

# NITRO



**Drillco is the home of**

# NITRO

**our premium line of cutting tools, including:**

- Jobber, Stub, Mechanic's Length, S&D, and Core Drills
- Spiral Point and Spiral Flute Multi-Application Taps, Hand Taps
- 1", 2" and 3" Depth of Cut Cobalt Annular Cutters
- Spiral Flute Construction Reamers
- Safety-First Hex Nut Reamers
- Sets and Counter Displays

**NITRO** products provide higher productivity levels, saving you money!

**Contact us today to see how Nitro can help improve your bottom line!**



Toll Free **800.634.0406**  
Call or Text **951.270.1360**

Email [sales@mudgefasteners.com](mailto:sales@mudgefasteners.com)  
Web [www.mudgefasteners.com](http://www.mudgefasteners.com)

# NITRO Heavy Duty Jobber Drills

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
1/16" thru 19/64" - 12 per pack  
5/16" thru 1/2" - 6 per pack

## Series 400N

135° SPLIT POINT / STRAIGHT SHANK

The *Nitro* Heavy Duty 135° Split Point drill with Nitride surface treatment, that give a hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling.



400N

Sets on next page

Size	Flute Length	Overall Length	400N EDP No.
1/16"	7/8"	1-7/8"	400N104
5/64"	1"	2"	400N105
3/32"	1-1/4"	2-1/4"	400N106
7/64"	1-1/2"	2-5/8"	400N107
1/8"	1-5/8"	2-3/4"	400N108
9/64"	1-3/4"	2-7/8"	400N109
5/32"	2"	3-1/8"	400N110
11/64"	2-1/8"	3-1/4"	400N111
3/16"	2-5/16"	3-1/2"	400N112
13/64"	2-7/16"	3-5/8"	400N113
7/32"	2-1/2"	3-3/4"	400N114
15/64"	2-5/8"	3-7/8"	400N115
1/4"	2-3/4"	4"	400N116
17/64"	2-7/8"	4-1/8"	400N117
9/32"	2-15/16"	4-1/4"	400N118

Size	Flute Length	Overall Length	400N EDP No.
19/64"	3-1/16"	4-3/8"	400N119
5/16"	3-3/16"	4-1/2"	400N120
21/64"	3-5/16"	4-5/8"	400N121
11/32"	3-7/16"	4-3/4"	400N122
23/64"	3-1/2"	4-7/8"	400N123
3/8"	3-5/8"	5"	400N124
25/64"	3-3/4"	5-1/8"	400N125
13/32"	3-7/8"	5-1/4"	400N126
27/64"	3-15/16"	5-3/8"	400N127
7/16"	4-1/16"	5-1/2"	400N128
29/64"	4-3/16"	5-5/8"	400N129
15/32"	4-5/16"	5-3/4"	400N130
31/64"	4-3/8"	5-7/8"	400N131
1/2"	4-1/2"	6"	400N132



# NITRO Heavy Duty Jobber Drills

**HIGH SPEED STEEL**  
Letter / Black & Gold



**PACKAGING:**  
'A' thru 'L' - 12 per pack  
'M' thru 'Z' - 6 per pack

## Series 440N

135° SPLIT POINT / STRAIGHT SHANK

The *Nitro* Heavy Duty 135° Split Point drill with Nitride surface treatment, that give a hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling.



440N

Size	Flute Length	Overall Length	440N EDP No.
A	2-5/8"	3-7/8"	440N501
B	2-3/4"	4"	440N502
C	2-3/4"	4"	440N503
D	2-3/4"	4"	440N504
E	2-3/4"	4"	440N505
F	2-7/8"	4-1/8"	440N506
G	2-7/8"	4-1/8"	440N507
H	2-7/8"	4-1/8"	440N508
I	2-7/8"	4-1/8"	440N509
J	2-7/8"	4-1/8"	440N510
K	2-15/16"	4-1/4"	440N511
L	2-15/16"	4-1/4"	440N512
M	3-1/16"	4-3/8"	440N513

Size	Flute Length	Overall Length	440N EDP No.
N	3-1/16"	4-3/8"	440N514
O	3-3/16"	4-1/2"	440N515
P	3-5/16"	4-5/8"	440N516
Q	3-7/16"	4-3/4"	440N517
R	3-7/16"	4-3/4"	440N518
S	3-1/2"	4-7/8"	440N519
T	3-1/2"	4-7/8"	440N520
U	3-5/8"	5"	440N521
V	3-5/8"	5"	440N522
W	3-3/4"	5-1/8"	440N523
X	3-3/4"	5-1/8"	440N524
Y	3-7/8"	5-1/4"	440N525
Z	3-7/8"	5-1/4"	440N526

No. of Pcs.	Description	EDP No.
<b>400N/440N/480N Series Nitro Heavy Duty Jobber Drill Sets</b>		
13	1/16" - 1/4" BY 64ths	400N13
15	1/16" - 1/2" BY 32nds	400N15
19	Maintenance Set - 1/16, 5/64, 3/32, 1/8, #29, #25, 5/32, #21, 3/16, #7, 7/32, 1/4, F, 5/16, U, 3/8, 27/64, 7/16, 1/2	400N19
21	1/16" - 3/8" BY 64ths	400N21
21	1/16" - 1/4" BY 64ths & 9/32" - 1/2" BY 32nds	400N21V
26	A - Z	400N26
29	1/16" - 1/2" BY 64ths	400N29
29	DRILL PAL 1/16" - 1/2" BY 64ths	400NW29
60	#1 - #60	400N60
115	1/16" - 1/2" BY 64ths, #1 - 60, A - Z	400N0115



400N29

# NITRO Heavy Duty Jobber Drills

**HIGH SPEED STEEL**  
Number / Black & Gold



**PACKAGING:**  
#1 thru #60 - 12 per pack

## Series 480N

135° SPLIT POINT / STRAIGHT SHANK

Description and applications as 440N.



480N

Sets on previous page

Size	Flute Length	Overall Length	480N EDP No.
1	2-5/8"	3-7/8"	480N001
2	2-1/2"	3-7/8"	480N002
3	2-1/2"	3-3/4"	480N003
4	2-1/2"	3-3/4"	480N004
5	2-1/2"	3-3/4"	480N005
6	2-1/2"	3-3/4"	480N006
7	2-7/16"	3-5/8"	480N007
8	2-7/16"	3-5/8"	480N008
9	2-7/16"	3-5/8"	480N009
10	2-7/16"	3-5/8"	480N010
11	2-5/16"	3-1/2"	480N011
12	2-5/16"	3-1/2"	480N012
13	2-5/16"	3-1/2"	480N013
14	2-3/16"	3-3/8"	480N014
15	2-3/16"	3-3/8"	480N015
16	2-3/16"	3-3/8"	480N016
17	2-3/16"	3-3/8"	480N017
18	2-1/8"	3-1/4"	480N018
19	2-1/8"	3-1/4"	480N019
20	2-1/8"	3-1/4"	480N020
21	2-1/8"	3-1/4"	480N021
22	2"	3-1/8"	480N022
23	2"	3-1/8"	480N023
24	2"	3-1/8"	480N024
25	1-7/8"	3"	480N025
26	1-7/8"	3"	480N026
27	1-7/8"	3"	480N027
28	1-3/4"	2-7/8"	480N028
29	1-3/4"	2-7/8"	480N029
30	1-5/8"	2-3/4"	480N030

Size	Flute Length	Overall Length	480N EDP No.
31	1-5/8"	2-3/4"	480N031
32	1-5/8"	2-3/4"	480N032
33	1-1/2"	2-5/8"	480N033
34	1-1/2"	2-5/8"	480N034
35	1-1/2"	2-5/8"	480N035
36	1-7/16"	2-1/2"	480N036
37	1-7/16"	2-1/2"	480N037
38	1-7/16"	2-1/2"	480N038
39	1-3/8"	2-3/8"	480N039
40	1-3/8"	2-3/8"	480N040
41	1-3/8"	2-3/8"	480N041
42	1-1/4"	2-1/4"	480N042
43	1-1/4"	2-1/4"	480N043
44	1-1/8"	2-1/8"	480N044
45	1-1/8"	2-1/8"	480N045
46	1-1/8"	2-1/8"	480N046
47	1"	2"	480N047
48	1"	2"	480N048
49	1"	2"	480N049
50	1"	2"	480N050
51	1"	2"	480N051
52	7/8"	1-7/8"	480N052
53*	7/8"	1-7/8"	480N053
54*	7/8"	1-7/8"	480N054
55*	7/8"	1-7/8"	480N055
56*	3/4"	1-3/4"	480N056
57*	3/4"	1-3/4"	480N057
58*	11/16"	1-5/8"	480N058
59*	11/16"	1-5/8"	480N059
60*	11/16"	1-5/8"	480N060

\* Not Split Point



# NITRO Mechanics Length Drills

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
1/16" thru 19/64" - 12 per pack.  
5/16" thru 1/2" - 6 per pack.

## Series 350N

135° SPLIT POINT / 3-FLATS

The *Nitro* Heavy Duty 135° Split Point drill with Nitride surface treatment, that give a hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling.



350N

Size	Flute Length	Overall Length	350N EDP No.
1/16"	7/8"	1-7/8"	350N104
5/64"	1"	2"	350N105
3/32"	1-1/4"	2-1/4"	350N106
7/64"	1-5/16"	2-3/8"	350N107
1/8"	1-7/16"	2-1/2"	350N108
9/64"	1-9/16"	2-5/8"	350N109
5/32"	1-11/16"	2-3/4"	350N110
11/64"	1-13/16"	2-7/8"	350N111
3/16"	1-7/8"	3"	350N112
13/64"	1-15/16"	3-1/8"	350N113
7/32"	2"	3-1/4"	350N114
15/64"	2-1/16"	3-3/8"	350N115
1/4"	2-3/32"	3-1/2"	350N116
17/64"	2-1/8"	3-5/8"	350N117
9/32"	2-1/4"	3-3/4"	350N118

Size	Flute Length	Overall Length	350N EDP No.
19/64"	2-3/8"	3-7/8"	350N119
5/16"	2-1/2"	4"	350N120
21/64"	2-9/16"	4-1/16"	350N121
11/32"	2-5/8"	4-1/8"	350N122
23/64"	2-11/16"	4-3/16"	350N123
3/8"	2-11/16"	4-1/4"	350N124
25/64"	2-3/4"	4-5/16"	350N125
13/32"	2-13/16"	4-3/8"	350N126
27/64"	2-7/8"	4-7/16"	350N127
7/16"	2-15/16"	4-1/2"	350N128
29/64"	3"	4-5/8"	350N129
15/32"	3-1/8"	4-3/4"	350N130
31/64"	3-1/4"	4-7/8"	350N131
1/2"	3-3/8"	5"	350N132

No flats on sizes smaller than 3/16"



350N29

No. of Pcs.	Description	EDP No.
<b>350N Series Nitro Mechanics Length Drill Sets</b>		
13	1/16" - 1/4" BY 64ths	350N13
15	1/16" - 1/2" BY 32nds	350N15
21	1/16" - 3/8" BY 64ths	350N21
21	1/16" - 1/4" BY 64ths & 9/32" - 1/2" BY 32nds	350N21V
29	1/16" - 1/2" BY 64ths	350N29
29	DRILL PAL 1/16" - 1/2" BY 64ths	350NW29

# NITRO Screw Machine Length Drills

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
1/16" thru 19/64" - 12 per pack.  
5/16" thru 1/2" - 6 per pack.

## Series 300N

135° SPLIT POINT / STRAIGHT SHANK

The *Nitro* Heavy Duty 135° Split Point drill with Nitride surface treatment, that give a hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling.



300N

Size	Flute Length	Overall Length	300N EDP No.
1/16"	5/8"	1-5/8"	300N104
5/64"	11/16"	1-11/16"	300N105
3/32"	3/4"	1-3/4"	300N106
7/64"	13/16"	1-13/16"	300N107
1/8"	7/8"	1-7/8"	300N108
9/64"	15/16"	1-15/16"	300N109
5/32"	1"	2-1/16"	300N110
11/64"	1-1/16"	2-1/8"	300N111
3/16"	1-1/8"	2-3/16"	300N112
13/64"	1-3/16"	2-1/4"	300N113
7/32"	1-1/4"	2-3/8"	300N114
15/64"	1-5/16"	2-7/16"	300N115
1/4"	1-3/8"	2-1/2"	300N116
17/64"	1-7/16"	2-5/8"	300N117
9/32"	1-1/2"	2-11/16"	300N118

Size	Flute Length	Overall Length	300N EDP No.
19/64"	1-9/16"	2-3/4"	300N119
5/16"	1-5/8"	2-13/16"	300N120
21/64"	1-11/16"	2-15/16"	300N121
11/32"	1-11/16"	3"	300N122
23/64"	1-3/4"	3-1/16"	300N123
3/8"	1-13/16"	3-1/8"	300N124
25/64"	1-7/8"	3-1/4"	300N125
13/32"	1-15/16"	3-5/16"	300N126
27/64"	2"	3-3/8"	300N127
7/16"	2-1/16"	3-7/16"	300N128
29/64"	2-1/8"	3-9/16"	300N129
15/32"	2-1/8"	3-5/8"	300N130
31/64"	2-3/16"	3-11/16"	300N131
1/2"	2-1/4"	3-3/4"	300N132



300N29

No. of Pcs.	Description	EDP No.
<b>300N Series Screw Machine (Stub) Length Heavy-Duty Drill Sets</b>		
13	1/16" - 1/4" BY 64ths	300N13
21	1/16" - 3/8" BY 64ths	300N21
29	1/16" - 1/2" BY 64ths	300N29



# NITRO 1/2" Shank S & D Drills

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
All sizes are individually packaged.

## Series 1000N

118° SPLIT POINT / 1/2" REDUCED SHANK / FLATTED SHANK

The *Nitro* 118° Split Point S & D drill with Nitride Surface treatment, that gives hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling. The 118 degree split point reduces thrust and eliminates walking at the drill point.



1000N

Size	Flute Length	Overall Length	1000N EDP No.
33/64"	3"	6"	1000N133
17/32"	3"	6"	1000N134
35/64"	3"	6"	1000N135
9/16"	3"	6"	1000N136
37/64"	3"	6"	1000N137
19/32"	3"	6"	1000N138
39/64"	3"	6"	1000N139
5/8"	3"	6"	1000N140
41/64"	3"	6"	1000N141
21/32"	3"	6"	1000N142
43/64"	3"	6"	1000N143
11/16"	3"	6"	1000N144
45/64"	3"	6"	1000N145
23/32"	3"	6"	1000N146
47/64"	3"	6"	1000N147
3/4"	3"	6"	1000N148

Size	Flute Length	Overall Length	1000N EDP No.
49/64"	3"	6"	1000N149
25/32"	3"	6"	1000N150
51/64"	3"	6"	1000N151
13/16"	3"	6"	1000N152
53/64"	3"	6"	1000N153
27/32"	3"	6"	1000N154
55/64"	3"	6"	1000N155
7/8"	3"	6"	1000N156
57/64"	3"	6"	1000N157
29/32"	3"	6"	1000N158
59/64"	3"	6"	1000N159
15/16"	3"	6"	1000N160
61/64"	3"	6"	1000N161
31/32"	3"	6"	1000N162
63/64"	3"	6"	1000N163
1"	3"	6"	1000N164

No. of Pcs.	Description	EDP No.
<b>1000N Series 1/2" Shank S&amp;D Drill Sets</b>		
5	9/16" - 1" BY 8ths	1000N5
8	9/16" - 1" BY 16ths	1000N8
32	STAND 1/2" - 1" BY 64ths W/DRILLS	1000N32



1000N8

# NITRO 3/8" Reduced Shank Drills

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
25/64" - 1/2" - 6 per pack  
17/32" - 3/4" - 1 per pack

## Series 1035N

135° SPLIT POINT / 3/8" REDUCED SHANK

The *Nitro* Heavy Duty 135° Split Point drill with Nitride surface treatment, that give a hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling.



1035N

Size	Flute Length	Overall Length	1035N EDP No.
25/64"	3-3/4"	5-1/8"	1035N125
13/32"	3-7/8"	5-1/4"	1035N126
27/64"	3-15/16"	5-3/8"	1035N127
7/16"	4-1/16"	5-1/2"	1035N128
29/64"	4-3/16"	5-5/8"	1035N129
15/32"	4-5/16"	5-3/4"	1035N130
31/64"	4-3/8"	5-7/8"	1035N131

Size	Flute Length	Overall Length	1035N EDP No.
1/2"	4-1/2"	6"	1035N132
17/32"	4-1/2"	6"	1035N134
9/16"	4-1/2"	6"	1035N136
5/8"	4-1/2"	6"	1035N140
11/16"	4-1/2"	6"	1035N144
3/4"	4-1/2"	6"	1035N148

Sets on next page



# NITRO 3/8" Reduced Shank Drills

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
6 per pack

## Series 1045N

MECHANICS LENGTH / 135° SPLIT POINT / 3/8" REDUCED SHANK

The *Nitro* Heavy Duty 135° Split Point drill with Nitride surface treatment, that give a hard, protective layer to the drill (increases hardness without increasing brittleness), which is measurably harder than high speed steel. Body and clearance are black and gold surface treated for maximum lubricity. Recommended for use in stainless steel and other hard metal drilling.



1045N

Size	Flute Length	Overall Length	1045N EDP No.
25/64"	2-3/4"	4-5/16"	1045N125
13/32"	2-13/16"	4-3/8"	1045N126
27/64"	2-7/8"	4-7/16"	1045N127
7/16"	2-15/16"	4-1/2"	1045N128

Size	Flute Length	Overall Length	1045N EDP No.
29/64"	3"	4-5/8"	1045N129
15/32"	3-1/8"	4-3/4"	1045N130
31/64"	3-1/4"	4-7/8"	1045N131
1/2"	3-3/8"	5"	1045N132



No. of Pcs.	Description	EDP No.
<b>1035N &amp; 1045N Series Reduced Shank Drill Sets</b>		
15	1/16" - 1/2" BY 32nds	1035N15
29	1/16" - 1/2" BY 64ths	1035N29
15	1/16" - 1/2" BY 32nds	1045N15
29	1/16" - 1/2" BY 64ths	1045N29

# NITRO Multi-Application Spiral Flute Taps

**HIGH SPEED STEEL**  
Machine Screw & Fractional / Bright



**PACKAGING:**  
All sizes are individually packaged.

## 2000PF

BOTTOMING / BLIND HOLE

These taps are designed for machine tapping in a wide range of material groups, including difficult to machine materials such as stainless steel. The *Nitro* multi-application tap improves thread quality, and aids in chip evacuation, eliminating bird nesting. They are available in both spiral point and spiral flute designs, in fractional and metric sizes.



2000PF

Size	NC	NF	No. of Flutes	Pitch Dia. Limits	2000PF EDP No.
4	40	-	2	H2	20PF004C
4	-	48	2	H2	20PF004F
5	40	-	3	H2	20PF005C
5	-	44	3	H2	20PF005F
6	32	-	3	H3	20PF006C
6	-	40	3	H2	20PF006F
8	32	-	3	H3	20PF008C
8	-	36	3	H2	20PF008F
10	24	-	3	H3	20PF010C
10	-	32	3	H3	20PF010F
12	24	-	3	H3	20PF012C
12	-	28	3	H3	20PF012F
1/4"	20	-	3	H3	20PF116C
1/4"	20	-	3	H5	20PF116C5
1/4"	-	28	3	H3	20PF116F
1/4"	-	28	3	H4	20PF116F4
5/16"	18	-	3	H3	20PF120C
5/16"	18	-	3	H5	20PF120C5
5/16"	-	24	3	H3	20PF120F
5/16"	-	24	3	H5	20PF120F5

Size	NC	NF	No. of Flutes	Pitch Dia. Limits	2000PF EDP No.
3/8"	16	-	3	H3	20PF124C
3/8"	16	-	3	H5	20PF124C5
3/8"	-	24	3	H3	20PF124F
3/8"	-	24	3	H4	20PF124F4
7/16"	14	-	3	H3	20PF128C
7/16"	14	-	3	H5	20PF128C
7/16"	-	20	3	H3	20PF128F
7/16"	-	20	3	H5	20PF128F5
1/2"	13	-	3	H5	20PF132C
1/2"	-	20	3	H5	20PF132F
9/16"	12	-	3	H5	20PF136C
9/16"	-	18	3	H5	20PF136F
5/8"	11	-	4	H5	20PF140C
5/8"	-	18	4	H5	20PF140F
3/4"	10	-	4	H5	20PF148C
3/4"	-	16	4	H5	20PF148F
7/8"	9	-	4	H6	20PF156C
7/8"	-	14	4	H6	20PF156F
1"	8	-	4	H6	20PF164C
1"	-	12	4	H6	20PF164F



# NITRO Multi-Application Spiral Flute Taps

**HIGH SPEED STEEL**  
Metric / Bright



**PACKAGING:**  
All sizes are individually packaged.

## 2000PF

BOTTOMING / BLIND HOLE

These taps are designed for machine tapping in a wide range of material groups, including difficult to machine materials such as stainless steel. The *Nitro* multi-application tap improves thread quality, and aids in chip evacuation, eliminating bird nesting. They are available in both spiral point and spiral flute designs, in fractional and metric sizes.



2000PF

Size	Pitch (mm)	No. of Flutes	Pitch Dia. Limits	2000PF EDP No.
M3	0.5	3	D3	20PF030A
M3.5	0.6	3	D4	20PF035A
M4	0.7	3	D4	20PF040A
M5	0.8	3	D4	20PF050A
M6	1.0	3	D5	20PF060A
M7	1.0	3	D5	20PF070A
M8	1.25	3	D5	20PF080A
M8	1.0	3	D5	20PF080B
M10	1.5	3	D6	20PF100A6
M10	1.5	3	D5	20PF100A
M12	1.75	3	D6	20PF120A
M12	1.25	3	D5	20PF120C
M14	2.0	3	D7	20PF140A
M14	1.5	3	D6	20PF140B
M16	2.0	3	D7	20PF160A
M16	1.5	3	D6	20PF160B
M18	2.5	4	D7	20PF180A
M18	1.5	4	D6	20PF180D
M20	2.5	4	D7	20PF200A
M20	1.5	4	D6	20PF200B
M22	2.5	4	D7	20PF220A
M22	1.5	4	D6	20PF220B
M24	3.0	4	D8	20PF240A

# NITRO Multi-Application Spiral Point Taps

**HIGH SPEED STEEL**  
Machine Screw & Fractional / Bright



**PACKAGING:**  
All sizes are individually packaged.

## 2100PS

PLUG / THROUGH HOLE

These taps are designed for machine tapping in a wide range of material groups, including difficult to machine materials such as stainless steel. The *Nitro* multi-application tap improves thread quality, and aids in chip evacuation, eliminating bird nesting. They are available in both spiral point and spiral flute designs, in fractional and metric sizes.



2100PS

Size	NC	NF	Number of Flutes	Pitch Dia. Limits	2100PS EDP No.
4	40	-	2	H2	21PS004C
4	-	48	2	H2	21PS004F
5	40	-	3	H2	21PS005C
5	-	44	3	H2	21PS005F
6	32	-	3	H3	21PS006C
6	-	40	3	H2	21PS006F
8	32	-	3	H3	21PS008C
8	-	36	3	H2	21PS008F
10	24	-	3	H3	21PS010C
10	-	32	3	H3	21PS010F
12	24	-	3	H3	21PS012C
12	-	28	3	H3	21PS012F
1/4"	20	-	3	H3	21PS116C
1/4"	20	-	3	H5	21PS116C5
1/4"	-	28	3	H3	21PS116F
1/4"	-	28	3	H4	21PS116F4
5/16"	18	-	3	H3	21PS120C
5/16"	18	-	3	H5	21PS120C5
5/16"	-	24	3	H3	21PS120F
5/16"	-	24	3	H5	21PS120F5

Size	NC	NF	Number of Flutes	Pitch Dia. Limits	2100PS EDP No.
3/8"	16	-	3	H3	21PS124C
3/8"	16	-	3	H5	21PS124C5
3/8"	-	24	3	H3	21PS124F
3/8"	-	24	3	H4	21PS124F4
7/16"	14	-	3	H3	21PS128C
7/16"	14	-	3	H5	21PS128C5
7/16"	-	20	3	H3	21PS128F
7/16"	-	20	3	H5	21PS128F5
1/2"	13	-	3	H5	21PS132C
1/2"	-	20	3	H5	21PS132F
9/16"	12	-	3	H5	21PS136C
9/16"	-	18	3	H5	21PS136F
5/8"	11	-	3	H5	21PS140C
5/8"	-	18	3	H5	21PS140F
3/4"	10	-	3	H5	21PS148C
3/4"	-	16	3	H5	21PS148F
7/8"	9	-	3	H6	21PS156C
7/8"	-	14	3	H6	21PS156F
1"	8	-	3	H6	21PS164C
1"	-	12	3	H6	21PS164F



# NITRO Multi-Application Spiral Point Taps

**HIGH SPEED STEEL**  
Metric / Bright



**PACKAGING:**  
All sizes are individually packaged.

**2100PS** continued

PLUG / THROUGH HOLE

These taps are designed for machine tapping in a wide range of material groups, including difficult to machine materials such as stainless steel. The *Nitro* multi-application tap improves thread quality, and aids in chip evacuation, eliminating bird nesting. They are available in both spiral point and spiral flute designs, in fractional and metric sizes.



2100PS

Size	Pitch (mm)	Number of Flutes	Pitch Dia. Limits	2100PS EDP No.
M3	0.5	3	D3	21PS030A
M3.5	0.6	3	D4	21PS035A
M4	0.7	3	D4	21PS040A
M5	0.8	3	D4	21PS050A
M6	1.0	3	D5	21PS060A
M7	1.0	3	D5	21PS070A
M8	1.25	3	D5	21PS080A
M8	1.0	3	D5	21PS080B
M10	1.5	3	D6	21PS100A
M10	1.5	3	D5	21PS100B
M12	1.75	3	D6	21PS120A
M12	1.25	3	D5	21PS120B
M14	2.0	3	D7	21PS140A
M14	1.5	3	D6	21PS140B
M16	2.0	3	D7	21PS160A
M16	1.5	3	D6	21PS160B
M18	2.5	3	D7	21PS180A
M18	1.5	3	D6	21PS180D
M20	2.5	3	D7	21PS200A
M20	1.5	3	D6	21PS200B
M22	2.5	3	D7	21PS220A
M22	1.5	3	D6	21PS220B
M24	3.0	3	D8	21PS240A

# NITRO Spiral Point Taps

**HIGH SPEED STEEL**  
Machine Screw & Fractional / Black Oxide



**PACKAGING:** #0 thru 1/4" - 12 per pack  
5/16" thru 1/2" - 6 per pack  
9/16" thru 3/4" - 3 per pack

## 2100N

PLUG / THROUGH HOLE

The angular flutes at the front end of these taps propel the chips ahead of the tap. This reduce loading and clogging in the flutes. Spiral Point taps are ideal for production tapping thru holes. Sometimes referred to as "Gun Taps", spiral point taps "shoot" the chips ahead of the tap.



2100N

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100N EDP No.
							Plug
0	-	80	1-5/8"	5/16"	2	H1	21N000FP
1	64	-	1-11/16"	3/8"	2	H1	21N001CP
1	-	72	1-11/16"	3/8"	2	H1	21N001FP
2	56	-	1-3/4"	7/16"	2	H2	21N002CP
2	-	64	1-3/4"	7/16"	2	H2	21N002FP
3	48	-	1-13/16"	1/2"	2	H2	21N003CP
3	-	56	1-13/16"	1/2"	2	H2	21N003FP
4	40	-	1-7/8"	9/16"	2	H2	21N004CP
4	-	48	1-7/8"	9/16"	2	H2	21N004FP
4	-	36	1-7/8"	9/16"	2	H2	21N004SP
5	40	-	1-15/16"	5/8"	2	H2	21N005CP
5	-	44	1-15/16"	5/8"	2	H2	21N005FP
6	32	-	2"	11/16"	2	H3	21N006CP
6	-	40	2"	11/16"	2	H2	21N006FP
8	32	-	2-1/8"	3/4"	2	H3	21N008CP
8	-	36	2-1/8"	3/4"	2	H2	21N008FP
10	24	-	2-3/8"	7/8"	2	H3	21N010CP
10	-	32	2-3/8"	7/8"	2	H3	21N010FP
12	24	-	2-3/8"	15/16"	2	H3	21N012CP
12	-	28	2-3/8"	15/16"	2	H3	21N012FP

Continued on next page



# NITRO Spiral Point Taps

**HIGH SPEED STEEL**  
Fractional / Black Oxide



**PACKAGING:** #0 thru 1/4" - 12 per pack  
5/16" thru 1/2" - 6 per pack  
9/16" thru 3/4" - 3 per pack

**2100N** continued

PLUG / THROUGH HOLE

The angular flutes at the front end of these taps propel the chips ahead of the tap. This reduce loading and clogging in the flutes. Spiral Point taps are ideal for production tapping thru holes. Sometimes referred to as "Gun Taps", spiral point taps "shoot" the chips ahead of the tap.

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100N EDP No.
							Plug
1/4"	20	-	2-1/2"	1"	2	H3	21N116CP
1/4"	-	28	2-1/2"	1"	2	H3	21N116FP
5/16"	18	-	2-23/32"	1-1/8"	2	H3	21N120CP
5/16"	-	24	2-23/32"	1-1/8"	2	H3	21N120FP
3/8"	16	-	2-15/16"	1-1/4"	3	H3	21N124CP
3/8"	-	24	2-15/16"	1-1/4"	3	H3	21N124FP
7/16"	14	-	3-5/32"	1-7/16"	3	H3	21N128CP
7/16"	-	20	3-5/32"	1-7/16"	3	H3	21N128FP
1/2"	13	-	3-3/8"	1-21/32"	3	H3	21N132CP
1/2"	-	20	3-3/8"	1-21/32"	3	H3	21N132FP
9/16"	12	-	3-19/32"	1-21/32"	3	H3	21N136CP
9/16"	-	18	3-19/32"	1-21/32"	3	H3	21N136FP
5/8"	11	-	3-13/16"	1-13/16"	3	H3	21N140CP
5/8"	-	18	3-13/16"	1-13/16"	3	H3	21N140FP
3/4"	10	-	4-1/4"	2"	3	H3	21N148CP
3/4"	-	16	4-1/4"	2"	3	H3	21N148FP

# NITRO Hand Taps

**HIGH SPEED STEEL**  
Machine Screw / Black Oxide



**PACKAGING:**  
1 thru 12 - 12 per pack

## 2000N

TAPER, PLUG & BOTTOMING / THROUGH OR BLIND HOLE

Straight Flute "Hand Taps" are the most popular and versatile style of taps in general machine tapping operations. They are for general use in production tapping or hand operations in a wide range of application material groups.

**Taper** – 7-10 pitch chamfer length. Starts the thread square with the workpiece

**Plug** – 3-5 pitch chamfer length. Generally used in through holes

**Bottoming** – 1-2 pitch chamfer length. Generates the thread to the bottom

**Sets** – Contains 1 each of Taper, Plug, and Bottoming



2000N

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000N EDP No.			
							Taper	Plug	Bottoming	Sets
1	64	–	1-11/16"	3/8"	2	H1	20N001CT	20N001CP	20N001CB	20N001CS
1	–	72	1-11/16"	3/8"	2	H1	20N001FT	20N001FP	20N001FB	20N001FS
2	56	–	1-3/4"	7/16"	3	H2	20N002CT	20N002CP	20N002CB	20N002CS
2	–	64	1-3/4"	7/16"	3	H2	20N002FT	20N002FP	20N002FB	20N002FS
3	48	–	1-13/16"	1/2"	3	H2	20N003CT	20N003CP	20N003CB	20N003CS
3	–	56	1-13/16"	1/2"	3	H2	20N003FT	20N003FP	20N003FB	20N003FS
4	40	–	1-7/8"	9/16"	3	H2	20N004CT	20N004CP	20N004CB	20N004CS
4	–	36	1-7/8"	9/16"	3	H2	20N004ST	20N004SP	20N004SB	20N004SS
4	–	48	1-7/8"	9/16"	3	H2	20N004FT	20N004FP	20N004FB	20N004FS
5	40	–	1-15/16"	5/8"	3	H2	20N005CT	20N005CP	20N005CB	20N005CS
5	–	44	1-15/16"	5/8"	3	H2	20N005FT	20N005FP	20N005FB	20N005FS
6	32	–	2"	11/16"	3	H3	20N006CT	20N006CP	20N006CB	20N006CS
6	–	40	2"	11/16"	3	H2	20N006FT	20N006FP	20N006FB	20N006FS
8	32	–	2-1/8"	3/4"	4	H3	20N008CT	20N008CP	20N008CB	20N008CS
8	–	36	2-1/8"	3/4"	4	H2	20N008FT	20N008FP	20N008FB	20N008FS
10	24	–	2-3/8"	7/8"	4	H3	20N010CT	20N010CP	20N010CB	20N010CS
10	–	32	2-3/8"	7/8"	4	H3	20N010FT	20N010FP	20N010FB	20N010FS
12	24	–	2-3/8"	15/16"	4	H3	20N012CT	20N012CP	20N012CB	20N012CS
12	–	28	2-3/8"	15/16"	4	H3	20N012FT	20N012FP	20N012FB	20N012FS

Continued on next page



# NITRO Hand Taps

**HIGH SPEED STEEL**  
Fractional / Black Oxide



**PACKAGING:**

1/4" - 12 per pack

5/16" thru 1/2" - 6 per pack

9/16" thru 1" - 3 per pack

1-1/8" and up - individually packaged

**2000N** continued

TAPER, PLUG & BOTTOMING / THROUGH OR BLIND HOLE

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000N EDP No.			
							Taper	Plug	Bottoming	Sets
1/4"	20	-	2-1/2"	1"	4	H3	20N116CT	20N116CP	20N116CB	20N116CS
1/4"	-	28	2-1/2"	1"	4	H3	20N116FT	20N116FP	20N116FB	20N116FS
5/16"	18	-	2-23/32"	1-1/8"	4	H3	20N120CT	20N120CP	20N120CB	20N120CS
5/16"	-	24	2-23/32"	1-1/8"	4	H3	20N120FT	20N120FP	20N120FB	20N120FS
3/8"	16	-	2-15/16"	1-1/4"	4	H3	20N124CT	20N124CP	20N124CB	20N124CS
3/8"	-	24	2-15/16"	1-1/4"	4	H3	20N124FT	20N124FP	20N124FB	20N124FS
7/16"	14	-	3-5/32"	1-7/16"	4	H3	20N128CT	20N128CP	20N128CB	20N128CS
7/16"	-	20	3-5/32"	1-7/16"	4	H3	20N128FT	20N128FP	20N128FB	20N128FS
1/2"	13	-	3-3/8"	1-21/32"	4	H3	20N132CT	20N132CP	20N132CB	20N132CS
1/2"	-	20	3-3/8"	1-21/32"	4	H3	20N132FT	20N132FP	20N132FB	20N132FS
9/16"	12	-	3-19/32"	1-21/32"	4	H3	20N136CT	20N136CP	20N136CB	20N136CS
9/16"	-	18	3-19/32"	1-21/32"	4	H3	20N136FT	20N136FP	20N136FB	20N136FS
5/8"	11	-	3-13/16"	1-13/16"	4	H3	20N140CT	20N140CP	20N140CB	20N140CS
5/8"	-	18	3-13/16"	1-13/16"	4	H3	20N140FT	20N140FP	20N140FB	20N140FS
11/16"	11	-	4-1/32"	1-13/16"	4	H3	20N144CT	20N144CP	20N144CB	20N144CS
11/16"	-	16	4-1/32"	1-13/16"	4	H3	20N144FT	20N144FP	20N144FB	20N144FS
3/4"	10	-	4-1/4"	2"	4	H3	20N148CT	20N148CP	20N148CB	20N148CS
3/4"	-	16	4-1/4"	2"	4	H3	20N148FT	20N148FP	20N148FB	20N148FS
7/8"	9	-	4-11/16"	2-7/32"	4	H4	20N156CT	20N156CP	20N156CB	20N156CS
7/8"	-	14	4-11/16"	2-7/32"	4	H4	20N156FT	20N156FP	20N156FB	20N156FS
1"	8	-	5-1/8"	2-1/2"	4	H4	20N164CT	20N164CP	20N164CB	20N164CS
1"	-	12	5-1/8"	2-1/2"	4	H4	20N164FT	20N164FP	20N164FB	20N164FS
1"	-	14	5-1/8"	2-1/2"	4	H4	20N164ST	20N164SP	20N164SB	20N164SS
1-1/8"	7	-	5-7/16"	2-9/16"	4	H4	20N208CT	20N208CP	20N208CB	20N208CS
1-1/8"	-	12	5-7/16"	2-9/16"	4	H4	20N208FT	20N208FP	20N208FB	20N208FS
1-1/4"	7	-	5-3/4"	2-9/16"	4	H4	20N216CT	20N216CP	20N216CB	20N216CS
1-1/4"	-	12	5-3/4"	2-9/16"	6	H4	20N216FT	20N216FP	20N216FB	20N216FS
1-3/8"	6	-	6-1/16"	3"	4	H4	20N224CT	20N224CP	20N224CB	20N224CS
1-3/8"	-	12	6-1/16"	3"	6	H4	20N224FT	20N224FP	20N224FB	20N224FS
1-1/2"	6	-	6-3/8"	3"	4	H4	20N232CT	20N232CP	20N232CB	20N232CS
1-1/2"	-	12	6-3/8"	3"	6	H4	20N232FT	20N232FP	20N232FB	20N232FS

# Tap Sets / Tap & Drill Sets



2000N19



400NC2018

No. of Pieces	Brand	Material	Coating/Finishing	Includes	EDP No.
<b>2000N Series Hand Taps</b>					
10	Nitro	High Speed Steel	Black Oxide	1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20"	2000N10
19	Nitro	High Speed Steel	Black Oxide	0-80, 1-64, 1-72, 2-56, 2-64, 3-48, 3-56, 4-40, 4-48, 5-40, 5-44, 6-32, 6-40, 8-32, 8-36, 10-24, 10-32, 12-24, 12-28	2000N19
<b>2100N Series Spiral Point Tap Sets</b>					
10	Nitro	High Speed Steel	Black Oxide	1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20	2100N10
19	Nitro	High Speed Steel	Black Oxide	0-80, 1-64, 1-72, 2-56, 2-64, 3-48, 3-56, 4-40, 4-48, 5-40, 5-44, 6-32, 6-40, 8-32, 8-36, 10-24, 10-32, 12-24, 12-28	2100N19
<b>2000N Series Tap &amp; Drill Sets</b>					
18	Nitro	High Speed Steel	Black Oxide	Taps: 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13 w/ corresponding 400N series drills	400NC2018
18	Nitro	High Speed Steel	Black Oxide	Taps: 6-40, 8-36, 10-24, 10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20 w/ corresponding 400N series drills	400NF2018

Pieces	Description	EDP No.
<b>Series 2000N Tap Display Case</b>		
90	3 each of the following, all in taper, plug, and bottoming: 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20	2000N90D





# Annular Cutters 1" Depth of Cut

**NITRO** COBALT  
Fractional

**PACKAGING:**  
All sizes are individually packaged.

## 9100N Annular Cutters

3/4" & 1-1/4" SHANK

Broach cutting using Drillco cutters means you can produce large diameter holes efficiently and quickly with less energy, faster penetration and less thrust. Rather than drilling out the metal with a solid drill, Drillco cutters remove only the periphery of the hole, ejecting a slug at the end of the cut.

Tests show that a solid drill will take 3 minutes, 45 seconds to drill a 1-1/4" hole in 3/4" plate.

A Drillco cutter can do the same job in 35 seconds.

The *Nitro* ranges of Annular Cutters are made from Cobalt, offering even better performance over the standard High Speed Steel ranges.



9100N

Size	Nitro 9100N EDP No.	Size	Nitro 9100N EDP No.	Size	Nitro 9100N EDP No.
7/16"	91N128	1-3/8"	91N224	2-5/16"	91N320*
1/2"	91N132	1-7/16"	91N228	2-3/8"	91N324*
9/16"	91N136	1-1/12"	91N232	2-7/16"	91N328*
5/8"	91N140	1-9/16"	91N236	2-1/2"	91N332*
11/16"	91N144	1-5/8"	91N240		
3/4"	91N148	1-11/16"	91N244		
13/16"	91N152	1-3/4"	91N248		
7/8"	91N156	1-13/16"	91N252		
15/16"	91N160	1-7/8"	91N256		
1"	91N164	1-15/16"	91N260		
1-1/16"	91N204	2"	91N264		
1-1/8"	91N208	2-1/16"	91N304		
1-3/16"	91N212	2-1/8"	91N308		
1-1/4"	91N216	2-3/16"	91N312		
1-5/16"	91N220	2-1/4"	91N316		

\*1-1/4" Shank

Description	EDP No.
<b>Annular Cutter Pilot</b>	
1" depth of cut pilot pin for 1/2" – 2-1/4"	91SE001
1" depth of cut pilot pin for 7/16"	91SE002

Description	EDP No.
<b>Annular Cutter Pilot</b>	
1" depth of cut pilot pin for 2-5/16" & larger sizes	91SE003

# Annular Cutters 2" Depth of Cut

**NITRO** COBALT  
Fractional

**PACKAGING:**  
All sizes are individually packaged.

## 9200N Annular Cutters

3/4" SHANK

Broach cutting using Drillco cutters means you can produce large diameter holes efficiently and quickly with less energy, faster penetration and less thrust. Rather than drilling out the metal with a solid drill, Drillco cutters remove only the periphery of the hole, ejecting a slug at the end of the cut.

Tests show that a solid drill will take 3 minutes, 45 seconds to drill a 1-1/4" hole in 3/4" plate. A Drillco cutter can do the same job in 35 seconds.

The *Nitro* ranges of Annular Cutters are made from Cobalt, offering even better performance over the standard High Speed Steel ranges.



9200N

Size	Nitro 9200N EDP No.
7/16"	92N128
1/2"	92N132
9/16"	92N136
5/8"	92N140
11/16"	92N144
3/4"	92N148
13/16"	92N152
7/8"	92N156
15/16"	92N160
1"	92N164
1-1/16"	92N204
1-1/8"	92N208
1-3/16"	92N212
1-1/4"	92N216
1-5/16"	92N220

Size	Nitro 9200N EDP No.
1-3/8"	92N224
1-7/16"	92N228
1-1/2"	92N232
1-9/16"	92N236
1-5/8"	92N240
1-11/16"	92N244
1-3/4"	92N248
1-13/16"	92N252
1-7/8"	92N256
1-15/16"	92N260
2"	92N264
2-1/16"	92N304
2-1/8"	92N308
2-3/16"	92N312
2-1/4"	92N316

Description	EDP No.
<b>Annular Cutter Pilot</b>	
2" depth of cut pilot pin for 1/2" – 2-1/4"	92SE001
2" depth of cut pilot pin for 7/16" only	92SE002



# Annular Cutters 3" Depth of Cut

**NITRO** COBALT  
Fractional

**PACKAGING:**  
All sizes are individually packaged.

## 9300N Annular Cutters

3/4" SHANK

Broach cutting using Drillco cutters means you can produce large diameter holes efficiently and quickly with less energy, faster penetration and less thrust. Rather than drilling out the metal with a solid drill, Drillco cutters remove only the periphery of the hole, ejecting a slug at the end of the cut.

Tests show that a solid drill will take 3 minutes, 45 seconds to drill a 1-1/4" hole in 3/4" plate.

A Drillco cutter can do the same job in 35 seconds.

The *Nitro* ranges of Annular Cutters are made from Cobalt, offering even better performance over the standard High Speed Steel ranges.



9300N

Size	Nitro 9300N EDP No.
3/4"	93N148
13/16"	93N152
7/8"	93N156
15/16"	93N160
1"	93N164
1-1/16"	93N204
1-1/8"	93N208
1-3/16"	93N212
1-1/4"	93N216
1-5/16"	93N220
1-3/8"	93N224
1-7/16"	93N228
1-1/2"	93N232

Size	Nitro 9300N EDP No.
1-9/16"	93N236
1-5/8"	93N240
1-11/16"	93N244
1-3/4"	93N248
1-13/16"	93N252
1-7/8"	93N256
1-15/16"	93N260
2"	93N264
2-1/16"	93N304
2-1/8"	93N308
2-3/16"	93N312
2-1/4"	93N316

Description	EDP No.
<b>Annular Cutter Pilot</b>	
3" depth of cut pilot pin for 1/2" – 2-1/4"	93SE001

# Annular Cutters Displays/Sets

**NITRO** COBALT

Fractional

## Annular Cutter Displays/Sets



\*Cutters pictured are not Nitro.

Material	Series	Includes	EDP No.
<b>32 pc. Fractional Sizes Display</b>			
Nitro (Cobalt)	9100N & 9200N	1 each of the following: 1/2, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16, 1-1/8, and 6 pins.	912N32D
<b>52 pc. Fractional Sizes Display</b>			
Nitro (Cobalt)	9100N & 9200N	2 each of the following: 1/2, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16, 1-1/8, and 6 pins.	912N52D
<b>72 pc. Fractional Sizes Display</b>			
Nitro (Cobalt)	9100N & 9200N	3 each of the following: 1/2, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16, 1-1/8, and 6 pins.	912N72D
<b>Annular Cutter Sets, 7 pc.</b>			
Nitro (Cobalt)	9100N	9/16, 5/8, 11/16, 3/4, 13/16, 15/16, and 1 pin.	91N7S





# Annular Cutters Accessories



Description	EDP No.
<b>Machine Accessories</b>	
Quick-hitch for MB30 & MB35	QDC35
Quick-hitch for MBQ50	QDC50
1/2" chuck to annular adapter	MA000
<b>Annular Cutter Reduced &amp; Morse Taper Shank Holders</b>	
<b>1/2" Shank Adapters w/ 3 Flats</b>	
7/16" thru 2-1/4" Dia. x 1" LOC	RSA001
1/2" thru 2-1/4" Dia. x 2" LOC	RSA002
1/2" thru 2-1/4" Dia. x 3" LOC	RSA003
1/2" thru 2-1/4" Dia. x 4" LOC	RSA004
<b>3/4" Shank Adapters w/ 3 Flats</b>	
2-5/16" thru 4" Dia. x 1" LOC	RSA005
2-5/16" thru 4" Dia. x 2" LOC	RSA006
2-5/16" thru 4" Dia. x 3" LOC	RSA007
2-5/16" thru 4" Dia. x 4" LOC	RSA008
<b>#2 Morse Taper Shank Adapters</b>	
7/16" thru 2-1/4" Dia. x 1" & 2" LOC	MTA001
1/2" thru 2-1/4" Dia. x 3" & 4" LOC	MTA002
<b>#3 Morse Taper Shank Adapters</b>	
7/16" thru 2-1/4" Dia. x 1" & 2" LOC	MTA003
1/2" thru 2-1/4" Dia. x 3" & 4" LOC	MTA004
2-5/16" thru 4" Dia. x 1" & 2" LOC	MTA005
2-5/16" thru 4" Dia. x 3" & 4" LOC	MTA006
<b>#4 Morse Taper Shank Adapters</b>	
2-5/16" thru 4" Dia. x 1" & 2" LOC	MTA007
2-5/16" thru 4" Dia. x 3" & 4" LOC	MTA008

# Mag Drill Machines

## ELECTRO-MAGNETIC DRILLING MACHINES

Model	Features	Specifications																			
<b>MB30</b>																					
	<p>One of the most powerful mag base machines for its size.</p> <p>Reliable Hitachi motor allows drilling accurate holes up to 1-1/4" in diameter.</p> <p>Mag drill arbor is easily replaced with 1/2" chuck for twist drills.</p> <p>The operating handle can be moved to either side for ultimate accessibility.</p>	<table border="1"> <tr><td>Cutter Capacity</td><td>1-1/4"</td></tr> <tr><td>Twist drill capacity</td><td>1-1/2"</td></tr> <tr><td>Chuck capacity</td><td>1/2"</td></tr> <tr><td>"No load" speed</td><td>550 rpm</td></tr> <tr><td>Power consumption</td><td>720W</td></tr> <tr><td>Clamping force</td><td>2,000 psi</td></tr> <tr><td>L x H x W</td><td>235 x 325 x 95 mm</td></tr> <tr><td>Weight</td><td>26.75 lbs.</td></tr> <tr><td>Voltage</td><td>110 or 230V</td></tr> </table>	Cutter Capacity	1-1/4"	Twist drill capacity	1-1/2"	Chuck capacity	1/2"	"No load" speed	550 rpm	Power consumption	720W	Clamping force	2,000 psi	L x H x W	235 x 325 x 95 mm	Weight	26.75 lbs.	Voltage	110 or 230V	
Cutter Capacity	1-1/4"																				
Twist drill capacity	1-1/2"																				
Chuck capacity	1/2"																				
"No load" speed	550 rpm																				
Power consumption	720W																				
Clamping force	2,000 psi																				
L x H x W	235 x 325 x 95 mm																				
Weight	26.75 lbs.																				
Voltage	110 or 230V																				
<b>Includes:</b> Warranty, carrying case, Allen keys, safety strap and guard, cutting oil.																					
<b>MB35</b>																					
	<p>Powerful new light weight motor unit.</p> <p>Integral automatic lubrication system.</p> <p>Electronic controls with safety interlocks and audible warnings.</p> <p>Outstanding performance.</p>	<table border="1"> <tr><td>Cutter Capacity</td><td>1-3/8"</td></tr> <tr><td>Twist drill capacity</td><td>1-1/2"</td></tr> <tr><td>Chuck capacity</td><td>1/2"</td></tr> <tr><td>"No-load" speed</td><td>550 rpm</td></tr> <tr><td>Power consumption</td><td>1080W</td></tr> <tr><td>Clamping force</td><td>2,000 psi</td></tr> <tr><td>L x H x W</td><td>11" x 15-1/4" x 5-7/8"</td></tr> <tr><td>Weight</td><td>26.25 lbs.</td></tr> <tr><td>Stroke</td><td>6-1/4"</td></tr> </table>	Cutter Capacity	1-3/8"	Twist drill capacity	1-1/2"	Chuck capacity	1/2"	"No-load" speed	550 rpm	Power consumption	1080W	Clamping force	2,000 psi	L x H x W	11" x 15-1/4" x 5-7/8"	Weight	26.25 lbs.	Stroke	6-1/4"	
Cutter Capacity	1-3/8"																				
Twist drill capacity	1-1/2"																				
Chuck capacity	1/2"																				
"No-load" speed	550 rpm																				
Power consumption	1080W																				
Clamping force	2,000 psi																				
L x H x W	11" x 15-1/4" x 5-7/8"																				
Weight	26.25 lbs.																				
Stroke	6-1/4"																				
<b>Includes:</b> Warranty, carrying case, Allen keys, safety strap and guard, cutting oil.																					



# Mag Drill Machines

## ELECTRO-MAGNETIC DRILLING MACHINES

Model	Features	Specifications																					
<b>MBQ50</b>																							
	<p><b>NEW</b> patented <b>Quickhitch</b> arbor, change cutters in less than 10 seconds.</p> <p>Two speed gearbox.</p> <p>Electronic controls with safety interlocks and audible warnings.</p> <p>Integral automatic lubrication system.</p>	<table border="1"> <tr><td>Cutter Capacity</td><td>2"</td></tr> <tr><td>Twist drill capacity</td><td>1-1/2"</td></tr> <tr><td>Chuck capacity</td><td>5/8"</td></tr> <tr><td>"No load" speeds</td><td>280/500 rpm</td></tr> <tr><td>Power consumption</td><td>1150W</td></tr> <tr><td>Clamping force</td><td>2,000 psi</td></tr> <tr><td>L x H x W</td><td>11-1/2" x 18" x 4-1/8"</td></tr> <tr><td>Weight</td><td>49.5 lbs.</td></tr> <tr><td>Voltage</td><td>110V</td></tr> </table>	Cutter Capacity	2"	Twist drill capacity	1-1/2"	Chuck capacity	5/8"	"No load" speeds	280/500 rpm	Power consumption	1150W	Clamping force	2,000 psi	L x H x W	11-1/2" x 18" x 4-1/8"	Weight	49.5 lbs.	Voltage	110V			
Cutter Capacity	2"																						
Twist drill capacity	1-1/2"																						
Chuck capacity	5/8"																						
"No load" speeds	280/500 rpm																						
Power consumption	1150W																						
Clamping force	2,000 psi																						
L x H x W	11-1/2" x 18" x 4-1/8"																						
Weight	49.5 lbs.																						
Voltage	110V																						
<b>Includes:</b> Warranty, carrying case, Allen keys, safety strap and guard, cutting oil.																							
<b>MBQ100</b>																							
	<p><b>NEW</b> patented <b>Quickhitch</b> arbor, change cutters in less than 10 seconds.</p> <p>Two speed gearbox.</p> <p>Variable speeds.</p> <p>Slipping clutch.</p> <p>Electronic controls with safety interlocks and audible warnings.</p> <p>Integral automatic lubrication system.</p>	<table border="1"> <tr><td>Cutter Capacity</td><td>4"</td></tr> <tr><td>Twist drill capacity</td><td>#3 M T</td></tr> <tr><td>Chuck capacity</td><td>3/4"</td></tr> <tr><td>"Gear I" speeds</td><td>40-130 rpm</td></tr> <tr><td>"Gear II" speeds</td><td>145-430 rpm</td></tr> <tr><td>Power consumption</td><td>1850W</td></tr> <tr><td>Clamping force</td><td>4,000 psi</td></tr> <tr><td>L x H x W</td><td>14-3/4" x 20" x 5-1/4"</td></tr> <tr><td>Weight</td><td>57 lbs.</td></tr> <tr><td>Stroke</td><td>11"</td></tr> </table>	Cutter Capacity	4"	Twist drill capacity	#3 M T	Chuck capacity	3/4"	"Gear I" speeds	40-130 rpm	"Gear II" speeds	145-430 rpm	Power consumption	1850W	Clamping force	4,000 psi	L x H x W	14-3/4" x 20" x 5-1/4"	Weight	57 lbs.	Stroke	11"	
Cutter Capacity	4"																						
Twist drill capacity	#3 M T																						
Chuck capacity	3/4"																						
"Gear I" speeds	40-130 rpm																						
"Gear II" speeds	145-430 rpm																						
Power consumption	1850W																						
Clamping force	4,000 psi																						
L x H x W	14-3/4" x 20" x 5-1/4"																						
Weight	57 lbs.																						
Stroke	11"																						
<b>Includes:</b> Warranty, carrying case, Allen keys, safety strap and guard, cutting oil.																							
<i>MBQ Swivel base machine available</i>																							

# Annular Cutters

## Feeds and Speeds for Annular Cutters

Material To Be Drilled	HSS Cutter	Nitro Cutter	
<b>Cutting Speed In Feet/Min. (SFPM)</b>			
Steel	Freecutting-Leaded	100	150
	Up To 180 Brinell	80 to 110	130
	A-36	80 to 110	130
	180 To 285 Brinell	45 to 70	80
	285 To 375 Brinell	30 to 45	55
	375 & Up Brinell	15 to 25	35
	Manganese (low)	15 to 20	25
	Stainless-Freecutting	30 to 60	70
	Stainless 304,316, 320 & Tougher	-	-
	Inconel, Hastelloy	25 to 40	55
Inconel - X	20 to 25	35	
Titanium	30 to 40	50	
A-286	25 to 35	50	

Material To Be Drilled	HSS Cutter	Nitro Cutter	
<b>Speed In Feet/Min. (SFPM)</b>			
Aluminum	150	250	
Brass	Ordinary	150	250
	Leaded	200	300
Bronze	Ordinary	100	200
	Hi-tensile	70	100
Cast Iron	Soft	100	150
	Medium	80	90
	Hard	50	70
	Chilled	25	35
Copper	100	200	
Magnesium	Up to 300	400	
Malleable Iron	70	80	
Monel	40	50	

Cutter Dia.	Feed Ins./Rev.
<b>Operating Feed*</b>	
7/16" to 9/16"	.002 to .006
5/8" to 3/4"	.003 to .003
1-3/16" - 1-1/16"	.004 to .008
1-1/8" - 1-7/16"	.006 to .010
1-1/2" to 2"	.008 to .012
2" to 2-1/2"	.012 to .025

\*Always commence operations at the lower end of RPM.

CUTTING SPEEDS (SFPM)	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"	1-1/8"	1-1/4"	1-3/8"	1-1/2"	1-5/8"	1-3/4"	2"	2-1/4"	2-1/2"
	10	87	76	68	61	56	51	47	44	41	38	34	31	28	25	24	22	19	17
20	175	153	136	122	111	102	94	87	82	76	68	61	56	51	47	44	38	34	31
30	262	229	204	183	167	153	141	131	122	115	102	92	83	76	71	65	57	51	46
40	349	306	272	245	222	204	188	175	163	153	136	122	111	102	94	87	76	68	61
50	437	382	339	306	278	255	235	218	204	191	170	153	140	127	118	109	95	85	76
60	524	458	407	367	333	306	282	263	245	229	204	183	167	153	141	131	115	102	92
70	611	535	475	428	389	357	329	306	285	267	238	214	194	178	165	153	134	119	107
80	700	611	543	489	444	408	376	350	326	306	272	244	222	204	188	175	153	136	122
90	786	688	611	550	500	458	426	393	367	344	306	275	250	229	212	196	172	153	138
100	873	764	679	611	556	509	470	436	408	382	340	306	278	255	235	218	191	170	153
120	1048	917	815	733	667	611	564	524	489	458	407	367	333	306	282	262	229	204	183
140	1222	1070	950	856	778	713	658	611	571	535	475	428	390	356	329	306	267	238	214
150	1310	1146	1018	917	833	764	705	655	611	573	509	458	417	382	353	327	286	255	229
160	1397	1222	1086	978	889	815	752	698	652	611	543	490	444	407	376	350	306	272	244
180	1572	1375	1222	1100	1000	917	846	786	734	688	611	550	500	458	423	393	344	306	275
200	1747	1528	1358	1222	1111	1020	940	874	815	764	680	611	556	510	470	437	382	340	306
220	1920	1681	1494	1345	1222	1121	1034	960	897	840	747	672	611	560	517	480	420	374	336
240	2096	1833	1630	1467	1333	1222	1128	1048	978	917	815	733	667	611	564	524	458	407	367
250	2183	1910	1697	1528	1389	1274	1175	1091	1020	955	850	764	694	637	588	546	477	424	382
260	2270	1986	1765	1590	1444	1325	1221	1135	1060	993	883	795	722	662	611	568	497	441	397
280	2445	2140	1900	1712	1556	1426	1316	1222	1140	1070	950	856	778	713	658	611	535	475	428
300	2620	2292	2037	1834	1667	1528	1410	1310	1222	1146	1020	917	833	7	705	655	573	510	458

### SPEED AND FEED FORMULAS

SPEED OF CUTTER IN SURFACE FEET PER MINUTE (SFM)

$$SFM = D \times .26 \times RPM$$

REVOLUTIONS PER MINUTE (RPM)

$$RPM = SFM \times 3.82 \text{ divided by Dia.}$$

FEED IN INCHES PER MINUTE (IPM) OR (F)

$$F = f \times T \times RPM$$



# NITRO Construction Reamers

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
All sizes are individually packaged.

## 4275N/4285N Construction Reamers

3-FLATS REDUCED SHANK

Construction or Car Reamers are especially adapted for heavy duty reaming as encountered in the fabrication of structural steel assemblies. They are tapered at the point to facilitate entering of holes which are out of alignment. Available in Spiral Flute and High Spiral Flute designs with 3-Flat Straight Shanks, or with Hex Nut Shanks.



4275N Spiral Flute



4285N High Spiral Flute

Size	Shank Dia.	Flute Length	Overall Length	Spiral Flute 4275N EDP No.	High Spiral Flute 4285N EDP No.
1/4"	1/4"	2-1/2"	4-3/8"	427N116	428N116
5/16"	5/16"	2-3/4"	4-5/8"	427N120	428N120
3/8"	3/8"	2-3/4"	4-5/8"	427N124	428N124
13/32"	13/32"	3-1/2"	5-3/8"	427N126	428N126
7/16"	7/16"	3-1/2"	5-3/8"	427N128	428N128
15/32"	15/32"	3-3/4"	5-7/8"	427N130	428N130
1/2"	1/2"	4"	5-7/8"	427N132	428N132
17/32"	1/2"	4"	5-7/8"	427N134	428N134
9/16"	1/2"	4"	5-7/8"	427N136	428N136
19/32"	1/2"	4-1/2"	6-3/8"	427N138	428N138
5/8"	1/2"	4-1/2"	6-3/8"	427N140	428N140
.652	1/2"	4-1/2"	6-3/8"	427N141	428N141
21/32"	1/2"	4-1/2"	6-3/8"	427N142	428N142
11/16"	1/2"	4-1/2"	6-3/8"	427N144	428N144
23/32"	1/2"	4-1/2"	6-3/8"	427N146	428N146
3/4"	1/2"	5"	6-7/8"	427N148	428N148
.776	1/2"	5"	6-7/8"	427N149	428N149

Size	Shank Dia.	Flute Length	Overall Length	Spiral Flute 4275N EDP No.	High Spiral Flute 4285N EDP No.
25/32"	1/2"	5"	6-7/8"	427N150	428N150
13/16"	1/2"	5"	6-7/8"	427N152	428N152
27/32"	1/2"	5"	6-7/8"	427N154	428N154
7/8"	1/2"	5"	6-7/8"	427N156	428N156
29/32"	1/2"	5"	6-7/8"	427N158	428N158
15/16"	1/2"	5"	6-7/8"	427N160	428N160
31/32"	1/2"	5"	6-7/8"	427N162	428N162
1"	1/2"	5"	6-7/8"	427N164	428N164
1.027	1/2"	5"	6-7/8"	427N201	428N201
1-1/16"	1/2"	5"	6-7/8"	427N204	428N204
1-1/8"	3/4"	5"	6-7/8"	427N208	428N208
1-3/16"	3/4"	5"	6-7/8"	427N212	428N212
1-1/4"	3/4"	5"	6-7/8"	427N216	428N216
1-5/16"	3/4"	5"	6-7/8"	427N220	428N220
1-3/8"	3/4"	5"	6-7/8"	427N224	428N224
1-7/16"	3/4"	5"	6-7/8"	427N228	428N228
1-1/2"	3/4"	5"	6-7/8"	427N232	428N232

Sizes 1-1/8" and above also available with 1/2" shank. Please call for price and availability.

No. of Pcs.	Sizes	4275N EDP No.	4285N EDP No.
<b>Nitro Construction Reamer Display Sets</b>			
8	1 each of: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16	427N8D	428N8D
16	2 each of: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16	427N16D	428N16D
24	3 each of: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16	427N24D	428N24D



# NITRO Safety First Construction Reamers

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
All sizes are individually packaged.

## 125SF Nitro Safety First Construction Reamers

SPIRAL FLUTE / HEX NUT / BRIDGE LENGTH

Manufactured from a premium grade of high speed steel. Body and clearance are gold and black surface treated for maximum lubricity.

Construction or Car Reamers are especially adapted for heavy duty reaming as encountered in the fabrication of structural steel assemblies. They are tapered at the point to facilitate entering of holes which are out of alignment.

Two NEO40 Magnets are placed 180 degrees apart in hex nut to reduce the risk of the reamer falling out of the socket while in use.

Drillco's *Nitro* Safety First Hex Shank Reamers have been designed to protect against the danger and loss of a falling reamer. The *Nitro* meets OSHA 29CFR Part 1926.759 (falling objects protection).



125SF

Size	Hex Dia.	Flute Length	Overall Length	125SF EDP No.
9/16"	1-1/16"	5-1/8"	6-7/8"	125SF136
5/8"	1-1/16"	6-1/8"	7-7/8"	125SF140
11/16"	1-1/16"	7-1/8"	9-1/4"	125SF144
3/4"	1-1/4"	7-3/8"	9-3/8"	125SF148
13/16"	1-1/4"	7-3/8"	9-3/8"	125SF152
7/8"	1-7/16"	7-3/8"	9-3/8"	125SF156
15/16"	1-7/16"	7-3/8"	9-3/8"	125SF160
1"	1-7/16"	7-3/8"	9-3/8"	125SF164
1-1/16"	1-5/8"	7-3/8"	9-3/8"	125SF204

Size	Hex Dia.	Flute Length	Overall Length	125SF EDP No.
1-1/8"	1-5/8"	7-3/8"	9-3/8"	125SF208
1-3/16"	1-13/16"	7-3/8"	9-3/8"	125SF212
1-1/4"	1-13/16"	7-3/8"	9-3/8"	125SF216
1-5/16"	2"	7-3/8"	10"	125SF220
1-3/8"	2"	7-3/8"	10"	125SF224
1-7/16"	2"	7-3/8"	10"	125SF228
1-1/2"	2"	7-3/8"	10"	125SF232
1-9/16"	2"	7-3/8"	10"	125SF236
1-5/8"	2"	7-3/8"	10"	125SF240

## 4290N Nitro Safety First Construction Reamers

SPIRAL FLUTE / HEX NUT / CAR LENGTH



4290N

Size	Hex Dia.	Flute Length	Overall Length	4290N EDP No.
1/2"	1-1/16"	4"	5-1/2"	429N132
9/16"	1-1/16"	4"	5-7/8"	429N136
5/8"	1-1/16"	4-1/2"	6"	429N140
11/16"	1-1/16"	4-1/2"	6-3/8"	429N144
3/4"	1-1/4"	5"	7"	429N148
13/16"	1-1/4"	5"	7"	429N152
7/8"	1-7/16"	5"	7"	429N156

Size	Hex Dia.	Flute Length	Overall Length	4290N EDP No.
15/16"	1-7/16"	5"	7"	429N160
1"	1-7/16"	5"	7"	429N164
1-1/16"	1-5/8"	5"	7"	429N204
1-1/8"	1-5/8"	5"	7"	429N208
1-3/16"	1-13/16"	5"	7"	429N212
1-1/4"	1-13/16"	5"	7"	429N216
1-5/16"	2"	5"	7-7/8"	429N220



# NITRO Core Drill

**HIGH SPEED STEEL**  
Fractional / Black & Gold



**PACKAGING:**  
All sizes are individually packaged.

## Series 950N

118° POINT / 1/2" SHANK

Three and Four Flute Core Drills are designed for enlarging and or finishing holes produced by drilling, casting, or punching. Enlarges holes up to 60 percent of tool diameter. They will not produce original holes.



950N

Size	Flute Length	Overall Length	Starting Hole Size	950N EDP No.
3/8"	1-7/8"	6"	1/4"	950N124
1/2"	1-7/8"	6"	5/16"	950N132
9/16"	1-7/8"	6"	11/32"	950N136
5/8"	1-7/8"	6"	3/8"	950N140
11/16"	1-7/8"	6"	7/16"	950N144
3/4"	1-7/8"	6"	15/32"	950N148
13/16"	1-7/8"	6"	1/2"	950N152
7/8"	1-7/8"	6"	17/32"	950N156
15/16"	1-7/8"	6"	9/16"	950N160
1"	1-7/8"	6"	5/8"	950N164
1-1/16"	1-7/8"	6"	21/32"	950N204
1-1/8"	1-7/8"	6"	11/16"	950N208
1-3/16"	1-7/8"	6"	23/32"	950N212
1-1/4"	1-7/8"	6"	3/4"	950N216