January 2021

New Product

Carbide Common Shank Drills

CLEVELAND

See additional pages for dimensional and technical information

3xD - AlTiN 

5xD - AlTiN 

8xD - AlTiN 

12xD - AlTiN 

Features:

- Made From Ultra Fine Grain Carbide
- Polished Flutes
- Defined Edge Geometry (Pre-Coat)
- 140° Self Starting Point
- Coating - Advanced AlTiN
- 0.02mm (0.0008") Maximum Concentricity
- Shank to Din 6535 HA (h6 tolerance)
- Drill diameter tolerance = h7

Style: 6100 - 3xD - External Coolant - AlTiN

Diameter			Shank		Overall	Length	
Inch	Metric	Decimal Equiv.	Dia. Ø	Decimal Equiv.	Length	of Flute	Part Number
	3.00	0.1181	6.00	0.2362	2.441	0.787	C92500
1/8	3.18	0.1250	6.00	0.2362	2.441	0.787	C92501
	3.30	0.1299	6.00	0.2362	2.441	0.787	C92502
	3.80	0.1496	6.00	0.2362	2.598	0.945	C92503
5/32	3.97	0.1563	6.00	0.2362	2.598	0.945	C92504
	4.20	0.1654	6.00	0.2362	2.598	0.945	C92505
3/16	4.76	0.1875	6.00	0.2362	2.598	0.945	C92506
	5.00	0.1969	6.00	0.2362	2.598	1.102	C92507
	5.10	0.2008	6.00	0.2362	2.598	1.102	C92508
7/32	5.56	0.2188	6.00	0.2362	2.598	1.102	C92509
	5.50	0.2165	6.00	0.2362	2.598	1.102	C92510
	5.80	0.2283	6.00	0.2362	2.598	1.102	C92511
	6.00	0.2362	6.00	0.2362	2.598	1.102	C92512
1/4	6.35	0.2500	8.00	0.315	3.110	1.457	C92513
	6.50	0.2559	8.00	0.315	3.110	1.339	C92514
	6.70	0.2638	8.00	0.315	3.110	1.339	C92515
	6.80	0.2677	8.00	0.315	3.110	1.339	C92516
	7.00	0.2756	8.00	0.315	3.110	1.339	C92517
9/32	7.15	0.2812	8.00	0.315	3.110	1.339	C92518
5/16	7.94	0.3125	8.00	0.315	3.110	1.339	C92519
	8.00	0.3150	8.00	0.315	3.110	1.339	C92520
	8.50	0.3346	10.00	0.3937	3.504	1.850	C92521
11/32	8.73	0.3438	10.00	0.3937	3.504	1.850	C92522
	9.00	0.3543	10.00	0.3937	3.504	1.850	C92523
3/8	9.53	0.3750	10.00	0.3937	3.504	1.850	C92524
	10.00	0.3937	10.00	0.3937	3.504	1.850	C92525
	10.20	0.4016	12.00	0.4724	4.016	2.165	C92526
13/32	10.32	0.4063	12.00	0.4724	4.016	2.165	C92527
	10.50	0.4134	12.00	0.4724	4.016	2.165	C92528
	11.00	0.4331	12.00	0.4724	4.016	2.165	C92529
7/16	11.11	0.4375	12.00	0.4724	4.016	2.165	C92530
	12.00	0.4724	12.00	0.4724	4.016	2.165	C92531
	12.50	0.4921	14.00	0.5512	4.213	2.362	C92532
1/2	12.70	0.5000	14.00	0.5512	4.213	2.362	C92533
	13.00	0.5118	14.00	0.5512	4.213	2.362	C92534
	13.50	0.5315	14.00	0.5512	4.213	2.362	C92535
	14.00	0.5512	14.00	0.5512	4.213	2.362	C92536

CLEVELAND

New Product
Carbide Common Shank Drills
Continued

Style: 6200 - 5xD - Internal Coolant - AlTiN

Diameter			Shank		Overall	Length	
Inch	Metric	Decimal Equiv.	Dia. Ø	Decimal Equiv.	Length	of Flute	Part Number
	3.00	0.1181	6.00	0.2362	2.598	1.102	C92537
1/8	3.18	0.1250	6.00	0.2362	2.598	1.102	C92538
	3.30	0.1299	6.00	0.2362	2.598	1.102	C92539
	4.00	0.1575	6.00	0.2362	2.913	1.417	C92540
	4.20	0.1654	6.00	0.2362	2.913	1.417	C92541
	4.50	0.1772	6.00	0.2362	2.913	1.417	C92542
3/16	4.76	0.1875	6.00	0.2362	3.228	1.732	C92543
	5.00	0.1969	6.00	0.2362	3.228	1.732	C92544
	5.10	0.2008	6.00	0.2362	3.228	1.732	C92545
	5.50	0.2165	6.00	0.2362	3.228	1.732	C92546
	6.00	0.2362	6.00	0.2362	3.228	1.732	C92547
1/4	6.35	0.2500	8.00	0.315	3.583	2.087	C92548
	6.50	0.2559	8.00	0.315	3.583	2.087	C92549
	6.80	0.2677	8.00	0.315	3.583	2.087	C92550
	7.00	0.2756	8.00	0.315	3.583	2.087	C92551
9/32	7.15	0.2812	8.00	0.315	3.583	2.087	C92552
5/16	7.94	0.3125	8.00	0.315	3.583	2.087	C92553
	8.00	0.3150	8.00	0.315	3.583	2.087	C92554
21/64	8.33	0.3281	10.00	0.3937	3.583	2.087	C92555
	8.50	0.3346	10.00	0.3937	4.055	2.402	C92556
	9.00	0.3543	10.00	0.3937	4.055	2.402	C92557
	9.40	0.3701	10.00	0.3937	4.055	2.402	C92558
3/8	9.53	0.3750	10.00	0.3937	4.055	2.402	C92559
	9.90	0.3898	10.00	0.3937	4.055	2.402	C92560
	10.00	0.3937	10.00	0.3937	4.055	2.402	C92561
	10.20	0.4016	12.00	0.4724	4.646	2.795	C92562
13/32	10.32	0.4063	12.00	0.4724	4.646	2.795	C92563
	10.50	0.4134	12.00	0.4724	4.646	2.795	C92564
	10.70	0.4213	12.00	0.4724	4.646	2.795	C92565
	11.00	0.4331	12.00	0.4724	4.646	2.795	C92566
7/16	11.11	0.4375	12.00	0.4724	4.646	2.795	C92567
	11.60	0.4567	12.00	0.4724	4.646	2.795	C92568
	12.00	0.4724	12.00	0.4724	4.646	2.795	C92569
31/64	12.30	0.4844	14.00	0.5512	4.882	3.031	C92570
	12.50	0.4921	14.00	0.5512	4.882	3.031	C92571
1/2	12.70	0.5000	14.00	0.5512	4.882	3.031	C92572
	13.00	0.5118	14.00	0.5512	4.882	3.031	C92573
	13.50	0.5315	14.00	0.5512	4.882	3.031	C92574
	14.00	0.5512	14.00	0.5512	4.882	3.031	C92575
	14.50	0.5709	16.00	0.6299	5.236	3.268	C92576
	14.70	0.5787	16.00	0.6299	5.236	3.268	C92577
	15.00	0.5906	16.00	0.6299	5.236	3.268	C92578
	15.50	0.6102	16.00	0.6299	5.236	3.268	C92579
	15.80	0.6220	16.00	0.6299	5.236	3.268	C92580
5/8	15.88	0.6250	16.00	0.6299	5.236	3.268	C92581

Style: 6300 - 8xD - Internal Coolant - AlTiN

Diameter			Shank		Overall	Length	
Inch	Metric	Decimal Equiv.	Dia. Ø	Decimal Equiv.	Length	of Flute	Part Number
	4.00	0.1575	6.00	0.2362	3.150	1.654	C92582
	4.50	0.1772	6.00	0.2362	3.150	1.654	C92583
3/16	4.76	0.1875	6.00	0.2362	3.622	2.126	C92584
	5.00	0.1969	6.00	0.2362	3.622	2.126	C92585
	5.50	0.2165	6.00	0.2362	3.622	2.126	C92586
	6.00	0.2362	6.00	0.2362	3.622	2.126	C92587

continued on next page

CLEVELAND

New Product
Carbide Common Shank Drills
Continued

Style: 6300 - 8xD - Internal Coolant - AlTiN

Diameter			Shank		Overall	Length	
Inch	Metric	Decimal Equiv.	Dia. Ø	Decimal Equiv.	Length	of Flute	Part Number
1/4	6.35	0.2500	8.00	0.315	3.937	2.441	C92588
	6.50	0.2559	8.00	0.315	3.937	2.441	C92589
	6.80	0.2677	8.00	0.315	3.937	2.441	C92590
	7.00	0.2756	8.00	0.315	4.252	2.756	C92591
9/32	7.15	0.2812	8.00	0.315	4.252	2.756	C92592
	7.50	0.2812	8.00	0.315	4.252	2.756	C92593
5/16	7.94	0.3125	8.00	0.315	4.252	2.756	C92594
	8.00	0.3150	8.00	0.315	4.252	2.756	C92595
	8.50	0.3346	10.00	0.3937	4.803	3.150	C92596
	9.00	0.3543	10.00	0.3937	4.803	3.150	C92597
	9.50	0.3740	11.00	0.4331	5.118	3.465	C92598
3/8	9.53	0.3750	10.00	0.3937	5.118	3.465	C92599
	10.00	0.3937	10.00	0.3937	5.118	3.465	C92600
	10.20	0.4016	12.00	0.4724	5.984	4.134	C92601
	10.50	0.4134	12.00	0.4724	5.984	4.134	C92602
	11.00	0.4331	12.00	0.4724	5.984	4.134	C92603
7/16	11.11	0.4375	12.00	0.4724	5.984	4.134	C92604
	11.80	0.4646	12.00	0.4724	5.984	4.134	C92605
	12.00	0.4724	12.00	0.4724	5.984	4.134	C92606
	12.50	0.4921	14.00	0.5512	6.693	4.843	C92607
1/2	12.70	0.5000	14.00	0.5512	6.693	4.843	C92608
	13.00	0.5118	14.00	0.5512	6.693	4.843	C92609
	13.50	0.5315	14.00	0.5512	6.693	4.843	C92610
	14.00	0.5512	14.00	0.5512	6.693	4.843	C92611

Style: 6400 - 12xD - Internal Coolant - AlTiN

Diameter			Shank		Overall	Length	
Inch	Metric	Decimal Equiv.	Dia. Ø	Decimal Equiv.	Length	of Flute	Part Number
	4.00	0.1575	6.00	0.2362	4.016	2.520	C92612
	4.50	0.1772	6.00	0.2362	4.016	2.520	C92613
3/16	4.76	0.1875	6.00	0.2362	4.567	3.071	C92614
	5.00	0.1969	6.00	0.2362	4.567	3.071	C92615
	5.50	0.2165	6.00	0.2362	4.567	3.071	C92616
	6.00	0.2362	6.00	0.2362	4.567	3.071	C92617
1/4	6.35	0.2500	8.00	0.315	5.748	4.252	C92618
	6.50	0.2559	8.00	0.315	5.748	4.252	C92619
	6.80	0.2677	8.00	0.315	5.748	4.252	C92620
	7.00	0.2756	8.00	0.315	5.748	4.252	C92621
9/32	7.14	0.2812	8.00	0.315	5.748	4.252	C92622
	7.50	0.2812	8.00	0.315	5.748	4.252	C92623
5/16	7.94	0.3125	8.00	0.315	5.748	4.252	C92624
	8.00	0.3150	8.00	0.315	5.748	4.252	C92625
	8.50	0.3346	10.00	0.3937	6.378	4.724	C92626
	9.00	0.3543	10.00	0.3937	6.378	4.724	C92627
	9.50	0.3740	11.00	0.4331	6.378	4.724	C92628
3/8	9.53	0.3750	10.00	0.3937	6.378	4.724	C92629
	10.00	0.3937	10.00	0.3937	6.378	4.724	C92630
	10.20	0.4016	12.00	0.4724	8.031	6.142	C92631
	10.50	0.4134	12.00	0.4724	8.031	6.142	C92632
	11.00	0.4331	12.00	0.4724	8.031	6.142	C92633
7/16	11.11	0.4375	12.00	0.4724	8.031	6.142	C92634
	11.80	0.4646	12.00	0.4724	8.031	6.142	C92635
	12.00	0.4724	12.00	0.4724	8.031	6.142	C92636
	12.50	0.4921	14.00	0.5512	9.055	7.165	C92637
1/2	12.70	0.5000	14.00	0.5512	9.055	7.165	C92638
	13.00	0.5118	14.00	0.5512	9.055	7.165	C92639
	13.50	0.5315	14.00	0.5512	9.055	7.165	C92640
	14.00	0.5512	14.00	0.5512	9.055	7.165	C92641

CLEVELAND

New Product
Carbide Common Shank Drills
Continued

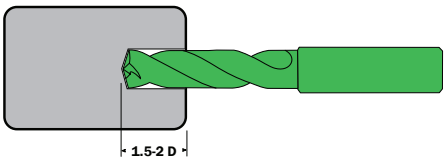
Speed & Feeds

ISO	Material Group	Tensile Strength (N/mm^2) Rockwell Hardness (HRc)	Average Cutting Speed Vc (SFM) 5 x D Vc	5 x D Feed Ltr	8 x D Vc	8 x D Feed Ltr	12 x d Vc	12 x d Feed Ltr
P	Structural Steel	≤ 25 HRC (≤ 850 N/mm^2)	459	E	344	E	312	D
	Heat Treatable, Case Hardening, Free Cutting Steels	≤ 42 HRC (≤ 1300 N/mm^2)	443	E	312	E	295	E
M	Stainless Steels	≤ 23 HRC (500 - 800 N/mm^2)	180	B	148	B	131	B
	Heat Resisting Steels	≤ 23 HRC	180	C	148	C	131	C
K	Cast Material	≤ 22 HRC	541	F	476	F	361	F
	Cast Material	≤ 30 HRC	476	F	361	F	312	F
S	Titanium Materials	≤ 23 HRC (800 N/mm^2)	148	C	131	C	98	C
	Titanium Alloys	≤ 38 HRC (1200 N/mm^2)	131	C	115	C	82	C
H	Hardened Steels	≤ 60 HRC	115	A	115	A	82	A

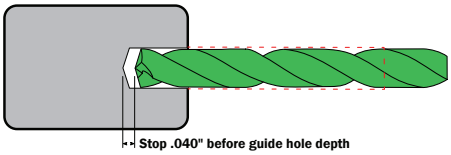
Feed Ltr	Nominal Diameter in mm 2.5mm (0.098")	4mm (0.1575")	6.3mm (0.2362")	10mm (0.3932")	16mm (0.6300")	25mm (0.9842"0
A	0.001 inch per rev	0.002 inch per rev	0.002 inch per rev	0.004 inch per rev	0.005 inch per rev	0.008 inch per rev
B	0.002 inch per rev	0.002 inch per rev	0.003 inch per rev	0.005 inch per rev	0.006 inch per rev	0.01 inch per rev
C	0.002 inch per rev	0.003 inch per rev	0.004 inch per rev	0.006 inch per rev	0.008 inch per rev	0.012 inch per rev
D	0.002 inch per rev	0.004 inch per rev	0.005 inch per rev	0.008 inch per rev	0.01 inch per rev	0.016 inch per rev
E	0.003 inch per rev	0.005 inch per rev	0.006 inch per rev	0.01 inch per rev	0.012 inch per rev	0.02 inch per rev
F	0.004 inch per rev	0.006 inch per rev	0.008 inch per rev	0.012 inch per rev	0.016 inch per rev	0.025 inch per rev

Drilling method for Cleveland® 12x diameter common shank drill

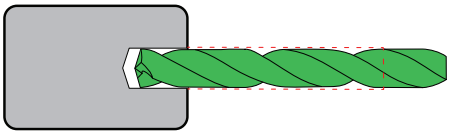
1. Create guide hole using Cleveland® carbide common shank 3x diameter drill.



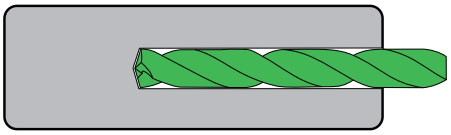
2. Insert the 12x diameter drill at low RPM and feed (500 RPM / 40-80 IPM).



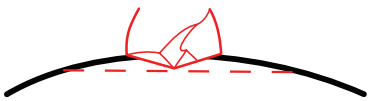
3. Increase rotation to full speed and begin normal drilling cycle.



4. After drilling is complete, reduce RPM and feed during retract (500 RPM / 40-80 IPM).



Important Note:



If the hole to be drilled is on a curved surface, or otherwise not perpendicular to the drilling axis, a flat must be cut for accurate drilling.

Coolant Options:

Through spindle coolant or minimum quantity lube (MQL) through spindle coolant.