015 050 S04C	1.5	5	4	50
2ACE 020 060 S04C	2	6	4	50
2ACE 025 080 S04C	2.5	8	4	50
2ACE 030 090 S03C	3	9	3	50
2ACE 030 090 S04C	3	9	4	50
2ACE 035 110 S04C	3.5	11	4	50
2ACE 040 100 S04C	4	10	4	50
2ACE 050 130 S05C	5	13	5	50
2ACE 050 130 S06C	5	13	6	50
2ACE 060 150 S06C	6	15	6	50
2ACE 070 200 S08D	7	20	8	60
2ACE 080 200 S08D	8	20	8	60
2ACE 090 250 S10E	9	25	10	75
2ACE 100 250 S10E	10	25	10	75
2ACE 110 250 S12E	11	25	12	75
2ACE 120 300 S12E	12	30	12	75
2ACE 140 450 S14H	14	45	14	100
2ACE 150 450 S16H	15	45	16	100
2ACE 160 450 S16H	16	45	16	100
2ACE 180 450 S18H	18	45	18	100
2ACE 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	Tool Diameter (mm)							
				3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (<45HRC) Alloy Steel	ap ≤ 1.5D	180	19110	14330	9550	7170	5730	4780	3580	2870
		ap ≤ 0.15D		1070	1030	920	930	920	860	860	860
		ap ≤ 1D	130	13800	10350	6900	5180	4140	3450	2590	2070
M	stainless steel	ap ≤ 1.5D	130	610	580	550	620	560	500	410	370
		ap ≤ 0.15D		13800	10350	6900	5180	4140	3450	2590	2070
		ap ≤ 1D	130	690	660	590	650	610	590	490	460
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	16990	12740	8490	6370	5100	4250	3190	2550
		ap ≤ 0.15D		850	820	820	750	700	680	610	560
		ap ≤ 1D	140	14860	11150	7430	5570	4460	3720	2790	2230
		ap ≤ 0.12D		650	670	670	620	580	560	500	460
		ap ≤ 1D	140	14860	11150	7430	5570	4460	3720	2790	2230
		ap ≤ 0.12D		650	670	670	620	580	560	500	460

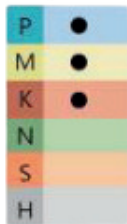
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



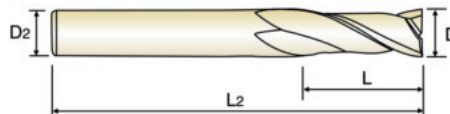
2ACE

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 Flutes Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
2ACL 030 120 S03E	3	12	3	75
2ACL 040 160 S04E	4	16	4	75
2ACL 050 180 S05E	5	18	5	75
2ACL 060 240 S06E	6	24	6	75
2ACL 080 250 S08E	8	25	8	75
2ACL 030 120 S03H	3	12	3	100
2ACL 040 200 S04H	4	20	4	100
2ACL 050 300 S05H	5	30	5	100
2ACL 060 300 S06H	6	30	6	100
2ACL 080 350 S08H	8	35	8	100
2ACL 100 400 S10H	10	40	10	100
2ACL 120 450 S12H	12	45	12	100
2ACL 060 450 S06M	6	45	6	150
2ACL 080 500 S08M	8	50	8	150
2ACL 100 550 S10M	10	55	10	150
2ACL 120 550 S12M	12	55	12	150
2ACL 140 700 S14M	14	70	14	150
2ACL 160 800 S16M	16	80	16	150
2ACL 180 800 S18M	18	80	18	150
2ACL 200 800 S20M	20	80	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	Tool Diameter (mm)								
				3	4	6	8	10	12	16	20	
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		ap≤0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		ap≤1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap≤0.12D		feed velocity (mm/min)	610	580	550	620	560	500	410	370
M	stainless steel	ap≤1.5D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap≤0.15D		feed velocity (mm/min)	690	660	590	650	610	590	490	460
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		ap≤0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560
		ap≤1D	140	rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
		ap≤0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460

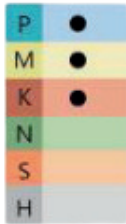
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



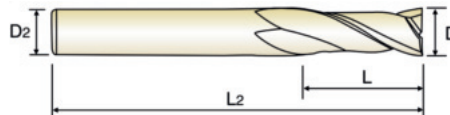
2ACL

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 Flutes Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
2ACL 030 120 S03E	3	12	3	75
2ACL 040 160 S04E	4	16	4	75
2ACL 050 180 S05E	5	18	5	75
2ACL 060 240 S06E	6	24	6	75
2ACL 080 250 S08E	8	25	8	75
2ACL 030 120 S03H	3	12	3	100
2ACL 040 200 S04H	4	20	4	100
2ACL 050 300 S05H	5	30	5	100
2ACL 060 300 S06H	6	30	6	100
2ACL 080 350 S08H	8	35	8	100
2ACL 100 400 S10H	10	40	10	100
2ACL 120 450 S12H	12	45	12	100
2ACL 060 450 S06M	6	45	6	150
2ACL 080 500 S08M	8	50	8	150
2ACL 100 550 S10M	10	55	10	150
2ACL 120 550 S12M	12	55	12	150
2ACL 140 700 S14M	14	70	14	150
2ACL 160 800 S16M	16	80	16	150
2ACL 180 800 S18M	18	80	18	150
2ACL 200 800 S20M	20	80	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	aps1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		aps0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
M	stainless steel	aps1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		aps0.12D		feed velocity (mm/min)	610	580	550	620	560	500	410	370
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	aps1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560
		aps1D	140	rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
		aps0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460

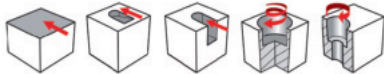
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



4ACM

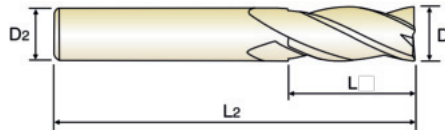
STEEL, STAINLESS STEEL, CAST IRON

Carbide 4 Flutes Square 45° Helix End Mill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
4ACM 010 030 S04C	1	3	4	50
4ACM 015 050 S04C	1.5	5	4	50
4ACM 020 060 S04C	2	6	4	50
4ACM 025 080 S04C	2.5	8	4	50
4ACM 030 090 S03C	3	9	3	50
4ACM 030 090 S04C	3	9	4	50
4ACM 035 110 S04C	3.5	11	4	50
4ACM 040 100 S04C	4	10	4	50
4ACM 050 130 S05C	5	13	5	50
4ACM 050 130 S06C	5	13	6	50
4ACM 060 150 S06C	6	15	6	50
4ACM 070 200 S08D	7	20	8	60
4ACM 080 200 S08D	8	20	8	60
4ACM 080 240 S08D	8	24	8	60
4ACM 090 250 S10E	9	25	10	75
4ACM 100 250 S10E	10	25	10	75
4ACM 100 300 S10E	10	30	10	75
4ACM 110 300 S12E	11	30	12	75
4ACM 120 300 S12E	12	30	12	75
4ACM 120 350 S12E	12	35	12	75
4ACM 130 450 S14H	13	45	14	100
4ACM 140 450 S14H	14	45	14	100
4ACM 150 450 S16H	15	45	16	100
4ACM 160 450 S16H	16	45	16	100
4ACM 180 450 S18H	18	45	18	100
4ACM 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)									
					3	4	6	8	10	12	16	20		
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap≤1.5D	180	rote speed (min-1) feed velocity (mm/min)	19110	14330	9550	7170	5730	4780	3580	2870		
		ap≤0.15D	130	rote speed (min-1) feed velocity (mm/min)	1070	1030	920	930	920	860	860	860		
		ap≤0.12D			13800	10350	6900	5180	4140	3450	2590	2070		
M	stainless steel	ap≤1.5D	130	rote speed (min-1) feed velocity (mm/min)	610	580	550	620	560	500	410	370		
		ap≤0.15D			13800	10350	6900	5180	4140	3450	2590	2070		
					690	660	590	650	610	590	490	460		
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤1.5D	160	rote speed (min-1) feed velocity (mm/min)	16990	12740	8490	6370	5100	4250	3190	2550		
		ap≤0.15D			850	820	820	750	700	680	610	560		
		ap≤0.12D	140	rote speed (min-1) feed velocity (mm/min)	14860	11150	7430	5570	4460	3720	2790	2230		
					650	670	670	620	580	560	500	460		

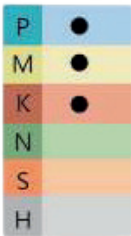
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



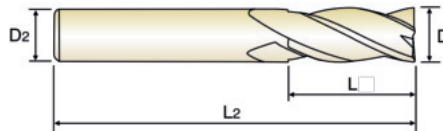
4ACE

STEEL, STAINLESS STEEL, CAST IRON

Carbide 4 Flutes Square 35° Helix End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4ACE 010 030 S04C	1	3	4	50
4ACE 015 050 S04C	1.5	5	4	50
4ACE 020 060 S04C	2	6	4	50
4ACE 025 080 S04C	2.5	8	4	50
4ACE 030 090 S03C	3	9	3	50
4ACE 030 090 S04C	3	9	4	50
4ACE 035 110 S04C	3.5	11	4	50
4ACE 040 100 S04C	4	10	4	50
4ACE 050 130 S05C	5	13	5	50
4ACE 050 130 S06C	5	13	6	50
4ACE 060 150 S06C	6	15	6	50
4ACE 070 200 S08D	7	20	8	60
4ACE 080 200 S08D	8	20	8	60
4ACE 080 240 S08D	8	24	8	60
4ACE 090 250 S10E	9	25	10	75
4ACE 100 250 S10E	10	25	10	75
4ACE 100 300 S10E	10	30	10	75
4ACE 110 300 S12E	11	30	12	75
4ACE 120 300 S12E	12	30	12	75
4ACE 120 350 S12E	12	35	12	75
4ACE 130 450 S14H	13	45	14	100
4ACE 140 450 S14H	14	45	14	100
4ACE 150 450 S16H	15	45	16	100
4ACE 160 450 S16H	16	45	16	100
4ACE 180 450 S18H	18	45	18	100
4ACE 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (<45HRC) Alloy Steel	aps1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		aps0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		aps1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
M	stainless steel	aps0.12D		feed velocity (mm/min)	610	580	550	620	560	500	410	370
		aps1.5D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		aps0.15D		feed velocity (mm/min)	690	660	590	650	610	590	490	460
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	aps1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560
		aps1D	140	rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
		aps0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460

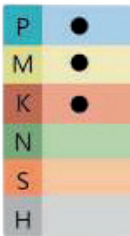
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



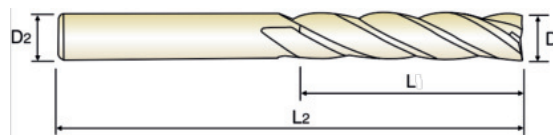
4ACL

STEEL, STAINLESS STEEL, CAST IRON

Carbide 4 Flutes Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
4ACL 030 120 S03E	3	12	3	75
4ACL 035 140 S04E	3.5	14	4	75
4ACL 040 160 S04E	4	16	4	75
4ACL 050 180 S05E	5	18	5	75
4ACL 060 240 S06E	6	24	6	75
4ACL 080 250 S08E	8	25	8	75
4ACL 030 120 S03H	3	12	3	100
4ACL 040 200 S04H	4	20	4	100
4ACL 050 300 S05H	5	30	5	100
4ACL 060 300 S06H	6	30	6	100
4ACL 080 350 S08H	8	35	8	100
4ACL 100 400 S10H	10	40	10	100
4ACL 100 500 S10H	10	50	10	100
4ACL 120 450 S12H	12	45	12	100
4ACL 120 500 S12H	12	50	12	100
4ACL 060 450 S06M	6	45	6	150
4ACL 080 500 S08M	8	50	8	150
4ACL 100 550 S10M	10	55	10	150
4ACL 120 550 S12M	12	55	12	150
4ACL 140 700 S14M	14	70	14	150
4ACL 160 800 S16M	16	80	16	150
4ACL 180 800 S18M	18	80	18	150
4ACL 200 800 S20M	20	80	20	150
4ACL 060 500 S06R	6	50	6	200
4ACL 080 600 S08R	8	60	8	200
4ACL 100 650 S10R	10	65	10	200
4ACL 120 700 S12R	12	70	12	200
4ACL 140 800 S14R	14	80	14	200
4ACL 160 850 S16R	16	85	16	200
4ACL 200 900 S20R	20	90	20	200

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)									
P	Carbon steel alloy steel (<45HRC) Alloy Steel	aps1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870		
		aps0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860		
		aps1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070		
		aps0.12D		feed velocity (mm/min)	610	580	550	620	560	500	410	370		
M	stainless steel	aps1.5D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070		
		aps0.15D		feed velocity (mm/min)	690	660	590	650	610	590	490	460		
		aps1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550		
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560		
K	Gry cast iron, modular cast iron (35-45HRC) High alloy cast iron	aps1D	140	rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230		
		aps0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460		
		aps1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550		
		aps0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560		

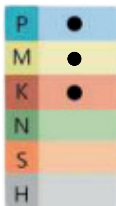
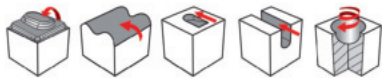
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



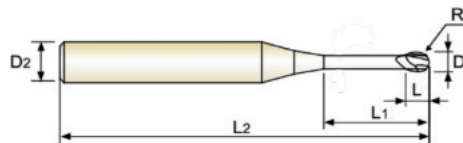
S-2ACB

STEEL, STAINLESS STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ACB 002 010 S04C	0.2 x R0.1	0.2	1	4	50
S-2ACB 002 020 S04C	0.2 x R0.1	0.2	2	4	50
S-2ACB 003 010 S04C	0.3 x R0.15	0.3	1	4	50
S-2ACB 003 020 S04C	0.3 x R0.15	0.3	2	4	50
S-2ACB 003 030 S04C	0.3 x R0.15	0.3	3	4	50
S-2ACB 004 0200 S04C	0.4 x R0.2	0.4	2	4	50
S-2ACB 004 030 S04C	0.4 x R0.2	0.4	3	4	50
S-2ACB 004 040 S04C	0.4 x R0.2	0.4	4	4	50
S-2ACB 004 060 S04C	0.4 x R0.2	0.4	6	4	50
S-2ACB 005 020 S04C	0.5 x R0.25	0.5	2	4	50
S-2ACB 005 030 S04C	0.5 x R0.25	0.5	3	4	50
S-2ACB 005 040 S04C	0.5 x R0.25	0.5	4	4	50
S-2ACB 005 050 S04C	0.5 x R0.25	0.5	5	4	50
S-2ACB 005 060 S04C	0.5 x R0.25	0.5	6	4	50
S-2ACB 005 080 S04C	0.5 x R0.25	0.5	8	4	50
S-2ACB 006 020 S04C	0.6 x R0.3	0.6	2	4	50
S-2ACB 006 030 S04C	0.6 x R0.3	0.6	3	4	50
S-2ACB 006 040 S04C	0.6 x R0.3	0.6	4	4	50
S-2ACB 006 050 S04C	0.6 x R0.3	0.6	5	4	50
S-2ACB 006 060 S04C	0.6 x R0.3	0.6	6	4	50
S-2ACB 006 080 S04C	0.6 x R0.3	0.6	8	4	50

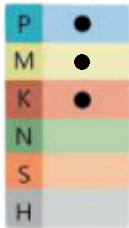
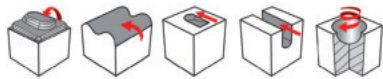
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



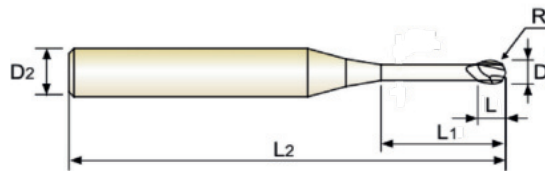
S-2ACB

STEEL, STAINLESS STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)		
R	R ≤ 1.5	1.5 < R < 3	R ≥ 3
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ACB 008 030 S04C	0.8 x R0.4	0.8	3	4	50
S-2ACB 008 040 S04C	0.8 x R0.4	0.8	4	4	50
S-2ACB 008 050 S04C	0.8 x R0.4	0.8	5	4	50
S-2ACB 008 060 S04C	0.8 x R0.4	0.8	6	4	50
S-2ACB 008 080 S04C	0.8 x R0.4	0.8	8	4	50
S-2ACB 008 100 S04C	0.8 x R0.4	0.8	10	4	50
S-2ACB 010 040 S04C	1 x R0.5	1	4	4	50
S-2ACB 010 060 S04C	1 x R0.5	1	6	4	50
S-2ACB 010 080 S04C	1 x R0.5	1	8	4	50
S-2ACB 010 100 S04C	1 x R0.5	1	10	4	50
S-2ACB 010 120 S04C	1 x R0.5	1	12	4	50
S-2ACB 010 150 S04C	1 x R0.5	1	14	4	50
S-2ACB 010 160 S04C	1 x R0.5	1	16	4	50
S-2ACB 010 200 S04C	1 x R0.5	1	20	4	50
S-2ACB 015 060 S04C	1.5 x R0.75	1.5	6	4	50
S-2ACB 015 080 S04C	1.5 x R0.75	1.5	8	4	50
S-2ACB 015 100 S04C	1.5 x R0.75	1.5	10	4	50
S-2ACB 015 120 S04C	1.5 x R0.75	1.5	12	4	50
S-2ACB 015 140 S04C	1.5 x R0.75	1.5	14	4	50
S-2ACB 015 160 S04C	1.5 x R0.75	1.5	16	4	50
S-2ACB 015 200 S04C	1.5 x R0.75	1.5	20	4	50

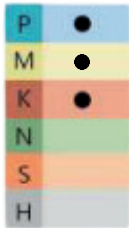
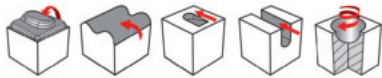
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



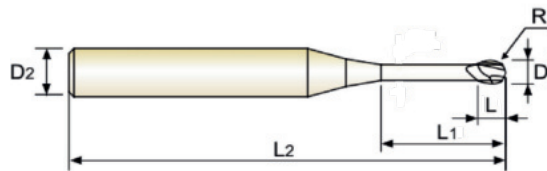
S-2ACB

STEEL, STAINLESS STEEL, CAST IRON

Carbide Long Neck Ball Mill



Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ACB 020 080 S04C	2 x R1	2	8	4	50
S-2ACB 020 100 S04C	2 x R1	2	10	4	50
S-2ACB 020 120 S04C	2 x R1	2	12	4	50
S-2ACB 020 140 S04C	2 x R1	2	14	4	50
S-2ACB 020 160 S04C	2 x R1	2	16	4	50
S-2ACB 020 200 S04C	2 x R1	2	20	4	50
S-2ACB 030 120 S04C	3 x R1.5	3	12	4	50
S-2ACB 030 160 S04C	3 x R1.5	3	16	4	50
S-2ACB 030 200 S04C	3 x R1.5	3	20	4	50
S-2ACB 030 120 S04C	3 x R1.5	3	12	6	60
S-2ACB 030 160 S06D	3 x R1.5	3	16	6	60
S-2ACB 030 200 S06D	3 x R1.5	3	20	6	60
S-2ACB 030 260 S06E	3 x R1.5	3	26	6	75
S-2ACB 030 300 S06E	3 x R1.5	3	30	6	75
S-2ACB 040 160 S06D	4 x R2	4	16	6	60
S-2ACB 040 200 S06D	4 x R2	4	20	6	60
S-2ACB 040 260 S06E	4 x R2	4	26	6	75
S-2ACB 040 300 S06E	4 x R2	4	30	6	75

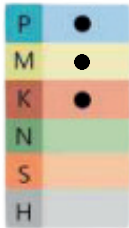
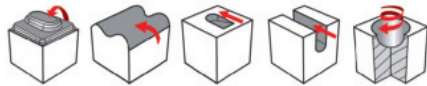
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



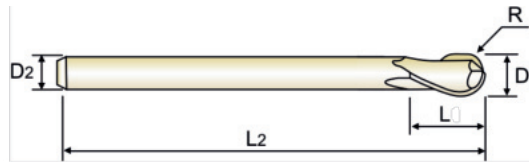
2ACB

STEEL, STAINLESS STEEL, CAST IRON

Carbide Ball Nose End Mill (Standard)



Unit	(mm)		
R	R ≤ 1.5	1.5 < R < 3	R ≥ 3
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2ACB 010 020 S04C	1	0.5	4	50
2ACB 015 030 S04C	1.5	0.75	4	50
2ACB 020 040 S04C	2	1	4	50
2ACB 025 050 S04C	2.5	1.25	4	50
2ACB 030 060 S03C	3	1.5	3	50
2ACB 030 060 S04C	3	1.5	4	50
2ACB 035 070 S04C	3.5	1.75	4	50
2ACB 040 080 S04C	4	2	4	50
2ACB 050 100 S05C	5	2.5	5	50
2ACB 050 100 S06C	5	2.5	6	50
2ACB 060 120 S06C	6	3	6	50
2ACB 070 140 S08D	7	3.5	8	60
2ACB 080 160 S08D	8	4	8	60
2ACB 100 200 S10E	10	5	10	75
2ACB 120 240 S12E	12	6	12	75
2ACB 140 280 S14H	14	7	14	100
2ACB 160 320 S16H	16	8	16	100
2ACB 180 360 S18H	18	9	18	100
2ACB 200 400 S20H	20	10	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)											
					4	5	6	7	8	9	10	11	12			
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.2D	160	rote speed (min-1)	12740	10190	8490	7280	6370	5660	5100	4630	4250			
		ap≤0.3D		feed velocity (mm/min)	1020	1020	1020	1020	1020	1020	1020	1020	1020			
		ap≤0.15D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190			
		ap≤0.15D		feed velocity (mm/min)	610	640	660	630	620	610	610	610	610			
M	stainless steel	ap≤0.2D	110	rote speed (min-1)	8760	7010	5840	5010	4380	3890	3500	3190	2920			
		ap≤0.2D		feed velocity (mm/min)	610	630	640	630	630	620	630	640	640			
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.2D	140	rote speed (min-1)	11150	8920	7430	6370	5570	4950	4460	4050	3720			
		ap≤0.2D		feed velocity (mm/min)	780	800	820	800	800	790	800	810	820			
		ap≤0.1D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190			
		ap≤0.1D		feed velocity (mm/min)	610	640	660	660	670	650	650	660	670			

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2ACB

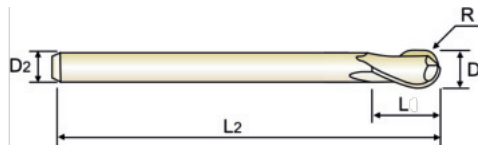
STEEL, STAINLESS STEEL, CAST IRON

Carbide Ball Nose End Mill (Extra Long)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)		
R	R ≤ 1.5	1.5 < R < 3	R ≥ 3
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2ACB 030 060 S03E	3	1.5	3	75
2ACB 040 080 S04E	4	2	4	75
2ACB 050 100 S05E	5	2.5	5	75
2ACB 060 120 S06E	6	3	6	75
2ACB 080 160 S08E	8	4	8	75
2ACB 030 060 S03H	3	1.5	3	100
2ACB 040 080 S04H	4	2	4	100
2ACB 050 100 S05H	5	2.5	5	100
2ACB 060 120 S06H	6	3	6	100
2ACB 080 160 S08H	8	4	8	100
2ACB 100 200 S10H	10	5	10	100
2ACB 120 240 S12H	12	6	12	100
2ACB 060 120 S06M	6	3	6	150
2ACB 080 160 S08M	8	4	8	150
2ACB 100 200 S10M	10	5	10	150
2ACB 120 240 S12M	12	6	12	150
2ACB 140 280 S14M	14	7	14	150
2ACB 160 320 S16M	16	8	16	150
2ACB 180 360 S18M	18	9	18	150
2ACB 200 400 S20M	20	10	20	150
2ACB 060 120 S06R	6	3	6	200
2ACB 080 160 S08R	8	4	8	200
2ACB 100 200 S10R	10	5	10	200
2ACB 120 240 S12R	12	6	12	200
2ACB 160 320 S16R	16	8	16	200

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)									
					4	5	6	7	8	9	10	11	12	
														
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.2D	160	rote speed (min-1)	12740	10190	8490	7280	6370	5660	5100	4630	4250	
		ap≤0.3D		feed velocity (mm/min)	1020	1020	1020	1020	1020	1020	1020	1020	1020	
		ap≤0.15D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190	
		ap≤0.15D		feed velocity (mm/min)	610	640	660	630	620	610	610	610	610	
M	stainless steel	ap≤0.2D	110	rote speed (min-1)	8760	7010	5840	5010	4380	3890	3500	3190	2920	
		ap≤0.2D		feed velocity (mm/min)	610	630	640	630	630	620	630	640	640	
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.2D	140	rote speed (min-1)	11150	8920	7430	6370	5570	4950	4460	4050	3720	
		ap≤0.2D		feed velocity (mm/min)	780	800	820	800	800	790	800	810	820	
		ap≤0.1D	120	rote speed (min-1)	9550	7640	6370	5460	4780	4250	3820	3470	3190	
		ap≤0.1D		feed velocity (mm/min)	610	640	660	660	670	650	650	660	670	

Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



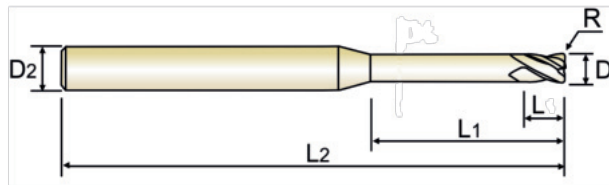
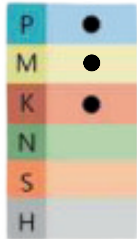
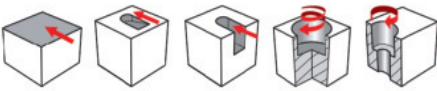
S-2&4ACR

STEEL, STAINLESS STEEL, CAST IRON

Carbide 2 & 4 Flutes Long Neck Corner Radius End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2&4ACR 010 001 040 S04C	1 x R0.1	1.5	4	4	50
S-2&4ACR 010 001 060 S04C	1 x R0.1	1.5	6	4	50
S-2&4ACR 010 001 080 S04C	1 x R0.1	1.5	8	4	50
S-2&4ACR 010 002 040 S04C	1 x R0.2	1.5	4	4	50
S-2&4ACR 010 002 060 S04C	1 x R0.2	1.5	6	4	50
S-2&4ACR 010 002 080 S04C	1 x R0.2	1.5	8	4	50
S-2&4ACR 010 002 100 S04C	1 x R0.2	1.5	10	4	50
S-2&4ACR 015 001 060 S04C	1.5 x R0.1	2.3	6	4	50
S-2&4ACR 015 001 080 S04C	1.5 x R0.1	2.3	8	4	50
S-2&4ACR 015 001 100 S04C	1.5 x R0.1	2.3	10	4	50
S-2&4ACR 015 002 060 S04C	1.5 x R0.2	2.3	6	4	50
S-2&4ACR 015 002 080 S04C	1.5 x R0.2	2.3	8	4	50
S-2&4ACR 015 002 100 S04C	1.5 x R0.2	2.3	10	4	50
S-2&4ACR 015 002 120 S04C	1.5 x R0.2	2.3	12	4	50
S-2&4ACR 020 001 080 S04C	2 x R0.1	3	8	4	50
S-2&4ACR 020 001 100 S04C	2 x R0.1	3	10	4	50
S-2&4ACR 020 001 120 S04C	2 x R0.1	3	12	4	50
S-2&4ACR 020 001 160 S04C	2 x R0.1	3	16	4	50
S-2&4ACR 020 002 080 S04C	2 x R0.2	3	8	4	50
S-2&4ACR 020 002 100 S04C	2 x R0.2	3	10	4	50
S-2&4ACR 020 002 120 S04C	2 x R0.2	3	12	4	50
S-2&4ACR 020 002 160 S04C	2 x R0.2	3	16	4	50

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



S-2&4ACR

STEEL, STAINLESS STEEL, CAST IRON

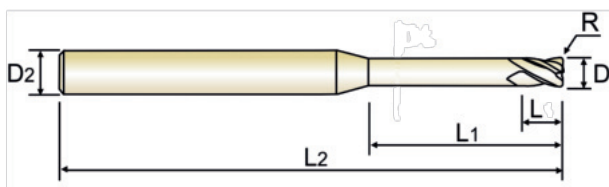
Carbide 2 & 4 Flutes Long Neck Corner Radius End Mill



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



P	●
M	●
K	●
N	●
S	●
H	●



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2&4ACR 030 002 160 S04C	3 x R0.2	4.5	16	4	50
S-2&4ACR 030 002 200 S04C	3 x R0.2	4.5	20	4	50
S-2&4ACR 030 002 160 S06D	3 x R0.2	4.5	16	6	60
S-2&4ACR 030 002 200 S06D	3 x R0.2	4.5	20	6	60
S-2&4ACR 030 005 120 S04C	3 x R0.5	4.5	12	4	50
S-2&4ACR 030 005 160 S04C	3 x R0.5	4.5	16	4	50
S-2&4ACR 030 005 200 S04C	3 x R0.5	4.5	20	4	50
S-2&4ACR 030 005 160 S06D	3 x R0.5	4.5	16	6	60
S-2&4ACR 030 005 200 S06D	3 x R0.5	4.5	20	6	60
S-2&4ACR 030 005 260 S06E	3 x R0.5	4.5	26	6	75
S-2&4ACR 030 005 300 S06E	3 x R0.5	4.5	30	6	75
S-2&4ACR 040 002 160 S06D	4 x R0.2	6	16	6	60
S-2&4ACR 040 002 200 S06D	4 x R0.2	6	20	6	60
S-2&4ACR 040 005 160 S06D	4 x R0.5	6	16	6	60
S-2&4ACR 040 005 200 S06D	4 x R0.5	6	20	6	60
S-2&4ACR 040 005 260 S06E	4 x R0.5	6	26	6	75
S-2&4ACR 040 005 300 S06E	4 x R0.5	6	30	6	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		
P	Carbon steel alloy steel (50HRC) Alloy Steel	aps1.5D	180	rote speed (min-1)	19110
		aps0.15D		feed velocity (mm/min)	14330
		aps1D	130	rote speed (min-1)	1070
		aps0.12D		feed velocity (mm/min)	1030
M	stainless steel	aps1.5D	130	rote speed (min-1)	13800
		aps0.15D		feed velocity (mm/min)	10350
		aps1D		rote speed (min-1)	610
		aps0.12D		feed velocity (mm/min)	580
K	Gry cast iron, modular cast iron (15-45HRC) High alloy cast iron	aps1.5D	160	rote speed (min-1)	16990
		aps0.15D		feed velocity (mm/min)	12740
		aps1D	140	rote speed (min-1)	850
		aps0.12D		feed velocity (mm/min)	820

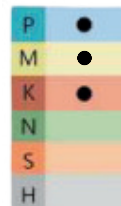
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



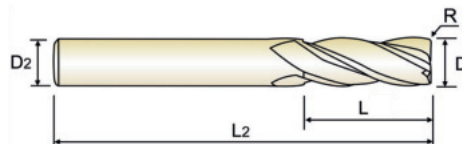
4ACR

STEEL, STAINLESS STEEL, CAST IRON

Carbide Connor Radius End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	R	D2	L2
	mm	mm	mm	mm
4ACR 010 002 S04C	1	0.2	4	50
4ACR 015 002 S04C	1.5	0.2	4	50
4ACR 020 002 S04C	2	0.2	4	50
4ACR 020 005 S04C	2	0.5	4	50
4ACR 025 002 S04C	2.5	0.2	4	50
4ACR 025 005 S04C	2.5	0.5	4	50
4ACR 030 002 S03C	3	0.2	3	50
4ACR 030 002 S04C	3	0.2	4	50
4ACR 030 005 S03C	3	0.5	3	50
4ACR 030 005 S04C	3	0.5	4	50
4ACR 035 005 S04C	3.5	0.5	4	50
4ACR 040 002 S04C	4	0.2	4	50
4ACR 040 005 S04C	4	0.5	4	50
4ACR 050 005 S05C	5	0.5	5	50
4ACR 050 005 S06C	5	0.5	6	50
4ACR 050 010 S05C	5	1	5	50
4ACR 050 010 S06C	5	1	6	50
4ACR 060 002 S06C	6	0.2	6	50
4ACR 060 003 S06C	6	0.3	6	50
4ACR 060 005 S06C	6	0.5	6	50
4ACR 060 010 S06C	6	1	6	50
4ACR 080 005 S08D	8	0.5	8	60
4ACR 080 010 S08D	8	1	8	60
4ACR 080 020 S08D	8	2	8	60
4ACR 100 005 S10E	10	0.5	10	75
4ACR 100 010 S10E	10	1	10	75
4ACR 100 020 S10E	10	2	10	75
4ACR 100 030 S10E	10	3	10	75
4ACR 120 005 S12E	12	0.5	12	75
4ACR 120 010 S12E	12	1	12	75
4ACR 120 020 S12E	12	2	12	75
4ACR 120 030 S12E	12	3	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Depth (mm)									
P	Carbon steel alloy steel (S45C~S50C) Alloy Steel	aps1.5D	180	rate speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870		
		aps0.15D	130	feed velocity (mm/min)	1070	1080	920	930	920	860	860	860		
		aps1D	130	rate speed (min-1)	13600	10350	6900	5180	4140	3400	2590	2070		
M	stainless steel	aps0.12D	130	feed velocity (mm/min)	810	880	590	620	590	500	410	370		
		aps1.5D	130	rate speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070		
		aps0.15D	130	feed velocity (mm/min)	890	860	590	650	610	590	490	460		
K	Gray cast iron, nodular cast iron (HT-400~HT-250) High alloy cast iron	aps1.5D	180	rate speed (min-1)	18990	12740	8490	6370	5100	4250	3190	2550		
		aps0.15D	130	feed velocity (mm/min)	850	820	820	750	700	660	610	560		
		aps1D	140	rate speed (min-1)	14860	11150	7430	5570	4460	3720	2780	2230		
		aps0.12D	140	feed velocity (mm/min)	650	670	670	620	560	500	460	420		

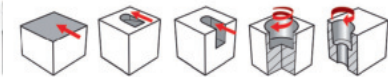
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



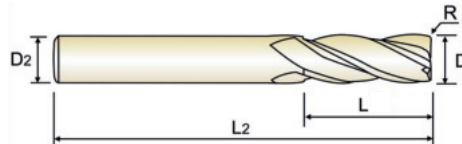
4ACR

STEEL, STAINLESS STEEL, CAST IRON

Carbide Connor Radius End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
4ACR 030 005 S03E	3	0.5	3	75
4ACR 040 005 S04E	4	0.5	4	75
4ACR 050 005 S05E	5	0.5	5	75
4ACR 060 005 S06E	6	0.5	6	75
4ACR 080 005 S08E	8	0.5	8	75
4ACR 040 005 S04H	4	0.5	4	100
4ACR 040 010 S04H	4	1	4	100
4ACR 050 005 S05H	5	0.5	5	100
4ACR 050 010 S05H	5	1	5	100
4ACR 060 005 S06H	6	0.5	6	100
4ACR 060 010 S06H	6	1	6	100
4ACR 080 005 S08H	8	0.5	8	100
4ACR 080 010 S08H	8	1	8	100
4ACR 100 005 S10H	10	0.5	10	100
4ACR 100 010 S10H	10	1	10	100
4ACR 120 005 S12H	12	0.5	12	100
4ACR 120 010 S12H	12	1	12	100
4ACR 080 005 S08H	8	0.5	8	100
4ACR 080 010 S08M	8	1	8	150
4ACR 100 005 S10M	10	0.5	10	150
4ACR 100 010 S10M	10	1	10	150
4ACR 120 005 S12M	12	0.5	12	150
4ACR 120 010 S12M	12	1	12	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	180	rote speed (min-1)	19110	14330	9550	7170	5730	4780	3580	2870
		ap ≤ 0.15D		feed velocity (mm/min)	1070	1030	920	930	920	860	860	860
		ap ≤ 1D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap ≤ 0.12D		feed velocity (mm/min)	610	580	550	620	560	500	410	370
M	stainless steel	ap ≤ 1.5D	130	rote speed (min-1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap ≤ 0.15D		feed velocity (mm/min)	690	660	590	650	610	590	490	460
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	160	rote speed (min-1)	16990	12740	8490	6370	5100	4250	3190	2550
		ap ≤ 0.15D		feed velocity (mm/min)	850	820	820	750	700	680	610	560
		ap ≤ 1D	140	rote speed (min-1)	14860	11150	7430	5570	4460	3720	2790	2230
		ap ≤ 0.12D		feed velocity (mm/min)	650	670	670	620	580	560	500	460

Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



HRC65

HIGH PERFORMANCE



HRC65

HRC65 High hardness and high efficiency machining end milling cutter

**END**

- Suitable for high-hardness steel high-efficiency processing
- Can process stainless steel, most modulated steel and general steel after heat treatment.
- Suitable for high efficiency cutting with large cutting depth and width (good rigidity of machine tool)

Excellent vibration resistance



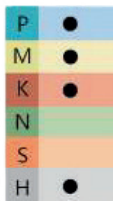
WORLDWIDE RELIABLE PARTNERS



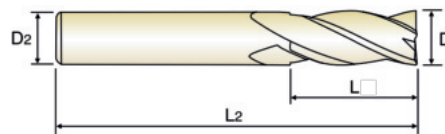
4DCE

STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Carbide 4 Flutes Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4DCE 030 005 S03E	1	3	4	50
4DCE 030 005 S03E	1.5	4	4	50
4DCE 030 005 S03E	2	6	4	50
4DCE 030 005 S03E	2.5	8	4	50
4DCE 030 005 S03E	3	8	3	50
4DCE 030 005 S03E	3	8	4	50
4DCE 030 005 S03E	3.5	10	4	50
4DCE 030 005 S03E	4	10	4	50
4DCE 030 005 S03E	5	13	5	50
4DCE 030 005 S03E	5	13	6	50
4DCE 030 005 S03E	6	15	6	50
4DCE 030 005 S03E	7	20	8	60
4DCE 030 005 S03E	8	20	8	60
4DCE 030 005 S03E	9	25	10	75
4DCE 030 005 S03E	10	25	10	75
4DCE 030 005 S03E	11	30	12	75
4DCE 030 005 S03E	12	30	12	75
4DCE 030 005 S03E	14	45	14	100
4DCE 030 005 S03E	16	45	16	100
4DCE 030 005 S03E	18	45	18	100
4DCE 030 005 S03E	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					2	4	6	8	10	12
H	(<60HAC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	rote speed (min-1) feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	(65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	rote speed (min-1) feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

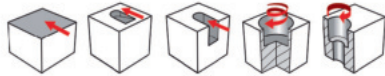
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



4DCL

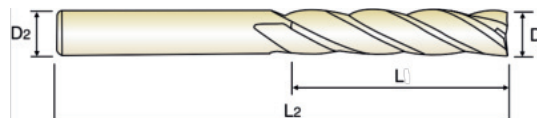
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Carbide 4 Flutes Square End Mill (Extra Long)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4DCL 030 120 S03E	3	12	3	75
4DCL 040 160 S06E	4	16	4	75
4DCL 050 180 S08E	5	18	5	75
4DCL 060 240 S06E	6	24	6	75
4DCL 080 250 S08E	8	25	8	75
4DCL 030 120 S03H	3	12	3	100
4DCL 040 200 S04H	4	20	4	100
4DCL 050 300 S05H	5	30	5	100
4DCL 060 300 S06H	6	30	6	100
4DCL 080 350 S08H	8	35	8	100
4DCL 100 400 S10H	10	40	10	100
4DCL 120 450 S12H	12	45	12	100
4DCL 060 450 S06M	6	45	6	150
4DCL 080 500 S08M	8	50	8	150
4DCL 100 550 S10M	10	55	10	150
4DCL 120 550 S12M	12	55	12	150
4DCL 140 700 S14M	14	70	14	150
4DCL 160 700 S16M	16	70	16	150
4DCL 200 700 S20M	20	70	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	rote speed (min-1) feed velocity (mm/min)	Tool Diameter (mm)					
					2	4	6	8	10	12
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	rote speed (min-1) feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	(65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	rote speed (min-1) feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2DCB

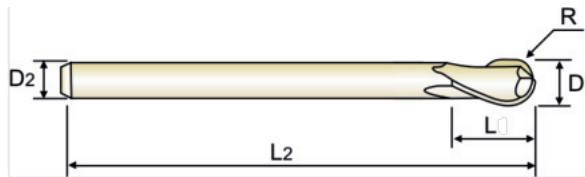
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Carbide Ball Nose End Mill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)		
R	R ≤ 1.5	1.5 < R < 3	R ≥ 3
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2DCB 010 020 S04C	1	0.5	4	50
2DCB 015 030 S04C	1.5	0.75	4	50
2DCB 020 040 S04C	2	1	4	50
2DCB 025 050 S04C	2.5	1.25	4	50
2DCB 030 060 S03C	3	1.5	3	50
2DCB 030 060 S04C	3	1.5	4	50
2DCB 035 070 S04C	3.5	1.75	4	50
2DCB 040 080 S04C	4	2	4	50
2DCB 050 100 S05C	5	2.5	5	50
2DCB 050 100 S06C	5	2.5	6	50
2DCB 060 120 S06C	6	3	6	50
2DCB 080 160 S08D	8	4	8	60
2DCB 100 200 S10E	10	5	10	75
2DCB 120 240 S12E	12	6	12	75
2DCB 140 280 S14H	14	7	14	100
2DCB 160 320 S16H	16	8	16	100
2DCB 180 360 S18H	18	9	18	100
2DCB 200 400 S20H	20	10	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					2	4	6	8	10	12
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	rote speed (min-1) feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	(65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	rote speed (min-1) feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2DCB

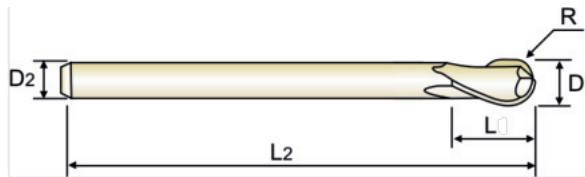
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Carbide Ball Nose End Mill (Extra Long)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)			
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$	
Tol	0	0	0	
	-0.015	-0.015	-0.02	



Order Number	D mm	R mm	D2 mm	L2 mm
2DCB 030 060 S03E	3	1.5	3	75
2DCB 040 080 S04E	4	2	4	75
2DCB 050 100 S05E	5	2.5	5	75
2DCB 060 120 S06E	6	3	6	75
2DCB 080 160 S08E	8	4	8	75
2DCB 040 080 S04H	4	2	4	100
2DCB 050 100 S05H	5	2.5	5	100
2DCB 060 120 S06H	6	3	6	100
2DCB 080 160 S08H	8	4	8	100
2DCB 100 200 S10H	10	5	10	100
2DCB 120 240 S12H	12	6	12	100
2DCB 060 120 S06M	6	3	6	150
2DCB 080 160 S08M	8	4	8	150
2DCB 100 200 S10M	10	5	10	150
2DCB 120 240 S12M	12	6	12	150
2DCB 140 280 S14M	14	7	14	150
2DCB 160 320 S16M	16	8	16	150
2DCB 200 400 S20M	20	10	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					2	4	6	8	10	12
H	(<60HRC) Alloy steel, hardened steel	$ap \leq 1D$ $ap \leq 0.05D$	120	rote speed (min-1) feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	(65HRC) Alloy steel, hardened steel	$ap \leq 0.7D$ $ap \leq 0.03D$	90	rote speed (min-1) feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

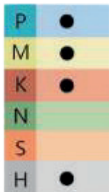
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



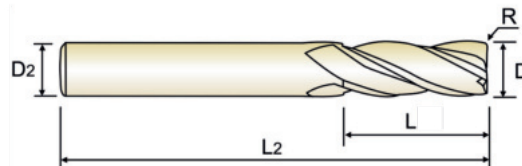
4DCR

STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Carbide Corner Radius Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
4DCR 010 002 S04C	1	0.2	4	50
4DCR 015 002 S04C	1.5	0.2	4	50
4DCR 020 002 S04C	2	0.2	4	50
4DCR 020 005 S04C	2	0.5	4	50
4DCR 025 002 S04C	2.5	0.2	4	50
4DCR 025 005 S04C	2.5	0.5	4	50
4DCB 030 002 S04C	3	0.2	4	50
4DCB 030 005 S03C	3	0.5	3	50
4DCB 030 005 S04C	3	0.5	4	50
4DCB 040 002 S04C	4	0.2	4	50
4DCB 040 005 S04C	4	0.5	4	50
4DCB 040 010 S04C	4	1	4	50
4DCB 050 005 S05C	5	0.5	5	50
4DCB 050 010 S05C	5	1	5	50
4DCB 050 005 S06C	5	0.5	6	50
4DCB 050 010 S06C	5	1	6	50
4DCB 060 002 S06C	6	0.2	6	50
4DCB 060 005 S06C	6	0.5	6	50
4DCB 060 010 S06C	6	1	6	50
4DCB 080 005 S08D	8	0.5	8	60
4DCB 080 005 S08D	8	1	8	60
4DCB 100 005 S10E	10	0.5	10	75
4DCB 100 010 S10E	10	1	10	75
4DCB 120 005 S12E	12	0.5	12	75
4DCB 120 010 S12E	12	1	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					2	4	6	8	10	12
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	rote speed (min-1) feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	(65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	rote speed (min-1) feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



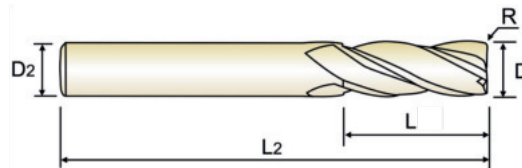
4DCR

STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Carbide Corner Radius Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
4DCR 040 005 S04E	4	0.5	4	75
4DCR 060 005 S06E	6	0.5	6	75
4DCR 060 010 S04E	6	1	6	75
4DCR 080 005 S08E	8	0.5	8	75
4DCR 080 010 S08E	8	1	8	75
4DCR 040 005 S04H	4	0.5	4	100
4DCR 040 010 S04H	4	1	4	100
4DCR 060 005 S06H	6	0.5	6	100
4DCR 060 010 S06H	6	1	6	100
4DCR 080 005 S08H	8	0.5	8	100
4DCR 080 010 S08H	8	1	8	100
4DCR 100 005 S10H	10	0.5	10	100
4DCR 100 010 S10H	10	1	10	100
4DCR 120 005 S12H	12	0.5	12	100
4DCR 120 010 S12H	12	1	12	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					2	4	6	8	10	12
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	rote speed (min-1) feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	(65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	rote speed (min-1) feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.

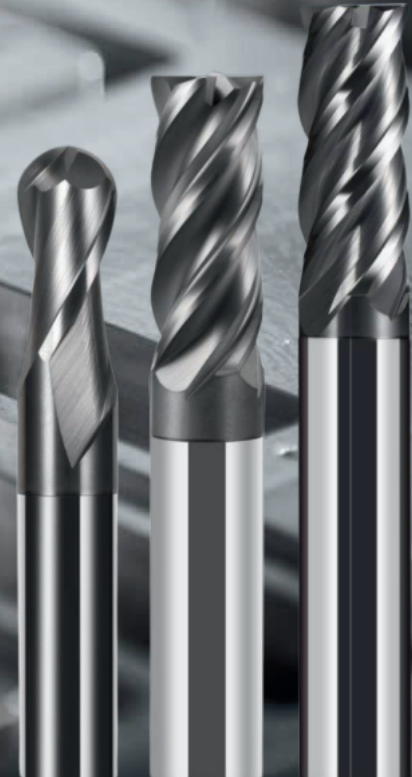


HRC70-72

HIGH PERFORMANCE

Ultra-high hardness and high efficiency end mills

- Variable bottom edges and large helix angle to reduce vibration and improve the surface finish.
- The spiral tool design is suitable for high hardness steels processing.



High hardness and toughness substrate.

WORLDWIDE RELIABLE PARTNERS



4KCE

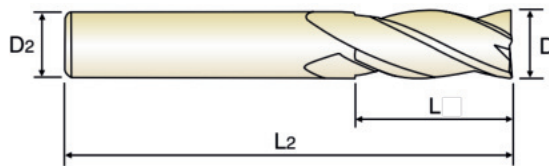
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL, SUPERALLOYS

Carbide 4 Flutes Square End Mill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
4KCE 010 030 S04C	1	3	4	50
4KCE 015 040 S04C	1.5	4	4	50
4KCE 020 060 S04C	2	6	4	50
4KCE 025 080 S04C	2.5	8	4	50
4KCE 030 080 S03C	3	8	3	50
4KCE 030 080 S04C	3	8	4	50
4KCE 035 100 S04C	3.5	10	4	50
4KCE 040 100 S04C	4	10	4	50
4KCE 060 150 S06C	6	15	6	50
4KCE 080 200 S08D	8	20	8	60
4KCE 100 250 S10E	10	25	10	75
4KCE 120 300 S12E	12	30	12	75
4KCE 120 360 S12E	12	36	12	75
4KCE 160 450 S16H	16	45	16	100
4KCE 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	200	rote speed (min-1)	21230	15920	10620	7960	6370	5310	3980	3190
		ap ≤ 0.15D		feed velocity (mm/min)	2040	1960	1690	1670	1620	1590	1490	1480
		ap ≤ 1D	150	rote speed (min-1)	15920	10350	7960	5970	4780	3980	2990	2390
		ap ≤ 0.12D		feed velocity (mm/min)	1290	1180	1080	1160	1050	930	760	680
M	stainless steel	ap ≤ 1.5D	150	rote speed (min-1)	15920	11940	49600	5970	4780	3980	2900	2390
		ap ≤ 0.15D		feed velocity (mm/min)	1580	1330	1150	1220	1130	1080	900	820
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	170	rote speed (min-1)	18050	13540	9020	6770	5410	4510	3380	2710
		ap ≤ 0.15D		feed velocity (mm/min)	1620	1500	1440	1330	1200	1150	1020	930
		ap ≤ 1D	150	rote speed (min-1)	15920	11940	7960	5970	4780	3980	2990	2390
		ap ≤ 0.12D		feed velocity (mm/min)	1290	1250	1190	1090	1000	960	850	770
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D	120	rote speed (min-1)	16710	9550	6370	4780	3820	3190	2390	1910
		ap ≤ 0.05D		feed velocity (mm/min)	380	380	380	380	370	360	310	290

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



4KCE

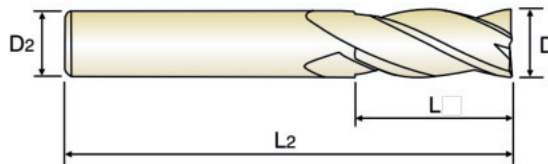
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL, SUPERALLOYS

Carbide 4 Flutes Square End Mill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4KCE 010 030 S04C	4	16	4	75
4KCE 010 030 S04C	5	18	5	75
4KCE 010 030 S04C	6	24	6	75
4KCE 010 030 S04C	8	25	8	75
4KCE 010 030 S04C	4	20	4	100
4KCE 010 030 S04C	5	30	5	100
4KCE 010 030 S04C	6	30	6	100
4KCE 010 030 S04C	8	35	8	100
4KCE 010 030 S04C	10	40	10	100
4KCE 010 030 S04C	12	45	12	100
4KCE 010 030 S04C	6	45	6	150
4KCE 010 030 S04C	8	50	8	150
4KCE 010 030 S04C	10	55	10	150

ISO	Workpiece Material	Depth of cut (mm)	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 1.5D	200	rote speed (min-1)	21230	15920	10620	7960	6370	5310	3980	3190
		ap ≤ 0.15D		feed velocity (mm/min)	2040	1960	1690	1670	1620	1590	1490	1480
M	stainless steel	ap ≤ 1D	150	rote speed (min-1)	15920	10350	7960	5970	4780	3980	2990	2390
		ap ≤ 0.12D		feed velocity (mm/min)	1290	1180	1080	1160	1050	930	760	680
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 1.5D	170	rote speed (min-1)	15920	11940	9020	6770	5410	4510	3380	2710
		ap ≤ 0.15D		feed velocity (mm/min)	1620	1500	1440	1330	1200	1150	1020	930
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D	120	rote speed (min-1)	15920	11940	7960	5970	4780	3980	2990	2390
		ap ≤ 0.05D		feed velocity (mm/min)	1290	1250	1190	1090	1000	960	850	770

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2KCB

STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL, SUPERALLOYS

Carbide Ball Nose End Mill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)		
R	R ≤ 1.5	1.5 < R < 3	R ≥ 3
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2KCB 010 020 S04C	1	0.5	4	50
2KCB 015 030 S04C	1.5	0.75	4	50
2KCB 020 040 S04C	2	1	4	50
2KCB 025 050 S04C	2.5	1.25	4	50
2KCB 030 060 S03C	3	1.5	3	50
2KCB 030 060 S04C	3	1.5	4	50
2KCB 035 070 S04C	3.5	1.75	4	50
2KCB 040 080 S04C	4	2	4	50
2KCB 050 100 S05C	5	2.5	5	50
2KCB 050 100 S06C	5	2.5	6	50
2KCB 060 120 S06C	6	3	6	50
2KCB 080 160 S08D	8	4	8	60

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					4	5	6	7	8	10	11	12
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap ≤ 0.04D	220	rote speed (min-1) feed velocity (mm/min)	50000 2800	15920 1960	10620 1690	7960 1670	6370 1620	8760 2800	7010 2800	5840 2800
		ap ≤ 0.02D	180	rote speed (min-1) feed velocity (mm/min)	50000 1950	10350 1180	7960 1080	5970 1160	4780 1050	7170 2010	5730 2000	4780 2000
M	stainless steel	ap ≤ 0.04D	220	rote speed (min-1) feed velocity (mm/min)	50000 2520	35030 2450	23360 2570	17520 2630	11680 2570	8760 2570	7010 2520	5840 2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap ≤ 0.04D	220	rote speed (min-1) feed velocity (mm/min)	50000 2520	35030 2450	23660 2570	17520 2630	11680 2570	8760 2540	7010 2520	5840 2530
		ap ≤ 0.04D	220	rote speed (min-1) feed velocity (mm/min)	50000 2380	35030 2450	23360 2430	17520 2450	11680 2450	8760 2450	7010 2450	5840 2440
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 0.03D	200	rote speed (min-1) feed velocity (mm/min)	50000 510	31840 510	27860 570	15920 570	10620 590	7960 590	6370 570	5310 570

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2KCB

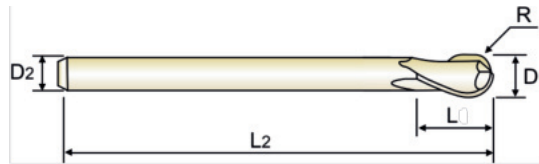
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL, SUPERALLOYS

Carbide Ball Nose End Mill (Extra Long)



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2KCB 040 080 S04E	4	2	4	75
2KCB 050 100 S05E	5	2.5	5	75
2KCB 060 120 S06E	6	3	6	75
2KCB 080 160 S08E	8	4	8	75
2KCB 100 200 S10E	10	5	10	75
2KCB 120 240 S12E	12	6	12	75
2KCB 080 160 S08H	8	4	8	100
2KCB 100 200 S10H	10	5	10	100
2KCB 120 240 S12H	12	6	12	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					4	5	6	7	8	10	11	12
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	$ap \leq 0.04D$	220	rote speed (min-1) feed velocity (mm/min)	50000 2800	15920 1960	10620 1690	7960 1670	6370 1620	8760 2800	7010 2800	5840 2800
		$ap \leq 0.04D$	180	rote speed (min-1) feed velocity (mm/min)	50000 1950	10350 1180	7960 1080	5970 1160	4780 1050	7170 2010	5730 2000	4780 2000
		$ap \leq 0.02D$										
		$ap \leq 0.02D$										
M	stainless steel	$ap \leq 0.04D$	220	rote speed (min-1) feed velocity (mm/min)	50000 2520	35030 2450	23360 2570	17520 2630	11680 2570	8760 2570	7010 2520	5840 2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	$ap \leq 0.04D$	220	rote speed (min-1) feed velocity (mm/min)	50000 2520	35030 2450	23360 2570	17520 2630	11680 2570	8760 2540	7010 2520	5840 2530
		$ap \leq 0.04D$	220	rote speed (min-1) feed velocity (mm/min)	50000 2380	35030 2450	23360 2430	17520 2450	11680 2450	8760 2450	7010 2450	5840 2440
		$ap \leq 0.04D$										
		$ap \leq 0.04D$										
H	(<60HRC) Alloy steel, hardened steel	$ap \leq 0.03D$	200	rote speed (min-1) feed velocity (mm/min)	50000 510	31840 510	27860 570	15920 570	10620 590	7960 590	6370 570	5310 570

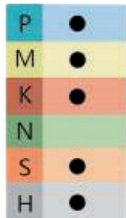
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



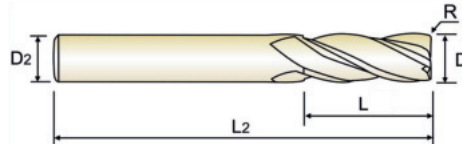
4KNR

STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL, SUPERALLOYS

Carbide Corner Radius Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	R	D2	L2
	mm	mm	mm	mm
4KNR 010 002 S04C	1	0.2	4	50
4KNR 015 002 S04C	1.5	0.2	4	50
4KNR 020 002 S04C	2	0.2	4	50
4KNR 020 005 S04C	2	0.5	4	50
4KNR 030 002 S04C	3	0.2	4	50
4KNR 030 005 S03C	3	0.5	3	50
4KNR 030 005 S04C	3	0.5	4	50
4KNR 040 002 S04C	4	0.2	4	50
4KNR 040 005 S04C	4	0.5	4	50
4KNR 050 005 S05C	5	0.5	5	50
4KNR 050 005 S06C	5	0.5	6	50
4KNR 050 010 S05C	5	1	5	50
4KNR 050 010 S06C	5	1	6	50
4KNR 060 002 S06C	6	0.2	6	50
4KNR 060 005 S06C	6	0.5	6	50
4KNR 060 010 S06C	6	1	6	50
4KNR 080 005 S08D	8	0.5	8	60
4KNR 080 010 S08D	8	1	8	60
4KNR 100 005 S10E	10	0.5	10	75
4KNR 100 010 S10E	10	1	10	75
4KNR 120 005 S12E	12	0.5	12	75
4KNR 120 010 S12E	12	1	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel	ap ≤ 1.5D	200	rote speed (min-1) feed velocity (mm/min)	21230 2040	15920 1960	10620 1690	7960 1670	6370 1620	5310 1590	3980 1490	3190 1480
	(50HRC) Alloy Steel	ap ≤ 1D ap ≤ 0.12D	150	rote speed (min-1) feed velocity (mm/min)	15920 1290	10350 1180	7960 1080	5970 1160	4780 1050	3980 930	2990 760	2390 680
M	stainless steel	ap ≤ 1.5D ap ≤ 0.15D	150	rote speed (min-1) feed velocity (mm/min)	15920 1580	11940 1330	49600 1150	5970 1220	4780 1130	3980 1080	2900 900	2390 820
K	(<32HRC) Gry cast iron, nodular cast iron	ap ≤ 1.5D ap ≤ 0.15D	170	rote speed (min-1) feed velocity (mm/min)	18050 1620	13540 1500	9020 1440	6770 1330	5410 1200	4510 1150	3380 1020	2710 930
	(35-45HRC) High alloy cast iron	ap ≤ 1D ap ≤ 0.12D	150	rote speed (min-1) feed velocity (mm/min)	15920 1290	11940 1250	7960 1190	5970 1090	4780 1000	3980 960	2990 850	2390 770
H	(<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	rote speed (min-1) feed velocity (mm/min)	16710 380	9550 380	6370 380	4780 380	3820 370	3190 360	2390 310	1910 290

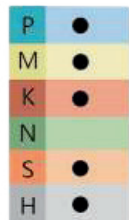
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



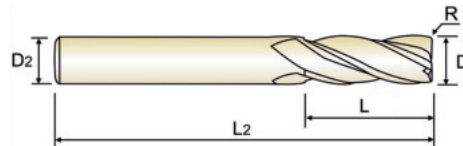
4KNR

STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL, SUPERALLOYS

Carbide Corner Radius Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D mm	R mm	D2 mm	L2 mm
4KNR 040 005 S04E	4	0.5	4	75
4KNR 040 010 S04E	4	1	4	75
4KNR 060 005 S06E	6	0.5	6	75
4KNR 080 005 S08E	8	0.5	8	75
4KNR 080 010 S08E	8	1	8	75
4KNR 040 005 S04H	4	0.5	4	100
4KNR 040 010 S04H	4	1	4	100
4KNR 060 005 S06H	6	0.5	6	100
4KNR 060 010 S06H	6	1	6	100
4KNR 080 005 S08H	8	0.5	8	100
4KNR 080 010 S08H	8	1	8	100
4KNR 100 005 S10H	10	0.5	10	100
4KNR 100 010 S10H	10	1	10	100
4KNR 120 005 S12H	12	0.5	12	100
4KNR 120 010 S12H	12	1	12	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤1.5D	200	rote speed (min-1)	21230	15920	10620	7960	6370	5310	3980	3190
		ap≤0.15D		feed velocity (mm/min)	2040	1960	1690	1670	1620	1590	1490	1480
		ap≤1D	150	rote speed (min-1)	15920	10350	7960	5970	4780	3980	2990	2390
M	stainless steel	ap≤1.5D	150	rote speed (min-1)	1290	1180	1080	1160	1050	930	760	680
		ap≤0.15D		feed velocity (mm/min)	15920	11940	49600	5970	4780	3980	2900	2390
		ap≤1D		feed velocity (mm/min)	1580	1330	1150	1220	1130	1080	900	820
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤1.5D	170	rote speed (min-1)	18050	13540	9020	6770	5410	4510	3380	2710
		ap≤0.15D		feed velocity (mm/min)	1620	1500	1440	1330	1200	1150	1020	930
		ap≤1D	150	rote speed (min-1)	15920	11940	7960	5970	4780	3980	2990	2390
H	(<60HRC) Alloy steel, hardened steel	ap≤0.12D		feed velocity (mm/min)	1290	1250	1190	1090	1000	960	850	770
		ap≤1D	120	rote speed (min-1)	16710	9550	6370	4780	3820	3190	2390	1910
		ap≤0.05D		feed velocity (mm/min)	380	380	380	380	370	360	310	290

Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



- Suitable for fine machining of Steel alloys, cast iron, etc.
- High-gloss mirror treatment, fine grinding with imported polishing grinding wheel.
- Smoother rake face and faster chip evacuation.

Monolithic cermet
Corrosion and wear
resistance



Improved edge wear resistance and tool rigidity

WORLDWIDE RELIABLE PARTNERS



4CRM

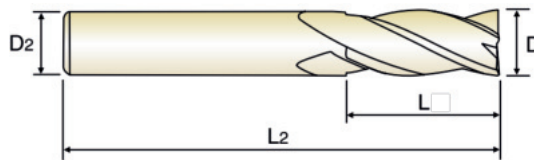
STEEL, STAINLESS STEEL, CAST IRON, SUPERALLOYS

Ceramic 4 Flute Square End Mill (Standard)



P	●
M	
K	●
N	
S	●
H	

Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4CRM 010 040 S04C	1	4	4	50
4CRM 015 040 S04C	1.5	4	4	50
4CRM 020 050 S04C	2	5	4	50
4CRM 025 050 S04C	2.5	5	4	50
4CRM 030 075 S03C	3	7.5	3	50
4CRM 030 075 S04C	3	7.5	4	50
4CRM 040 100 S04C	4	10	4	50
4CRM 050 125 S05C	5	12.5	5	50
4CRM 060 150 S06C	6	15	6	50
4CRM 080 200 S08D	8	20	8	60
4CRM 100 250 S10E	10	25	10	75
4CRM 120 300 S12E	12	30	12	75

Ceramic 4 Flute Square End Mill (Extra Long)

Order Number	D	L	D2	L2
	mm	mm	mm	mm
4CRM 060 180 S06E	6	18	6	75
4CRM 080 240 S08E	8	24	8	75
4CRM 080 240 S08H	8	24	8	100
4CRM 100 300 S10H	10	30	10	100
4CRM 120 300 S12H	12	30	12	100

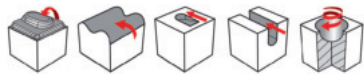
Above table is the standard cutting data for side milling machining, if for groove cutting , the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2CRB

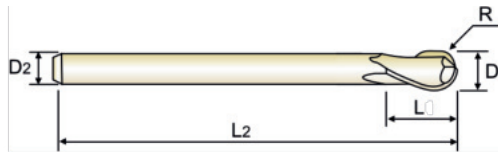
STEEL, STAINLESS STEEL, CAST IRON, SUPERALLOYS

Ceramic 4 Flute Square End Mill (Standard)



P	●
M	
K	●
N	
S	●
H	

Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
Tol	0	0	0
	-0.015	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2CRB 015 030 S04C	1.5	0.75	4	50
2CRB 020 040 S04C	2	1	4	50
2CRB 030 060 S04C	3	1.5	4	50
2CRB 040 080 S04C	4	2	4	50
2CRB 060 120 S06C	6	3	6	50
2CRB 060 120 S06E	6	3	6	75
2CRB 080 160 S08D	8	4	8	60
2CRB 080 160 S08E	8	4	8	75
2CRB 100 200 S10E	10	5	10	75
2CRB 100 200 S10H	10	5	10	100
2CRB 120 240 S12E	12	6	12	75
2CRB 120 240 S12H	12	6	12	100

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



AL

Super Bright Aluminum Processing Series



HIGHLIGHT

- Suitable for high-efficiency and super bright processing of aluminum alloy materials
- Variable helix angle and differential flute pitch, reduces and eliminates vibration high precision of machining surface

Special edge design, effectively solve the problem of sticky

WORLDWIDE RELIABL PARTNERS



Achieve high-efficiency & high-precision machining for 3-Flute End Mill

Excellent cutting effect and high vibration-resistant

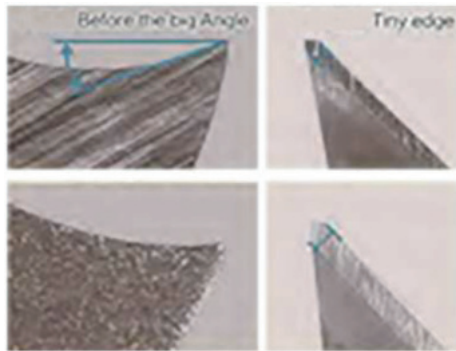
High stability in various processing

1. Inhibition of burr

The front angles is compared to the edge

(comparison of company)

AL-S3



Comparison of burr state after processing

(comparison of company)

AL-S3



Comparison of burr state after processing

Cutting parameter: $n=17000\text{r/min}$, $V_f=4500\text{mm/min}$, $a_p=10\text{mm}$

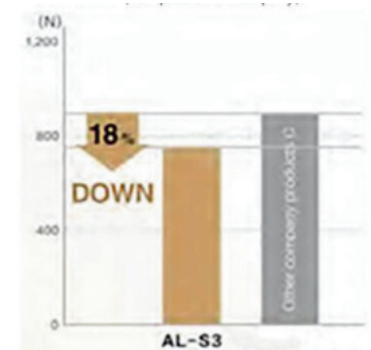
Processing diameter: $\Phi 10$

Processing steps: Undercut, Wet+HSK A63

By cutting material: 7A09

Cutting resistance (net force) contrast

(comparison of company)



Cutting parameter: $n=17000\text{r/min}$,

$V_f=3400\text{mm/min}$, diameter: $\Phi 8$, $a_p=10\text{mm}$

Processing by Cutting Processing, Wet, BT50

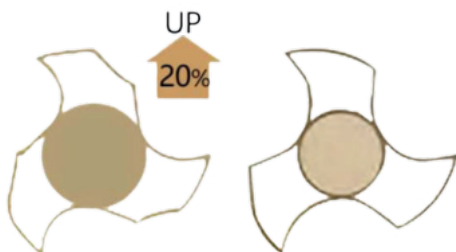
By cutting material: 5A02

2. Strong vibration resistance

Ensure large core thickness for high vibration knife performance

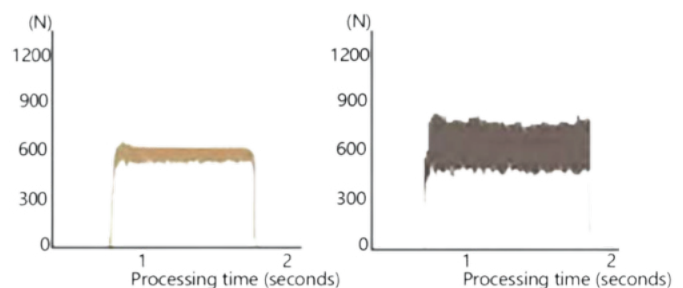
The core thickness contrast

(comparison of company)



Cutting resistance (net forces) contrast

(comparison of company)

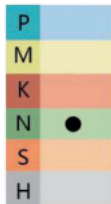




SS-2ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Micro Diameter Square End Mill (Standard)



Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D mm	L mm	D2 mm	L2 mm
SS-2ALS 002 004 S04C	0.2	0.4	4	50
SS-2ALS 003 006 S04C	0.3	0.6	4	50
SS-2ALS 004 008 S04C	0.4	0.8	4	50
SS-2ALS 005 010 S04C	0.5	1	4	50
SS-2ALS 006 012 S04C	0.6	1.2	4	50
SS-2ALS 007 014 S04C	0.7	1.4	4	50
SS-2ALS 008 016 S04C	0.8	1.6	4	50
SS-2ALS 009 018 S04C	0.9	1.8	4	50

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	tool Diameter (mm)									
				1	2	4	6	8	10	12	16	20	
N	(Si<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150										
		ap≤0.2D	(60~350)										
		ap≤1.5D	150	16000	12700	12000	10600	10000	9500	9280	7000	5600	
		ap≤0.2D	(60~350)	580	710	1200	1280	1390	1720	2400	2500	2450	
N	(Si<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150										
		ap≤1D	(60~350)										
		ap≤0.5D	150	16000	10000	9000	8000	7800	8000	6800	5000	4000	
		ap≤1D	(60~350)	400	500	810	920	1100	1280	1300	1310	1200	
N	(Si<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150										
		ap≤1D	(60~350)										
		ap≤0.5D	150	16000	10000	9000	8000	7800	8000	6800	5000	4000	
		ap≤1D	(60~350)	380	450	800	830	1000	1150	1130	1000	1080	

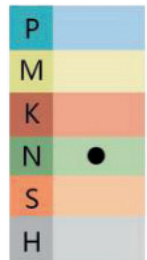
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



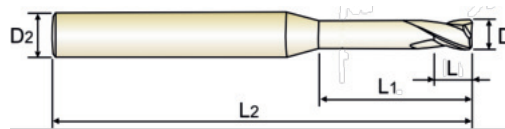
S-2&3ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Carbide 2 & 4 Flutes Square Long Neck End Mill



Unit	(mm)	
D	$D \leq 12$	$D > 12$
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	L1 mm	D2 mm	L2 mm
S-2ALS 002 010 S04C	0.2	0.3	1	4	50
S-2ALS 002 020 S04C	0.2	0.3	2	4	50
S-2ALS 003 010 S04C	0.3	0.5	1	4	50
S-2ALS 003 020 S04C	0.3	0.5	2	4	50
S-2ALS 003 030 S04C	0.3	0.5	3	4	50
S-2ALS 004 020 S04C	0.4	0.6	2	4	50
S-2ALS 004 030 S04C	0.4	0.6	3	4	50
S-2ALS 004 040 S04C	0.4	0.6	4	4	50
S-2ALS 004 060 S04C	0.4	0.6	6	4	50
S-2ALS 005 020 S04C	0.5	0.7	2	4	50
S-2ALS 005 030 S04C	0.5	0.7	3	4	50
S-2ALS 005 040 S04C	0.5	0.7	4	4	50
S-2ALS 005 050 S04C	0.5	0.7	5	4	50
S-2ALS 005 060 S04C	0.5	0.7	6	4	50
S-2ALS 005 080 S04C	0.5	0.7	8	4	50
S-2ALS 006 020 S04C	0.6	0.9	2	4	50
S-2ALS 006 030 S04C	0.6	0.9	3	4	50
S-2ALS 006 040 S04C	0.6	0.9	4	4	50
S-2ALS 006 050 S04C	0.6	0.9	5	4	50
S-2ALS 006 060 S04C	0.6	0.9	6	4	50
S-2ALS 006 080 S04C	0.6	0.9	8	4	50

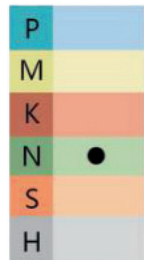
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



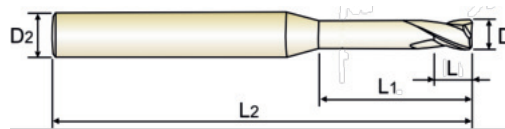
S-2&3ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Carbide 2 & 4 Flutes Square Long Neck End Mill



Unit	(mm)	
D	$D \leq 12$	$D > 12$
Tol	0	0
	-0.015	-0.02



Order Number	D	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ALS 008 030 S04C	0.8	1.2	3	4	50
S-2ALS 008 040 S04C	0.8	1.2	4	4	50
S-2ALS 008 050 S04C	0.8	1.2	5	4	50
S-2ALS 008 060 S04C	0.8	1.2	6	4	50
S-2ALS 008 080 S04C	0.8	1.2	8	4	50
S-2ALS 008 100 S04C	0.8	1.2	10	4	50
S-2&3ALS 010 050 S04C	1	1.5	5	4	50
S-2&3ALS 010 060 S04C	1	1.5	6	4	50
S-2&3ALS 010 080 S04C	1	1.5	8	4	50
S-2&3ALS 010 100 S04C	1	1.5	10	4	50
S-2&3ALS 010 120 S04C	1	1.5	12	4	50
S-2&3ALS 010 140 S04C	1	1.5	14	4	50
S-2&3ALS 010 160 S04C	1	1.5	16	4	50
S-2&3ALS 010 200 S04C	1	1.5	20	4	50
S-2&3ALS 015 060 S04C	1.5	2.3	6	4	50
S-2&3ALS 015 080 S04C	1.5	2.3	8	4	50
S-2&3ALS 015 100 S04C	1.5	2.3	10	4	50
S-2&3ALS 015 120 S04C	1.5	2.3	12	4	50
S-2&3ALS 015 140 S04C	1.5	2.3	14	4	50
S-2&3ALS 015 160 S04C	1.5	2.3	16	4	50
S-2&3ALS 015 200 S04C	1.5	2.3	20	4	50

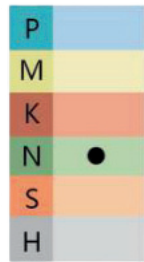
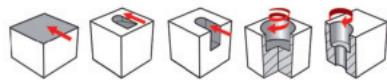
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



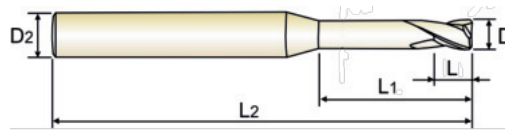
S-2&3ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Carbide 2 & 4 Flutes Square Long Neck End Mill



Unit	(mm)	
D	$D \leq 12$	$D > 12$
Tol	0	0
	-0.015	-0.02



Order Number	D	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2&3ALS 020 080 S04C	2	3	8	4	50
S-2&3ALS 020 100 S04C	2	3	10	4	50
S-2&3ALS 020 120 S04C	2	3	12	4	50
S-2&3ALS 020 140 S04C	2	3	14	4	50
S-2&3ALS 020 160 S04C	2	3	16	4	50
S-2&3ALS 020 200 S04C	2	3	20	4	50
S-2&3ALS 025 120 S04C	2.5	3.8	12	4	50
S-2&3ALS 025 160 S04C	2.5	3.8	16	4	50
S-2&3ALS 025 200 S04C	2.5	3.8	20	4	50
S-2&3ALS 030 120 S04C	3	4.5	12	4	50
S-2&3ALS 030 160 S04C	3	4.5	16	4	50
S-2&3ALS 030 200 S04C	3	4.5	20	4	50
S-2&3ALS 040 160 S06D	4	6	16	6	60
S-2&3ALS 040 200 S06D	4	6	20	6	60
S-2&3ALS 040 260 S06E	4	6	26	6	75
S-2&3ALS 040 300 S06E	4	6	30	6	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)									
					1	2	4	6	8	10	12	16	20	
N	(SI+12%) forging and casting aluminum alloy (~200HB) Copper alloy	ap≤1.5D	150	rate speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600	5400
		ap≤0.2D	(60~350)	feed velocity (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450	
		ap≤1.5D	150	rate speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600	
		ap≤0.2D	(60~350)	feed velocity (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200	
					tool Diameter (mm)									
					1	2	4	6	8	10	12	16	20	
N	(SI+12%) forging and casting aluminum alloy (~200HB) Copper alloy	ap≤0.5D	150	rate speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000	
		ap≤1D	(60~350)	feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200	
		ap≤0.5D	150	rate speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000	
		ap≤1D	(60~350)	feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080	

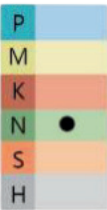
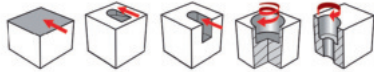
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



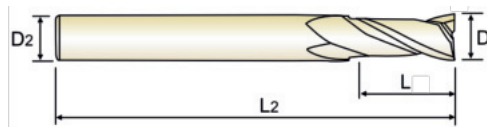
2ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

2 Flutes Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
2ALS 010 030 S04C	1	3	4	50
2ALS 015 050 S04C	1.5	5	4	50
2ALS 020 060 S04C	2	6	4	50
2ALS 025 080 S04C	2.5	8	4	50
2ALS 030 090 S03C	3	9	3	50
2ALS 030 090 S04C	3	9	4	50
2ALS 035 110 S04C	3.5	11	4	50
2ALS 040 100 S04C	4	10	4	50
2ALS 050 150 S05C	5	15	5	50
2ALS 050 150 S06C	5	15	6	50
2ALS 060 180 S06C	6	18	6	50
2ALS 070 240 S08D	7	24	8	60
2ALS 080 240 S08D	8	24	8	60
2ALS 100 300 S10E	10	30	10	75
2ALS 120 350 S12E	12	35	12	75
2ALS 140 450 S14H	14	45	14	100
2ALS 160 450 S16H	16	45	16	100
2ALS 180 450 S18H	18	45	18	100
2ALS 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
													
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450
		ap≤1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200

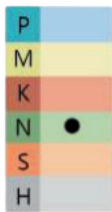
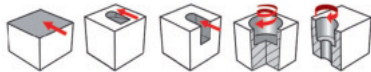
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
													
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60~350)	feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
		ap≤0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60~350)	feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080



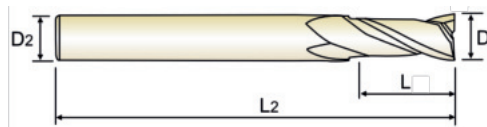
2ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

2 Flutes Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
2ALS 030 120 S03E	3	12	3	75
2ALS 040 160 S04E	4	16	4	75
2ALS 050 180 S05E	5	18	5	75
2ALS 060 250 S06E	6	25	6	75
2ALS 080 300 S08E	8	30	8	75
2ALS 040 200 S04H	4	20	4	100
2ALS 050 250 S05H	5	25	5	100
2ALS 060 300 S06H	6	30	6	100
2ALS 080 350 S08H	8	35	8	100
2ALS 100 400 S10H	10	40	10	100
2ALS 120 450 S12H	12	45	12	100
2ALS 060 450 S06M	6	45	6	150
2ALS 060 500 S06M	8	50	8	150
2ALS 100 550 S10M	10	55	10	150
2ALS 120 550 S12M	12	55	12	150
2ALS 140 700 S14M	14	70	14	150
2ALS 160 700 S16M	16	70	16	150
2ALS 200 700 S20M	20	70	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI < 12%)	ap ≤ 1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
	Forging and casting aluminum alloy (< 200HB)	ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450
	Copper alloy	ap ≤ 1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200

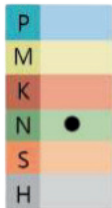
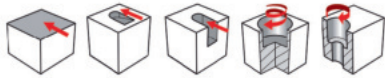
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI < 12%)	ap ≤ 0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
	Forging and casting aluminum alloy (< 200HB)	ap ≤ 1D	(60~350)	feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
	Copper alloy	ap ≤ 0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080



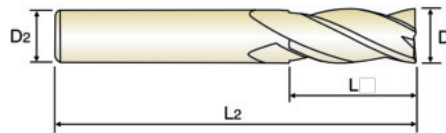
3ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

3 Flutes Square End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
3ALS 010 030 S04C	1	3	4	50
3ALS 015 450 S04C	1.5	4.5	4	50
3ALS 020 060 S04C	2	6	4	50
3ALS 025 080 S04C	2.5	8	4	50
3ALS 030 090 S03C	3	9	3	50
3ALS 030 090 S04C	3	9	4	50
3ALS 035 110 S04C	3.5	11	4	50
3ALS 040 120 S04C	4	12	4	50
3ALS 050 150 S05C	5	15	5	50
3ALS 050 150 S06C	5	15	6	50
3ALS 060 180 S06C	6	18	6	50
3ALS 070 240 S08D	7	24	8	60
3ALS 080 240 S08D	8	24	8	60
3ALS 090 300 S10E	9	30	10	75
3ALS 100 300 S10E	10	30	10	75
3ALS 110 350 S12E	11	35	12	75
3ALS 120 350 S12E	12	35	12	75
3ALS 140 450 S14H	14	45	14	100
3ALS 160 450 S16H	16	45	16	100
3ALS 180 450 S18H	18	45	18	100
3ALS 200 450 S20H	20	45	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450
		ap ≤ 1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200

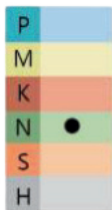
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
		ap ≤ 0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080



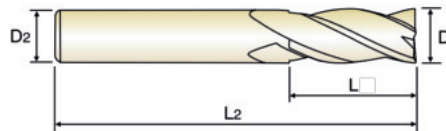
3ALS

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

3 Flutes Square End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
3ALS 020 060 S04E	2	6	4	75
3ALS 030 090 S04E	3	9	4	75
3ALS 030 120 S04E	3	12	3	75
3ALS 035 105 S04E	3.5	10.5	4	75
3ALS 040 160 S04E	4	16	4	75
3ALS 050 180 S05E	5	18	5	75
3ALS 060 250 S06E	6	25	6	75
3ALS 080 300 S08E	8	30	8	75
3ALS 030 120 S03H	3	12	3	100
3ALS 040 200 S04H	4	20	4	100
3ALS 050 300 S05H	5	30	5	100
3ALS 060 300 S06H	6	30	6	100
3ALS 080 350 S08H	8	35	8	100
3ALS 100 400 S10H	10	40	10	100
3ALS 120 450 S12H	12	45	12	100
3ALS 060 450 S06M	6	45	6	150
3ALS 080 500 S08M	8	50	8	150
3ALS 100 550 S10M	10	55	10	150
3ALS 120 550 S12M	12	55	12	150
3ALS 140 700 S14M	14	70	14	150
3ALS 160 800 S16M	16	80	16	150
3ALS 180 800 S18M	18	80	18	150
3ALS 200 800 S20M	20	80	20	150
3ALS 060 500 S06R	6	50	6	200
3ALS 080 600 S08R	8	60	8	200
3ALS 100 650 S10R	10	65	10	200
3ALS 120 700 S12R	12	70	12	200
3ALS 140 800 S14R	14	80	14	200
3ALS 160 850 S16R	16	85	16	200
3ALS 200 900 S20R	20	90	20	200

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(Si<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	aps1.5D	150	rate speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		aps0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		aps1.5D	150	rate speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		aps0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000

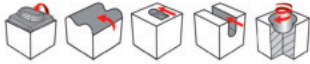
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(Si<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	aps1.5D	150	rate speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		aps0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		aps1.5D	150	rate speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		aps0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



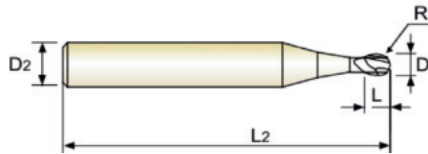
SS-2ABE

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Micro Diameter Ball Nose End Mill (Standard)



Unit	(mm)
R	R
Tol	±0.015



Order Number	D	R	D2	L2
	mm	mm	mm	mm
SS-2ABE 003 006 S04C	0.3	0.15	4	50
SS-2ABE 004 008 S04C	0.4	0.2	4	50
SS-2ABE 005 010 S04C	0.5	0.25	4	50
SS-2ABE 006 012 S04C	0.6	0.3	4	50
SS-2ABE 007 014 S04C	0.7	0.35	4	50
SS-2ABE 008 016 S04C	0.8	0.4	4	50
SS-2ABE 009 018 S04C	0.9	0.45	4	50

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	tool Diameter (mm)								
				1	2	4	6	8	10	12	16	20
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 1.5D	150									
		ap ≤ 0.2D	(60~350)									
		ap ≤ 1.5D	150	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	580	710	1200	1280	1390	1720	2400	2500	2450
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 1.5D	150									
		ap ≤ 0.5D	(60~350)									
		ap ≤ 1.5D	150	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	400	500	810	920	1100	1280	1300	1310	1200
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 0.5D	150	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	380	450	800	830	1000	1150	1130	1000	1080
		ap ≤ 1.5D	150	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	380	450	800	830	1000	1150	1130	1000	1080

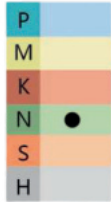
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



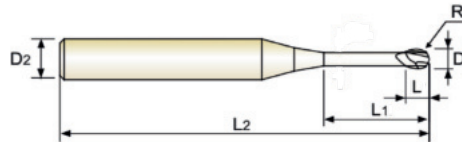
S-2ABE

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Carbide Long Neck Ball Mill



Unit	(mm)
R	R
Tol	±0.015



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ABE 002 010 S04C	0.2 x R0.1	0.2	1	4	50
S-2ABE 002 020 S04C	0.2 x R0.1	0.2	2	4	50
S-2ABE 003 010 S04C	0.3 x R0.15	0.3	1	4	50
S-2ABE 003 020 S04C	0.3 x R0.15	0.3	2	4	50
S-2ABE 003 030 S04C	0.3 x R0.15	0.3	3	4	50
S-2ABE 004 0200 S04C	0.4 x R0.2	0.4	2	4	50
S-2ABE 004 030 S04C	0.4 x R0.2	0.4	3	4	50
S-2ABE 004 040 S04C	0.4 x R0.2	0.4	4	4	50
S-2ABE 004 060 S04C	0.4 x R0.2	0.4	6	4	50
S-2ABE 005 020 S04C	0.5 x R0.25	0.5	2	4	50
S-2ABE 005 030 S04C	0.5 x R0.25	0.5	3	4	50
S-2ABE 005 040 S04C	0.5 x R0.25	0.5	4	4	50
S-2ABE 005 050 S04C	0.5 x R0.25	0.5	5	4	50
S-2ABE 005 060 S04C	0.5 x R0.25	0.5	6	4	50
S-2ABE 005 080 S04C	0.5 x R0.25	0.5	8	4	50
S-2ABE 006 020 S04C	0.6 x R0.3	0.6	2	4	50
S-2ABE 006 030 S04C	0.6 x R0.3	0.6	3	4	50
S-2ABE 006 040 S04C	0.6 x R0.3	0.6	4	4	50
S-2ABE 006 050 S04C	0.6 x R0.3	0.6	5	4	50
S-2ABE 006 060 S04C	0.6 x R0.3	0.6	6	4	50
S-2ABE 006 080 S04C	0.6 x R0.3	0.6	8	4	50

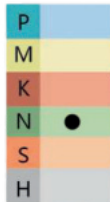
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



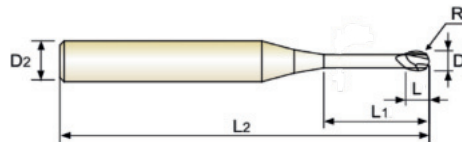
S-2ABE

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Carbide Long Neck Ball Mill



Unit	(mm)
R	R
Tol	±0.015



Order Number	D x R	L	L1	D2	L2
	mm	mm	mm	mm	mm
S-2ABE 008 030 S04C	0.8 x R0.4	0.8	3	4	50
S-2ABE 008 040 S04C	0.8 x R0.4	0.8	4	4	50
S-2ABE 008 050 S04C	0.8 x R0.4	0.8	5	4	50
S-2ABE 008 060 S04C	0.8 x R0.4	0.8	6	4	50
S-2ABE 008 080 S04C	0.8 x R0.4	0.8	8	4	50
S-2ABE 008 100 S04C	0.8 x R0.4	0.8	10	4	50
S-2ABE010 040 S04C	1 x R0.5	1	4	4	50
S-2ABE 010 060 S04C	1 x R0.5	1	6	4	50
S-2ABE 010 080 S04C	1 x R0.5	1	8	4	50
S-2ABE 010 100 S04C	1 x R0.5	1	10	4	50
S-2ABE 010 120 S04C	1 x R0.5	1	12	4	50
S-2ABE 010 150 S04C	1 x R0.5	1	14	4	50
S-2ABE 010 160 S04C	1 x R0.5	1	16	4	50
S-2ABE 010 200 S04C	1 x R0.5	1	20	4	50
S-2ABE 015 080 S04C	1.5 x R0.75	1.5	6	4	50
S-2ABE 015 060 S04C	1.5 x R0.75	1.5	8	4	50
S-2ABE 015 100 S04C	1.5 x R0.75	1.5	10	4	50
S-2ABE 015 120 S04C	1.5 x R0.75	1.5	12	4	50
S-2ABE 015 140 S04C	1.5 x R0.75	1.5	14	4	50
S-2ABE 015 160 S04C	1.5 x R0.75	1.5	16	4	50
S-2ABE 015 200 S04C	1.5 x R0.75	1.5	20	4	50

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)							
					1	2	4	6	8	10	12	16
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150	rote speed (min-1)	19000	15900	11900	10600	8000	7950	7950	7000
		ap≤1D	(60~350)	feed velocity (mm/min)	950	1600	1900	2500	2250	3800	3800	4450
		ap≤0.5D	150	rote speed (min-1)	19000	15900	11900	10600	8000	7950	7950	7000
		ap≤1D	(60~350)	feed velocity (mm/min)	860	1430	1720	2300	2300	2850	3450	4010

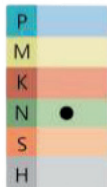
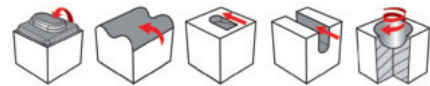
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



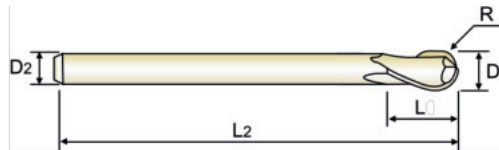
2ABE

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Ball Nose End Mill (Standard)



Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
Tol	0	0	0
	-0.01	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2ABE 010 020 S04C	1	0.5	4	50
2ABE 015 030 S04C	1.5	0.75	4	50
2ABE 020 040 S04C	2	1	4	50
2ABE 025 050 S04C	2.5	1.25	4	50
2ABE 030 060 S03C	3	1.5	3	50
2ABE 030 060 S04C	3	1.5	4	50
2ABE 035 070 S04C	3.5	1.75	4	50
2ABE 040 080 S04C	4	2	4	50
2ABE 050 100 S05C	5	2.5	5	50
2ABE 050 100 S06C	5	2.5	6	50
2ABE 060 120 S06C	6	3	6	50
2ABE 070 140 S08D	7	3.5	8	60
2ABE 080 160 S08D	8	4	8	60
2ABE 100 200 S10E	10	5	10	75
2ABE 120 240 S12E	12	6	12	75
2ABE 140 280 S14H	14	7	14	100
2ABE 160 320 S16H	16	8	16	100
2ABE 180 360 S18H	18	9	18	100
2ABE 200 400 S20H	20	10	20	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	tool Diameter (mm)							
				1	2	4	6	8	10	12	16
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150 (60~350)								
		ap≤1D	150 (60~350)	19000	15900	11900	10600	8000	7950	7950	7000
				950	1600	1900	2500	2250	3800	3800	4450
		ap≤0.5D	150 (60~350)	19000	15900	11900	10600	8000	7950	7950	7000
				860	1430	1720	2300	2300	2850	3450	4010

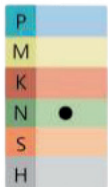
1. Please use high-precision machine tools and tool holder.
2. Please use oil cooled cutting liquid.
3. When the rigidity of the machine tool and the workpiece is poorly installed, vibration and abnormal sound will occur.
At this time, the rotation speed and feed rate of the above table should be reduced.
4. Keep the tool overhang as short as possible without interference.



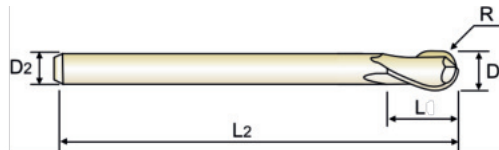
2ABE

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Ball Nose End Mill (Standard)



Unit	(mm)		
R	$R \leq 1.5$	$1.5 < R < 3$	$R \geq 3$
Tol	0	0	0
	-0.01	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
2ABE 030 060 S03E	3	1.5	3	75
2ABE 040 080 S04E	4	2	4	75
2ABE 050 100 S05E	5	2.5	5	75
2ABE 060 120 S06E	6	3	6	75
2ABE 080 160 S08E	8	4	8	75
2ABE 030 060 S03H	3	1.5	3	100
2ABE 040 080 S04H	4	2	4	100
2ABE 050 100 S05H	5	2.5	5	100
2ABE 060 120 S06H	6	3	6	100
2ABE 080 160 S08H	8	4	8	100
2ABE 100 200 S10H	10	5	10	100
2ABE 120 240 S12H	12	6	12	100
2ABE 060 120 S06M	6	3	6	150
2ABE 080 160 S08M	8	4	8	150
2ABE 100 200 S10M	10	5	10	150
2ABE 120 240 S12M	12	6	12	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	tool Diameter (mm)							
				1	2	4	6	8	10	12	16
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	$ap \leq 0.5D$	150								
		$ap \leq 1D$	(60~350)								
		$ap \leq 0.5D$	150	19000	15900	11900	10600	8000	7950	7950	7000
		$ap \leq 1D$	(60~350)	950	1600	1900	2500	2250	3800	3800	4450
				19000	15900	11900	10600	8000	7950	7950	7000
				860	1430	1720	2300	2300	2850	3450	4010

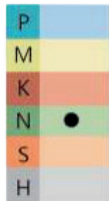
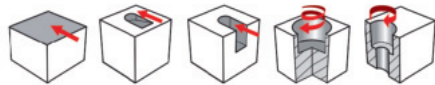
1. Please use high-precision machine tools and tool holder.
2. Please use oil cooled cutting liquid.
3. When the rigidity of the machine tool and the workpiece is poorly installed, vibration and abnormal sound will occur.
At this time, the rotation speed and feed rate of the above table should be reduced.
4. Keep the tool overhang as short as possible without interference.



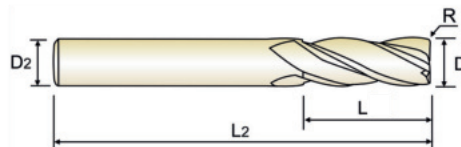
3ALR

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Ball Nose End Mill (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	R mm	D2 mm	L2 mm
3ALR 010 002 S04C	1	0.2	4	50
3ALR 015 002 S04C	1.5	0.2	4	50
3ALR 020 002 S04C	2	0.2	4	50
3ALR 020 005 S04C	2	0.5	4	50
3ALR 030 002 S04C	3	0.2	4	50
3ALR 030 005 S04C	3	0.5	4	50
3ALR 030 010 S04C	3	1	4	50
3ALR 040 005 S04C	4	0.5	4	50
3ALR 040 010 S04C	4	1	4	50
3ALR 050 005 S05C	5	0.5	5	50
3ALR 050 005 S06C	5	0.5	6	50
3ALR 050 010 S05C	5	1	5	50
3ALR 050 010 S06C	5	1	6	50
3ALR 060 005 S06C	6	0.5	6	50
3ALR 060 010 S06C	6	1	6	50
3ALR 080 005 S08D	8	0.5	8	60
3ALR 080 010 S08D	8	1	8	60
3ALR 080 020 S08D	8	2	8	60
3ALR 100 005 S10E	10	0.5	10	75
3ALR 100 010 S10E	10	1	10	75
3ALR 120 005 S12E	12	0.5	12	75
3ALR 120 010 S12E	12	1	12	75

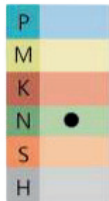
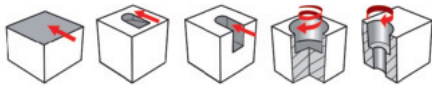
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	650	850	1200	1530	1670	2050	2800	3000	3150
		ap ≤ 1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		ap ≤ 0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)	450	520	860	830	960	1240	1500	1550	1510



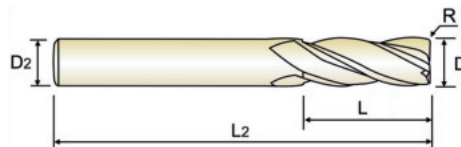
3ALR

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Ball Nose End Mill (Extra Long)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0 -0.015	0 -0.02



Order Number	D	R	D2	L2
	mm	mm	mm	mm
3ALR 040 005 S04E	4	0.5	4	75
3ALR 040 010 S04E	4	1	4	75
3ALR 060 005 S06E	6	0.5	6	75
3ALR 060 010 S06E	6	1	6	75
3ALR 080 005 S08E	8	0.5	8	75
3ALR 080 010 S08E	8	1	8	75
3ALR 040 005 S04H	4	0.5	4	100
3ALR 040 010 S04H	4	1	4	100
3ALR 060 005 S06H	6	0.5	6	100
3ALR 060 010 S06H	6	1	6	100
3ALR 080 005 S08H	8	0.5	8	100
3ALR 080 010 S08H	8	1	8	100
3ALR 100 005 S10H	10	0.5	10	100
3ALR 100 010 S10H	10	1	10	100
3ALR 120 005 S12H	12	0.5	12	100
3ALR 120 010 S12H	12	1	12	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	tool Diameter (mm)										
				1	2	4	6	8	10	12	16	20		
														
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 1.5D	150	rote speed (min-1)		16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)		650	850	1200	1530	1670	2050	2800	3000	3150
		ap ≤ 1.5D	150	rote speed (min-1)		16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)		720	900	1200	1200	1500	1800	2225	2500	3000

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min	tool Diameter (mm)										
				1	2	4	6	8	10	12	16	20		
														
N	(SI < 12%) Forging and casting aluminum alloy (< 200HB) Copper alloy	ap ≤ 0.5D	150	rote speed (min-1)		16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)		450	570	960	1050	1300	1500	1620	1680	1800
		ap ≤ 0.5D	150	rote speed (min-1)		16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 1D	(60~350)	feed velocity (mm/min)		450	520	860	830	960	1240	1500	1550	1510



- Suitable for rough machining of steel & cast iron.
- Special cutting edge chipbreaker treatment, suitable for rough machining of groove and side wall of workpieces
- TiSiN Coating.



Improved edge wear resistance and tool rigidity

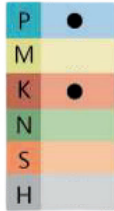
WORLDWIDE RELIABLE PARTNERS



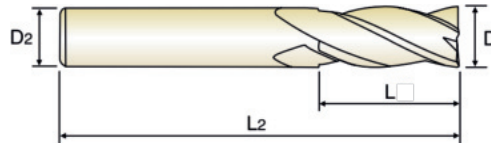
4BRH

STELL, CAST IRON

4 Flutes Rough End Mill For Steel (Standard)



Unit	(mm)	
D	$D \leq 12$	$D > 12$
Tol	0	0
	-0.015	-0.02



Order Number	D	L	D2	L2
	mm	mm	mm	mm
4BRH 040 100 S04C	4	10	4	50
4BRH 050 130 S05C	5	13	5	50
4BRH 050 130 S06C	5	13	6	50
4BRH 060 150 S05C	6	15	6	50
4BRH 080 200 S08D	8	20	8	60
4BRH 100 250 S10E	10	25	10	75
4BRH 120 300 S12E	12	30	12	75
4BRH 140 450 S14H	14	45	14	100
4BRH 160 450 S16H	16	45	16	100
4BRH 180 450 S18H	18	45	18	100
4BRH 200 450 S20H	20	45	20	100

4 Flutes Rough End Mill For Steel (Extra Long)

Order Number	D	L	D2	L2
	mm	mm	mm	mm
4BRH 060 240 S06E	6	24	6	75
4BRH 080 250 S08E	8	25	8	75
4BRH 060 300 S06H	6	30	6	100
4BRH 080 350 S08H	8	35	8	100
4BRH 100 400 S10H	10	40	10	100
4BRH 120 450 S12H	12	45	12	100
4BRH 160 700 S16M	16	70	16	150
4BRH 200 700 S20M	20	70	20	150

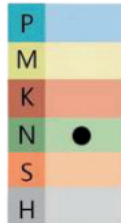
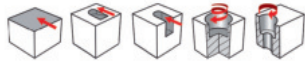
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)					
					6	8	10	12	16	20
P	Carbon steel alloy steel (50HRC) Alloy Steel	$ap \leq 1D$	80	rote speed (min-1) feed velocity (mm/min)	4250 760	3190 700	2550 660	2120 640	1590 640	1270 710
		$ap \leq 0.5D$	60	rote speed (min-1) feed velocity (mm/min)	3190 380	2390 380	1910 380	1590 380	1190 330	960 310
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	$ap \leq 1D$	55	rote speed (min-1) feed velocity (mm/min)	2920 370	2190 370	1750 360	1460 350	1100 310	880 280
		$ap \leq 0.8D$	55	rote speed (min-1) feed velocity (mm/min)	2920 350	2190 350	1750 350	1460 320	1133 290	880 260



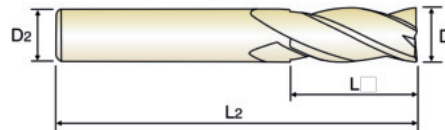
3BRHD

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

3 Futes Rough End Mill For Aluminium (Standard)



Unit	(mm)	
D	D ≤ 12	D > 12
Tol	0	0
	-0.015	-0.02



Order Number	D mm	L mm	D2 mm	L2 mm
3BRHD 040 120 S04C	4	12	4	50
3BRHD 050 150 S05C	5	15	5	50
3BRHD 050 150 S06C	5	15	6	50
3BRHD 060 180 S06C	6	18	6	50
3BRHD 080 240 S08D	8	24	8	60
3BRHD 100 300 S10E	10	30	10	75
3BRHD 120 350 S12E	12	35	12	75
3BRHD 140 450 S14H	14	45	14	100
3BRHD 160 450 S16H	16	45	16	100
3BRHD 180 450 S18H	18	45	18	100
3BRHD 200 450 S20H	20	45	20	100

3 Futes Rough End Mill For Aluminium (Extra Long)

Order Number	D mm	L mm	D2 mm	L2 mm
3BRHD 060 240 S06E	6	24	6	75
3BRHD 080 280 S08E	8	25	8	75
3BRHD 060 300 S06H	6	30	6	100
3BRHD 080 350 S08H	8	35	8	100
3BRHD 100 400 S10H	10	40	10	100
3BRHD 120 450 S12H	12	45	12	100
3BRHD 160 700 S16M	16	70	16	150
3BRHD 200 700 S20M	20	70	20	150

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(Si < 12%) Forging and casting aluminum alloy (~200HB) Copper alloy	ap ≤ 1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		ap ≤ 1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(Si < 12%) Forging and casting aluminum alloy (~200HB) Copper alloy	ap ≤ 1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		ap ≤ 1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap ≤ 0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



CHAMFER CUTTERS

CNC Carbide Chamfering Milling

- Ideal for chamfering and deburring in small, narrow areas and flat surfaces
- Optimized for contouring and chamfering of larger features
- End cut, ideal for one-off mixed floors and chamfered walls



Special edge design, effectively solve the problem of sticky

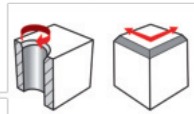
WORLD WIDE RELIABLE PARTNERS



2CHD

STEEL, STAINLESS STEEL, CAST IRON

Chamfer Mill



P	●
M	●
K	●
N	
S	
H	

Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D mm	Angle	D2 mm	L2 mm
2CHD 020 60 S04C	2	60°	4	50
2CHD 020 90 S04C	2	90°	4	50
2CHD 020 120 S04C	2	120°	4	50
2CHD 025 90 S04C	2.5	90°	4	50
2CHD 030 60 S03C	3	60°	3	50
2CHD 020 90 S03C	3	90°	3	50
2CHD 030 120 S03C	3	120°	3	50
2CHD 030 60 S04C	3	60°	4	50
2CHD 030 120 S04C	3	120°	4	50
2CHD 040 90 S04C	4	90°	4	50
2CHD 050 90 S05C	5	90°	5	50
2CHA 060 90 S06C	6	90°	6	50
2CHD 080 90 S08C	8	90°	8	60
2CHD 100 90 S10E	10	90°	10	75
2CHD 120 90 S12E	12	90°	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
												
P	(<45HRC)	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
	Carbon steel alloy steel	ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
	(50HRC)	ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
	Alloy Steel	ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC)	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
	Gry cast iron, nodular cast iron	ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
	(35-45HRC)	ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
	High alloy cast iron	ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



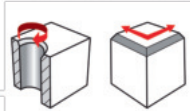
2CHH

STEEL, STAINLESS STEEL, CAST IRON

Chamfer Mill

DJD

TiAsiN

HRC
65

Unit (mm)

D

D

Tol

0

-0.015



Order Number	D mm	Angle	D2 mm	L2 mm
2CHH 020 90 S04C	2	90°	4	50
2CHH 030 90 S03C	3	90°	3	50
2CHH 030 90 S04C	3	90°	4	50
2CHH 040 90 S04C	4	90°	4	50
2CHH 050 90 S05C	5	90°	5	50
2CHH 060 90 S06C	6	90°	6	50
2CHH 080 90 S08D	8	90°	8	60
2CHH 100 90 S10E	10	90°	10	75
2CHH 120 90 S12E	12	90°	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2CHH

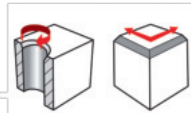
STEEL, STAINLESS STEEL, CAST IRON

Chamfer Mill

ZCDJD

AL

DLC

HRC
55

P	
M	
K	
N	●
S	
H	

Unit (mm)

D

D

Tol

0

-0.015

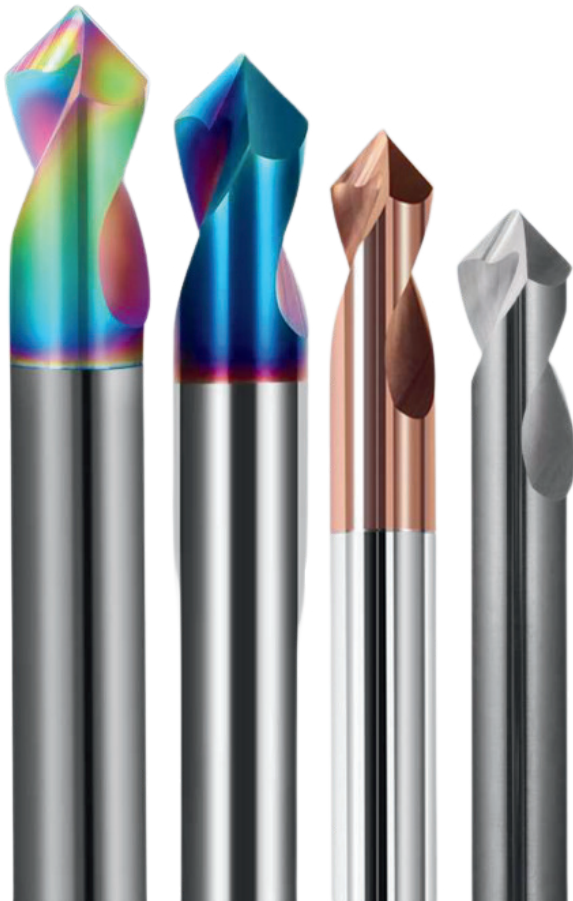


Order Number	D mm	Angle	D2 mm	L2 mm
2CHA 020 60 S04C	2	60°	4	50
2CHA 020 60 S04C	2	90°	4	50
2CHA 020 60 S04C	2	120°	4	50
2CHA 020 60 S04C	2.5	90°	4	50
2CHA 020 60 S04C	3	60°	3	50
2CHA 020 60 S04C	3	90°	3	50
2CHA 020 60 S04C	3	120°	3	50
2CHA 020 60 S04C	3	60°	4	50
2CHA 020 60 S04C	3	120°	4	50
2CHA 020 60 S04C	4	90°	4	50
2CHA 020 60 S04C	5	90°	5	50
2CHA 020 60 S04C	6	90°	6	50
2CHA 020 60 S04C	8	90°	8	60
2CHA 020 60 S04C	10	90°	10	75
2CHA 020 60 S04C	12	90°	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450
		ap≤1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200
					tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60~350)	feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
		ap≤0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60~350)	feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080



Carbide Center Drill



- The center drill with high sharpness and outstanding durability
- The use of cobalt HSS improving runout accuracy
- The optimized tool shape deliver excellent sharpness and help prevent breakages.



Improved edge wear resistance and tool rigidity

WORLD WIDE RELIABL PARTNERS



2DMM

STEEL, STAINLESS STEEL, CAST IRON

Spot Drill

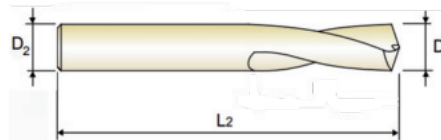
GYDXZ

TiAlN

HRC
55

P	●
M	●
K	●
N	
S	
H	

Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D mm	Angle	D2 mm	L2 mm
2DMM 010 90 S04C	1	90°	4	50
2DMM 020 90 S04C	2	90°	4	50
2DMM 025 90 S04C	2.5	90°	4	50
2DMM 030 90 S04C	3	90°	4	50
2DMM 040 90 S04C	4	90°	4	50
2DMM 050 90 S05C	5	90°	5	50
2DMM 060 90 S06C	6	90°	6	50
2DMM 080 90 S08D	8	90°	8	60
2DMM 100 90 S10E	10	90°	10	75
2DMM 120 90 S12E	12	90°	12	75
2DMM 040 90 S04H	4	90°	4	100
2DMM 060 90 S06H	6	90°	6	100
2DMM 080 90 S08H	8	90°	8	100
2DMM 100 90 S10H	10	90°	10	100
2DMM 120 90 S12H	12	90°	12	100
2DMM 160 90 S16H	16	90°	16	100

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D		rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
		ap≤0.5D		rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.05D		feed velocity (mm/min)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.5D		rote speed (min-1)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2DMC

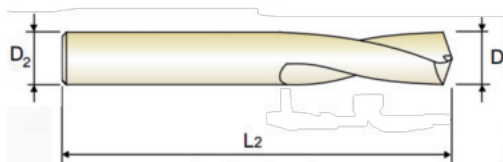
STEEL, STAINLESS STEEL, CAST IRON

Spot Drill



P	●
M	●
K	●
N	
S	
H	

Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D	Angle	D2	L2
	mm		mm	mm
2DMC 010 90 S04C	1	90°	4	50
2DMC 020 90 S04C	2	90°	4	50
2DMC 030 90 S04C	3	90°	4	50
2DMC 040 90 S04C	4	90°	4	50
2DMC 050 90 S05C	5	90°	5	50
2DMC 060 90 S06C	6	90°	6	50
2DMC 080 90 S08D	8	90°	8	60
2DMC 100 90 S10E	10	90°	10	75
2DMC 120 90 S12E	12	90°	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	Carbon steel alloy steel (<45HRC) Alloy Steel (50HRC)	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	Gry cast iron, nodular cast iron (<32HRC) (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



2DMA

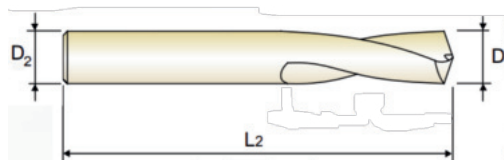
STEEL, STAINLESS STEEL, CAST IRON

Spot Drill



P	
M	
K	
N	●
S	
H	

Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D mm	Angle	D2 mm	L2 mm
2DMA 010 90 S04C	1	90°	4	50
2DMA 020 90 S04C	2	90°	4	50
2DMA 030 90 S04C	3	90°	4	50
2DMA 040 90 S04C	4	90°	4	50
2DMA 050 90 S05C	5	90°	5	50
2DMA 060 90 S06C	6	90°	6	50
2DMA 080 90 S08D	8	90°	8	60
2DMA 100 90 S10E	10	90°	10	75
2DMA 120 90 S12E	12	90°	12	75
2DMA 040 90 S04H	4	90°	4	100
2DMA 060 90 S06H	6	90°	6	100
2DMA 080 90 S08H	8	90°	8	100
2DMC 100 90 S10H	10	90°	10	100
2DMA 120 90 S12H	12	90°	12	100
2DMA 160 90 S16H	16	90°	16	100

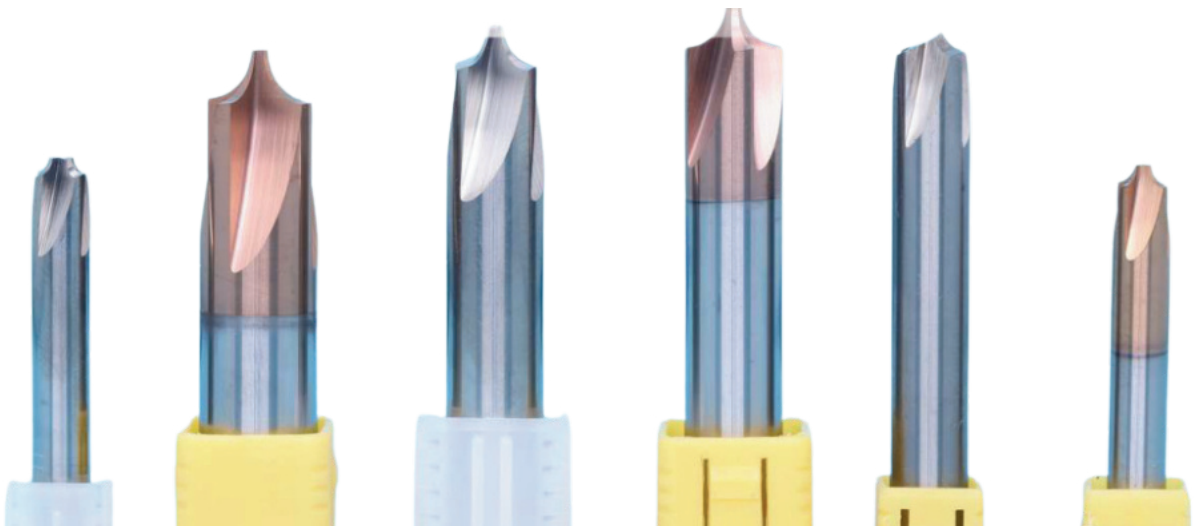
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)									
					1	2	4	6	8	10	12	16	20	
														
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600	
		ap≤0.2D	(60~350)	feed velocity (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450	
		ap≤1.5D	150	rote speed (min-1)	16000	12700	12000	10600	10000	9500	9280	7000	5600	
		ap≤0.2D	(60~350)	feed velocity (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200	

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60~350)	feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
		ap≤0.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60~350)	feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080



Solid Carbide Inner Radius End Mill

- Suitable for copper, stainless steel, alloy steel, carbon steel, cast iron etc.
- Apply in high hardness and high speed cutting, could processing high speed rough machining and fine
- The inner radius tool uses the latest ultra-fine tungsten carbide for the highest wear resistance and strength



WORLD WIDE RELIABLE PARTNERS



4AMI

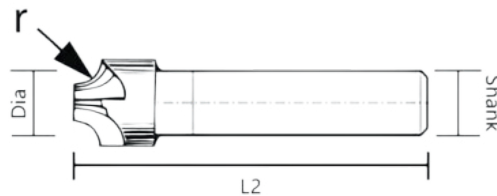
STEEL, STAINLESS STEEL, CAST IRON

Internal R End Mill



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D mm	R mm	D2 mm	L2 mm
4AMI 040 005 S04C	4	0.5	4	50
4AMI 040 0075 S04C	4	0.75	4	50
4AMI 040 010 S04C	4	1	4	50
4AMI 060 015 S06C	6	1.5	6	50
4AMI 060 020 S06C	6	2	6	50
4AMI 060 025 S06C	6	2.5	6	50
4AMI 080 030 S08D	8	3	8	60
4AMI 100 040 S10D	10	4	10	60
4AMI 120 050 S12D	12	5	12	60
4AMI 140 060 S14E	14	6	14	75
4AMI 160 070 S16E	16	7	16	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤1.5D	200	rote speed (min-1)	21230	15920	10620	7960	6370	5310	3980	3190
		ap≤0.15D		feed velocity (mm/min)	2040	1960	1690	1670	1620	1590	1490	1480
		ap≤1D	150	rote speed (min-1)	15920	10350	7960	5970	4780	3980	2990	2390
		ap≤0.12D		feed velocity (mm/min)	1290	1180	1080	1160	1050	930	760	680
M	stainless steel	ap≤1.5D	150	rote speed (min-1)	15920	11940	49600	5970	4780	3980	2900	2390
		ap≤0.15D		feed velocity (mm/min)	1580	1330	1150	1220	1130	1080	900	820
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤1.5D	170	rote speed (min-1)	18050	13540	9020	6770	5410	4510	3380	2710
		ap≤0.15D		feed velocity (mm/min)	1620	1500	1440	1330	1200	1150	1020	930
		ap≤1D	150	rote speed (min-1)	15920	11940	7960	5970	4780	3980	2990	2390
		ap≤0.12D		feed velocity (mm/min)	1290	1250	1190	1090	1000	960	850	770

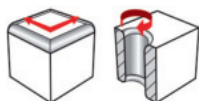
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



4AMA

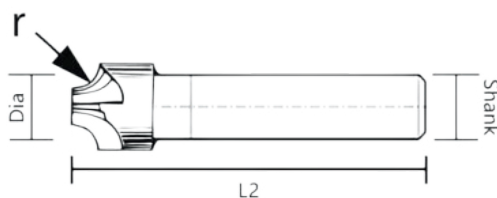
ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Internal R End Mill



P	
M	
K	
N	●
S	
H	

Unit	(mm)
D	D
Tol	0 -0.015



Order Number	D mm	R mm	D2 mm	L2 mm
4AMA 040 005 S04C	4	0.5	4	50
4AMA 040 0075 S04C	4	0.75	4	50
4AMA 040 010 S04C	4	1	4	50
4AMA 060 015 S06C	6	1.5	6	50
4AMA 060 020 S06C	6	2	6	50
4AMA 060 025 S06C	6	2.5	6	50
4AMA 080 030 S08D	8	3	8	60
4AMA 100 040 S10D	10	4	10	60
4AMA 120 050 S12D	12	5	12	60
4AMA 140 060 S14E	14	6	14	75
4AMA 160 070 S16E	16	7	16	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (~200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (~200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



Solid Carbide T-Slot End Mill



- Carbide cutter suitable for T-grooving and milling.
- Made from solid carbide to support high precision groove machining
- Use for T groove machining or face milling

WORLD WIDE RELIABLE PARTNERS



CUSTOM DESIGN

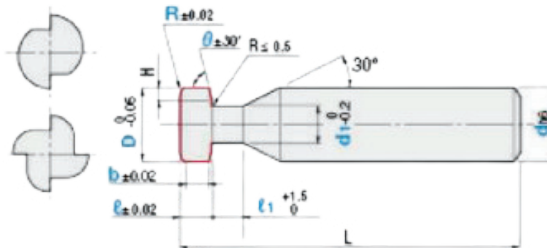
STEEL, STAINLESS STEEL, CAST IRON

T-Slot End Mill



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)
D	D
Tol	±0.01



D	L	D2	L2
mm	mm	mm	mm
3	0.5/1/1.5/2	4	50
4	0.5/1/1.5/2	4	50
6	0.5/1/1.5/2/2.5/3	6	50
8	0.5/1/1.5/2/2.5/3	8	50
10	1/1.5/2/2.5/3/4/5	10	60
12	1/1.5/2/2.5/3/4/5	12	60
14	1/1.5/2/2.5/3/4/5	14	75
16	1/1.5/2/2.5/3/4/5	16	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

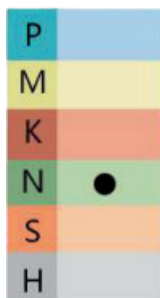
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



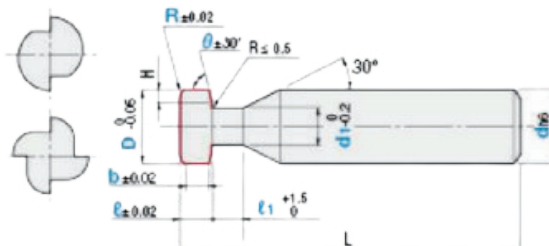
CUSTOM DESIGN

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

T-Slot End Mill



Unit	(mm)
D	D
Tol	±0.01



D	L	D2	L2
mm	mm	mm	mm
3	0.5/1/1.5/2	4	50
4	0.5/1/1.5/2	4	50
6	0.5/1/1.5/2/2.5/3	6	50
8	0.5/1/1.5/2/2.5/3	8	50
10	1/1.5/2/2.5/3/4/5	10	60
12	1/1.5/2/2.5/3/4/5	12	60
14	1/1.5/2/2.5/3/4/5	14	75
16	1/1.5/2/2.5/3/4/5	16	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



Solid Carbide Dovetail End EMills



- Features a shortened neck for long machining operations
- Corner radius profile for increased strength
- Solid carbide for durability

Special edge design, effectively solve the problem of sticky

WORLD WIDE RELIABL PARTNERS



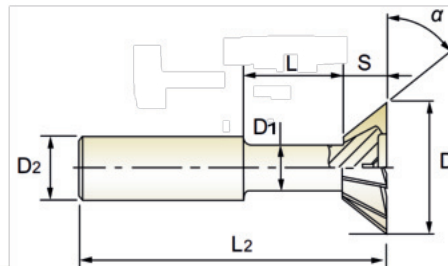
CUSTOM DESIGN

STEEL, STAINLESS STEEL, CAST IRON

Dovetail End Mill



P	●
M	●
K	●
N	●
S	●
H	●



Unit	(mm)
D	D
Tol	0 -0.015



D	Angle	D2	L2
mm		mm	mm
1	30°	4	50
1.5	30°	4	50
2	30°	4	50
2.5	30°	4	50
3	30°	4	50
4	30°	4	50
6	30°	6	50
8	30°	8	60
10	30°	10	75
1	45°	4	50
1.5	45°	4	50
2	45°	4	50
2.5	45°	4	50
3	45°	4	50
4	45°	4	50
6	45°	6	50
8	45°	8	60
10	45°	10	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					3	4	6	8	10	12	16	20
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤1.5D	200	rote speed (min-1)	21230	15920	10620	7960	6370	5310	3980	3190
		ap≤0.15D		feed velocity (mm/min)	2040	1960	1690	1670	1620	1590	1490	1480
		ap≤1D	150	rote speed (min-1)	15920	10350	7960	5970	4780	3980	2990	2390
M	stainless steel	ap≤1.5D	150	rote speed (min-1)	15920	11940	49600	5970	4780	3980	2900	2390
		ap≤0.15D		feed velocity (mm/min)	1580	1330	1150	1220	1130	1080	900	820
		ap≤1D	170	rote speed (min-1)	18050	13540	9020	6770	5410	4510	3380	2710
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤1.5D	170	rote speed (min-1)	1620	1500	1440	1330	1200	1150	1020	930
		ap≤0.15D		feed velocity (mm/min)	15920	11940	7960	5970	4780	3980	2990	2390
		ap≤1D	150	rote speed (min-1)	1290	1250	1190	1090	1000	960	850	770

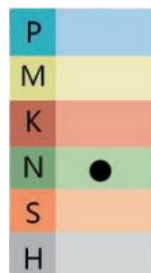
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



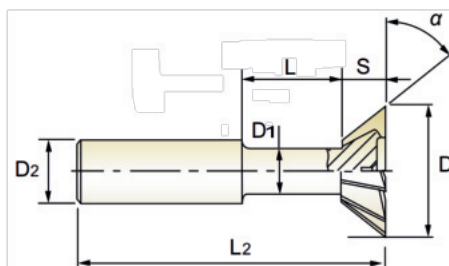
CUSTOM DESIGN

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Dovetail End Mill



Unit	(mm)
D	D
Tol	0
	-0.015



D	Angle	D2	L2
mm		mm	mm
1	30°	4	50
1.5	30°	4	50
2	30°	4	50
2.5	30°	4	50
3	30°	4	50
4	30°	4	50
6	30°	6	50
8	30°	8	60
10	30°	10	75
1	45°	4	50
1.5	45°	4	50
2	45°	4	50
2.5	45°	4	50
3	45°	4	50
4	45°	4	50
6	45°	6	50
8	45°	8	60
10	45°	10	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy <200H Copper alloy	aps1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		aps0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		aps1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		aps0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy <200H Copper alloy	aps1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		aps0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		aps1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		aps0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



Thread End Mills - Carbide

- Suitable for Various high-hard steel parts such as stainless steel, titanium alloy, heat-treated die steel, etc
- Combination of fully ground arc blade sharp edge, high wear resistance professional milling design



Improved edge wear resistance and tool rigidity

WORLD WIDE RELIABLE PARTNERS



CUSTOM DESIGN

STEEL, STAINLESS STEEL, CAST IRON

Thread End Mill

LWXD

TiAlN

HRC
55

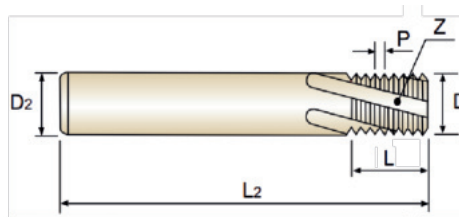
S



P	●
M	●
K	●
N	●
S	●
H	●

Unit (mm)

D D

To1 0
-0.015

D	L	D2	L2
mm	mm	mm	mm
2.1	6	4	50
4	10	4	50
6	13	6	60
2.7	7	4	50
3	8	4	50
3.4	9	4	50
8	20	8	60
4	10	4	50
4.8	12	6	57
6	16	6	57
8	20	8	60
6	16	6	57
8	20	8	60

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

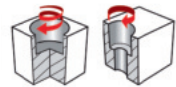
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



CUSTOM DESIGN

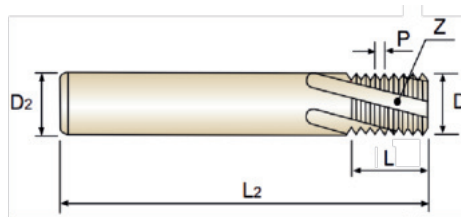
STEEL, STAINLESS STEEL, CAST IRON

Thread End Mill



P	●
M	●
K	●
N	
S	
H	

Unit	(mm)
D	D
Tol	0 -0.015



	D	L	D2	L2
	mm	mm	mm	mm
	10	22	10	75
	12	22	12	75
	16	30	16	90
	10	25	10	75
	10	28	10	75
	12	28	12	75
	16	30	16	90
	9.8	30	10	75
	10	30	10	75
	12	30	12	75
	16	40	16	90
	14	36	14	83
	16	40	16	90
	16	42	14	90

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

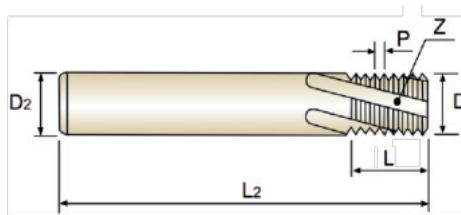
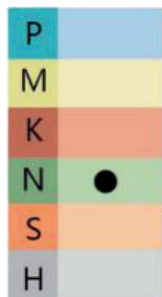
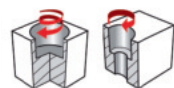
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



CUSTOM DESIGN

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Thread End Mill



Unit	(mm)
D	D
Tol	0 -0.015



D	L	D2	L2
mm	mm	mm	mm
2.1	6	4	50
4	10	4	50
6	13	6	60
2.7	7	4	50
3	8	4	50
3.4	9	4	50
8	20	8	60
4	10	4	50
4.8	12	6	57
6	16	6	57
8	20	8	60
6	16	6	57
8	20	8	60

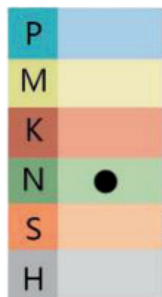
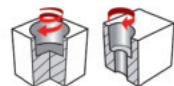
ISO	Workpiece Material	Depth of cut (mm)	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000
ISO	Workpiece Material	Depth of cut (mm)	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



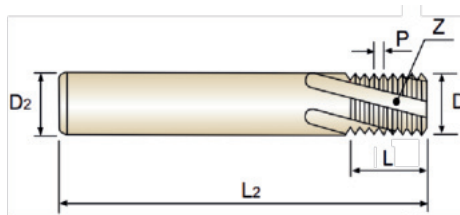
CUSTOM DESIGN

ALUMINUM ALLOY, SUPER BRIGHT HIGH EFFICIENT

Thread End Mill



Unit	(mm)
D	D
Tol	0 -0.015



D	L	D2	L2
mm	mm	mm	mm
10	22	10	75
12	22	12	75
16	30	16	90
10	25	10	75
10	28	10	75
12	28	12	75
16	30	16	90
9.8	30	10	75
10	30	10	75
12	30	12	75
16	40	16	90
14	36	14	83
16	40	16	90
16	42	14	90

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
		ap≤1.5D	150	rote speed (min-1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ap≤0.2D	(60~350)	feed velocity (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000

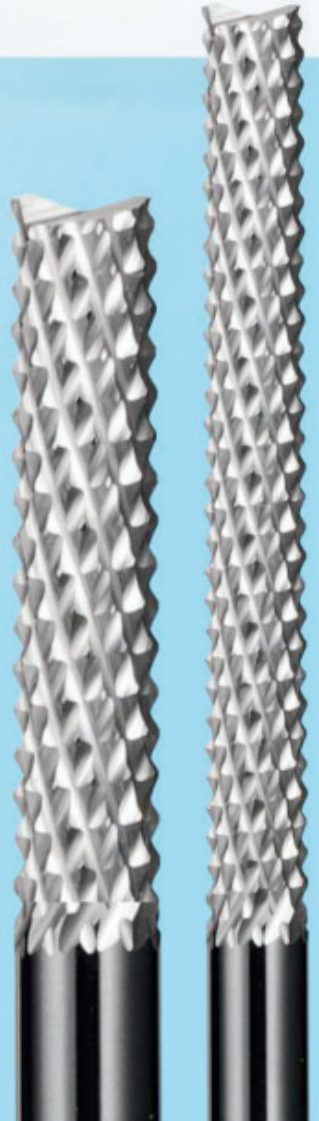
ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		tool Diameter (mm)								
					1	2	4	6	8	10	12	16	20
N	(SI<12%) Forging and casting aluminum alloy (<200HB) Copper alloy	ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
		ap≤1.5D	150	rote speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤0.2D	(60~350)	feed velocity (mm/min)	450	520	860	830	9600	1240	1500	1500	1510



Carbide Corn End Mill



- Applicable material circuit board, glass fiber, resin milling and other precision hardware processing
- The chip removal resistance is small, the chip removal is smooth, no glitches or scrap left.
- Unique knife edge mirror grinding process



Improved edge wear resistance and tool rigidity

WORLD WIDE RELIABLE PARTNERS



CUSTOM DESIGN

GLASS FIBER, CARBON FIBER

Corn End Mill For Composite Material

YMXD

AL

HRC
55

S

Unit

(mm)

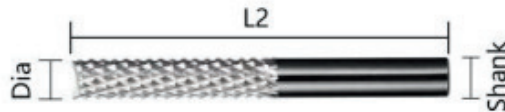
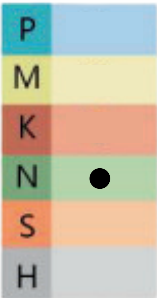
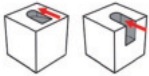
D

D

Tol

0

-0.015



D	L1	D2	L2
mm	mm	mm	mm
4	12	4	45
4	17	4	45
4	22	4	45
4	25	4	50
4	28	4	50
4	32	4	55
6	17	6	50
6	22	6	50
6	25	6	50
6	28	6	60
6	32	6	60
6	42	6	75
6	52	6	85
8	25	8	60
8	32	8	60
8	35	8	75
8	42	8	75
10	42	10	75
10	52	10	100
12	42	12	75
12	52	12	100

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



CNC imported integral tungsten steel drill



- 0.4μm micro-particle tungsten steel raw material, with higher wear resistance and high-speed cutting with higher hardness
- Suitable for steel, aluminum alloy, stainless steel, cast iron, short cut non-ferrous metal and nickel base alloy, titanium alloy and other most materials processing.

Special edge design, effectively solve the problem of sticky

WORLD WIDE RELIABL PARTNERS

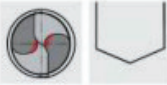


CUSTOM DESIGN

STEEL, STAINLESS STEEL, CAST IRON

Twist Drill

MHZ TiAlN

HRC
55

P	●
M	●
K	●
N	
S	
H	

Unit

(mm)

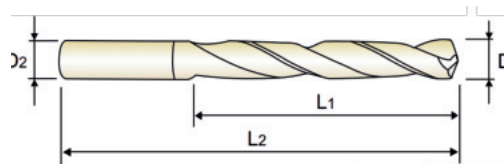
D

D

Tol

0

-0.015



D	L1	D2	L2
mm	mm	mm	mm
1-1.5	10	4	33
1.6-2	19	4	38
2.1-2.5	19	4	38
2.6-3	19	4	38
3.1-3.5	19	4	38
3.6-4	23	4	45
4.1-4.5	23	6	45
4.6-5	25	6	50
5.1-5.5	25	6	50
5.6-6	25	6	50
6.1-6.5	28	8	55
6.6-7	28	8	55
7.1-7.5	30	8	60
7.6-8	30	8	60
8.1-8.5	30	10	60
8.6-9	33	10	65
9.1-9.5	33	10	65
9.6-10	35	10	70
10.1-10.5	35	10	70

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



CUSTOM DESIGN

STEEL, STAINLESS STEEL, CAST IRON

Twist Drill

MHZ TiAlN

HRC
55

Unit (mm)

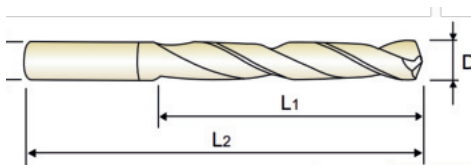
D D

Tol 0

-0.015



P	●
M	●
K	●
N	
S	
H	



D	L1	D2	L2
mm	mm	mm	mm
10.6-11	38	10	75
11.1-11.5	38	12	75
11.6-12	38	12	75
12.1-12.5	35	14	75
12.6-13	35	14	75
13.1-13.5	40	14	80
13.6-14	40	14	80
14.1-14.5	40	16	80
14.6-15	40	16	80
15.1-15.5	40	16	80
15.6-16	40	16	80
16.1-16.5	40	18	80
17	45	18	80
17.5	45	18	80
18	45	18	80
18.5	45	20	80
19	45	20	80
19.5	45	20	80
20	45	20	80

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



CUSTOM DESIGN

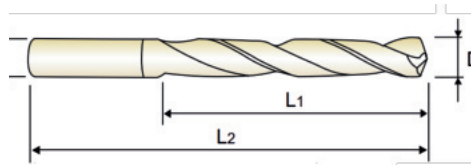
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Twist Drill



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)
D	D
To1	0
	-0.015



D	L1	D2	L2
mm	mm	mm	mm
1.0-1.5	16	4	33
1.6-2.0	18	4	38
2.1-2.5	18	4	38
2.6-3.0	18	4	38
3.1-3.5	18	4	38
3.6-4.0	23	4	45
4.1-4.5	23	6	45
4.6-5.0	25	6	50
5.1-5.5	25	6	50
5.6-6.0	25	6	50
6.1-6.5	28	8	55
6.6-7.0	28	8	55
7.1-7.5	30	8	60
7.6-8.0	30	8	60
8.1-8.5	30	10	60
8.6-9.0	33	10	65
9.1-9.5	33	10	65
9.6-10.0	35	10	70
10.1-10.5	35	12	70
10.6-11.0	38	12	75

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	(<45HRC) Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	(<32HRC) Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



CUSTOM DESIGN

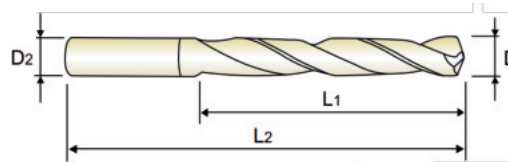
STEEL, STAINLESS STEEL, CAST IRON, HIGH HARDNESS STEEL

Twist Drill



P	●
M	●
K	●
N	●
S	●
H	●

Unit	(mm)
D	D
To1	0
	-0.015



D	L1	D2	L2
mm	mm	mm	mm
11.1-11.5	38	12	75
11.6-12	38	12	75
12.1-12.5	38	12	75
12.6-13.0	38	14	75
13.1-13.5	38	14	75
13.6-14.0	40	14	80
14.1-14.5	40	14	80
14.6-15.0	40	16	80
15.1-15.5	40	16	80
15.6-16.0	40	16	80
16.1-16.5	40	16	80
17	40	18	80
17.5	40	18	80
18	40	18	80
18.5	40	18	80
19	40	20	80
19.5	40	20	80
20	40	20	80
20.5	40	20	80
21	40	22	80
22	40	22	80

ISO	Workpiece Material	(mm) Depth of cut	Vc m/min		Tool Diameter (mm)							
					0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	Carbon steel alloy steel (50HRC) Alloy Steel	ap≤0.5D	90	rote speed (min-1)	35830	31850	28600	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		ap≤0.5D	70	rote speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
		ap≤0.05D		feed velocity (mm/min)	840	840	850	820	800	780	820	2000
M	stainless steel	ap≤0.5D	60	rote speed (min-1)	23890	21230	19110	15920	13650	11940	10620	5840
		ap≤0.03D		feed velocity (mm/min)	760	760	760	730	740	720	740	2530
K	Gry cast iron, nodular cast iron (35-45HRC) High alloy cast iron	ap≤0.5D	90	rote speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		ap≤0.05D		feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		ap≤0.5D	80	rote speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		ap≤0.05D		feed velocity (mm/min)	830	850	820	760	800	860	910	2440

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.