

DRILL MONSTER[®]





Solid Carbide Tools

THE MONSTER WAY

Today's market has placed ever increasing demands on the machine tool industry and manufacturers for increased production efficiency, better quality control and reduced costs.

NEXT GENERATIONS TOOLS

Monster Tool Company has met these challenges by developing a new line of cutting tool products that maximizes the advantages of today's sophisticated CNC Machining Center Technology, as well as all other machining processes. They are custom manufactured to the highest industry standards. Drill Monster and other Monster Tool products are available from stock at your local distributor or catalog company.

Drill Monster products offer the following advantages:

- Extensive product offerings in all industry standard sizes.
- Cutting flutes are precision ground.
- Close tolerances and consistent tool accuracy.
- Lab inspected raw materials.
- Highest quality tools.

SUPERIOR TOOL PERFORMANCE

Drill Monster products offer the advantage of very close tolerance precision ground cutting tools. This precision results in superior tool finishes on all cutting surfaces providing cleaner cuts and better work piece finishes. Monster Tool Company products are manufactured from premium sub-micron C - 2 carbide material with 10% cobalt; these tools are engineered to better serve the needs of modern metalworking in a wide range of applications.

POLICIES AND PROCEDURES

ORDERING INFORMATION

All items in the **DRILL MONSTER** catalog carry unique item numbers. Using these numbers will keep ordering errors to a minimum and assure that you will receive exactly what you order. Orders will be accepted by phone, fax, and email.

PRODUCT WARRANTY

Monster Tool Company assures that all products sold shall be free from manufacturing and material defects. Monster Tool Company will repair, replace, or issue credit on any product that does not conform with this warranty. Any product that has been altered, used, marked or damaged voids this warranty.

This warranty is in lieu of all other warranties, expressed or implied including any warranty of merchantability or fitness for a particular purpose and is also in lieu of all other obligations or liabilities, including any obligation or liability arising from contract, or otherwise for damages whether direct, indirect or consequential. There are no other warranties except the warranty against defects in material and workmanship set forth above, and we neither assume nor authorize any other person or firm to assume for it any other obligation or liability in connection with our products.

TERMS OF ORDER

All orders are shipped with Net 30 day terms (delinquent at 45 days). No shipment to delinquent accounts. Any account paid after 30 days may become COD on future orders. All orders are subject to credit approval. In the event any legal action or proceeding is brought by any party under this Agreement, the prevailing party shall be entitled to recover the reasonable fees of its attorneys and any costs incurred in such action or proceeding, including costs of appeal, if any, in such amount that the court or administrative body having jurisdiction over such action or proceeding may award.

DROP SHIPPING

All drop ship orders must be faxed or emailed to Monster Tool Company. Monster Tool Company will not assume responsibility for any incorrect shipping information. Monster Tool Company will assess a \$20 fee to any drop ship order that is either returned or re-routed by the shipping company.

DISTRIBUTOR DISCOUNT

Call for terms and conditions.

CANCELLATIONS

On orders for special or altered standard tooling, a cancellation fee will be charged proportionate to the cost incurred on the order at the time of cancellation. On standard catalog tools, cancellations are accepted at no charge unless the order has been shipped or the ordered amount is unusually large in proportion to Monster Tool Company's historical sales.

RETURNED GOODS POLICY

Tools may not be returned without a return goods authorization (RGA) number. Material returned for credit will be subject to a 20% restocking charge. Credits will not be issued for any items that have been modified, altered, marked, machined or used. Special items are not subject to returns or exchanges.

SAFETY PRECAUTIONS

Carbide cutting tools should be used to perform functions that are compatible with the original tool design. Any carbide cutting tool may chip or shatter when broken. Safety glasses and other appropriate safety equipment should be worn by all people in the vicinity of tool use.

TECHNICAL ASSISTANCE

Any technical assistance or application suggestions made by Monster Tool Company personnel are only to assist the customer and in all cases use of such information is solely the customer's responsibility.

CLAIMS

Claims for shortages, damage, or loss must be made within three days of receipt of tool.

REVISIONS & PRICING

Monster Tool Company reserves the right to revise listings, specifications, and pricing in this catalog without notice. Monster Tool Company is not responsible for any typographical or pricing errors in this catalog. Please verify current pricing at the time of your order.



DRILL MONSTER®

SOLID CARBIDE C-2 grade premium sub-micron carbide with 10% cobalt

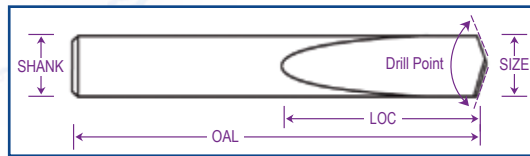
Spade Drills



- Well suited for shallow-hole drilling
- Ideal for drilling hard steel, high strength materials RC-50, thin sheet materials & spot drilling
- Massive web construction reduces breakage & insures maximum tool life
- Solid carbide construction for applications requiring the highest wear resistance



ITEM #	DEC. INCHES	SIZE	DRILL POINT	LOC	OAL
400-001002	0.0312	1/32	118°	3/16	1-1/2
400-001005	0.0469	3/64	118°	7/32	1-1/2
400-001007	0.0625	1/16	118°	5/16	1-1/2
400-001010	0.0938	3/32	118°	7/16	1-1/2
400-001011	0.1094	7/64	118°	7/16	1-1/2
400-001020	0.1250	1/8	118°	1/2	1-1/2
400-001021	0.1406	9/64	118°	1/2	2
400-001030	0.1562	5/32	118°	9/16	2
400-001031	0.1719	11/64	118°	9/16	2
400-001040	0.1875	3/16	118°	11/16	2
400-001050	0.2188	7/32	118°	19/32	2
400-001060	0.2500	1/4	118°	11/16	2
400-001070	0.2812	9/32	118°	7/8	2-1/2
400-001080	0.3125	5/16	118°	7/8	2-1/2
400-001090	0.3438	11/32	118°	15/16	2-1/2
400-001100	0.3750	3/8	118°	1-1/8	2-1/2
400-001110	0.4062	13/32	118°	1-1/8	2-3/4
400-001120	0.4375	7/16	118°	1-3/16	2-3/4
400-001130	0.4688	15/32	118°	1-3/16	3
400-001140	0.5000	1/2	118°	1-3/16	3



Tolerances	
Diameter (Size)	+0.0000 / -0.0005"

N/C Spot Drills



- Designed for exceptional precision & higher speed and feeds
- Short flute & overall lengths provide superior rigidity
- Chamfers and centers in one operation
- Easily resharpened, for longer tool life and a lower cost per hole

ITEM #	DEC. INCHES	SIZE	DRILL POINT	LOC	SHANK	OAL
402-125090	0.1250	1/8	90°	5/8	1/8	2
402-187090	0.1870	3/16	90°	3/4	3/16	2
402-250090	0.2500	1/4	90°	3/4	1/4	2-1/2
402-312090	0.3120	5/16	90°	1	5/16	2-1/2
402-375090	0.3750	3/8	90°	1	3/8	2-1/2
402-500090	0.5000	1/2	90°	1-1/4	1/2	3
402-125120	0.1250	1/8	120°	5/8	1/8	2
402-187120	0.1870	3/16	120°	3/4	3/16	2
402-250120	0.2500	1/4	120°	3/4	1/4	2-1/2
402-312120	0.3120	5/16	120°	1	5/16	2-1/2
402-375120	0.3750	3/8	120°	1	3/8	2-1/2
402-500120	0.5000	1/2	120°	1-1/4	1/2	3



Proudly Made in the U.S.A.

Twist Drills - Jobbers Length

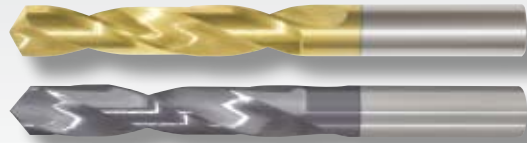
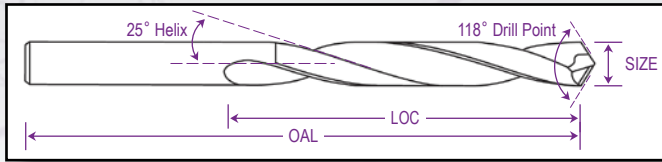
- ⚡ **Manufactured to assure true, accurate & smooth holes**
- ⚡ **For use on non-ferrous alloys, cast iron, plastics, aluminum, and highly abrasive materials**
- ⚡ **25° Helix - RHS/RHC**
- ⚡ **118° Drill point**
- ⚡ **When ordering coated drills, please add the letter "A" for TiN or "B" for TiAlN after the item number**



ITEM #	DEC. INCHES	SIZE	LOC	OAL
450-300135	0.0135	80	3/16	1-1/4
450-300145	0.0145	79	3/16	1-1/4
450-100156	0.0156	1/64	3/16	1-1/4
450-300160	0.0160	78	3/16	1-1/4
450-300180	0.0180	77	3/16	1-1/4
450-300200	0.0200	76	1/4	1-1/4
450-300210	0.0210	75	1/4	1-1/4
450-300225	0.0225	74	1/4	1-1/4
450-300240	0.0240	73	1/4	1-1/4
450-300250	0.0250	72	5/16	1-1/4
450-300260	0.0260	71	5/16	1-1/4
450-300280	0.0280	70	5/16	1-1/4
450-300292	0.0292	69	5/16	1-1/4
450-300310	0.0310	68	5/16	1-1/4
450-100312	0.0312	1/32	5/16	1-1/4
450-300320	0.0320	67	5/16	1-1/4
450-300330	0.0330	66	5/16	1-1/4
450-300350	0.0350	65	5/8	1-3/8
450-300360	0.0360	64	5/8	1-3/8
450-300370	0.0370	63	5/8	1-3/8
450-300380	0.0380	62	5/8	1-3/8
450-300390	0.0390	61	5/8	1-3/8
450-400394	0.0394	1.0 mm	5/8	1-1/2
450-300400	0.0400	60	3/4	1-1/2
450-300410	0.0410	59	3/4	1-1/2
450-300420	0.0420	58	3/4	1-1/2
450-300430	0.0430	57	3/4	1-1/2
450-300465	0.0465	56	3/4	1-1/2
450-100469	0.0469	3/64	3/4	1-1/2
450-300520	0.0520	55	3/4	1-1/2
450-300550	0.0550	54	3/4	1-1/2
450-400591	0.0591	1.5 mm	3/4	1-1/2
450-300595	0.0595	53	3/4	1-1/2
450-100625	0.0625	1/16	3/4	1-1/2
450-300635	0.0635	52	3/4	1-1/2
450-300670	0.0670	51	3/4	1-1/2
450-300700	0.0700	50	7/8	1-3/4
450-300730	0.0730	49	7/8	1-3/4
450-300760	0.0760	48	7/8	1-3/4
450-100781	0.0781	5/64	7/8	1-3/4
450-300785	0.0785	47	7/8	1-3/4
450-400787	0.0787	2.0 mm	7/8	1-3/4
450-300810	0.0810	46	7/8	1-3/4
450-300820	0.0820	45	7/8	1-3/4
450-300860	0.0860	44	1	2
450-300890	0.0890	43	1	2
450-300935	0.0935	42	1	2
450-100938	0.0938	3/32	1	2
450-300960	0.0960	41	1	2
450-300980	0.0980	40	1	2
450-400984	0.0984	2.5 mm	1	2
450-300995	0.0995	39	1-1/4	2-1/4
450-301015	0.1015	38	1-1/4	2-1/4
450-301040	0.1040	37	1-1/4	2-1/4

Tolerances	
Diameter (Size)	+0.0000 / -0.0005"

SOLID CARBIDE C-2 grade premium sub-micron carbide with 10% cobalt



ITEM #	DEC. INCHES	SIZE	LOC	OAL
450-301065	0.1065	36	1-1/4	2-1/4
450-101094	0.1094	7/64	1-1/4	2-1/4
450-301100	0.1100	35	1-1/4	2-1/4
450-301110	0.1110	34	1-1/4	2-1/4
450-301130	0.1130	33	1-1/4	2-1/4
450-301160	0.1160	32	1-1/4	2-1/4
450-401181	0.1181	3.0 mm	1-1/4	2-1/4
450-301200	0.1200	31	1-1/4	2-1/4
450-101250	0.1250	1/8	1-1/4	2-1/4
450-301285	0.1285	30	1-1/4	2-1/4
450-301360	0.1360	29	1-3/8	2-1/2
450-401378	0.1378	3.5 mm	1-3/8	2-1/2
450-301405	0.1405	28	1-3/8	2-1/2
450-101406	0.1406	9/64	1-3/8	2-1/2
450-301440	0.1440	27	1-3/8	2-1/2
450-301470	0.1470	26	1-3/8	2-1/2
450-301495	0.1495	25	1-3/8	2-1/2
450-301520	0.1520	24	1-3/8	2-1/2
450-301540	0.1540	23	1-3/8	2-1/2
450-101562	0.1562	5/32	1-3/8	2-1/2
450-301570	0.1570	22	1-3/8	2-1/2
450-401575	0.1575	4.0 mm	1-3/8	2-1/2
450-301590	0.1590	21	1-3/8	2-1/2
450-301610	0.1610	20	1-3/8	2-1/2
450-301660	0.1660	19	1-5/8	2-3/4
450-301695	0.1695	18	1-5/8	2-3/4
450-101719	0.1719	11/64	1-5/8	2-3/4
450-301730	0.1730	17	1-5/8	2-3/4
450-301770	0.1770	16	1-5/8	2-3/4
450-401772	0.1772	4.5 mm	1-5/8	2-3/4
450-301800	0.1800	15	1-5/8	2-3/4
450-301820	0.1820	14	1-5/8	2-3/4
450-301850	0.1850	13	1-5/8	2-3/4
450-101875	0.1875	3/16	1-5/8	2-3/4
450-301890	0.1890	12	1-5/8	2-3/4
450-301910	0.1910	11	1-5/8	2-3/4
450-301935	0.1935	10	1-5/8	2-3/4
450-301960	0.1960	9	1-3/4	3
450-401969	0.1969	5.0 mm	1-3/4	3
450-301990	0.1990	8	1-3/4	3
450-302010	0.2010	7	1-3/4	3
450-102031	0.2031	13/64	1-3/4	3
450-302040	0.2040	6	1-3/4	3
450-302055	0.2055	5	1-3/4	3
450-302090	0.2090	4	1-3/4	3
450-302130	0.2130	3	1-3/4	3
450-402165	0.2165	5.5 mm	1-3/4	3
450-102188	0.2188	7/32	1-3/4	3
450-302210	0.2210	2	1-3/4	3
450-302280	0.2280	1	1-3/4	3
450-202340	0.2340	A	2	3-1/4
450-102344	0.2344	15/64	2	3-1/4
450-402362	0.2362	6.0 mm	2	3-1/4
450-202380	0.2380	B	2	3-1/4

ITEM #	DEC. INCHES	SIZE	LOC	OAL
450-202420	0.2420	C	2	3-1/4
450-202460	0.2460	D	2	3-1/4
450-102500	0.2500	1/4	2	3-1/4
450-202500	0.2500	E	2	3-1/4
450-402559	0.2559	6.5 mm	2	3-1/4
450-202570	0.2570	F	2	3-1/4
450-202610	0.2610	G	2-1/8	3-1/2
450-102656	0.2656	17/64	2-1/8	3-1/2
450-202660	0.2660	H	2-1/8	3-1/2
450-202720	0.2720	I	2-1/8	3-1/2
450-402756	0.2756	7.0 mm	2-1/8	3-1/2
450-202770	0.2770	J	2-1/8	3-1/2
450-202810	0.2810	K	2-1/8	3-1/2
450-102812	0.2812	9/32	2-1/8	3-1/2
450-202900	0.2900	L	2-1/8	3-1/2
450-202950	0.2950	M	2-3/8	3-3/4
450-402953	0.2953	7.5 mm	2-3/8	3-3/4
450-102969	0.2969	19/64	2-3/8	3-3/4
450-203020	0.3020	N	2-3/8	3-3/4
450-103125	0.3125	5/16	2-3/8	3-3/4
450-403150	0.3150	8.0 mm	2-3/8	3-3/4
450-203160	0.3160	O	2-3/8	3-3/4
450-203230	0.3230	P	2-3/8	3-3/4
450-103281	0.3281	21/64	2-1/2	4
450-203320	0.3320	Q	2-1/2	4
450-403346	0.3346	8.5 mm	2-1/2	4
450-203390	0.3390	R	2-1/2	4
450-103438	0.3438	11/32	2-1/2	4
450-203480	0.3480	S	2-1/2	4
450-403543	0.3543	9.0 mm	2-1/2	4
450-203580	0.3580	T	2-3/4	4-1/4
450-103594	0.3594	23/64	2-3/4	4-1/4
450-203680	0.3680	U	2-3/4	4-1/4
450-403740	0.3740	9.5 mm	2-3/4	4-1/4
450-103750	0.3750	3/8	2-3/4	4-1/4
450-203770	0.3770	V	2-3/4	4-1/4
450-203860	0.3860	W	2-7/8	4-1/2
450-103906	0.3906	25/64	2-7/8	4-1/2
450-403937	0.3937	10.0 mm	2-7/8	4-1/2
450-203970	0.3970	X	2-7/8	4-1/2
450-204040	0.4040	Y	2-7/8	4-1/2
450-104062	0.4062	13/32	2-7/8	4-1/2
450-204130	0.4130	Z	2-7/8	4-1/2
450-404134	0.4134	10.5 mm	2-7/8	4-1/2
450-104219	0.4219	27/64	2-7/8	4-1/2
450-404331	0.4331	11.0 mm	2-7/8	4-1/2
450-104375	0.4375	7/16	2-7/8	4-1/2
450-404528	0.4528	11.5 mm	3	4-3/4
450-104531	0.4531	29/64	3	4-3/4
450-104688	0.4688	15/32	3	4-3/4
450-404724	0.4724	12.0 mm	3	4-3/4
450-104844	0.4844	31/64	3	4-3/4
450-404921	0.4921	12.5 mm	3	4-3/4
450-105000	0.5000	1/2	3	4-3/4

Stub Drills - Screw Machine Length

ITEM #	DEC. INCHES	SIZE	LOC	OAL
460-100312	0.0312	1/32	1/2	1-1/2
460-400394	0.0394	1.0 mm	1/2	1-1/2
460-300465	0.0465	56	1/2	1-1/2
460-100469	0.0469	3/64	1/2	1-1/2
460-300520	0.0520	55	1/2	1-1/2
460-300550	0.0550	54	1/2	1-1/2
460-400591	0.0591	1.5 mm	1/2	1-1/2
460-300595	0.0595	53	1/2	1-1/2
460-100625	0.0625	1/16	5/8	1-5/8
460-300635	0.0635	52	11/16	1-11/16
460-300670	0.0670	51	11/16	1-11/16
460-300700	0.0700	50	11/16	1-11/16
460-300730	0.0730	49	11/16	1-11/16
460-300760	0.0760	48	11/16	1-11/16
460-100781	0.0781	5/64	11/16	1-11/16
460-300785	0.0785	47	3/4	1-3/4
460-400787	0.0787	2.0 mm	3/4	1-3/4
460-300810	0.0810	46	3/4	1-3/4
460-300820	0.0820	45	3/4	1-3/4
460-300860	0.0860	44	3/4	1-3/4
460-300890	0.0890	43	3/4	1-3/4
460-300935	0.0935	42	3/4	1-3/4
460-100938	0.0938	3/32	3/4	1-3/4
460-300960	0.0960	41	13/16	1-13/16
460-300980	0.0980	40	13/16	1-13/16
460-400984	0.0984	2.5 mm	13/16	1-13/16
460-300995	0.0995	39	13/16	1-13/16
460-301015	0.1015	38	13/16	1-13/16
460-301040	0.1040	37	13/16	1-13/16
460-301065	0.1065	36	13/16	1-13/16
460-101094	0.1094	7/64	13/16	1-13/16
460-301100	0.1100	35	7/8	1-7/8
460-301110	0.1110	34	7/8	1-7/8
460-301130	0.1130	33	7/8	1-7/8
460-301160	0.1160	32	7/8	1-7/8
460-401181	0.1181	3.0 mm	7/8	1-7/8
460-301200	0.1200	31	7/8	1-7/8
460-101250	0.1250	1/8	7/8	1-7/8
460-301285	0.1285	30	15/16	1-15/16
460-301360	0.1360	29	15/16	1-15/16
460-401378	0.1378	3.5 mm	15/16	1-15/16
460-301405	0.1405	28	15/16	1-15/16
460-101406	0.1406	9/64	15/16	1-15/16
460-301440	0.1440	27	1	2-1/16
460-301470	0.1470	26	1	2-1/16
460-301495	0.1495	25	1	2-1/16

Precision drilling in:

- ⚡ Cast iron
- ⚡ Stainless steel
- ⚡ Tool steel
- ⚡ Titanium & nickel alloys

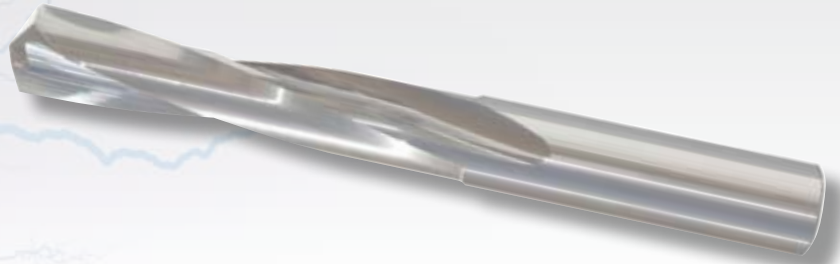


ITEM #	DEC. INCHES	SIZE	LOC	OAL
460-301520	0.1520	24	1	2-1/16
460-301540	0.1540	23	1	2-1/16
460-101562	0.1562	5/32	1	2-1/16
460-301570	0.1570	22	1-1/16	2-1/8
460-401575	0.1575	4.0 mm	1-1/16	2-1/8
460-301590	0.1590	21	1-1/16	2-1/8
460-301610	0.1610	20	1-1/16	2-1/8
460-301660	0.1660	19	1-1/16	2-1/8
460-301695	0.1695	18	1-1/16	2-1/8
460-101719	0.1719	11/64	1-1/16	2-1/8
460-301730	0.1730	17	1-1/8	2-3/16
460-301770	0.1770	16	1-1/8	2-3/16
460-401772	0.1772	4.5 mm	1-1/8	2-3/16
460-301800	0.1800	15	1-1/8	2-3/16
460-301820	0.1820	14	1-1/8	2-3/16
460-301850	0.1850	13	1-1/8	2-3/16
460-101875	0.1875	3/16	1-1/8	2-3/16
460-301890	0.1890	12	1-3/16	2-1/4
460-301910	0.1910	11	1-3/16	2-1/4
460-301935	0.1935	10	1-3/16	2-1/4
460-301960	0.1960	9	1-3/16	2-1/4
460-401969	0.1969	5.0 mm	1-3/16	2-1/4
460-301990	0.1990	8	1-3/16	2-1/4



Proudly Made in the U.S.A.

SOLID CARBIDE
C-2 grade premium
sub-micron carbide
with 10% cobalt



ITEM #	DEC. INCHES	SIZE	LOC	OAL
460-302010	0.2010	7	1-3/16	2-1/4
460-102031	0.2031	13/64	1-3/16	2-1/4
460-302040	0.2040	6	1-1/4	2-3/8
460-302055	0.2055	5	1-1/4	2-3/8
460-302090	0.2090	4	1-1/4	2-3/8
460-302130	0.2130	3	1-1/4	2-3/8
460-402165	0.2165	5.5 mm	1-1/4	2-3/8
460-102188	0.2188	7/32	1-1/4	2-3/8
460-302210	0.2210	2	1-5/16	2-7/16
460-302280	0.2280	1	1-5/16	2-7/16
460-202340	0.2340	A	1-5/16	2-7/16
460-102344	0.2344	15/64	1-5/16	2-7/16
460-402362	0.2362	6.0 mm	1-5/16	2-7/16
460-202380	0.2380	B	1-3/8	2-1/2
460-202420	0.2420	C	1-3/8	2-1/2
460-202460	0.2460	D	1-3/8	2-1/2
460-102500	0.2500	1/4	1-3/8	2-1/2
460-202500	0.2500	E	1-3/8	2-1/2
460-402559	0.2559	6.5 mm	1-3/8	2-1/2
460-202570	0.2570	F	1-7/16	2-5/8
460-202610	0.2610	G	1-7/16	2-5/8
460-102656	0.2656	17/64	1-7/16	2-5/8
460-202660	0.2660	H	1-1/2	2-11/16

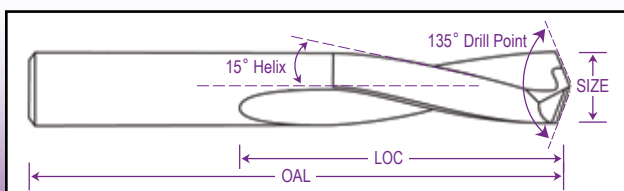
ITEM #	DEC. INCHES	SIZE	LOC	OAL
460-202720	0.2720	I	1-1/2	2-11/16
460-402756	0.2756	7.0 mm	1-1/2	2-11/16
460-202770	0.2770	J	1-1/2	2-11/16
460-202810	0.2810	K	1-1/2	2-11/16
460-102812	0.2812	9/32	1-1/2	2-11/16
460-202900	0.2900	L	1-9/16	2-3/4
460-202950	0.2950	M	1-9/16	2-3/4
460-402953	0.2953	7.5 mm	1-9/16	2-3/4
460-102969	0.2969	19/64	1-9/16	2-3/4
460-203020	0.3020	N	1-5/8	2-13/16
460-103125	0.3125	5/16	1-5/8	2-13/16
460-403150	0.3150	8.0 mm	1-5/8	2-13/16
460-203160	0.3160	O	1-11/16	2-15/16
460-203230	0.3230	P	1-11/16	2-15/16
460-103281	0.3281	21/64	1-11/16	2-15/16
460-203320	0.3320	Q	1-11/16	3
460-403346	0.3346	8.5 mm	1-11/16	3
460-203390	0.3390	R	1-11/16	3
460-103438	0.3438	11/32	1-11/16	3
460-203480	0.3480	S	1-3/4	3-1/16
460-403543	0.3543	9.0 mm	1-3/4	3-1/16
460-203580	0.3580	T	1-3/4	3-1/16
460-103594	0.3594	23/64	1-3/4	3-1/16
460-203680	0.3680	U	1-13/16	3-1/8
460-403740	0.3740	9.5 mm	1-13/16	3-1/8
460-103750	0.3750	3/8	1-13/16	3-1/8
460-203770	0.3770	V	1-7/8	3-1/4
460-203860	0.3860	W	1-7/8	3-1/4
460-103906	0.3906	25/64	1-7/8	3-1/4
460-403937	0.3937	10.0 mm	1-7/8	3-1/4
460-203970	0.3970	X	1-15/16	3-5/16
460-204040	0.4040	Y	1-15/16	3-5/16
460-104062	0.4062	13/32	1-15/16	3-5/16
460-204130	0.4130	Z	2	3-3/8
460-404134	0.4134	10.5 mm	2	3-3/8
460-104219	0.4219	27/64	2	3-3/8
460-404331	0.4331	11.0 mm	2	3-3/8
460-104375	0.4375	7/16	2-1/16	3-7/16
460-404528	0.4528	11.5 mm	2-1/16	3-7/16
460-104531	0.4531	29/64	2-1/8	3-9/16
460-104688	0.4688	15/32	2-1/8	3-5/8
460-404724	0.4724	12.0 mm	2-1/8	3-5/8
460-104844	0.4844	31/64	2-3/16	3-11/16
460-404921	0.4921	12.5 mm	2-3/16	3-11/16
460-105000	0.5000	1/2	2-1/4	3-3/4

➤ **15° Helix - RHS/RHC**

➤ **135° Drill point**

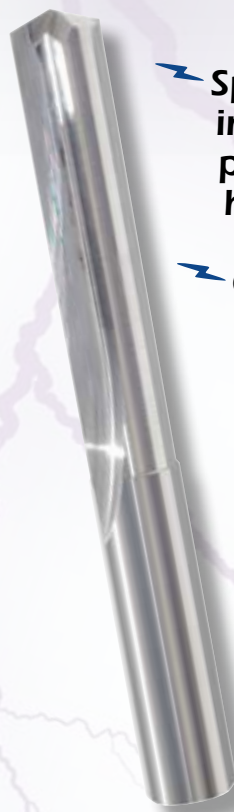
➤ **When ordering coated drills, please add the letter "B" for TiAlN after the item number**

Tolerances	
Diameter (Size)	+0.0000 / -0.0005"



Straight Flute Drills

ITEM #	DEC. INCHES	SIZE	LOC	OAL
470-100312	0.0312	1/32	1/2	1-1/2
470-400394	0.0394	1.0 mm	1/2	1-1/2
470-300465	0.0465	56	1/2	1-1/2
470-100469	0.0469	3/64	1/2	1-1/2
470-300520	0.0520	55	1/2	1-1/2
470-300550	0.0550	54	1/2	1-1/2
470-400591	0.0591	1.5 mm	1/2	1-1/2
470-300595	0.0595	53	1/2	1-1/2
470-100625	0.0625	1/16	5/8	1-5/8
470-300635	0.0635	52	11/16	1-11/16
470-300670	0.0670	51	11/16	1-11/16
470-300700	0.0700	50	11/16	1-11/16
470-300730	0.0730	49	11/16	1-11/16
470-300760	0.0760	48	11/16	1-11/16
470-100781	0.0781	5/64	11/16	1-11/16
470-300785	0.0785	47	3/4	1-3/4
470-400787	0.0787	2.0 mm	3/4	1-3/4
470-300810	0.0810	46	3/4	1-3/4
470-300820	0.0820	45	3/4	1-3/4
470-300860	0.0860	44	3/4	1-3/4
470-300890	0.0890	43	3/4	1-3/4
470-300935	0.0935	42	3/4	1-3/4
470-100938	0.0938	3/32	3/4	1-3/4
470-300960	0.0960	41	13/16	1-13/16
470-300980	0.0980	40	13/16	1-13/16
470-400984	0.0984	2.5 mm	13/16	1-13/16
470-300995	0.0995	39	13/16	1-13/16
470-301015	0.1015	38	13/16	1-13/16
470-301040	0.1040	37	13/16	1-13/16
470-301065	0.1065	36	13/16	1-13/16
470-101094	0.1094	7/64	13/16	1-13/16
470-301100	0.1100	35	7/8	1-7/8
470-301110	0.1110	34	7/8	1-7/8
470-301130	0.1130	33	7/8	1-7/8
470-301160	0.1160	32	7/8	1-7/8
470-401181	0.1181	3.0 mm	7/8	1-7/8
470-301200	0.1200	31	7/8	1-7/8
470-101250	0.1250	1/8	7/8	1-7/8
470-301285	0.1285	30	15/16	1-15/16
470-301360	0.1360	29	15/16	1-15/16
470-401378	0.1378	3.5 mm	15/16	1-15/16
470-301405	0.1405	28	15/16	1-15/16
470-101406	0.1406	9/64	15/16	1-15/16
470-301440	0.1440	27	1	2-1/16
470-301470	0.1470	26	1	2-1/16
470-301495	0.1495	25	1	2-1/16



Specifically designed for increased edge strength & precision tight tolerance holes

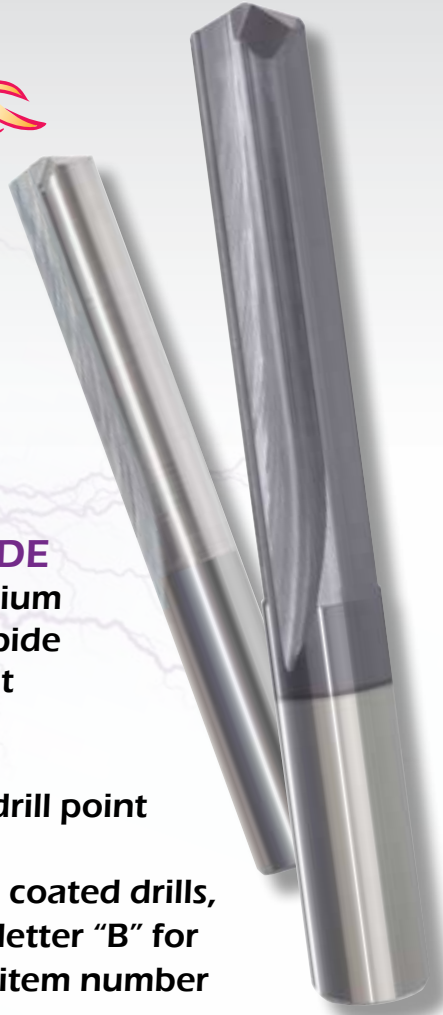
Capable of producing reamer type finishes in work hardened and abrasive materials such as:

- Chrome alloys
- Heat treated alloys
- Nickel alloys
- Titanium alloys
- Steel & stainless steel weldments

ITEM #	DEC. INCHES	SIZE	LOC	OAL
470-301520	0.1520	24	1	2-1/16
470-301540	0.1540	23	1	2-1/16
470-101562	0.1562	5/32	1	2-1/16
470-301570	0.1570	22	1-1/16	2-1/8
470-401575	0.1575	4.0 mm	1-1/16	2-1/8
470-301590	0.1590	21	1-1/16	2-1/8
470-301610	0.1610	20	1-1/16	2-1/8
470-301660	0.1660	19	1-1/16	2-1/8
470-301695	0.1695	18	1-1/16	2-1/8
470-101719	0.1719	11/64	1-1/16	2-1/8
470-301730	0.1730	17	1-1/8	2-3/16
470-301770	0.1770	16	1-1/8	2-3/16
470-401772	0.1772	4.5 mm	1-1/8	2-3/16
470-301800	0.1800	15	1-1/8	2-3/16
470-301820	0.1820	14	1-1/8	2-3/16
470-301850	0.1850	13	1-1/8	2-3/16
470-101875	0.1875	3/16	1-1/8	2-3/16
470-301890	0.1890	12	1-3/16	2-1/4
470-301910	0.1910	11	1-3/16	2-1/4
470-301935	0.1935	10	1-3/16	2-1/4
470-301960	0.1960	9	1-3/16	2-1/4
470-401969	0.1969	5.0 mm	1-3/16	2-1/4
470-301990	0.1990	8	1-3/16	2-1/4

Tolerances

Diameter (Size) +0.0000 / -0.0005"



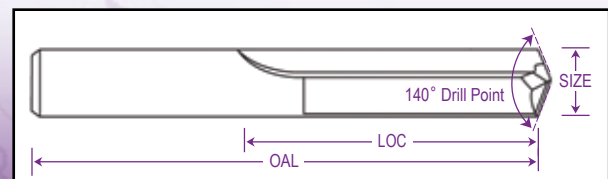
SOLID CARBIDE
C-2 grade premium
sub-micron carbide
with 10% cobalt

⚡ **140° Notched drill point**

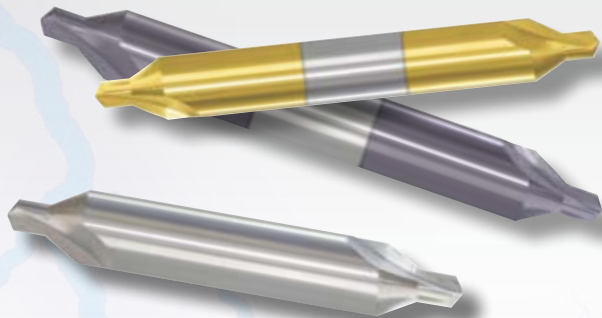
⚡ **When ordering coated drills,
please add the letter "B" for
TiAlN after the item number**

ITEM #	DEC. INCHES	SIZE	LOC	OAL
470-302010	0.2010	7	1-3/16	2-1/4
470-102031	0.2031	13/64	1-3/16	2-1/4
470-302040	0.2040	6	1-1/4	2-3/8
470-302055	0.2055	5	1-1/4	2-3/8
470-302090	0.2090	4	1-1/4	2-3/8
470-302130	0.2130	3	1-1/4	2-3/8
470-402165	0.2165	5.5 mm	1-1/4	2-3/8
470-102188	0.2188	7/32	1-1/4	2-3/8
470-302210	0.2210	2	1-5/16	2-7/16
470-302280	0.2280	1	1-5/16	2-7/16
470-202340	0.2340	A	1-5/16	2-7/16
470-102344	0.2344	15/64	1-5/16	2-7/16
470-402362	0.2362	6.0 mm	1-5/16	2-7/16
470-202380	0.2380	B	1-3/8	2-1/2
470-202420	0.2420	C	1-3/8	2-1/2
470-202460	0.2460	D	1-3/8	2-1/2
470-102500	0.2500	1/4	1-3/8	2-1/2
470-202500	0.2500	E	1-3/8	2-1/2
470-402559	0.2559	6.5 mm	1-3/8	2-1/2
470-202570	0.2570	F	1-7/16	2-5/8
470-202610	0.2610	G	1-7/16	2-5/8
470-102656	0.2656	17/64	1-7/16	2-5/8
470-202660	0.2660	H	1-1/2	2-11/16

ITEM #	DEC. INCHES	SIZE	LOC	OAL
470-202720	0.2720	I	1-1/2	2-11/16
470-402756	0.2756	7.0 mm	1-1/2	2-11/16
470-202770	0.2770	J	1-1/2	2-11/16
470-202810	0.2810	K	1-1/2	2-11/16
470-102812	0.2812	9/32	1-1/2	2-11/16
470-202900	0.2900	L	1-9/16	2-3/4
470-202950	0.2950	M	1-9/16	2-3/4
470-402953	0.2953	7.5 mm	1-9/16	2-3/4
470-102969	0.2969	19/64	1-9/16	2-3/4
470-203020	0.3020	N	1-5/8	2-13/16
470-103125	0.3125	5/16	1-5/8	2-13/16
470-403150	0.3150	8.0 mm	1-5/8	2-13/16
470-203160	0.3160	O	1-11/16	2-15/16
470-203230	0.3230	P	1-11/16	2-15/16
470-103281	0.3281	21/64	1-11/16	2-15/16
470-203320	0.3320	Q	1-11/16	3
470-403346	0.3346	8.5 mm	1-11/16	3
470-203390	0.3390	R	1-11/16	3
470-103438	0.3438	11/32	1-11/16	3
470-203480	0.3480	S	1-3/4	3-1/16
470-403543	0.3543	9.0 mm	1-3/4	3-1/16
470-203580	0.3580	T	1-3/4	3-1/16
470-103594	0.3594	23/64	1-3/4	3-1/16
470-203680	0.3680	U	1-13/16	3-1/8
470-403740	0.3740	9.5 mm	1-13/16	3-1/8
470-103750	0.3750	3/8	1-13/16	3-1/8
470-203770	0.3770	V	1-7/8	3-1/4
470-203860	0.3860	W	1-7/8	3-1/4
470-103906	0.3906	25/64	1-7/8	3-1/4
470-403937	0.3937	10.0 mm	1-7/8	3-1/4
470-203970	0.3970	X	1-15/16	3-5/16
470-204040	0.4040	Y	1-15/16	3-5/16
470-104062	0.4062	13/32	1-15/16	3-5/16
470-204130	0.4130	Z	2	3-3/8
470-404134	0.4134	10.5 mm	2	3-3/8
470-104219	0.4219	27/64	2	3-3/8
470-404331	0.4331	11.0 mm	2	3-3/8
470-104375	0.4375	7/16	2-1/16	3-7/16
470-404528	0.4528	11.5 mm	2-1/16	3-7/16
470-104531	0.4531	29/64	2-1/8	3-9/16
470-104688	0.4688	15/32	2-1/8	3-5/8
470-404724	0.4724	12.0 mm	2-1/8	3-5/8
470-104844	0.4844	31/64	2-3/16	3-11/16
470-404921	0.4921	12.5 mm	2-3/16	3-11/16
470-105000	0.5000	1/2	2-1/4	3-3/4



Center Drills



- Combined drill & countersink
- 118° Pilot drill point
- Ideal for high production applications where tolerance, finish and down-time are considerations

Regular Length 60°

SIZE	PILOT DIA	SHANK DIA	OAL	60° UNC. ITEM #	60° TIN ITEM #	60° TiAIN ITEM #
00	0.0265	1/8	1-1/2	300-001001	300-001501	300-001001B
0	1/32	1/8	1-1/2	300-001002	300-001502	300-001002B
1	3/64	1/8	1-1/2	300-001003	300-001503	300-001003B
2	5/64	3/16	1-7/8	300-001004	300-001504	300-001004B
3	7/64	1/4	2	300-001005	300-001505	300-001005B
4	1/8	5/16	2-1/8	300-001006	300-001506	300-001006B
5	3/16	7/16	2-3/4	300-001007	300-001507	300-001007B
6	7/32	1/2	3	300-001008	300-001508	300-001008B
7	1/4	5/8	3-1/4	300-001009	300-001509	300-001009B
8	5/16	3/4	3-1/2	300-001010	300-001510	300-001010B

Regular Length 82° & 90°

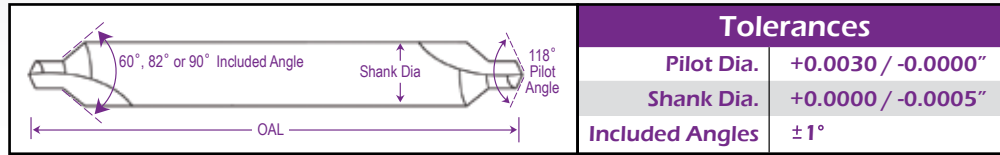
SIZE	PILOT DIA	SHANK DIA	OAL	82° UNC. ITEM #	90° UNC. ITEM #	82° TiAIN ITEM #	90° TiAIN ITEM #
00	0.0265	1/8	1-1/2	300-002001	300-003001	300-002001B	300-003001B
0	1/32	1/8	1-1/2	300-002002	300-003002	300-002002B	300-003002B
1	3/64	1/8	1-1/2	300-002003	300-003003	300-002003B	300-003003B
2	5/64	3/16	1-7/8	300-002004	300-003004	300-002004B	300-003004B
3	7/64	1/4	2	300-002005	300-003005	300-002005B	300-003005B
4	1/8	5/16	2-1/8	300-002006	300-003006	300-002006B	300-003006B
5	3/16	7/16	2-3/4	300-002007	300-003007	300-002007B	300-003007B
6	7/32	1/2	3	300-002008	300-003008	300-002008B	300-003008B
7	1/4	5/8	3-1/4	300-002009	300-003009	300-002009B	300-003009B
8	5/16	3/4	3-1/2	300-002010	300-003010	300-002010B	300-003010B

SOLID CARBIDE C-2 grade premium sub-micron carbide with 10% cobalt



Proudly Made in the U.S.A.

Long Center Drills

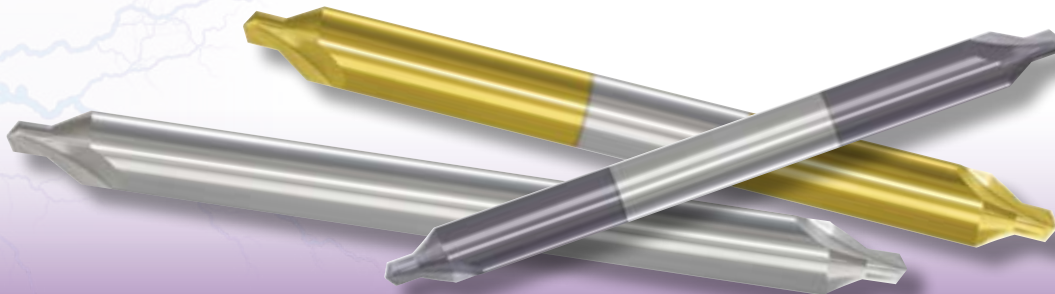


Long Length 60°

SIZE	PILOT DIA	SHANK DIA	OAL	60° UNC. ITEM #	60° TiN ITEM #	60° TiAIN ITEM #
1	3/64	1/8	4	300-005001	300-005501	300-005001B
2	5/64	3/16	4	300-005002	300-005502	300-005002B
3	7/64	1/4	4	300-005003	300-005503	300-005003B
4	1/8	5/16	4	300-005004	300-005504	300-005004B
5	3/16	7/16	6	300-005005	300-005505	300-005005B
6	7/32	1/2	6	300-005006	300-005506	300-005006B
7	1/4	5/8	6	300-005007	300-005507	300-005007B
8	5/16	3/4	6	300-005008	300-005508	300-005008B

Long Length 82° & 90°

SIZE	PILOT DIA	SHANK DIA	OAL	82° UNC. ITEM #	90° UNC. ITEM #	82° TiAIN ITEM #	90° TiAIN ITEM #
1	3/64	1/8	4	300-006001	300-007001	300-006001B	300-007001B
2	5/64	3/16	4	300-006002	300-007002	300-006002B	300-007002B
3	7/64	1/4	4	300-006003	300-007003	300-006003B	300-007003B
4	1/8	5/16	4	300-006004	300-007004	300-006004B	300-007004B
5	3/16	7/16	6	300-006005	300-007005	300-006005B	300-007005B
6	7/32	1/2	6	300-006006	300-007006	300-006006B	300-007006B
7	1/4	5/8	6	300-006007	300-007007	300-006007B	300-007007B
8	5/16	3/4	6	300-006008	300-007008	300-006008B	300-007008B



DRILL MONSTER®

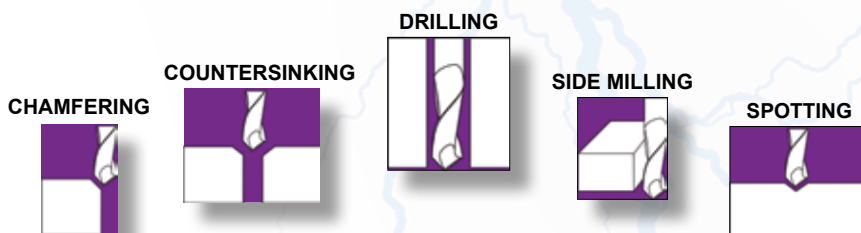
Drill Mills 60° & 90°

Maximum performance for a variety of operations.

⚡ 30° Helix RHS / RHC

⚡ Center Cutting

⚡ Coated Tools Offer Longer Tool Life and Increased Speeds & Feeds



THE 5-IN-1 TOOL!

2 Flute



SIZE	LOC	SHANK DIA.	OAL	60° UNC. ITEM #	90° UNC. ITEM #	60° TiAIN ITEM #	90° TiAIN ITEM #
1/8	1/2	1/8	1-1/2	208-621250	208-000125	208-621253	208-010125
3/16	5/8	3/16	2	208-621870	208-000187	208-621873	208-010187
1/4	3/4	1/4	2-1/2	208-622500	208-000250	208-622503	208-010250
5/16	13/16	5/16	2-1/2	208-623120	208-000312	208-623123	208-010312
3/8	1	3/8	2-1/2	208-623750	208-000375	208-623753	208-010375
7/16	1	7/16	2-3/4	208-624370	208-000437	208-624373	208-010437
1/2	1	1/2	3	208-625000	208-000500	208-625003	208-010500
5/8	1-1/4	5/8	3-1/2	208-626250	208-000625	208-626253	208-010625
3/4	1-1/2	3/4	4	208-627500	208-000750	208-627503	208-010750

4 Flute



SIZE	LOC	SHANK DIA.	OAL	60° UNC. ITEM #	90° UNC. ITEM #	60° TiAIN ITEM #	90° TiAIN ITEM #
1/8	1/2	1/8	1-1/2	208-641250	208-400125	208-641253	208-420125
3/16	5/8	3/16	2	208-641870	208-400187	208-641873	208-420187
1/4	3/4	1/4	2-1/2	208-642500	208-400250	208-642503	208-420250
5/16	13/16	5/16	2-1/2	208-643120	208-400312	208-643123	208-420312
3/8	1	3/8	2-1/2	208-643750	208-400375	208-643753	208-420375
7/16	1	7/16	2-3/4	208-644370	208-400437	208-644373	208-420437
1/2	1	1/2	3	208-645000	208-400500	208-645003	208-420500
5/8	1-1/4	5/8	3-1/2	208-646250	208-400625	208-646253	208-420625
3/4	1-1/2	3/4	4	208-647500	208-400750	208-647503	208-420750



Speeds and Feeds

Surface Feet per Minute & Inches per Revolution

MATERIAL		DRILL SPEED	DRILL FEED (I.P.R.)			
		(SFM)	.062	.125	.250	.500
Aluminum & Aluminum Alloys		250-650	.0008	.003	.007	.012
Aluminum Alloyed > 10%		100-400	.0008	.002	.006	.010
Brass		250-450	.0007	.002	.003	.004
Bronze		150-250	.0007	.002	.003	.004
Cast Irons	Soft	150-300	.001	.003	.005	.010
	Medium	125-250	.001	.003	.005	.008
	Ductile	80-200	.0005	.002	.004	.006
	Malleable	65-200	.0005	.002	.004	.007
Copper / Copper Alloys		150-300	.001	.003	.007	.012
Magnesium / Magnesium Alloys		300-600	.001	.003	.007	.012
Monel / High Nickel Steel		75-200	.001	.003	.005	.009
Plastics		150-450	.001	.002	.004	.005
Stainless Steel (Soft)		80-300	.001	.003	.005	.008
Stainless Steel (Hard)		40-100	.0005	.002	.004	.006
Steels	Low Carbon	150-300	.001	.002	.004	.007
	Medium Carbon	100-200	.001	.002	.003	.006
	High Tensile (35-40 Rc)	75-150	.001	.002	.003	.004
	High Tensile (40-45 Rc)	50-100	.0007	.001	.002	.003
	High Tensile (46 Rc+)	25-75	.0005	.0007	.001	.002
	Mold Steel Tool Steel	60-130 40-100	.0005 .001	.001 .0015	.003 .003	.005 .005
Titanium	Soft	80-350	.001	.002	.004	.006
	Hard	40-100	.007	.001	.002	.005

NOTE: All recommendations are considered as starting parameters only

Consider the following variables when trying to optimize performance:

1. Machine rigidity
2. Concentricity at spindle
3. Work piece rigidity
4. Use minimum tool OAL for application
5. Recommended coolant type directed to point of cut
6. Match recommended feeds and speeds
7. Resharpen or replace tool before catastrophic failure



Proudly Made in the U.S.A.

Speeds and Feeds Formulas

IF YOU WANT TO FIND THIS:	AND YOU KNOW THIS:	DO THIS:
R.P.M.	S.F.M.	$(S.F.M. \times 12) / (\text{Dia.} \times 3.1416)$
S.F.M.	R.P.M.	$(\text{Dia.} \times R.P.M. \times 3.1416) / 12$
Feedrate Per R.P.M. (F.R.)	S.F.M. and F.M.	$(\text{Dia.} \times F.M. \times 3.1416) / (S.F.M. \times 12)$
Feedrate Per R.P.M. (F.R.)	R.P.M. and F.M.	F.M. / R.P.M.
Feedrate Per Minute (F.M.)	R.P.M. AND F.R.	F.R. x R.P.M.
S.F.M.	R.P.M. and Diameter	$.26 \times R.P.M. \times \text{Dia.}$
R.P.M.	S.F.M. and Diameter	$(S.F.M. / \text{Dia.}) \times 3.8$

MONSTER TOOL COMPANY

UNCOATED

Bright Finish



General purpose drilling in all materials.

TiN COATED

Titanium Nitride



Coating offers increased tool life and wear resistance by providing enhanced heat resistance and lubricity for a wide variety of materials.

TiAlN COATED

Titanium Aluminum Nitride



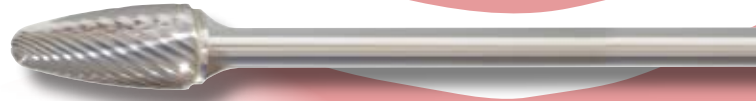
Coating can be used in semi-dry to dry drilling of most steels, including high nickel alloys, stainless steel and cast iron. This multi-layer coating provides good thermal stability for increased speeds and feeds that offers excellent heat resistance and good lubricity.



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World leader in Solid Carbide Reamer production.

Huge inventory of fractional, decimal, wire, letter & metric sizes - with over 800 SKU's. Stock by .0005 increments to .2650 diameter and by .001 increments over .2650 to .5050 diameter



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Single, 3, 4 and 6 flute Chatterless Countersinks, Countersink Sets, Thread Mills, Boring Bars, Engraving Blanks and Drill Mills





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