

MACHINING End Mills

Carbide Drill Mills

Drill mills have a nose with a pointed tip and can drill holes or create angled features in a piece of stock. They are used for slotting, side profiling, chamfering, spotting, countersinking, and cutting grooves in milling tasks.



WIDIA HANITA



CLEVELAND

Scan. Order. Done.
Details on page A1.



**Bright
(Uncoated) Finish
2 Flutes
19LJ60**



No. of Flutes	Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
AlTiN Finish						
60° Included Angle						
2	1/8 in	1/2 in	1 1/2 in	1/8 in	—	19LJ57
2	3/16 in	5/8 in	2 in	3/16 in	—	19LJ59
2	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ61
2	1/2 in	1 in	3 in	1/2 in	—	19LJ69
2	5/8 in	1 1/4 in	3 1/2 in	5/8 in	—	19LJ71
4	1/8 in	1/2 in	1 1/2 in	1/8 in	—	19LJ75
4	3/16 in	5/8 in	2 in	3/16 in	—	19LJ77
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ79
4	5/16 in	13/16 in	2 1/2 in	5/16 in	—	19LJ81
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ83
4	1/2 in	1 in	3 in	1/2 in	—	19LJ87
4	3/4 in	1 1/2 in	4 in	3/4 in	—	19LJ91
82° Included Angle						
2	1/8 in	1/2 in	1 1/2 in	1/8 in	—	55HF86
2	3/16 in	5/8 in	2 in	3/16 in	—	55HF88
2	1/4 in	3/4 in	2 1/2 in	1/4 in	—	55HF89
2	5/8 in	1 in	2 1/2 in	5/8 in	—	55HF90
2	1/2 in	1 in	3 in	1/2 in	—	55HF92
4	1/8 in	1/2 in	1 1/2 in	1/8 in	—	55HF94
4	3/16 in	5/8 in	2 in	3/16 in	—	19LK03
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LK05
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LK07
90° Included Angle						
2	1/8 in	1/2 in	1 1/2 in	1/8 in	Micro 100	16T572
2	3/16 in	5/8 in	2 in	3/16 in	Micro 100	16T576
2	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ29
2	1/2 in	1 in	3 in	1/2 in	—	19LJ30
2	1/4 in	3/4 in	2 1/2 in	1/4 in	Micro 100	16T580
2	5/16 in	13/16 in	2 1/2 in	5/16 in	—	19LJ31
2	3/8 in	1 in	2 1/2 in	3/8 in	Micro 100	16T588
2	1/2 in	1 in	2 3/4 in	1/2 in	—	19LJ33
2	1/2 in	1 in	3 in	1/2 in	—	19LJ34
2	1/2 in	1 in	3 in	1/2 in	Micro 100	16T596
2	5/8 in	1 1/4 in	3 1/2 in	5/8 in	—	19LJ35
2	3/4 in	1 1/2 in	4 in	3/4 in	—	19LJ36
2	6.000 mm	16.00 mm	57.0 mm	6.000 mm	Micro 100	16T635
2	8.000 mm	22.00 mm	63.0 mm	8.000 mm	Micro 100	16T643
4	1/8 in	1/2 in	1 1/2 in	1/8 in	Micro 100	16T574
4	1/8 in	1/2 in	1 1/2 in	1/8 in	—	19LJ47
4	3/16 in	5/8 in	2 in	3/16 in	—	19LJ48
4	3/16 in	5/8 in	2 in	3/16 in	Micro 100	16T578
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ49
4	1/4 in	3/4 in	2 1/2 in	1/4 in	Micro 100	16T582
4	5/16 in	0.813 in	2 1/2 in	5/16 in	Micro 100	16T586
4	5/16 in	13/16 in	2 1/2 in	5/16 in	—	19LJ50
4	3/8 in	1 in	2 1/2 in	3/8 in	Micro 100	16T590
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ51
4	1/2 in	1 in	3 in	1/2 in	Micro 100	16T598
4	1/2 in	1 in	3 in	1/2 in	—	19LJ53
4	5/8 in	1 1/4 in	3 1/2 in	5/8 in	—	19LJ54
4	3/4 in	1 1/2 in	4 in	3/4 in	—	19LJ55
4	6.000 mm	16.00 mm	57.0 mm	6.000 mm	Micro 100	16T639
4	8.000 mm	22.00 mm	63.0 mm	8.000 mm	Micro 100	16T647
120° Included Angle						
2	4.000 mm	11.00 mm	50.0 mm	4.000 mm	Micro 100	16T617
2	5.000 mm	13.00 mm	57.0 mm	5.000 mm	Micro 100	16T625
2	6.000 mm	16.00 mm	57.0 mm	6.000 mm	Micro 100	16T633
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ93
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ95
4	3.000 mm	8.00 mm	38.0 mm	3.000 mm	Micro 100	16T613
4	8.000 mm	22.00 mm	63.0 mm	8.000 mm	Micro 100	16T645
Bright (Uncoated) Finish						
60° Included Angle						
2	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ60
2	5/16 in	13/16 in	2 1/2 in	5/16 in	—	19LJ62
2	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ64
2	1/2 in	1 in	2 3/4 in	1/2 in	—	19LJ66
2	1/2 in	1 in	3 in	1/2 in	—	19LJ68

No. of Flutes	Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Brand	Item No.
4	1/8 in	1/2 in	1 1/2 in	1/8 in	—	19LJ74
4	3/16 in	5/8 in	2 in	3/16 in	—	19LJ76
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ78
4	5/16 in	13/16 in	2 1/2 in	5/16 in	—	19LJ80
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ82
4	1/2 in	1 in	3 in	1/2 in	—	19LJ86
82° Included Angle						
2	1/8 in	1/2 in	1 1/2 in	1/8 in	—	19LJ98
2	3/16 in	5/8 in	2 in	3/16 in	—	55HF87
2	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ99
2	3/8 in	1 in	2 1/2 in	3/8 in	—	19LK01
2	1/2 in	1 in	3 in	1/2 in	—	55HF91
4	1/8 in	1/2 in	1 1/2 in	1/8 in	—	55HF93
4	3/16 in	5/8 in	2 in	3/16 in	—	19LK02
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LK06
4	1/2 in	1 in	3 in	1/2 in	—	19LK08
90° Included Angle						
2	1/8 in	1/2 in	1 1/2 in	1/8 in	Micro 100	16T571
2	3/16 in	5/8 in	2 in	3/16 in	—	19LJ19
2	1/4 in	3/4 in	2 1/2 in	1/4 in	Widia Hanita	2NHF7
2	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ20
2	1/2 in	1 in	2 3/4 in	1/2 in	Cleveland	31C861
2	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ21
2	1/4 in	3/4 in	2 1/2 in	1/4 in	Micro 100	16T579
2	1/4 in	3/4 in	2 1/2 in	1/4 in	Widia Hanita	2NHF8
2	3/8 in	1 in	2 1/2 in	3/8 in	Cleveland	43T737
2	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ22
2	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ23
2	3/8 in	1 in	2 1/2 in	3/8 in	Widia Hanita	2NHF1
2	1/2 in	1 in	2 1/2 in	1/2 in	Cleveland	31C868
2	1/2 in	1 in	2 3/4 in	1/2 in	—	19LJ24
2	1/2 in	1 in	3 in	1/2 in	—	19LJ25
2	1/2 in	1 in	3 in	1/2 in	Cleveland	31C870
2	3/8 in	1 1/4 in	3 1/2 in	3/8 in	Cleveland	43T738
2	3/8 in	1 1/4 in	3 1/2 in	3/8 in	—	19LJ26
2	3/4 in	1 1/2 in	4 in	3/4 in	—	19LJ27
2	1 in	1 1/2 in	3 3/4 in	1 in	Cleveland	31C877
2	6.000 mm	16.00 mm	57.0 mm	6.000 mm	Micro 100	16T634
2	8.000 mm	22.00 mm	63.0 mm	8.000 mm	Micro 100	16T642
4	1/2 in	1 in	2 1/2 in	1/2 in	—	19LJ37
4	1/2 in	1 in	2 1/2 in	1/2 in	—	19LJ38
4	1/2 in	1 in	2 1/2 in	1/2 in	Micro 100	16T573
4	3/16 in	5/8 in	2 in	3/16 in	—	19LJ39
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ40
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ41
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ42
4	1/2 in	1 in	3 in	1/2 in	—	19LJ44
4	1/2 in	1 in	3 in	1/2 in	Micro 100	16T597
4	3/4 in	1 1/4 in	3 1/2 in	3/4 in	—	19LJ45
120° Included Angle						
2	5.000 mm	13.00 mm	57.0 mm	5.000 mm	Micro 100	16T624
2	6.000 mm	16.00 mm	57.0 mm	6.000 mm	Micro 100	16T632
4	1/4 in	3/4 in	2 1/2 in	1/4 in	—	19LJ92
4	3/8 in	1 in	2 1/2 in	3/8 in	—	19LJ94
4	1/2 in	1 in	3 in	1/2 in	—	19LJ96
TiCN Finish						
90° Included Angle						
2	1/8 in	1 1/2 in	3 3/4 in	1/8 in	Cleveland	438L67
2	1 in	1 1/2 in	3 3/4 in	1 in	Cleveland	31C879
TiN Finish						
90° Included Angle						
2	1/4 in	1/2 in	2 3/4 in	3/8 in	Cleveland	31C862
2	3/8 in	1 in	2 3/4 in	3/8 in	Cleveland	31C866
2	1/2 in	1 1/4 in	2 3/4 in	3/8 in	Cleveland	438L60
2	1/2 in	1 in	3 in	1/2 in	Cleveland	31C871
2	3/8 in	1 1/4 in	3 1/2 in	3/8 in	Cleveland	438L61
2	3/8 in	1 1/4 in	3 1/2 in	3/8 in	Cleveland	31C875
2	1/2 in	1 1/2 in	3 3/4 in	3/4 in	Cleveland	438L63
2	1 in	1 1/2 in	3 3/4 in	3/4 in	Cleveland	31C878

Keyway End Mills

Keyway end mills make slots in parts so that key stock can be inserted into the slots when mating other components with the parts. These end mills are typically undersized, which means they create an undersized slot to ensure a snug, secure fit when key stock is inserted into the slot.

Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Shank Type	Helix Angle	Brand	Item No.
Bright (Uncoated) Finish							
2 Flutes							
1/8 in	3/8 in	2 3/4 in	3/8 in	Straight	0°	Cleveland	438U15
1/8 in	3/8 in	2 3/4 in	3/8 in	Weldon Flat	15°	YG-1 Tool Company	55GE44
3/16 in	1/2 in	2 3/4 in	3/16 in	Weldon Flat	15°	YG-1 Tool Company	55GF73
1/4 in	1/2 in	2 3/4 in	3/16 in	Weldon Flat	15°	YG-1 Tool Company	55GG62
1/4 in	1/2 in	2 3/4 in	3/16 in	Weldon Flat	30°	Cleveland	438N58
5/16 in	5/8 in	2 1/2 in	5/16 in	Straight	0°	Cleveland	438U18
5/16 in	5/8 in	2 1/2 in	5/16 in	Straight	0°	Cleveland	438U19
3/8 in	5/8 in	2 3/4 in	3/8 in	Weldon Flat	15°	YG-1 Tool Company	55GJ07
7/16 in	13/16 in	2 1/2 in	7/16 in	Weldon Flat	15°	YG-1 Tool Company	55GJ60
1/2 in	1 in	3 1/4 in	1/2 in	Straight	0°	Cleveland	438U20
1/2 in	1 in	3 in	1/2 in	Weldon Flat	15°	YG-1 Tool Company	55GK31
5/8 in	1 1/4 in	3 1/4 in	5/8 in	Weldon Flat	15°	YG-1 Tool Company	55GL14

**TiN Finish
2 Flutes
55GG63**



Milling Dia.	Length of Cut	Overall Length	Shank Dia.	Shank Type	Helix Angle	Brand	Item No.
3/4 in	1 3/4 in	3 3/8 in	3/4 in	Straight	0°	Cleveland	438U22
3/4 in	1 3/4 in	3 3/8 in	3/4 in	Weldon Flat	15°	YG-1 Tool Company	55GM13
7/8 in	1 1/2 in	4 1/8 in	7/8 in	Straight	0°	Cleveland	438U23
1 in	1 3/4 in	4 1/2 in	1 in	Straight	0°	Cleveland	438U24
TiCN Finish							
2 Flutes							
1/4 in	1/2 in	2 1/4 in	3/8 in	Weldon Flat	30°	Cleveland	438F90
5/8 in	1 3/4 in	3 1/4 in	5/8 in	Weldon Flat	30°	Cleveland	438F97
TiN Finish							
2 Flutes							
3/8 in	1/2 in	2 3/4 in	3/8 in	Weldon Flat	15°	YG-1 Tool Company	55GF74
1/4 in	1/2 in	2 3/4 in	3/8 in	Weldon Flat	15°	YG-1 Tool Company	55GG63
1/4 in	1/2 in	2 3/4 in	3/8 in	Weldon Flat	30°	Cleveland	438F74
5/8 in	1 3/4 in	3 1/4 in	5/8 in	Weldon Flat	15°	YG-1 Tool Company	55GF73
1/2 in	1 in	2 1/2 in	1/2 in	Weldon Flat	15°	YG-1 Tool Company	55GJ08
5/8 in	1 3/4 in	3 3/4 in	5/8 in	Weldon Flat	15°	YG-1 Tool Company	55GL15
3/4 in	1 5/8 in	3 5/8 in	3/4 in	Weldon Flat	15°	YG-1 Tool Company	55GM14
3/4 in	1 5/8 in	3 7/8 in	3/4 in	Weldon Flat	30°	Cleveland	438F81
7/8 in	1 1/2 in	4 1/8 in	7/8 in	Weldon Flat	30°	Cleveland	438F83