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WHY CHOOSE MAGNUM?

- **Substantially longer cutting life**
The nitro-carburized flute has an increased Rockwell hardness.
- **Cuts harder materials**
The flatter point takes a smaller chip. More torque is directed to a smaller area. This allows drilling into materials with hardness of over 30 on the Rockwell "C" scale.
- **Stops drill walking**
The split point design gives accurate starting without the use of a center punch.
- **Holds tighter hole size**
The split point design is self centering. This limits the normal oversize drilling characteristics.
- **Outstanding quality appearance**
The rich amber gold color sets it apart from commodity cutting tools.
- **Runs cooler, uses less torque**
135° point takes a smaller chip resulting in less heat. Friction is reduced by amber gold surface treatment.
- **Stops chuck slippage**
Flats on drill shanks allow easy positive chuck grip.

MAGNUM SUPER PREMIUM vs. COBALT

The Magnum Super Premium drills will substantially outperform cobalt drills in work hardening stainless steel applications. This performance advantage is the result of construction differences between the two types of drills. Cobalt drills, manufactured to **Type J NAS 907** specs, have a very thick web. This web is necessary to limit breakage of the brittle cobalt steel. Magnum Super Premium drills are made of special hi-moly tool steel, which is much tougher than cobalt steel. The web on an Magnum Super Premium drill can be thinned considerably due to the toughness of the steel.

An Magnum Super Premium drill with its thin web will penetrate the work hardening stainless fast enough to continually cut beneath the chip which is hardening from deformation. This means the drill is cutting softer steel. The cobalt drill, with its thick web, cannot be fed at a fast enough rate to cut beneath the area which is hardening. As a result the cobalt drill is continually drilling into hardened steel.

STAINLESS STEEL WORK HARDENING VS. FREE MACHINING

Work hardening grades of stainless are the 300 series with the exception of 303, which is free machining. Free machining grades include the 400 series in addition to type 303. A quick way to identify work hardening vs free machining stainless is to observe the chip formation. Work hardening chips break up during the drilling process, while free machining chips are long and stringy.

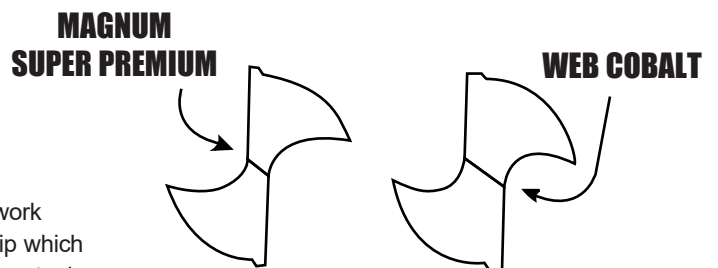
COBALT APPLICATIONS

Cobalt drills are recommended for free machining stainless (400 series & 303), titanium alloys and other high tensile strength materials. These applications require the high red hardness of cobalt steel to counter the substantial heat generated in the drilling process.

NORSEMAN MAGNUM SUPER PREMIUM™ VS. COBALT

Magnum Super Premium drill with its thin web will penetrate the work hardening stainless fast enough to continually cut beneath the chip which is hardening from deformation. This means the drill is cutting softer steel.

The cobalt drill, with its thick web, cannot be fed at a fast enough rate to cut beneath the area which is hardening. As a result the cobalt drill is continually drilling into hardened steel.



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Jobber Length

HEAVY-DUTY SUPER PREMIUM NAS 907B

Type 190-AG

NAS 907B Super Premium - 135° Split Point

- Nitro-Carburized
- Magnum will substantially outperform cobalt drills in work hardening stainless steel and other tough drilling applications.



Type 190-AG

Low temperature stress relief improves lubricity and toughness.

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 05580 | 1/16 | 1-7/8 | 7/8 | 12 |
| 05590 | 5/64 | 2" | 1 | 12 |
| 05600 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 05610 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 05620 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 05630 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 05640 | 5/32 | 3-1/8 | 2 | 12 |
| 05650 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 05660 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 05670 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 05680 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 05690 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 05700 | 1/4 | 4" | 2-3/4 | 12 |
| 05710 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 05720 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 05730 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 05740 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 05750 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 05760 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 05770 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 05780 | 3/8 | 5" | 3-5/8 | 6 |
| 05790 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 05800 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 05810 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 05820 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 05830 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 05840 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 05850 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 05860 | 1/2 | 6" | 4-1/2 | 6 |
| 22210 | 33/64 | 6-5/8 | 4-13/16 | 1 |
| 22220 | 17/32 | 6-5/8 | 4-13/16 | 1 |
| 22230 | 35/64 | 6-5/8 | 4-13/16 | 1 |
| 22240 | 9/16 | 6-5/8 | 4-13/16 | 1 |
| 22250 | 37/64 | 6-5/8 | 4-13/16 | 1 |
| 22260 | 19/32 | 7-1/8 | 5-3/16 | 1 |
| 22270 | 39/64 | 7-1/8 | 5-3/16 | 1 |
| 22280 | 5/8 | 7-1/8 | 5-3/16 | 1 |
| 22290 | 41/64 | 7-1/8 | 5-3/16 | 1 |
| 22300 | 21/32 | 7-1/8 | 5-3/16 | 1 |
| 22310 | 43/64 | 7-5/8 | 5-5/8 | 1 |
| 22320 | 11/16 | 7-5/8 | 5-5/8 | 1 |
| 22330 | 45/64 | 7-5/8 | 5-5/8 | 1 |
| 22340 | 23/32 | 7-5/8 | 5-5/8 | 1 |
| 22350 | 47/64 | 7-5/8 | 5-5/8 | 1 |
| 22360 | 3/4 | 7-3/8 | 5-5/8 | 1 |

Larger sizes available in 280-UB section

LETTER

| Part # | Letter Size | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-------------|-----------------------|---------------------|---------------|
| 39460 | A | 3-7/8 | 2-5/8 | 12 |
| 39470 | B | 4" | 2-3/4 | 12 |
| 39480 | C | 4" | 2-3/4 | 12 |
| 39490 | D | 4" | 2-3/4 | 12 |
| 39500 | E | 4" | 2-3/4 | 12 |
| 39510 | F | 4-1/8 | 2-7/8 | 12 |
| 39520 | G | 4-1/8 | 2-7/8 | 12 |
| 39530 | H | 4-1/8 | 2-7/8 | 12 |
| 39540 | I | 4-1/8 | 2-7/8 | 12 |
| 39550 | J | 4-1/8 | 2-7/8 | 12 |
| 39560 | K | 4-1/4 | 2-15/16 | 12 |
| 39570 | L | 4-1/4 | 2-15/16 | 12 |
| 39580 | M | 4-3/8 | 3-1/16 | 6 |
| 39590 | N | 4-3/8 | 3-1/16 | 6 |
| 39600 | O | 4-1/2 | 3-3/16 | 6 |

Wire Continued Next Column

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 39610 | P | 4-5/8 | 3-5/16 | 6 |
| 39620 | Q | 4-3/4 | 3-7/16 | 6 |
| 39630 | R | 4-3/4 | 3-7/16 | 6 |
| 39640 | S | 4-7/8 | 3-1/2 | 6 |
| 39650 | T | 4-7/8 | 3-1/2 | 6 |
| 39660 | U | 5" | 3-5/8 | 6 |
| 39670 | V | 5" | 3-5/8 | 6 |
| 39680 | W | 5-1/8 | 3-3/4 | 6 |
| 39690 | X | 5-1/8 | 3-3/4 | 6 |
| 39700 | Y | 5-1/4 | 3-7/8 | 6 |
| 39710 | Z | 5-1/4 | 3-7/8 | 6 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 38940 | 1 | 3-7/8 | 2-5/8 | 12 |
| 38950 | 2 | 3-7/8 | 2-5/8 | 12 |
| 38960 | 3 | 3-3/4 | 2-1/2 | 12 |
| 38970 | 4 | 3-3/4 | 2-1/2 | 12 |
| 38980 | 5 | 3-3/4 | 2-1/2 | 12 |
| 38990 | 6 | 3-3/4 | 2-1/2 | 12 |
| 39000 | 7 | 3-5/8 | 2-7/16 | 12 |
| 39010 | 8 | 3-5/8 | 2-7/16 | 12 |
| 39020 | 9 | 3-5/8 | 2-7/16 | 12 |
| 39030 | 10 | 3-5/8 | 2-7/16 | 12 |
| 39040 | 11 | 3-1/2 | 2-5/16 | 12 |
| 39050 | 12 | 3-1/2 | 2-5/16 | 12 |
| 39060 | 13 | 3-1/2 | 2-5/16 | 12 |
| 39070 | 14 | 3-3/8 | 2-3/16 | 12 |
| 39080 | 15 | 3-3/8 | 2-3/16 | 12 |
| 39090 | 16 | 3-3/8 | 2-3/16 | 12 |
| 39100 | 17 | 3-3/8 | 2-3/16 | 12 |
| 39110 | 18 | 3-1/4 | 2-1/8 | 12 |
| 39120 | 19 | 3-1/4 | 2-1/8 | 12 |
| 39130 | 20 | 3-1/4 | 2-1/8 | 12 |
| 39140 | 21 | 3-1/4 | 2-1/8 | 12 |
| 39150 | 22 | 3-1/8 | 2" | 12 |
| 39160 | 23 | 3-1/8 | 2" | 12 |
| 39170 | 24 | 3-1/8 | 2" | 12 |
| 39180 | 25 | 3" | 1-7/8 | 12 |
| 39190 | 26 | 3" | 1-7/8 | 12 |
| 39200 | 27 | 3" | 1-7/8 | 12 |
| 39210 | 28 | 2-7/8 | 1-3/4 | 12 |
| 39220 | 29 | 2-7/8 | 1-3/4 | 12 |
| 39230 | 30 | 2-3/4 | 1-5/8 | 12 |
| 92310 | 31 | 2-3/4 | 1-5/8 | 12 |
| 92300 | 32 | 2-3/4 | 1-5/8 | 12 |
| 92290 | 33 | 2-5/8 | 1-1/2 | 12 |
| 92280 | 34 | 2-5/8 | 1-1/2 | 12 |
| 92270 | 35 | 2-5/8 | 1-1/2 | 12 |
| 92260 | 36 | 2-1/2 | 1-7/16 | 12 |
| 92250 | 37 | 2-1/2 | 1-7/16 | 12 |
| 92240 | 38 | 2-1/2 | 1-7/16 | 12 |
| 92230 | 39 | 2-3/8 | 1-3/8 | 12 |
| 92220 | 40 | 2-3/8 | 1-3/8 | 12 |
| 88420 | 41 | 2-3/8 | 1-3/8 | 12 |
| 88410 | 42 | 2-1/4 | 1-1/4 | 12 |
| 88400 | 43 | 2-1/4 | 1-1/4 | 12 |
| 88390 | 44 | 2-1/8 | 1-1/8 | 12 |
| 88380 | 45 | 2-1/8 | 1-1/8 | 12 |
| 88370 | 46 | 2-1/8 | 1-1/8 | 12 |
| 88360 | 47 | 2" | 1" | 12 |
| 88350 | 48 | 2" | 1" | 12 |
| 88340 | 49 | 2" | 1" | 12 |
| 88330 | 50 | 2" | 1" | 12 |
| 88320 | 51 | 2" | 1" | 12 |
| 88310 | 52 | 1-7/8 | 7/8 | 12 |
| 88300 | 53 | 1-7/8 | 7/8 | 12 |
| 88290 | 54 | 1-7/8 | 7/8 | 12 |
| 88280 | 55 | 1-7/8 | 7/8 | 12 |
| 88270 | 56 | 1-3/4 | 3/4 | 12 |
| 88260 | 57 | 1-3/4 | 3/4 | 12 |
| 88250 | 58 | 1-5/8 | 11/16 | 12 |
| 88240 | 59 | 1-5/8 | 11/16 | 12 |
| 88230 | 60 | 1-5/8 | 11/16 | 12 |

HSS CN-TECH NAS 907B & 3/8" REDUCED SHANK

Type 190-CN

CN-TECH™ CRYO/NITRIDE 135° Split Point

- Nitride process case hardening resulting in superior tool life and exceptional corrosion resistance.
- Cryogenic treatment at -300° F increases toughness while reducing brittleness.



| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 47032 | 1/16 | 1-7/8 | 7/8 | 12 |
| 47042 | 5/64" | 2" | 1" | 12 |
| 47052 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 47062 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 47072 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 47082 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 47092 | 5/32" | 3-1/8" | 2" | 12 |
| 47102 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 47112 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 47122 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 47132 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 47142 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 47152 | 1/4" | 4" | 2-3/4" | 12 |
| 47162 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 47172 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 47182 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 47192 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 47202 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 47212 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 47222 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 47232 | 3/8" | 5" | 3-5/8" | 6 |
| 47242 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 47252 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 47262 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 47272 | 7/16" | 5-1/2 | 4-1/16 | 6 |
| 47282 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 47292 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 47302 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 47312 | 1/2" | 6" | 4-1/2" | 6 |

LETTER

| Part # | Letter Size | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-------------|-----------------------|---------------------|---------------|
| 47522 | A | 3-7/8 | 2-5/8 | 12 |
| 47532 | B | 4" | 2-3/4 | 12 |
| 47542 | C | 4" | 2-3/4 | 12 |
| 47552 | D | 4" | 2-3/4 | 12 |
| 47562 | E | 4" | 2-3/4 | 12 |
| 47572 | F | 4-1/8 | 2-7/8 | 12 |
| 47582 | G | 4-1/8 | 2-7/8 | 12 |
| 47592 | H | 4-1/8 | 2-7/8 | 12 |
| 47602 | I | 4-1/8 | 2-7/8 | 12 |
| 47612 | J | 4-1/8 | 2-7/8 | 12 |
| 47622 | K | 4-1/4 | 2-15/16 | 12 |
| 47632 | L | 4-1/4 | 2-15/16 | 12 |
| 47642 | M | 4-3/8 | 3-1/16 | 6 |
| 47652 | N | 4-3/8 | 3-1/16 | 6 |
| 47662 | O | 4-1/2 | 3-3/16 | 6 |
| 47672 | P | 4-5/8 | 3-5/16 | 6 |
| 47682 | Q | 4-3/4 | 3-7/16 | 6 |
| 47692 | R | 4-3/4 | 3-7/16 | 6 |
| 47702 | S | 4-7/8 | 3-1/2 | 6 |
| 47712 | T | 4-7/8 | 3-1/2 | 6 |
| 47722 | U | 5" | 3-5/8 | 6 |
| 47732 | V | 5" | 3-5/8 | 6 |
| 47742 | W | 5-1/8 | 3-3/4 | 6 |
| 47752 | X | 5-1/8 | 3-3/4 | 6 |
| 47762 | Y | 5-1/4 | 3-7/8 | 6 |
| 47772 | Z | 5-1/4 | 3-7/8 | 6 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 47782 | 1 | 3-7/8 | 2-5/8 | 12 |
| 47792 | 2 | 3-7/8 | 2-5/8 | 12 |
| 47802 | 3 | 3-3/4 | 2-1/2 | 12 |
| 47812 | 4 | 3-3/4 | 2-1/2 | 12 |
| 47822 | 5 | 3-3/4 | 2-1/2 | 12 |
| 47832 | 6 | 3-3/4 | 2-1/2 | 12 |
| 47842 | 7 | 3-5/8 | 2-7/16 | 12 |
| 47852 | 8 | 3-5/8 | 2-7/16 | 12 |
| 47862 | 9 | 3-5/8 | 2-7/16 | 12 |

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 47872 | 10 | 3-5/8 | 2-7/16 | 12 |
| 47882 | 11 | 3-1/2 | 2-5/16 | 12 |
| 47892 | 12 | 3-1/2 | 2-5/16 | 12 |
| 47902 | 13 | 3-1/2 | 2-5/16 | 12 |
| 47912 | 14 | 3-3/8 | 2-3/16 | 12 |
| 47922 | 15 | 3-3/8 | 2-3/16 | 12 |
| 47932 | 16 | 3-3/8 | 2-3/16 | 12 |
| 47942 | 17 | 3-3/8 | 2-3/16 | 12 |
| 47952 | 18 | 3-1/4 | 2-1/8 | 12 |
| 47962 | 19 | 3-1/4 | 2-1/8 | 12 |
| 47972 | 20 | 3-1/4 | 2-1/8 | 12 |
| 47982 | 21 | 3-1/4 | 2-1/8 | 12 |
| 47992 | 22 | 3-1/8 | 2" | 12 |
| 48002 | 23 | 3-1/8 | 2" | 12 |
| 48012 | 24 | 3-1/8 | 2" | 12 |
| 48022 | 25 | 3" | 1-7/8 | 12 |
| 48032 | 26 | 3" | 1-7/8 | 12 |
| 48042 | 27 | 3" | 1-7/8 | 12 |
| 48052 | 28 | 2-7/8 | 1-3/4 | 12 |
| 48062 | 29 | 2-7/8 | 1-3/4 | 12 |
| 48072 | 30 | 2-3/4 | 1-5/8 | 12 |
| 48082 | 31 | 2-3/4 | 1-5/8 | 12 |
| 48092 | 32 | 2-3/4 | 1-5/8 | 12 |
| 48102 | 33 | 2-5/8 | 1-1/2 | 12 |
| 48112 | 34 | 2-5/8 | 1-1/2 | 12 |
| 48122 | 35 | 2-5/8 | 1-1/2 | 12 |
| 48132 | 36 | 2-1/2 | 1-7/16 | 12 |
| 48142 | 37 | 2-1/2 | 1-7/16 | 12 |
| 48152 | 38 | 2-1/2 | 1-7/16 | 12 |
| 48162 | 39 | 2-3/8 | 1-3/8 | 12 |
| 48172 | 40 | 2-3/8 | 1-3/8 | 12 |
| 48182 | 41 | 2-3/8 | 1-3/8 | 12 |
| 48192 | 42 | 2-1/4 | 1-1/4 | 12 |
| 48202 | 43 | 2-1/4 | 1-1/4 | 12 |
| 48212 | 44 | 2-1/8 | 1-1/8 | 12 |
| 48222 | 45 | 2-1/8 | 1-1/8 | 12 |
| 48232 | 46 | 2-1/8 | 1-1/8 | 12 |
| 48242 | 47 | 2" | 1" | 12 |
| 48252 | 48 | 2" | 1" | 12 |
| 48262 | 49 | 2" | 1" | 12 |
| 48272 | 50 | 2" | 1" | 12 |
| 48282 | 51 | 2" | 1" | 12 |
| 48292 | 52 | 1-7/8 | 7/8 | 12 |
| 48302 | 53 | 1-7/8 | 7/8 | 12 |
| 48312 | 54 | 1-7/8 | 7/8 | 12 |
| 48322 | 55 | 1-7/8 | 7/8 | 12 |
| 48332 | 56 | 1-3/4 | 3/4 | 12 |
| 48342 | 57 | 1-3/4 | 3/4 | 12 |
| 48352 | 58 | 1-5/8 | 11/16 | 12 |
| 48362 | 59 | 1-5/8 | 11/16 | 12 |
| 48372 | 60 | 1-5/8 | 11/16 | 12 |

Type 128-AG

3/8" Reduced Shank Magnum Super Premium

- 135° split point for fast penetration and accurate starting without center punch.
- Precision ground point, flutes, body, clearance and drill diameter for the ultimate in accuracy and performance.



Type 128-AG

Recommended for use in work hardening grades of stainless steel and other hard metal drilling applications

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 59200 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 59210 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 59220 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 59230 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 59240 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 59250 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 59260 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 59270 | 1/2 | 6" | 4-1/2 | 6 |
| 59280 | 17/32 | 6" | 4-1/4 | 1 |
| 59290 | 9/16 | 6" | 4-1/4 | 1 |
| 59300 | 19/32 | 6" | 4-1/4 | 1 |
| 59310 | 5/8 | 6" | 4-1/4 | 1 |

These items are also available carded. See Price List Catalog for details.

Jobber Length

NAS 907B - METRIC

Type 170-AG

Magnum Super Premium -
135° Split Point, NAS 907B

- 135° split point provides fast penetration and accurate starting without a center punch.
- Withstands substantially higher drilling temperatures while maintaining sharpness.



Type 170-AG

Recommended for use in work hardening grades of stainless steel and other hard metal drilling applications.

METRIC

| Part No. | Dia. MM | Overall Length | | Flute Length | | Qty. per/pack | Part No. | Dia. MM | Overall Length | | Flute Length | | Qty. per/pack |
|----------|------------|----------------|---------|--------------|---------|------------------|----------|------------|----------------|--------|--------------|---------|------------------|
| | | MM | Inches | MM | Inches | | | | MM | Inches | MM | Inches | |
| 48760 | 0.70 | 32 | 1-1/4 | 10 | 25/64 | 10 | 49270 | 4.00 | 83 | 3-1/4 | 54 | 2-1/8 | 10 |
| 48780 | 0.80 | 35 | 1-3/8 | 13 | 1/2 | 10 | 49280 | 4.10 | 83 | 3-1/4 | 54 | 2-1/8 | 10 |
| 48790 | 0.85 | 38 | 1-1/2 | 16 | 5/8 | 10 | 49290 | 4.20 | 83 | 3-1/4 | 54 | 2-1/8 | 10 |
| 48800 | 0.90 | 38 | 1-1/2 | 16 | 5/8 | 10 | 49300 | 4.30 | 83 | 3-1/4 | 54 | 2-1/8 | 10 |
| 49990 | 0.95 | 38 | 1-1/2 | 16 | 5/8 | 10 | 49310 | 4.40 | 86 | 3-3/8 | 56 | 2-13/64 | 10 |
| 48690 | 0.98 | 38 | 1-1/2 | 16 | 5/8 | 10 | 49320 | 4.50 | 86 | 3-3/8 | 56 | 2-13/64 | 10 |
| 48820 | 1.00 | 41 | 1-5/8 | 17 | 11/16 | 10 | 49330 | 4.60 | 86 | 3-3/8 | 56 | 2-13/64 | 10 |
| 48750 | 1.05 | 41 | 1-5/8 | 17 | 11/16 | 10 | 49340 | 4.70 | 89 | 3-1/2 | 59 | 2-21/64 | 10 |
| 48840 | 1.10 | 44 | 1-3/4 | 19 | 3/4 | 10 | 49350 | 4.80 | 89 | 3-1/2 | 59 | 2-21/64 | 10 |
| 48850 | 1.15 | 44 | 1-3/4 | 19 | 3/4 | 10 | 49360 | 4.90 | 92 | 3-5/8 | 62 | 2-7/16 | 10 |
| 23270 | 1.18 | 44 | 1-3/4 | 19 | 3/4 | 10 | 49370 | 5.00 | 92 | 3-5/8 | 62 | 2-7/16 | 10 |
| 48860 | 1.20 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49380 | 5.10 | 92 | 3-5/8 | 62 | 2-7/16 | 10 |
| 48870 | 1.25 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49390 | 5.20 | 95 | 3-3/4 | 64 | 2-1/2 | 10 |
| 48880 | 1.30 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49400 | 5.30 | 95 | 3-3/4 | 64 | 2-1/2 | 10 |
| 48890 | 1.35 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49410 | 5.40 | 95 | 3-3/4 | 64 | 2-1/2 | 10 |
| 48900 | 1.40 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49420 | 5.50 | 95 | 3-3/4 | 64 | 2-1/2 | 10 |
| 48910 | 1.45 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49430 | 5.60 | 98 | 3-7/8 | 67 | 2-5/8 | 10 |
| 48920 | 1.50 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49440 | 5.70 | 98 | 3-7/8 | 67 | 2-5/8 | 10 |
| 48930 | 1.55 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49450 | 5.80 | 98 | 3-7/8 | 67 | 2-5/8 | 10 |
| 48940 | 1.60 | 48 | 1-7/8 | 22 | 7/8 | 10 | 49460 | 5.90 | 98 | 3-7/8 | 67 | 2-5/8 | 10 |
| 48950 | 1.65 | 51 | 2" | 25 | 1" | 10 | 49470 | 6.00 | 102 | 4" | 70 | 2-3/4 | 10 |
| 48960 | 1.70 | 51 | 2" | 25 | 1" | 10 | 49480 | 6.10 | 102 | 4" | 70 | 2-3/4 | 10 |
| 48970 | 1.75 | 51 | 2" | 25 | 1" | 10 | 49490 | 6.20 | 102 | 4" | 70 | 2-3/4 | 10 |
| 48980 | 1.80 | 51 | 2" | 25 | 1" | 10 | 49500 | 6.30 | 102 | 4" | 70 | 2-3/4 | 10 |
| 49000 | 1.90 | 51 | 2" | 25 | 1" | 10 | 49510 | 6.40 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49010 | 1.95 | 51 | 2" | 25 | 1" | 10 | 49520 | 6.50 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49020 | 2.00 | 51 | 2" | 25 | 1" | 10 | 49530 | 6.60 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49030 | 2.05 | 54 | 2-1/8 | 29 | 1-5/32 | 10 | 49540 | 6.70 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49040 | 2.10 | 54 | 2-1/8 | 29 | 1-5/32 | 10 | 49550 | 6.80 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49060 | 2.20 | 57 | 2-1/4 | 32 | 1-1/4 | 10 | 49560 | 6.90 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49080 | 2.30 | 57 | 2-1/4 | 32 | 1-1/4 | 10 | 49570 | 7.00 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 49100 | 2.40 | 60 | 2-23/64 | 35 | 1-3/8 | 10 | 49580 | 7.10 | 108 | 4-1/4 | 75 | 2-61/64 | 10 |
| 49120 | 2.50 | 60 | 2-23/64 | 35 | 1-3/8 | 10 | 49590 | 7.20 | 108 | 4-1/4 | 75 | 2-61/64 | 10 |
| 49130 | 2.60 | 64 | 2-1/2 | 37 | 1-29/64 | 10 | 49600 | 7.30 | 108 | 4-1/4 | 75 | 2-61/64 | 10 |
| 49140 | 2.70 | 64 | 2-1/2 | 37 | 1-15/32 | 10 | 49610 | 7.40 | 111 | 4-3/8 | 78 | 3" | 10 |
| 49150 | 2.80 | 67 | 2-5/8 | 38 | 1-1/2 | 10 | 49620 | 7.50 | 111 | 4-3/8 | 78 | 3" | 5 |
| 49160 | 2.90 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | 49630 | 7.60 | 111 | 4-3/8 | 78 | 3" | 5 |
| 49170 | 3.00 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | 49640 | 7.70 | 114 | 4-1/2 | 81 | 3-3/16 | 5 |
| 49180 | 3.10 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | 49650 | 7.80 | 114 | 4-1/2 | 81 | 3-3/16 | 5 |
| 49190 | 3.20 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | 49660 | 7.90 | 114 | 4-1/2 | 81 | 3-3/16 | 5 |
| 49200 | 3.30 | 73 | 2-7/8 | 45 | 1-3/4 | 10 | 49670 | 8.00 | 114 | 4-1/2 | 81 | 3-3/16 | 5 |
| 49210 | 3.40 | 73 | 2-7/8 | 45 | 1-3/4 | 10 | 49680 | 8.10 | 117 | 4-9/16 | 84 | 3-5/16 | 5 |
| 49220 | 3.50 | 73 | 2-7/8 | 45 | 1-3/4 | 10 | 49690 | 8.20 | 117 | 4-9/16 | 84 | 3-5/16 | 5 |
| 49230 | 3.60 | 76 | 3" | 48 | 1-7/8 | 10 | 49700 | 8.30 | 117 | 4-9/16 | 84 | 3-5/16 | 5 |
| 49240 | 3.70 | 76 | 3" | 48 | 1-7/8 | 10 | 49710 | 8.40 | 121 | 4-3/4 | 87 | 3-27/64 | 5 |
| 49250 | 3.80 | 76 | 3" | 48 | 1-7/8 | 10 | | | | | | | |
| 49260 | 3.90 | 79 | 3-1/8 | 51 | 2" | 10 | | | | | | | |

Metric sizes continued on page 9

NAS 907B - METRIC & HIGH HELIX FLUTES



Type 170-AG

Recommended for use in work hardening grades of stainless steel and other hard metal drilling applications.

Type 170-AG

Magnum Super Premium
- NAS 907B 135° Split Point

- 135° split point provides fast penetration and accurate starting without a center punch.
- Withstands substantially higher drilling temperatures while maintaining sharpness.

METRIC

| Part No. | Dia. MM | Overall Length | | Flute Length | | Qty. per/pack |
|----------|---------|----------------|---------|--------------|---------|---------------|
| | | MM | Inches | MM | Inches | |
| 49720 | 8.50 | 121 | 4-3/4 | 87 | 3-27/64 | 5 |
| 49730 | 8.60 | 121 | 4-3/4 | 87 | 3-27/64 | 5 |
| 49740 | 8.70 | 121 | 4-3/4 | 87 | 3-27/64 | 5 |
| 49750 | 8.80 | 124 | 4-7/8 | 89 | 3-1/2 | 5 |
| 49760 | 8.90 | 124 | 4-7/8 | 89 | 3-1/2 | 5 |
| 49770 | 9.00 | 124 | 4-7/8 | 89 | 3-1/2 | 5 |
| 49780 | 9.10 | 124 | 4-7/8 | 89 | 3-1/2 | 5 |
| 49790 | 9.20 | 127 | 5" | 92 | 3-5/8 | 5 |
| 49800 | 9.30 | 127 | 5" | 92 | 3-5/8 | 5 |
| 49810 | 9.40 | 127 | 5" | 92 | 3-5/8 | 5 |
| 49820 | 9.50 | 127 | 5" | 92 | 3-5/8 | 5 |
| 49830 | 9.60 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 49840 | 9.70 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 49850 | 9.80 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 49860 | 9.90 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 49870 | 10.00 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 12450 | 10.10 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 49880 | 10.20 | 133 | 5-15/64 | 98 | 3-7/8 | 5 |
| 12510 | 10.30 | 133 | 5-15/64 | 98 | 3-7/8 | 5 |
| 50220 | 10.40 | 133 | 5-15/64 | 98 | 3-7/8 | 5 |
| 49890 | 10.50 | 133 | 5-15/64 | 98 | 3-7/8 | 5 |
| 12460 | 10.60 | 133 | 5-15/64 | 98 | 3-7/8 | 5 |
| 50230 | 10.70 | 133 | 5-1/4 | 98 | 3-5/8 | 5 |
| 49900 | 10.80 | 140 | 5-1/2 | 103 | 4-1/16 | 5 |

| Part No. | Dia. MM | Overall Length | | Flute Length | | Qty. per/pack |
|----------|---------|----------------|--------|--------------|---------|---------------|
| | | MM | Inches | MM | Inches | |
| 12470 | 10.90 | 140 | 5-1/2 | 103 | 4-1/16 | 5 |
| 49910 | 11.00 | 140 | 5-1/2 | 103 | 4-1/16 | 5 |
| 12480 | 11.10 | 140 | 5-1/2 | 103 | 4-1/16 | 5 |
| 49920 | 11.20 | 143 | 5-5/8 | 106 | 4-7/32 | 5 |
| 50240 | 11.30 | 143 | 5-5/8 | 106 | 4-7/32 | 5 |
| 12490 | 11.40 | 143 | 5-5/8 | 106 | 4-7/32 | 5 |
| 49930 | 11.50 | 143 | 5-5/8 | 106 | 4-7/32 | 5 |
| 12500 | 11.60 | 143 | 5-5/8 | 106 | 4-7/32 | 5 |
| 50250 | 11.70 | 146 | 5-3/4 | 110 | 4-11/32 | 5 |
| 49940 | 11.80 | 146 | 5-3/4 | 110 | 4-11/32 | 5 |
| 12520 | 11.90 | 146 | 5-3/4 | 110 | 4-11/32 | 5 |
| 49950 | 12.00 | 149 | 5-7/8 | 111 | 4-3/8 | 5 |
| 12530 | 12.10 | 149 | 5-7/8 | 111 | 4-3/8 | 5 |
| 49960 | 12.20 | 149 | 5-7/8 | 111 | 4-3/8 | 5 |
| 50260 | 12.30 | 149 | 5-7/8 | 111 | 4-3/8 | 5 |
| 12540 | 12.40 | 149 | 5-7/8 | 111 | 4-3/8 | 5 |
| 49970 | 12.50 | 152 | 6" | 114 | 4-1/2 | 5 |
| 12550 | 12.60 | 152 | 6" | 114 | 4-1/2 | 5 |
| 12570 | 12.70 | 152 | 6" | 114 | 4-1/2 | 5 |
| 50270 | 12.80 | 152 | 6" | 114 | 4-1/2 | 5 |
| 12560 | 12.90 | 152 | 6" | 114 | 4-1/2 | 5 |
| 49980 | 13.00 | 152 | 6" | 114 | 4-1/2 | 5 |

Larger sizes in **Metric 130-AGM** section page 46

HIGH HELIX FLUTES

Type 190-SS

Magnum Super Premium
135° Split Point



- High Helix Flute design allows for increased feed rates.
- 135° split point provides fast penetration and accurate starting without a center punch.
- Recommended for stainless steel, aluminum, brass and all other non-ferrous metals.

| Part No. | Diameter Inches | Overall Length | | Flute Length | | Qty. per/pack |
|----------|-----------------|----------------|---------|--------------|--------|---------------|
| | | Inches | Inches | Inches | Inches | |
| 41301 | 1/16" | 1-7/8 | 7/8 | | | 12 |
| 41311 | 5/64" | 2" | 1" | | | 12 |
| 41321 | 3/32" | 2-1/4 | 1-1/4 | | | 12 |
| 41331 | 7/64" | 2-5/8 | 1-1/2 | | | 12 |
| 41341 | 1/8" | 2-3/4 | 1-5/8 | | | 12 |
| 41351 | 9/64" | 2-7/8 | 1-3/4 | | | 12 |
| 41361 | 5/32" | 3-1/8" | 2" | | | 12 |
| 41371 | 11/64" | 3-1/4 | 2-1/8 | | | 12 |
| 41381 | 3/16" | 3-1/2 | 2-5/16 | | | 12 |
| 41391 | 13/64" | 3-5/8 | 2-7/16 | | | 12 |
| 41401 | 7/32" | 3-3/4 | 2-1/2 | | | 12 |
| 41411 | 15/64" | 3-7/8 | 2-5/8 | | | 12 |
| 41421 | 1/4" | 4" | 2-3/4" | | | 12 |
| 41431 | 17/64" | 4-1/8 | 2-7/8 | | | 12 |
| 41441 | 9/32" | 4-1/4 | 2-15/16 | | | 12 |

| Part No. | Diameter Inches | Overall Length | | Flute Length | | Qty. per/pack |
|----------|-----------------|----------------|---------|--------------|--------|---------------|
| | | Inches | Inches | Inches | Inches | |
| 41451 | 19/64" | 4-3/8 | 3-1/16 | | | 6 |
| 41461 | 5/16" | 4-1/2 | 3-3/16 | | | 6 |
| 41471 | 21/64" | 4-5/8 | 3-5/16 | | | 6 |
| 41481 | 11/32" | 4-3/4 | 3-7/16 | | | 6 |
| 41491 | 23/64" | 4-7/8 | 3-1/2 | | | 6 |
| 41501 | 3/8" | 5" | 3-5/8" | | | 6 |
| 41511 | 25/64" | 5-1/8 | 3-3/4 | | | 6 |
| 41521 | 13/32" | 5-1/4 | 3-7/8 | | | 6 |
| 41531 | 27/64" | 5-3/8 | 3-15/16 | | | 6 |
| 41541 | 7/16" | 5-1/2 | 4-1/16 | | | 6 |
| 41551 | 29/64" | 5-5/8 | 4-3/16 | | | 6 |
| 41561 | 15/32" | 5-3/4 | 4-5/16 | | | 6 |
| 41571 | 31/64" | 5-7/8 | 4-3/8 | | | 6 |
| 41581 | 1/2" | 6" | 4-1/2" | | | 6 |

Jobber Length

HSS HEAVY-DUTY NAS 907B

Type 190, Type 190-AN Titanium Nitride Coated

135° Split Point

- Heavy-duty construction for drilling in tougher materials
- Manufactured from premium high-speed steel
- 135° split point is self-centering for reduce thrust and easier penetration
- Manufactured to **NAS 907B** aerospace specification



Type 190

Black oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 190-AN

Titanium nitride (TiN) coating adds lubricity and hardness, enhancing chip flow, finish hole quality and drill life.

FRACTIONAL

| Type 190 Black Oxide Part Number | Type 190-AN Titanium Nitride Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Type 190 Black Oxide Qty. per/Pack | Type 190-AN Titanium Nitride Qty. per/Pack |
|--|--|--------------------|-----------------------------|---------------------------|--|--|
| 04490 | 97890 | 1/16 | 1-7/8 | 7/8 | 12 | 6 |
| 04500 | 97880 | 5/64 | 2 | 1 | 12 | 6 |
| 04510 | 97870 | 3/32 | 2-1/4 | 1-1/4 | 12 | 6 |
| 04520 | 97860 | 7/64 | 2-5/8 | 1-1/2 | 12 | 6 |
| 04530 | 97850 | 1/8 | 2-3/4 | 1-5/8 | 12 | 6 |
| 04540 | 97840 | 9/64 | 2-7/8 | 1-3/4 | 12 | 6 |
| 04550 | 97830 | 5/32 | 3-1/8 | 2 | 12 | 6 |
| 04560 | 97820 | 11/64 | 3-1/4 | 2-1/8 | 12 | 6 |
| 04570 | 97810 | 3/16 | 3-1/2 | 2-5/16 | 12 | 6 |
| 04580 | 97800 | 13/64 | 3-5/8 | 2-7/16 | 12 | 6 |
| 04590 | 97790 | 7/32 | 3-3/4 | 2-1/2 | 12 | 6 |
| 04600 | 97780 | 15/64 | 3-7/8 | 2-5/8 | 12 | 6 |
| 04610 | 97770 | 1/4 | 4 | 2-3/4 | 12 | 6 |
| 04620 | 97760 | 17/64 | 4-1/8 | 2-7/8 | 12 | 6 |
| 04630 | 97750 | 9/32 | 4-1/4 | 2-15/16 | 12 | 6 |
| 04640 | 97740 | 19/64 | 4-3/8 | 3-1/16 | 6 | 3 |
| 04650 | 97730 | 5/16 | 4-1/2 | 3-3/16 | 6 | 3 |
| 04660 | 97720 | 21/64 | 4-5/8 | 3-5/16 | 6 | 3 |
| 04670 | 97710 | 11/32 | 4-3/4 | 3-7/16 | 6 | 3 |
| 04680 | 97700 | 23/64 | 4-7/8 | 3-1/2 | 6 | 3 |
| 04690 | 97690 | 3/8 | 5 | 3-5/8 | 6 | 3 |
| 04700 | 97680 | 25/64 | 5-1/8 | 3-3/4 | 6 | 3 |
| 04710 | 97670 | 13/32 | 5-1/4 | 3-7/8 | 6 | 3 |
| 04720 | 97660 | 27/64 | 5-3/8 | 3-15/16 | 6 | 3 |
| 04730 | 97650 | 7/16 | 5-1/2 | 4-1/16 | 6 | 3 |
| 04740 | 97640 | 29/64 | 5-5/8 | 4-3/16 | 6 | 3 |
| 04750 | 97630 | 15/32 | 5-3/4 | 4-5/16 | 6 | 3 |
| 04760 | 97620 | 31/64 | 5-7/8 | 4-3/8 | 6 | 3 |
| 04770 | 97610 | 1/2 | 6 | 4-1/2 | 6 | 3 |

LETTER

| Type 190 Black Oxide Part Number | Type 190-AN Titanium Nitride Part Number | Letter Sizes | Overall Length Inches | Flute Length Inches | Type 190 Black Oxide Qty. per/pack | Type 190-AN Titanium Nitride Qty. per/pack |
|--|--|-----------------|-----------------------------|---------------------------|--|--|
| 05300 | 95710 | A | 3-7/8 | 2-5/8 | 12 | 6 |
| 05310 | 95700 | B | 4 | 2-3/4 | 12 | 6 |
| 05320 | 95690 | C | 4 | 2-3/4 | 12 | 6 |
| 05330 | 95680 | D | 4 | 2-3/4 | 12 | 6 |
| 05340 | 95670 | E | 4 | 2-3/4 | 12 | 6 |
| 05350 | 95660 | F | 4-1/8 | 2-7/8 | 12 | 6 |
| 05360 | 95650 | G | 4-1/8 | 2-7/8 | 12 | 6 |
| 05370 | 95640 | H | 4-1/8 | 2-7/8 | 12 | 6 |
| 05380 | 95630 | I | 4-1/8 | 2-7/8 | 12 | 6 |
| 05390 | 95620 | J | 4-1/8 | 2-7/8 | 12 | 6 |
| 05400 | 95610 | K | 4-1/4 | 2-15/16 | 12 | 6 |
| 05410 | 95600 | L | 4-1/4 | 2-15/16 | 12 | 6 |
| 05420 | 95590 | M | 4-3/8 | 3-1/16 | 6 | 3 |
| 05430 | 95580 | N | 4-3/8 | 3-1/16 | 6 | 3 |
| 05440 | 95570 | O | 4-1/2 | 3-3/16 | 6 | 3 |
| 05450 | 95560 | P | 4-5/8 | 3-5/16 | 6 | 3 |
| 05460 | 95550 | Q | 4-3/4 | 3-7/16 | 6 | 3 |
| 05470 | 95540 | R | 4-3/4 | 3-7/16 | 6 | 3 |
| 05480 | 95530 | S | 4-7/8 | 3-1/2 | 6 | 3 |

Letter sizes continued on page 11.

TiN

HSS Twist Drills - Heavy Duty HSS NAS 907B

HSS HEAVY-DUTY NAS 907B

Type 190, Type 190-AN Titanium Nitride Coated

135° Split Point



Type 190

Black oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 190-AN

Titanium nitride (TiN) coating adds lubricity and hardness, enhancing chip flow, finish hole quality and drill life.

- Heavy-duty construction for drilling in tougher materials
- Manufactured from premium high-speed steel
- 135° split point is self-centering for reducing thrust and easier penetration
- Manufactured to **NAS 907B** aerospace specification

LETTER

| Type 190 Black Oxide Part Number | Type 190-AN TiN Coated Part Number | Letter Sizes | Overall Length Inches | Flute Length Inches | Type 190 Black Oxide Qty. per/pack | Type 190-AN Titanium Nitride Qty. per/pack |
|--|--|-----------------|-----------------------------|---------------------------|--|--|
| 05490 | 95520 | T | 4-7/8 | 3-1/2 | 6 | 3 |
| 05500 | 95510 | U | 5 | 3-5/8 | 6 | 3 |
| 05510 | 95500 | V | 5 | 3-5/8 | 6 | 3 |
| 05520 | 95490 | W | 5-1/8 | 3-3/4 | 6 | 3 |
| 05530 | 95480 | X | 5-1/8 | 3-3/4 | 6 | 3 |
| 05540 | 95470 | Y | 5-1/4 | 3-7/8 | 6 | 3 |
| 05550 | 95460 | Z | 5-1/4 | 3-7/8 | 6 | 3 |

WIRE

| Type 190 Black Oxide Part Number | Type 190-AN TiN Coated Part Number | Letter Sizes | Overall Length Inches | Flute Length Inches | Type 190 Black Oxide Qty. per/pack | Type 190-AN TiN Coated Qty. per/pack |
|--|--|-----------------|-----------------------------|---------------------------|--|--|
| 04780 | 98520 | 1 | 3-7/8 | 2-5/8 | 12 | 6 |
| 04790 | 98510 | 2 | 3-7/8 | 2-5/8 | 12 | 6 |
| 04800 | 98500 | 3 | 3-3/4 | 2-1/2 | 12 | 6 |
| 04810 | 98490 | 4 | 3-3/4 | 2-1/2 | 12 | 6 |
| 04820 | 98480 | 5 | 3-3/4 | 2-1/2 | 12 | 6 |
| 04830 | 98470 | 6 | 3-3/4 | 2-1/2 | 12 | 6 |
| 04840 | 98460 | 7 | 3-5/8 | 2-7/16 | 12 | 6 |
| 04850 | 98450 | 8 | 3-5/8 | 2-7/16 | 12 | 6 |
| 04860 | 98440 | 9 | 3-5/8 | 2-7/16 | 12 | 6 |
| 04870 | 98430 | 10 | 3-5/8 | 2-7/16 | 12 | 6 |
| 04880 | 98420 | 11 | 3-1/2 | 2-5/16 | 12 | 6 |
| 04890 | 98410 | 12 | 3-1/2 | 2-5/16 | 12 | 6 |
| 04900 | 98400 | 13 | 3-1/2 | 2-5/16 | 12 | 6 |
| 04910 | 98390 | 14 | 3-3/8 | 2-3/16 | 12 | 6 |
| 04920 | 98380 | 15 | 3-3/8 | 2-3/16 | 12 | 6 |
| 04930 | 98370 | 16 | 3-3/8 | 2-3/16 | 12 | 6 |
| 04940 | 98360 | 17 | 3-3/8 | 2-3/16 | 12 | 6 |
| 04950 | 98350 | 18 | 3-1/4 | 2-1/8 | 12 | 6 |
| 04960 | 98340 | 19 | 3-1/4 | 2-1/8 | 12 | 6 |
| 04970 | 98330 | 20 | 3-1/4 | 2-1/8 | 12 | 6 |
| 04980 | 98320 | 21 | 3-1/4 | 2-1/8 | 12 | 6 |
| 04990 | 98310 | 22 | 3-1/8 | 2 | 12 | 6 |
| 05000 | 98300 | 23 | 3-1/8 | 2 | 12 | 6 |
| 05010 | 98290 | 24 | 3-1/8 | 2 | 12 | 6 |
| 05020 | 98280 | 25 | 3 | 1-7/8 | 12 | 6 |
| 05030 | 98270 | 26 | 3 | 1-7/8 | 12 | 6 |
| 05040 | 98260 | 27 | 3 | 1-7/8 | 12 | 6 |
| 05050 | 98250 | 28 | 2-7/8 | 1-3/4 | 12 | 6 |
| 05060 | 98240 | 29 | 2-7/8 | 1-3/4 | 12 | 6 |
| 05070 | 98230 | 30 | 2-3/4 | 1-5/8 | 12 | 6 |
| 05080 | 98220 | 31 | 2-3/4 | 1-5/8 | 12 | 6 |
| 05090 | 98210 | 32 | 2-3/4 | 1-5/8 | 12 | 6 |
| 05100 | 98200 | 33 | 2-5/8 | 1-1/2 | 12 | 6 |
| 05110 | 98190 | 34 | 2-5/8 | 1-1/2 | 12 | 6 |
| 05120 | 98180 | 35 | 2-5/8 | 1-1/2 | 12 | 6 |
| 05130 | 98170 | 36 | 2-1/2 | 1-7/16 | 12 | 6 |
| 05140 | 98160 | 37 | 2-1/2 | 1-7/16 | 12 | 6 |
| 05150 | 98150 | 38 | 2-1/2 | 1-7/16 | 12 | 6 |
| 05160 | 98140 | 39 | 2-3/8 | 1-3/8 | 12 | 6 |
| 05170 | 98130 | 40 | 2-3/8 | 1-3/8 | 12 | 6 |
| 05180 | 98120 | 41 | 2-3/8 | 1-3/8 | 12 | 6 |
| 05190 | 98110 | 42 | 2-1/4 | 1-1/4 | 12 | 6 |
| 05200 | 98100 | 43 | 2-1/4 | 1-1/4 | 12 | 6 |
| 05210 | 98090 | 44 | 2-1/8 | 1-1/8 | 12 | 6 |
| 05220 | 98080 | 45 | 2-1/8 | 1-1/8 | 12 | 6 |
| 05230 | 98070 | 46 | 2-1/8 | 1-1/8 | 12 | 6 |
| 05240 | 98060 | 47 | 2 | 1 | 12 | 6 |
| 05250 | 98050 | 48 | 2 | 1 | 12 | 6 |
| 05260 | 98040 | 49 | 2 | 1 | 12 | 6 |
| 05270 | 98030 | 50 | 2 | 1 | 12 | 6 |
| 05280 | 98020 | 51 | 2 | 1 | 12 | 6 |
| 05290 | 98010 | 52 | 1-7/8 | 7/8 | 12 | 6 |

Jobber Length

HSS HEAVY-DUTY NAS 907B

Type 190-ACN Titanium Carbon Nitride

Type 190-ALN Titanium Aluminum Nitride

- Heavy-duty construction for drilling in tougher materials
- Manufactured from premium high-speed steel
- 135° split point is self-centering for reducing thrust and easier penetration
- Provides exceptional oxidation resistance and extreme hardness
- TiCN is harder and has a lower coefficient of friction than TiN coating.
- Recommended where moderate temperatures are generated.
- Manufactured to **NAS 907B** aerospace specification



TiCN Coating

Titanium carbon nitride (TiCN) coating raises cutting surface hardness greatly increasing resistance to wear.



TiAlN Coating

Titanium aluminum nitride (TiAlN) designed for use in high temperature operations and difficult to machine material

FRACTIONAL

| Type 190-ACN TiCN Coated Part Number | Type 190-ALN TiAlN Coated Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/Pack |
|--|---|--------------------|-----------------------------|---------------------------|------------------|
| 80002 | 80000 | 1/16 | 1-7/8 | 7/8 | 6 |
| 80012 | 80010 | 5/64 | 2 | 1 | 6 |
| 80022 | 80020 | 3/32 | 2-1/4 | 1-1/4 | 6 |
| 80032 | 80030 | 7/64 | 2-5/8 | 1-1/2 | 6 |
| 80042 | 80040 | 1/8 | 2-3/4 | 1-5/8 | 6 |
| 80052 | 80050 | 9/64 | 2-7/8 | 1-3/4 | 6 |
| 80062 | 80060 | 5/32 | 3-1/8 | 2 | 6 |
| 80072 | 80070 | 11/64 | 3-1/4 | 2-1/8 | 6 |
| 80082 | 80080 | 3/16 | 3-1/2 | 2-5/16 | 6 |
| 80092 | 80090 | 13/64 | 3-5/8 | 2-7/16 | 6 |
| 80102 | 80100 | 7/32 | 3-3/4 | 2-1/2 | 6 |
| 80112 | 80110 | 15/64 | 3-7/8 | 2-5/8 | 6 |
| 80122 | 80120 | 1/4 | 4 | 2-3/4 | 6 |
| 80132 | 80130 | 17/64 | 4-1/8 | 2-7/8 | 6 |
| 80142 | 80140 | 9/32 | 4-1/4 | 2-15/16 | 6 |
| 80152 | 80150 | 19/64 | 4-3/8 | 3-1/16 | 3 |
| 80162 | 80160 | 5/16 | 4-1/2 | 3-3/16 | 3 |
| 80172 | 80170 | 21/64 | 4-5/8 | 3-5/16 | 3 |
| 80182 | 80180 | 11/32 | 4-3/4 | 3-7/16 | 3 |
| 80192 | 80190 | 23/64 | 4-7/8 | 3-1/2 | 3 |
| 80202 | 80200 | 3/8 | 5 | 3-5/8 | 3 |
| 80212 | 80210 | 25/64 | 5-1/8 | 3-3/4 | 3 |
| 80222 | 80220 | 13/32 | 5-1/4 | 3-7/8 | 3 |
| 80232 | 80230 | 27/64 | 5-3/8 | 3-15/16 | 3 |
| 80242 | 80240 | 7/16 | 5-1/2 | 4-1/16 | 3 |
| 80252 | 80250 | 29/64 | 5-5/8 | 4-3/16 | 3 |
| 80262 | 80260 | 15/32 | 5-3/4 | 4-5/16 | 3 |
| 80272 | 80270 | 31/64 | 5-7/8 | 4-3/8 | 3 |
| 80282 | 80280 | 1/2 | 6 | 4-1/2 | 3 |

LETTER

| Type 190- ACN TiCN Coated Part Number | Type 190-ALN TiAlN Coated Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/Pack |
|---|---|--------------------|-----------------------------|---------------------------|------------------|
| 80292 | 80290 | A | 3-7/8 | 2-5/8 | 6 |
| 80302 | 80300 | B | 4 | 2-3/4 | 6 |
| 80312 | 80310 | C | 4 | 2-3/4 | 6 |
| 80322 | 80320 | D | 4 | 2-3/4 | 6 |
| 80332 | 80330 | E | 4 | 2-3/4 | 6 |
| 80342 | 80340 | F | 4-1/8 | 2-7/8 | 6 |
| 80352 | 80350 | G | 4-1/8 | 2-7/8 | 6 |
| 80362 | 80360 | H | 4-1/8 | 2-7/8 | 6 |
| 80372 | 80370 | I | 4-1/8 | 2-7/8 | 6 |
| 80382 | 80380 | J | 4-1/8 | 2-7/8 | 6 |
| 80392 | 80390 | K | 4-1/4 | 2-15/16 | 6 |
| 80402 | 80400 | L | 4-1/4 | 2-15/16 | 6 |
| 80412 | 80410 | M | 4-3/8 | 3-1/16 | 3 |
| 80422 | 80420 | N | 4-3/8 | 3-1/16 | 3 |
| 80432 | 80430 | O | 4-1/2 | 3-3/16 | 3 |

Letter sizes continued on page 13

TiCN / TiAlN

Twist Drills - HSS Heavy-Duty NAS 907B

HSS HEAVY-DUTY NAS 907B

Type 190-ACN Titanium Carbon Nitride
Type 190-ALN Titanium Aluminum Nitride



TiCN Coating

Titanium carbon nitride (TiCN) coating raises cutting surface hardness greatly increasing resistance to wear.



TiAlN Coating

Titanium aluminum nitride (TiAlN) designed for use in high temperature operations and difficult to machine material

- Heavy-duty construction for drilling in tougher materials
- Manufactured from premium high-speed steel
- 135° split point is self-centering for reducing thrust and easier penetration
- Provides exceptional oxidation resistance and extreme hardness
- TiCN is harder and has a lower coefficient of friction than TiN coating.
- Recommended where moderate temperatures are generated.
- Manufactured to **NAS 907B** aerospace specification

LETTER

| Type 190- ACN TiCN Coated Part Number | Type 190-ALN TiAlN Coated Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/Pack |
|---|---|--------------------|-----------------------------|---------------------------|------------------|
| 80442 | 80440 | P | 4-5/8 | 3-5/16 | 3 |
| 80452 | 80450 | Q | 4-3/4 | 3-7/16 | 3 |
| 80462 | 80460 | R | 4-3/4 | 3-7/16 | 3 |
| 80472 | 80470 | S | 4-7/8 | 3-1/2 | 3 |
| 80482 | 80480 | T | 4-7/8 | 3-1/2 | 3 |
| 80492 | 80490 | U | 5 | 3-5/8 | 3 |
| 80502 | 80500 | V | 5 | 3-5/8 | 3 |
| 80512 | 80510 | W | 5-1/8 | 3-3/4 | 3 |
| 80522 | 80520 | X | 5-1/8 | 3-3/4 | 3 |
| 80532 | 80530 | Y | 5-1/4 | 3-7/8 | 3 |
| 80542 | 80540 | Z | 5-1/4 | 3-7/8 | 3 |

WIRE

| Type 190- ACN TiCN Coated Part Number | Type 190-ALN TiAlN Coated Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/Pack |
|---|---|--------------------|-----------------------------|---------------------------|------------------|
| 80552 | 80550 | 1 | 3-7/8 | 2-5/8 | 6 |
| 80562 | 80560 | 2 | 3-7/8 | 2-5/8 | 6 |
| 80572 | 80570 | 3 | 3-3/4 | 2-1/2 | 6 |
| 80582 | 80580 | 4 | 3-3/4 | 2-1/2 | 6 |
| 80592 | 80590 | 5 | 3-3/4 | 2-1/2 | 6 |
| 80602 | 80600 | 6 | 3-3/4 | 2-1/2 | 6 |
| 80612 | 80610 | 7 | 3-5/8 | 2-7/16 | 6 |
| 80622 | 80620 | 8 | 3-5/8 | 2-7/16 | 6 |
| 80632 | 80630 | 9 | 3-5/8 | 2-7/16 | 6 |
| 80642 | 80640 | 10 | 3-5/8 | 2-7/16 | 6 |
| 80652 | 80650 | 11 | 3-1/2 | 2-5/16 | 6 |
| 80662 | 80660 | 12 | 3-1/2 | 2-5/16 | 6 |
| 80672 | 80670 | 13 | 3-1/2 | 2-5/16 | 6 |
| 80682 | 80680 | 14 | 3-3/8 | 2-3/16 | 6 |
| 80692 | 80690 | 15 | 3-3/8 | 2-3/16 | 6 |
| 80702 | 80700 | 16 | 3-3/8 | 2-3/16 | 6 |
| 80712 | 80710 | 17 | 3-3/8 | 2-3/16 | 6 |
| 80722 | 80720 | 18 | 3-1/4 | 2-1/8 | 6 |
| 80732 | 80730 | 19 | 3-1/4 | 2-1/8 | 6 |
| 80742 | 80740 | 20 | 3-1/4 | 2-1/8 | 6 |
| 80752 | 80750 | 21 | 3-1/4 | 2-1/8 | 6 |
| 80762 | 80760 | 22 | 3-1/8 | 2 | 6 |
| 80772 | 80770 | 23 | 3-1/8 | 2 | 6 |
| 80782 | 80780 | 24 | 3-1/8 | 2 | 6 |
| 80792 | 80790 | 25 | 3 | 1-7/8 | 6 |
| 80802 | 80800 | 26 | 3 | 1-7/8 | 6 |
| 80812 | 80810 | 27 | 3 | 1-7/8 | 6 |
| 80822 | 80820 | 28 | 2-7/8 | 1-3/4 | 6 |
| 80832 | 80830 | 29 | 2-7/8 | 1-3/4 | 6 |
| 80842 | 80840 | 30 | 2-3/4 | 1-5/8 | 6 |
| 80852 | 80850 | 31 | 2-3/4 | 1-5/8 | 6 |
| 80862 | 80860 | 32 | 2-3/4 | 1-5/8 | 6 |
| 80872 | 80870 | 33 | 2-5/8 | 1-1/2 | 6 |
| 80882 | 80880 | 34 | 2-5/8 | 1-1/2 | 6 |
| 80892 | 80890 | 35 | 2-5/8 | 1-1/2 | 6 |
| 80902 | 80900 | 36 | 2-1/2 | 1-7/16 | 6 |

Wire sizes continued on page 14

Jobber Length

HSS HEAVY-DUTY NAS 907B

Type 190-ACN Titanium Carbon Nitride

Type 190-ALN Titanium Aluminum Nitride

- Heavy-duty construction for drilling in tougher materials
- Manufactured from premium high-speed steel
- 135° split point is self-centering for reducing thrust and easier penetration
- Provides exceptional oxidation resistance and extreme hardness
- TiCN is harder and has a lower coefficient of friction than TiN coating.
- Recommended where moderate temperatures are generated.
- Manufactured to **NAS 907B** aerospace specification



TiCN Coating

Titanium carbon nitride (TiCN) coating raises cutting surface hardness greatly increasing resistance to wear.



TiAlN Coating

Titanium aluminum nitride (TiAlN) designed for use in high temperature operations and difficult to machine material

WIRE

| Type 190- ACN TiCN Coated Part Number | Type 190-ALN TiAlN Coated Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/Pack |
|---|---|--------------------|-----------------------------|---------------------------|------------------|
| 80912 | 80910 | 37 | 2-1/2 | 1-7/16 | 6 |
| 80922 | 80920 | 38 | 2-1/2 | 1-7/16 | 6 |
| 80932 | 80930 | 39 | 2-3/8 | 1-3/8 | 6 |
| 80942 | 80940 | 40 | 2-3/8 | 1-3/8 | 6 |
| 80952 | 80950 | 41 | 2-3/8 | 1-3/8 | 6 |
| 80962 | 80960 | 42 | 2-1/4 | 1-1/4 | 6 |
| 80972 | 80970 | 43 | 2-1/4 | 1-1/4 | 6 |
| 80982 | 80980 | 44 | 2-1/8 | 1-1/8 | 6 |
| 80992 | 80990 | 45 | 2-1/8 | 1-1/8 | 6 |
| 81002 | 81000 | 46 | 2-1/8 | 1-1/8 | 6 |
| 81012 | 81010 | 47 | 2 | 1 | 6 |
| 81022 | 81020 | 48 | 2 | 1 | 6 |
| 81032 | 81030 | 49 | 2 | 1 | 6 |
| 81042 | 81040 | 50 | 2 | 1 | 6 |
| 81052 | 81050 | 51 | 2 | 1 | 6 |
| 81062 | 81060 | 52 | 1-7/8 | 7/8 | 6 |

TiCN / TiAlN

Twist Drills - HSS Heavy-Duty NAS 907B

GOLDSTRIKE™ & V-LINE HEAVY DUTY

Type 190-GF

GOLDSTRIKE™

Premium - 135° Split Point

Gold Surface Treated 3-Flats on Shank, 3/16" and Larger

- Heavy-duty 135° split point drills perform well in very demanding applications.
- Ideal for use with hand held drills with key-less chucks.



Type 190-GF

Heavy-duty construction makes it ideal for difficult to drill materials.

Type 198

V-Line - Heavy-Duty
Black Oxide 135° Split Point

- American made value line drill.
- 135° split point drills are self centering and perform well in harder metals.
- Heavy-duty construction makes this series of drills ideal for the medium to light tensile strength metal drilling applications.



Type 198

Designed for the user whose applications are well served without the need for the tighter tolerances of our standard Type 190.

FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 40490 | 1/16 | 1-7/8 | 7/8 | 12 |
| 40500 | 5/64 | 2 | 1 | 12 |
| 40510 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 40520 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 40530 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 40540 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 40550 | 5/32 | 3-1/8 | 2 | 12 |
| 40560 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 40561 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 40562 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 40563 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 40564 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 40569 | 1/4 | 4 | 2-3/4 | 12 |
| 40571 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 40572 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 40573 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 40574 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 40579 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 40581 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 40582 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 40583 | 3/8 | 5 | 3-5/8 | 6 |
| 40584 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 40589 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 40591 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 40592 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 40593 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 40594 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 40601 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 40602 | 1/2 | 6 | 4-1/2 | 6 |

FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 02782 | 1/16 | 1-7/8 | 7/8 | 12 |
| 02792 | 5/64 | 2 | 1 | 12 |
| 02802 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 02812 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 02822 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 02832 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 02842 | 5/32 | 3-1/8 | 2 | 12 |
| 02852 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 02862 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 02872 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 02882 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 02892 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 02902 | 1/4 | 4 | 2-3/4 | 12 |
| 02912 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 02922 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 02932 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 02942 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 02952 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 02962 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 02972 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 02982 | 3/8 | 5 | 3-5/8 | 6 |
| 02992 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 03002 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 03012 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 03022 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 03032 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 03042 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 03052 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 03062 | 1/2 | 6 | 4-1/2 | 6 |

Type 190-GFR

GOLDSTRIKE™ Reduced Shank -

135° Split Point with 3/8" Reduced Shank with Flats



3/8" WITH FLATS ON SHANK

| Part # | Description of Sizes | Per Pack | Part # | Description of Sizes | Per Pack |
|--------|----------------------|----------|--------|----------------------|----------|
| 40633 | 25/64 | 6 | 40622 | 29/64 | 6 |
| 40634 | 13/32 | 6 | 40623 | 15/32 | 6 |
| 40639 | 27/64 | 6 | 40624 | 31/64 | 6 |
| 40621 | 7/16 | 6 | 40629 | 1/2 | 6 |

Jobber Length

HSS BLACK OXIDE 118° SPLIT POINT NAS 907A

Type 340-A

- 118° split point is self-centering for reduced thrust and easier penetration
- Black oxide finish for increased wear resistance and added lubricity
- Manufactured to **NAS 907A** aerospace specification



Type 340-A

General-purpose geometry with 118° split point for drilling in a wide range of drilling operations and materials.

FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 35730 | 1/16 | 1-7/8 | 7/8 | 12 |
| 35740 | 5/64 | 2 | 1 | 12 |
| 35750 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 35760 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 35770 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 35780 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 35790 | 5/32 | 3-1/8 | 2 | 12 |
| 35800 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 35810 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 35820 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 35830 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 35840 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 35850 | 1/4 | 4 | 2-3/4 | 12 |
| 35860 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 35870 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 35880 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 35890 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 35900 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 35910 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 35920 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 35930 | 3/8 | 5 | 3-5/8 | 6 |
| 35940 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 35950 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 35960 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 35970 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 35980 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 35990 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 36000 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 36010 | 1/2 | 6 | 4-1/2 | 6 |

LETTER

| Part # | Letter Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------|-----------------------|---------------------|---------------|
| 82750 | A | 3-7/8 | 2-5/8 | 12 |
| 82760 | B | 4 | 2-3/4 | 12 |
| 82770 | C | 4 | 2-3/4 | 12 |
| 82780 | D | 4 | 2-3/4 | 12 |
| 82790 | E | 4 | 2-3/4 | 12 |
| 82800 | F | 4-1/8 | 2-7/8 | 12 |
| 82810 | G | 4-1/8 | 2-7/8 | 12 |
| 82820 | H | 4-1/8 | 2-7/8 | 12 |
| 82830 | I | 4-1/8 | 2-7/8 | 12 |
| 82840 | J | 4-1/8 | 2-7/8 | 12 |
| 82850 | K | 4-1/4 | 2-15/16 | 12 |
| 82860 | L | 4-1/4 | 2-15/16 | 12 |
| 82870 | M | 4-3/8 | 3-1/16 | 6 |
| 82880 | N | 4-3/8 | 3-1/16 | 6 |
| 82890 | O | 4-1/2 | 3-3/16 | 6 |
| 82900 | P | 4-5/8 | 3-5/16 | 6 |
| 82910 | Q | 4-3/4 | 3-7/16 | 6 |
| 82920 | R | 4-3/4 | 3-7/16 | 6 |
| 82930 | S | 4-7/8 | 3-1/2 | 6 |
| 82940 | T | 4-7/8 | 3-1/2 | 6 |
| 82950 | U | 5 | 3-5/8 | 6 |
| 82960 | V | 5 | 3-5/8 | 6 |
| 82970 | W | 5-1/8 | 3-3/4 | 6 |
| 82980 | X | 5-1/8 | 3-3/4 | 6 |
| 82990 | Y | 5-1/4 | 3-7/8 | 6 |
| 83000 | Z | 5-1/4 | 3-7/8 | 6 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 66710 | 1 | 3-7/8 | 2-5/8 | 12 |
| 57280 | 2 | 3-7/8 | 2-5/8 | 12 |
| 66700 | 3 | 3-3/4 | 2-1/2 | 12 |
| 57370 | 4 | 3-3/4 | 2-1/2 | 12 |
| 95430 | 5 | 3-3/4 | 2-1/2 | 12 |
| 66690 | 6 | 3-3/4 | 2-1/2 | 12 |
| 66680 | 7 | 3-5/8 | 2-7/16 | 12 |
| 66770 | 8 | 3-5/8 | 2-7/16 | 12 |
| 66760 | 9 | 3-5/8 | 2-7/16 | 12 |
| 92630 | 10 | 3-5/8 | 2-7/16 | 12 |
| 66670 | 11 | 3-1/2 | 2-5/16 | 12 |
| 66220 | 12 | 3-1/2 | 2-5/16 | 12 |
| 92640 | 13 | 3-1/2 | 2-5/16 | 12 |
| 66660 | 14 | 3-3/8 | 2-3/16 | 12 |
| 66650 | 15 | 3-3/8 | 2-3/16 | 12 |
| 66640 | 16 | 3-3/8 | 2-3/16 | 12 |
| 57290 | 17 | 3-3/8 | 2-3/16 | 12 |
| 66810 | 18 | 3-1/4 | 2-1/8 | 12 |
| 57550 | 19 | 3-1/4 | 2-1/8 | 12 |
| 66630 | 20 | 3-1/4 | 2-1/8 | 12 |
| 66620 | 21 | 3-1/4 | 2-1/8 | 12 |
| 57630 | 22 | 3-1/8 | 2 | 12 |
| 66610 | 23 | 3-1/8 | 2 | 12 |
| 66720 | 24 | 3-1/8 | 2 | 12 |
| 57360 | 25 | 3 | 1-7/8 | 12 |
| 66600 | 26 | 3 | 1-7/8 | 12 |
| 66750 | 27 | 3 | 1-7/8 | 12 |
| 57700 | 28 | 2-7/8 | 1-3/4 | 12 |
| 66590 | 29 | 2-7/8 | 1-3/4 | 12 |
| 95420 | 30 | 2-3/4 | 1-5/8 | 12 |
| 66800 | 31 | 2-3/4 | 1-5/8 | 12 |
| 66350 | 32 | 2-3/4 | 1-5/8 | 12 |
| 66580 | 33 | 2-5/8 | 1-1/2 | 12 |
| 66740 | 34 | 2-5/8 | 1-1/2 | 12 |
| 57350 | 35 | 2-5/8 | 1-1/2 | 12 |
| 66570 | 36 | 2-1/2 | 1-7/16 | 12 |
| 66560 | 37 | 2-1/2 | 1-7/16 | 12 |
| 66550 | 38 | 2-1/2 | 1-7/16 | 12 |
| 57560 | 39 | 2-3/8 | 1-3/8 | 12 |
| 66540 | 40 | 2-3/8 | 1-3/8 | 12 |

Twist Drills - HSS Black Oxide 118° NAS 907A

GENERAL PURPOSE & TITANIUM NITRIDE COATED



Type 115

Black Oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 100

Recommended for non-ferrous metals, wood and plastic.



Type 100-BN

Performs well in mild drilling applications with abrasive wear characteristics.

Type 115, 100, 100-BN Titanium Nitride 118° Point

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials

FRACTIONAL

| Type 115 Black Oxide Part Number | Type 100 Bright Part Number | Type 100-BN TiN Coated Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Type 115 / Type 100 Black Oxide/Bright Qty. per/Pack | Type 100-BN TiN Coated Qty. per/Pack |
|--|-----------------------------------|--|--------------------|-----------------------------|---------------------------|--|--|
| 01000 | 02750 | 97920 | 1/64 | 3/4 | 3/16 | 12 | 6 |
| 01010 | 02760 | 97910 | 1/32 | 1-3/8 | 1/2 | 12 | 6 |
| 01020 | 02770 | 97900 | 3/64 | 1-3/4 | 3/4 | 12 | 6 |
| 01030 | 02780 | 22570 | 1/16 | 1-7/8 | 7/8 | 12 | 6 |
| 01040 | 02790 | 22580 | 5/64 | 2 | 1 | 12 | 6 |
| 01050 | 02800 | 22590 | 3/32 | 2-1/4 | 1-1/4 | 12 | 6 |
| 01060 | 02810 | 22600 | 7/64 | 2-5/8 | 1-1/2 | 12 | 6 |
| 01070 | 02820 | 22610 | 1/8 | 2-3/4 | 1-5/8 | 12 | 6 |
| 01080 | 02830 | 22620 | 9/64 | 2-7/8 | 1-3/4 | 12 | 6 |
| 01090 | 02840 | 22630 | 5/32 | 3-1/8 | 2 | 12 | 6 |
| 01100 | 02850 | 22640 | 11/64 | 3-1/4 | 2-1/8 | 12 | 6 |
| 01110 | 02860 | 22650 | 3/16 | 3-1/2 | 2-5/16 | 12 | 6 |
| 01120 | 02870 | 22660 | 13/64 | 3-5/8 | 2-7/16 | 12 | 6 |
| 01130 | 02880 | 22670 | 7/32 | 3-3/4 | 2-1/2 | 12 | 6 |
| 01140 | 02890 | 22680 | 15/64 | 3-7/8 | 2-5/8 | 12 | 6 |
| 01150 | 02900 | 22690 | 1/4 | 4 | 2-3/4 | 12 | 6 |
| 01160 | 02910 | 22700 | 17/64 | 4-1/8 | 2-7/8 | 12 | 6 |
| 01170 | 02920 | 22710 | 9/32 | 4-1/4 | 2-15/16 | 12 | 6 |
| 01180 | 02930 | 22720 | 19/64 | 4-3/8 | 3-1/16 | 6 | 3 |
| 01190 | 02940 | 22730 | 5/16 | 4-1/2 | 3-3/16 | 6 | 3 |
| 01200 | 02950 | 22740 | 21/64 | 4-5/8 | 3-5/16 | 6 | 3 |
| 01210 | 02960 | 22750 | 11/32 | 4-3/4 | 3-7/16 | 6 | 3 |
| 01220 | 02970 | 22760 | 23/64 | 4-7/8 | 3-1/2 | 6 | 3 |
| 01230 | 02980 | 22770 | 3/8 | 5 | 3-5/8 | 6 | 3 |
| 01240 | 02990 | 22780 | 25/64 | 5-1/8 | 3-3/4 | 6 | 3 |
| 01250 | 03000 | 22790 | 13/32 | 5-1/4 | 3-7/8 | 6 | 3 |
| 01260 | 03010 | 22800 | 27/64 | 5-3/8 | 3-15/16 | 6 | 3 |
| 01270 | 03020 | 22810 | 7/16 | 5-1/2 | 4-1/16 | 6 | 3 |
| 01280 | 03030 | 22820 | 29/64 | 5-5/8 | 4-3/16 | 6 | 3 |
| 01290 | 03040 | 22830 | 15/32 | 5-3/4 | 4-5/16 | 6 | 3 |
| 01300 | 03050 | 22840 | 31/64 | 5-7/8 | 4-3/8 | 6 | 3 |
| 01310 | 03060 | 22850 | 1/2 | 6 | 4-1/2 | 6 | 3 |
| 01320 | 48370 | 32500 | 33/64 | 6-5/8 | 4-13/16 | 1 | 1 |
| 01330 | 48380 | 32510 | 17/32 | 6-5/8 | 4-13/16 | 1 | 1 |
| 01340 | 48390 | 32520 | 35/64 | 6-5/8 | 4-13/16 | 1 | 1 |
| 01350 | 48400 | 32530 | 9/16 | 6-5/8 | 4-13/16 | 1 | 1 |
| 01360 | 48410 | 32540 | 37/64 | 6-5/8 | 4-13/16 | 1 | 1 |
| 01370 | 48420 | 32550 | 19/32 | 7-1/8 | 5-3/16 | 1 | 1 |
| 01380 | 48430 | 32560 | 39/64 | 7-1/8 | 5-3/16 | 1 | 1 |
| 01390 | 48440 | 32570 | 5/8 | 7-1/8 | 5-3/16 | 1 | 1 |
| 01400 | 48450 | 32580 | 41/64 | 7-1/8 | 5-3/16 | 1 | 1 |
| 01410 | 48460 | 32590 | 21/32 | 7-1/8 | 5-3/16 | 1 | 1 |
| 01420 | 48470 | 32600 | 43/64 | 7-5/8 | 5-5/8 | 1 | 1 |
| 01430 | 48480 | 32610 | 11/16 | 7-5/8 | 5-5/8 | 1 | 1 |
| 12370 | 48730 | 32650 | 3/4 | 7-5/8 | 5-5/8 | 1 | 1 |

Letter sizes continued on page 18

Jobber Length

GENERAL PURPOSE & TITANIUM NITRIDE COATED

Type 115, 100, 100-BN Titanium Nitride 118° Point

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials



Type 115

Black Oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 100

It is recommended for non-ferrous metals, wood and plastic.



Type 100-BN

Performs well in mild drilling applications with abrasive wear characteristics.

LETTER

| Type 115 Black Oxide Part Number | Type 100 Bright Part Number | Type 100-BN TiN Coated Part Number | Letter Sizes | Overall Length Inches | Flute Length Inches | Type 115 / Type 100 Black Oxide/Bright Qty. per/pack | Type 100-BN TiN Coated Qty. per/pack |
|--|-----------------------------------|--|-----------------|-----------------------------|---------------------------|--|--|
| 02410 | 04160 | 22890 | A | 3-7/8 | 2-5/8 | 12 | 6 |
| 02420 | 04170 | 22900 | B | 4 | 2-3/4 | 12 | 6 |
| 02430 | 04180 | 22910 | C | 4 | 2-3/4 | 12 | 6 |
| 02440 | 04190 | 22920 | D | 4 | 2-3/4 | 12 | 6 |
| 02450 | 04200 | 22930 | E | 4 | 2-3/4 | 12 | 6 |
| 02460 | 04210 | 22940 | F | 4-1/8 | 2-7/8 | 12 | 6 |
| 02470 | 04220 | 22950 | G | 4-1/8 | 2-7/8 | 12 | 6 |
| 02480 | 04230 | 22960 | H | 4-1/8 | 2-7/8 | 12 | 6 |
| 02490 | 04240 | 22970 | I | 4-1/8 | 2-7/8 | 12 | 6 |
| 02500 | 04250 | 22980 | J | 4-1/8 | 2-7/8 | 12 | 6 |
| 02510 | 04260 | 22990 | K | 4-1/4 | 2-15/16 | 12 | 6 |
| 02520 | 04270 | 23000 | L | 4-1/4 | 2-15/16 | 12 | 6 |
| 02530 | 04280 | 23010 | M | 4-3/8 | 3-1/16 | 6 | 3 |
| 02540 | 04290 | 23020 | N | 4-3/8 | 3-1/16 | 6 | 3 |
| 02550 | 04300 | 23030 | O | 4-1/2 | 3-3/16 | 6 | 3 |
| 02560 | 04310 | 23040 | P | 4-5/8 | 3-5/16 | 6 | 3 |
| 02570 | 04320 | 23050 | Q | 4-3/4 | 3-7/16 | 6 | 3 |
| 02580 | 04330 | 23060 | R | 4-3/4 | 3-7/16 | 6 | 3 |
| 02590 | 04340 | 23070 | S | 4-7/8 | 3-1/2 | 6 | 3 |
| 02600 | 04350 | 23080 | T | 4-7/8 | 3-1/2 | 6 | 3 |
| 02610 | 04360 | 22790 | U | 5 | 3-5/8 | 6 | 3 |
| 02620 | 04370 | 23100 | V | 5 | 3-5/8 | 6 | 3 |
| 02630 | 04380 | 23110 | W | 5-1/8 | 3-3/4 | 6 | 3 |
| 02640 | 04390 | 23120 | X | 5-1/8 | 3-3/4 | 6 | 3 |
| 02650 | 04400 | 23130 | Y | 5-1/4 | 3-7/8 | 6 | 3 |
| 02660 | 04410 | 23140 | Z | 5-1/4 | 3-7/8 | 6 | 3 |

WIRE

| Type 115 Black Oxide Part Number | Type 100 Bright Part Number | Type 100-BN TiN Coated Part Number | Wire Sizes | Overall Length Inches | Flute Length Inches | Type 115 / Type 100 Black Oxide/Bright Qty. per/Pack | Type 100-BN TiN Coated Qty. per/Pack |
|--|-----------------------------------|--|---------------|-----------------------------|---------------------------|--|--|
| 01440 | 03190 | 47790 | 1 | 3-7/8 | 2-5/8 | 12 | 6 |
| 01450 | 03200 | 47800 | 2 | 3-7/8 | 2-5/8 | 12 | 6 |
| 01460 | 03210 | 47810 | 3 | 3-3/4 | 2-1/2 | 12 | 6 |
| 01470 | 03220 | 47820 | 4 | 3-3/4 | 2-1/2 | 12 | 6 |
| 01480 | 03230 | 47830 | 5 | 3-3/4 | 2-1/2 | 12 | 6 |
| 01490 | 03240 | 47840 | 6 | 3-3/4 | 2-1/2 | 12 | 6 |
| 01500 | 03250 | 47850 | 7 | 3-5/8 | 2-7/16 | 12 | 6 |

Wire sizes continued on page 19

TiN

Twist Drills - General Purpose & TiN Coated

GENERAL PURPOSE & TITANIUM NITRIDE COATED



Type 115

Black Oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 100

It is recommended for non-ferrous metals, wood and plastic.



Type 100-BN

Performs well in mild drilling applications with abrasive wear characteristics.

Type 115, 100, 100-BN Titanium Nitride

118° Point

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials

WIRE

| Type 115 Black Oxide Part Number | Type 100 Bright Part Number | Type 100-BN TiN Coated Part Number | Wire Sizes | Overall Length Inches | Flute Length Inches | Type 115 / Type 100 Black Oxide/Bright Qty. per/Pack | Type 100-BN TiN Coated Qty. per/Pack |
|--|-----------------------------------|--|---------------|-----------------------------|---------------------------|--|--|
| 01510 | 03260 | 47860 | 8 | 3-5/8 | 2-7/16 | 12 | 6 |
| 01520 | 03270 | 47870 | 9 | 3-5/8 | 2-7/16 | 12 | 6 |
| 01530 | 03280 | 47880 | 10 | 3-5/8 | 2-7/16 | 12 | 6 |
| 01540 | 03290 | 47890 | 11 | 3-1/2 | 2-5/16 | 12 | 6 |
| 01550 | 03300 | 47900 | 12 | 3-1/2 | 2-5/16 | 12 | 6 |
| 01560 | 03310 | 47910 | 13 | 3-1/2 | 2-5/16 | 12 | 6 |
| 01570 | 03320 | 47920 | 14 | 3-3/8 | 2-3/16 | 12 | 6 |
| 01580 | 03330 | 47930 | 15 | 3-3/8 | 2-3/16 | 12 | 6 |
| 01590 | 03340 | 47940 | 16 | 3-3/8 | 2-3/16 | 12 | 6 |
| 01600 | 03350 | 47950 | 17 | 3-3/8 | 2-3/16 | 12 | 6 |
| 01610 | 03360 | 47960 | 18 | 3-1/4 | 2-1/8 | 12 | 6 |
| 01620 | 03370 | 47970 | 19 | 3-1/4 | 2-1/8 | 12 | 6 |
| 01630 | 03380 | 47980 | 20 | 3-1/4 | 2-1/8 | 12 | 6 |
| 01640 | 03390 | 47990 | 21 | 3-1/4 | 2-1/8 | 12 | 6 |
| 01650 | 03400 | 48000 | 22 | 3-1/8 | 2 | 12 | 6 |
| 01660 | 03410 | 48010 | 23 | 3-1/8 | 2 | 12 | 6 |
| 01670 | 03420 | 48020 | 24 | 3-1/8 | 2 | 12 | 6 |
| 01680 | 03430 | 48030 | 25 | 3 | 1-7/8 | 12 | 6 |
| 01690 | 03440 | 48040 | 26 | 3 | 1-7/8 | 12 | 6 |
| 01700 | 03450 | 48050 | 27 | 3 | 1-7/8 | 12 | 6 |
| 01710 | 03460 | 48060 | 28 | 2-7/8 | 1-3/4 | 12 | 6 |
| 01720 | 03470 | 48070 | 29 | 2-7/8 | 1-3/4 | 12 | 6 |
| 01730 | 03480 | 48080 | 30 | 2-3/4 | 1-5/8 | 12 | 6 |
| 01740 | 03490 | 48090 | 31 | 2-3/4 | 1-5/8 | 12 | 6 |
| 01750 | 03500 | 48100 | 32 | 2-3/4 | 1-5/8 | 12 | 6 |
| 01760 | 03510 | 48110 | 33 | 2-5/8 | 1-1/2 | 12 | 6 |
| 01770 | 03520 | 48120 | 34 | 2-5/8 | 1-1/2 | 12 | 6 |
| 01780 | 03530 | 48130 | 35 | 2-5/8 | 1-1/2 | 12 | 6 |
| 01790 | 03540 | 48140 | 36 | 2-1/2 | 1-7/16 | 12 | 6 |
| 01800 | 03550 | 48150 | 37 | 2-1/2 | 1-7/16 | 12 | 6 |
| 01810 | 03560 | 48160 | 38 | 2-1/2 | 1-7/16 | 12 | 6 |
| 01820 | 03570 | 48170 | 39 | 2-3/8 | 1-3/8 | 12 | 6 |
| 01830 | 03580 | 48180 | 40 | 2-3/8 | 1-3/8 | 12 | 6 |
| 01840 | 03590 | 48190 | 41 | 2-3/8 | 1-3/8 | 12 | 6 |
| 01850 | 03600 | 48200 | 42 | 2-1/4 | 1-1/4 | 12 | 6 |
| 01860 | 03610 | 48210 | 43 | 2-1/4 | 1-1/4 | 12 | 6 |
| 01870 | 03620 | 48220 | 44 | 2-1/8 | 1-1/8 | 12 | 6 |
| 01880 | 03630 | 48230 | 45 | 2-1/8 | 1-1/8 | 12 | 6 |
| 01890 | 03640 | 48240 | 46 | 2-1/8 | 1-1/8 | 12 | 6 |
| 01900 | 03650 | 48250 | 47 | 2 | 1 | 12 | 6 |
| 01910 | 03660 | 48260 | 48 | 2 | 1 | 12 | 6 |
| 01920 | 03670 | 48270 | 49 | 2 | 1 | 12 | 6 |
| 01930 | 03680 | 48280 | 50 | 2 | 1 | 12 | 6 |
| 01940 | 03690 | 48290 | 51 | 2 | 1 | 12 | 6 |

Wire sizes continued on page 20

Jobber Length

GENERAL PURPOSE & TITANIUM NITRIDE COATED

Type 115, 100, 100-BN Titanium Nitride

118° Point

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials



Type 115

Black Oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 100

It is recommended for non-ferrous metals, wood and plastic.



Type 100-BN

Performs well in mild drilling applications with abrasive wear characteristics.

WIRE

| Type 115 Black Oxide Part Number | Type 100 Bright Part Number | Type 100-BN TiN Coated Part Number | Wire Sizes | Overall Length Inches | Flute Length Inches | Type 115 / Type 100 Black Oxide/Bright Qty. per/Pack | Type 100-BN TiN Coated Qty. per/Pack |
|--|-----------------------------------|--|---------------|-----------------------------|---------------------------|--|--|
| 01950 | 03700 | 48300 | 52 | 1-7/8 | 7/8 | 12 | 6 |
| 01960 | 03710 | 98000 | 53 | 1-7/8 | 7/8 | 12 | 6 |
| 01970 | 03720 | 97990 | 54 | 1-7/8 | 7/8 | 12 | 6 |
| 01980 | 03730 | 97980 | 55 | 1-7/8 | 7/8 | 12 | 6 |
| 01990 | 03740 | 97970 | 56 | 1-3/4 | 3/4 | 12 | 6 |
| 02000 | 03750 | 97960 | 57 | 1-3/4 | 3/4 | 12 | 6 |
| 02010 | 03760 | 97950 | 58 | 1-5/8 | 11/16 | 12 | 6 |
| 02020 | 03770 | 97940 | 59 | 1-5/8 | 11/16 | 12 | 6 |
| 02030 | 03780 | 97930 | 60 | 1-5/8 | 11/16 | 12 | 6 |
| 02040 | 03790 | 81200 | 61 | 1-5/8 | 11/16 | 12 | ---- |
| 02050 | 03800 | 81210 | 62 | 1-1/2 | 5/8 | 12 | ---- |
| 02060 | 03810 | 81220 | 63 | 1-1/2 | 5/8 | 12 | ---- |
| 02070 | 03820 | 81230 | 64 | 1-1/2 | 5/8 | 12 | ---- |
| 02080 | 03830 | 81240 | 65 | 1-1/2 | 5/8 | 12 | ---- |
| 02090 | 03840 | 81250 | 66 | 1-3/8 | 1/2 | 12 | ---- |
| 02100 | 03850 | 81260 | 67 | 1-3/8 | 1/2 | 12 | ---- |
| 02110 | 03860 | 81270 | 68 | 1-3/8 | 1/2 | 12 | ---- |
| 02120 | 03870 | 81280 | 69 | 1-3/8 | 1/2 | 12 | ---- |
| 02130 | 03880 | 81290 | 70 | 1-1/4 | 3/8 | 12 | ---- |
| 02140 | 03890 | 81300 | 71 | 1-1/4 | 3/8 | 12 | ---- |
| 02150 | 03900 | 81310 | 72 | 1-1/8 | 5/16 | 12 | ---- |
| 02160 | 03910 | 81320 | 73 | 1-1/8 | 5/16 | 12 | ---- |
| 02170 | 03920 | 81330 | 74 | 1 | 1/4 | 12 | ---- |
| 02180 | 03930 | 81340 | 75 | 1 | 1/4 | 12 | ---- |
| 02190 | 03940 | 81350 | 76 | 7/8 | 3/16 | 12 | ---- |
| 02200 | 03950 | 81360 | 77 | 7/8 | 3/16 | 12 | ---- |
| 02210 | 03960 | 81370 | 78 | 7/8 | 3/16 | 12 | ---- |
| 02220 | 03970 | 81380 | 79 | 3/4 | 1/8 | 12 | ---- |
| 02230 | 03980 | 81390 | 80 | 3/4 | 1/8 | 12 | ---- |
| ---- | 03990 | ---- | 81 | 3/4 | 1/8 | 12 | ---- |
| ---- | 04000 | ---- | 82 | 3/4 | 1/8 | 12 | ---- |
| ---- | 04010 | ---- | 83 | 3/4 | 1/8 | 12 | ---- |
| ---- | 04020 | ---- | 84 | 3/4 | 3/32 | 12 | ---- |
| ---- | 04030 | ---- | 85 | 3/4 | 3/32 | 12 | ---- |

Wire sizes continued on page 21

GENERAL PURPOSE & TITANIUM NITRIDE COATED



Type 115

Black Oxide surface finish increases wear resistance and adds lubricity to improve chip flow.



Type 100

It is recommended for non-ferrous metals, wood and plastic.



Type 100-BN

Performs well in mild drilling applications with strong abrasive wear characteristics.

Type 115, 100, 100-BN Titanium Nitride 118° Point

- Widely used in general purpose applications.
- Designed for a wide range of operating conditions and materials.

WIRE

| Type 115 Black Oxide Part Number | Type 100 Bright Part Number | Type 100-BN TiN Coated Part Number | Wire Sizes | Overall Length Inches | Flute Length Inches | Type 115 / Type 100 Black Oxide/Bright Qty. per/Pack | Type 100-BN TiN Coated Qty. per/Pack |
|--|-----------------------------------|--|---------------|-----------------------------|---------------------------|--|--|
| ---- | 04040 | ---- | 86 | 3/4 | 3/32 | 12 | ---- |
| ---- | 04050 | ---- | 87 | 3/4 | 3/32 | 12 | ---- |
| ---- | 04060 | ---- | 88 | 3/4 | 5/64 | 12 | ---- |
| ---- | 04070 | ---- | 89 | 3/4 | 5/64 | 12 | ---- |
| ---- | 04080 | ---- | 90 | 3/4 | 5/64 | 12 | ---- |

Type 118

V-line - General Purpose Black Oxide, 118° point

- American made value line drill
- These general purpose 118° point HSS drills are ideal for a wide variety of light tensile strength metal drilling applications.



- This series is designed for the user whose applications are well served without the need for the tighter tolerances of our standard Type 115.

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------------|-----------------------------|---------------------------|------------------|
| 02783 | 1/16 | 1-7/8 | 7/8 | 12 |
| 02793 | 5/64 | 2 | 1 | 12 |
| 02803 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 02813 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 02823 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 02833 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 02843 | 5/32 | 3-1/8 | 2 | 12 |
| 02853 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 02863 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 02873 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 02883 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 02893 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 02903 | 1/4 | 4 | 2-3/4 | 12 |
| 02913 | 17/64 | 4-1/8 | 2-7/8 | 12 |

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------------|-----------------------------|---------------------------|------------------|
| 02923 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 02933 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 02943 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 02953 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 02963 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 02973 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 02983 | 3/8 | 5 | 3-5/8 | 6 |
| 02993 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 03003 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 03013 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 03023 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 03033 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 03043 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 03053 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 03063 | 1/2 | 6 | 4-1/2 | 6 |

Jobber Length

GENERAL PURPOSE - BLACK OXIDE AND BRIGHT FINISH

Type 170 - METRIC

118° Point General Purpose - Black Oxide

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials



Type 170-W - METRIC

118° Point General Purpose - Bright Finish

- This 118° point, high-speed steel drill performs well in a wide variety of drilling applications.
- It is recommended for non-ferrous metals, wood and plastics.



METRIC

| Type 170 Part Number | Type 170-W Part Number | Dia. MM | Overall Length MM | Overall Length Inches | Flute Length MM | Flute Length Inches | Qty. per/pack |
|----------------------|------------------------|---------|-------------------|-----------------------|-----------------|---------------------|---------------|
| 20630 | 17160 | .75 | 35 | 1-3/8 | 13 | 1/2 | 10 |
| 20640 | 17070 | .80 | 35 | 1-3/8 | 13 | 1/2 | 10 |
| 20650 | 17080 | .85 | 38 | 1-1/2 | 16 | 5/8 | 10 |
| 20660 | 29020 | .90 | 38 | 1-1/2 | 16 | 5/8 | 10 |
| 20670 | 29030 | .95 | 38 | 1-1/2 | 16 | 5/8 | 10 |
| 20680 | 29040 | 1.00 | 41 | 1-5/8 | 17 | 11/16 | 10 |
| 20690 | 29050 | 1.05 | 41 | 1-5/8 | 17 | 11/16 | 10 |
| 20700 | 29060 | 1.10 | 44 | 1-3/4 | 19 | 3/4 | 10 |
| 20710 | 17100 | 1.15 | 44 | 1-3/4 | 19 | 3/4 | 10 |
| 20720 | 29070 | 1.20 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20730 | 17150 | 1.25 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20740 | 29080 | 1.30 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20750 | 29090 | 1.35 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20760 | 29100 | 1.40 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20780 | 17110 | 1.50 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20800 | 29110 | 1.60 | 48 | 1-7/8 | 22 | 7/8 | 10 |
| 20820 | 29010 | 1.70 | 51 | 2" | 25 | 1 | 10 |
| 20830 | 17120 | 1.75 | 51 | 2" | 25 | 1 | 10 |
| 20840 | 17130 | 1.80 | 51 | 2" | 25 | 1 | 10 |
| 20860 | 29120 | 1.90 | 51 | 2" | 25 | 1 | 10 |
| 20880 | 20881 | 2.00 | 51 | 2" | 25 | 1 | 10 |
| 20980 | 20981 | 2.50 | 60 | 2-23/64 | 35 | 1-3/8 | 10 |
| 21040 | 21041 | 3.00 | 70 | 2-3/4 | 41 | 1-5/8 | 10 |
| 21110 | 21111 | 3.50 | 73 | 2-7/8 | 45 | 1-3/4 | 10 |
| 21170 | 21171 | 4.00 | 83 | 3-1/4 | 54 | 2-1/8 | 10 |
| 21230 | 21231 | 4.50 | 86 | 3-3/8 | 56 | 2-13/64 | 10 |
| 21290 | 21291 | 5.00 | 92 | 3-5/8 | 62 | 2-7/16 | 10 |
| 21350 | 21351 | 5.50 | 95 | 3-3/4 | 64 | 2-1/2 | 10 |
| 21410 | 21411 | 6.00 | 102 | 4" | 70 | 2-3/4 | 10 |
| 21470 | 21471 | 6.50 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 21530 | 21531 | 7.00 | 105 | 4-1/8 | 73 | 2-7/8 | 10 |
| 21590 | 21591 | 7.50 | 111 | 4-3/8 | 78 | 3 | 5 |
| 21650 | 21651 | 8.00 | 114 | 4-1/2 | 81 | 3-3/16 | 5 |
| 21710 | 21711 | 8.50 | 121 | 4-3/4 | 87 | 3-27/64 | 5 |
| 21770 | 21771 | 9.00 | 124 | 4-7/8 | 89 | 3-1/2 | 5 |
| 21830 | 21831 | 9.50 | 127 | 5" | 92 | 3-5/8 | 5 |
| 21890 | 21891 | 10.00 | 130 | 5-1/8 | 95 | 3-3/4 | 5 |
| 21900 | 21901 | 10.50 | 133 | 5-15/64 | 98 | 3-7/8 | 5 |
| 21910 | 21911 | 11.00 | 140 | 5-1/2 | 103 | 4-1/16 | 5 |
| 21920 | 21921 | 11.50 | 143 | 5-5/8 | 106 | 4-7/32 | 5 |
| 21930 | 21931 | 12.00 | 149 | 5-7/8 | 111 | 4-3/8 | 5 |
| 21940 | 21941 | 12.50 | 152 | 6" | 114 | 4-1/2 | 5 |
| 21950 | 21951 | 13.00 | 152 | 6" | 114 | 4-1/2 | 5 |

METRIC

Twist Drills - General Purpose Black Oxide & Bright Finish

1/4" & 3/8" REDUCED SHANK

Type 120

General Purpose 118° point - Bright Finish
1/4" Reduced Shank - Shorter than Jobber Length

- Shorter than Jobber length increases rigidity and improves drilling performance.
- Designed for use in portable air and electric drilling equipment with 1/4" chucks.



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 28800 | 17/64 | 3-1/2 | 1-7/8 | 12 |
| 28810 | 9/32 | 3-19/32 | 1-31/32 | 12 |
| 28820 | 19/64 | 3-23/32 | 2-1/16 | 6 |
| 28830 | 5/16 | 3-27/32 | 2-3/16 | 6 |
| 28840 | 21/64 | 4 | 2-9/32 | 6 |
| 28850 | 11/32 | 4-1/32 | 2-11/32 | 6 |
| 28860 | 23/64 | 4-5/32 | 2-15/32 | 6 |
| 28870 | 3/8 | 4-1/4 | 2-9/16 | 6 |
| 28880 | 25/64 | 4-11/32 | 2-5/8 | 6 |
| 28890 | 13/32 | 4-15/32 | 2-3/4 | 6 |
| 28900 | 27/64 | 4-9/16 | 2-27/32 | 6 |
| 28910 | 7/16 | 4-11/16 | 2-15/16 | 6 |
| 28920 | 29/64 | 4-25/32 | 3-1/32 | 6 |
| 28930 | 15/32 | 4-7/8 | 3-1/8 | 6 |
| 28940 | 31/64 | 5 | 3-7/32 | 6 |
| 28950 | 1/2 | 5 | 3-7/32 | 6 |

These items are also available carded.
See Price List Catalog for details.

Type 128

General Purpose 118° point - Bright Finish
3/8" Reduced Shank - Jobber Length

- General purpose 118° point HSS drill is designed for use in portable air or electric drilling equipment with 3/8" chucks.
- **NOTE:** Surface treated flutes on sizes larger than 1/2".



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 59570 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 59580 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 59590 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 59500 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 59600 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 59510 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 59610 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 59520 | 1/2 | 6 | 4-1/2 | 6 |
| 59530 | 17/32 | 6 | 4-1/4 | 1 |
| 59540 | 9/16 | 6 | 4-1/4 | 1 |
| 59550 | 19/32 | 6 | 4-1/4 | 1 |
| 59560 | 5/8 | 6 | 4-1/4 | 1 |

These items are also available carded.
See Price List Catalog for details.

Jobber Length

FAST SPIRAL HIGH HELIX

Type 240-F

Fast Spiral High Helix - 118° Point Bright Finish



- HSS drill performs well in deep hole drilling of low tensile strength material such as aluminum, zinc, copper, wood, refrigeration die castings, auto hardware & epoxy based plastics.
- Use to drill free machining steels, brass & bronze.

FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 06550 | 1/32 | 1-3/8 | 1/2 | 12 |
| 06560 | 3/64 | 1-3/4 | 3/4 | 12 |
| 06570 | 1/16 | 1-7/8 | 7/8 | 12 |
| 06580 | 5/64 | 2 | 1 | 12 |
| 06590 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 06600 | 7/64 | 2-5/8 | 1-1/2 | 12 |
| 06610 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 06620 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 06630 | 5/32 | 3-1/8 | 2 | 12 |
| 06640 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 06650 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 06660 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 06670 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 06680 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 06690 | 1/4 | 4 | 2-3/4 | 12 |
| 06700 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 06710 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 06720 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 06730 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 06740 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 06750 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 06760 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 06770 | 3/8 | 5 | 3-5/8 | 6 |
| 06780 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 06790 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 06800 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 06810 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 06820 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 06830 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 06840 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 06850 | 1/2 | 6 | 4-1/2 | 6 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 06860 | 1 | 3-7/8 | 2-5/8 | 12 |
| 06870 | 2 | 3-7/8 | 2-5/8 | 12 |
| 06880 | 3 | 3-3/4 | 2-1/2 | 12 |
| 06890 | 4 | 3-3/4 | 2-1/2 | 12 |
| 06900 | 5 | 3-3/4 | 2-1/2 | 12 |
| 06910 | 6 | 3-3/4 | 2-1/2 | 12 |
| 06920 | 7 | 3-5/8 | 2-7/16 | 12 |
| 06930 | 8 | 3-5/8 | 2-7/16 | 12 |
| 06940 | 9 | 3-5/8 | 2-7/16 | 12 |
| 06950 | 10 | 3-5/8 | 2-7/16 | 12 |
| 06960 | 11 | 3-1/2 | 2-5/16 | 12 |
| 06970 | 12 | 3-1/2 | 2-5/16 | 12 |
| 06980 | 13 | 3-1/2 | 2-5/16 | 12 |
| 06990 | 14 | 3-3/8 | 2-3/16 | 12 |
| 07000 | 15 | 3-3/8 | 2-3/16 | 12 |
| 07010 | 16 | 3-3/8 | 2-3/16 | 12 |
| 07020 | 17 | 3-3/8 | 2-3/16 | 12 |
| 07030 | 18 | 3-1/4 | 2-1/8 | 12 |
| 07040 | 19 | 3-1/4 | 2-1/8 | 12 |
| 07050 | 20 | 3-1/4 | 2-1/8 | 12 |
| 07060 | 21 | 3-1/4 | 2-1/8 | 12 |
| 07070 | 22 | 3-1/8 | 2 | 12 |
| 07080 | 23 | 3-1/8 | 2 | 12 |
| 07090 | 24 | 3-1/8 | 2 | 12 |
| 07100 | 25 | 3 | 1-7/8 | 12 |
| 07110 | 26 | 3 | 1-7/8 | 12 |
| 07120 | 27 | 3 | 1-7/8 | 12 |
| 07130 | 28 | 2-7/8 | 1-3/4 | 12 |
| 07140 | 29 | 2-7/8 | 1-3/4 | 12 |
| 07150 | 30 | 2-3/4 | 1-5/8 | 12 |
| 07160 | 31 | 2-3/4 | 1-5/8 | 12 |
| 07170 | 32 | 2-3/4 | 1-5/8 | 12 |
| 07180 | 33 | 2-5/8 | 1-1/2 | 12 |
| 07190 | 34 | 2-5/8 | 1-1/2 | 12 |
| 07200 | 35 | 2-5/8 | 1-1/2 | 12 |
| 07210 | 36 | 2-1/2 | 1-7/16 | 12 |
| 07220 | 37 | 2-1/2 | 1-7/16 | 12 |
| 07230 | 38 | 2-1/2 | 1-7/16 | 12 |
| 07240 | 39 | 2-3/8 | 1-3/8 | 12 |
| 07250 | 40 | 2-3/8 | 1-3/8 | 12 |
| 07260 | 41 | 2-3/8 | 1-3/8 | 12 |
| 07270 | 42 | 2-1/4 | 1-1/4 | 12 |
| 07280 | 43 | 2-1/4 | 1-1/4 | 12 |
| 07290 | 44 | 2-1/8 | 1-1/8 | 12 |
| 07300 | 45 | 2-1/8 | 1-1/8 | 12 |
| 07310 | 46 | 2-1/8 | 1-1/8 | 12 |
| 07320 | 47 | 2 | 1 | 12 |
| 07330 | 48 | 2 | 1 | 12 |
| 07340 | 49 | 2 | 1 | 12 |
| 07350 | 50 | 2 | 1 | 12 |
| 07360 | 51 | 2 | 1 | 12 |
| 07370 | 52 | 1-7/8 | 7/8 | 12 |
| 07380 | 53 | 1-7/8 | 7/8 | 12 |
| 07390 | 54 | 1-7/8 | 7/8 | 12 |
| 07400 | 55 | 1-7/8 | 7/8 | 12 |
| 07410 | 56 | 1-3/4 | 3/4 | 12 |
| 07420 | 57 | 1-3/4 | 3/4 | 12 |
| 07430 | 58 | 1-5/8 | 5/8 | 12 |
| 07440 | 59 | 1-5/8 | 5/8 | 12 |
| 07450 | 60 | 1-5/8 | 5/8 | 12 |

LETTER

| Part # | Letter Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------|-----------------------|---------------------|---------------|
| 07660 | A | 3-7/8 | 2-5/8 | 12 |
| 07670 | B | 4 | 2-3/4 | 12 |
| 07680 | C | 4 | 2-3/4 | 12 |
| 07690 | D | 4 | 2-3/4 | 12 |
| 07700 | E | 4 | 2-3/4 | 12 |
| 07710 | F | 4-1/8 | 2-7/8 | 12 |
| 07720 | G | 4-1/8 | 2-7/8 | 12 |
| 07730 | H | 4-1/8 | 2-7/8 | 12 |
| 07740 | I | 4-1/8 | 2-7/8 | 12 |
| 07750 | J | 4-1/8 | 2-7/8 | 12 |
| 07760 | K | 4-1/4 | 2-15/16 | 12 |
| 07770 | L | 4-1/4 | 2-15/16 | 12 |
| 07780 | M | 4-3/8 | 3-1/16 | 6 |
| 07790 | N | 4-3/8 | 3-1/16 | 6 |
| 07800 | O | 4-1/2 | 3-3/16 | 6 |
| 07810 | P | 4-5/8 | 3-5/16 | 6 |
| 07820 | Q | 4-3/4 | 3-7/16 | 6 |
| 07830 | R | 4-3/4 | 3-7/16 | 6 |
| 07840 | S | 4-7/8 | 3-1/2 | 6 |
| 07850 | T | 4-7/8 | 3-1/2 | 6 |
| 07860 | U | 5 | 3-5/8 | 6 |
| 07870 | V | 5 | 3-5/8 | 6 |
| 07880 | W | 5-1/8 | 3-3/4 | 6 |
| 07890 | X | 5-1/8 | 3-3/4 | 6 |
| 07900 | Y | 5-1/4 | 3-7/8 | 6 |
| 07910 | Z | 5-1/4 | 3-7/8 | 6 |

Twist Drills - Fast Spiral High Helix

HEAVY-DUTY & TITANIUM NITRIDE PARABOLIC FLUTE

Type 190-P

135° Split Point - Black Oxide

- Parabolic flute drills are designed to allow deep hole drilling without frequent drill removal to clear chips.
- Parabolic flute drills perform best in low to medium tensile strength materials.



Type 190-PT

135° Split Point - Titanium Nitride Coated

- Parabolic flute drills are designed to allow deep hole drilling without frequent drill removal to clear chips.
- Exceptional high performance drill with the super hard TiN coating extends tool life 500% or more in very abrasive drilling applications.



| Type 190-P Black Oxide | Type 190-PT Titanium Nitride | FRACTIONAL | | | Type 190-P Black Oxide | Type 190-PT Titanium Nitride |
|---------------------------|---------------------------------|--------------------|-----------------------------|---------------------------|---------------------------|---------------------------------|
| Part Number | Part Number | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/Pack | Qty. per/Pack |
| 36800 | 37870 | 1/16 | 1-7/8 | 7/8 | 12 | 6 |
| 36810 | 37880 | 5/64 | 2 | 1 | 12 | 6 |
| 36820 | 37890 | 3/32 | 2-1/4 | 1-1/4 | 12 | 6 |
| 36830 | 37900 | 7/64 | 2-5/8 | 1-1/2 | 12 | 6 |
| 36840 | 37910 | 1/8 | 2-3/4 | 1-5/8 | 12 | 6 |
| 36850 | 37920 | 9/64 | 2-7/8 | 1-3/4 | 12 | 6 |
| 36860 | 37930 | 5/32 | 3-1/8 | 2 | 12 | 6 |
| 36870 | 37940 | 11/64 | 3-1/4 | 2-1/8 | 12 | 6 |
| 36880 | 37950 | 3/16 | 3-1/2 | 2-5/16 | 12 | 6 |
| 36890 | 37960 | 13/64 | 3-5/8 | 2-7/16 | 12 | 6 |
| 36900 | 37970 | 7/32 | 3-3/4 | 2-1/2 | 12 | 6 |
| 36910 | 37980 | 15/64 | 3-7/8 | 2-5/8 | 12 | 6 |
| 36920 | 37990 | 1/4 | 4 | 2-3/4 | 12 | 6 |
| 36930 | 38000 | 17/64 | 4-1/8 | 2-7/8 | 12 | 6 |
| 36940 | 38010 | 9/32 | 4-1/4 | 2-15/16 | 12 | 6 |
| 36950 | 38020 | 19/64 | 4-3/8 | 3-1/16 | 6 | 3 |
| 36960 | 38030 | 5/16 | 4-1/2 | 3-3/16 | 6 | 3 |
| 36970 | 38040 | 21/64 | 4-5/8 | 3-5/16 | 6 | 3 |
| 36980 | 38050 | 11/32 | 4-3/4 | 3-7/16 | 6 | 3 |
| 36990 | 38060 | 23/64 | 4-7/8 | 3-1/2 | 6 | 3 |
| 37000 | 38070 | 3/8 | 5 | 3-5/8 | 6 | 3 |
| 37010 | 38080 | 25/64 | 5-1/8 | 3-3/4 | 6 | 3 |
| 37020 | 38090 | 13/32 | 5-1/4 | 3-7/8 | 6 | 3 |
| 37030 | 38100 | 27/64 | 5-3/8 | 3-15/16 | 6 | 3 |
| 37040 | 38110 | 7/16 | 5-1/2 | 4-1/16 | 6 | 3 |
| 37050 | 38120 | 29/64 | 5-5/8 | 4-3/16 | 6 | 3 |
| 37060 | 38130 | 15/32 | 5-3/4 | 4-5/16 | 6 | 3 |
| 37070 | 38140 | 31/64 | 5-7/8 | 4-3/8 | 6 | 3 |
| 37080 | 38150 | 1/2 | 6 | 4-1/2 | 6 | 3 |
| Type 190-P Black Oxide | Type 190-PT Titanium Nitride | WIRE | | | Type 190-P Black Oxide | Type 190-PT Titanium Nitride |
| Part Number | Part Number | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/Pack | Qty. per/Pack |
| 68161 | 68162 | 1 | 3-7/8 | 2-5/8 | 12 | 6 |
| 68171 | 68172 | 2 | 3-7/8 | 2-5/8 | 12 | 6 |
| 38171 | 38172 | 3 | 3-3/4 | 2-1/2 | 12 | 6 |
| 68181 | 68182 | 4 | 3-3/4 | 2-1/2 | 12 | 6 |
| 68191 | 68192 | 5 | 3-3/4 | 2-1/2 | 12 | 6 |
| 68201 | 68202 | 6 | 3-3/4 | 2-1/2 | 12 | 6 |
| 58421 | 58422 | 7 | 3-5/8 | 2-7/16 | 12 | 6 |
| 68211 | 68212 | 8 | 3-5/8 | 2-7/16 | 12 | 6 |
| 68221 | 68222 | 9 | 3-5/8 | 2-7/16 | 12 | 6 |
| 68231 | 68232 | 10 | 3-5/8 | 2-7/16 | 12 | 6 |
| 68241 | 68242 | 11 | 3-1/2 | 2-5/16 | 12 | 6 |
| 68251 | 68252 | 12 | 3-1/2 | 2-5/16 | 12 | 6 |
| 68261 | 68262 | 13 | 3-1/2 | 2-5/16 | 12 | 6 |
| 68271 | 68272 | 14 | 3-3/8 | 2-3/16 | 12 | 6 |
| 68281 | 68282 | 15 | 3-3/8 | 2-3/16 | 12 | 6 |
| 68291 | 68292 | 16 | 3-3/8 | 2-3/16 | 12 | 6 |

Wire sizes continued on page 26

Jobber Length

HEAVY-DUTY & TITANIUM NITRIDE PARABOLIC FLUTE

Type 190-P

135° Split Point - Black Oxide



Type 190-PT

135° Split Point - Titanium Nitride Coated



TiN

Twist Drills - Parabolic & TiN Coated Parabolic Flutes

| Type 190-P Black Oxide | Type 190-PT Titanium Nitride | WIRE | | | Type 190-P Black Oxide | Type 190-PT Titanium Nitride |
|---------------------------|---------------------------------|--------------|-----------------------|---------------------|---------------------------|---------------------------------|
| Part Number | Part Number | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/Pack | Qty. per/Pack |
| 68301 | 68302 | 17 | 3-3/8 | 2-3/16 | 12 | 6 |
| 58591 | 58592 | 18 | 3-1/4 | 2-1/8 | 12 | 6 |
| 68311 | 68312 | 19 | 3-1/4 | 2-1/8 | 12 | 6 |
| 58381 | 58382 | 20 | 3-1/4 | 2-1/8 | 12 | 6 |
| 58721 | 58722 | 21 | 3-1/4 | 2-1/8 | 12 | 6 |
| 68321 | 68322 | 22 | 3-1/8 | 2 | 12 | 6 |
| 68331 | 68332 | 23 | 3-1/8 | 2 | 12 | 6 |
| 68341 | 68342 | 24 | 3-1/8 | 2 | 12 | 6 |
| 58901 | 58902 | 25 | 3 | 1-7/8 | 12 | 6 |
| 68351 | 68352 | 26 | 3 | 1-7/8 | 12 | 6 |
| 68361 | 68362 | 27 | 3 | 1-7/8 | 12 | 6 |
| 68371 | 68372 | 28 | 2-7/8 | 1-3/4 | 12 | 6 |
| 37321 | 37322 | 29 | 2-7/8 | 1-3/4 | 12 | 6 |
| 68381 | 68382 | 30 | 2-3/4 | 1-5/8 | 12 | 6 |
| 68391 | 68392 | 31 | 2-3/4 | 1-5/8 | 12 | 6 |
| 68401 | 68402 | 32 | 2-3/4 | 1-5/8 | 12 | 6 |
| 58441 | 58442 | 33 | 2-5/8 | 1-1/2 | 12 | 6 |
| 68411 | 68412 | 34 | 2-5/8 | 1-1/2 | 12 | 6 |
| 68421 | 68422 | 35 | 2-5/8 | 1-1/2 | 12 | 6 |
| 58581 | 58582 | 36 | 2-1/2 | 1-7/16 | 12 | 6 |
| 37721 | 37722 | 37 | 2-1/2 | 1-7/16 | 12 | 6 |
| 68431 | 68432 | 38 | 2-1/2 | 1-7/16 | 12 | 6 |
| 58451 | 58452 | 39 | 2-3/8 | 1-3/8 | 12 | 6 |
| 38321 | 38322 | 40 | 2-3/8 | 1-3/8 | 12 | 6 |
| Type 190-P Black Oxide | Type 190-PT Titanium Nitride | LETTER | | | Type 190-P Black Oxide | Type 190-PT Titanium Nitride |
| Part Number | Part Number | Letter Sizes | Overall Length Inches | Flute Length Inches | Qty. per/Pack | Qty. per/Pack |
| 70880 | 58372 | A | 3-7/8 | 2-5/8 | 12 | 6 |
| 70890 | 58402 | B | 4 | 2-3/4 | 12 | 6 |
| 70900 | 58412 | C | 4 | 2-3/4 | 12 | 6 |
| 70910 | 58462 | D | 4 | 2-3/4 | 12 | 6 |
| 71950 | 58472 | E | 4 | 2-3/4 | 12 | 6 |
| 58481 | 58482 | F | 4-1/8 | 2-7/8 | 12 | 6 |
| 70920 | 58492 | G | 4-1/8 | 2-7/8 | 12 | 6 |
| 70930 | 58512 | H | 4-1/8 | 2-7/8 | 12 | 6 |
| 70940 | 58532 | I | 4-1/8 | 2-7/8 | 12 | 6 |
| 70950 | 58542 | J | 4-1/8 | 2-7/8 | 12 | 6 |
| 71960 | 58552 | K | 4-1/4 | 2-15/16 | 12 | 6 |
| 70960 | 58562 | L | 4-1/4 | 2-15/16 | 12 | 6 |
| 70970 | 58572 | M | 4-3/8 | 3-1/16 | 6 | 3 |
| 70980 | 58602 | N | 4-3/8 | 3-1/16 | 6 | 3 |
| 70990 | 58612 | O | 4-1/2 | 3-3/16 | 6 | 3 |
| 71000 | 58622 | P | 4-5/8 | 3-5/16 | 6 | 3 |
| 71010 | 58632 | Q | 4-3/4 | 3-7/16 | 6 | 3 |
| 71020 | 58642 | R | 4-3/4 | 3-7/16 | 6 | 3 |
| 71030 | 58652 | S | 4-7/8 | 3-1/2 | 6 | 3 |
| 71040 | 58662 | T | 4-7/8 | 3-1/2 | 6 | 3 |
| 71050 | 58672 | U | 5 | 3-5/8 | 6 | 3 |
| 71060 | 58732 | V | 5 | 3-5/8 | 6 | 3 |
| 71070 | 58682 | W | 5-1/8 | 3-3/4 | 6 | 3 |
| 72000 | 58692 | X | 5-1/8 | 3-3/4 | 6 | 3 |
| 71080 | 58702 | Y | 5-1/4 | 3-7/8 | 6 | 3 |
| 71090 | 58712 | Z | 5-1/4 | 3-7/8 | 6 | 3 |

AUTOMOTIVE SERIES TANGED DRIVE

Type 230

Automotive Series Tanged Drive
118° Point General Purpose - Black Oxide

- Tang drive used with A.S.A. split sleeve drill drivers



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 13300 | 1/8 | 2-3/4 | 1-5/8 | 12 |
| 13360 | 9/64 | 2-7/8 | 1-3/4 | 12 |
| 13400 | 5/32 | 3-1/8 | 2 | 12 |
| 13440 | 11/64 | 3-1/4 | 2-1/8 | 12 |
| 13490 | 3/16 | 3-1/2 | 2-5/16 | 12 |
| 13540 | 13/64 | 3-5/8 | 2-7/16 | 12 |
| 13570 | 7/32 | 3-3/4 | 2-1/2 | 12 |
| 13600 | 15/64 | 3-7/8 | 2-5/8 | 12 |
| 13630 | 1/4 | 4 | 2-3/4 | 12 |
| 13670 | 17/64 | 4-1/8 | 2-7/8 | 12 |
| 13700 | 9/32 | 4-1/4 | 2-15/16 | 12 |
| 13730 | 19/64 | 4-3/8 | 3-1/16 | 6 |
| 13760 | 5/16 | 4-1/2 | 3-3/16 | 6 |
| 13790 | 21/64 | 4-5/8 | 3-5/16 | 6 |
| 13820 | 11/32 | 4-3/4 | 3-7/16 | 6 |
| 13850 | 23/64 | 4-7/8 | 3-1/2 | 6 |
| 13870 | 3/8 | 5 | 3-5/8 | 6 |
| 13890 | 25/64 | 5-1/8 | 3-3/4 | 6 |
| 13910 | 13/32 | 5-1/4 | 3-7/8 | 6 |
| 13920 | 27/64 | 5-3/8 | 3-15/16 | 6 |
| 13930 | 7/16 | 5-1/2 | 4-1/16 | 6 |
| 13940 | 29/64 | 5-5/8 | 4-3/16 | 6 |
| 13950 | 15/32 | 5-3/4 | 4-5/16 | 6 |
| 13960 | 31/64 | 5-7/8 | 4-3/8 | 6 |
| 13970 | 1/2 | 6 | 4-1/2 | 6 |
| 13980 | 33/64 | 6-5/8 | 4-13/16 | 1 |
| 13990 | 17/32 | 6-5/8 | 4-13/16 | 1 |
| 14000 | 35/64 | 6-5/8 | 4-13/16 | 1 |
| 14010 | 9/16 | 6-5/8 | 4-13/16 | 1 |
| 14020 | 37/64 | 6-5/8 | 4-13/16 | 1 |
| 14030 | 19/32 | 7-1/8 | 5-3/16 | 1 |
| 14040 | 39/64 | 7-1/8 | 5-3/16 | 1 |
| 14050 | 5/8 | 7-1/8 | 5-3/16 | 1 |
| 14060 | 41/64 | 7-1/8 | 5-3/16 | 1 |
| 14070 | 21/32 | 7-1/8 | 5-3/16 | 1 |
| 14080 | 43/64 | 7-5/8 | 5-5/8 | 1 |
| 14090 | 11/16 | 7-5/8 | 5-5/8 | 1 |

Mechanic Length

HSS MAGNUM

Type 175-AG

Magnum Super Premium
3-Flats on Shank - 135° Split Point

- Special Hi-Molybdenum tool steel.
- 135° split point for fast penetration and accurate starting without center punch.
- Precision ground point, flutes, body, clearance and drill diameter for the ultimate in accuracy and performance.
- Body and clearance are gold surface treated for maximum lubricity.
- Flats on shank give positive chuck-grip (3/16" and Larger).



3 - FLATS ON SHANK

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 22860 | 1/16 | 1-7/8 | 7/8 | 12 |
| 22870 | 5/64 | 2 | 1 | 12 |
| 22880 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 86950 | 7/64 | 2-3/8 | 1-5/16 | 12 |
| 86960 | 1/8 | 2-1/2 | 1-7/16 | 12 |
| 86970 | 9/64 | 2-5/8 | 1-9/16 | 12 |
| 86980 | 5/32 | 2-3/4 | 1-11/16 | 12 |
| 86990 | 11/64 | 2-7/8 | 1-13/16 | 12 |
| 87000 | 3/16 | 3 | 1-7/8 | 12 |
| 87010 | 13/64 | 3-1/8 | 1-15/16 | 12 |
| 87020 | 7/32 | 3-1/4 | 2 | 12 |
| 87030 | 15/64 | 3-3/8 | 2-1/16 | 12 |
| 87040 | 1/4 | 3-1/2 | 2 | 12 |
| 87050 | 17/64 | 3-5/8 | 2-1/8 | 12 |
| 87060 | 9/32 | 3-3/4 | 2-1/4 | 12 |
| 87070 | 19/64 | 3-7/8 | 2-3/8 | 6 |
| 87080 | 5/16 | 4 | 2-1/2 | 6 |
| 87090 | 21/64 | 4-1/16 | 2-9/16 | 6 |
| 87100 | 11/32 | 4-1/8 | 2-5/8 | 6 |
| 87110 | 23/64 | 4-3/16 | 2-11/16 | 6 |
| 87120 | 3/8 | 4-1/4 | 2-11/16 | 6 |
| 87130 | 25/64 | 4-5/16 | 2-3/4 | 6 |
| 87140 | 13/32 | 4-3/8 | 2-13/16 | 6 |
| 87150 | 27/64 | 4-7/16 | 2-7/8 | 6 |
| 87160 | 7/16 | 4-1/2 | 2-15/16 | 6 |
| 87170 | 29/64 | 4-5/8 | 3 | 6 |
| 87180 | 15/32 | 4-3/4 | 3-1/8 | 6 |
| 87190 | 31/64 | 4-7/8 | 3-1/4 | 6 |
| 87200 | 1/2 | 5 | 3-3/8 | 6 |

These items are also available carded.

See Price List Catalog for details.

Type 178-AG

Magnum Super Premium - 135° Split Point
3-Flats on Shank - 3/8" Reduced Shank

- Reduced shank with flats for positive chuck grip.



3 - FLATS ON SHANK - 3/8" SHANK

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 81560 | 13/32 | 4-3/8 | 2-13/16 | 6 |
| 81570 | 27/64 | 4-7/16 | 2-7/8 | 6 |
| 81580 | 7/16 | 4-1/2 | 2-15/16 | 6 |
| 81590 | 29/64 | 4-5/8 | 3 | 6 |
| 81600 | 15/32 | 4-3/4 | 3-1/8 | 6 |
| 81610 | 31/64 | 4-7/8 | 3-1/4 | 6 |
| 81620 | 1/2 | 5 | 3-3/8 | 6 |

25/64" 175-AG drills with flats will fit a 3/8" chuck without reducing the shank diameter

These items are also available carded. See Price List Catalog for details.

Type 191

V-line, CAD-HD Series -
Black Oxide 135° Split Point

- American made value line drill
- New advances in drill making technology have allowed us to make an excellent drill for the very price sensitive portions of the business.
- The black surface treatment prevents chip welding and increases abrasion resistance.



| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 04492 | 1/16 | 1-7/8 | 7/8 | 12 |
| 04502 | 5/64 | 2 | 1 | 12 |
| 04512 | 3/32 | 2-1/4 | 1-1/4 | 12 |
| 04522 | 7/64 | 2-3/8 | 1-1/4 | 12 |
| 04532 | 1/8 | 2-1/2 | 1-5/16 | 12 |
| 04542 | 9/64 | 2-5/8 | 1-3/8 | 12 |
| 04552 | 5/32 | 2-3/4 | 1-7/16 | 12 |
| 04562 | 11/64 | 2-7/8 | 1-1/2 | 12 |
| 04572 | 3/16 | 2 | 1-9/16 | 12 |
| 04582 | 13/64 | 3-1/8 | 1-5/8 | 12 |
| 04592 | 7/32 | 3-1/4 | 1-11/16 | 12 |
| 04602 | 15/64 | 3-3/8 | 1-3/4 | 12 |
| 04612 | 1/4 | 3-1/2 | 1-13/16 | 12 |
| 04622 | 17/64 | 3-5/8 | 1-7/8 | 12 |
| 04632 | 9/32 | 3-3/4 | 1-15/16 | 12 |
| 04642 | 19/64 | 3-7/8 | 2" | 6 |
| 04652 | 5/16 | 4 | 2-1/16 | 6 |
| 04662 | 21/64 | 4-1/16 | 2-1/8 | 6 |
| 04672 | 11/32 | 4-1/8 | 2-3/16 | 6 |
| 04682 | 23/64 | 4-3/16 | 2-3/16 | 6 |
| 04692 | 3/8 | 4-1/4 | 2-3/16 | 6 |
| 04702 | 25/64 | 4-5/16 | 2-1/4 | 6 |
| 04712 | 13/32 | 4-3/8 | 2-1/4 | 6 |
| 04722 | 27/64 | 4-7/16 | 2-5/16 | 6 |
| 04732 | 7/16 | 4-1/2 | 2-5/16 | 6 |
| 04742 | 29/64 | 4-5/8 | 2-3/8 | 6 |
| 04752 | 15/32 | 4-3/4 | 2-7/16 | 6 |
| 04762 | 31/64 | 4-7/8 | 2-1/2 | 6 |
| 04772 | 1/2 | 5 | 2-9/16 | 6 |

HEX SHANK - 1/4" QUICK RELEASE

Type QR-AG Magnum Super Premium Quick Release Drills - 135° Split Point



- A mechanic length with a quick release shank
 - Special Hi-Molybdenum tool steel.
- 135° split point for fast penetration and accurate starting without center punch.
- Body and clearance are gold treated for maximum lubricity.
- Specially designed for hand held drill and impact tools.
 - Recommended use in work hardening grades of stain-less steel and other hard metal drill applications.

QR-AG 1/4" HEX SHANK

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------------|-----------------------|---------------------|---------------|
| 34501 | 1/16 | 2-5/8 | 7/8 | 6 |
| 34521 | 3/32 | 3 | 1-1/4 | 6 |
| 34541 | 1/8 | 3-1/4 | 1-7/16 | 6 |
| 34561 | 5/32 | 3-1/2 | 1-11/16 | 6 |
| 34581 | 3/16 | 3-3/4 | 1-7/8 | 6 |
| 34611 | 7/32 | 4" | 2" | 6 |
| 34631 | 1/4 | 4-1/4 | 2" | 6 |
| 34651 | 9/32 | 3-13/16 | 2-1/4 | 6 |
| 34671 | 5/16 | 4" | 2-1/2 | 3 |
| 34691 | 11/32 | 4-7/32 | 2-5/8 | 3 |
| 34711 | 3/8 | 4-1/4 | 2-11/16 | 3 |
| 34731 | 13/32 | 4-1/2 | 2-13/16 | 3 |
| 34751 | 7/16 | 4-1/2 | 2-15/16 | 3 |
| 34771 | 15/32 | 4-7/8 | 3-1/8 | 3 |
| 34791 | 1/2 | 5" | 3-3/8 | 3 |
| 34801 | Quick Release Adapter | | | |

CARDED QR-AG 1/4" HEX SHANK

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------------------------|-----------------------|---------------------|---------------|
| 34507 | 1/16 | 2-5/8 | 7/8 | 2 |
| 34527 | 3/32 | 3 | 1-1/4 | 2 |
| 34547 | 1/8 | 3-1/4 | 1-7/16 | 2 |
| 34567 | 5/32 | 3-1/2 | 1-11/16 | 2 |
| 34587 | 3/16 | 3-3/4 | 1-7/8 | 2 |
| 34617 | 7/32 | 4" | 2" | 1 |
| 34637 | 1/4 | 4-1/4 | 2" | 1 |
| 34657 | 9/32 | 3-13/16 | 2-1/4 | 1 |
| 34677 | 5/16 | 4" | 2-1/2 | 1 |
| 34697 | 11/32 | 4-7/32 | 2-5/8 | 1 |
| 34717 | 3/8 | 4-1/4 | 2-11/16 | 1 |
| 34737 | 13/32 | 4-1/2 | 2-13/16 | 1 |
| 34757 | 7/16 | 4-1/2 | 2-15/16 | 1 |
| 34777 | 15/32 | 4-7/8 | 3-1/8 | 1 |
| 34797 | 1/2 | 5" | 3-3/8 | 1 |
| 34807 | Quick Release Adapter (CARDED) | | | |

TYPE QR-AG EXTENSIONS

- One handed operation – Simply push your PTA into the extension and it will automatically load and lock the accessory.
- Patented All Hex connection system will hold any 1/4" hex shape including, Power Groove and Notched product.
- Patented All Hex connection system holds the accessory without any wobble or play. Tight fit for a professional feel.
- **Made in the USA.**
- **Not intended for Impact Tools.**



| Part No. | Size | Qty. per/pack |
|----------|-----------------------------|---------------|
| 34821 | 3" Quick release Extension | 1 |
| 34831 | 6" Quick release Extension | 1 |
| 34841 | 12" Quick release Extension | 1 |

SETS HEX SHANK - 1/4" QUICK RELEASE



QR-12 SET HARD CASE - INDEX

| Part # | Description of Sizes | Qty of each |
|--------|---|-------------|
| 34811 | 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8, 7/16, 1/2" & Quick Release Adapter | 1 |

QR-7A - SOFT POUCH INDEX

| Part # | Description of Sizes | Qty of each |
|--------|---|-------------|
| 34803 | 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4" | 1 |



QR-16 SET SOFT POUCH - INDEX

| Part # | Description of Sizes | Qty of each |
|--------|--|-------------|
| 34812 | 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8" 13/32, 7/16, 15/32, 1/2" & Quick Release Adapter | 1 |

QR-7B SET SOFT POUCH - INDEX

| Part # | Description of Sizes | Qty of each |
|--------|---------------------------------------|-------------|
| 34804 | 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2" | 1 |

Jobber Length

M42 COBALT-TITANIUM NITRIDE & TITANIUM ALUMINUM NITRIDE NAS 907J

Type 150 - M42 Cobalt, Type 150-N - TiN Coated
Type 150-ALN - Titanium Aluminum Nitride

135° Split Point - M42 Cobalt NAS 907J

- Manufactured from M42 HSS containing 8% cobalt which increases high red hardness.
- Cobalt drills require rigidly held positive feed drilling equipment.
- Titanium Aluminum Nitride can be used in machining stainless steel, nickel based and titanium alloys, not recommended for aluminum.
- Manufactured to **NAS 907J** specifications.



Type 150

Use to drill hard, tough metals, free machining stainless steel, titanium alloys and certain abrasive plastics.



Type 150-N

Titanium nitride coating for lubricity, and extended tool life.



Type 150-ALN

Titanium aluminum nitride designed for use where extreme temperatures are found, allows for increased machining speeds up to 200%.

FRACTIONAL

| 150 Part# | 150-N TIN Part# | 150-ALN TIAIN Part# | Overall Diameter Inches | Flute Length Inches | Length Inches | 150 Qty. per/Pk | 150-N/150-ALN Qty. per/Pk |
|-----------|-----------------|---------------------|-------------------------|---------------------|---------------|-----------------|---------------------------|
| 08000 | ----- | ----- | 3/64 | 1-3/4 | 3/4 | 12 | 6 |
| 08010 | 79600 | 80003 | 1/16 | 1-7/8 | 7/8 | 12 | 6 |
| 08020 | 79610 | 80013 | 5/64 | 2" | 1" | 12 | 6 |
| 08030 | 79620 | 80023 | 3/32 | 2-1/4 | 1-1/4 | 12 | 6 |
| 08040 | 79630 | 80033 | 7/64 | 2-5/8 | 1-1/2 | 12 | 6 |
| 08050 | 79640 | 80043 | 1/8" | 2-3/4" | 1-5/8" | 12 | 6 |
| 08060 | 79650 | 80053 | 9/64 | 2-7/8 | 1-3/4 | 12 | 6 |
| 08070 | 79660 | 80063 | 5/32" | 3-1/8" | 2" | 12 | 6 |
| 08080 | 79670 | 80073 | 11/64 | 3-1/4 | 2-1/8 | 12 | 6 |
| 08090 | 79680 | 80083 | 3/16 | 3-1/2 | 2-5/16 | 12 | 6 |
| 08100 | 79690 | 80093 | 13/64 | 3-5/8 | 2-7/16 | 12 | 6 |
| 08110 | 79700 | 80103 | 7/32 | 3-3/4 | 2-1/2 | 12 | 6 |
| 08120 | 79710 | 80113 | 15/64 | 3-7/8 | 2-5/8 | 12 | 6 |
| 08130 | 79720 | 80123 | 1/4" | 4" | 2-3/4" | 12 | 6 |
| 08140 | 79730 | 80133 | 17/64 | 4-1/8 | 2-7/8 | 12 | 6 |
| 08150 | 79740 | 80143 | 9/32 | 4-1/4 | 2-15/16 | 12 | 6 |
| 08160 | 79750 | 80153 | 19/64 | 4-3/8 | 3-1/16 | 6 | 3 |
| 08170 | 79760 | 80163 | 5/16 | 4-1/2 | 3-3/16 | 6 | 3 |
| 08180 | 79770 | 80173 | 21/64 | 4-5/8 | 3-5/16 | 6 | 3 |
| 08190 | 79780 | 80183 | 11/32 | 4-3/4 | 3-7/16 | 6 | 3 |
| 08200 | 79790 | 80193 | 23/64 | 4-7/8 | 3-1/2 | 6 | 3 |
| 08210 | 79800 | 80203 | 3/8" | 5" | 3-5/8" | 6 | 3 |
| 08220 | 79810 | 80213 | 25/64 | 5-1/8 | 3-3/4 | 6 | 3 |
| 08230 | 79820 | 80223 | 13/32 | 5-1/4 | 3-7/8 | 6 | 3 |
| 08240 | 79830 | 80233 | 27/64 | 5-3/8 | 3-15/16 | 6 | 3 |
| 08250 | 79840 | 80243 | 7/16 | 5-1/2 | 4-1/16 | 6 | 3 |
| 08260 | 79850 | 80253 | 29/64 | 5-5/8 | 4-3/16 | 6 | 3 |
| 08270 | 79860 | 80263 | 15/32 | 5-3/4 | 4-5/16 | 6 | 3 |
| 08280 | 79870 | 80273 | 31/64 | 5-7/8 | 4-3/8 | 6 | 3 |
| 08290 | 79880 | 80283 | 1/2" | 6" | 4-1/2" | 6 | 3 |

LETTER

| 150 Part# | 150-N TIN Part# | 150-ALN TIAIN Part# | Letter Sizes | Overall Length Inches | Flute Length Inches | 150 Qty. per/Pk | 150-N/150-ALN Qty. per/Pk |
|-----------|-----------------|---------------------|--------------|-----------------------|---------------------|-----------------|---------------------------|
| 08940 | 79320 | 80293 | A | 3-7/8 | 2-5/8 | 12 | 6 |
| 08950 | 79330 | 80303 | B | 4" | 2-3/4 | 12 | 6 |
| 08960 | 79340 | 80313 | C | 4" | 2-3/4 | 12 | 6 |
| 08970 | 79350 | 80323 | D | 4" | 2-3/4 | 12 | 6 |
| 08980 | 79360 | 80333 | E | 4" | 2-3/4 | 12 | 6 |
| 08990 | 79370 | 80343 | F | 4-1/8 | 2-7/8 | 12 | 6 |
| 09000 | 79380 | 80353 | G | 4-1/8 | 2-7/8 | 12 | 6 |
| 09010 | 79390 | 80363 | H | 4-1/8 | 2-7/8 | 12 | 6 |
| 09020 | 79400 | 80373 | I | 4-1/8 | 2-7/8 | 12 | 6 |
| 09030 | 79410 | 80383 | J | 4-1/8 | 2-7/8 | 12 | 6 |
| 09040 | 79420 | 80393 | K | 4-1/4 | 2-15/16 | 12 | 6 |
| 09050 | 79430 | 80403 | L | 4-1/4 | 2-15/16 | 12 | 6 |
| 09060 | 79440 | 80413 | M | 4-3/8 | 3-3/16 | 6 | 3 |
| 09070 | 79450 | 80423 | N | 4-3/8 | 3-1/16 | 6 | 3 |
| 09080 | 79460 | 80433 | O | 4-1/2 | 3-3/16 | 6 | 3 |
| 09090 | 79470 | 80443 | P | 4-5/8 | 3-5/16 | 6 | 3 |
| 09100 | 79480 | 80453 | Q | 4-3/4 | 3-7/16 | 6 | 3 |
| 09110 | 79490 | 80463 | R | 4-3/4 | 3-7/16 | 6 | 3 |
| 09120 | 79500 | 80473 | S | 4-7/8 | 3-1/2 | 6 | 3 |
| 09130 | 79510 | 80483 | T | 4-7/8 | 3-1/2 | 6 | 3 |
| 09140 | 79520 | 80493 | U | 5" | 3-5/8 | 6 | 3 |
| 09150 | 79530 | 80503 | V | 5" | 3-5/8 | 6 | 3 |
| 09160 | 79540 | 80513 | W | 5-1/8 | 3-3/4 | 6 | 3 |
| 09170 | 79550 | 80523 | X | 5-1/8 | 3-3/4 | 6 | 3 |
| 09180 | 79560 | 80533 | Y | 5-1/4 | 3-7/8 | 6 | 3 |
| 09190 | 79570 | 80543 | Z | 5-1/4 | 3-7/8 | 6 | 3 |

WIRE

| 150 Part# | 150-N TIN Part# | 150-ALN TIAIN Part# | Wire Sizes | Overall Diameter Inches | Flute Length Inches | 150 Qty. per/Pk | 150N/150ALN Qty. per/Pk |
|-----------|-----------------|---------------------|------------|-------------------------|---------------------|-----------------|-------------------------|
| 08300 | 77001 | 80553 | 1 | 3-7/8 | 2-5/8 | 12 | 6 |
| 08310 | 77011 | 80563 | 2 | 3-7/8 | 2-5/5 | 12 | 6 |
| 08320 | 77021 | 80573 | 3 | 3-3/4 | 2-1/2 | 12 | 6 |
| 08330 | 77031 | 80583 | 4 | 3-3/4 | 2-1/2 | 12 | 6 |
| 08340 | 77041 | 80593 | 5 | 3-3/4 | 2-1/2 | 12 | 6 |
| 08350 | 77051 | 80603 | 6 | 3-3/4 | 2-1/2 | 12 | 6 |
| 08360 | 77061 | 80613 | 7 | 3-5/8 | 2-7/16 | 12 | 6 |

Wire sizes continued next Column

| 150 Part# | 150-N TIN Part# | 150-ALN TIAIN Part# | Wire Sizes | Overall Diameter Inches | Flute Length Inches | 150 Qty. per/Pk | 150-N/150-ALN Qty. per/Pk |
|-----------|-----------------|---------------------|------------|-------------------------|---------------------|-----------------|---------------------------|
| 08370 | 77071 | 80623 | 8 | 3-5/8 | 2-7/16 | 12 | 6 |
| 08380 | 77081 | 80633 | 9 | 3-5/8 | 2-7/16 | 12 | 6 |
| 08390 | 77091 | 80643 | 10 | 3-5/8 | 2-7/16 | 12 | 6 |
| 08400 | 77101 | 80653 | 11 | 3-1/2 | 2-5/16 | 12 | 6 |
| 08410 | 77111 | 80663 | 12 | 3-1/2 | 2-5/16 | 12 | 6 |
| 08420 | 77121 | 80673 | 13 | 3-1/2 | 2-5/16 | 12 | 6 |
| 08430 | 77131 | 80683 | 14 | 3-3/8 | 2-3/16 | 12 | 6 |
| 08440 | 77141 | 80693 | 15 | 3-3/8 | 2-3/16 | 12 | 6 |
| 08450 | 77151 | 80703 | 16 | 3-3/8 | 2-3/16 | 12 | 6 |
| 08460 | 77161 | 80713 | 17 | 3-3/8 | 2-3/16 | 12 | 6 |
| 08470 | 77171 | 80723 | 18 | 3-1/4 | 2-1/8 | 12 | 6 |
| 08480 | 77181 | 80733 | 19 | 3-1/4 | 2-1/8 | 12 | 6 |
| 08490 | 77191 | 80743 | 20 | 3-1/4 | 2-1/8 | 12 | 6 |
| 08500 | 77201 | 80753 | 21 | 3-1/4 | 2-1/8 | 12 | 6 |
| 08510 | 77211 | 80763 | 22 | 3-1/8 | 2" | 12 | 6 |
| 08520 | 77221 | 80773 | 23 | 3-1/8 | 2" | 12 | 6 |
| 08530 | 77231 | 80783 | 24 | 3-1/8 | 2" | 12 | 6 |
| 08540 | 77241 | 80793 | 25 | 3" | 1-7/8 | 12 | 6 |
| 08550 | 77251 | 80803 | 26 | 3" | 1-7/8 | 12 | 6 |
| 08560 | 77261 | 80813 | 27 | 3" | 1-7/8 | 12 | 6 |
| 08570 | 77271 | 80823 | 28 | 2-7/8 | 1-3/4 | 12 | 6 |
| 08580 | 77281 | 80833 | 29 | 2-7/8 | 1-3/4 | 12 | 6 |
| 08590 | 77291 | 80843 | 30 | 2-3/4 | 1-5/8 | 12 | 6 |
| 08600 | 77301 | 80853 | 31 | 2-3/4 | 1-5/8 | 12 | 6 |
| 08610 | 77311 | 80863 | 32 | 2-3/4 | 1-5/8 | 12 | 6 |
| 08620 | 77321 | 80873 | 33 | 2-5/8 | 1-1/2 | 12 | 6 |
| 08630 | 77331 | 80883 | 34 | 2-5/8 | 1-1/2 | 12 | 6 |
| 08640 | 77341 | 80893 | 35 | 2-5/8 | 1-1/2 | 12 | 6 |
| 08650 | 77351 | 80903 | 36 | 2-1/2 | 1-7/16 | 12 | 6 |
| 08660 | 77361 | 80913 | 37 | 2-1/2 | 1-7/16 | 12 | 6 |
| 08670 | 77371 | 80923 | 38 | 2-1/2 | 1-7/16 | 12 | 6 |
| 08680 | 77381 | 80933 | 39 | 2-3/8 | 1-3/8 | 12 | 6 |
| 08690 | 77491 | 80943 | 40 | 2-3/8 | 1-3/8 | 12 | 6 |
| 08700 | 77401 | 80953 | 41 | 2-3/8 | 1-3/8 | 12 | 6 |
| 08710 | 77411 | 80963 | 42 | 2-1/4 | 1-1/4 | 12 | 6 |
| 08720 | 77421 | 80973 | 43 | 2-1/4 | 1-1/4 | 12 | 6 |
| 08730 | 77431 | 80983 | 44 | 2-1/8 | 1-1/8 | 12 | 6 |
| 08740 | 77441 | 80993 | 45 | 2-1/8 | 1-1/8 | 12 | 6 |
| 08750 | 77451 | 81003 | 46 | 2-1/8 | 1-1/8 | 12 | 6 |
| 08760 | 77461 | 81013 | 47 | 2" | 1" | 12 | 6 |
| 08770 | 77471 | 81023 | 48 | 2" | 1" | 12 | 6 |
| 08780 | 77481 | 81033 | 49 | 2" | 1" | 12 | 6 |
| 08790 | 77491 | 81043 | 50 | 2" | 1" | 12 | 6 |
| 08800 | 77501 | 81053 | 51 | 2" | 1" | 12 | 6 |
| 08810 | 77511 | 81063 | 52 | 1-7/8 | 7/8 | 12 | 6 |
| 08820 | 77521 | 81073 | 53 | 1-7/8 | 7/8 | 12 | 6 |
| 08830 | 77531 | 81083 | 54 | 1-7/8 | 7/8 | 12 | 6 |
| 08840 | 77541 | 81093 | 55 | 1-7/8 | 7/8 | 12 | 6 |
| 08850 | 77551 | 81103 | 56 | 1-3/4 | 3/4 | 12 | 6 |
| 08860 | 77561 | 81113 | 57 | 1-3/4 | 3/4 | 12 | 6 |
| 08870 | 77571 | 81123 | 58 | 1-5/8 | 11/16 | 12 | 6 |
| 08880 | 77581 | 81133 | 59 | 1-5/8 | 11/16 | 12 | 6 |
| 08890 | 77591 | 81143 | 60 | 1-5/8 | 11/16 | 12 | 6 |
| 08900 | ----- | ----- | 61 | 1-5/8 | 11/16 | 12 | 6 |
| 08910 | ----- | ----- | 62 | 1-1/2 | 5/8 | 12 | 6 |
| 08921 | ----- | ----- | 63 | 1-1/2 | 5/8 | 12 | 6 |
| 08931 | ----- | ----- | 64 | 1-1/2 | 5/8 | 12 | 6 |
| 08941 | ----- | ----- | 65 | 1-1/2 | 5/8 | 12 | 6 |
| 08951 | ----- | ----- | 66 | 1-3/8 | 1/2 | 12 | 6 |
| 08961 | ----- | ----- | 67 | 1-3/8 | 1/2 | 12 | 6 |
| 08971 | ----- | ----- | 68 | 1-3/8 | 1/2 | 12 | 6 |
| 08981 | ----- | ----- | 69 | 1-3/8 | 1/2 | 12 | 6 |
| 08991 | ----- | ----- | 70 | 1-1/4 | 3/8 | 12 | 6 |
| 09001 | ----- | ----- | 71 | 1-1/4 | 3/8 | 12 | 6 |
| 09011 | ----- | ----- | 72 | 1-1/8 | 5/16 | 12 | 6 |
| 09021 | ----- | ----- | 73 | 1-1/8 | 5/16 | 12 | 6 |
| 09031 | ----- | ----- | 74 | 1" | 1/4 | 12 | 6 |
| 09041 | ----- | ----- | 75 | 1" | 1/4 | 12 | 6 |
| 09051 | ----- | ----- | 76 | 7/8 | 3/16 | 12 | 6 |
| 09061 | ----- | ----- | 77 | 7/8 | 3/16 | 12 | 6 |
| 09071 | ----- | ----- | 78 | 7/8 | 3/16 | 12 | 6 |
| 09081 | ----- | ----- | 79 | 3/4 | 3/16 | 12 | 6 |
| 09091 | ----- | ----- | 80 | 3/4 | 3/16 | 12 | 6 |

TiAIN

TiN

Twist Drills - M42 Cobalt Titanium Nitride/Titanium Aluminum Nitride NAS 907-J

M42 COBALT NAS 907J

Type 150-M

METRIC - Jobber Length 135° Split Point
M42 Cobalt - NAS 907J



- Manufactured from M42 HSS containing 8% cobalt which increases high hot hardness.
- Cobalt drills require rigidly held positive feed drilling equipment.
- Manufactured to **NAS 907J** specifications.

METRIC

| Part # | Diameter | | Overall Length | | Flute Length | | Qty. per/pack |
|--------|----------|--------|----------------|--------|--------------|--------|---------------|
| | MM | Inches | MM | Inches | MM | Inches | |
| 27050 | 0.90 | 38 | 1-1/2 | 16 | 5/8 | 10 | |
| 27060 | 0.95 | 38 | 1-1/2 | 16 | 5/8 | 10 | |
| 27070 | 1.00 | 41 | 1-5/8 | 17 | 11/16 | 10 | |
| 27080 | 1.05 | 41 | 1-5/8 | 17 | 11/16 | 10 | |
| 27090 | 1.10 | 44 | 1-3/4 | 19 | 3/4 | 10 | |
| 27100 | 1.20 | 48 | 1-7/8 | 22 | 7/8 | 10 | |
| 27110 | 1.30 | 48 | 1-7/8 | 22 | 7/8 | 10 | |
| 08831 | 1.40 | 48 | 1-7/8 | 22 | 7/8 | 10 | |
| 27130 | 1.50 | 48 | 1-7/8 | 22 | 7/8 | 10 | |
| 27140 | 1.60 | 48 | 1-7/8 | 22 | 7/8 | 10 | |
| 27150 | 1.70 | 51 | 2" | 25 | 1 | 10 | |
| 27160 | 1.80 | 51 | 2" | 25 | 1 | 10 | |
| 27170 | 1.90 | 51 | 2" | 25 | 1 | 10 | |
| 26460 | 2.00 | 51 | 2" | 25 | 1 | 10 | |
| 26940 | 2.05 | 54 | 2-1/8 | 25 | 1-5/32 | 10 | |
| 26470 | 2.10 | 54 | 2-1/8 | 29 | 1-5/32 | 10 | |
| 26480 | 2.20 | 57 | 2-1/4 | 32 | 1-1/4 | 10 | |
| 26490 | 2.30 | 57 | 2-1/4 | 32 | 1-1/4 | 10 | |
| 26500 | 2.40 | 60 | 2-23/64 | 35 | 1-3/8 | 10 | |
| 26510 | 2.50 | 60 | 2-23/64 | 35 | 1-3/8 | 10 | |
| 26520 | 2.60 | 64 | 2-1/2 | 37 | 1-29/64 | 10 | |
| 26530 | 2.70 | 64 | 2-1/2 | 37 | 1-15/32 | 10 | |
| 26540 | 2.80 | 67 | 2-5/8 | 38 | 1-1/2 | 10 | |
| 26550 | 2.90 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | |
| 26560 | 3.00 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | |
| 26570 | 3.10 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | |
| 26580 | 3.20 | 70 | 2-3/4 | 41 | 1-5/8 | 10 | |
| 26590 | 3.30 | 73 | 2-7/8 | 45 | 1-3/4 | 10 | |
| 26600 | 3.40 | 73 | 2-7/8 | 45 | 1-3/4 | 10 | |
| 26610 | 3.50 | 73 | 2-7/8 | 45 | 1-3/4 | 10 | |
| 26620 | 3.60 | 76 | 3" | 48 | 1-7/8 | 10 | |
| 26630 | 3.70 | 76 | 3" | 48 | 1-7/8 | 10 | |
| 26640 | 3.80 | 76 | 3" | 48 | 1-7/8 | 10 | |
| 26650 | 3.90 | 79 | 3-1/8 | 51 | 2 | 10 | |
| 26660 | 4.00 | 83 | 3-1/4 | 54 | 2-1/8 | 10 | |
| 26670 | 4.10 | 83 | 3-1/4 | 54 | 2-1/8 | 10 | |
| 26680 | 4.20 | 83 | 3-1/4 | 54 | 2-1/8 | 10 | |
| 26690 | 4.30 | 83 | 3-1/4 | 54 | 2-1/8 | 10 | |
| 34570 | 4.40 | 86 | 3-3/8 | 56 | 2-13/64 | 10 | |
| 26700 | 4.50 | 86 | 3-3/8 | 56 | 2-13/64 | 10 | |
| 26710 | 4.60 | 86 | 3-3/8 | 56 | 2-13/64 | 10 | |
| 26720 | 4.70 | 89 | 3-1/2 | 59 | 2-21/64 | 10 | |
| 26730 | 4.80 | 89 | 3-1/2 | 59 | 2-21/64 | 10 | |
| 26740 | 4.90 | 92 | 3-5/8 | 62 | 2-7/16 | 10 | |
| 26750 | 5.00 | 92 | 3-5/8 | 62 | 2-7/16 | 10 | |
| 33960 | 5.10 | 92 | 3-5/8 | 62 | 2-7/16 | 10 | |
| 33970 | 5.20 | 95 | 3-3/4 | 64 | 2-1/2 | 10 | |
| 33980 | 5.30 | 95 | 3-3/4 | 64 | 2-1/2 | 10 | |
| 33990 | 5.40 | 95 | 3-3/4 | 64 | 2-1/2 | 10 | |
| 34000 | 5.50 | 95 | 3-3/4 | 64 | 2-1/2 | 10 | |
| 34010 | 5.60 | 98 | 3-7/8 | 67 | 2-5/8 | 10 | |
| 34020 | 5.70 | 98 | 3-7/8 | 67 | 2-5/8 | 10 | |
| 34030 | 5.80 | 98 | 3-7/8 | 67 | 2-5/8 | 10 | |
| 34040 | 5.90 | 98 | 3-7/8 | 67 | 2-5/8 | 10 | |
| 34050 | 6.00 | 102 | 4" | 70 | 2-3/4 | 10 | |
| 34060 | 6.10 | 102 | 4" | 70 | 2-3/4 | 10 | |
| 34070 | 6.20 | 102 | 4" | 70 | 2-3/4 | 10 | |
| 34080 | 6.30 | 102 | 4" | 70 | 2-3/4 | 10 | |
| 34090 | 6.40 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |
| 34100 | 6.50 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |
| 34110 | 6.60 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |
| 34120 | 6.70 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |

| Part # | Diameter | | Overall Length | | Flute Length | | Qty. per/pack |
|--------|----------|--------|----------------|--------|--------------|--------|---------------|
| | MM | Inches | MM | Inches | MM | Inches | |
| 34130 | 6.80 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |
| 34140 | 6.90 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |
| 34150 | 7.00 | 105 | 4-1/8 | 73 | 2-7/8 | 10 | |
| 34160 | 7.10 | 108 | 4-1/4 | 75 | 2-61/64 | 10 | |
| 34170 | 7.20 | 108 | 4-1/4 | 75 | 2-61/64 | 10 | |
| 34180 | 7.30 | 108 | 4-1/4 | 75 | 2-61/64 | 10 | |
| 34190 | 7.40 | 111 | 4-3/8 | 78 | 3 | 10 | |
| 34200 | 7.50 | 111 | 4-3/8 | 78 | 3 | 5 | |
| 34210 | 7.60 | 111 | 4-3/8 | 78 | 3 | 5 | |
| 34220 | 7.70 | 114 | 4-1/2 | 81 | 3-3/16 | 5 | |
| 34230 | 7.80 | 114 | 4-1/2 | 81 | 3-3/16 | 5 | |
| 34240 | 7.90 | 114 | 4-1/2 | 81 | 3-3/16 | 5 | |
| 34250 | 8.00 | 114 | 4-1/2 | 81 | 3-3/16 | 5 | |
| 34260 | 8.10 | 117 | 4-9/16 | 84 | 3-5/16 | 5 | |
| 34270 | 8.20 | 117 | 4-9/16 | 84 | 3-5/16 | 5 | |
| 34280 | 8.30 | 117 | 4-9/16 | 84 | 3-5/16 | 5 | |
| 34290 | 8.40 | 121 | 4-3/4 | 87 | 3-27/64 | 5 | |
| 34300 | 8.50 | 121 | 4-3/4 | 87 | 3-27/64 | 5 | |
| 34310 | 8.60 | 121 | 4-3/4 | 87 | 3-27/64 | 5 | |
| 34320 | 8.70 | 121 | 4-3/4 | 87 | 3-27/64 | 5 | |
| 34330 | 8.80 | 124 | 4-7/8 | 89 | 3-1/2 | 5 | |
| 34340 | 8.90 | 124 | 4-7/8 | 89 | 3-1/2 | 5 | |
| 34350 | 9.00 | 124 | 4-7/8 | 89 | 3-1/2 | 5 | |
| 34360 | 9.10 | 124 | 4-7/8 | 89 | 3-1/2 | 5 | |
| 34370 | 9.20 | 127 | 5" | 92 | 3-5/8 | 5 | |
| 34380 | 9.30 | 127 | 5" | 92 | 3-5/8 | 5 | |
| 34390 | 9.40 | 127 | 5" | 92 | 3-5/8 | 5 | |
| 34400 | 9.50 | 127 | 5" | 92 | 3-5/8 | 5 | |
| 34410 | 9.60 | 130 | 5-1/8 | 95 | 3-3/4 | 5 | |
| 34420 | 9.70 | 130 | 5-1/8 | 95 | 3-3/4 | 5 | |
| 34430 | 9.80 | 130 | 5-1/8 | 95 | 3-3/4 | 5 | |
| 34440 | 9.90 | 130 | 5-1/8 | 95 | 3-3/4 | 5 | |
| 34450 | 10.00 | 130 | 5-1/8 | 95 | 3-3/4 | 5 | |
| 34452 | 10.10 | 133 | 5-15/64 | 98 | 3-7/8 | 5 | |
| 34460 | 10.20 | 133 | 5-15/64 | 98 | 3-7/8 | 5 | |
| 34461 | 10.30 | 133 | 5-15/64 | 98 | 3-7/8 | 5 | |
| 34462 | 10.40 | 133 | 5-1/4 | 98 | 3-7/8 | 5 | |
| 34470 | 10.50 | 133 | 5-15/64 | 98 | 3-7/8 | 5 | |
| 34472 | 10.60 | 136 | 5-3/8 | 100 | 3-15/16 | 5 | |
| 34512 | 10.70 | 136 | 5-3/8 | 100 | 3-15/16 | 5 | |
| 34480 | 10.80 | 140 | 5-1/2 | 103 | 4-1/16 | 5 | |
| 34482 | 10.90 | 140 | 5-1/2 | 103 | 4-1/16 | 5 | |
| 34490 | 11.00 | 140 | 5-1/2 | 103 | 4-1/16 | 5 | |
| 34492 | 11.10 | 140 | 5-1/2 | 103 | 4-1/16 | 5 | |
| 34502 | 11.30 | 143 | 5-5/8 | 106 | 4-7/32 | 5 | |
| 34500 | 11.20 | 143 | 5-5/8 | 106 | 4-7/32 | 5 | |
| 34504 | 11.40 | 143 | 5-5/8 | 106 | 4-7/32 | 5 | |
| 34510 | 11.50 | 143 | 5-5/8 | 106 | 4-7/32 | 5 | |
| 34514 | 11.60 | 146 | 5-3/4 | 110 | 4-11/32 | 5 | |
| 34519 | 11.70 | 146 | 5-3/4 | 110 | 4-11/32 | 5 | |
| 34520 | 11.80 | 146 | 5-3/4 | 110 | 4-11/32 | 5 | |
| 34522 | 11.90 | 146 | 5-3/4 | 109 | 4-5/16 | 5 | |
| 34530 | 12.00 | 149 | 5-7/8 | 111 | 4-3/8 | 5 | |
| 34532 | 12.10 | 149 | 5-7/8 | 111 | 4-3/8 | 5 | |
| 34540 | 12.20 | 149 | 5-7/8 | 111 | 4-3/8 | 5 | |
| 34542 | 12.30 | 149 | 5-7/8 | 111 | 4-3/8 | 5 | |
| 34544 | 12.40 | 152 | 6" | 114 | 4-1/2 | 5 | |
| 34550 | 12.50 | 152 | 6" | 114 | 4-1/2 | 5 | |
| 34552 | 12.60 | 152 | 6" | 114 | 4-1/2 | 5 | |
| 34580 | 12.70 | 152 | 6" | 114 | 4-1/2 | 5 | |
| 34590 | 12.80 | 152 | 6" | 114 | 4-1/2 | 5 | |
| 34980 | 12.90 | 152 | 6" | 114 | 4-1/2 | 5 | |
| 34560 | 13.00 | 152 | 6" | 114 | 4-1/2 | 5 | |

DIN Length

HSS M42 COBALT DIN 338

Type XGT-J - METRIC

DIN 338 Length - 135° Split Point
M-42 Cobalt High Speed Steel

- Gyroidal Torsion flute and wide land construction yields exceptional performance in deep hole drilling.
- Recommended for a wide range of steels, castings and other hard metal drilling applications.
- Cobalt steel is abrasion and heat resistant.
- Allows deep hole drilling without drill retraction.



Type XGT-J

Heavy duty wide land parabolic.

METRIC

Twist Drills - HSS M42 Cobalt DIN 338

METRIC

| Part # | Dia. MM | Frac/Wire/Letter | Overall Length | | Flute Length | | Qty. per/pack |
|--------|---------|------------------|----------------|---------|--------------|---------|---------------|
| | | | MM | Inches | MM | Inches | |
| 00200 | 1.00 | | 41 | 1 5/8 | 17 | 11/16 | 10 |
| 00201 | 1.02 | 60 | 41 | 1 5/8 | 17 | 11/16 | 10 |
| 00202 | 1.04 | 59 | 41 | 1 5/8 | 17 | 11/16 | 10 |
| 00203 | 1.05 | | 41 | 1 5/8 | 17 | 11/16 | 10 |
| 00204 | 1.07 | 58 | 41 | 1 5/8 | 17 | 11/16 | 10 |
| 00210 | 1.09 | 57 | 44 | 1 3/4 | 19 | 3/4 | 10 |
| 00211 | 1.10 | | 44 | 1 3/4 | 19 | 3/4 | 10 |
| 00212 | 1.15 | | 44 | 1 3/4 | 19 | 3/4 | 10 |
| 00213 | 1.18 | 56 | 44 | 1 3/4 | 19 | 3/4 | 10 |
| 00214 | 1.19 | 3/64 | 44 | 1 3/4 | 19 | 3/4 | 10 |
| 00220 | 1.20 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00221 | 1.25 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00222 | 1.30 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00223 | 1.32 | 55 | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00224 | 1.35 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00230 | 1.40 | 54 | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00232 | 1.45 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00233 | 1.50 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00234 | 1.51 | 53 | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00240 | 1.55 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00241 | 1.59 | 1/16 | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00242 | 1.60 | | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00243 | 1.61 | 52 | 48 | 1 7/8 | 22 | 7/8 | 10 |
| 00244 | 1.65 | | 51 | 2 | 25 | 1 | 10 |
| 00250 | 1.70 | 51 | 51 | 2 | 25 | 1 | 10 |
| 00252 | 1.75 | | 51 | 2 | 25 | 1 | 10 |
| 00253 | 1.78 | 50 | 51 | 2 | 25 | 1 | 10 |
| 00254 | 1.80 | | 51 | 2 | 25 | 1 | 10 |
| 00260 | 1.85 | 49 | 51 | 2 | 25 | 1 | 10 |
| 00262 | 1.90 | | 51 | 2 | 25 | 1 | 10 |
| 00263 | 1.93 | 48 | 51 | 2 | 25 | 1 | 10 |
| 00264 | 1.95 | | 51 | 2 | 25 | 1 | 10 |
| 00270 | 1.98 | 5/64 | 51 | 2 | 25 | 1 | 10 |
| 00271 | 1.99 | 47 | 51 | 2 | 25 | 1 | 10 |
| 00272 | 2.00 | | 51 | 2 | 25 | 1 | 10 |
| 00273 | 2.05 | | 54 | 2 1/8 | 29 | 1 5/32 | 10 |
| 00274 | 2.06 | 46 | 54 | 2 1/8 | 29 | 1 5/32 | 10 |
| 00280 | 2.08 | 45 | 54 | 2 1/8 | 29 | 1 5/32 | 10 |
| 00281 | 2.10 | | 54 | 2 1/8 | 29 | 1 5/32 | 10 |
| 00282 | 2.15 | | 54 | 2 1/8 | 29 | 1 5/32 | 10 |
| 00283 | 2.18 | 44 | 54 | 2 1/8 | 29 | 1 5/32 | 10 |
| 00284 | 2.20 | | 57 | 2 1/4 | 32 | 1 1/4 | 10 |
| 00290 | 2.25 | | 57 | 2 1/4 | 32 | 1 1/4 | 10 |
| 00291 | 2.26 | 43 | 57 | 2 1/4 | 32 | 1 1/4 | 10 |
| 00292 | 2.30 | | 57 | 2 1/4 | 32 | 1 1/4 | 10 |
| 00293 | 2.35 | | 57 | 2 1/4 | 32 | 1 1/4 | 10 |
| 00294 | 2.37 | 42 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00300 | 2.38 | 3/32 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00301 | 2.40 | | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00302 | 2.44 | 41 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00303 | 2.45 | | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00304 | 2.49 | 40 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00310 | 2.50 | | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00311 | 2.53 | 39 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00231 | 2.55 | | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00312 | 2.58 | 38 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00313 | 2.60 | | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00314 | 2.64 | 37 | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00251 | 2.65 | | 57 | 2 1/4 | 30 | 1 3/16 | 10 |
| 00320 | 2.70 | | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00321 | 2.71 | 36 | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00261 | 2.75 | | 61 | 2 13/32 | 33 | 1 19/64 | 10 |

| Part # | Dia. MM | Frac/Wire/Letter | Overall Length | | Flute Length | | Qty. per/pack |
|--------|---------|------------------|----------------|---------|--------------|---------|---------------|
| | | | MM | Inches | MM | Inches | |
| 00322 | 2.78 | 7/64 | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00323 | 2.79 | 35 | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00324 | 2.80 | | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00330 | 2.82 | 34 | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00360 | 2.85 | | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00331 | 2.87 | 33 | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00332 | 2.90 | | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00333 | 2.95 | 32 | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00334 | 3.00 | | 61 | 2 13/32 | 33 | 1 19/64 | 10 |
| 00340 | 3.05 | 31 | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00341 | 3.10 | | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00342 | 3.17 | 1/8 | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00343 | 3.20 | | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00371 | 3.25 | | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00344 | 3.26 | 30 | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00350 | 3.30 | | 65 | 2 9/16 | 36 | 1 7/16 | 10 |
| 00351 | 3.40 | | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00352 | 3.45 | 29 | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00353 | 3.50 | | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00354 | 3.57 | 9/64-28 | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00361 | 3.60 | | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00362 | 3.66 | 27 | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00363 | 3.70 | | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00364 | 3.73 | 26 | 70 | 2 3/4 | 39 | 1 17/32 | 10 |
| 00370 | 3.80 | 25 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00372 | 3.86 | 24 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00373 | 3.90 | | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00374 | 3.91 | 23 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00380 | 3.97 | 5/32 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00381 | 3.99 | 22 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00382 | 4.00 | | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00383 | 4.04 | 21 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00384 | 4.09 | 20 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00390 | 4.10 | | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00391 | 4.15 | | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00392 | 4.20 | | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00393 | 4.22 | 19 | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00480 | 4.25 | | 75 | 2 15/16 | 43 | 1 11/16 | 10 |
| 00394 | 4.30 | | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00680 | 4.31 | 18 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00400 | 4.37 | 11/64 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00401 | 4.39 | 17 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00402 | 4.40 | | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00403 | 4.50 | 16 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00404 | 4.55 | | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00410 | 4.57 | 15 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00411 | 4.60 | | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00412 | 4.62 | 14 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00413 | 4.70 | 13 | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00414 | 4.75 | | 80 | 3 5/32 | 47 | 1 27/32 | 10 |
| 00420 | 4.76 | 3/16 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00421 | 4.80 | 12 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00423 | 4.85 | 11 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00424 | 4.90 | | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00430 | 4.91 | 10 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00431 | 4.98 | 9 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00432 | 5.00 | | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00433 | 5.05 | 8 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00434 | 5.10 | | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00440 | 5.11 | 7 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00441 | 5.16 | 13/64 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00442 | 5.18 | 6 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00443 | 5.20 | | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00444 | 5.22 | 5 | 86 | 3 3/8 | 52 | 2 1/16 | 10 |
| 00481 | 5.25 | | 86 | 3 3/8 | 52 | 2 7/32 | 10 |
| 00450 | 5.30 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00451 | 5.31 | 4 | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00452 | 5.40 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00453 | 5.41 | 3 | 93 | 3 21/32 | 57 | 2 7/32 | 10 |

METRIC sizes continued on page 33

DIN Length

METRIC

| Part # | Dia. MM | Frac/ Wire/ Letter | Overall Length | | Flute Length | | Qty. per/pack |
|--------|------------|--------------------------|-------------------|---------|-----------------|---------|------------------|
| | | | MM | Inches | MM | Inches | |
| 00454 | 5.50 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00460 | 5.56 | 7/32 | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00461 | 5.60 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00462 | 5.61 | 2 | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00463 | 5.70 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00482 | 5.75 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00464 | 5.79 | 1 | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00470 | 5.80 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00471 | 5.90 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00472 | 5.94 | A | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00473 | 5.95 | 15/64 | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00474 | 6.00 | | 93 | 3 21/32 | 57 | 2 7/32 | 10 |
| 00483 | 6.05 | B | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00484 | 6.10 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00490 | 6.15 | C | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00491 | 6.20 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00492 | 6.25 | D | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00493 | 6.30 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00494 | 6.35 | 1/4-E | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00500 | 6.40 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00501 | 6.50 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00502 | 6.53 | F | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00503 | 6.60 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00504 | 6.63 | G | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00510 | 6.70 | | 101 | 3 31/32 | 63 | 2 15/32 | 10 |
| 00511 | 6.75 | 17/64-H | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00513 | 6.80 | | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00514 | 6.90 | I | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00520 | 7.00 | | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00521 | 7.04 | J | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00522 | 7.10 | | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00524 | 7.14 | 9/32-K | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00530 | 7.20 | | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00531 | 7.30 | | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00532 | 7.37 | L | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00533 | 7.40 | | 109 | 4 9/32 | 69 | 2 23/32 | 10 |
| 00540 | 7.50 | M | 109 | 4 9/32 | 69 | 2 23/32 | 5 |
| 00541 | 7.54 | 19/64 | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00542 | 7.60 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00543 | 7.67 | N | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00544 | 7.70 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00550 | 7.80 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00551 | 7.90 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00552 | 7.94 | 5/16 | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00553 | 8.00 | O | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00554 | 8.03 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00560 | 8.10 | P | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00561 | 8.20 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00562 | 8.30 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00563 | 8.33 | 21/64 | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00564 | 8.40 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00570 | 8.43 | Q | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00571 | 8.50 | | 117 | 4 19/32 | 75 | 2 15/16 | 5 |
| 00572 | 8.60 | R | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00573 | 8.70 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00574 | 8.73 | 11/32 | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00580 | 8.80 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00581 | 8.84 | S | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00582 | 8.90 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00583 | 9.00 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00584 | 9.10 | T | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00590 | 9.13 | 23/64 | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00591 | 9.20 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00592 | 9.30 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00593 | 9.35 | U | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00594 | 9.40 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00600 | 9.50 | | 125 | 4 29/32 | 81 | 3 3/16 | 5 |
| 00601 | 9.52 | 3/8 | 125 | 4 29/32 | 87 | 3 7/16 | 5 |
| 00602 | 9.58 | V | 125 | 4 29/32 | 87 | 3 7/16 | 5 |
| 00603 | 9.60 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00604 | 9.70 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00610 | 9.80 | W | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00611 | 9.90 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00612 | 9.92 | 25/64 | 133 | 5 1/4 | 87 | 3 7/16 | 5 |

HSS M42 COBALT DIN 338

Type XGT-J METRIC

DIN 338 Length - 135° Split Point
M-42 Cobalt High-Speed Steel

| Part # | Dia. MM | Frac/ Wire/ Letter | Overall Length | | Flute Length | | Qty. per/pack |
|--------|------------|--------------------------|-------------------|---------|-----------------|---------|------------------|
| | | | MM | Inches | MM | Inches | |
| 00613 | 10.00 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00614 | 10.08 | X | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00620 | 10.10 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00621 | 10.20 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00622 | 10.26 | Y | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00623 | 10.30 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00624 | 10.32 | 13/32 | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00630 | 10.40 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00631 | 10.50 | Z | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00632 | 10.60 | | 133 | 5 1/4 | 87 | 3 7/16 | 5 |
| 00633 | 10.70 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00634 | 10.72 | 27/64 | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00640 | 10.80 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00641 | 10.90 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00642 | 11.00 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00643 | 11.10 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00644 | 11.11 | 7/16 | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00650 | 11.20 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00651 | 11.30 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00652 | 11.40 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00653 | 11.50 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00654 | 11.51 | 29/64 | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00660 | 11.60 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00661 | 11.70 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00662 | 11.75 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00663 | 11.80 | | 142 | 5 19/32 | 94 | 3 11/16 | 5 |
| 00664 | 11.91 | 15/32 | 151 | 5 15/16 | 101 | 3 31/32 | 5 |
| 00670 | 12.00 | | 151 | 5 15/16 | 101 | 3 31/32 | 5 |
| 00671 | 12.30 | 31/64 | 151 | 5 15/16 | 101 | 3 31/32 | 5 |
| 00672 | 12.50 | | 151 | 5 15/16 | 101 | 3 31/32 | 5 |
| 00673 | 12.70 | 1/2 | 151 | 5 15/16 | 101 | 3 31/32 | 5 |
| 00674 | 13.00 | | 151 | 5 15/16 | 101 | 3 31/32 | 5 |

HSS M42 COBALT DIN 338

Type XGT-JN TiN Titanium Nitride
DIN 338 Length - 135° Split Point M-42 Cobalt



| Part No. | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|----------|--------------------|-----------------------------|---------------------------|------------------|
| | | | | |
| 38613 | 5/64 | 2 | 1 | 10 |
| 38623 | 3/32 | 2-1/4 | 1-3/16 | 10 |
| 38633 | 7/64 | 2-13/32 | 1-19/64 | 10 |
| 38643 | 1/8 | 2-9/16 | 1-7/16 | 10 |
| 38653 | 9/64 | 2-3/4 | 1-17/32 | 10 |
| 38663 | 5/32 | 2-15/16 | 1-11/16 | 10 |
| 38673 | 11/64 | 3-5/32 | 1-27/32 | 10 |
| 38683 | 3/16 | 3-3/8 | 2-1/16 | 10 |
| 38693 | 13/64 | 3-1/8 | 2-1/16 | 10 |
| 38703 | 7/32 | 3-21/32 | 2-7/32 | 10 |
| 38713 | 15/64 | 3-21/32 | 2-7/32 | 10 |
| 38723 | 1/4 | 3-31/32 | 2-15/32 | 10 |
| 38733 | 17/64 | 4-9/32 | 2-23/32 | 10 |
| 38743 | 9/32 | 4-9/32 | 2-23/32 | 10 |
| 38753 | 19/64 | 4-19/32 | 2-15/16 | 5 |
| 38763 | 5/16 | 4-19/32 | 2-15/16 | 5 |
| 38773 | 21/64 | 4-19/32 | 2-15/16 | 5 |
| 38783 | 11/32 | 4-29/32 | 3-3/16 | 5 |
| 38793 | 23/64 | 4-29/32 | 3-3/16 | 5 |
| 38803 | 3/8 | 4-29/32 | 3-7/16 | 5 |
| 38813 | 25/64 | 5-1/4 | 3-7/16 | 5 |
| 38823 | 13/32 | 5-1/4 | 3-7/16 | 5 |
| 38833 | 27/64 | 5-19/32 | 3-11/16 | 5 |
| 38843 | 7/16 | 5-19/32 | 3-11/16 | 5 |
| 38853 | 29/64 | 5-19/32 | 3-11/16 | 5 |
| 38863 | 15/32 | 5-15/16 | 3-31/32 | 5 |
| 38873 | 31/64 | 5-15/16 | 3-31/32 | 5 |
| 38883 | 1/2 | 5-15/16 | 3-31/32 | 5 |

Screw Machine Length

NAS 907C - SCREW MACHINE

Type 135-AG - NAS 907C

Magnum Super Premium, 135° Split Point

- Special Hi-Moybdenum tool steel.
- Gold surface treated body and clearance for maximum lubricity.
- Heavy-duty construction, 135° split point, no center punch needed - will not walk.
- Recommended for work hardening grades of stainless steel and other hard metal drilling applications.



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 87710 | 1/16 | 1-5/8 | 5/8 | 12 |
| 87720 | 5/64 | 1-11/16 | 11/16 | 12 |
| 87730 | 3/32 | 1-3/4 | 3/4 | 12 |
| 87740 | 7/64 | 1-13/16 | 13/16 | 12 |
| 87750 | 1/8 | 1-7/8 | 7/8 | 12 |
| 87760 | 9/64 | 1-15/16 | 15/16 | 12 |
| 87770 | 5/32 | 2-1/16 | 1 | 12 |
| 87780 | 11/64 | 2-1/8 | 1-1/16 | 12 |
| 87790 | 3/16 | 2-3/16 | 1-1/8 | 12 |
| 87800 | 13/64 | 2-1/4 | 1-3/16 | 12 |
| 87810 | 7/32 | 2-3/8 | 1-1/4 | 12 |
| 87820 | 15/64 | 2-7/16 | 1-5/16 | 12 |
| 87830 | 1/4 | 2-1/2 | 1-3/8 | 12 |
| 87840 | 17/64 | 2-5/8 | 1-7/16 | 12 |
| 87850 | 9/32 | 2-11/16 | 1-1/2 | 12 |
| 87860 | 19/64 | 2-3/4 | 1-9/16 | 6 |
| 87870 | 5/16 | 2-13/16 | 1-5/8 | 6 |
| 87880 | 21/64 | 2-15/16 | 1-11/16 | 6 |
| 87890 | 11/32 | 3" | 1-11/16 | 6 |
| 87900 | 23/64 | 3-1/16 | 1-3/4 | 6 |
| 87910 | 3/8 | 3-1/8 | 1-13/16 | 6 |
| 87920 | 25/64 | 3-1/4 | 1-7/8 | 6 |
| 87930 | 13/32 | 3-5/16 | 1-15/16 | 6 |
| 87940 | 27/64 | 3-3/8 | 2 | 6 |
| 87950 | 7/16 | 3-7/16 | 2-1/16 | 6 |
| 87960 | 29/64 | 3-9/16 | 2-1/8 | 6 |
| 87970 | 15/32 | 3-5/8 | 2-1/8 | 6 |
| 87980 | 31/64 | 3-11/16 | 2-3/16 | 6 |
| 87990 | 1/2 | 3-3/4 | 2-1/4 | 6 |
| 88000 | 33/64 | 3-7/8 | 2-3/8 | 1 |
| 88010 | 17/32 | 3-7/8 | 2-3/8 | 1 |
| 88020 | 35/64 | 4" | 2-1/2 | 1 |
| 88030 | 9/16 | 4" | 2-1/2 | 1 |
| 88040 | 37/64 | 4-1/8 | 2-5/8 | 1 |
| 88050 | 19/32 | 4-1/8 | 2-5/8 | 1 |
| 88060 | 39/64 | 4-1/4 | 2-3/4 | 1 |
| 88070 | 5/8 | 4-1/4 | 2-3/4 | 1 |
| 88080 | 41/64 | 4-1/2 | 2-7/8 | 1 |
| 88090 | 21/32 | 4-1/2 | 2-7/8 | 1 |
| 89210 | 43/64 | 4-1/2 | 2-7/8 | 1 |
| 89220 | 11/16 | 4-1/2 | 2-7/8 | 1 |
| 89230 | 45/64 | 4-3/4 | 3 | 1 |
| 89240 | 23/32 | 4-3/4 | 3 | 1 |
| 89250 | 47/64 | 5" | 3-1/8 | 1 |
| 89260 | 3/4 | 5" | 3-1/8 | 1 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 87600 | 1 | 2-7/16 | 1-5/16 | 12 |
| 87590 | 2 | 2-7/16 | 1-5/16 | 12 |
| 87580 | 3 | 2-3/8 | 1-1/4 | 12 |
| 87570 | 4 | 2-3/8 | 1-1/4 | 12 |
| 87560 | 5 | 2-3/8 | 1-1/4 | 12 |
| 87550 | 6 | 2-3/8 | 1-1/4 | 12 |
| 87540 | 7 | 2-1/4 | 1-3/16 | 12 |
| 87530 | 8 | 2-1/4 | 1-3/16 | 12 |
| 87520 | 9 | 2-1/4 | 1-3/16 | 12 |
| 87510 | 10 | 2-1/4 | 1-3/16 | 12 |
| 87500 | 11 | 2-1/4 | 1-3/16 | 12 |
| 87490 | 12 | 2-1/4 | 1-3/16 | 12 |
| 87480 | 13 | 2-3/16 | 1-1/8 | 12 |
| 87470 | 14 | 2-3/16 | 1-1/8 | 12 |
| 87460 | 15 | 2-3/16 | 1-1/8 | 12 |
| 87450 | 16 | 2-3/16 | 1-1/8 | 12 |
| 87440 | 17 | 2-3/16 | 1-1/8 | 12 |
| 87430 | 18 | 2-1/8 | 1-1/16 | 12 |
| 87420 | 19 | 2-1/8 | 1-1/16 | 12 |
| 87410 | 20 | 2-1/8 | 1-1/16 | 12 |
| 87400 | 21 | 2-1/8 | 1-1/16 | 12 |
| 87390 | 22 | 2-1/8 | 1-1/16 | 12 |
| 87380 | 23 | 2-1/16 | 1 | 12 |
| 87370 | 24 | 2-1/16 | 1 | 12 |
| 87360 | 25 | 2-1/16 | 1 | 12 |
| 87350 | 26 | 2-1/16 | 1 | 12 |
| 87340 | 27 | 2-1/16 | 1 | 12 |
| 87330 | 28 | 1-15/16 | 15/16 | 12 |
| 87320 | 29 | 1-15/16 | 15/16 | 12 |
| 87310 | 30 | 1-15/16 | 15/16 | 12 |
| 87300 | 31 | 1-7/8 | 7-8 | 12 |
| 87290 | 32 | 1-7/8 | 7-8 | 12 |
| 87280 | 33 | 1-7/8 | 7-8 | 12 |
| 87270 | 34 | 1-7/8 | 7-8 | 12 |
| 87260 | 35 | 1-7/8 | 7-8 | 12 |
| 87250 | 36 | 1-13/16 | 13/16 | 12 |
| 87240 | 37 | 1-13/16 | 13/16 | 12 |
| 87230 | 38 | 1-13/16 | 13/16 | 12 |
| 87220 | 39 | 1-13/16 | 13/16 | 12 |
| 87210 | 40 | 1-13/16 | 13/16 | 12 |
| 23360 | 41 | 1-13/16 | 13/16 | 12 |
| 23370 | 42 | 1-3/4 | 3/4 | 12 |
| 23380 | 43 | 1-3/4 | 3/4 | 12 |
| 23390 | 44 | 1-3/4 | 3/4 | 12 |
| 23400 | 45 | 1-3/4 | 3/4 | 12 |
| 23410 | 46 | 1-3/4 | 3/4 | 12 |
| 23420 | 47 | 1-3/4 | 3/4 | 12 |
| 23430 | 48 | 1-11/16 | 11/16 | 12 |
| 23440 | 49 | 1-11/16 | 11/16 | 12 |
| 23450 | 50 | 1-11/16 | 11/16 | 12 |
| 23460 | 51 | 1-11/16 | 11/16 | 12 |
| 23470 | 52 | 1-11/16 | 11/16 | 12 |
| 23480 | 53 | 1-5/8 | 5/8 | 12 |
| 23490 | 54 | 1-5/8 | 5/8 | 12 |
| 23500 | 55 | 1-5/8 | 5/8 | 12 |
| 23510 | 56 | 1-3/8 | 1/2 | 12 |
| 23520 | 57 | 1-3/8 | 1/2 | 12 |
| 23530 | 58 | 1-3/8 | 1/2 | 12 |
| 23540 | 59 | 1-3/8 | 1/2 | 12 |
| 23550 | 60 | 1-3/8 | 1/2 | 12 |

Letter sizes continued on page 35

Screw Machine Length

NAS 907C - SCREW MACHINE

Type 135-AG - NAS 907C

Magnum Super Premium, 135° Split Point

- Special Hi-Moybdenum tool steel.
- Gold surface treated body and clearance for maximum lubricity.
- Heavy-duty construction, 135° split point, no center punch needed - will not walk.
- Recommended for work hardening grades of stainless steel and other hard metal drilling applications.



LETTER

| Part # | Letter Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------|-----------------------|---------------------|---------------|
| 23601 | A | 2-7/16 | 1-5/16 | 12 |
| 23611 | B | 2-1/2 | 1-3/8 | 12 |
| 23621 | C | 2-1/2 | 1-3/8 | 12 |
| 23631 | D | 2-1/2 | 1-3/8 | 12 |
| 23641 | E | 2-1/2 | 1-3/8 | 12 |
| 23651 | F | 2-5/8 | 1-7/16 | 12 |
| 23661 | G | 2-5/8 | 1-7/16 | 12 |
| 23671 | H | 2-11/16 | 1-1/2 | 12 |
| 23681 | I | 2-11/16 | 1-1/2 | 12 |
| 23691 | J | 2-11/16 | 1-1/2 | 12 |
| 23701 | K | 2-11/16 | 1-1/2 | 12 |
| 23711 | L | 2-3/4 | 1-9/16 | 12 |
| 23721 | M | 2-3/4 | 1-9/16 | 6 |
| 23731 | N | 2-13/16 | 1-5/8 | 6 |
| 23741 | O | 2-15/16 | 1-11/16 | 6 |
| 23751 | P | 2-15/16 | 1-11/16 | 6 |
| 23761 | Q | 3" | 1-11/16 | 6 |
| 23771 | R | 3" | 1-11/16 | 6 |
| 23781 | S | 3-1/16 | 1-3/4 | 6 |
| 23791 | T | 3-1/16 | 1-3/4 | 6 |
| 23801 | U | 3-1/8 | 1-13/16 | 6 |
| 23811 | V | 3-1/4 | 1-7/8 | 6 |
| 23821 | W | 3-1/4 | 1-7/8 | 6 |
| 23831 | X | 3-5/16 | 1-15/16 | 6 |
| 23841 | Y | 3-5/16 | 1-15/16 | 6 |
| 23851 | Z | 3-3/8 | 2" | 6 |

M42 COBALT - TiN & TITANIUM ALUMINUM NITRIDE SCREW MACHINE

Type 260-D - M42 Cobalt, Type 260-DN - Titanium

Nitride, Type 260-AND - Titanium Aluminum Nitride 135° Split Point - M42 Cobalt Steel

- Manufactured from M42 HSS contains 8% Cobalt increasing hot hardness.
- High hot hardness of cobalt permits speeds 30% over regular high-speed steel drills.
- Titanium Aluminum Nitride can be used in machining stainless steel, nickel based and titanium alloys, not recommended for aluminum.



Type 260-D

Use to drill hard, tough metals, free machining stainless steel, titanium alloys and certain abrasive plastics.



Type 260-DN

TiN coating for lubricity, abrasion resistance extended tool life.



Type 260-AND

Titanium aluminum nitride designed for use where extreme temperatures are found, allows for increased machining speeds up to 200%.

| 260-D Part # | 260-DN TiN Part# | 260-AND TiAlN Part# | Dia. Inches | Overall Length Inches | Flute Length Inches | 260-D Qty. per/Pk | 260-DN/260-AND Qty. per/Pk |
|--------------|------------------|---------------------|-------------|-----------------------|---------------------|-------------------|----------------------------|
| 39800 | 81800 | 37103 | 1/16 | 1-5/8 | 5/8 | 12 | 6 |
| 39810 | 81810 | 37113 | 5/64 | 1-11/16 | 11/16 | 12 | 6 |
| 39820 | 81820 | 37123 | 3/32 | 1-3/4 | 3/4 | 12 | 6 |
| 39830 | 81830 | 37133 | 7/64 | 1-13/16 | 13/16 | 12 | 6 |
| 39840 | 81840 | 37143 | 1/8" | 1-7/8 | 7/8 | 12 | 6 |
| 39850 | 81850 | 37153 | 9/64 | 1-15/16 | 15/16 | 12 | 6 |
| 39860 | 81860 | 37163 | 5/32 | 2-1/16 | 1 | 12 | 6 |
| 39870 | 81870 | 37173 | 11/64 | 2-1/8 | 1-1/16 | 12 | 6 |
| 39880 | 81880 | 37183 | 3/16 | 2-3/16 | 1-1/8 | 12 | 6 |
| 39890 | 81890 | 37193 | 13/64 | 2-1/4 | 1-3/16 | 12 | 6 |
| 39900 | 81900 | 37203 | 7/32 | 2-3/8 | 1-1/4 | 12 | 6 |
| 39910 | 81910 | 37213 | 15/64 | 2-7/16 | 1-5/16 | 12 | 6 |
| 39920 | 81920 | 37223 | 1/4" | 2-1/2 | 1-3/8 | 12 | 6 |
| 39930 | 81930 | 37233 | 17/64 | 2-5/8 | 1-7/16 | 12 | 6 |
| 39940 | 81940 | 37243 | 9/32 | 2-11/16 | 1-1/2 | 12 | 6 |
| 39950 | 81950 | 37253 | 19/64 | 2-3/4 | 1-9/16 | 6 | 3 |
| 39960 | 81960 | 37263 | 5/16 | 2-13/16 | 1-5/8 | 6 | 3 |
| 39970 | 81970 | 37273 | 21/64 | 2-15/16 | 1-11/16 | 6 | 3 |
| 39980 | 81980 | 37283 | 11/32 | 3 | 1-11/16 | 6 | 3 |
| 39990 | 81990 | 37293 | 23/64 | 3-1/16 | 1-3/4 | 6 | 3 |
| 40000 | 82000 | 37303 | 3/8" | 3-1/8 | 1-13/16 | 6 | 3 |
| 40010 | 82010 | 37313 | 25/64 | 3-1/4 | 1-7/8 | 6 | 3 |
| 40020 | 82020 | 37323 | 13/32 | 3-5/16 | 1-15/16 | 6 | 3 |
| 40030 | 82030 | 37333 | 27/64 | 3-3/8 | 2 | 6 | 3 |
| 40040 | 82040 | 37343 | 7/16" | 3-7/16 | 2-1/16 | 6 | 3 |
| 40050 | 82050 | 37353 | 29/64 | 3-9/16 | 2-1/8 | 6 | 3 |
| 40060 | 82060 | 37363 | 15/32 | 3-5/8 | 2-1/8 | 6 | 3 |
| 40070 | 82070 | 37373 | 31/64 | 3-11/16 | 2-3/16 | 6 | 3 |
| 40080 | 82080 | 37383 | 1/2" | 3-3/4 | 2-1/4 | 6 | 3 |
| 51630 | ----- | ----- | 33/64 | 3-7/8 | 2-3/8 | 1 | -- |
| 51640 | ----- | ----- | 17/32 | 3-7/8 | 2-3/8 | 1 | -- |
| 51650 | ----- | ----- | 35/64 | 4 | 2-1/2 | 1 | -- |
| 51660 | ----- | ----- | 9/16 | 4 | 2-1/2 | 1 | -- |
| 51670 | ----- | ----- | 37/64 | 4-1/8 | 2-5/8 | 1 | -- |
| 51680 | ----- | ----- | 19/32 | 4-1/8 | 2-5/8 | 1 | -- |
| 51690 | ----- | ----- | 39/64 | 4-1/4 | 2-3/4 | 1 | -- |
| 51700 | ----- | ----- | 5/8" | 4-1/4 | 2-3/4 | 1 | -- |
| 51710 | ----- | ----- | 41/64 | 4-1/2 | 2-7/8 | 1 | -- |
| 51720 | ----- | ----- | 21/32 | 4-1/2 | 2-7/8 | 1 | -- |
| 51730 | ----- | ----- | 43/64 | 4-1/2 | 2-7/8 | 1 | -- |
| 51740 | ----- | ----- | 11/16 | 4-1/2 | 2-7/8 | 1 | -- |
| 51750 | ----- | ----- | 45/64 | 4-3/4 | 3 | 1 | -- |
| 51760 | ----- | ----- | 23/32 | 4-3/4 | 3 | 1 | -- |
| 51770 | ----- | ----- | 47/64 | 5 | 3-1/8 | 1 | -- |
| 51780 | ----- | ----- | 3/4" | 5 | 3-1/8 | 1 | -- |

Screw Machine Length

Black & Gold

M42 COBALT - TiN & TITANIUM ALUMINUM NITRIDE SCREW MACHINE

Type 260-D - M42 Cobalt, Type 260-DN - Titanium Nitride, Type 260-AND - Titanium Aluminum Nitride 135° Split Point - M42 Cobalt Steel

- Manufactured from M42 HSS contains 8% Cobalt increasing hot hardness.
- High hot hardness of cobalt permits speeds 30% over regular high-speed steel drills.
- Titanium Aluminum Nitride can be used in machining stainless steel, nickel based and titanium alloys, not recommended for aluminum.

WIRE

| 260-D Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------------|------------|-----------------------|---------------------|---------------|
| 40090 | 1 | 2-7/16 | 1-5/16 | 12 |
| 40100 | 2 | 2-7/16 | 1-5/16 | 12 |
| 40110 | 3 | 2-3/8 | 1-1/4 | 12 |
| 40120 | 4 | 2-3/8 | 1-1/4 | 12 |
| 40130 | 5 | 2-3/8 | 1-1/4 | 12 |
| 40140 | 6 | 2-3/8 | 1-1/4 | 12 |
| 40150 | 7 | 2-1/4 | 1-3/16 | 12 |
| 40160 | 8 | 2-1/4 | 1-3/16 | 12 |
| 40170 | 9 | 2-1/4 | 1-3/16 | 12 |
| 40180 | 10 | 2-1/4 | 1-3/16 | 12 |
| 40190 | 11 | 2-1/4 | 1-3/16 | 12 |
| 40200 | 12 | 2-1/4 | 1-3/16 | 12 |
| 40210 | 13 | 2-3/16 | 1-1/8 | 12 |
| 40220 | 14 | 2-3/16 | 1-1/8 | 12 |
| 40230 | 15 | 2-3/16 | 1-1/8 | 12 |
| 40240 | 16 | 2-3/16 | 1-1/8 | 12 |
| 40250 | 17 | 2-3/16 | 1-1/8 | 12 |
| 40260 | 18 | 2-1/8 | 1-1/16 | 12 |
| 40270 | 19 | 2-1/8 | 1-1/16 | 12 |
| 40280 | 20 | 2-1/8 | 1-1/16 | 12 |
| 40290 | 21 | 2-1/8 | 1-1/16 | 12 |
| 40300 | 22 | 2-1/8 | 1-1/16 | 12 |
| 40310 | 23 | 2-1/16 | 1 | 12 |
| 40320 | 24 | 2-1/16 | 1 | 12 |
| 40330 | 25 | 2-1/16 | 1 | 12 |
| 40340 | 26 | 2-1/16 | 1 | 12 |
| 40350 | 27 | 2-1/16 | 1 | 12 |
| 40360 | 28 | 1-15/16 | 15/16 | 12 |
| 40370 | 29 | 1-15/16 | 15/16 | 12 |
| 40380 | 30 | 1-15/16 | 15/16 | 12 |
| 40390 | 31 | 1-7/8 | 7/8 | 12 |
| 40400 | 32 | 1-7/8 | 7/8 | 12 |
| 40410 | 33 | 1-7/8 | 7/8 | 12 |
| 40420 | 34 | 1-7/8 | 7/8 | 12 |
| 40430 | 35 | 1-7/8 | 7/8 | 12 |
| 40440 | 36 | 1-13/16 | 13/16 | 12 |
| 40450 | 37 | 1-13/16 | 13/16 | 12 |
| 40460 | 38 | 1-13/16 | 13/16 | 12 |
| 40470 | 39 | 1-13/16 | 13/16 | 12 |
| 40480 | 40 | 1-13/16 | 13/16 | 12 |
| 42410 | 41 | 1-13/16 | 13/16 | 12 |
| 42420 | 42 | 1-3/4 | 3/4 | 12 |
| 42430 | 43 | 1-3/4 | 3/4 | 12 |
| 42440 | 44 | 1-3/4 | 3/4 | 12 |
| 42450 | 45 | 1-3/4 | 3/4 | 12 |
| 42460 | 46 | 1-3/4 | 3/4 | 12 |
| 42470 | 47 | 1-3/4 | 3/4 | 12 |
| 42480 | 48 | 1-11/16 | 11/16 | 12 |
| 42490 | 49 | 1-11/16 | 11/16 | 12 |
| 42500 | 50 | 1-11/16 | 11/16 | 12 |
| 42510 | 51 | 1-11/16 | 11/16 | 12 |
| 42520 | 52 | 1-11/16 | 11/16 | 12 |
| 42530 | 53 | 1-5/8 | 5/8 | 12 |
| 42540 | 54 | 1-5/8 | 5/8 | 12 |
| 42550 | 55 | 1-5/8 | 5/8 | 12 |
| 42560 | 56 | 1-3/8 | 1/2 | 12 |
| 42570 | 57 | 1-3/8 | 1/2 | 12 |
| 42580 | 58 | 1-3/8 | 1/2 | 12 |
| 42590 | 59 | 1-3/8 | 1/2 | 12 |
| 42600 | 60 | 1-3/8 | 1/2 | 12 |

HEAVY-DUTY 1/4" REDUCED SHANK

Type 125

1/4" Reduced Shank - Heavy-Duty Surfaced Treated, 135° Split Point

- This HSS drill is recommended for "punch" drilling in hard, tough sheet metal applications where quick and accurately located holes are required.



TYPE 125 1/4" REDUCED SHANK

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 22410 | 17/64 | 2-5/8 | 1-7/16 | 12 |
| 22420 | 9/32 | 2-11/16 | 1-1/2 | 12 |
| 22430 | 19/64 | 2-3/4 | 1-9/16 | 6 |
| 22440 | 5/16 | 2-13/16 | 1-5/8 | 6 |
| 22450 | 21/64 | 2-15/16 | 1-11/16 | 6 |
| 22460 | 11/32 | 3" | 1-11/16 | 6 |
| 22470 | 23/64 | 3-1/16 | 1-3/4 | 6 |
| 22480 | 3/8 | 3-1/8 | 1-13/16 | 6 |
| 22490 | 25/64 | 3-1/4 | 1-7/8 | 6 |
| 22500 | 13/32 | 3-5/16 | 1-15/16 | 6 |
| 22510 | 27/64 | 3-3/8 | 2" | 6 |
| 22520 | 7/16 | 3-7/16 | 2-1/16 | 6 |
| 22530 | 29/64 | 3-9/16 | 2-1/8 | 6 |
| 22540 | 15/32 | 3-5/8 | 2-1/8 | 6 |
| 22550 | 31/64 | 3-11/16 | 2-3/16 | 6 |
| 22560 | 1/2 | 3-3/4 | 2-1/4 | 6 |

Screw Machine - M42 Cobalt Heavy-Duty 1/4" Reduced Shank

Screw Machine Length

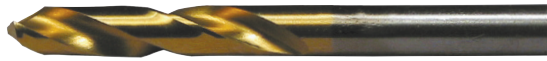
TiN COATED, BRIGHT FINISHED NAS 907C HEAVY-DUTY



Type 135
Sturdy drill for use in portable power drilling.



Type 260-TW
Bright finish accurate centering, fast penetration.



Type 135-TN
Titanium nitride coating provides a super hard surface with high lubricity.

Type 135, Type 135-TN, Type 260-TW NAS 907C Heavy-Duty 135° Split Point

- A sturdy drill for use in portable power drilling.
- Accurate centering, fast penetration. Ideal for thin metal work.
- Sizes smaller than #52 are not split pointed.

NOTE: For letter sizes, see 135-AG page 36

NOTE: * **TiN Coated Package Quantity**
(6 qty. - 1/16 thru 9/32 A-L #1 - 60) (3 qty. - 19/64 - 1/2")

NOTE: * **TiN Coated Package Quantity**
(6 qty. - 1/16 thru 9/32 A-L #1 - 60) (3 qty. - 19/64 - 1/2")

FRACTIONAL

| Type 135 Part # | Type *135-TN Part # | Type 260-TW Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|-----------------|---------------------|--------------------|-----------------|-----------------------|---------------------|---------------|
| 25560 | 97600 | 52240 | 1/16" | 1-5/8 | 5/8 | 12 |
| 25570 | 97590 | 52250 | 5/64 | 1-11/16 | 11/16 | 12 |
| 25580 | 97580 | 52260 | 3/32 | 1-3/4 | 3/4 | 12 |
| 25590 | 97570 | 52270 | 7/64 | 1-13/16 | 13/16 | 12 |
| 25600 | 97560 | 52280 | 1/8" | 1-7/8 | 7/8 | 12 |
| 25610 | 97550 | 52290 | 9/64 | 1-15/16 | 15/16 | 12 |
| 25620 | 97540 | 52300 | 5/32 | 2-1/16 | 1 | 12 |
| 25630 | 97530 | 52310 | 11/64 | 2-1/8 | 1-1/16 | 12 |
| 25640 | 97520 | 52320 | 3/16 | 2-3/16 | 1-1/8 | 12 |
| 25650 | 97510 | 52330 | 13/64 | 2-1/4 | 1-3/16 | 12 |
| 25660 | 97500 | 52340 | 7/32 | 2-3/8 | 1-1/4 | 12 |
| 25670 | 97490 | 52350 | 15/64 | 2-7/16 | 1-5/16 | 12 |
| 25680 | 97480 | 52360 | 1/4" | 2-1/2 | 1-3/8 | 12 |
| 25690 | 97470 | 52370 | 17/64 | 2-5/8 | 1-7/16 | 12 |
| 25700 | 97460 | 52380 | 9/32 | 2-11/16 | 1-1/2 | 12 |
| 25710 | 97450 | 52390 | 19/64 | 2-3/4 | 1-9/16 | 6 |
| 25720 | 97440 | 52400 | 5/16" | 2-13/16 | 1-5/8 | 6 |
| 25730 | 97430 | 52410 | 21/64 | 2-15/16 | 1-11/16 | 6 |
| 25740 | 97420 | 52420 | 11/32 | 3 | 1-11/16 | 6 |
| 25750 | 97410 | 52430 | 23/64 | 3-1/16 | 1-3/4 | 6 |
| 25760 | 97400 | 52440 | 3/8" | 3-1/8 | 1-13/16 | 6 |
| 25770 | 97390 | 52450 | 25/64 | 3-1/4 | 1-7/8 | 6 |
| 25780 | 97380 | 52460 | 13/32 | 3-5/16 | 1-15/16 | 6 |
| 25790 | 97370 | 52470 | 27/64 | 3-3/8 | 2 | 6 |
| 25800 | 97360 | 52480 | 7/16" | 3-7/16 | 2-1/16 | 6 |
| 25810 | 97350 | 52490 | 29/64 | 3-9/16 | 2-1/8 | 6 |
| 25820 | 97340 | 52500 | 15/32 | 3-5/8 | 2-1/8 | 6 |
| 25830 | 97330 | 52510 | 31/64 | 3-11/16 | 2-3/16 | 6 |
| 25840 | 97320 | 52520 | 1/2" | 3-3/4 | 2-1/4 | 6 |

For Letter Sizes use Type 135-AG page 35

NOTE: * **TiN Coated Package Quantity**
(6 qty. - 1/16 thru 9/32 A-L #1 - 60) (3 qty. - 19/64 - 1/2")

WIRE

| Type 135 Part # | Type *135-TN Part # | Type 260-TW Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|-----------------|---------------------|--------------------|------------|-----------------------|---------------------|---------------|
| 25850 | 96670 | 52530 | 1 | 2-7/16 | 1-5/16 | 12 |
| 25860 | 96660 | 52540 | 2 | 2-7/16 | 1-5/16 | 12 |
| 25870 | 96650 | 52550 | 3 | 2-3/8 | 1-1/4 | 12 |
| 25880 | 96640 | 52560 | 4 | 2-3/8 | 1-1/4 | 12 |
| 25890 | 96630 | 52570 | 5 | 2-3/8 | 1-1/4 | 12 |
| 25900 | 96620 | 52580 | 6 | 2-3/8 | 1-1/4 | 12 |
| 25910 | 96610 | 52590 | 7 | 2-1/4 | 1-3/16 | 12 |
| 25920 | 96600 | 52600 | 8 | 2-1/4 | 1-3/16 | 12 |

WIRE - CONTINUED

| Type 135 Part # | Type *135-TN Part # | Type 260-TW Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|-----------------|---------------------|--------------------|------------|-----------------------|---------------------|---------------|
| 25930 | 96590 | 52610 | 9 | 2-1/4 | 1-3/16 | 12 |
| 25940 | 96580 | 52620 | 10 | 2-1/4 | 1-3/16 | 12 |
| 25960 | 96570 | 52630 | 11 | 2-1/4 | 1-3/16 | 12 |
| 25970 | 96560 | 52640 | 12 | 2-1/4 | 1-3/16 | 12 |
| 25980 | 96550 | 52650 | 13 | 2-3/16 | 1-1/8 | 12 |
| 25990 | 96540 | 52660 | 14 | 2-3/16 | 1-1/8 | 12 |
| 26000 | 96530 | 52670 | 15 | 2-3/16 | 1-1/8 | 12 |
| 26010 | 96520 | 52680 | 16 | 2-3/16 | 1-1/8 | 12 |
| 26020 | 96510 | 52690 | 17 | 2-3/16 | 1-1/8 | 12 |
| 26030 | 96500 | 52700 | 18 | 2-1/8 | 1-1/16 | 12 |
| 26040 | 96490 | 52710 | 19 | 2-1/8 | 1-1/16 | 12 |
| 26050 | 96480 | 52720 | 20 | 2-1/8 | 1-1/16 | 12 |
| 26060 | 96470 | 52730 | 21 | 2-1/8 | 1-1/16 | 12 |
| 26070 | 96460 | 52740 | 22 | 2-1/8 | 1-1/16 | 12 |
| 26080 | 96450 | 52750 | 23 | 2-1/16 | 1 | 12 |
| 26090 | 96440 | 52760 | 24 | 2-1/16 | 1 | 12 |
| 26100 | 96430 | 52770 | 25 | 2-1/16 | 1 | 12 |
| 26110 | 96420 | 52780 | 26 | 2-1/16 | 1 | 12 |
| 26120 | 96410 | 52790 | 27 | 2-1/16 | 1 | 12 |
| 26130 | 96400 | 52800 | 28 | 1-15/16 | 15/16 | 12 |
| 26140 | 96390 | 52810 | 29 | 1-15/16 | 15/16 | 12 |
| 26150 | 96380 | 52820 | 30 | 1-15/16 | 15/16 | 12 |
| 26160 | 96370 | 52830 | 31 | 1-7/8 | 7/8 | 12 |
| 26170 | 96360 | 52840 | 32 | 1-7/8 | 7/8 | 12 |
| 26180 | 96350 | 52850 | 33 | 1-7/8 | 7/8 | 12 |
| 26190 | 96340 | 52860 | 34 | 1-7/8 | 7/8 | 12 |
| 26200 | 96330 | 52870 | 35 | 1-7/8 | 7/8 | 12 |
| 26210 | 96320 | 52880 | 36 | 1-13/16 | 13/16 | 12 |
| 26220 | 96310 | 52890 | 37 | 1-13/16 | 13/16 | 12 |
| 26230 | 96300 | 52900 | 38 | 1-13/16 | 13/16 | 12 |
| 26240 | 96290 | 52910 | 39 | 1-13/16 | 13/16 | 12 |
| 26250 | 96280 | 52920 | 40 | 1-13/16 | 13/16 | 12 |
| 26260 | 96270 | 52930 | 41 | 1-13/16 | 13/16 | 12 |
| 26270 | 96260 | 52940 | 42 | 1-3/4 | 3/4 | 12 |
| 26280 | 96250 | 52950 | 43 | 1-3/4 | 3/4 | 12 |
| 26290 | 96240 | 52960 | 44 | 1-3/4 | 3/4 | 12 |
| 26300 | 96230 | 52970 | 45 | 1-3/4 | 3/4 | 12 |
| 26310 | 96220 | 52980 | 46 | 1-3/4 | 3/4 | 12 |
| 26320 | 96210 | 52990 | 47 | 1-3/4 | 3/4 | 12 |
| 26330 | 96200 | 53000 | 48 | 1-11/16 | 11/16 | 12 |
| 26340 | 96190 | 53010 | 49 | 1-11/16 | 11/16 | 12 |
| 26350 | 96180 | 53020 | 50 | 1-11/16 | 11/16 | 12 |
| 26360 | 96170 | 53030 | 51 | 1-11/16 | 11/16 | 12 |
| 26370 | 96160 | 53040 | 52 | 1-11/16 | 11/16 | 12 |
| 26380 | 96150 | 53050 | 53 | 1-5/8 | 5/8 | 12 |
| 26390 | 96140 | 53060 | 54 | 1-5/8 | 5/8 | 12 |
| 26400 | 96130 | 53070 | 55 | 1-5/8 | 5/8 | 12 |
| 26410 | 96120 | 53080 | 56 | 1-3/8 | 1/2 | 12 |
| 26420 | 96110 | 53090 | 57 | 1-3/8 | 1/2 | 12 |
| 26430 | 96100 | 53100 | 58 | 1-3/8 | 1/2 | 12 |
| 26440 | 96090 | 53110 | 59 | 1-3/8 | 1/2 | 12 |
| 26450 | 96080 | 53120 | 60 | 1-3/8 | 1/2 | 12 |

Screw Machine Length

HSS SCREW MACHINE & TITANIUM NITRIDE COATED

Type 260 & Type 260-BN Titanium Nitride Coated 118°point - High-Speed Steel - General Purpose

Bright-Flute thru 3/4" diameter.

Surface treated flutes over 1" diameter.

- Can be used for all screw machine qualified to run in all applications.
- This drill is designed for ease of penetration and to facilitate chip removal in tough, hard materials.
- May also be used in portable drilling equipment.
Drill sizes over 1-1/16" have a reduced shank.



Type 260

The short length of drill and flute makes this an especially rigid drill for greater drilling accuracy.



Type 260-BN

Performs well in mild drilling applications with abrasive wear characteristics.

FRACTIONAL

| 260 Part # | 260-BN TiN Coated Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | 260 Qty. per/pack | 260-BN Qty. per/pack |
|------------|--------------------------|-----------------|-----------------------|---------------------|-------------------|----------------------|
| 23860 | ----- | 3/64 | 1-3/8 | 1/2 | 12 | ----- |
| 23870 | 01501 | 1/16 | 1-5/8 | 5/8 | 12 | 6 |
| 23880 | 01511 | 5/64 | 1-11/16 | 11/16 | 12 | 6 |
| 23890 | 01521 | 3/32 | 1-3/4 | 3/4 | 12 | 6 |
| 23900 | 01531 | 7/64 | 1-13/16 | 13/16 | 12 | 6 |
| 23910 | 01541 | 1/8 | 1-7/8 | 7/8 | 12 | 6 |
| 23920 | 01551 | 9/64 | 1-15/16 | 15/16 | 12 | 6 |
| 23930 | 01561 | 5/32 | 2-1/16 | 1 | 12 | 6 |
| 23940 | 01571 | 11/64 | 2-1/8 | 1-1/16 | 12 | 6 |
| 23950 | 01581 | 3/16 | 2-3/16 | 1-1/8 | 12 | 6 |
| 23960 | 01591 | 13/64 | 2-1/4 | 1-3/16 | 12 | 6 |
| 23970 | 01601 | 7/32 | 2-3/8 | 1-1/4 | 12 | 6 |
| 23980 | 01611 | 15/64 | 2-7/16 | 1-5/16 | 12 | 6 |
| 23990 | 01621 | 1/4 | 2-1/2 | 1-3/8 | 12 | 6 |
| 24000 | 01631 | 17/64 | 2-5/8 | 1-7/16 | 12 | 6 |
| 24010 | 01641 | 9/32 | 2-11/16 | 1-1/2 | 12 | 6 |
| 24020 | 01651 | 19/64 | 2-3/4 | 1-9/16 | 6 | 3 |
| 24030 | 01661 | 5/16 | 2-13/16 | 1-5/8 | 6 | 3 |
| 24040 | 01671 | 21/64 | 2-15/16 | 1-11/16 | 6 | 3 |
| 24050 | 01681 | 11/32 | 3 | 1-11/16 | 6 | 3 |
| 24060 | 01691 | 23/64 | 3-1/16 | 1-3/4 | 6 | 3 |
| 24070 | 01701 | 3/8 | 3-1/8 | 1-13/16 | 6 | 3 |
| 24080 | 01711 | 25/64 | 3-1/4 | 1-7/8 | 6 | 3 |
| 24090 | 01721 | 13/32 | 3-5/16 | 1-15/16 | 6 | 3 |
| 24100 | 01731 | 27/64 | 3-3/8 | 2 | 6 | 3 |
| 24110 | 01741 | 7/16 | 3-7/16 | 2-1/16 | 6 | 3 |
| 24120 | 01751 | 29/64 | 3-9/16 | 2-1/8 | 6 | 3 |
| 24130 | 01761 | 15/32 | 3-5/8 | 2-1/8 | 6 | 3 |
| 24140 | 01771 | 31/64 | 3-11/16 | 2-3/16 | 6 | 3 |
| 24150 | 01781 | 1/2 | 3-3/4 | 2-1/4 | 6 | 3 |
| 24160 | ----- | 33/64 | 3-7/8 | 2-3/8 | 1 | ----- |
| 24170 | ----- | 17/32 | 3-7/8 | 2-3/8 | 1 | ----- |
| 24180 | ----- | 35/64 | 4 | 2-1/2 | 1 | ----- |
| 24190 | ----- | 9/16 | 4 | 2-1/2 | 1 | ----- |
| 24200 | ----- | 37/64 | 4-1/8 | 2-5/8 | 1 | ----- |
| 24210 | ----- | 19/32 | 4-1/8 | 2-5/8 | 1 | ----- |
| 24220 | ----- | 39/64 | 4-1/4 | 2-3/4 | 1 | ----- |
| 24230 | ----- | 5/8 | 4-1/4 | 2-3/4 | 1 | ----- |
| 24240 | ----- | 41/64 | 4-1/2 | 2-7/8 | 1 | ----- |
| 24250 | ----- | 21/32 | 4-1/2 | 2-7/8 | 1 | ----- |
| 24260 | ----- | 43/64 | 4-1/2 | 2-7/8 | 1 | ----- |
| 24270 | ----- | 11/16 | 4-1/2 | 2-7/8 | 1 | ----- |
| 24280 | ----- | 45/64 | 4-3/4 | 3 | 1 | ----- |
| 24290 | ----- | 23/32 | 4-3/4 | 3 | 1 | ----- |
| 24300 | ----- | 47/64 | 5 | 3-1/8 | 1 | ----- |
| 24310 | ----- | 3/4 | 5 | 3-1/8 | 1 | ----- |
| 24320 | ----- | 49/64 | 5-1/8 | 3-1/4 | 1 | ----- |
| 24330 | ----- | 25/32 | 5-1/8 | 3-1/4 | 1 | ----- |

FRACTIONAL

| 260 Part # | 260-BN TiN Coated | Diameter Inches | Overall Length Inches | Flute Length Inches | 260 Qty. per/pack | 260-BN Qty. per/pack |
|------------|-------------------|-----------------|-----------------------|---------------------|-------------------|----------------------|
| 24340 | ----- | 51/64 | 5-1/4 | 3-3/8 | 1 | ----- |
| 24350 | ----- | 13/16 | 5-1/4 | 3-3/8 | 1 | ----- |
| 24360 | ----- | 53/64 | 5-3/8 | 3-1/2 | 1 | ----- |
| 24370 | ----- | 27/32 | 5-3/8 | 3-1/2 | 1 | ----- |
| 24380 | ----- | 55/64 | 5-3/8 | 3-1/2 | 1 | ----- |
| 24390 | ----- | 7/8 | 5-3/8 | 3-1/2 | 1 | ----- |
| 24400 | ----- | 57/64 | 5-5/8 | 3-5/8 | 1 | ----- |
| 24410 | ----- | 29/32 | 5-5/8 | 3-5/8 | 1 | ----- |
| 24420 | ----- | 59/64 | 5-3/4 | 3-3/4 | 1 | ----- |
| 24430 | ----- | 15/16 | 5-3/4 | 3-3/4 | 1 | ----- |
| 24440 | ----- | 61/64 | 5-7/8 | 3-7/8 | 1 | ----- |
| 24450 | ----- | 31/32 | 5-7/8 | 3-7/8 | 1 | ----- |
| 24460 | ----- | 63/64 | 6 | 4 | 1 | ----- |
| 24470 | ----- | 1" | 6 | 4 | 1 | ----- |
| 24480 | ----- | 1-1/16 | 6-1/4 | 4 | 1 | ----- |
| 24490 | ----- | 1-1/8 | 6-3/8 | 4 | 1 | ----- |
| 24500 | ----- | 1-3/16 | 6-5/8 | 4-1/4 | 1 | ----- |
| 24510 | ----- | 1-1/4 | 6-3/4 | 4-3/8 | 1 | ----- |
| 24520 | ----- | 1-5/16 | 7 | 4-3/8 | 1 | ----- |
| 24530 | ----- | 1-3/8 | 7-1/8 | 4-1/2 | 1 | ----- |
| 24540 | ----- | 1-7/16 | 7-3/8 | 4-3/4 | 1 | ----- |
| 24550 | ----- | 1-1/2 | 7-1/2 | 4-7/8 | 1 | ----- |
| 24560 | ----- | 1-9/16 | 7-3/4 | 4-7/8 | 1 | ----- |
| 24570 | ----- | 1-5/8 | 7-3/4 | 4-7/8 | 1 | ----- |
| 24580 | ----- | 1-11/16 | 8 | 5-1/8 | 1 | ----- |
| 24590 | ----- | 1-3/4 | 8 | 5-1/8 | 1 | ----- |
| 24600 | ----- | 1-13/16 | 8-1/4 | 5-3/8 | 1 | ----- |
| 24610 | ----- | 1-7/8 | 8-1/4 | 5-3/8 | 1 | ----- |
| 24620 | ----- | 1-15/16 | 8-1/2 | 5-5/8 | 1 | ----- |
| 24630 | ----- | 2" | 8-1/2 | 5-5/8 | 1 | ----- |

Wire, Letter sizes continued on page 39

Drill Size Shank Diameter

| | |
|--------------------|--------|
| 1-1/16" to 1-1/4" | 1" |
| 1- 5/16" to 1-1/2" | 1-1/4" |
| 1-9/16" to 2" | 1-1/2" |

Screw Machine Length

HSS SCREW MACHINE & TITANIUM NITRIDE COATED



Type 260

The short length of drill and flute makes this an especially rigid drill for greater drilling accuracy.



Type 260-BN

Performs well in mild drilling applications with abrasive wear characteristics.

Type 260, Type 260-BN Titanium Nitride Coated High-Speed Steel - General Purpose - 118° Point

Bright-Flute thru 3/4" diameter.
Surface treated flutes over 1" diameter.

- The short length of drill and flute makes this an especially rigid drill for greater drilling accuracy.
- May also be used in portable drilling equipment.

WIRE

| 260-BN 260 TiN Coated | | Wire Sizes | Overall Length Inches | Flute Length Inches | 260 Qty. per/pack | 260-BN Qty. per/pack |
|--------------------------|--------|---------------|-----------------------------|---------------------------|-------------------------|----------------------------|
| Part # | Part # | | | | | |
| 24640 | 24643 | 1 | 2-7/16 | 1-5/16 | 12 | 6 |
| 24650 | 24653 | 2 | 2-7/16 | 1-5/16 | 12 | 6 |
| 24660 | 24663 | 3 | 2-3/8 | 1-1/4 | 12 | 6 |
| 24670 | 24673 | 4 | 2-3/8 | 1-1/4 | 12 | 6 |
| 24680 | 24683 | 5 | 2-3/8 | 1-1/4 | 12 | 6 |
| 24690 | 24693 | 6 | 2-3/8 | 1-1/4 | 12 | 6 |
| 24700 | 24703 | 7 | 2-1/4 | 1-3/16 | 12 | 6 |
| 24710 | 24713 | 8 | 2-1/4 | 1-3/16 | 12 | 6 |
| 24720 | 24723 | 9 | 2-1/4 | 1-3/16 | 12 | 6 |
| 24730 | 24733 | 10 | 2-1/4 | 1-3/16 | 12 | 6 |
| 24740 | 24743 | 11 | 2-1/4 | 1-3/16 | 12 | 6 |
| 24750 | 24753 | 12 | 2-1/4 | 1-3/16 | 12 | 6 |
| 24760 | 24763 | 13 | 2-3/16 | 1-1/8 | 12 | 6 |
| 24770 | 24773 | 14 | 2-3/16 | 1-1/8 | 12 | 6 |
| 24780 | 24783 | 15 | 2-3/16 | 1-1/8 | 12 | 6 |
| 24790 | 24793 | 16 | 2-3/16 | 1-1/8 | 12 | 6 |
| 24800 | 24803 | 17 | 2-3/16 | 1-1/8 | 12 | 6 |
| 24810 | 24813 | 18 | 2-1/8 | 1-1/16 | 12 | 6 |
| 24820 | 24823 | 19 | 2-1/8 | 1-1/16 | 12 | 6 |
| 24830 | 24833 | 20 | 2-1/8 | 1-1/16 | 12 | 6 |
| 24840 | 24843 | 21 | 2-1/8 | 1-1/16 | 12 | 6 |
| 24850 | 24853 | 22 | 2-1/8 | 1-1/16 | 12 | 6 |
| 24860 | 24863 | 23 | 2-1/16 | 1 | 12 | 6 |
| 24870 | 24873 | 24 | 2-1/16 | 1 | 12 | 6 |
| 24880 | 24883 | 25 | 2-1/16 | 1 | 12 | 6 |
| 24890 | 24893 | 26 | 2-1/16 | 1 | 12 | 6 |
| 24900 | 24903 | 27 | 2-1/16 | 1 | 12 | 6 |
| 24910 | 24913 | 28 | 1-15/16 | 15/16 | 12 | 6 |
| 24920 | 24923 | 29 | 1-15/16 | 15/16 | 12 | 6 |
| 24930 | 24933 | 30 | 1-15/16 | 15/16 | 12 | 6 |
| 24940 | 24943 | 31 | 1-7/8 | 7/8 | 12 | 6 |
| 24950 | 24953 | 32 | 1-7/8 | 7/8 | 12 | 6 |
| 24960 | 24963 | 33 | 1-7/8 | 7/8 | 12 | 6 |
| 24970 | 24973 | 34 | 1-7/8 | 7/8 | 12 | 6 |
| 24980 | 24983 | 35 | 1-7/8 | 7/8 | 12 | 6 |
| 24990 | 24993 | 36 | 1-13/16 | 13/16 | 12 | 6 |
| 25000 | 25003 | 37 | 1-13/16 | 13/16 | 12 | 6 |
| 25010 | 25013 | 38 | 1-13/16 | 13/16 | 12 | 6 |
| 25020 | 25023 | 39 | 1-13/16 | 13/16 | 12 | 6 |
| 25030 | 25033 | 40 | 1-13/16 | 13/16 | 12 | 6 |
| 25040 | 25043 | 41 | 1-13/16 | 13/16 | 12 | 6 |
| 25050 | 25053 | 42 | 1-3/4 | 3/4 | 12 | 6 |
| 25060 | 25063 | 43 | 1-3/4 | 3/4 | 12 | 6 |
| 25070 | 25073 | 44 | 1-3/4 | 3/4 | 12 | 6 |
| 25080 | 25083 | 45 | 1-3/4 | 3/4 | 12 | 6 |
| 25090 | 25093 | 46 | 1-3/4 | 3/4 | 12 | 6 |
| 25100 | 25103 | 47 | 1-3/4 | 3/4 | 12 | 6 |
| 25110 | 25113 | 48 | 1-11/16 | 11/16 | 12 | 6 |
| 25120 | 25123 | 49 | 1-11/16 | 11/16 | 12 | 6 |
| 25130 | 25133 | 50 | 1-11/16 | 11/16 | 12 | 6 |
| 25140 | 25143 | 51 | 1-11/16 | 11/16 | 12 | 6 |
| 25150 | 25153 | 52 | 1-11/16 | 11/16 | 12 | 6 |
| 25160 | 25163 | 53 | 1-5/8 | 5/8 | 12 | 6 |
| 25170 | 25173 | 54 | 1-5/8 | 5/8 | 12 | 6 |
| 25180 | 25183 | 55 | 1-5/8 | 5/8 | 12 | 6 |
| 25190 | 25193 | 56 | 1-3/8 | 1/2 | 12 | 6 |
| 25200 | 25203 | 57 | 1-3/8 | 1/2 | 12 | 6 |
| 25210 | 25213 | 58 | 1-3/8 | 1/2 | 12 | 6 |
| 25220 | 25223 | 59 | 1-3/8 | 1/2 | 12 | 6 |
| 25230 | 25233 | 60 | 1-3/8 | 1/2 | 12 | 6 |

LETTER

| 260-BN 260 TiN Coated | | Letter Sizes | Overall Length Inches | Flute Length Inches | 260 Qty. per/pack | 260-BN Qty. per/pack |
|--------------------------|--------|-----------------|-----------------------------|---------------------------|-------------------------|----------------------------|
| Part # | Part # | | | | | |
| 23600 | ----- | A | 2-7/16 | 1-5/16 | 12 | ----- |
| 23610 | ----- | B | 2-1/2 | 1-3/8 | 12 | ----- |
| 23620 | ----- | C | 2-1/2 | 1-3/8 | 12 | ----- |
| 23630 | ----- | D | 2-1/2 | 1-3/8 | 12 | ----- |
| 23640 | ----- | E | 2-1/2 | 1-3/8 | 12 | ----- |
| 23650 | ----- | F | 2-5/8 | 1-7/16 | 12 | ----- |
| 23660 | ----- | G | 2-5/8 | 1-7/16 | 12 | ----- |
| 23670 | ----- | H | 2-11/16 | 1-1/2 | 12 | ----- |
| 23680 | ----- | I | 2-11/16 | 1-1/2 | 12 | ----- |
| 23690 | ----- | J | 2-11/16 | 1-1/2 | 12 | ----- |
| 23700 | ----- | K | 2-11/16 | 1-1/2 | 12 | ----- |
| 23710 | ----- | L | 2-3/4 | 1-9/16 | 12 | ----- |
| 23720 | ----- | M | 2-3/4 | 1-9/16 | 6 | ----- |
| 23730 | ----- | N | 2-13/16 | 1-5/8 | 6 | ----- |
| 23740 | ----- | O | 2-15/16 | 1-11/16 | 6 | ----- |
| 23750 | ----- | P | 2-15/16 | 1-11/16 | 6 | ----- |
| 23760 | ----- | Q | 3 | 1-11/16 | 6 | ----- |
| 23770 | ----- | R | 3 | 1-11/16 | 6 | ----- |
| 23780 | ----- | S | 3-1/16 | 1-3/4 | 6 | ----- |
| 23790 | ----- | T | 3-1/16 | 1-3/4 | 6 | ----- |
| 23800 | ----- | U | 3-1/8 | 1-13/16 | 6 | ----- |
| 23810 | ----- | V | 3-1/4 | 1-7/8 | 6 | ----- |
| 23820 | ----- | W | 3-1/4 | 1-7/8 | 6 | ----- |
| 23830 | ----- | X | 3-5/16 | 1-15/16 | 6 | ----- |
| 23840 | ----- | Y | 3-5/16 | 1-15/16 | 6 | ----- |
| 23850 | ----- | Z | 3-3/8 | 2 | 6 | ----- |

TiN

Screw Machine - HSS Screw Machine Bright Finish

Taper Length

HSS TAPER LENGTH

Type 210

High-Speed Steel 118° Point

- Bright finish thru 1" diameter.
- Surface treated flutes over 1" diameter.
- General purpose 118° point, recommended for mild drilling applications where longer than jobber length drills are required.



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 10490 | 3/64 | 2-1/4 | 1-1/8 | 12 |
| 10500 | 1/16 | 3 | 1-3/4 | 12 |
| 10510 | 5/64 | 3-3/4 | 2 | 12 |
| 10520 | 3/32 | 4-1/4 | 2-1/4 | 12 |
| 10530 | 7/64 | 4-5/8 | 2-1/2 | 12 |
| 10540 | 1/8 | 5-1/8 | 2-3/4 | 12 |
| 10550 | 9/64 | 5-3/8 | 3 | 12 |
| 10560 | 5/32 | 5-3/8 | 3 | 12 |
| 10570 | 11/64 | 5-3/4 | 3-3/8 | 12 |
| 10580 | 3/16 | 5-3/4 | 3-3/8 | 12 |
| 10590 | 13/64 | 6 | 3-5/8 | 12 |
| 10600 | 7/32 | 6 | 3-5/8 | 12 |
| 10610 | 15/64 | 6-1/8 | 3-3/4 | 12 |
| 10620 | 1/4 | 6-1/8 | 3-3/4 | 12 |
| 10630 | 17/64 | 6-1/4 | 3-7/8 | 12 |
| 10640 | 9/32 | 6-1/4 | 3-7/8 | 12 |
| 10650 | 19/64 | 6-3/8 | 4 | 6 |
| 10660 | 5/16 | 6-3/8 | 4 | 6 |
| 10670 | 21/64 | 6-1/2 | 4-1/8 | 6 |
| 10680 | 11/32 | 6-1/2 | 4-1/8 | 6 |
| 10690 | 23/64 | 6-3/4 | 4-1/4 | 6 |
| 10700 | 3/8 | 6-3/4 | 4-1/4 | 6 |
| 10710 | 25/64 | 7 | 4-3/8 | 1 |
| 10720 | 13/32 | 7 | 4-3/8 | 1 |
| 10730 | 27/64 | 7-1/4 | 4-5/8 | 1 |
| 10740 | 7/16 | 7-1/4 | 4-5/8 | 1 |
| 10750 | 29/64 | 7-1/2 | 4-3/4 | 1 |
| 10760 | 15/32 | 7-1/2 | 4-3/4 | 1 |
| 10770 | 31/64 | 7-3/4 | 4-3/4 | 1 |
| 10780 | 1/2 | 7-3/4 | 4-3/4 | 1 |
| 10790 | 33/64 | 8 | 4-3/4 | 1 |
| 10800 | 17/32 | 8 | 4-3/4 | 1 |
| 10810 | 35/64 | 8-1/4 | 4-7/8 | 1 |
| 10820 | 9/16 | 8-1/4 | 4-7/8 | 1 |
| 10830 | 37/64 | 8-3/4 | 4-7/8 | 1 |
| 10840 | 19/32 | 8-3/4 | 4-7/8 | 1 |
| 10850 | 39/64 | 8-3/4 | 4-7/8 | 1 |
| 10860 | 5/8 | 8-3/4 | 4-7/8 | 1 |
| 10870 | 41/64 | 9 | 5-1/8 | 1 |
| 10880 | 21/32 | 9 | 5-1/8 | 1 |
| 10890 | 43/64 | 9-1/4 | 5-3/8 | 1 |
| 10900 | 11/16 | 9-1/4 | 5-3/8 | 1 |
| 10910 | 45/64 | 9-1/2 | 5-5/8 | 1 |
| 10920 | 23/32 | 9-1/2 | 5-5/8 | 1 |
| 10930 | 47/64 | 9-3/4 | 5-7/8 | 1 |
| 10940 | 3/4 | 9-3/4 | 5-7/8 | 1 |
| 10950 | 49/64 | 9-7/8 | 6 | 1 |
| 10960 | 25/32 | 9-7/8 | 6 | 1 |
| 10970 | 51/64 | 10 | 6-1/8 | 1 |
| 10980 | 13/16 | 10 | 6-1/8 | 1 |
| 10990 | 53/64 | 10 | 6-1/8 | 1 |
| 11000 | 27/32 | 10 | 6-1/8 | 1 |
| 11010 | 55/64 | 10 | 6-1/8 | 1 |
| 11020 | 7/8 | 10 | 6-1/8 | 1 |
| 11030 | 57/64 | 10 | 6-1/8 | 1 |
| 11040 | 29/32 | 10 | 6-1/8 | 1 |
| 11050 | 59/64 | 10-3/4 | 6-1/8 | 1 |

FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 11060 | 15/16 | 10-3/4 | 6-1/8 | 1 |
| 11070 | 61/64 | 11 | 6-3/8 | 1 |
| 11080 | 31/32 | 11 | 6-3/8 | 1 |
| 11090 | 63/64 | 11 | 6-3/8 | 1 |
| 11100 | 1" | 11 | 6-3/8 | 1 |
| 11110 | 1-1/64 | 11-1/8 | 6-1/2 | 1 |
| 11120 | 1-1/32 | 11-1/8 | 6-1/2 | 1 |
| 11130 | 1-3/64 | 11-1/4 | 6-5/8 | 1 |
| 11140 | 1-1/16 | 11-1/4 | 6-5/8 | 1 |
| 11150 | 1-5/64 | 11-1/2 | 6-7/8 | 1 |
| 11160 | 1-3/32 | 11-1/2 | 6-7/8 | 1 |
| 11170 | 1-7/64 | 11-3/4 | 7-1/8 | 1 |
| 11180 | 1-1/8 | 11-3/4 | 7-1/8 | 1 |
| 11190 | 1-9/64 | 11-7/8 | 7-1/4 | 1 |
| 11200 | 1-5/32 | 11-7/8 | 7-1/4 | 1 |
| 11210 | 1-11/64 | 12 | 7-3/8 | 1 |
| 11220 | 1-3/16 | 12 | 7-3/8 | 1 |
| 11230 | 1-13/64 | 12-1/8 | 7-1/2 | 1 |
| 11240 | 1-7/32 | 12-1/8 | 7-1/2 | 1 |
| 11250 | 1-15/64 | 12-1/2 | 7-7/8 | 1 |
| 11260 | 1-1/4 | 12-1/2 | 7-7/8 | 1 |
| 11270 | 1-9/32 | 14-1/8 | 8-1/2 | 1 |
| 11280 | 1-5/16 | 14-1/4 | 8-5/8 | 1 |
| 11290 | 1-11/32 | 14-3/8 | 8-3/4 | 1 |
| 11300 | 1-3/8 | 14-1/2 | 8-7/8 | 1 |
| 11310 | 1-13/32 | 14-5/8 | 9 | 1 |
| 11320 | 1-7/16 | 14-3/4 | 9-1/8 | 1 |
| 11330 | 1-15/32 | 14-7/8 | 9-1/4 | 1 |
| 11340 | 1-1/2 | 15 | 9-3/8 | 1 |
| 11350 | 1-9/16 | 15-1/4 | 9-5/8 | 1 |
| 11360 | 1-5/8 | 15-5/8 | 9-7/8 | 1 |
| 11370 | 1-3/4 | 16-1/4 | 10-1/2 | 1 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 11640 | 1 | 6-1/8 | 3-3/4 | 12 |
| 11650 | 2 | 6-1/8 | 3-3/4 | 12 |
| 11660 | 3 | 6 | 3-5/8 | 12 |
| 11670 | 4 | 6 | 3-5/8 | 12 |
| 11680 | 5 | 6 | 3-5/8 | 12 |
| 11690 | 6 | 6 | 3-5/8 | 12 |
| 11700 | 7 | 6 | 3-5/8 | 12 |
| 11710 | 8 | 6 | 3-5/8 | 12 |
| 11720 | 9 | 6 | 3-5/8 | 12 |
| 11730 | 10 | 6 | 3-5/8 | 12 |
| 11740 | 11 | 6 | 3-5/8 | 12 |
| 11750 | 12 | 6 | 3-5/8 | 12 |
| 11760 | 13 | 5-3/4 | 3-3/8 | 12 |
| 11770 | 14 | 5-3/4 | 3-3/8 | 12 |
| 11780 | 15 | 5-3/4 | 3-3/8 | 12 |
| 11790 | 16 | 5-3/4 | 3-3/8 | 12 |
| 11800 | 17 | 5-3/4 | 3-3/8 | 12 |
| 11810 | 18 | 5-3/4 | 3-3/8 | 12 |
| 11820 | 19 | 5-3/4 | 3-3/8 | 12 |

Wire & Letter sizes continued on page 41

HSS TAPER LENGTH & AUTOMOTIVE TANG DRIVE

Type 210 - (Continued)

WIRE

| Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------------|---------------|
| 11830 | 20 | 5-3/4 | 3-3/8 | 12 |
| 11840 | 21 | 5-3/4 | 3-3/8 | 12 |
| 11850 | 22 | 5-3/4 | 3-3/8 | 12 |
| 11860 | 23 | 5-3/8 | 3 | 12 |
| 11870 | 24 | 5-3/8 | 3 | 12 |
| 11880 | 25 | 5-3/8 | 3 | 12 |
| 11890 | 26 | 5-3/8 | 3 | 12 |
| 11900 | 27 | 5-3/8 | 3 | 12 |
| 11910 | 28 | 5-3/8 | 3 | 12 |
| 11920 | 29 | 5-3/8 | 3 | 12 |
| 11930 | 30 | 5-3/8 | 3 | 12 |
| 11940 | 31 | 5-1/8 | 2-3/4 | 12 |
| 11950 | 32 | 5-1/8 | 2-3/4 | 12 |
| 11960 | 33 | 5-1/8 | 2-3/4 | 12 |
| 11970 | 34 | 5-1/8 | 2-3/4 | 12 |
| 11980 | 35 | 5-1/8 | 2-3/4 | 12 |
| 11990 | 36 | 4-5/8 | 2-1/2 | 12 |
| 12000 | 37 | 4-5/8 | 2-1/2 | 12 |
| 12010 | 38 | 4-5/8 | 2-1/2 | 12 |
| 12020 | 39 | 4-5/8 | 2-1/2 | 12 |
| 12030 | 40 | 4-5/8 | 2-1/2 | 12 |
| 12040 | 41 | 4-5/8 | 2-1/2 | 12 |
| 12050 | 42 | 4-1/4 | 2-1/4 | 12 |
| 12060 | 43 | 4-1/4 | 2-1/4 | 12 |
| 12070 | 44 | 4-1/4 | 2-1/4 | 12 |
| 12080 | 45 | 4-1/4 | 2-1/4 | 12 |
| 12090 | 46 | 4-1/4 | 2-1/4 | 12 |
| 12100 | 47 | 4-1/4 | 2-1/4 | 12 |
| 12110 | 48 | 3-3/4 | 2 | 12 |
| 12120 | 49 | 3-3/4 | 2 | 12 |
| 12130 | 50 | 3-3/4 | 2 | 12 |
| 12140 | 51 | 3-3/4 | 2 | 12 |
| 12150 | 52 | 3-3/4 | 2 | 12 |
| 12160 | 53 | 3 | 1-3/4 | 12 |
| 12170 | 54 | 3 | 1-3/4 | 12 |
| 12180 | 55 | 3 | 1-3/4 | 12 |
| 12190 | 56 | 2-1/4 | 1-1/8 | 12 |
| 12200 | 57 | 2-1/4 | 1-1/8 | 12 |
| 12210 | 58 | 2-1/4 | 1-1/8 | 12 |
| 12220 | 59 | 2-1/4 | 1-1/8 | 12 |
| 12230 | 60 | 2-1/4 | 1-1/8 | 12 |

LETTER

| Part # | Letter Sizes | OAL Inches | Flute Length Inches | Qty. per/pack |
|--------|--------------|------------|---------------------|---------------|
| 11380 | A | 6-1/8 | 3-3/4 | 12 |
| 11390 | B | 6-1/8 | 3-3/4 | 12 |
| 11400 | C | 6-1/8 | 3-3/4 | 12 |
| 11410 | D | 6-1/8 | 3-3/4 | 12 |
| 11420 | E | 6-1/8 | 3-3/4 | 12 |
| 11430 | F | 6-1/4 | 3-7/8 | 12 |
| 11440 | G | 6-1/4 | 3-7/8 | 12 |
| 11450 | H | 6-1/4 | 3-7/8 | 12 |
| 11460 | I | 6-1/4 | 3-7/8 | 12 |
| 11470 | J | 6-1/4 | 3-7/8 | 12 |
| 11480 | K | 6-1/4 | 3-7/8 | 12 |
| 11490 | L | 6-3/8 | 4 | 12 |
| 11500 | M | 6-3/8 | 4 | 6 |
| 11510 | N | 6-3/8 | 4 | 6 |
| 11520 | O | 6-1/2 | 4-1/8 | 6 |
| 11530 | P | 6-1/2 | 4-1/8 | 6 |
| 11540 | Q | 6-1/2 | 4-1/8 | 6 |
| 11550 | R | 6-1/2 | 4-1/8 | 6 |
| 11560 | S | 6-3/4 | 4-1/4 | 6 |
| 11570 | T | 6-3/4 | 4-1/4 | 6 |
| 11580 | U | 6-3/4 | 4-1/4 | 6 |
| 11590 | V | 7 | 4-3/8 | 1 |
| 11600 | W | 7 | 4-3/8 | 1 |
| 11610 | X | 7 | 4-3/8 | 1 |
| 11620 | Y | 7 | 4-3/8 | 1 |
| 11630 | Z | 7-1/4 | 4-5/8 | 1 |

Type 220

Automotive Series - Tang Drive

High-Speed Steel - General Purpose, 118° point

- Tanged and surface treated. When used with A.S.A. split sleeve drill drivers, these drills serve as economical substitutes for taper shank drills.



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 12870 | 1/8" | 5-1/8 | 2-3/4 | 12 |
| 12880 | 9/64 | 5-3/8 | 3 | 12 |
| 12890 | 5/32 | 5-3/8 | 3 | 12 |
| 12900 | 11/64 | 5-3/4 | 3-3/8 | 12 |
| 12910 | 3/16" | 5-3/4 | 3-3/8 | 12 |
| 12920 | 13/64 | 6 | 3-5/8 | 12 |
| 12930 | 7/32 | 6 | 3-5/8 | 12 |
| 12940 | 15/64 | 6-1/8 | 3-3/4 | 12 |
| 12950 | 1/4" | 6-1/8 | 3-3/4 | 12 |
| 12960 | 17/64 | 6-1/4 | 3-7/8 | 12 |
| 12970 | 9/32 | 6-1/4 | 3-7/8 | 12 |
| 12980 | 19/64 | 6-3/8 | 4 | 6 |
| 12990 | 5/16" | 6-3/8 | 4 | 6 |
| 13000 | 21/64 | 6-1/2 | 4-1/8 | 6 |
| 13010 | 11/32 | 6-1/2 | 4-1/8 | 6 |
| 13020 | 23/64 | 6-3/4 | 4-1/4 | 6 |
| 13030 | 3/8" | 6-3/4 | 4-1/4 | 6 |
| 13040 | 25/64 | 7 | 4-3/8 | 1 |
| 13050 | 13/32 | 7 | 4-3/8 | 1 |
| 13060 | 27/64 | 7-1/4 | 4-5/8 | 1 |
| 13070 | 7/16" | 7-1/4 | 4-5/8 | 1 |
| 13080 | 29/64 | 7-1/2 | 4-3/4 | 1 |
| 13090 | 15/32 | 7-1/2 | 4-3/4 | 1 |
| 13100 | 31/64 | 7-3/4 | 4-3/4 | 1 |
| 13110 | 1/2" | 7-3/4 | 4-3/4 | 1 |
| 13120 | 33/64 | 8 | 4-3/4 | 1 |
| 13130 | 17/32 | 8 | 4-3/4 | 1 |
| 13140 | 35/64 | 8-1/4 | 4-7/8 | 1 |
| 13150 | 9/16 | 8-1/4 | 4-7/8 | 1 |
| 13160 | 37/64 | 8-3/4 | 4-7/8 | 1 |
| 13170 | 19/32 | 8-3/4 | 4-7/8 | 1 |
| 13180 | 39/64 | 8-3/4 | 4-7/8 | 1 |
| 13190 | 5/8" | 8-3/4 | 4-7/8 | 1 |
| 13200 | 41/64 | 9 | 5-1/8 | 1 |
| 13240 | 21/32 | 9 | 5-1/8 | 1 |
| 13220 | 43/64 | 9-1/4 | 5-3/8 | 1 |
| 13230 | 11/16 | 9-1/4 | 5-3/8 | 1 |
| 72530 | 47/64 | 9-3/4 | 5-7/8 | 1 |
| 72540 | 3/4" | 9-3/4 | 5-7/8 | 1 |

Taper Length

TiN

Twist Drills - Heavy Duty Parabolic Taper Length

HEAVY DUTY PARABOLIC

Type 221-PT

Heavy-Duty - Parabolic Flute - Taper Length
Titanium Nitride Coated - Tang Drive
135° Split Point

- This high performance drill combines the superior wear resistance of titanium nitride coating, and the deep hole drilling advantages of parabolic flutes.
- The exceptional qualities of these drills can provide high productivity and extended tool life when compared to uncoated high-speed steel.



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 34600 | 1/8" | 5-1/8 | 3-3/8 | 6 |
| 34610 | 9/64 | 5-3/8 | 3-5/8 | 6 |
| 34620 | 5/32 | 5-3/8 | 3-3-4 | 6 |
| 34630 | 11/64 | 5-3/4 | 4-1/8 | 6 |
| 34640 | 3/16" | 5-3/4 | 4-1/8 | 6 |
| 34650 | 13/64 | 6 | 4-3/8 | 6 |
| 34660 | 7/32 | 6 | 4-3/8 | 6 |
| 34670 | 15/64 | 6-1/8 | 4-13/16 | 6 |
| 34680 | 1/4" | 6-1/8 | 4-13/16 | 6 |
| 34690 | 17/64 | 6-1/4 | 5 | 6 |
| 34700 | 9/32 | 6-1/4 | 5 | 6 |
| 34710 | 19/64 | 6-3/8 | 5-1/8 | 3 |
| 34720 | 5/16" | 6-3/8 | 5-1/8 | 3 |
| 34730 | 21/64 | 6-1/2 | 5-1/4 | 3 |
| 34740 | 11/32 | 6-1/2 | 5-1/4 | 3 |
| 34750 | 23/64 | 6-3/4 | 5-3/8 | 3 |
| 34760 | 3/8" | 6-3/4 | 5-3/8 | 3 |
| 34770 | 25/64 | 7 | 5-5/8 | 1 |
| 34780 | 13/32 | 7 | 5-5/8 | 1 |
| 34790 | 27/64 | 7-1/4 | 5-11/16 | 1 |
| 34800 | 7/16" | 7-1/4 | 5-11/16 | 1 |
| 34810 | 29/64 | 7-1/2 | 5-3/4 | 1 |
| 34820 | 15/32 | 7-1/2 | 5-3/4 | 1 |
| 34830 | 31/64 | 7-3/4 | 5-3/4 | 1 |
| 34840 | 1/2" | 7-3/4 | 5-3/4 | 1 |

Type 221-P

Heavy-Duty - Parabolic Flute Taper Length
Black Oxide - Tang Drive 135° Split Point

- Parabolic flute drills are designed to eliminate the need for frequent drill retraction when deep hole drilling in low to medium tensile strength materials.
- The split point and heavy-duty design provide superior performance by permitting higher feed rates and continuous drilling of deep holes.



FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 35320 | 1/8" | 5-1/8 | 3-3/8 | 12 |
| 35330 | 9/64 | 5-3/8 | 3-5/8 | 12 |
| 35340 | 5/32 | 5-3/8 | 3-3-4 | 12 |
| 35350 | 11/64 | 5-3/4 | 4-1/8 | 12 |
| 35360 | 3/16" | 5-3/4 | 4-1/8 | 12 |
| 35370 | 13/64 | 6 | 4-3/8 | 12 |
| 35380 | 7/32 | 6 | 4-3/8 | 12 |
| 35390 | 15/64 | 6-1/8 | 4-13/16 | 12 |
| 35400 | 1/4" | 6-1/8 | 4-13/16 | 12 |
| 35410 | 17/64 | 6-1/4 | 5 | 12 |
| 35420 | 9/32 | 6-1/4 | 5 | 12 |
| 35430 | 19/64 | 6-3/8 | 5-1/8 | 6 |
| 35440 | 5/16" | 6-3/8 | 5-1/8 | 6 |
| 35450 | 21/64 | 6-1/2 | 5-1/4 | 6 |
| 35460 | 11/32 | 6-1/2 | 5-1/4 | 6 |
| 35470 | 23/64 | 6-3/4 | 5-3/8 | 6 |
| 35480 | 3/8" | 6-3/4 | 5-3/8 | 6 |
| 35490 | 25/64 | 7 | 5-5/8 | 1 |
| 35500 | 13/32 | 7 | 5-5/8 | 1 |
| 35510 | 27/64 | 7-1/4 | 5-11/16 | 1 |
| 35520 | 7/16" | 7-1/4 | 5-11/16 | 1 |
| 35530 | 29/64 | 7-1/2 | 5-3/4 | 1 |
| 35540 | 15/32 | 7-1/2 | 5-3/4 | 1 |
| 35550 | 31/64 | 7-3/4 | 5-3/4 | 1 |
| 35560 | 1/2" | 7-3/4 | 5-3/4 | 1 |

EXTRA LENGTH DRILLS & LONGBOY DRILLS

Type XGT-AG

Heavy Duty 135° Split Point - 6", 9", 12"

- Gyroidal Torsion flute and wide land construction yield exceptional performance in deep hole drilling applications.
- Recommended for work hardening grades of stainless steel and other hard metal drilling operations.
- Will drill 12 or more diameters deep without drill removal to clear chips. Feed rates may be twice that of standard drills.



FRACTIONAL

| Part # | Size | OAL Inches | Flute Length Inches | Qty. per/pack |
|--------|----------|------------|---------------------|---------------|
| 39240 | 1/8x6 | 6 | 4 | 3 |
| 39250 | #29x6 | 6 | 4 | 3 |
| 39260 | 9/64x6 | 6 | 4 | 3 |
| 39270 | 5/32x6 | 6 | 4 | 3 |
| 39280 | 11/64x6 | 6 | 4 | 3 |
| 39300 | 3/16x6 | 6 | 4 | 3 |
| 39310 | #10x6 | 6 | 4 | 3 |
| 39320 | 13/64x6 | 6 | 4 | 3 |
| 39330 | 7/32x6 | 6 | 4 | 3 |
| 39340 | #1x6 | 6 | 4 | 3 |
| 39350 | 15/64x6 | 6 | 4 | 3 |
| 39360 | 1/4x6 | 6 | 4 | 3 |
| 39370 | "F"x6 | 6 | 4 | 3 |
| 39380 | 9/32x6 | 6 | 4 | 3 |
| 39390 | 5/16x6 | 6 | 4 | 3 |
| 39400 | 11/32x6 | 6 | 4 | 3 |
| 39410 | 3/8x6 | 6 | 4 | 1 |
| 39420 | 13/32x6 | 6 | 4 | 1 |
| 39430 | 7/16x6 | 6 | 4 | 1 |
| 39440 | 1/2x6 | 6 | 4 | 1 |
| 40780 | 1/8x9 | 9 | 6 | 1 |
| 40890 | 9/64 | 9 | 6 | 1 |
| 40790 | 5/32x9 | 9 | 6 | 1 |
| 53140 | 11/64 | 9 | 6 | 1 |
| 40800 | 3/16x9 | 9 | 6 | 1 |
| 53160 | 13/64 | 9 | 6 | 1 |
| 40810 | 7/32x9 | 9 | 6 | 1 |
| 53180 | 15/64 | 9 | 6 | 1 |
| 40820 | 1/4x9 | 9 | 6 | 1 |
| 40830 | 9/32x9 | 9 | 6 | 1 |
| 40840 | 5/16x9 | 9 | 6 | 1 |
| 40850 | 11/32x9 | 9 | 6 | 1 |
| 40860 | 3/8x9 | 9 | 6 | 1 |
| 40870 | 7/16x9 | 9 | 6 | 1 |
| 40880 | 1/2x9 | 9 | 6 | 1 |
| 43050 | 1/8x12 | 12 | 9 | 1 |
| 53130 | 9/64 | 12 | 9 | 1 |
| 43060 | 5/32x12 | 12 | 9 | 1 |
| 53150 | 11/64 | 12 | 9 | 1 |
| 43070 | 3/16x12 | 12 | 9 | 1 |
| 53170 | 13/64 | 12 | 9 | 1 |
| 43080 | 7/32x12 | 12 | 9 | 1 |
| 53190 | 15/64 | 12 | 9 | 1 |
| 43090 | 1/4x12 | 12 | 9 | 1 |
| 43100 | 9/32x12 | 12 | 9 | 1 |
| 43110 | 5/16x12 | 12 | 9 | 1 |
| 43120 | 11/32x12 | 12 | 9 | 1 |
| 43130 | 3/8x12 | 12 | 9 | 1 |
| 43140 | 7/16x12 | 12 | 9 | 1 |
| 43150 | 1/2x12 | 12 | 9 | 1 |

Type 160 & 165

Longboy Drills Bright Finish - 12" & 18"

- General purpose 118° point high-speed steel drill recommended for a wide range of deep hole drilling applications.



TYPE 160 12" LONGBOY

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 27200 | 1/8" | 12 | 9 | 1 |
| 27210 | 9/64 | 12 | 9 | 1 |
| 27220 | 5/32 | 12 | 9 | 1 |
| 27230 | 11/64 | 12 | 9 | 1 |
| 27240 | 3/16 | 12 | 9 | 1 |
| 27250 | 13/64 | 12 | 9 | 1 |
| 27260 | 7/32 | 12 | 9 | 1 |
| 27270 | 15/64 | 12 | 9 | 1 |
| 27280 | 1/4" | 12 | 9 | 1 |
| 27290 | 17/64 | 12 | 9 | 1 |
| 27300 | 9/32 | 12 | 9 | 1 |
| 27310 | 19/64 | 12 | 9 | 1 |
| 27320 | 5/16 | 12 | 9 | 1 |
| 27330 | 21/64 | 12 | 9 | 1 |
| 27340 | 11/32 | 12 | 9 | 1 |
| 27350 | 23/64 | 12 | 9 | 1 |
| 27360 | 3/8" | 12 | 9 | 1 |
| 27370 | 25/64 | 12 | 9 | 1 |
| 27380 | 13/32 | 12 | 9 | 1 |
| 27390 | 27/64 | 12 | 9 | 1 |
| 27400 | 7/16 | 12 | 9 | 1 |
| 27410 | 29/64 | 12 | 9 | 1 |
| 27420 | 15/32 | 12 | 9 | 1 |
| 27430 | 31/64 | 12 | 9 | 1 |
| 27440 | 1/2" | 12 | 9 | 1 |
| 27450 | 17/32 | 12 | 9 | 1 |
| 27460 | 9/16 | 12 | 9 | 1 |
| 27470 | 19/32 | 12 | 9 | 1 |
| 27480 | 5/8 | 12 | 9 | 1 |
| 27490 | 11/16 | 12 | 9 | 1 |
| 27500 | 3/4" | 12 | 9 | 1 |

TYPE 165 18" LONGBOY

| Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------------|---------------|
| 27600 | 3/16 | 18 | 10 | 1 |
| 27610 | 7/32 | 18 | 10 | 1 |
| 27620 | 1/4 | 18 | 12 | 1 |
| 27630 | 9/32 | 18 | 12 | 1 |
| 27640 | 5/16 | 18 | 12 | 1 |
| 27650 | 11/32 | 18 | 12 | 1 |
| 27660 | 3/8 | 18 | 12 | 1 |
| 27670 | 13/32 | 18 | 12 | 1 |
| 27680 | 7/16 | 18 | 12 | 1 |
| 27690 | 15/32 | 18 | 12 | 1 |
| 27700 | 1/2 | 18 | 12 | 1 |
| 27710 | 17/32 | 18 | 12 | 1 |
| 27720 | 9/16 | 18 | 12 | 1 |
| 27730 | 19/32 | 18 | 12 | 1 |
| 27740 | 5/8 | 18 | 12 | 1 |

Aircraft Extension

6" & 12" AIRCRAFT NAS 907B & NAS 907J EXTENSION DRILLS

Heavy - duty 135° split point high-speed steel drills used for drilling holes in hard to reach places.

Type 166 - NAS 907B

Aircraft 6", 135° Split Point
Solid Construction Black Oxide

Type 167-D - NAS 907J

Aircraft 6", 135° Split Point
Solid Construction M42 Cobalt

Type 168 - NAS 907B

12" Extension Drill, Black Oxide

Type 169-D - NAS 907J

12" Extension Drill, M42 Cobalt



Type 166 - NAS 907B

The black surface treatment prevents chip welding and increases abrasion resistance



Type 167-D - NAS 907J

M42 Cobalt steel increases heat and abrasion resistance.



Type 168 - NAS 907B

The black oxide treatment prevents chip welding and increases abrasion resistance



Type 169-D - NAS 907J

M42 Cobalt steel increases heat and abrasion resistance.

FRACTIONAL

| 166 Black Oxide Part # | 167-D Cobalt Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|------------------------------|---------------------------|--------------------|-----------------------------|---------------------------|------------------|
| 68170 | ----- | 1/16 | 6 | 7/8 | 6 |
| 68180 | ----- | 5/64 | 6 | 1 | 6 |
| 68470 | 65090 | 3/32 | 6 | 1-1/4 | 6 |
| 68490 | 65100 | 7/64 | 6 | 1-1/2 | 6 |
| 68500 | 65110 | 1/8 | 6 | 1-5/8 | 6 |
| 68510 | 65120 | 9/64 | 6 | 1-3/4 | 6 |
| 68520 | 65130 | 5/32 | 6 | 2 | 6 |
| 68530 | 65140 | 11/64 | 6 | 2-1/8 | 6 |
| 68540 | 65150 | 3/16 | 6 | 2-5/16 | 6 |
| 68550 | 65160 | 13/64 | 6 | 2-7/16 | 6 |
| 68560 | 65170 | 7/32 | 6 | 2-1/2 | 6 |
| 68570 | 65180 | 15/64 | 6 | 2-5/8 | 6 |
| 68580 | 65190 | 1/4 | 6 | 2-3/4 | 6 |
| 68190 | ----- | 9/32 | 6 | 2-15/16 | 6 |
| 68200 | ----- | 11/32 | 6 | 3-7/16 | 6 |
| 68450 | ----- | 21/64 | 6 | 3-5/16 | 6 |
| 68760 | ----- | 5/16 | 6 | 3-3/16 | 6 |
| 68770 | ----- | 3/8 | 6 | 3-5/8 | 6 |
| 68780 | ----- | 7/16 | 6 | 4-1/16 | 6 |
| 68790 | ----- | 1/2 | 6 | 4-1/2 | 6 |

WIRE

| 166 Black Oxide Part # | 167-D Cobalt Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|------------------------------|---------------------------|---------------|-----------------------------|---------------------------|------------------|
| 68590 | 65200 | 1 | 6 | 2-5/8 | 6 |
| 37400 | 65210 | 2 | 6 | 2-5/8 | 6 |
| 68330 | ----- | 5 | 6 | 2-1/2 | 6 |
| 68600 | 65220 | 10 | 6 | 2-7/16 | 6 |
| 68610 | 65230 | 11 | 6 | 2-5/16 | 6 |
| 68350 | ----- | 19 | 6 | 2-1/8 | 6 |
| 68620 | 65240 | 20 | 6 | 2-1/8 | 6 |
| 68630 | 65250 | 21 | 6 | 2-1/8 | 6 |
| 68370 | ----- | 25 | 6 | 1-7/8 | 6 |
| 68640 | 65260 | 29 | 6 | 1-3/4 | 6 |
| 68650 | 65270 | 30 | 6 | 1-5/8 | 6 |
| 37490 | 65280 | 40 | 6 | 1-3/8 | 6 |

FRACTIONAL

| 168 Black Oxide Part # | 169-D Cobalt Part # | Diameter Inches | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|------------------------------|---------------------------|--------------------|-----------------------------|---------------------------|------------------|
| 02710 | ----- | 1/16" | 12 | 7/8 | 1 |
| 02720 | ----- | 5/64 | 12 | 1 | 1 |
| 02730 | ----- | 3/32 | 12 | 1-1/4 | 1 |
| 02740 | 61800 | 7/64 | 12 | 1-1/2 | 1 |
| 68800 | 61810 | 1/8 | 12 | 1-5/8 | 1 |
| 68810 | 61820 | 9/64 | 12 | 1-3/4 | 1 |
| 68820 | 61830 | 5/32 | 12 | 2 | 1 |
| 68830 | 61840 | 11/64 | 12 | 2-1/8 | 1 |
| 68840 | 61850 | 3/16 | 12 | 2-5/16 | 1 |
| 68850 | 61860 | 13/64 | 12 | 2-7/16 | 1 |
| 68860 | 61870 | 7/32 | 12 | 2-1/2 | 1 |
| 68870 | 61880 | 15/64 | 12 | 2-5/8 | 1 |
| 68880 | 61890 | 1/4" | 12 | 2-3/4 | 1 |
| 68890 | ----- | 17/64 | 12 | 2-7/8 | 1 |
| 68900 | ----- | 9/32 | 12 | 2-15/16 | 1 |
| 68910 | ----- | 19/64 | 12 | 3-1/16 | 1 |
| 68920 | ----- | 5/16 | 12 | 3-3/16 | 1 |
| 68930 | ----- | 21/64 | 12 | 3-5/16 | 1 |
| 68940 | ----- | 11/32 | 12 | 3-7/16 | 1 |
| 68950 | ----- | 23/64 | 12 | 3-1/2 | 1 |
| 68960 | ----- | 3/8" | 12 | 3-5/8 | 1 |
| 68970 | ----- | 25/64 | 12 | 3-3/4 | 1 |
| 68980 | ----- | 13/32 | 12 | 3-7/8 | 1 |
| 68990 | ----- | 27/64 | 12 | 3-15/16 | 1 |
| 69000 | ----- | 7/16" | 12 | 4-1/16 | 1 |
| 69010 | ----- | 29/64 | 12 | 4-3/16 | 1 |
| 69020 | ----- | 15/32 | 12 | 4-5/16 | 1 |
| 69030 | ----- | 31/64 | 12 | 4-3/8 | 1 |
| 69040 | ----- | 1/2" | 12 | 4-1/2 | 1 |

WIRE

| 168 Black Oxide Part # | 169-D Cobalt Part # | Wire Sizes | Overall Length Inches | Flute Length Inches | Qty. per/pack |
|------------------------------|---------------------------|---------------|-----------------------------|---------------------------|------------------|
| 69050 | 61900 | 1 | 12 | 2-5/8 | 1 |
| ----- | 61910 | 2 | 12 | 2-5/8 | 1 |
| 02400 | ----- | 5 | 12 | 2-5/8 | 1 |
| 69060 | 61920 | 10 | 12 | 2-7/16 | 1 |
| 69070 | 61930 | 11 | 12 | 2-5/16 | 1 |
| 69080 | 61940 | 20 | 12 | 2-1/8 | 1 |
| 69090 | 61950 | 21 | 12 | 2-1/8 | 1 |
| 69100 | 61960 | 29 | 12 | 1-3/4 | 1 |
| 69110 | 61970 | 30 | 12 | 1-5/8 | 1 |
| 02370 | 61980 | 40 | 12 | 1-3/8 | 1 |

Twist Drills - 6" & 12" AIRCRAFT - TYPE NAS 907B / NAS 907J

PREMIUM & CN-TECH™ 1/2" REDUCED SHANK - SILVER & DEMING

Type 130-AG

1/2" Reduced Shank
Premium, 3-Flats on
Shank Heavy-Duty,
135° Split Point

- Special Hi-Molybdenum tool steel.
- One piece solid construction.
- Sizes greater than 1", 118° split pt.
- Use in work hardening grades of stainless steel and other hard metal drilling applications.

Type 130-AGX

1/2" Reduced Shank
Premium, Silver & Deming
3 - Flats on Shank
118° Split Point

- M2 High speed steel.
- Precision ground point, flutes, body and clearance.
- 118° split point for superior general purpose drilling in metal, wood and plastic.



Type 130-CN

CN-TECH™ CRYO/NITRIDE

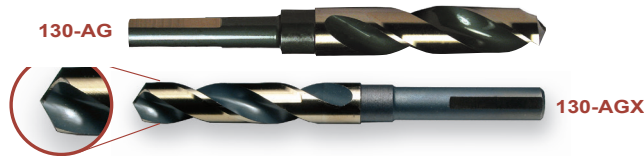
1/2" Reduced Shank 135° Split Point

- Nitride coating creates a case hardened surface that is resistant to rust, heat and extends tool life.
- Excellent for truck & trailer repair, and all MRO applications.



Type 130-CN

Nitride process case hardening resulting in superior tool life and exceptional corrosion resistance.



| 130-AG Part# | 130-AGX Part# | Diameter Inches | Overall Length Inches | Qty. per/pack |
|--------------|---------------|-----------------|-----------------------|---------------|
| 29550 | 74001 | 33/64 | 6 | 1 |
| 29560 | 74011 | 17/32 | 6 | 1 |
| 29570 | 74021 | 35/64 | 6 | 1 |
| 29580 | 74031 | 9/16 | 6 | 1 |
| 29590 | 74041 | 37/64 | 6 | 1 |
| 29600 | 74051 | 19/32 | 6 | 1 |
| 29610 | 74061 | 39/64 | 6 | 1 |
| 29620 | 74071 | 5/8" | 6 | 1 |
| 29630 | 74081 | 41/64 | 6 | 1 |
| 29640 | 74091 | 21/32 | 6 | 1 |
| 29650 | 74101 | 43/64 | 6 | 1 |
| 29660 | 74111 | 11/16 | 6 | 1 |
| 29670 | 74121 | 45/64 | 6 | 1 |
| 29680 | 74131 | 23/32 | 6 | 1 |
| 29690 | 74141 | 47/64 | 6 | 1 |
| 29700 | 74151 | 3/4" | 6 | 1 |
| 29710 | 74161 | 49/64 | 6 | 1 |
| 29720 | 74171 | 25/32 | 6 | 1 |
| 29730 | 74181 | 51/64 | 6 | 1 |
| 29740 | 74191 | 13/16 | 6 | 1 |
| 29750 | 74201 | 53/64 | 6 | 1 |
| 29760 | 74211 | 27/32 | 6 | 1 |
| 29770 | 74221 | 55/64 | 6 | 1 |
| 29780 | 74231 | 7/8" | 6 | 1 |
| 29790 | 74241 | 57/64 | 6 | 1 |
| 29800 | 74251 | 29/32 | 6 | 1 |
| 29810 | 74261 | 59/64 | 6 | 1 |
| 29820 | 74271 | 15/16 | 6 | 1 |
| 29830 | 74281 | 61/64 | 6 | 1 |
| 29840 | 74291 | 31/32 | 6 | 1 |
| 29850 | 74301 | 63/64 | 6 | 1 |
| 29860 | 74311 | 1" | 6 | 1 |
| 29870 | ---- | 1-1/32 | 6 | 1 |
| 29880 | 74321 | 1-1/16 | 6 | 1 |
| 29890 | ---- | 1-3/32 | 6 | 1 |
| 29900 | 74331 | 1-1/8 | 6 | 1 |
| 29910 | 74341 | 1-5/32 | 6 | 1 |
| 29920 | 74351 | 1-3/16 | 6 | 1 |
| 29930 | ---- | 1-7/32 | 6 | 1 |
| 29940 | 74361 | 1-1/4 | 6 | 1 |
| 29950 | ---- | 1-5/16 | 6 | 1 |
| 29960 | ---- | 1-3/8 | 6 | 1 |
| 29970 | ---- | 1-7/16 | 6 | 1 |
| 29980 | ---- | 1-1/2 | 6 | 1 |

| Sets 4 Pc. | | | |
|------------|----------|------------------------------|------------|
| Part # | | 9/16, 5/8, 3/4, 1" | Qty of ea. |
| 12250 | S&D-4SP | 1/2" Shank - Silver & Deming | 1 |
| 74771 | S&D-4AGX | 1/2" Shank - Silver & Deming | 1 |

| Sets 8 Pc. | | | |
|------------|----------|------------------------------|------------|
| Part # | | 9/16" - 1" by 16ths | Qty of ea. |
| 92400 | S&D-8SP | 1/2" Shank - Silver & Deming | 1 |
| 74781 | S&D-8AGX | 1/2" Shank - Silver & Deming | 1 |

| FRACTIONAL | | | |
|------------|-----------------|-----------------------|---------------|
| Part # | Diameter Inches | Overall Length Inches | Qty. per/pack |
| 30003 | 33/64" | 6 | 1 |
| 30013 | 17/32 | 6 | 1 |
| 30023 | 35/64 | 6 | 1 |
| 30033 | 9/16" | 6 | 1 |
| 30043 | 37/64 | 6 | 1 |
| 30053 | 19/32 | 6 | 1 |
| 30063 | 39/64 | 6 | 1 |
| 30073 | 5/8" | 6 | 1 |
| 30083 | 41/64 | 6 | 1 |
| 30093 | 21/32 | 6 | 1 |
| 30103 | 43/64 | 6 | 1 |
| 30113 | 11/16 | 6 | 1 |
| 30123 | 45/64 | 6 | 1 |
| 30133 | 23/32 | 6 | 1 |
| 30143 | 47/64 | 6 | 1 |
| 30153 | 3/4" | 6 | 1 |
| 30163 | 49/64 | 6 | 1 |
| 30173 | 25/32 | 6 | 1 |
| 30183 | 51/64 | 6 | 1 |
| 30193 | 13/16 | 6 | 1 |
| 30203 | 53/64 | 6 | 1 |
| 30213 | 27/32 | 6 | 1 |
| 30223 | 55/64 | 6 | 1 |
| 30233 | 7/8" | 6 | 1 |
| 30243 | 57/64 | 6 | 1 |
| 30253 | 29/32 | 6 | 1 |
| 30263 | 59/64 | 6 | 1 |
| 30273 | 15/16 | 6 | 1 |
| 30283 | 61/64 | 6 | 1 |
| 30293 | 31/32 | 6 | 1 |
| 30303 | 63/64 | 6 | 1 |
| 30313 | 1" | 6 | 1 |

| Sets 4 Pc. | | | |
|------------|---------|---|------------|
| Part # | | 9/16, 5/8, 3/4, 1" | Qty of ea. |
| 30323 | S&D-4CN | CN-TECH™ CRYO/NITRIDE 1/2" Shank - Silver & Deming | 1 |

| Sets 8 Pc. | | | |
|------------|---------|---|------------|
| Part # | | 9/16 - 1" by 16ths | Qty of ea. |
| 30333 | S&D-8CN | CN-TECH™ CRYO/NITRIDE 1/2" Shank - Silver & Deming | 1 |

| Sets 13 Pc. | | | |
|-------------|----------|--|------------|
| Part # | | 3 ea.(9/16" & 5/8") 2 ea.(3/4") 11/16", 13/16", 7/8", 15/16", 1" | Qty of ea. |
| 30343 | S&D-13CN | CN-TECH™ CRYO/NITRIDE 1/2" Shank - Silver & Deming | 1 |

| Sets 33 Pc. | | | |
|-------------|----------|---|------------|
| Part # | | 1/2 - 1" by 64ths | Qty of ea. |
| 30353 | S&D-33CN | CN-TECH™ CRYO/NITRIDE 1/2" Shank - Silver & Deming | 1 |

Reduced Shank

VORTEX-POINT™, METRIC-1/2" & 3/4" REDUCED SHANK SILVER & DEMING

Type 130-AGM - METRIC

1/2" Reduced Shank Silver & Deming
135° Split Point, 3-Flats on Shank

- Special Hi-Molybdenum tool steel.
- One-piece solid construction
- Body and clearance are gold surface treated for maximum lubricity.
- **Recommended** for use in work hardening grades of stainless steel and other hard metal drilling applications.



METRIC

| Part # | Dia. MM | OAL Inches | Part # | Dia. MM | OAL Inches |
|--------|---------|------------|--------|---------|------------|
| 25500 | 14.0 | 6 | 25520 | 20.0 | 6 |
| 25501 | 14.5 | 6 | 25521 | 20.5 | 6 |
| 25502 | 15.0 | 6 | 25522 | 21.0 | 6 |
| 25541 | 15.5 | 6 | 25523 | 21.5 | 6 |
| 25504 | 16.0 | 6 | 25524 | 22.0 | 6 |
| 25542 | 16.5 | 6 | 25529 | 22.5 | 6 |
| 25510 | 17.0 | 6 | 25530 | 23.0 | 6 |
| 25511 | 17.5 | 6 | 25531 | 23.5 | 6 |
| 25512 | 18.0 | 6 | 25532 | 24.0 | 6 |
| 25543 | 18.5 | 6 | 25549 | 24.5 | 6 |
| 25514 | 19.0 | 6 | 25534 | 25.0 | 6 |
| 25544 | 19.5 | 6 | | | |

Qty. per package 1

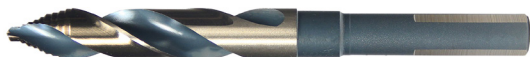
Qty. per package 1

Type 130-VT



1/2" Shank Silver & Deming 135° Split point
3-Flats on Shank

- Unique tip geometry reduces heat generation & cutting tool wear increasing tool life.
- Easily enlarges existing holes without damaging the point.
- Stay sharp up to 4X longer compared to conventional and other specialty tip design.
- **Recommended** for Cast iron, Brass, Sheet metal, Plastic, Mild steel, Copper, Hardened steel.



| Part # | Diameter Inches | Overall Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------|
| 26033 | 9/16" | 6 | 1 |
| 26073 | 5/8" | 6 | 1 |
| 26113 | 11/16 | 6 | 1 |
| 26153 | 3/4" | 6 | 1 |
| 26193 | 13/16 | 6 | 1 |
| 26233 | 7/8" | 6 | 1 |
| 26273 | 15/16 | 6 | 1 |
| 26313 | 1" | 6 | 1 |

Sets

| Part # | 4 Pc. | Qty of ea. |
|---------------|---|------------|
| 26443 S&D-4VT | 9/16, 5/8, 3/4, 1" VORTEX-POINT™ 1/2" Shank - Silver & Deming | 1 |

| Part # | 8 Pc. | Qty of ea. |
|---------------|---|------------|
| 26473 S&D-8VT | 9/16 - 1" by 16ths VORTEX-POINT™ 1/2" Shank - Silver & Deming | 1 |

Type 130

1/2" Reduced Shank Silver & Deming
118° point - General Purpose

- This general purpose 118° point high-speed steel drill is recommended for use in drilling equipment with 1/2" chucks.
- Type 130 drills may be used in power applications such as drill presses where a short rigid drill is required.



| Part # | Diameter Inches | Overall Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------|
| 29130 | 33/64" | 6 | 1 |
| 29140 | 17/32 | 6 | 1 |
| 29150 | 35/64 | 6 | 1 |
| 29160 | 9/16" | 6 | 1 |
| 29170 | 37/64 | 6 | 1 |
| 29180 | 19/32 | 6 | 1 |
| 29190 | 39/64 | 6 | 1 |
| 29200 | 5/8" | 6 | 1 |
| 29210 | 41/64 | 6 | 1 |
| 29220 | 21/32 | 6 | 1 |
| 29230 | 43/64 | 6 | 1 |
| 29240 | 11/16 | 6 | 1 |
| 29250 | 45/64 | 6 | 1 |
| 29260 | 23/32 | 6 | 1 |
| 29270 | 47/64 | 6 | 1 |
| 29280 | 3/4" | 6 | 1 |
| 29290 | 49/64 | 6 | 1 |
| 29300 | 25/32 | 6 | 1 |
| 29310 | 51/64 | 6 | 1 |
| 29320 | 13/16 | 6 | 1 |
| 29330 | 53/64 | 6 | 1 |
| 29340 | 27/32 | 6 | 1 |
| 29350 | 55/64 | 6 | 1 |
| 29360 | 7/8" | 6 | 1 |
| 29370 | 57/64 | 6 | 1 |
| 29380 | 29/32 | 6 | 1 |
| 29390 | 59/64 | 6 | 1 |
| 29400 | 15/16 | 6 | 1 |
| 29410 | 61/64 | 6 | 1 |
| 29420 | 31/32 | 6 | 1 |
| 29430 | 63/64 | 6 | 1 |
| 29440 | 1" | 6 | 1 |
| 29450 | 1-1/16 | 6 | 1 |
| 29460 | 1-1/8 | 6 | 1 |
| 29470 | 1-5/32 | 6 | 1 |
| 29480 | 1-3/16 | 6 | 1 |
| 29490 | 1-1/4 | 6 | 1 |
| 29540 | 1-47/64 | 6 | 1 |

Type 131-AG

3/4" Reduced Shank Silver & Deming
Magnum Super Premium - 135° Split Point

- These are high performance, close tolerance, tight run out spec.
- Tools designed for drilling with Bridgeport style or other production machines with 3/4" chucks.
- Recommended for use in work hardening grades of stainless steel and other hard metal drilling applications.



| Part # | Diameter Inches | Flute Length Inches | Overall Length Inches | Qty. per/pack |
|--------|-----------------|---------------------|-----------------------|---------------|
| 29741 | 13/16 | 3-1/4 | 5-1/2 | 1 |
| 29781 | 7/8 | 3-1/4 | 5-1/2 | 1 |
| 29821 | 15/16 | 3-1/4 | 5-1/2 | 1 |
| 29861 | 1 | 3-1/4 | 5-1/2 | 1 |
| 29901 | 1-1/8 | 3-1/2 | 5-27/32 | 1 |
| 29941 | 1-1/4 | 3-1/2 | 5-7/8 | 1 |
| 29961 | 1-3/8 | 3-1/2 | 5-29/32 | 1 |
| 29981 | 1-1/2 | 3-1/2 | 5-15/16 | 1 |

SILVER & DEMING - 1/2" REDUCED SHANK

Type 130-MRO

Maintenance Length - 1/2" Reduced Shank
135° Split Point 3-Flats on Shank
Surface Treated Flutes

- The 130-MRO is a shorter (5") tougher version of our very popular 1/2" reduced shank product.
- Designed specifically for the needs of the **MRO market**, the 130-MRO has a 135° split point to insure fast hole starts without drill walking.
- The three flats on the shank insure positive chucking with out slippage.



FRACTIONAL

| Part # | Size / Inches | Overall Length | Qty. per/pack |
|--------|---------------|----------------|---------------|
| 54291 | 33/64" | 5 | 1 |
| 54300 | 17/32 | 5 | 1 |
| 54301 | 35/64 | 5 | 1 |
| 54310 | 9/16 | 5 | 1 |
| 54311 | 37/64 | 5 | 1 |
| 54320 | 19/32 | 5 | 1 |
| 54321 | 39/64 | 5 | 1 |
| 54330 | 5/8" | 5 | 1 |
| 54331 | 41/64 | 5 | 1 |
| 54340 | 21/32 | 5 | 1 |
| 54341 | 43/64 | 5 | 1 |
| 54350 | 11/16 | 5 | 1 |
| 54351 | 45/64 | 5 | 1 |
| 54360 | 23/32 | 5 | 1 |
| 54361 | 47/64 | 5 | 1 |
| 54370 | 3/4" | 5 | 1 |
| 54371 | 49/64 | 5 | 1 |
| 54380 | 25/32 | 5 | 1 |
| 54381 | 51/64 | 5 | 1 |
| 54390 | 13/16 | 5 | 1 |
| 54391 | 53/64 | 5 | 1 |
| 54400 | 27/32 | 5 | 1 |
| 54401 | 55/64 | 5 | 1 |
| 54410 | 7/8" | 5 | 1 |
| 54411 | 57/64 | 5 | 1 |
| 54420 | 29/32 | 5 | 1 |
| 54421 | 59/64 | 5 | 1 |
| 54430 | 15/16 | 5 | 1 |
| 54431 | 61/64 | 5 | 1 |
| 54440 | 31/32 | 5 | 1 |
| 54441 | 63/64 | 5 | 1 |
| 54450 | 1" | 5 | 1 |

SET - Type 130-MRO

4 Pc.

| Part # | 9/16, 5/8, 3/4, 1" | Qty of each |
|-------------|----------------------------|-------------|
| 54520 S&D-4 | 1/2" Shank-Silver & Deming | 1 |

Type 130-D

1/2" Reduced Shank Silver & Deming
Super High-Speed M42 Cobalt

- Heavy-duty 135° split point with gold finish for use in drilling hard tough metals, free machining stainless steel, high temperature alloys, titanium and certain plastics.
- High red hot hardness of cobalt steel permits speeds **30% higher than regular high speed steel drills.**
- Cobalt drills require rigidly held, positive feed drilling equipment.



| Part # | Diameter Inches | Overall Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------|
| 29131 | 33/64 | 6 | 1 |
| 29141 | 17/32 | 6 | 1 |
| 29151 | 35/64 | 6 | 1 |
| 29161 | 9/16 | 6 | 1 |
| 29171 | 37/64 | 6 | 1 |
| 29181 | 19/32 | 6 | 1 |
| 29191 | 39/64 | 6 | 1 |
| 29201 | 5/8 | 6 | 1 |
| 29211 | 41/64 | 6 | 1 |
| 29221 | 21/32 | 6 | 1 |
| 29231 | 43/64 | 6 | 1 |
| 29241 | 11/16 | 6 | 1 |
| 29251 | 45/64 | 6 | 1 |
| 29261 | 23/32 | 6 | 1 |
| 29271 | 47/64 | 6 | 1 |
| 29281 | 3/4 | 6 | 1 |
| 29291 | 49/64 | 6 | 1 |
| 29331 | 25/32 | 6 | 1 |
| 29311 | 51/64 | 6 | 1 |
| 29321 | 13/16 | 6 | 1 |
| 29301 | 53/64 | 6 | 1 |
| 29341 | 27/32 | 6 | 1 |
| 29351 | 55/64 | 6 | 1 |
| 29361 | 7/8 | 6 | 1 |
| 29371 | 57/64 | 6 | 1 |
| 29381 | 29/32 | 6 | 1 |
| 29391 | 59/64 | 6 | 1 |
| 29401 | 15/16 | 6 | 1 |
| 29411 | 61/64 | 6 | 1 |
| 29421 | 31/32 | 6 | 1 |
| 29431 | 63/64 | 6 | 1 |
| 29441 | 1" | 6 | 1 |

SETS Type 130-D

4 Pc.

| Part # | 9/16, 5/8, 3/4, 1" | Qty of each |
|--------------|-----------------------------|-------------|
| 29551 S&D-4D | M42 Cobalt 135° Split point | 1 |

8 Pc.

| Part # | 9/16 - 1" by 16ths | Qty of each |
|--------------|-----------------------------|-------------|
| 29571 S&D-8D | M42 Cobalt 135° Split point | 1 |

Type EXT

Silver and Deming - Extension

- Includes an "Allen Wrench"
• COO-CHINA



| Part # | Bore/Shank | Diameter | Overall Length | Extension Length | Qty. per/pack |
|--------|------------|----------|----------------|------------------|---------------|
| 62730 | 1/2" | 7/8" | 7-1/2" | 6" | 1 |

Taper Shank

HSS TAPER SHANK - REGULAR

Type 510

High-Speed Steel 118° Point Taper Shank
Regular Shank - Black Oxide Flutes & Clearance

- Taper shank drills are made to fit tapered holders.
- Precision ground flutes, clearance and point.
- Designed to perform well under a wide variety of conditions in a wide range of materials.
- Made in the U.S.A.



FRACTIONAL

| Part # | Diameter Inches | Decimal Equivalent Inches | Taper Shank | Overall Length Inches | Flute Length Inches |
|--------|-----------------|---------------------------|-------------|-----------------------|---------------------|
| 14150 | 1/8 | .1250 | 1 | 5-1/8 | 1-7/8 |
| 14160 | 9/64 | .1406 | 1 | 5-3/8 | 2-1/8 |
| 14170 | 5/32 | .1562 | 1 | 5-3/8 | 2-1/8 |
| 14180 | 11/64 | .1719 | 1 | 5-3/4 | 2-1/2 |
| 14190 | 3/16 | .1875 | 1 | 5-3/4 | 2-1/2 |
| 14200 | 13/64 | .2031 | 1 | 6 | 2-3/4 |
| 14210 | 7/32 | .2188 | 1 | 6 | 2-3/4 |
| 14220 | 15/64 | .2344 | 1 | 6-1/8 | 2-7/8 |
| 14230 | 1/4 | .2500 | 1 | 6-1/8 | 2-7/8 |
| 14240 | 17/64 | .2656 | 1 | 6-1/4 | 3 |
| 14250 | 9/32 | .2812 | 1 | 6-1/4 | 3 |
| 14260 | 19/64 | .2969 | 1 | 6-3/8 | 3-1/8 |
| 14270 | 5/16 | .3125 | 1 | 6-3/8 | 3-1/8 |
| 14280 | 21/64 | .3281 | 1 | 6-1/2 | 3-1/4 |
| 14290 | 11/32 | .3438 | 1 | 6-1/2 | 3-1/4 |
| 14300 | 23/64 | .3594 | 1 | 6-3/4 | 3-1/2 |
| 14310 | 3/8 | .3750 | 1 | 6-3/4 | 3-1/2 |
| 14320 | 25/64 | .3906 | 1 | 7 | 3-5/8 |
| 14330 | 13/32 | .4062 | 1 | 7 | 3-5/8 |
| 14340 | 27/64 | .4219 | 1 | 7-1/4 | 3-7/8 |
| 14350 | 7/16 | .4375 | 1 | 7-1/4 | 3-7/8 |
| 14360 | 29/64 | .4531 | 1 | 7-1/2 | 4-1/8 |
| 14370 | 15/32 | .4688 | 1 | 7-1/2 | 4-1/8 |
| 14380 | 31/64 | .4844 | 2 | 8-1/4 | 4-3/8 |
| 14390 | 1/2 | .5000 | 2 | 8-1/4 | 4-3/8 |
| 14400 | 33/64 | .5156 | 2 | 8-1/2 | 4-5/8 |
| 14410 | 17/32 | .5312 | 2 | 8-1/2 | 4-5/8 |
| 14420 | 35/64 | .5469 | 2 | 8-3/4 | 4-7/8 |
| 14430 | 9/16 | .5625 | 2 | 8-3/4 | 4-7/8 |
| 14440 | 37/64 | .5781 | 2 | 8-3/4 | 4-7/8 |
| 14450 | 19/32 | .5938 | 2 | 8-3/4 | 4-7/8 |
| 14460 | 39/64 | .6094 | 2 | 8-3/4 | 4-7/8 |
| 14470 | 5/8 | .6250 | 2 | 8-3/4 | 4-7/8 |
| 14480 | 41/64 | .6406 | 2 | 9 | 5-1/8 |
| 14490 | 21/32 | .6562 | 2 | 9 | 5-1/8 |
| 14500 | 43/64 | .6719 | 2 | 9-1/4 | 5-3/8 |
| 14510 | 11/16 | .6875 | 2 | 9-1/4 | 5-3/8 |
| 14520 | 45/64 | .7031 | 2 | 9-1/2 | 5-5/8 |
| 14530 | 23/32 | .7188 | 2 | 9-1/2 | 5-5/8 |
| 14540 | 47/64 | .7344 | 2 | 9-3/4 | 5-7/8 |
| 14550 | 3/4 | .7500 | 2 | 9-3/4 | 5-7/8 |
| 14560 | 49/64 | .7656 | 2 | 9-7/8 | 6 |
| 14570 | 25/32 | .7812 | 2 | 9-7/8 | 6 |
| 14580 | 51/64 | .7969 | 3 | 10-3/4 | 6-1/8 |
| 14590 | 13/16 | .8125 | 3 | 10-3/4 | 6-1/8 |
| 14600 | 53/64 | .8281 | 3 | 10-3/4 | 6-1/8 |
| 14610 | 27/32 | .8438 | 3 | 10-3/4 | 6-1/8 |
| 14620 | 55/64 | .8594 | 3 | 10-3/4 | 6-1/8 |
| 14630 | 7/8 | .8750 | 3 | 10-3/4 | 6-1/8 |
| 14640 | 57/64 | .8906 | 3 | 10-3/4 | 6-1/8 |
| 14650 | 29/32 | .9062 | 3 | 10-3/4 | 6-1/8 |
| 14660 | 59/64 | .9219 | 3 | 10-3/4 | 6-1/8 |
| 14670 | 15/16 | .9375 | 3 | 10-3/4 | 6-1/8 |
| 14680 | 61/64 | .9531 | 3 | 11 | 6-3/8 |
| 14690 | 31/32 | .9688 | 3 | 11 | 6-3/8 |
| 14700 | 63/64 | .9844 | 3 | 11 | 6-3/8 |
| 14710 | 1" | 1.0000 | 3 | 11 | 6-3/8 |
| 14720 | 1-1/64 | 1.0156 | 3 | 11-1/8 | 6-1/2 |

FRACTIONAL

| Part # | Diameter Inches | Decimal Equivalent Inches | Taper Shank | Overall Length Inches | Flute Length Inches |
|--------|-----------------|---------------------------|-------------|-----------------------|---------------------|
| 14730 | 1-1/32 | 1.0312 | 3 | 11-1/8 | 6-1/2 |
| 14740 | 1-3/64 | 1.0469 | 3 | 11-1/4 | 6-5/8 |
| 14750 | 1-1/16 | 1.0625 | 3 | 11-1/4 | 6-5/8 |
| 14760 | 1-5/64 | 1.0781 | 4 | 12-1/2 | 6-7/8 |
| 14770 | 1-3/32 | 1.0938 | 4 | 12-1/2 | 6-7/8 |
| 14780 | 1-7/64 | 1.1094 | 4 | 12-3/4 | 7-1/8 |
| 14790 | 1-1/8 | 1.1250 | 4 | 12-3/4 | 7-1/8 |
| 14800 | 1-9/64 | 1.1406 | 4 | 12-7/8 | 7-1/4 |
| 14810 | 1-5/32 | 1.1562 | 4 | 12-7/8 | 7-1/4 |
| 14820 | 1-11/64 | 1.1719 | 4 | 13 | 7-3/8 |
| 14830 | 1-3/16 | 1.1875 | 4 | 13 | 7-3/8 |
| 14840 | 1-13/64 | 1.2031 | 4 | 13-1/8 | 7-1/2 |
| 14850 | 1-7/32 | 1.2188 | 4 | 13-1/8 | 7-1/2 |
| 14860 | 1-15/64 | 1.2344 | 4 | 13-1/2 | 7-7/8 |
| 14870 | 1-1/4 | 1.2500 | 4 | 13-1/2 | 7-7/8 |
| 14880 | 1-17/64 | 1.2656 | 4 | 14-1/8 | 8-1/2 |
| 14890 | 1-9/32 | 1.2812 | 4 | 14-1/8 | 8-1/2 |
| 14900 | 1-19/64 | 1.2969 | 4 | 14-1/4 | 8-5/8 |
| 14910 | 1-5/16 | 1.3125 | 4 | 14-1/4 | 8-5/8 |
| 14920 | 1-21/64 | 1.3281 | 4 | 14-3/8 | 8-3/4 |
| 14930 | 1-11/32 | 1.3438 | 4 | 14-3/8 | 8-3/4 |
| 14940 | 1-23/64 | 1.3594 | 4 | 14-1/2 | 8-7/8 |
| 14950 | 1-3/8 | 1.3750 | 4 | 14-1/2 | 8-7/8 |
| 14960 | 1-25/64 | 1.3906 | 4 | 14-5/8 | 9 |
| 14970 | 1-13/32 | 1.4062 | 4 | 14-5/8 | 9 |
| 14980 | 1-27/64 | 1.4219 | 4 | 14-3/4 | 9-1/8 |
| 14990 | 1-7/16 | 1.4375 | 4 | 14-3/4 | 9-1/8 |
| 15000 | 1-29/64 | 1.4531 | 4 | 14-7/8 | 9-1/4 |
| 15010 | 1-15/32 | 1.4688 | 4 | 14-7/8 | 9-1/4 |
| 15020 | 1-31/64 | 1.4844 | 4 | 15 | 9-3/8 |
| 15030 | 1-1/2 | 1.5000 | 4 | 15 | 9-3/8 |
| 15040 | 1-17/32 | 1.5312 | 5 | 16-3/8 | 9-3/8 |
| 15050 | 1-9/16 | 1.5625 | 5 | 16-5/8 | 9-5/8 |
| 15060 | 1-19/32 | 1.5938 | 5 | 16-7/8 | 9-7/8 |
| 15070 | 1-5/8 | 1.6250 | 5 | 17 | 10 |
| 15080 | 1-21/32 | 1.6562 | 5 | 17-1/8 | 10-1/8 |
| 15090 | 1-11/16 | 1.6875 | 5 | 17-1/8 | 10-1/8 |
| 15100 | 1-23/32 | 1.7188 | 5 | 17-1/8 | 10-1/8 |
| 15110 | 1-3/4 | 1.7500 | 5 | 17-1/8 | 10-1/8 |
| 15120 | 1-25/32 | 1.7812 | 5 | 17-1/8 | 10-1/8 |
| 15130 | 1-13/16 | 1.8125 | 5 | 17-1/8 | 10-1/8 |
| 15140 | 1-27/32 | 1.8438 | 5 | 17-1/8 | 10-1/8 |
| 15150 | 1-7/8 | 1.8750 | 5 | 17-3/8 | 10-3/8 |
| 15160 | 1-29/32 | 1.9062 | 5 | 17-3/8 | 10-3/8 |
| 15170 | 1-15/16 | 1.9375 | 5 | 17-3/8 | 10-3/8 |
| 15180 | 1-31/32 | 1.9688 | 5 | 17-3/8 | 10-3/8 |
| 15190 | 2" | 2.0000 | 5 | 17-3/8 | 10-3/8 |
| 15200 | 2-1/32 | 2.0312 | 5 | 17-3/8 | 10-3/8 |
| 15210 | 2-1/16 | 2.0625 | 5 | 17-3/8 | 10-1/4 |
| 15220 | 2-3/32 | 2.0938 | 5 | 17-3/8 | 10-1/4 |
| 15230 | 2-1/8 | 2.1250 | 5 | 17-3/8 | 10-1/4 |
| 15240 | 2-5/32 | 2.1562 | 5 | 17-3/8 | 10-1/4 |
| 15250 | 2-3/16 | 2.1875 | 5 | 17-3/8 | 10-1/4 |
| 15260 | 2-7/32 | 2.2188 | 5 | 17-3/8 | 10-1/8 |
| 15270 | 2-1/4 | 2.2500 | 5 | 17-3/8 | 10-1/8 |
| 15280 | 2-5/16 | 2.3125 | 5 | 17-3/8 | 10-1/8 |
| 15290 | 2-3/8 | 2.3750 | 5 | 17-3/8 | 10-1/8 |
| 15300 | 2-7/16 | 2.4375 | 5 | 18-3/4 | 11-1/4 |
| 15310 | 2-1/2 | 2.5000 | 5 | 18-3/4 | 11-1/4 |

Letter sizes continued on page 49

Taper Shank

HSS TAPER SHANK - REGULAR

Type 500

High-Speed Steel Taper Shank
Shank Smaller than Regular - Black Oxide

- Taper shank drills are made to fit tapered holders.
- They are designed to perform well under a variety of normal conditions in a wide range of materials.
- Packaged individually.



Type 510 - Continued

High-Speed Steel Taper Shank Regular Shank - Black Oxide

LETTER

| Part # | Letter Size | Decimal Equivalent Inches | Taper Shank | Overall Length Inches | Flute Length Inches |
|--------|-------------|---------------------------|-------------|-----------------------|---------------------|
| 15700 | A | .234 | 1 | 6-1/8 | 2-7/8 |
| 15710 | B | .238 | 1 | 6-1/8 | 2-7/8 |
| 15720 | C | .242 | 1 | 6-1/8 | 2-7/8 |
| 15730 | D | .246 | 1 | 6-1/8 | 2-7/8 |
| 15740 | E | .250 | 1 | 6-1/8 | 2-7/8 |
| 15750 | F | .257 | 1 | 6-1/4 | 3 |
| 15760 | G | .261 | 1 | 6-1/4 | 3 |
| 15770 | H | .266 | 1 | 6-1/4 | 3 |
| 15780 | I | .272 | 1 | 6-1/4 | 3 |
| 15790 | J | .277 | 1 | 6-1/4 | 3 |
| 15800 | K | .281 | 1 | 6-1/4 | 3 |
| 15810 | L | .290 | 1 | 6-3/8 | 3-1/8 |
| 15820 | M | .295 | 1 | 6-3/8 | 3-1/8 |
| 15830 | N | .302 | 1 | 6-3/8 | 3-1/8 |
| 15840 | O | .316 | 1 | 6-1/2 | 3-1/4 |
| 15850 | P | .323 | 1 | 6-1/2 | 3-1/4 |
| 15860 | Q | .332 | 1 | 6-1/2 | 3-1/4 |
| 15870 | R | .339 | 1 | 6-1/2 | 3-1/4 |
| 15880 | S | .348 | 1 | 6-3/4 | 3-1/2 |
| 15890 | T | .358 | 1 | 6-3/4 | 3-1/2 |
| 15900 | U | .368 | 1 | 6-3/4 | 3-1/2 |
| 15910 | V | .377 | 1 | 7 | 3-5/8 |
| 15920 | W | .386 | 1 | 7 | 3-5/8 |
| 15930 | X | .397 | 1 | 7 | 3-5/8 |
| 15940 | Y | .404 | 1 | 7 | 3-5/8 |
| 15950 | Z | .413 | 1 | 7-1/4 | 3-7/8 |

Type 520

High-Speed Steel Taper Shank
Shank Larger than Regular - Black Oxide

- Taper shank drills are made to fit tapered holders.
- They are designed to perform well under a variety of normal conditions in a wide range of materials.
- Packaged individually.



FRACTIONAL

| Part# | Diameter Inches | Decimal Equivalent Inches | Taper Shank | Overall Length Inches | Flute Length Inches |
|-------|-----------------|---------------------------|-------------|-----------------------|---------------------|
| 15450 | 3/8" | .3750 | 2 | 7-3/8 | 3-1/2 |
| 15460 | 25/64 | .3906 | 2 | 7-1/2 | 3-5/8 |
| 15470 | 13/32 | .4062 | 2 | 7-1/2 | 3-5/8 |
| 15480 | 27/64 | .4219 | 2 | 7-3/4 | 3-7/8 |
| 15490 | 7/16" | .4375 | 2 | 7-3/4 | 3-7/8 |
| 15500 | 29/64 | .4531 | 2 | 8 | 4-1/8 |
| 15510 | 15/32 | .4688 | 2 | 8 | 4-1/8 |
| 15520 | 41/64 | .6406 | 3 | 9-3/4 | 5-1/8 |
| 15530 | 21/32 | .6262 | 3 | 9-3/4 | 5-1/8 |
| 15540 | 43/64 | .6719 | 3 | 10 | 5-3/8 |
| 15550 | 11/16" | .6875 | 3 | 10 | 5-3/8 |
| 15560 | 45/64 | .7031 | 3 | 10-1/4 | 5-5/8 |
| 15570 | 23/32 | .7188 | 3 | 10-1/4 | 5-5/8 |
| 15580 | 47/64 | .7344 | 3 | 10-1/2 | 5-7/8 |
| 15590 | 3/4" | .7500 | 3 | 10-1/2 | 5-7/8 |
| 15600 | 49/64 | .7656 | 3 | 10-5/8 | 6 |
| 15610 | 25/32 | .7812 | 3 | 10-5/8 | 6 |
| 15620 | 1" | 1.0000 | 4 | 12 | 6-3/8 |
| 15630 | 1-1/32 | 1.0312 | 4 | 12-1/8 | 6-1/2 |
| 15640 | 1-1/16 | 1.0625 | 4 | 12-1/4 | 6-5/8 |

FRACTIONAL

| Part # | Diameter Inches | Decimal Equivalent Inches | Taper Shank | Overall Length Inches | Flute Length Inches |
|--------|-----------------|---------------------------|-------------|-----------------------|---------------------|
| 16050 | 31/64 | .4844 | 1 | 7-3/4 | 4-3/8 |
| 16060 | 1/2" | .5000 | 1 | 7-3/4 | 4-3/8 |
| 16070 | 33/64 | .5156 | 1 | 8 | 4-5/8 |
| 16080 | 17/32 | .5312 | 1 | 8 | 4-5/8 |
| 16090 | 35/64 | .5469 | 1 | 8-1/4 | 4-7/8 |
| 16100 | 9/16" | .5625 | 1 | 8-1/4 | 4-7/8 |
| 16110 | 51/64 | .7969 | 2 | 10 | 6-1/8 |
| 16120 | 13/16 | .8125 | 2 | 10 | 6-1/8 |
| 16130 | 53/64 | .8281 | 2 | 10 | 6-1/8 |
| 16140 | 27/32 | .8438 | 2 | 10 | 6-1/8 |
| 16150 | 55/64 | .8594 | 2 | 10 | 6-1/8 |
| 16160 | 7/8" | .8750 | 2 | 10 | 6-1/8 |
| 16170 | 57/64 | .8906 | 2 | 10 | 6-1/8 |
| 16180 | 29/32 | .9062 | 2 | 10 | 6-1/8 |
| 16190 | 1-5/64 | 1.0781 | 3 | 11-1/2 | 6-7/8 |
| 16200 | 1-3/32 | 1.0938 | 3 | 11-1/2 | 6-7/8 |
| 16210 | 1-7/64 | 1.1094 | 3 | 11-3/4 | 7-1/8 |
| 16220 | 1-1/8 | 1.1250 | 3 | 11-3/4 | 7-1/8 |
| 16230 | 1-9/64 | 1.1406 | 3 | 11-7/8 | 7-1/4 |
| 16240 | 1-5/32 | 1.1562 | 3 | 11-7/8 | 7-1/4 |
| 16250 | 1-11/64 | 1.1719 | 3 | 12 | 7-3/8 |
| 16260 | 1-3/16 | 1.1875 | 3 | 12 | 7-3/8 |
| 16270 | 1-13/64 | 1.2031 | 3 | 12-1/8 | 7-1/2 |
| 16280 | 1-7/32 | 1.2188 | 3 | 12-1/8 | 7-1/2 |
| 16290 | 1-15/64 | 1.2344 | 3 | 12-1/2 | 7-7/8 |
| 16300 | 1-1/4 | 1.2500 | 3 | 12-1/2 | 7-7/8 |
| 16320 | 1-17/32 | 1.5312 | 4 | 15 | 9-3/8 |
| 16340 | 1-9/16 | 1.5625 | 4 | 15-1/4 | 9-5/8 |
| 16360 | 1-19/32 | 1.5938 | 4 | 15-1/2 | 9-7/8 |
| 16380 | 1-5/8 | 1.6250 | 4 | 15-5/8 | 10 |
| 16400 | 1-21/32 | 1.6562 | 4 | 15-3/4 | 10-1/8 |
| 16420 | 1-11/16 | 1.6875 | 4 | 15-3/4 | 10-1/8 |
| 16440 | 1-23/32 | 1.7188 | 4 | 15-3/4 | 10-1/8 |
| 16460 | 1-3/4 | 1.7500 | 4 | 16-1/4 | 10-3/8 |
| 16470 | 1-25/32 | 1.7812 | 4 | 16-1/4 | 10-3/8 |
| 16480 | 1-13/16 | 1.8125 | 4 | 16-1/4 | 10-3/8 |
| 16490 | 1-27/32 | 1.8438 | 4 | 16-1/4 | 10-3/8 |
| 16500 | 1-7/8 | 1.8750 | 4 | 16-1/2 | 10-1/2 |
| 16510 | 1-29/32 | 1.9062 | 4 | 16-1/2 | 10-1/2 |
| 16520 | 1-15/16 | 1.9375 | 4 | 16-5/8 | 10-5/8 |
| 16530 | 1-31/32 | 1.9688 | 4 | 16-5/8 | 10-5/8 |
| 16540 | 2" | 2.0000 | 4 | 16-5/8 | 10-5/8 |

HSS Taper Shank - Smaller than Regular & Larger than Regular

Jobber Blank

DRILL BLANK

Type 240-DB

Jobbers Length

Hardened and Ground - Bright Finish

- Fully hardened drill blanks typically used as hole size and bushing gauges.

- May also be used as guide pins for die sets.

Tolerances: +.0000 -.0005 thru 1/4" +.0000 -.0007 over 1/4"

FRACTIONAL

| Part # | Diameter Inches | Overall Length Inches | Qty. per/pack |
|--------|-----------------|-----------------------|---------------|
| 02769 | 1/32 | 1-3/8 | 12 |
| 02779 | 3/64 | 1-3/4 | 12 |
| 02789 | 1/16 | 1-7/8 | 12 |
| 02799 | 5/64 | 2 | 12 |
| 02809 | 3/32 | 2-1/4 | 12 |
| 02819 | 7/64 | 2-5/8 | 12 |
| 02829 | 1/8 | 2-3/4 | 12 |
| 02839 | 9/64 | 2-7/8 | 12 |
| 02849 | 5/32 | 3-1/8 | 12 |
| 02859 | 11/64 | 3-1/4 | 12 |
| 02869 | 3/16 | 3-1/2 | 12 |
| 02879 | 13/64 | 3-5/8 | 12 |
| 02889 | 7/32 | 3-3/4 | 12 |
| 02899 | 15/64 | 3-7/8 | 12 |
| 02909 | 1/4 | 4 | 12 |
| 16919 | 17/64 | 4-1/8 | 12 |
| 16929 | 9/32 | 4-1/4 | 12 |
| 16939 | 19/64 | 4-3/8 | 6 |
| 16949 | 5/16 | 4-1/2 | 6 |
| 16959 | 21/64 | 4-5/8 | 6 |
| 16969 | 11/32 | 4-3/4 | 6 |
| 16979 | 23/64 | 4-7/8 | 6 |
| 16989 | 3/8 | 5 | 6 |
| 16999 | 25/64 | 5-1/8 | 6 |
| 17009 | 13/32 | 5-1/4 | 6 |
| 17019 | 27/64 | 5-3/8 | 6 |
| 17029 | 7/16 | 5-1/2 | 6 |
| 17039 | 29/64 | 5-5/8 | 6 |
| 17049 | 15/32 | 5-3/4 | 6 |
| 17059 | 31/64 | 5-7/8 | 6 |
| 17069 | 1/2 | 6 | 6 |

LETTER

| Part # | Letter Sizes | Qty. per/pack |
|--------|--------------|---------------|
| 02419 | A | 12 |
| 02429 | B | 12 |
| 02439 | C | 12 |
| 02449 | D | 12 |
| 02459 | E | 12 |
| 02469 | F | 12 |
| 02479 | G | 12 |
| 02489 | H | 12 |
| 02499 | I | 12 |
| 02509 | J | 12 |
| 02519 | K | 12 |
| 02529 | L | 12 |
| 02539 | M | 6 |
| 02549 | N | 6 |
| 02559 | O | 6 |
| 02569 | P | 6 |
| 02579 | Q | 6 |
| 02589 | R | 6 |
| 02599 | S | 6 |
| 02609 | T | 6 |
| 02619 | U | 6 |
| 02629 | V | 6 |
| 02639 | W | 6 |
| 02649 | X | 6 |
| 02659 | Y | 6 |
| 26960 | Z | 6 |

WIRE

| Part # | Wire Sizes | Overall Length Inches | Qty. per/pack |
|--------|------------|-----------------------|---------------|
| 03199 | 1 | 3-7/8 | 12 |
| 03209 | 2 | 3-7/8 | 12 |
| 03219 | 3 | 3-3/4 | 12 |
| 03229 | 4 | 3-3/4 | 12 |
| 03239 | 5 | 3-3/4 | 12 |
| 03249 | 6 | 3-3/4 | 12 |
| 03259 | 7 | 3-5/8 | 12 |
| 03269 | 8 | 3-5/8 | 12 |
| 03279 | 9 | 3-5/8 | 12 |
| 03289 | 10 | 3-5/8 | 12 |
| 03299 | 11 | 3-1/2 | 12 |
| 03309 | 12 | 3-1/2 | 12 |
| 03319 | 13 | 3-1/2 | 12 |
| 03329 | 14 | 3-3/8 | 12 |
| 03339 | 15 | 3-3/8 | 12 |
| 03349 | 16 | 3-3/8 | 12 |
| 03359 | 17 | 3-3/8 | 12 |
| 03369 | 18 | 3-1/4 | 12 |
| 03379 | 19 | 3-1/4 | 12 |
| 03389 | 20 | 3-1/4 | 12 |
| 03399 | 21 | 3-1/4 | 12 |
| 03409 | 22 | 3-1/8 | 12 |
| 03419 | 23 | 3-1/8 | 12 |
| 03429 | 24 | 3-1/8 | 12 |
| 03439 | 25 | 3" | 12 |
| 03449 | 26 | 3" | 12 |
| 03459 | 27 | 3" | 12 |
| 03469 | 28 | 2-7/8 | 12 |
| 03479 | 29 | 2-7/8 | 12 |
| 03489 | 30 | 2-3/4 | 12 |
| 03499 | 31 | 2-3/4 | 12 |
| 03509 | 32 | 2-3/4 | 12 |
| 03519 | 33 | 2-5/8 | 12 |
| 03529 | 34 | 2-5/8 | 12 |
| 03539 | 35 | 2-5/8 | 12 |
| 03549 | 36 | 2-1/2 | 12 |
| 03559 | 37 | 2-1/2 | 12 |
| 03569 | 38 | 2-1/2 | 12 |
| 03579 | 39 | 2-3/8 | 12 |
| 03589 | 40 | 2-3/8 | 12 |
| 03599 | 41 | 2-3/8 | 12 |
| 03609 | 42 | 2-1/4 | 12 |
| 03619 | 43 | 2-1/4 | 12 |
| 03629 | 44 | 2-1/8 | 12 |
| 03639 | 45 | 2-1/8 | 12 |
| 03649 | 46 | 2-1/8 | 12 |
| 03659 | 47 | 2" | 12 |
| 03669 | 48 | 2" | 12 |
| 03679 | 49 | 2" | 12 |
| 03689 | 50 | 2" | 12 |
| 03699 | 51 | 2" | 12 |
| 03709 | 52 | 1-7/8 | 12 |
| 03719 | 53 | 1-7/8 | 12 |
| 03729 | 54 | 1-7/8 | 12 |
| 03739 | 55 | 1-7/8 | 12 |
| 03749 | 56 | 1-3/4 | 12 |
| 03759 | 57 | 1-3/4 | 12 |
| 03769 | 58 | 1-5/8 | 12 |
| 03779 | 59 | 1-5/8 | 12 |
| 03789 | 60 | 1-5/8 | 12 |
| 03799 | 61 | 1-5/8 | 12 |
| 03809 | 62 | 1-1/2 | 12 |
| 03819 | 63 | 1-1/2 | 12 |
| 03829 | 64 | 1-1/2 | 12 |
| 03839 | 65 | 1-1/2 | 12 |
| 03849 | 66 | 1-3/8 | 12 |
| 03859 | 67 | 1-3/8 | 12 |
| 03869 | 68 | 1-3/8 | 12 |
| 03879 | 69 | 1-3/8 | 12 |
| 03889 | 70 | 1-1/4 | 12 |
| 03899 | 71 | 1-1/4 | 12 |
| 03919 | 72 | 1-1/8 | 12 |
| 03929 | 73 | 1-1/8 | 12 |
| 03939 | 74 | 1" | 12 |
| 03949 | 75 | 1" | 12 |
| 03959 | 76 | 7/8 | 12 |
| 03969 | 77 | 7/8 | 12 |
| 03979 | 78 | 7/8 | 12 |
| 03989 | 79 | 3/4 | 12 |
| 03999 | 80 | 3/4 | 12 |

Decimal Equivalent & Tap Drill Sizes Chart

| Drill Size | Decimal | Drill Size | Decimal | Drill Size | Decimal | Drill Size | Decimal | Drill Size | Decimal |
|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| 0.10 | .0039 | 54 | .0550 | 26 | .1470 | 17/64 | .2656 | 11.50 | .4528 |
| 97 | .0059 | 1.40 | .0551 | 25 | .1495 | H | .2660 | 29/64 | .4531 |
| 96 | .0063 | 1.45 | .0571 | 3.80 | .1496 | 6.80 | .2677 | 11.80 | .4646 |
| 95 | .0067 | 1.50 | .0591 | 24 | .1520 | 6.90 | .2717 | 15/32 | .4688 |
| 94 | .0071 | 53 | .0595 | 3.90 | .1535 | I | .2720 | 12.00 | .4724 |
| 93 | .0075 | 1.55 | .0610 | 23 | .1540 | 7.00 | .2756 | 12.20 | .4803 |
| 92 | .0079 | 1/16 | .0625 | 5/32 | .1562 | J | .2770 | 31/64 | .4844 |
| 0.20 | .0079 | 1.60 | .0630 | 22 | .1570 | 7.10 | .2795 | 12.50 | .4921 |
| 91 | .0083 | 52 | .0635 | 4.00 | .1575 | K | .2810 | 1/2 | .5000 |
| 90 | .0087 | 1.65 | .0650 | 21 | .1590 | 9/32 | .2812 | 13.00 | .5118 |
| 89 | .0091 | 1.70 | .0669 | 20 | .1610 | 7.20 | .2835 | 33/64 | .5156 |
| 88 | .0095 | 51 | .0670 | 4.10 | .1614 | 7.30 | .2874 | 17/32 | .5312 |
| 87 | .0100 | 1.75 | .0689 | 4.20 | .1654 | L | .2900 | 13.50 | .5315 |
| 86 | .0105 | 50 | .0700 | 19 | .1660 | 7.40 | .2913 | 35/64 | .5469 |
| 85 | .0110 | 1.80 | .0709 | 4.30 | .1693 | M | .2950 | 14.00 | .5512 |
| 84 | .0115 | 1.85 | .0728 | 18 | .1695 | 7.50 | .2953 | 9/16 | .5625 |
| 0.30 | .0118 | 49 | .0730 | 11/64 | .1719 | 19/64 | .2969 | 14.50 | .5709 |
| 83 | .0120 | 1.90 | .0748 | 17 | .1730 | 7.60 | .2992 | 37/64 | .5781 |
| 82 | .0125 | 48 | .0760 | 4.40 | .1732 | N | .3020 | 15.00 | .5906 |
| 81 | .0130 | 1.95 | .0768 | 16 | .1770 | 7.70 | .3031 | 19/32 | .5938 |
| 80 | .0135 | 5/64 | .0781 | 4.50 | .1772 | 7.80 | .3071 | 39/64 | .6094 |
| 0.35 | .0138 | 47 | .0785 | 15 | .1800 | 7.90 | .3110 | 15.50 | .6102 |
| 79 | .0145 | 2.00 | .0787 | 4.60 | .1811 | 5/16 | .3125 | 5/8 | .6250 |
| 1/64 | .0156 | 2.05 | .0807 | 14 | .1820 | 8.00 | .3150 | 16.00 | .6299 |
| 0.40 | .0157 | 46 | .0810 | 13 | .1850 | O | .3160 | 41/64 | .6406 |
| 78 | .0160 | 45 | .0820 | 4.70 | .1850 | 8.10 | .3189 | 16.50 | .6496 |
| 0.45 | .0177 | 2.10 | .0827 | 3/16 | .1875 | 8.20 | .3228 | 21/32 | .6562 |
| 77 | .0180 | 2.15 | .0846 | 12 | .1890 | P | .3230 | 17.00 | .6693 |
| 0.50 | .0197 | 44 | .0860 | 4.80 | .1890 | 8.30 | .3268 | 43/64 | .6719 |
| 76 | .0200 | 2.20 | .0866 | 11 | .1910 | 21/64 | .3281 | 11/16 | .6875 |
| 75 | .0210 | 2.25 | .0886 | 4.90 | .1929 | 8.40 | .3307 | 17.50 | .6890 |
| 0.55 | .0217 | 43 | .0890 | 10 | .1935 | Q | .3320 | 45/64 | .7031 |
| 74 | .0225 | 2.30 | .0906 | 9 | .1960 | 8.50 | .3346 | 18.00 | .7087 |
| 0.60 | .0236 | 2.35 | .0925 | 5.00 | .1969 | 8.60 | .3386 | 23/32 | .7188 |
| 73 | .0240 | 42 | .0935 | 8 | .1990 | R | .3390 | 18.50 | .7283 |
| 72 | .0250 | 3/32 | .0938 | 5.10 | .2008 | 8.70 | .3425 | 47/64 | .7344 |
| 0.65 | .0256 | 2.40 | .0945 | 7 | .2010 | 11/32 | .3438 | 19.00 | .7480 |
| 71 | .0260 | 41 | .0960 | 13/64 | .2031 | 8.80 | .3465 | 3/4 | .7500 |
| 0.70 | .0276 | 2.45 | .0965 | 6 | .2040 | S | .3480 | 49/64 | .7656 |
| 70 | .0280 | 40 | .0980 | 5.20 | .2047 | 8.90 | .3504 | 19.50 | .7677 |
| 69 | .0292 | 2.50 | .0984 | 5 | .2055 | 9.00 | .3543 | 25/32 | .7812 |
| 0.75 | .0295 | 39 | .0995 | 5.30 | .2087 | T | .3580 | 20.00 | .7874 |
| 68 | .0310 | 38 | .1015 | 4 | .2090 | 9.10 | .3583 | 51/64 | .7969 |
| 1/32 | .0312 | 2.60 | .1024 | 5.40 | .2126 | 23/64 | .3594 | 20.50 | .8071 |
| 0.80 | .0315 | 37 | .1040 | 3 | .2130 | 9.20 | .3622 | 13/16 | .8125 |
| 67 | .0320 | 2.70 | .1063 | 5.50 | .2165 | 9.30 | .3661 | 21.00 | .8268 |
| 66 | .0330 | 36 | .1065 | 7/32 | .2188 | U | .3680 | 53/64 | .8281 |
| 0.85 | .0335 | 7/64 | .1094 | 5.60 | .2205 | 9.40 | .3701 | 27/32 | .8438 |
| 65 | .0350 | 35 | .1100 | 2 | .2210 | 9.50 | .3740 | 21.50 | .8465 |
| 0.90 | .0354 | 2.80 | .1102 | 5.70 | .2244 | 3/8 | .3750 | 55/64 | .8594 |
| 64 | .0360 | 34 | .1110 | 1 | .2280 | V | .3770 | 22.00 | .8661 |
| 63 | .0370 | 33 | .1130 | 5.80 | .2283 | 9.60 | .3780 | 7/8 | .8750 |
| 0.95 | .0374 | 2.90 | .1142 | 5.90 | .2323 | 9.70 | .3819 | 22.50 | .8858 |
| 62 | .0380 | 32 | .1160 | A | .2340 | 9.80 | .3858 | 57/64 | .8906 |
| 61 | .0390 | 3.00 | .1181 | 15/64 | .2344 | W | .3860 | 23.00 | .9055 |
| 1.00 | .0394 | 31 | .1200 | 6.00 | .2362 | 9.90 | .3898 | 29/32 | .9062 |
| 60 | .0400 | 3.10 | .1220 | B | .2380 | 25/64 | .3906 | 59/64 | .9219 |
| 59 | .0410 | 1/8 | .1250 | 6.10 | .2402 | 10.00 | .3937 | 23.50 | .9252 |
| 1.05 | .0413 | 3.20 | .1260 | C | .2420 | X | .3970 | 15/16 | .9375 |
| 58 | .0420 | 3.25 | .1280 | 6.20 | .2441 | 10.20 | .4016 | 24.00 | .9449 |
| 57 | .0430 | 30 | .1285 | D | .2460 | Y | .4040 | 61/64 | .9531 |
| 1.10 | .0433 | 3.30 | .1299 | 6.30 | .2480 | 10.30 | .4058 | 24.50 | .9646 |
| 1.15 | .0453 | 3.40 | .1339 | 1/4 | .2500 | 13/32 | .4062 | 31/32 | .9688 |
| 56 | .0465 | 29 | .1360 | E | .2500 | Z | .4130 | 25.00 | .9843 |
| 3/64 | .0469 | 3.50 | .1378 | 6.40 | .2520 | 10.50 | .4134 | 63/64 | .9844 |
| 1.20 | .0472 | 28 | .1405 | 6.50 | .2559 | 27/64 | .4219 | 1" | 1.0000 |
| 1.25 | .0492 | 9/64 | .1406 | F | .2570 | 10.80 | .4252 | | |
| 1.30 | .0512 | 3.60 | .1417 | 6.60 | .2598 | 11.00 | .4331 | | |
| 55 | .0520 | 27 | .1440 | G | .2610 | 7/16 | .4375 | | |
| 1.35 | .0531 | 3.70 | .1457 | 6.70 | .2638 | 11.20 | .4409 | | |

TAP DRILL SIZES

| Thread | Drill | Thread | Drill | Thread | Drill | Thread | Drill | Thread | Drill |
|----------|-------|----------|-------|-----------|-------|----------|-------|---------|-------|
| 0-80 | 3/64 | M3.0-.5 | 2.50M | 12-28 | 14 | 7/16-20 | 25/64 | M18-1.5 | 16.5M |
| M1.6-.35 | 1.25M | 5-40 | 38 | M6.0-1 | 5.0M | M12-1.75 | Y | 3/4-10 | 21/32 |
| 1-64 | 54 | 5-44 | 37 | 1/4-20 | 7 | 1/2-13 | 27/64 | 3/4-16 | 11/16 |
| M1.8-.35 | 1.45M | 6-32 | 36 | 1/4-28 | 3 | M12-1.25 | 10.8M | M20-2.5 | 17.5M |
| 1-72 | 53 | 6-40 | 33 | M7.0-1 | 6.0M | 1/2-20 | 29/64 | M20-1.5 | 18.5M |
| M2.0-.4 | 1.60M | M3.5-.6 | 2.90M | 5/16-18 | F | M14-2 | 12.0M | 7/8-9 | 49/64 |
| 2-56 | 51 | M4.0-.7 | 3.30M | M8.0-1.25 | H | 9/16-12 | 31/64 | M22-2.5 | 19.5M |
| M2.2-.45 | 1.75M | 8-32 | 29 | 5/16-24 | I | M14-1.5 | 12.5M | M22-1.5 | 20.5M |
| 2-64 | 50 | 8-36 | 29 | M8.0-1 | 7.0M | 9/16-18 | 33/64 | 7/8-14 | 13/16 |
| 3-48 | 47 | M4.5-.75 | 26 | 3/8-16 | 5/16 | M16-2 | 14.0M | M24-3 | 21.0M |
| M2.5-.45 | 2.05M | 10-24 | 25 | 3/8-24 | Q | 5/8-11 | 17/32 | M24-2 | 22.0M |
| 3-56 | 45 | 10-32 | 21 | M10-1.5 | 8.5M | M16-1.5 | 14.5M | 1-8 | 7/8 |
| 4-40 | 43 | M5.0-.8 | 4.20M | M10-1.25 | 11/32 | 5/8-18 | 37/64 | 1-12 | 59/64 |
| 4-48 | 42 | 12-24 | 16 | 7/16-14 | U | M18-2.5 | 15.5M | 1-14 | 15/16 |

Drill Feed & Speeds

Different drilling conditions make it impossible to develop any rigid rules for feeds and speeds. The following tables contain guidelines which can be utilized when drilling standard materials. Also, the following "rules of thumb" can be used to determine proper feeds and speeds for drilling ferrous materials (note: varying conditions can easily require adjustments).

Feed equals .001" per revolution for every 1/16" of drill diameter, plus or minus .001" on the total.

Speed equals 80 surface feet per minute in 100 Brinell hardness material and the speed should be reduced 10 surface feet per minute for each additional 50 points Brinell hardness.

Feed and speed rates should be reduced up to 45-50 % when drilling holes deeper than 4 drill diameters.

Recommended Feeds

| RECOMMENDED FEEDS FOR VARIOUS DIAMETER DRILLS | |
|--|-------------------------------|
| Diameter of Drill—Inches | Feed Inches per Revolution |
| Under 1/8 | .001 to .003 |
| 1/8 to 1/4 | .002 to .006 |
| 1/4 to 1/2 | .004 to .010 |
| 1/2 to 1 | .007 to .015 |
| 1 inch and over | .015 to .025 |

NOTE: It is best to start with a moderate speed and feed, increasing either one, or both, after observing the action and condition of the drill.

Recommended Speeds

| RECOMMENDED SPEEDS FOR STANDARD MATERIALS WITH H.S.S. DRILLS | |
|---|----------------------------|
| Material | Recommended Speed (sfm) |
| Aluminum and its Alloys | 200—300 |
| Brass and Bronze (ordinary) | 150—300 |
| Bronze (High Tensile) | 70—150 |
| Die Castings (Zinc Base) | 300—400 |
| Iron—Cast (soft) | 75—125 |
| Cast (medium hard) | 50—100 |
| Hard Chilled | 10—20 |
| Malleable | 80—90 |
| Magnesium and its Alloys | 250—400 |
| Monel Metal or High-Nickel Steel | 30—50 |
| Plastics or Similar Materials | 100—300 |
| Steel— | |
| Mild .2 carbon to .3 carbon | 80—110 |
| Steel .4 carbon to .5 carbon | 70—80 |
| Tool 1.2 carbon | 50—60 |
| Forgings | 40—50 |
| Alloy—300 to 400 Brinell | 20—30 |
| High Tensile (Heat Treated) | |
| 35 to 40 Rockwell "C" | 30—40 |
| 40 to 45 Rockwell "C" | 25—35 |
| 45 to 50 Rockwell "C" | 15—25 |
| 50 to 55 Rockwell "C" | 7—15 |
| Stainless Steel | |
| Free Machining Grades | 30—80 |
| Work Hardening Grades | 15—50 |
| Titanium Alloy Sheet | 50—60 |
| Titanium Alloys | |
| Ti-75A (Commercially Pure) | 50—60 |
| RS-120 | 40—60 |
| Ti-150A | 40—50 |
| Ti-140A | 30—40 |
| RC-130B | 30—40 |
| MST 6A1-4 Va. | 20—35 |
| MST 3A1-5 Cr. | 10—20 |

Formulas

- R.P.M.** = (3.8197 / Drill Diameter) x S.F.M.
- S.F.M.** = 0.2618 x Drill Diameter x R.P.M.
- I.P.M.** = I.P.R. (feed) x R.P.M. (speed)
- Machine Time (seconds) = (60 x Feed minus Stroke) / I.P.M.

R.P.M. = Revolutions Per Minute

I.P.R. = Inches Per Revolution

S.F.M. = Surface Feet Per Minute

Feed Stroke = Drill Depth + 1/3

I.P.M. = Inches Per Minute

Car Reamer = 1/2 Speed of Drill

Cutting Speed

| DRILL SIZE | CUTTING SPEED — FEET PER MINUTE | | | | |
|---------------|---------------------------------|------|-------|--------|-------|
| | 20 | 40 | 60 | 80 | 100 |
| | REVOLUTIONS | | PER | MINUTE | |
| | (000) | | | | |
| 1/64 | 4.89 | 9.78 | 14.78 | 19.72 | 24.45 |
| 1/16 | 1.22 | 2.44 | 3.70 | 4.93 | 6.11 |
| 1/8 | .61 | 1.22 | 1.83 | 2.44 | 3.06 |
| 3/16 | .41 | .82 | 1.23 | 1.63 | 2.04 |
| 1/4 | .30 | .61 | .92 | 1.22 | 1.53 |
| 5/16 | .24 | .49 | .74 | .98 | 1.22 |
| 3/8 | .20 | .41 | .61 | .81 | 1.02 |
| 7/16 | .18 | .35 | .52 | .70 | .87 |
| 1/2 | .15 | .31 | .46 | .61 | .76 |
| 9/16 | .14 | .27 | .41 | .54 | .68 |
| 5/8 | .12 | .24 | .37 | .49 | .61 |
| 11/16 | .11 | .22 | .34 | .45 | .56 |
| 3/4 | .10 | .20 | .31 | .41 | .51 |
| 13/16 | .09 | .19 | .28 | .38 | .47 |
| 7/8 | .09 | .18 | .26 | .35 | .44 |
| 15/16 | .08 | .16 | .25 | .33 | .41 |
| 1 | .08 | .15 | .23 | .30 | .38 |

| PROBLEM | CAUSE | CORRECTION |
|------------------------------|--|--|
| BROKEN DRILL | 1. Flutes clogged with chips, drill binds in hole (common in deep holes) | —Use drill with wider flutes and/or faster helix angle —Consider polished flutes —Withdraw drill at regular intervals to clear chips —If chips are not broken up, consider heavier feeds—or a chip breaker design |
| | 2. Drill binding due to worn outer corners | —Repoint or replace drill —Check for excessive speed, inadequate or incorrect coolant, excessive run out as drill enters work |
| | 3. Work insecurely held | —Use adequate holding or clamping devices |
| | 4. Excessive feed | —Reduce feed |
| | 5. Improper point | —Check for correct lip clearance —Use proper type of drill and point for the application |
| | 6. Drill is dull | —Replace before dulling occurs. Check feeds, speeds, and No. 5 for premature dulling |
| BROKEN TANG | 1. Shank or socket damaged | —Repair or replace |
| | 2. Drill not properly seated in socket | —Check for positive, secure fit |
| CHIPS NOT BREAKING UP | 1. Insufficient feed | —Increase feed |
| | 2. Improper style of drill and/or point | —Consider use of chip-breaker design drill and/or chip-breaker point grind |
| DAMAGED POINT | 1. Using hard object to tap drill into socket | —Use soft lead, brass, plastic, etc. hammer |
| | 2. Dropping, mishandling drill | —Handle with care |
| OVERSIZE HOLE | 1. Drill point off center | —Repoint accurately or replace with properly pointed drill |
| | 2. Machine spindle not rigid or not running true | —Repair if possible; consider use of bushing |
| | 3. Work piece loose and/or vibrating | —Tighten and hold securely |
| ROUGH HOLE | 1. Incorrect point grind and/or dull drill | —Repoint or replace with properly pointed drill |
| | 2. Excessive feed | —Reduce feed |
| | 3. Incorrect or insufficient coolant | —Correct and adjust |
| POOR TOOL LIFE | 1. Coolant not reaching drill point or insufficient or incorrect coolant | —Correct and adjust |
| | 2. Speed too high and/or feed too low | —Review and adjust |
| | 3. Wrong type of point and/or drill for application | —Review requirements and conditions |
| WEB SPLITS | 1. Insufficient lip clearance | —Repoint or replace with properly pointed drill |
| | 2. Point thinned too much | —Repoint or replace with properly pointed drill |
| | 3. Excessive feed | —Reduce feed |
| CHIPPED LIPS | 1. Excessive lip clearance and/or heel relief | —Repoint or replace with properly pointed drill |
| BROKEN OUTER CORNERS | 1. Insufficient or incorrect coolant | —Correct and adjust |
| | 2. Excessive speed | —Reduce speed |
| | 3. Scale, hard spots encountered in material | —No final remedy if this condition is prevalent; lower feeds and speeds may help |