



SOLID CARBIDE END MILLS

Professional Cutting Tools for Precision Machining

DIAMETER RANGE
1/64" to 1"

FLUTE OPTIONS
2 · 3 · 4 Flute

COATINGS
TiN · TiCN · AlTiN · Uncoated

MADE IN USA
100% American Materials



TiN Coated · Gold



TiCN BC coated Bronze



AlTiN Coated · Black

COMPLETE PRODUCT RANGE:

- Standard Length Square End Mills
- Standard Length Ball End Mills
- Long Length Square End Mills
- Long Length Ball End Mills
- TiN Coated · Series 125 / 140
- TiCN Coated · Series 127 / 143
- AlTiN Coated · Series 130 / 145
- Uncoated · Series 150 / 155

PRECISION ENGINEERED · SOLID CARBIDE · MADE IN USA · ADVANCED GEOMETRY · ISO QUALITY STANDARDS

About ShopToolUSA



ShopToolUSA is your trusted source for professional-grade solid carbide end mills, precision-engineered for modern CNC machining. Every tool is **MADE IN USA** using 100% American-made materials, backed by advanced manufacturing with over 170 CNC machines and five dedicated coating systems — enabling same-day custom manufacturing and a 98% fill rate direct from stock.

Our range covers Standard and Long Length in Square and Ball End geometries, 2/3/4 flute, diameters 1/64" to 1", with TiN, TiCN, AlTiN and uncoated options.

★ MADE IN USA 100% American materials	★ Advanced Coatings TiN · TiCN · AlTiN	★ Precision Ground Advanced flute geometry
★ 1/64"–1" Diameter Full size range	★ 2 · 3 · 4 Flute All applications	★ Std & Long Length For every setup

Coating Technology Comparison

Choosing the right coating dramatically extends tool life and improves surface finish. AlTiN offers 38 GPa hardness and 900°C thermal resistance for dry high-speed machining. TiCN excels in interrupted cuts with ultra-low friction (0.20).

Property	TiN (Gold)	TiCN (Bronze)	TiAlN (Dark Gray)	AlTiN (Black)
Nanohardness (GPa)	24	32	32	38
Coeff. of Friction	0.55	0.20	0.60	0.70
Thickness	1–7 µm	1–8 µm	2–0 µm	2–2 µm
Thermal Threshold	600°C	400°C	750°C	900°C
Applications	Cutting, forming, injection molding	Interrupted cutting, milling & tapping, stamping	Drilling, milling, reaming, stable finishing & roughing	High heat resistance, dry high-speed machining, hard mat.

STANDARD LENGTH · SINGLE END SQUARE · 2-3-4 FLUTE

Series 125 · 127 · 130 | Dia: 1/64"-1"

Standard length square end mills for side milling, slotting, profiling and pocketing. TiN (Gold), TiCN/HTC Progressive (Bronze) and AlTiN/HTC Hard Coat (Black), 2-3-4 flute, diameter range 1/64"-1".

SERIES 125 · TiN · Gold

Titanium Nitride | 2-3-4 Flute | Dia: 1/64"-1"



DIA	FL	OAL	2-FL#	3-FL#	4-FL#	DIA	FL	OAL	2-FL#	3-FL#	4-FL#
1/64"	1/16"	1-1/2"	125-2015	125-3015	125-4015	15/64"	3/4"	2-1/2"	125-2234	125-3234	125-4234
1/32"	3/32"	1-1/2"	125-2031	125-3031	125-4031	1/4"	3/4"	2-1/2"	125-2250	125-3250	125-4250
3/64"	1/8"	1-1/2"	125-2046	125-3046	125-4046	17/64"	7/8"	2-1/2"	125-2265	125-3265	125-4265
1/16"	3/16"	1-1/2"	125-2062	125-3062	125-4062	9/32"	7/8"	2-1/2"	125-2281	125-3281	125-4281
5/64"	1/4"	1-1/2"	125-2078	125-3078	125-4078	5/16"	7/8"	2-1/2"	125-2312	125-3312	125-4312
3/32"	3/8"	1-1/2"	125-2093	125-3093	125-4093	11/32"	7/8"	2-1/2"	125-2343	125-3343	125-4343
7/64"	3/8"	1-1/2"	125-2109	125-3109	125-4109	3/8"	1"	2-1/2"	125-2375	120-3375	125-4375
1/8"	1/2"	1-1/2"	125-2125	125-3125	125-4125	7/16"	1"	2-1/2"	125-2437	120-3437	125-4437
9/64"	9/16"	2"	125-2140	125-3140	125-4140	1/2"	1"	3"	125-2500	120-3500	125-4500
5/32"	9/16"	2"	125-2156	125-3156	125-4156	9/16"	1-1/4"	3-1/2"	125-2562	125-3562	125-4562
11/64"	9/16"	2"	125-2171	125-3171	125-4171	5/8"	1-1/4"	3-1/2"	125-2625	125-3625	125-4625
3/16"	5/8"	2"	125-2187	125-3187	125-4187	3/4"	1-1/2"	4"	125-2750	125-3750	125-4750
13/64"	5/8"	2-1/2"	125-2203	125-3203	125-4203	7/8"	1-1/2"	4"	125-2875	125-3875	125-4875
7/32"	5/8"	2-1/2"	125-2218	125-3218	125-4218	1"	1-1/2"	4"	125-2100	125-3100	125-4100

SERIES 127 · TiCN · Bronze

HTC Progressive Coat | 2-3-4 Flute | Dia: 1/32"-1"



DIA	FL	OAL	2-FL#	3-FL#	4-FL#	DIA	FL	OAL	2-FL#	3-FL#	4-FL#
1/32"	3/32"	1-1/2"	127-2031	127-3031	127-4031	3/8"	1"	2-1/2"	127-2375	127-3375	127-4375
3/64"	1/8"	1-1/2"	127-2046	127-3046	127-4046	7/16"	1"	2-1/2"	127-2437	127-3437	127-4437
1/16"	3/16"	1-1/2"	127-2062	127-3062	127-4062	1/2"	1"	3"	127-2500	127-3500	127-4500
5/64"	1/4"	1-1/2"	127-2078	127-3078	127-4078	9/16"	1-1/4"	3-1/2"	127-2562	127-3562	127-4562
3/32"	3/8"	1-1/2"	127-2093	127-3093	127-4093	5/8"	1-1/4"	3-1/2"	127-2625	127-3625	127-4625
1/8"	1/2"	1-1/2"	127-2125	127-3125	127-4125	3/4"	1-1/2"	4"	127-2750	127-3750	127-4750
3/16"	5/8"	2"	127-2187	127-3187	127-4187	7/8"	1-1/2"	4"	127-2875	127-3875	127-4875
1/4"	3/4"	2-1/2"	127-2250	127-3250	127-4250	1"	1-1/2"	4"	127-2100	127-3100	127-4100
5/16"	7/8"	2-1/2"	127-2312	127-3312	127-4312						

SERIES 130 · AlTiN · Black

HTC Hard Coat | 2-3-4 Flute | Dia: 1/32"-1"



DIA	FL	OAL	2-FL#	3-FL#	4-FL#	DIA	FL	OAL	2-FL#	3-FL#	4-FL#
1/32"	3/32"	1-1/2"	130-2031	130-3031	130-4031	3/8"	7/8"	2-1/2"	130-2375	130-3375	130-4375
3/64"	1/8"	1-1/2"	130-2046	130-3046	130-4046	7/16"	1"	2-1/2"	130-2437	130-3437	130-4437
1/16"	3/16"	1-1/2"	130-2062	130-3062	130-4062	1/2"	1"	3"	130-2500	130-3500	130-4500
5/64"	1/4"	1-1/2"	130-2078	130-3078	130-4078	9/16"	1-1/4"	3-1/2"	130-2562	130-3562	130-4562
3/32"	3/8"	1-1/2"	130-2093	130-3093	130-4093	5/8"	1-1/4"	3-1/2"	130-2625	130-3625	130-4625
1/8"	1/2"	1-1/2"	130-2125	130-3125	130-4125	3/4"	1-1/2"	4"	130-2750	130-3750	130-4750
3/16"	5/8"	2"	130-2187	130-3187	130-4187	7/8"	1-1/2"	4"	130-2875	130-3875	130-4875
1/4"	3/4"	2-1/2"	130-2250	130-3250	130-4250	1"	1-1/2"	4"	130-2100	130-3100	130-4100
5/16"	7/8"	2-1/2"	130-2312	130-3312	130-4312						

STANDARD LENGTH · SINGLE END BALL · 2-4 FLUTE

Series 140 · 143 · 145 | Dia: 1/64"-1"

Standard length ball nose end mills for 3D profiling, contour milling, cavity machining and complex surface finishing. TiN, TiCN and AlTiN coatings, 2 and 4 flute, diameter range 1/64"-1".

SERIES 140 · TiN · Gold

Titanium Nitride | 2-4 Flute | Dia: 1/64"-1"



DIA	FLUTE LEN	OA LEN	2-FLUTE PART#	4-FLUTE PART#	DIA	FLUTE LEN	OA LEN	2-FLUTE PART#	4-FLUTE PART#
1/64"	1/16"	1-1/2"	140-2015	140-4015	5/16"	7/8"	2-1/2"	140-2312	140-4312
1/32"	3/32"	1-1/2"	140-2031	140-4031	3/8"	1"	2-1/2"	140-2375	140-4375
3/64"	1/8"	1-1/2"	140-2046	140-4046	7/16"	1"	2-1/2"	140-2437	140-4437
1/16"	3/16"	1-1/2"	140-2062	140-4062	1/2"	1"	3"	140-2500	140-4500
5/64"	1/4"	1-1/2"	140-2078	140-4078	9/16"	1-1/4"	3-1/2"	140-2562	140-4562
3/32"	3/8"	1-1/2"	140-2093	140-4093	5/8"	1-1/4"	3-1/2"	140-2625	140-4625
7/64"	3/8"	1-1/2"	140-2109	140-4109	3/4"	1-1/2"	4"	140-2750	140-4750
1/8"	1/2"	1-1/2"	140-2125	140-4125	7/8"	1-1/2"	4"	140-2875	140-4875
3/16"	5/8"	2"	140-2187	140-4187	1"	1-1/2"	4"	140-2100	140-4100
1/4"	3/4"	2-1/2"	140-2250	140-4250					

SERIES 143 · TiCN · Bronze

HTC Progressive Coat | 2-4 Flute | Dia: 1/32"-1"



DIA	FLUTE LEN	OA LEN	2-FLUTE PART#	4-FLUTE PART#	DIA	FLUTE LEN	OA LEN	2-FLUTE PART#	4-FLUTE PART#
1/32"	3/32"	1-1/2"	143-2031	143-4031	3/8"	1"	2-1/2"	143-2375	143-4375
3/64"	1/8"	1-1/2"	143-2046	143-4046	7/16"	1"	2-1/2"	143-2437	143-4437
1/16"	3/16"	1-1/2"	143-2062	143-4062	1/2"	1"	3"	143-2500	143-4500
5/64"	1/4"	1-1/2"	143-2078	143-4078	9/16"	1-1/4"	3-1/2"	143-2562	143-4562
3/32"	3/8"	1-1/2"	143-2093	143-4093	5/8"	1-1/4"	3-1/2"	143-2625	143-4625
1/8"	1/2"	1-1/2"	143-2125	143-4125	3/4"	1-1/2"	4"	143-2750	143-4750
3/16"	5/8"	2"	143-2187	143-4187	7/8"	1-1/2"	4"	143-2875	143-4875
1/4"	3/4"	2-1/2"	143-2250	143-4250	1"	1-1/2"	4"	143-2100	143-4100
5/16"	7/8"	2-1/2"	143-2312	143-4312					

SERIES 145 · AlTiN · Black

HTC Hard Coat | 2-4 Flute | Dia: 1/32"-1"



DIA	FLUTE LEN	OA LEN	2-FLUTE PART#	4-FLUTE PART#	DIA	FLUTE LEN	OA LEN	2-FLUTE PART#	4-FLUTE PART#
1/32"	3/32"	1-1/2"	145-2031	145-4031	3/8"	1"	2-1/2"	145-2375	145-4375
3/64"	1/8"	1-1/2"	145-2046	145-4046	7/16"	1"	2-1/2"	145-2437	145-4437
1/16"	3/16"	1-1/2"	145-2062	145-4062	1/2"	1"	3"	145-2500	145-4500
5/64"	1/4"	1-1/2"	145-2078	145-4078	9/16"	1-1/4"	3-1/2"	145-2562	145-4562
3/32"	3/8"	1-1/2"	145-2093	145-4093	5/8"	1-1/4"	3-1/2"	145-2625	145-4625
1/8"	1/2"	1-1/2"	145-2125	145-4125	3/4"	1-1/2"	4"	145-2750	145-4750
3/16"	5/8"	2"	145-2187	145-4187	7/8"	1-1/2"	4"	145-2875	145-4875
1/4"	3/4"	2-1/2"	145-2250	145-4250	1"	1-1/2"	4"	145-2100	145-4100
5/16"	7/8"	2-1/2"	145-2312	145-4312					

LONG LENGTH · SINGLE END SQUARE · 2-4 FLUTE

Series 150 · 152 · 154 · 160 | Dia: 1/8"-1"

Long length square end mills for deep cavity work and extended reach — up to 2-1/4" flute and 5" O.A.L. Uncoated, TiN, TiCN and AlTiN, 2 and 4 flute.

SERIES 150 · UNCOATED

Bright Carbide | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	150-2125	150-4125
3/16"	3/4"	2-1/2"	150-2187	150-4187
1/4"	1-1/8"	3"	150-2250	150-4250
5/16"	1-1/8"	3"	150-2312	150-4312
3/8"	1-1/8"	3"	150-2375	150-4375
7/16"	2"	4"	150-2437	150-4437
1/2"	1-1/2"	4"	150-2504	150-4504
1/2"	2"	4"	150-2500	150-4500
5/8"	2-1/4"	5"	150-2625	150-4625
3/4"	2-1/4"	5"	150-2750	150-4750
1"	2-1/4"	5"	150-2100	150-4100

SERIES 152 · TiN · Gold

Titanium Nitride | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN		2-FL PART#	4-FL PART#
1/8"	3/4"		152-2125	152-4125
3/16"	3/4"		152-2187	152-4187
1/4"	1-1/8"		152-2250	152-4250
5/16"	1-1/8"		152-2312	152-4312
3/8"	1-1/8"		152-2375	152-4375
7/16"	2"		152-2437	152-4437
1/2"	1-1/2"		152-2504	152-4504
1/2"	2"		152-2500	152-4500
5/8"	2-1/4"		152-2625	152-4625
3/4"	2-1/4"		152-2750	152-4750
1"	2-1/4"		152-2100	152-4100

RECOMMENDED MATERIALS

Aluminum alloys · Carbon steel · Alloy steel · Stainless steel · Cast iron · Copper alloys

TYPICAL APPLICATIONS

Deep cavities · Side milling · Full-slot pocketing · Extended reach profiling · Step milling

COATING SELECTION GUIDE

Uncoated → general purpose · TiN → ferrous metals · TiCN → interrupted cuts · AlTiN → hard & dry machining

SERIES 154 · TiCN · Bronze

HTC Progressive Coat | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	154-2125	154-4125
3/16"	3/4"	2-1/2"	154-2187	154-4187
1/4"	1-1/8"	3"	154-2250	154-4250
5/16"	1-1/8"	3"	154-2312	154-4312
3/8"	1-1/8"	3"	154-2375	154-4375
7/16"	2"	4"	154-2437	154-4437
1/2"	1-1/2"	4"	154-2504	154-4504
1/2"	2"	4"	154-2500	154-4500
5/8"	2-1/4"	5"	154-2625	154-4625
3/4"	2-1/4"	5"	154-2750	154-4750
1"	2-1/4"	5"	154-2100	154-4100

SERIES 160 · AlTiN · Black

HTC Hard Coat | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	160-2125	160-4125
3/16"	3/4"	2-1/2"	160-2187	160-4187
1/4"	1-1/8"	3"	160-2250	160-4250
5/16"	1-1/8"	3"	160-2312	160-4312
3/8"	1-1/8"	3"	160-2375	160-4375
7/16"	2"	4"	160-2437	160-4437
1/2"	1-1/2"	4"	160-2504	160-4504
1/2"	2"	4"	160-2500	160-4500
5/8"	2-1/4"	5"	160-2625	160-4625
3/4"	2-1/4"	5"	160-2750	160-4750
1"	2-1/4"	5"	160-2100	160-4100

RECOMMENDED MATERIALS

Aluminum alloys · Carbon steel · Alloy steel · Stainless steel · Cast iron · Copper alloys

TYPICAL APPLICATIONS

Deep cavities · Side milling · Full-slot pocketing · Extended reach profiling · Step milling

COATING SELECTION GUIDE

Uncoated → general purpose · TiN → ferrous metals · TiCN → interrupted cuts · AlTiN → hard & dry machining

LONG LENGTH · SINGLE END BALL · 2-4 FLUTE

Series 155 · 157 · 159 · 165 | Dia: 1/8"-1"

Long length ball nose end mills for deep 3D contouring and extended reach pocket milling — up to 2-1/4" flute and 5" O.A.L. Uncoated, TiN, TiCN and AlTiN.

SERIES 155 · UNCOATED

Bright Carbide | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	155-2125	155-4125
3/16"	3/4"	2-1/2"	155-2187	155-4187
1/4"	1-1/8"	3"	155-2250	155-4250
5/16"	1-1/8"	3"	155-2312	155-4312
3/8"	1-1/8"	3"	155-2375	155-4375
7/16"	2"	4"	155-2437	155-4437
1/2"	1-1/2"	4"	155-2504	155-4504
1/2"	2"	4"	155-2500	155-4500
5/8"	2-1/4"	5"	155-2625	155-4625
3/4"	2-1/4"	5"	155-2750	155-4750
1"	2-1/4"	5"	155-2100	155-4100

SERIES 157 · TiN · Gold

Titanium Nitride | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	157-2125	157-4125
3/16"	3/4"	2-1/2"	157-2187	157-4187
1/4"	1-1/8"	3"	157-2250	157-4250
5/16"	1-1/8"	3"	157-2312	157-4312
3/8"	1-1/8"	3"	157-2375	157-4375
7/16"	2"	4"	157-2437	157-4437
1/2"	1-1/2"	4"	157-2504	157-4504
1/2"	2"	4"	157-2500	157-4500
5/8"	2-1/4"	5"	157-2625	157-4625
3/4"	2-1/4"	5"	157-2750	157-4750
1"	2-1/4"	5"	157-2100	157-4100

RECOMMENDED MATERIALS

Aluminum alloys · Carbon steel · Alloy steel · Stainless steel · P20 mold steel · Hardened steel

TYPICAL APPLICATIONS

Deep 3D contouring · Cavity profiling · Draft angle milling · Radius blending · Surface finishing

COATING SELECTION GUIDE

Uncoated → general purpose · TiN → ferrous metals · TiCN → interrupted cuts · AlTiN → hard & dry machining

SERIES 159 · TiCN · Bronze

HTC Progressive Coat | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	159-2125	159-4125
3/16"	3/4"	2-1/2"	159-2187	159-4187
1/4"	1-1/8"	3"	159-2250	159-4250
5/16"	1-1/8"	3"	159-2312	159-4312
3/8"	1-1/8"	3"	159-2375	159-4375
7/16"	2"	4"	159-2437	159-4437
1/2"	1-1/2"	4"	159-2504	159-4504
1/2"	2"	4"	159-2500	159-4500
5/8"	2-1/4"	5"	159-2625	159-4625
3/4"	2-1/4"	5"	159-2750	159-4750
1"	2-1/4"	5"	159-2100	159-4100

SERIES 165 · AlTiN · Black

HTC Hard Coat | 2-4 Flute | Dia: 1/8"-1"



CUTTER DIA	FLUTE LEN	O.A. LEN	2-FL PART#	4-FL PART#
1/8"	3/4"	2-1/2"	165-2125	165-4125
3/16"	3/4"	2-1/2"	165-2187	165-4187
1/4"	1-1/8"	3"	165-2250	165-4250
5/16"	1-1/8"	3"	165-2312	165-4312
3/8"	1-1/8"	3"	165-2375	165-4375
7/16"	2"	4"	165-2437	165-4437
1/2"	1-1/2"	4"	165-2504	165-4504
1/2"	2"	4"	165-2500	165-4500
5/8"	2-1/4"	5"	165-2625	165-4625
3/4"	2-1/4"	5"	165-2750	165-4750
1"	2-1/4"	5"	165-2100	165-4100

RECOMMENDED MATERIALS

Aluminum alloys · Carbon steel · Alloy steel · Stainless steel · P20 mold steel · Hardened steel

TYPICAL APPLICATIONS

Deep 3D contouring · Cavity profiling · Draft angle milling · Radius blending · Surface finishing

COATING SELECTION GUIDE

Uncoated → general purpose · TiN → ferrous metals · TiCN → interrupted cuts · AlTiN → hard & dry machining



Order & Contact Information

To place an order, request a custom quote or inquire about special specifications, visit our website or contact our sales team. Customer service is available Monday–Friday, 8:00 AM – 5:30 PM.

■ Website	www.shoptoolusa.com
■ Online Ordering	Available 24/7 at www.shoptoolusa.com
■ Email	sales@shoptoolusa.com
■ Customer Service	Monday – Friday 8:00 AM – 5:30 PM
■ Manufacturing	MADE IN USA · 100% American-Made Materials

All dimensions in inches. Specifications and part numbers subject to change without notice. Custom specifications available on request. All products manufactured in the United States of America. ©2024 ShopToolUSA.

PRODUCT SERIES QUICK REFERENCE			
Standard Length Square	Series 125 · 127 · 130	Standard Length Ball	Series 140 · 143 · 145
Long Length Square	Series 150 · 152 · 154 · 160	Long Length Ball	Series 155 · 157 · 159 · 165