

**1-800-GRAINGER (472-4643)**

For more information on Drill Bits, see page 2239.



## High-Speed Steel Spotting Drills



TiN Finish, Spiral Flute, Straight Shank  
33UP30

Drill Bit Size	Decimal Equivalent	Flute Length	Overall Length	Shank Dia.	Brand	Item No.
<b>Bright Finish, Spiral Flute, Straight Shank</b>						
<b>82° Point Angle</b>						
1 in	0.2362	2 1/4 in	6 in	1 in	KEO	33UR05
<b>90° Point Angle</b>						
1/8 in	0.1250	3/8 in	1 1/4 in	1/8 in	KEO	1DBU7
3/16 in	0.3750	1 in	2 in	3/16 in	KEO	1DBV2
1/4 in	0.3750	1 1/8 in	3 1/8 in	1/4 in	KEO	1MCA9
5/16 in	0.4375	1 in	2 in	5/16 in	KEO	33UP55
3/8 in	0.5000	1 in	2 in	3/8 in	KEO	33UL67
1/2 in	0.5000	1 3/8 in	3 3/4 in	1/2 in	KEO	1MCA3
5/8 in	0.5000	1.3780 in	4 1/8 in	5/8 in	Walter Titex	440N94
3/4 in	0.5000	1 3/8 in	6 in	3/4 in	KEO	1MCA4
7/8 in	0.7500	1 1/8 in	2 1/4 in	7/8 in	KEO	1DBV5
1 in	0.7500	1 1/8 in	5 in	1 in	KEO	1MCA7
1 1/8 in	1.0000	2 1/4 in	6 in	1 1/8 in	KEO	1MCA8
1 1/4 in	0.1969	15.00 mm	120.00 mm	5.00 mm	Walter Titex	440N90
E	0.2500	3/4 in	2 1/2 in	1/4 in	KEO	1MCA6
E	0.2500	3/4 in	6 in	1/4 in	KEO	1MCA8
<b>118° Point Angle</b>						
1/8 in	0.1250	3/8 in	1 1/4 in	1/8 in	KEO	1DBV8
3/16 in	0.1875	1/2 in	1 3/8 in	3/16 in	KEO	1DBV9
1/4 in	0.3125	5/8 in	1 1/2 in	1/4 in	KEO	1DBW2
5/16 in	0.3750	1 in	2 in	5/16 in	KEO	33UP47
3/8 in	0.5000	1 in	2 in	1/2 in	KEO	33UP24
5/8 in	0.2500	5/8 in	1 1/2 in	1/4 in	KEO	1DBW1
<b>120° Point Angle</b>						
6.00 mm	0.2362	20.00 mm	66.00 mm	6.00 mm	Walter Titex	440N71
16.00 mm	0.6299	46.00 mm	115.00 mm	16.00 mm	Walter Titex	440N43
E	0.2500	3/4 in	2 1/2 in	1/4 in	KEO	1MCA9
<b>TiN Finish, Spiral Flute, Straight Shank</b>						
<b>90° Point Angle</b>						
3/16 in	0.1875	1/2 in	1 3/8 in	3/16 in	KEO	33UP30
1/4 in	0.3750	1 in	2 in	1/4 in	KEO	33UP46
5/16 in	0.5000	1 3/8 in	3 3/4 in	5/16 in	KEO	12V264
3/8 in	0.5000	1 3/8 in	6 in	3/8 in	KEO	12V265
<b>118° Point Angle</b>						
3/16 in	0.3125	5/8 in	1 1/2 in	3/16 in	KEO	33UP37
1/4 in	0.3750	1 in	2 in	1/4 in	KEO	33UP45
5/16 in	0.5000	1 in	2 in	1/2 in	KEO	33UP22
3/8 in	0.5625	1 in	2 in	3/8 in	KEO	33UP64
<b>120° Point Angle</b>						
E	0.2500	3/4 in	4 in	1/4 in	KEO	12Y286



**AITIN Finish, Spiral Flute, Straight Shank**  
45XY78



## Carbide Spotting Drills

Drill Bit Size	Decimal Equivalent	Flute Length	Overall Length	Shank Dia.	Brand	Item No.
<b>Bright Finish, Helical Flute, Straight Shank</b>						
<b>90° Point Angle</b>						
3.00 mm	0.1181	5.00 mm	38.00 mm	3.00 mm	Kyocera	414V90
<b>AITIN Finish, Spiral Flute, Straight Shank</b>						
<b>90° Point Angle</b>						
1/8 in	0.1250	3/8 in	2 in	1/8 in	—	45XY78
3/16 in	0.2500	3/4 in	2 1/2 in	3/16 in	—	45XY67
1/4 in	0.3750	1 in	2 1/2 in	1/4 in	—	45XY57
5/16 in	0.5000	1 1/4 in	3 in	5/16 in	—	45XY51
<b>120° Point Angle</b>						
3/16 in	0.1875	3/4 in	2 in	3/16 in	—	45YC29
1/4 in	0.2500	3/4 in	2 1/2 in	1/4 in	—	45XY62
5/16 in	0.3750	1 in	2 1/2 in	5/16 in	—	45YC53
<b>140° Point Angle</b>						
1/4 in	0.2500	3/4 in	2 1/2 in	1/4 in	—	45XY64
3/8 in	0.3750	1 in	2 1/2 in	3/8 in	—	45YC55
1/2 in	0.5000	1 1/4 in	3 in	1/2 in	—	45XY48
<b>Bright Finish, Helical Flute, Straight Shank</b>						
<b>130° Point Angle</b>						
0.0200 in	0.0200	0.0500 in	1 1/2 in	1/8 in	Kyocera	414V39
<b>Bright Finish, Spiral Flute, Straight Shank</b>						
<b>82° Point Angle</b>						
3/8 in	0.3750	3/4 in	2 1/2 in	3/8 in	KEO	33UR01
1/2 in	0.5000	1 in	3 in	1/2 in	KEO	33UP91
E	0.2500	3/4 in	2 1/2 in	1/4 in	KEO	33UP92
<b>90° Point Angle</b>						
1/8 in	0.1250	3/8 in	1 1/2 in	1/8 in	KEO	1MBY8
3/16 in	0.1875	3/4 in	2 in	3/16 in	—	45YC32
1/4 in	0.2500	3/4 in	2 1/2 in	1/4 in	—	45XY66
5/16 in	0.3125	3/4 in	2 1/2 in	5/16 in	Micro 100	16R629
3/8 in	0.3750	3/4 in	2 1/2 in	3/8 in	KEO	1MBZ3
5/8 in	0.3750	1.0236 in	3 1/2 in	5/8 in	Walter Titex	49L622
1 in	0.5000	1 in	3 in	1 in	KEO	1MBZ4
1 1/8 in	0.6250	1 in	3 1/2 in	1 1/8 in	KEO	1MBZ5
1 in	1.0000	1 1/4 in	2 1/2 in	1 in	Micro 100	16R621
6.00 mm	0.2362	20.00 mm	66.00 mm	6.00 mm	Walter Titex	49L619
10.00 mm	0.3937	31.00 mm	89.00 mm	10.00 mm	Walter Titex	49L623
E	0.2500	3/4 in	2 1/2 in	1/4 in	KEO	1MBZ1
<b>100° Point Angle</b>						
3/8 in	0.3750	1 in	2 1/2 in	3/8 in	Micro 100	16R634
1/2 in	0.5000	1 in	2 1/2 in	1/2 in	Micro 100	16R642
1 1/2 in	0.5000	1 1/4 in	3 in	1 1/2 in	—	45XY44
E	0.2500	3/4 in	2 1/2 in	1/4 in	Micro 100	16R626
<b>120° Point Angle</b>						
3/16 in	0.1875	3/8 in	2 in	3/16 in	KEO	1MBZ8
1/4 in	0.3750	3/4 in	2 1/2 in	1/4 in	KEO	1MCA2
5/8 in	0.3750	1 in	2 1/2 in	3/8 in	—	45YC52
<b>140° Point Angle</b>						
3/16 in	0.1875	3/4 in	2 in	3/16 in	—	45YC30
1/2 in	0.5000	1 1/4 in	3 in	1/2 in	—	45XY47
<b>142° Point Angle</b>						
3/8 in	0.3750	3/4 in	2 1/2 in	3/8 in	KEO	12J398
<b>AITIN Finish, Spiral Flute, Straight Shank</b>						
<b>140° Point Angle</b>						
3/16 in	0.1875	3/4 in	2 in	3/16 in	—	45YC31
<b>TiN Finish, Spiral Flute, Straight Shank</b>						
<b>120° Point Angle</b>						
3/8 in	0.6250	1 in	3 1/2 in	3/8 in	KEO	33UR03
E	0.2500	3/4 in	2 1/2 in	1/4 in	KEO	12Y301



## Carbide Micro Drill Bits for Circuit Boards

Drill Bit Size	Decimal Equivalent	Flute Length	Shank Dia.	Overall Length	Item No.
<b>Bright Finish, Spiral Flute, Non-Coolant Through, Straight Shank</b>					
<b>118° Point Angle, 4 Facet Point</b>					
#81	0.0130	1/32 in	1/8 in	1 1/2 in	414C98
#83	0.0120	1/32 in	1/8 in	1 1/2 in	414C90
#83	0.0120	1/4 in	1/8 in	1 1/2 in	414C91
#85	0.0110	1/8 in	1/8 in	1 1/2 in	414C78
#86	0.0105	1/32 in	1/8 in	1 1/2 in	414C75
#87	0.0100	1/8 in	1/8 in	1 1/2 in	414C70
#87	0.0100	1/32 in	1/8 in	1 1/2 in	414C71
#89	0.0087	1/8 in	1/8 in	1 1/2 in	414C58
#90	0.0087	1/8 in	1/8 in	1 1/2 in	414C55
#91	0.0083	1/32 in	1/4 in	38.00 mm	414H83
#97	0.0059	1/16 in	1/4 in	38.00 mm	414H77
#97	0.0059	1/32 in	1/8 in	1 1/2 in	414C27
<b>130° Point Angle, 4 Facet Point</b>					
#36	0.1065	3/8 in	1/8 in	1 1/2 in	414G22
#37	0.1040	3/8 in	1/8 in	1 1/2 in	414G16
#41	0.0960	3/8 in	1/8 in	1 1/2 in	414F99
#43	0.0890	3/8 in	1/8 in	1 1/2 in	414F87
#45	0.0820	3/8 in	1/8 in	1 1/2 in	414F75
#47	0.0755	3/8 in	1/8 in	1 1/2 in	414F67
#51	0.0670	3/8 in	1/8 in	1 1/2 in	414F47
#54	0.0550	3/8 in	1/8 in	1 1/2 in	414F25
#55	0.0520	3/8 in	1/8 in	1 1/2 in	414F21
#57	0.0430	3/8 in	1/8 in	1 1/2 in	414F03
#58	0.0420	3/8 in	1/8 in	1 1/2 in	414F01
#60	0.0400	3/8 in	1/8 in	1 1/2 in	414D94
#65	0.0350	3/8 in	1/8 in	1 1/2 in	414D78
#67	0.0320	3/8 in	1/8 in	1 1/2 in	414D72
#68	0.0310	3/8 in	1/8 in	1 1/2 in	414D66
#69	0.0292	3/8 in	1/8 in	1 1/2 in	414D62
#70	0.0280	3/8 in	1/8 in	1 1/2 in	414D60
#71	0.0260	3/16 in	1/8 in	1 1/2 in	414D56
#72	0.0250	3/16 in	1/8 in	1 1/2 in	414D52
#73	0.0240	3/16 in	1/8 in	1 1/2 in	414D50
#74	0.0225	3/16 in	1/8 in	1 1/2 in	414D46
#75	0.0210	3/16 in	1/8 in	1 1/2 in	414D43
#76	0.0200	1/4 in	1/8 in	1 1/2 in	414D39
#76	0.0200	1/8 in	1/8 in	1 1/2 in	414D40
#77	0.0180	1/4 in	1/8 in	1 1/2 in	414D31
#77	0.0180	3/32 in	1/8 in	1 1/2 in	414D32
#78	0.0160	1/4 in	1/8 in	1 1/2 in	414D23
#78	0.0160	3/32 in	1/8 in	1 1/2 in	414D24
#79	0.0145	1/4 in	1/8 in	1 1/2 in	414D12
#80	0.0135	1/32 in	1/8 in	1 1/2 in	414D03
#80	0.0135	1/4 in	1/8 in	1 1/2 in	414D04

**118° Point Angle**  
414C98



## Step Chamfer Carbide Drill Bits

Drill Bit Size	Decimal Equivalent	Flute Length	Shank Dia.	Overall Length	Item No.
<b>TiNAl Finish, Coolant Through, Straight Shank</b>					
<b>150° Point Angle, 90° Chamfer Angle</b>					
1/4 in	0.2500	1 3/8 in	10.00 mm	3 1/2 in	29FV06
3.00 mm	0.1181	20.00 mm	6.00 mm	66.00 mm	29FT90
4.00 mm	0.1575	22.00 mm	6.00 mm	66.00 mm	29FT95
5.00 mm	0.1969	28.00 mm	8.00 mm	79.00 mm	29FT99
6.00 mm	0.2362	28.00 mm	8.00 mm	79.00 mm	29FV04
7.00 mm	0.2756	34.00 mm	10.00 mm	89.00 mm	29FV09
8.00 mm	0.3150	40.00 mm	12.00 mm	102.00 mm	29FV14
8.50 mm	0.3346	44.00 mm	12.00 mm	102.00 mm	29FV16
9.00 mm	0.3543	44.00 mm	12.00 mm	102.00 mm	29FV18
10.00 mm	0.3937	44.00 mm	12.00 mm	102.00 mm	29FV21
12.00 mm	0.4724	52.00 mm	14.00 mm	107.00 mm	29FV29

**TiNAl Finish, Coolant Through, Straight Shank**  
29FV06

