

1-800-GRAINGER (472-4643)

Additional End Mill sizes, materials, and coatings are available on Grainger.com®.



General Purpose Finishing Cobalt Ball End Mills

■ 30° helix angle



TiN Finish
2 Flutes
437Z54

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
Bright (Uncoated) Finish					
2 Flutes					
1/8 in	3/8 in	2.3 in	3/8 in	Cleveland	2NFP8
1/8 in	3/8 in	2.3 in	3/8 in	OSG	35DG77
3/16 in	1/2 in	2.6 in	3/16 in	YG-1 Tool Company	55FP45
3/16 in	1/2 in	2.3 in	3/16 in	OSG	35DG78
1/4 in	5/8 in	3 in	3/8 in	YG-1 Tool Company	55FR25
1/4 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFR2
5/16 in	3/4 in	2.5 in	3/8 in	OSG	35DG80
3/8 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFR3
7/16 in	1 in	3 in	1/2 in	OSG	35DG98
1/2 in	1 in	3 in	1/2 in	YG-1 Tool Company	35V286
1/2 in	2 in	4 in	1/2 in	OSG	35DG97
9/16 in	1 1/8 in	3.1 in	1/2 in	YG-1 Tool Company	35V287
9/16 in	1 3/8 in	3.5 in	1/2 in	OSG	35DG87
9/16 in	1 3/8 in	4.6 in	1/2 in	OSG	35DH06
3/4 in	1 1/8 in	4.3 in	1/2 in	YG-1 Tool Company	35V290
3/4 in	1 1/8 in	5.3 in	3/4 in	YG-1 Tool Company	55FX44
7/8 in	1 7/8 in	4.1 in	3/4 in	OSG	35DG89
7/8 in	2 in	4.2 in	3/4 in	YG-1 Tool Company	35V292
1 1/4 in	1 3/8 in	3.8 in	3/4 in	YG-1 Tool Company	35V298
1 1/8 in	1 5/8 in	3.8 in	3/4 in	YG-1 Tool Company	35V296
1 1/2 in	1 5/8 in	4.1 in	3/4 in	YG-1 Tool Company	35V303
1 3/8 in	1 5/8 in	4.1 in	3/4 in	YG-1 Tool Company	35V301
1 in	2 1/4 in	4.7 in	1 in	OSG	35DG93
1 1/4 in	2 1/2 in	5 in	1 1/4 in	OSG	35DG95
1 in	2 1/2 in	7.2 in	1 in	YG-1 Tool Company	55FZ03
2 in	2 1/2 in	5 in	1 1/4 in	YG-1 Tool Company	35V305
4 Flutes					
1/8 in	3/8 in	2.3 in	3/8 in	Cleveland	2NFT8
3/16 in	1/2 in	2.3 in	3/8 in	Cleveland	2NFT9
3/16 in	1/2 in	2.3 in	3/8 in	YG-1 Tool Company	35V408
1/4 in	3/8 in	2.4 in	3/8 in	YG-1 Tool Company	35V409
1/4 in	1 1/4 in	3 in	3/8 in	YG-1 Tool Company	55FR30
5/16 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFU2
5/16 in	1 3/8 in	3.1 in	3/8 in	YG-1 Tool Company	55FT01
3/8 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFU3
3/8 in	1 1/2 in	3.2 in	3/8 in	YG-1 Tool Company	55FT54
1/2 in	1 1/4 in	3.2 in	3/8 in	OSG	35DJ91
1/2 in	1 1/4 in	3.2 in	3/8 in	OSG	35DJ83
5/8 in	1 5/8 in	3.7 in	3/8 in	OSG	35DJ84
5/8 in	2 1/2 in	4.6 in	3/8 in	OSG	35DJ85
1 1/16 in	1 5/8 in	3.7 in	3/8 in	YG-1 Tool Company	35V415
3/4 in	1 5/8 in	3.8 in	3/8 in	Cleveland	2NFU6
3/4 in	3 in	5.2 in	3/4 in	Cleveland	438H11
7/8 in	3 1/2 in	5.7 in	7/8 in	YG-1 Tool Company	55FY43
1 1/4 in	2 in	4.5 in	1 1/4 in	YG-1 Tool Company	35V420
1 in	4 in	6.5 in	1 in	YG-1 Tool Company	55FZ08
2 in	2 in	4.5 in	1 1/4 in	YG-1 Tool Company	35V422

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
6 Flutes					
1 1/2 in	2 in	4.5 in	1 1/4 in	Cleveland	437Z66
1 1/4 in	2 in	4.5 in	1 1/4 in	Cleveland	437Z65
1 in	2 in	4.5 in	1 in	Cleveland	438H09
TiCN Finish					
2 Flutes					
1/8 in	3/8 in	2.3 in	3/8 in	YG-1 Tool Company	55FM94
3/16 in	1/2 in	2.6 in	3/8 in	YG-1 Tool Company	55FP46
3/16 in	1/2 in	2.3 in	3/8 in	Cleveland	2NFR9
1/4 in	5/8 in	3 in	3/8 in	YG-1 Tool Company	55FR26
5/16 in	3/4 in	2.5 in	3/8 in	YG-1 Tool Company	55FR93
3/8 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFT3
3/8 in	3/4 in	3.3 in	3/8 in	YG-1 Tool Company	55FT50
1/2 in	1 in	3.2 in	1/2 in	Cleveland	2NFT4
9/16 in	1 1/8 in	3.1 in	1/2 in	YG-1 Tool Company	55FW29
9/16 in	1 3/8 in	4.6 in	1/2 in	YG-1 Tool Company	55FW50
3/4 in	1 1/8 in	3.3 in	1/2 in	YG-1 Tool Company	55FX40
3/4 in	1 1/8 in	5.3 in	3/4 in	YG-1 Tool Company	55FX45
7/8 in	1 7/8 in	4.1 in	3/4 in	Cleveland	437Z64
7/8 in	2 in	4.2 in	3/4 in	YG-1 Tool Company	55FY37
1 1/8 in	1 5/8 in	3.8 in	3/4 in	YG-1 Tool Company	55FZ96
1 in	2 1/4 in	4.7 in	1 in	Cleveland	2NFT7
1 in	2 1/4 in	4.7 in	1 in	YG-1 Tool Company	55FZ02
1 1/2 in	2 1/2 in	5 in	1 1/4 in	YG-1 Tool Company	55GC04
1 1/4 in	2 1/2 in	5 in	1 1/4 in	YG-1 Tool Company	55GA22
1 3/8 in	2 1/2 in	5 in	1 1/4 in	YG-1 Tool Company	55GA93
2 in	2 1/2 in	5 in	1 1/4 in	YG-1 Tool Company	55GC85
4 Flutes					
3/16 in	1/2 in	2.3 in	3/8 in	Cleveland	2NFU9
1/4 in	1 1/4 in	3 in	3/8 in	YG-1 Tool Company	55FR31
3/16 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFU2
3/16 in	1 3/8 in	3.1 in	3/8 in	YG-1 Tool Company	55FT02
3/8 in	3/4 in	2.5 in	3/8 in	Cleveland	2NFU3
3/8 in	1 1/2 in	3.2 in	3/8 in	YG-1 Tool Company	55FT55
1/2 in	1 in	2.6 in	3/8 in	YG-1 Tool Company	55FP16
1/2 in	1 1/4 in	3.2 in	1/2 in	Cleveland	2NFU4
1/2 in	2 in	4 in	1/2 in	YG-1 Tool Company	55FY59
5/8 in	1 5/8 in	3.7 in	3/8 in	YG-1 Tool Company	55FW52
5/8 in	2 1/2 in	4.6 in	3/8 in	YG-1 Tool Company	55FW55
1 1/16 in	1 5/8 in	3.7 in	3/8 in	YG-1 Tool Company	55FX23
3/4 in	1 5/8 in	3.8 in	3/4 in	YG-1 Tool Company	55FX47
7/8 in	3 1/2 in	5.7 in	7/8 in	YG-1 Tool Company	55FY44
1 in	1 7/8 in	4.5 in	1 in	YG-1 Tool Company	55FZ06
1 1/8 in	2 in	4.5 in	1 in	YG-1 Tool Company	55GA01
1 in	4 in	6.5 in	1 in	YG-1 Tool Company	55FZ09
2 in	2 in	4.5 in	1 1/4 in	YG-1 Tool Company	55GC87
6 Flutes					
1 1/2 in	2 in	4.5 in	1 1/4 in	Cleveland	437Z83
1 in	2 in	4.5 in	1 in	Cleveland	437Z81

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
TiN Finish					
2 Flutes					
1/8 in	3/8 in	2.3 in	3/8 in	Cleveland	437Z54
3/16 in	1/2 in	2.3 in	3/8 in	Cleveland	437Z55
1/4 in	5/8 in	3 in	3/8 in	YG-1 Tool Company	55FR27
5/16 in	3/4 in	2.5 in	3/8 in	YG-1 Tool Company	55FR94
3/8 in	3/4 in	2.5 in	3/8 in	Cleveland	437Z58
3/8 in	3/4 in	3.3 in	3/8 in	YG-1 Tool Company	55FT51
7/16 in	1 in	3 in	1/2 in	YG-1 Tool Company	55FV12
1/2 in	1 in	3.2 in	1/2 in	Cleveland	437Z59
5/8 in	1 1/8 in	3.1 in	1/2 in	YG-1 Tool Company	55FW46
5/8 in	1 3/8 in	4.6 in	1/2 in	YG-1 Tool Company	55FW51
3/4 in	1 3/8 in	3.3 in	1/2 in	YG-1 Tool Company	55FX41
3/4 in	1 5/8 in	5.3 in	3/4 in	YG-1 Tool Company	55FX46
7/8 in	1 7/8 in	4.1 in	3/4 in	Cleveland	437Z62
7/8 in	2 in	4.2 in	3/4 in	YG-1 Tool Company	55FY38
1 3/8 in	1 5/8 in	4.1 in	3/4 in	YG-1 Tool Company	55GA92
1 in	2 1/4 in	4.7 in	1 in	Cleveland	437Z63
2 in	2 1/2 in	5 in	1 1/4 in	YG-1 Tool Company	55GC86
4 Flutes					
1/8 in	3/8 in	2.3 in	3/8 in	Cleveland	437Z67
3/16 in	1/2 in	2.3 in	3/8 in	Cleveland	437Z68
1/4 in	5/8 in	2.4 in	3/8 in	Cleveland	437Z69
5/16 in	1 3/8 in	3.1 in	3/8 in	YG-1 Tool Company	55FT03
3/8 in	3/4 in	2.5 in	3/8 in	Cleveland	437Z71
3/8 in	1 1/2 in	3.2 in	3/8 in	YG-1 Tool Company	55FT56
1/2 in	1 in	2.6 in	3/8 in	YG-1 Tool Company	55FP17
1/2 in	2 in	4 in	1/2 in	YG-1 Tool Company	55FV60
5/8 in	1 5/8 in	3.7 in	3/8 in	Cleveland	437Z73
1 1/16 in	1 5/8 in	3.7 in	3/8 in	YG-1 Tool Company	55FX24
3/4 in	1 5/8 in	3.8 in	3/4 in	YG-1 Tool Company	55FX48
7/8 in	3 1/2 in	5.7 in	7/8 in	YG-1 Tool Company	55FY45
1 in	1 7/8 in	4.5 in	1 in	YG-1 Tool Company	55FZ07
1 1/8 in	2 in	4.5 in	1 in	YG-1 Tool Company	55GA02
1 in	4 in	6.5 in	1 in	YG-1 Tool Company	55FZ10
2 in	2 in	4.5 in	1 1/4 in	YG-1 Tool Company	55GC88
6 Flutes					
1 1/4 in	2 in	4.5 in	1 1/4 in	Cleveland	437Z78



TiCN Finish
4 Flutes
55FN20

General Purpose Double-End Finishing Bright Finish Cobalt Ball End Mills

■ 30° helix angle

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
Bright (Uncoated) Finish					
2 Flutes					
1/8 in	3/8 in	2 in	3/8 in	OSG	35DN65
1/8 in	3/8 in	2.2 in	3/8 in	OSG	35DN70
3/16 in	1/2 in	2.1 in	3/8 in	OSG	35DN12
3/16 in	1/2 in	2.2 in	3/8 in	OSG	35DN66
5/32 in	1/2 in	2.2 in	3/8 in	YG-1 Tool Company	55FP12
5/32 in	1/2 in	2.2 in	3/8 in	OSG	35DN71
1/4 in	1 in	3.1 in	3/8 in	YG-1 Tool Company	55FR57
1/2 in	3/8 in	3.1 in	3/8 in	YG-1 Tool Company	55FT75
3/8 in	1 3/8 in	3.7 in	1/2 in	YG-1 Tool Company	55FV91
5/8 in	1 1/8 in	4.5 in	3/8 in	OSG	35DN18
3/4 in	1 5/8 in	5 in	3/4 in	OSG	35DN19
4 Flutes					
1/8 in	3/8 in	3 in	3/8 in	YG-1 Tool Company	55FN19
1/4 in	5/8 in	3.3 in	3/8 in	YG-1 Tool Company	55FR60
3/8 in	3/4 in	3.5 in	3/8 in	YG-1 Tool Company	55FT78
1/2 in	1 in	4.1 in	1/2 in	YG-1 Tool Company	55FV94
5/8 in	1 3/8 in	4.5 in	3/8 in	YG-1 Tool Company	55FW90
3/4 in	1 5/8 in	5.6 in	3/4 in	YG-1 Tool Company	55FX88
1 in	1 7/8 in	6.3 in	1 in	YG-1 Tool Company	55FZ55
TiCN Finish					
2 Flutes					
1/8 in	3/8 in	2 in	3/8 in	YG-1 Tool Company	55FN40
5/32 in	1/2 in	2 in	3/8 in	YG-1 Tool Company	55FP10
3/16 in	1/2 in	3.1 in	3/8 in	YG-1 Tool Company	55FP68
1/4 in	1 in	3.1 in	3/8 in	YG-1 Tool Company	55FR58
5/16 in	3/4 in	3.1 in	3/8 in	YG-1 Tool Company	55FT24
3/8 in	3/4 in	3.1 in	3/8 in	YG-1 Tool Company	55FT76
1/2 in	1 3/8 in	3.7 in	1/2 in	YG-1 Tool Company	55FV92
5/8 in	1 1/8 in	4.5 in	3/8 in	YG-1 Tool Company	55FW88
3/4 in	1 5/8 in	5 in	3/4 in	YG-1 Tool Company	55FX86

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
4 Flutes					
1/8 in	3/8 in	3 in	3/8 in	YG-1 Tool Company	55FN20
1/4 in	5/8 in	3.3 in	3/8 in	YG-1 Tool Company	55FR61
3/8 in	3/4 in	3.5 in	3/8 in	YG-1 Tool Company	55FT27
3/8 in	3/4 in	3.5 in	3/8 in	YG-1 Tool Company	55FT79
1/2 in	1 in	4.1 in	1/2 in	YG-1 Tool Company	55FV95
5/8 in	1 3/8 in	5 in	3/8 in	YG-1 Tool Company	55FW91
3/4 in	1 5/8 in	5.6 in	3/4 in	YG-	