

TOOLS OF THE TRADE

AUGUST 2023



Choose The Right End Mill For The Job

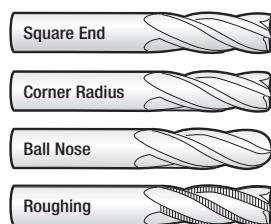
All at equal quality, better pricing, & in stock in USA



At Sowa Tool, we strive to make our customers' experience easy and enjoyable and take great pride in our reputation as a trusted and reliable brand. By combining our 6-plus decades of industry expertise with our agility and size to provide tailored and one-stop-shop solutions, we help our customers reach their goals. Our long-term customers have come to know us for our dedication to quality and customer satisfaction.

Our GS Tooling branded products are guaranteed to meet the most stringent industry benchmarks. The performance of GS Tooling end mills, at such a reasonable cost, is without a doubt one of the best deals available on the marketplace today.

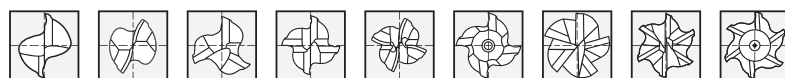
TYPES:



LENGTHS:



FLUTES:



FINISHES:



Compare our End Mills with other brands... the biggest difference you'll find is unrivaled value for your money!



OTHER
BRANDS

Quality Material:		
Solid Sub-Micron Micrograin Carbide	✓	✓
Superior Tolerance:		
Ground to a Tolerance of h6	✓	✓
Variety of Finishes:		
Uncoated for Aluminum	✓	✓
Titanium Carbonitride (TiCN) for Aluminum	✓	✓
Uncoated	✓	✓
Titanium Aluminum Nitride (TiAlN)	✓	✓
Aluminum Titanium Nitride (AlTiN)	✓	✓
2 to 8-Flutes:		
Available in 2, 3, 4, 5, 6 & 8-Flutes	✓	✓
Most Common Types:		
Available in Square End, Ball Nose, Corner Radius & Roughing	✓	✓
Other:		
Stock available in USA & Canada	✓	✓
Decades of performance	✓	✓
UNRIVALED VALUE FOR YOUR MONEY	✓	✗

Carbide End Mills for Aluminum

2-Flute Square End, 40° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$
1/4	1/4	3/4	2-1/2	101020	15.43
3/8	3/8	1	2-1/2	101028	26.95
1/2	1/2	1	3	101032	43.18
5/8	5/8	1-1/4	3-1/2	101036	83.26
3/4	3/4	1-1/2	4	101040	122.08

2-Flute Corner Radius, 35° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Corner Radius	Uncoated Code No.	Price \$	TiCN Coated Code No.	Price \$
1/4	1/4	3/4	2-1/2	0.010	153212	15.43	153404	18.98
3/8	3/8	1	2-1/2	0.015	153216	26.95	153408	33.15
1/2	1/2	1	3	0.020	153220	43.18	153412	53.11
5/8	5/8	1-1/4	3-1/2	0.020	153222	83.26	153414	102.41
3/4	3/4	1-1/2	4	0.030	153224	122.08	153416	150.16

End Mills designed specifically for milling aluminum and all non-ferrous materials, made of solid, sub-micron micrograin carbide.

40° helix permits much higher speed and feed rates without chip loading. Spindle and feed rates can be increased by fifty percent for greater productivity while maintaining excellent part surface finish. **35° helix** is slightly less aggressive but are supplied with a corner radius to help break up sharp corners, distributing cutting forces more evenly and

3-Flute Square End, 40° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiCN Coated Code No.	Price \$
1/4	1/4	3/4	2-1/2	153324	15.43	153374	18.98
3/8	3/8	1	2-1/2	153332	26.95	153382	33.15
1/2	1/2	1	3	153336	43.18	153386	53.11
5/8	5/8	1-1/4	3-1/2	153340	83.26	153390	102.41
3/4	3/4	1-1/2	4	153344	122.08	153394	150.16

3-Flute Corner Radius, 35° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Corner Radius	Uncoated Code No.	Price \$	TiCN Coated Code No.	Price \$
1/4	1/4	3/4	2-1/2	0.005	153154	15.43	153048	18.98
3/8	3/8	1	2-1/2	0.005	153158	26.95	153052	33.15
1/2	1/2	1-1/4	3	0.005	153162	43.18	153056	53.11
5/8	5/8	1-5/8	3-1/2	0.005	153164	83.26	153058	102.41
3/4	3/4	1-5/8	4	0.005	153166	122.08	153060	150.16

helping to prevent wear and chipping while prolonging functional tool life. **Choose 3-flute** designs for slotting and profiling applications where faster chip evacuation is required while machining at higher speeds.

Titanium Carbonitride (TiCN) coating offers high surface lubricity, reduces friction, and increases chip flow. The resistance in heat and hardness allows the tool to run at 20-30% higher machining speeds than uncoated end mills.

Square End Carbide End Mills

2-Flute Square End, 30° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiAlN Code No.	Price \$	AlTiN Code No.	Price \$
1/4	1/4	3/4	2-1/2	103854	14.65	102810	19.98	104608	20.75
3/8	3/8	1	2-1/2	103857	25.62	102814	33.55	104616	34.90
1/2	1/2	1	3	103859	41.01	102818	50.06	104620	52.21
5/8	5/8	1-1/4	3-1/2	103887	79.09	102822	92.18	104624	96.33
3/4	3/4	1-1/2	4	103889	115.95	102826	131.40	104628	137.50

3-Flute Square End, 30° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiAlN Code No.	Price \$
1/4	1/4	3/4	2-1/2	101092	14.65	102371	19.98
3/8	3/8	1	2-1/2	101097	25.62	102381	33.55
1/2	1/2	1	3	101099	41.01	102384	50.06
5/8	5/8	1-1/4	3-1/2	101101	79.09	102386	92.18
3/4	3/4	1-1/2	4	101103	115.95	102388	131.40

4-Flute Square End, 30° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiAlN Code No.	Price \$	AlTiN Code No.	Price \$
1/4	1/4	3/4	2-1/2	103864	14.65	102840	19.98	104708	20.75
3/8	3/8	1	2-1/2	103867	25.62	102844	33.55	104716	34.90
1/2	1/2	1	3	103869	41.01	102848	50.06	104720	52.21
5/8	5/8	1-1/4	3-1/2	103934	79.09	102852	92.18	104724	96.33
3/4	3/4	1-1/2	4	103936	115.95	102856	131.40	104728	137.50

General purpose, sub-micron micrograin carbide end mills ideal for deeper slotting applications where a balance of cutting edges, chip evacuation and heat dissipation is required. All end mills are center cutting and can be used for plunging applications.

3-flute end mills offer maximum chip clearance therefore reducing chip packing.

Ball end mills have a helical gash on ball end for reduced cutting force and better chip

Ball Nose Carbide End Mills

2-Flute Ball Nose, 30° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiAlN Code No.	Price \$	AlTiN Code No.	Price \$
1/4	1/4	3/4	2-1/2	103874	18.21	102866	23.50	104658	24.67
3/8	3/8	1	2-1/2	103875	29.21	102870	37.19	104666	39.05
1/2	1/2	1	3	103876	54.36	102872	63.44	104670	66.61
5/8	5/8	1-1/4	3-1/2	103893	87.92	102876	100.99	104674	106.04
3/4	3/4	1-1/2	4	103895	129.39	102878	144.83	104678	152.07

3-Flute Ball Nose, 30° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiAlN Code No.	Price \$
1/4	1/4	3/4	2-1/2	101122	18.21	102474	23.50
3/8	3/8	1	2-1/2	101127	29.21	102479	37.19
1/2	1/2	1	3	101129	54.36	102483	63.44
5/8	5/8	1-1/4	3-1/2	101131	87.92	102487	100.99
3/4	3/4	1-1/2	4	101133	129.39	102491	144.83

4-Flute Ball Nose, 30° Helix



Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Uncoated Code No.	Price \$	TiAlN Code No.	Price \$	AlTiN Code No.	Price \$
1/4	1/4	3/4	2-1/2	103882	18.21	102886	23.50	104758	24.67
3/8	3/8	1	2-1/2	103884	29.21	102890	37.19	104766	39.05
1/2	1/2	1	3	103885	54.36	102892	63.44	104770	66.61
5/8	5/8	1-1/4	3-1/2	103940	87.92	102896	100.99	104774	106.04
3/4	3/4	1-1/2	4	103942	129.39	102898	144.83	104778	152.07

evacuation. 4-flute ball nose end mills offer wear resistance and minimal deflection for excellent size control.

Both TiAlN and AlTiN coatings are designed for difficult to machine materials. TiAlN coating reduces heat in cases where interrupted cuts may be encountered. **AlTiN coating** is better for dry machining applications, non-interrupted cuts and for abrasive applications.



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