# SUPER PRIMALLOY Drill Bits

**SUPER PRIMALLOY - the finest value in maintenance drilling applications**
***"It's not the price of the bit - it's the cost of the hole that counts"***
Super Primalloy drills more holes per bit, drills them faster, drills them easier, drills them in more materials

## SUBSTANTIALLY LONGER CUTTING LIFE

- Nitro-Carburized flute edges have increased Rockwell hardness for longer life
- Superior M-7 alloy and harder cutting edges resist wear and dulling heat for increased service life
- The core of the drill remains resilient M-7 alloy for maximum strength, and flexible toughness, to resist breakage

## DRILLS HARD TO DRILL MATERIALS

- Flatter 135° point angle cuts a smaller chip, allowing the drill torque to be applied to a smaller area for increased efficiency
- Drill bit takes many small bites of hard material resulting in fast penetration in the toughest materials
- Gives outstanding performance even in materials over 30 Rockwell "C"

## WILL NOT WALK OR WANDER

- Split point design gives accurate starting without the use of a center punch
- Prevents surface damage and scratching

## MORE ACCURATE HOLE SIZE

- Self-centering split point keeps the drill rotating evenly, prevents wander and unintentional oversize hole formation
- Higher tolerance construction results in tighter tolerance hole formation. Super Primalloy tolerances are 1/2 of the industry flute grinding tolerances.

## SUPERIOR APPEARANCE / SUPERIOR PERFORMANCE

- Black & gold color sets these drills apart from everyday cutting tools
- Ferro-Gold enhances lubricity for reduced friction and wear
- Black oxide flutes enhance hot chip flow and prevent chip sticking. Draws damaging heat away from the point to protect the cutting tool

## RUNS COOLER / REQUIRES LESS TORQUE / CUTS EASIER

- Flatter 135° point takes a smaller "bite", resulting in less heat in the drill
- Ferro-Gold surface treatment reduces friction and heat even more
- Combination of 135° point and modified web give easier drill penetration

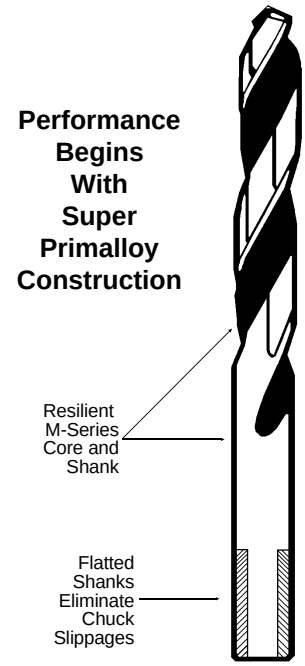
## MAINTENANCE LENGTH

- Reduced length gives greater rigidity and breakage resistance.
- Provides increased drilling control and easier drilling

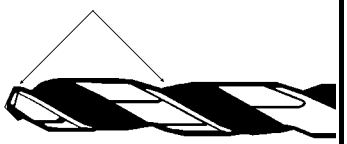
## NO SLIPPAGE IN THE CHUCK

- Flats on the shank (3/16" diameter and up)
- Prevents shank damage that hinders putting drills back in the index and makes it impossible to read the drill size on the shank
- Gives faster, more reliable chucking

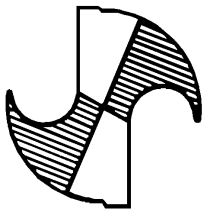
**Performance Begins With Super Primalloy Construction**




Nitro-Carburized Cutting Edges perform like a surface case hardening for ultimate edge holding sharpness



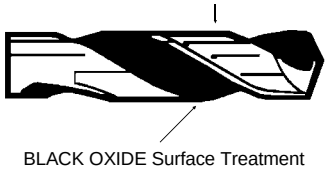
Split point is self-centering to eliminate walking. Requires no center punching



Flatter 135° point angle applies torque to a smaller area for increased drilling efficiency.


135° point takes many small bites quickly to give fast penetration in tough materials


FERRO-GOLD Surface Treatment increases lubricity for reduced friction, heat, and wear



BLACK OXIDE Surface Treatment keeps hot chips flowing quickly away from the point

# SUPER PRIMALLOY Drill Bits

## OUTPERFORMS COBALT IN WORK HARDENING STAINLESS STEEL

- Some alloys, such as 300 series (18-8) stainless steel (except 303), will work harden. When the alloy is stressed, it hardens. Stress can occur in many machining operations, drilling is one of them.
- Cobalt drills have an extra thick web necessary to limit breakage of the brittle cobalt steel
- Super Primalloys are produced from special high molybdenum M-7 tool steel - much tougher than cobalt.
- Cobalt drills, with their thick web, cannot penetrate quick enough to remove material before it work hardens from deformation stress. Because of this the drill is continually drilling into hardened steel.
- Super Primalloys don't require cobalt type web thickness to support the drill. They penetrate work hardening stainless steel quickly, before it hardens. Because these drills are cutting softer steel they cut faster and more efficiently than cobalt on work hardening alloys.
- Cobalt is recommended for free machining stainless steel (400 series and 303), titanium and some high tensile alloys. The high red hardness of cobalt steel counters the large amount of heat generated drilling these alloys. This heat results in loss of heat treat hardness, and subsequent dulling, of many cutting tools.

## FEATURES / BENEFITS

| FEATURES | BENEFITS | ADVANTAGES |
|---|---|---|
| M-Series Alloy Construction | 1. Provides ultimate toughness and resiliency<br>2. Increases edge holding capability | 1. Resists breakage and stress.<br>2. Provides longer drill life in tough maintenance drilling applications |
| Nitro-Carburized Cutting Edges | 1. Acts like a surface case hardening<br>2. Does not penetrate into the core of the drill bit | 1. Increases the surface hardness of cutting edges for superior wear resistance<br>2. Provides longer, faster cutting<br>3. Core remains resilient to absorb stress and prevent breakage |
| Split Point | 1. Provides self-centering capability | 1. Drill will not walk or wander when starting hole<br>2. Eliminates the need for center punching |
| 135° Point Angle | 1. Provides a flatter drill point angle that cuts a smaller chip | 1. Allows the drill torque to be applied to a smaller area for increased efficiency<br>2. Takes many small bites to give fast penetration in the toughest materials |
| Maintenance Length | Reduced length provides greater strength and rigidity | 1. Gives increased breakage resistance<br>2. Reduced length gives increased control and easier drilling |
| Flatted Shanks | Eliminate slippage in the chuck | Prevents damage to the drill bit |
| Smooth Ferro-Gold Surface Treatment On Outer Drill Surfaces | Smooth finish provides increased surface lubricity to reduce binding and friction in the hole | 1. Provides easier, smoother drilling<br>2. Reduces wear on the drill surfaces for increased service life |
| Black Oxide Surface Treatment On Inner Flute Surfaces | Gives a roughened texture that keeps chips from sticking | 1. Moves hot chips quickly away from the point<br>2. Reduces heat build-up at the point to prevent heat induced dulling<br>3. Provides increased service life |