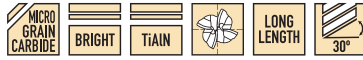


4-Flute Ball Nose Long Length

Added flute and overall length combine for greater reach when deep slotting or milling. These end mills have the capability to mill thicker material in one pass, eliminating the interrupted cut that may be present with regular length end mills.



Bright: Speeds & Feeds > P. A32

TiAlN: Speeds & Feeds > P. A35

Cutting Dia.	Shank Dia.	Flute Length	Overall Length	Bright Code No.	Price \$	TiAlN Code No.	Price \$
Inch							
1/8	1/8	3/4	2-1/4	102991	15.41	102942	18.03
3/16	3/16	3/4	2-1/2	102992	15.08	102944	17.73
1/4	1/4	1-1/8	3	102993	30.35	102946	35.84
5/16	5/16	1-1/8	3	102994	37.49	102948	45.70
3/8	3/8	1-1/8	3	102995	42.19	102950	50.37
7/16	7/16	2	4	102996	63.72	102952	75.81
1/2	1/2	2	4	102997	65.09	102954	77.16
5/8	5/8	2-1/4	5	102998	135.56	102956	155.53
3/4	3/4	2-1/4	5	102999	222.46	102958	245.59
1	1	2-1/4	5	103000	282.57	102960	297.45
Metric							
3	3	19	57	101620	25.02	101764	27.66
4	4	19	57	101621	25.56	101765	29.68
5	5	25	64	101622	27.60	101766	33.06
6	6	28	76	101623	31.95	101767	37.40
8	8	29	76	101624	39.47	101768	47.64
10	10	32	76	101625	45.58	101769	54.91
12	12	51	102	101626	68.59	101770	80.62
14	14	57	127	101627	128.64	-	-
16	16	57	127	101628	135.54	101772	155.53
18	18	57	127	101629	208.51	-	-
20	20	57	127	101630	229.25	101774	259.34
25	25	57	127	101631	363.77	-	-

4-Flute Ball Nose Extra Long Length

Extra Long Length End mills combine added flute and overall length for greater reach when deep slotting or milling. These end mills have the capability to mill much thicker material in a single pass, thereby eliminating the interrupted cut that may be present with regular length end mills.



Bright: Speeds & Feeds > P. A32

TiAlN: Speeds & Feeds > P. A35

Cutting Dia.	Shank Dia.	Flute Length	Overall Length	Bright Code No.	Price \$	TiAlN Code No.	Price \$
Inch							
1/8	1/8	1	3	102480	23.77	102580	27.02
3/16	3/16	1-1/8	3	102482	26.22	102582	30.34
1/4	1/4	1-1/2	4	102484	31.93	102584	38.36
5/16	5/16	1-5/8	4	102486	41.84	102586	52.23
3/8	3/8	1-3/4	4	102488	46.28	102588	56.69
7/16	7/16	3	6	102490	82.83	102590	99.77
1/2	1/2	3	6	102492	92.19	102592	109.12
5/8	5/8	3	6	102494	135.56	102594	138.75
3/4	3/4	3	6	102496	222.46	102596	245.59
1	1	3	6	102498	378.28	102598	408.36

Tolerances - Inch

Size	Diameter	Shank Diameter
3/32 thru 1"	+0.000"-0.002"	+0.0000"-0.0005"

Tolerances - Metric

Size	Diameter	Shank Diameter
1mm-25mm	+0.000mm-0.051mm	+0.000mm-0.013mm

Steel

Stainless Steel

Cast Iron/Hardened

Aluminum

4-Flute Ball Nose Double End Regular Length

The ball nose 4-flute centre cut design allows for excellent finish while contour milling.



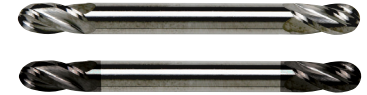
Bright: Speeds & Feeds > P. A32

TiAlN: Speeds & Feeds > P. A35

Cutting Dia.	Shank Dia.	Flute Length	Overall Length	Bright Code No.	Price \$	TiAlN Code No.	Price \$
Inch							
1/8	3/8	3/8	3-1/16	101360	45.70	101708	57.96
5/32	3/8	7/16	3-1/8	101361	45.70	-	-
3/16	3/8	1/2	3-1/4	101362	45.70	101726	57.96
7/32	3/8	9/16	3-3/8	101363	45.70	-	-
1/4	3/8	5/8	3-3/8	101364	45.70	101728	57.96
9/32	3/8	11/16	3-3/8	101365	46.28	-	-
5/16	3/8	3/4	3-1/2	101366	46.28	101739	68.07
11/32	3/8	3/4	3-1/2	101367	46.28	-	-
3/8	3/8	3/4	3-1/2	101368	46.28	101748	68.07
7/16	1/2	7/8	4	101369	63.72	-	-
1/2	1/2	1	4	101370	63.72	101763	77.16

4-Flute Ball Nose Double End Stub Length

These end mills have a shorter flute length which provides greater rigidity with less deflection for shallow milling or slotting. This series is ideal for use on high tensile alloys and heat treated steels.



Bright: Speeds & Feeds > P. A32

TiAlN: Speeds & Feeds > P. A35

Cutting Dia.	Shank Dia.	Flute Length	Overall Length	Bright Code No.	Price \$	TiAlN Code No.	Price \$
Inch							
1/32	1/8	5/64	1-1/2	101355	23.25	101776	27.24
3/64	1/8	3/32	1-1/2	101356	23.25	101777	27.24
1/16	1/8	1/8	1-1/2	101357	23.25	101778	27.24
3/32	1/8	3/16	1-1/2	101358	23.25	101779	27.24
1/8	1/8	1/4	1-1/2	101359	14.42	101802	18.41
5/32	3/16	5/16	2	101371	25.62	101803	29.61
3/16	3/16	3/8	2	101372	20.94	101804	24.92
7/32	1/4	1/2	2-1/2	101373	27.24	101805	36.87
1/4	1/4	1/2	2-1/2	101374	27.24	101806	35.44
5/16	5/16	1/2	2-1/2	101375	41.84	101807	46.17
3/8	3/8	1/2	2-1/2	101376	46.28	101808	48.32
7/16	7/16	9/16	2-3/4	101377	63.72	101809	75.24
1/2	1/2	5/8	3	101378	65.09	101832	75.24