



General Purpose Finishing Carbide Ball End Mills

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Shank Type	Helix Angle	Brand	Item No.
AITIN							
4 Flutes							
1/2 in	25/64 in	4 in	1/2 in	Straight	30 °	Micro 100	14K696
8 mm	5.4-mm	100-mm	8 mm	Straight	30 °	Micro 100	14K793
10 mm	6.7-mm	100-mm	10 mm	Straight	30 °	Micro 100	14K810
12 mm	8-mm	100-mm	12 mm	Straight	30 °	Micro 100	14M228
Bright (Uncoated)							
2 Flutes							
1/2 in	1/2 in	1.5 in	1/2 in	Weldon Flat	30 °	—	36NU14
1/2 in	1/2 in	1.5 in	1/2 in	Straight	30 °	OSG	2TXN2
1/2 in	1/2 in	1.5 in	1/2 in	Weldon Flat	35 °	Cleveland	33FX60
1/2 in	1 in	3 in	1/2 in	Weldon Flat	35 °	Cleveland	33FX62
5/32 in	1/2 in	2 in	3/16 in	Weldon Flat	30 °	—	36PC17
3/16 in	5/8 in	2 in	3/16 in	Weldon Flat	30 °	—	36NW04
3/16 in	1 1/8 in	3 in	3/16 in	Weldon Flat	35 °	Cleveland	33FX69
1/4 in	3/4 in	3 in	1/4 in	Straight	30 °	Micro 100	14K673
1/4 in	3/4 in	2.5 in	1/4 in	Weldon Flat	30 °	—	36NR56
1/4 in	3/4 in	2.5 in	1/4 in	Weldon Flat	35 °	Cleveland	33FX74
1/4 in	1 1/4 in	2.5 in	1/4 in	Weldon Flat	40 °	Onsrud	4XYX8
1/4 in	1 1/2 in	4 in	1/4 in	Weldon Flat	30 °	—	36NR72
1/4 in	1 1/2 in	4 in	1/4 in	Weldon Flat	35 °	Cleveland	33FX76
5/16 in	1/2 in	2 in	5/16 in	Weldon Flat	35 °	Cleveland	33FX80
5/16 in	5/8 in	2.5 in	5/16 in	Weldon Flat	30 °	—	36NY98
5/16 in	1 in	2.5 in	5/16 in	Straight	30 °	OSG	2TXP1
5/16 in	1 1/8 in	3 in	5/16 in	Weldon Flat	30 °	—	36NZ07
5/16 in	2 in	4 in	5/16 in	Weldon Flat	30 °	—	36NZ23
1/2 in	1 in	3 in	1/2 in	Weldon Flat	30 °	—	36NN82
1/2 in	1 in	3 in	1/2 in	Straight	30 °	OSG	2TXP5
1/2 in	1 in	3 in	1/2 in	Weldon Flat	35 °	Cleveland	33FX94
1/2 in	1 1/2 in	4 in	1/2 in	Weldon Flat	30 °	—	36NN90
1/2 in	1 1/2 in	6 in	1/2 in	Weldon Flat	30 °	—	36NP15
5/16 in	1 1/4 in	3.5 in	5/16 in	Weldon Flat	30 °	—	36PE19
5/16 in	3/4 in	3 in	5/16 in	Weldon Flat	35 °	Cleveland	33FX99
5/16 in	1 1/4 in	3.5 in	5/16 in	Weldon Flat	30 °	—	36PC53
5/16 in	1 1/4 in	3.5 in	5/16 in	Straight	30 °	OSG	30L938
5/16 in	1 1/8 in	4 in	5/16 in	Weldon Flat	40 °	Onsrud	4XYX6
3/4 in	1 in	3 in	3/4 in	Weldon Flat	35 °	Cleveland	33FY04
3/4 in	1 1/2 in	4 in	3/4 in	Weldon Flat	30 °	—	36NX49
3/4 in	2 in	6 in	3/4 in	Weldon Flat	30 °	—	36NX57
3/4 in	2 1/4 in	5 in	3/4 in	Weldon Flat	35 °	Cleveland	33FY06
7/8 in	1 1/2 in	4 in	7/8 in	Weldon Flat	35 °	Cleveland	33FY08
1 in	1 1/2 in	4 in	1 in	Weldon Flat	35 °	Cleveland	33FY11
1 in	4 in	7 in	1 in	Weldon Flat	30 °	—	36NM13
8 mm	21-mm	64-mm	8 mm	Straight	30 °	OSG	30L878
4 Flutes							
1/2 in	1/2 in	1.5 in	1/2 in	Straight	30 °	OSG	2TXR9
1/2 in	1/2 in	1.5 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC02
1/2 in	3/4 in	2.2 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC04
1/2 in	1 in	3 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC05
5/32 in	1/2 in	2 in	3/16 in	Weldon Flat	30 °	—	36PC21
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	2TXT2
1/16 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	30M024
3/16 in	5/8 in	2 in	3/16 in	Weldon Flat	30 °	Cleveland	33GC10
3/16 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	2TXT4
3/16 in	5/8 in	2 in	3/16 in	Weldon Flat	30 °	Cleveland	33GC11
3/16 in	5/8 in	2 in	3/16 in	Weldon Flat	30 °	—	36NW08
3/16 in	3/4 in	2.5 in	3/16 in	Weldon Flat	30 °	Cleveland	33GC12
3/16 in	1 1/8 in	3 in	3/16 in	Weldon Flat	30 °	Cleveland	33GC13
3/16 in	1 1/8 in	4 in	3/16 in	Weldon Flat	30 °	—	36NW24
1/4 in	1/2 in	2 in	1/4 in	Weldon Flat	30 °	Cleveland	33GC17
1/4 in	3/4 in	2.5 in	1/4 in	Straight	30 °	OSG	2TXT6
1/4 in	3/4 in	2.5 in	1/4 in	Weldon Flat	30 °	—	36NR60
1/4 in	3/4 in	2.5 in	1/4 in	Weldon Flat	30 °	Cleveland	33GC18
1/4 in	1 in	4 in	1/4 in	Weldon Flat	30 °	Cleveland	33GC19
1/4 in	1 1/2 in	4 in	1/4 in	Weldon Flat	30 °	Cleveland	33GC21
1/4 in	1 1/2 in	4 in	1/4 in	Weldon Flat	30 °	—	36NR76
1/4 in	1 1/2 in	6 in	1/4 in	Weldon Flat	30 °	Cleveland	33GC22
5/16 in	1/2 in	2.5 in	5/16 in	Weldon Flat	30 °	—	36NV03
5/16 in	1/2 in	2 in	5/16 in	Weldon Flat	30 °	Cleveland	33GC25
5/16 in	1 1/8 in	2.5 in	5/16 in	Straight	30 °	OSG	2TXT8
5/16 in	7/8 in	2.5 in	5/16 in	Weldon Flat	30 °	Cleveland	33GC26
5/16 in	1 1/8 in	3 in	5/16 in	Weldon Flat	30 °	Cleveland	33GC27
5/16 in	1 in	2.5 in	5/16 in	Weldon Flat	30 °	—	36NZ03
3/8 in	1 in	2.5 in	3/8 in	Weldon Flat	30 °	OSG	2TXU1
3/8 in	2 in	4 in	3/8 in	Weldon Flat	30 °	Cleveland	33GC31
7/16 in	2 in	4 in	7/16 in	Straight	30 °	OSG	36NZ27
7/16 in	1 in	2.5 in	7/16 in	Weldon Flat	30 °	—	36PD66
7/16 in	2 in	4 in	7/16 in	Weldon Flat	30 °	Cleveland	33GC39
1/2 in	5/8 in	2.5 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC42
1/2 in	1 in	3 in	1/2 in	Straight	30 °	OSG	2TXU3
1/2 in	1 in	3 in	1/2 in	Weldon Flat	30 °	—	36NN86
1/2 in	1 in	3 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC43
1/2 in	1 in	4 in	1/2 in	Weldon Flat	30 °	—	36NP11
1/2 in	1 1/2 in	4 in	1/2 in	Weldon Flat	30 °	—	36NN94
1/2 in	1 1/2 in	6 in	1/2 in	Weldon Flat	30 °	—	36NP19
1/2 in	3 in	6 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC46
3/4 in	1 1/8 in	3.5 in	3/4 in	Weldon Flat	30 °	—	36NX37
5/8 in	1 1/8 in	3.5 in	5/8 in	Straight	30 °	OSG	30M143
5/8 in	3/4 in	3 in	5/8 in	Weldon Flat	30 °	Cleveland	33GC48
5/8 in	1 1/4 in	3.5 in	5/8 in	Weldon Flat	30 °	—	36PC57

Bright (Uncoated) 4 Flutes 33GL90

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Shank Type	Helix Angle	Brand	Item No.
1/2 in	3 in	6 in	1/2 in	Weldon Flat	30 °	—	36PC73
3/4 in	1 1/2 in	4 in	3/4 in	Weldon Flat	30 °	Cleveland	33GC53
3/4 in	1 1/2 in	4 in	3/4 in	Weldon Flat	30 °	—	36NX53
3/4 in	2 in	6 in	3/4 in	Weldon Flat	30 °	—	36NX61
3/4 in	3 in	6 in	3/4 in	Weldon Flat	30 °	Cleveland	33GC55
1/2 in	1 1/2 in	4 in	1/2 in	Weldon Flat	30 °	Cleveland	33GC56
1 in	1 1/2 in	4 in	1 in	Weldon Flat	30 °	—	36NM09
1 in	1 1/2 in	4 in	1 in	Weldon Flat	30 °	Cleveland	33GC59
1 in	2 1/4 in	5 in	1 in	Weldon Flat	30 °	Cleveland	33GC60
1 in	3 in	6 in	1 in	Weldon Flat	30 °	Cleveland	33GC61
5 mm	16-mm	51-mm	5 mm	Straight	30 °	OSG	30M034
6 mm	19-mm	64-mm	6 mm	Straight	30 °	OSG	30M050
8 mm	21-mm	64-mm	8 mm	Straight	30 °	OSG	30M074
12 mm	25-mm	76-mm	12 mm	Straight	30 °	OSG	30M129
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2 Flutes							
1/2 in	1/4 in	1.5 in	1/2 in	Weldon Flat	35 °	Cleveland	33GH27
1/2 in	1/2 in	1.5 in	1/2 in	Straight	30 °	OSG	30L818
1/2 in	1/2 in	2 in	1/2 in	Weldon Flat	35 °	Cleveland	33GH41
1/4 in	3/4 in	2.5 in	1/4 in	Straight	30 °	OSG	2TXN8
1/4 in	1 1/2 in	6 in	1/4 in	Weldon Flat	35 °	Cleveland	33GH45
1/16 in	1/2 in	2.5 in	5/16 in	Weldon Flat	35 °	Cleveland	33GH46
5/16 in	5/8 in	2 in	5/16 in	Weldon Flat	35 °	Cleveland	33GH52
5/16 in	1 in	2.5 in	5/16 in	Straight	30 °	OSG	2TXP3
5/16 in	1 1/2 in	6 in	5/16 in	Weldon Flat	35 °	Cleveland	33GH55
1/2 in	1 in	3 in	1/2 in	Straight	30 °	OSG	2TXP7
4 mm	8-mm	51-mm	4 mm	Straight	30 °	OSG	54LJ49
6 mm	19-mm	64-mm	6 mm	Straight	30 °	OSG	30L857
4 Flutes							
1/2 in	1/4 in	1.5 in	1/2 in	Straight	30 °	OSG	54LJ39
1/2 in	1/2 in	1.5 in	1/2 in	Straight	30 °	OSG	2TXT1
1/2 in	1/2 in	1.5 in	1/2 in	Straight	30 °	Widia Hanita	48HA84
1/2 in	3/4 in	2.2 in	1/2 in	Straight	30 °	OSG	54LJ52
5/32 in	1/2 in	2 in	3/16 in	Straight	30 °	Widia Hanita	48HA88
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	2TXT3
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	Widia Hanita	48HA89
5/32 in	5/8 in	2 in	3/16 in	Weldon Flat	30 °	Cleveland	33GL55
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	54LJ41
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	2TXT5
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	Widia Hanita	48HA92
5/32 in	5/8 in	2 in	3/16 in	Weldon Flat	30 °	Cleveland	33GL56
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	Widia Hanita	48HA93
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	Widia Hanita	48HA94
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	Widia Hanita	48HA96
5/32 in	5/8 in	2 in	3/16 in	Straight	30 °	OSG	30M047
1/4 in	1/2 in	2 in	1/4 in	Straight	30 °	Widia Hanita	48HA98
1/4 in	3/4 in	2.5 in	1/4 in	Straight	30 °	OSG	2TXT7
1/4 in	3/4 in	2.5 in	1/4 in	Straight	30 °	Widia Hanita	48HA99
1/4 in	1 in	4 in	1/4 in	Weldon Flat	30 °	Cleveland	33GL64
1/4 in	1 1/8 in	3 in	1/4 in	Straight	30 °	Widia Hanita	48HC01
1/4 in	1 1/2 in	4 in	1/4 in	Straight	30 °	OSG	54LJ63
5/16 in	5/8 in	2 in	5/16 in	Straight	30 °	OSG	30M065
5/16 in	5/8 in	2 in	5/16 in	Straight	30 °	Widia Hanita	48HC06
5/16 in	5/8 in	2 in	5/16 in	Straight	30 °	Widia Hanita	48HC07
5/16 in	5/8 in	2 in	5/16 in	Straight	30 °	OSG	2TXT9
5/16 in	5/8 in	2 in	5/16 in	Weldon Flat	30 °	Cleveland	33GL71
5/16 in	3/4 in	2.5 in	5/16 in	Straight	30 °	Widia Hanita	48HC08
5/16 in	1 1/8 in	3 in	5/16 in	Weldon Flat	30 °	—	36NZ04
5/16 in	1 in	2.5 in	5/16 in	Straight	30 °	Widia Hanita	48HC12
5/16 in	1 in	2.5 in	5/16 in	Straight	30 °	OSG	2TXU2
5/16 in	1 in	2.5 in	5/16 in	Weldon Flat	30 °	Cleveland	33GL76
5/16 in	1 1/8 in	3 in	5/16 in	Straight	30 °	Widia Hanita	48HC13
5/16 in	1 1/2 in	6 in	5/16 in	Straight	30 °	Widia Hanita	48HC14
5/16 in	3 in	6 in	5/16 in	Weldon Flat	30 °	—	36NZ20
5/16 in	1 in	2.5 in	5/16 in	Straight	30 °	Widia Hanita	48HC15
3/16 in	1 in	3 in	1/2 in	Straight	30 °	OSG	30M134
1/2 in	5/8 in	2.5 in	1/2 in	Weldon Flat	30 °	Cleveland	33GL87
1/2 in	1 in	3 in	1/2 in	Straight	30 °	OSG	2TXU4
1/2 in	1 in	3 in	1/2 in	Weldon Flat	30 °	Cleveland	33GL88
1/2 in	1 in	3 in	1/2 in	Straight	30 °	Widia Hanita	48HC17
1/2 in	1 in	4 in	1/2 in	Straight	30 °	Widia Hanita	48HC16
1/2 in	1 1/2 in	6 in	1/2 in	Straight	30 °	Widia Hanita	48HC18
1/2 in	2 in	4.5 in	1/2 in	Straight	30 °	Widia Hanita	48HC19
1/2 in	2 in	4 in	1/2 in	Weldon Flat	30 °	Cleveland	33GL90
1/2 in	2 in	4 in	1/2 in	Straight	30 °	Widia Hanita	48HC20
9/16 in	1 1/4 in	3.5 in	9/16 in	Straight	30 °	Widia Hanita	48HC22
9/16 in	1 1/4 in	3.5 in	9/16 in	Straight	30 °	Widia Hanita	48HC24
9/16 in	1 1/4 in	3.5 in	9/16 in	Straight	30 °	OSG	2TXU6
9/16 in	2 1/4 in	5 in	9/16 in	Straight	30 °	Widia Hanita	48HC25
3/4 in	1 in	3 in	3/4 in	Straight	30 °	Widia Hanita	48HC27
3/4 in	1 1/2 in	4 in	3/4 in	Weldon Flat	30 °	—	36NX54
3/4 in	1 1/2 in	4 in	3/4 in	Straight	30 °	OSG	2TXU8
3/4 in	3 in	6 in	3/4 in	Weldon Flat	30 °	Cleveland	33GC01
3/4 in	3 in	6 in	3/4 in	Straight	30 °	Widia Hanita	48HC29
4 mm	14-mm	51-mm	4 mm	Straight	30 °	OSG	30M021
TICN							
2 Flutes							
1/4 in	1 1/8 in	3 in	1/4 in	Straight	30 °	OSG	54LJ51
4 Flutes							
1/2 in	1 in	3 in	1/2 in	Weldon Flat	30 °	—	36NN88
1/2 in	1 in	6 in	1/2 in	Weldon Flat	30 °	—	36NP05
1/2 in	2 in	4 in	1/2 in	Straight	30 °	OSG	54LJ50