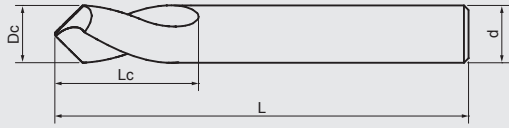


D903 / D904 / D913 / D914 超微粒鎢鋼NC定點鑽頭 90° / 120°

NC Spot Drills 90° / 120°

Two specifications of length.
Drill point angle 90° and 120°.

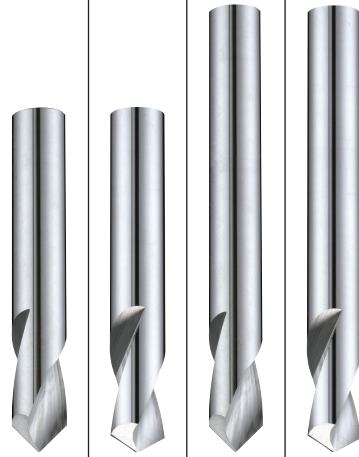
兩種規格長度供選擇。
鑽尖90°和120°供選擇。



VHM Carbide
Uncoated Bright
 D
 2
90°
120°
Steel Cast Iron AL. Copper

Improved strength design for cutting different steels below 48HRC, cast iron, aluminium and copper.
Application for drill positioning and chamfering.

加強度更適用切削48HRC以下的各種鋼材、鑄鐵、鋁合金、銅合金。
適用於鑽孔前定位用及工件倒角。



| | | | |
|---|---|---|---|
| P | P | P | P |
| H | H | H | H |
| K | K | K | K |
| N | N | N | N |

Standard Length

| Dc h6 | Lc mm | L mm | d h6 | D903 90° | D913 120° | | | | |
|----------|----------|---------|---------|-------------|--------------|--|--|--|--|
| 3 | 10 | 38 | 3 | ● | ● | | | | |
| 4 | 12 | 50 | 4 | ● | ● | | | | |
| 5 | 15 | 50 | 5 | ● | ● | | | | |
| 6 | 20 | 60 | 6 | ● | ● | | | | |
| 8 | 25 | 60 | 8 | ● | ● | | | | |
| 10 | 25 | 72 | 10 | ● | ● | | | | |
| 12 | 30 | 75 | 12 | ● | ● | | | | |
| 16 | 35 | 100 | 16 | ● | ● | | | | |
| 20 | 40 | 100 | 20 | ● | ● | | | | |

Long Length

| Dc h6 | Lc mm | L mm | d h6 | | | D904 90° | D914 120° | | |
|----------|----------|---------|---------|--|--|-------------|--------------|--|--|
| 6 | 20 | 100 | 6 | | | ● | ● | | |
| 8 | 25 | 125 | 8 | | | ● | ● | | |
| 10 | 25 | 150 | 10 | | | ● | ● | | |
| 12 | 30 | 150 | 12 | | | ● | ● | | |
| 16 | 35 | 150 | 16 | | | ● | ● | | |
| 20 | 40 | 150 | 20 | | | ● | ● | | |

切削條件

Cutting Conditions

| D903 D904 D913 D914 | D903 | | D904 | | D913 | | D914 | | |
|----------------------------------|-----------------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|----------|
| | | | | | | | | | |
| | cutting speed Vc (m/min) | feed per tooth fz(mm) | cutting speed Vc (m/min) | feed per tooth fz(mm) | cutting speed Vc (m/min) | feed per tooth fz(mm) | cutting speed Vc (m/min) | feed per tooth fz(mm) | |
| Carbon Steel Materials | | | | | | | | | |
| P | GR1 Carbon Steel | 70 | 0.004xDc | 80 | 0.005xDc | 70 | 0.004xDc | 80 | 0.005xDc |
| | GR2 <24HRC Low-alloyed Steel | 60 | 0.004xDc | 70 | 0.005xDc | 60 | 0.004xDc | 70 | 0.005xDc |
| | GR3 <30HRC Hi-alloyed Steel | 50 | 0.004xDc | 60 | 0.004xDc | 50 | 0.004xDc | 60 | 0.004xDc |
| Hardened Steel Materials | | | | | | | | | |
| H | GR4 30-38HRC Hardened Steel | 40 | 0.003xDc | 35 | 0.003xDc | 40 | 0.003xDc | 35 | 0.003xDc |
| | GR5 38-48HRC Hardened Steel | 30 | 0.002xDc | 30 | 0.002xDc | 30 | 0.002xDc | 30 | 0.002xDc |
| Cast Iron Materials | | | | | | | | | |
| K | GR9-1 Grey cast iron | 70 | 0.004xDc | 80 | 0.005xDc | 70 | 0.004xDc | 80 | 0.005xDc |
| | GR9-2 Nodular cast iron | 70 | 0.004xDc | 80 | 0.005xDc | 70 | 0.004xDc | 80 | 0.005xDc |
| Aluminium Steel Materials | | | | | | | | | |
| | GR10-1 Wrought Aluminium alloys | 200 | 0.007xDc | 200 | 0.007xDc | 200 | 0.007xDc | 200 | 0.007xDc |
| | GR10-2 Aluminium cast alloys <10% | 200 | 0.007xDc | 200 | 0.007xDc | 200 | 0.007xDc | 200 | 0.007xDc |
| | GR10-3 Aluminium cast alloys >10% | 180 | 0.007xDc | 180 | 0.007xDc | 180 | 0.007xDc | 180 | 0.007xDc |
| Copper Steel Materials | | | | | | | | | |
| N | GR11-1 Pure Copper | 60 | 0.004xDc | 70 | 0.005xDc | 60 | 0.004xDc | 70 | 0.005xDc |
| | GR11-2 Brass | 70 | 0.004xDc | 80 | 0.005xDc | 70 | 0.004xDc | 80 | 0.005xDc |
| | GR11-2 Bronze | 60 | 0.004xDc | 70 | 0.005xDc | 60 | 0.004xDc | 70 | 0.005xDc |

All cutting data serve for orientation only and should be adapted individually to the technical conditions on location

1. Please work with good rigidity / high precision facilities and collet chuck.
 2. Please choose proper cutting fluid.
 3. The cutting data is reference value only. Please adjust it according to your real working conditions.
 4. If RPM is lower the reference value, the Feed rate [fz] and RPM should be reduced by the same proportion.
 5. If vibration occurs during cutting, please reduce cutting parameter.
1. 請使用剛性好、精度高的設備和夾具。
 2. 請選擇適用於工件材料的切削液。
 3. 此切削條件表中的數值為切削條件的基準值，實際加工時，請考慮加工形狀、目的、使用機台等因素，對切削條件進行調整。
 4. 如果機台轉速低於表中所列數值，則進給速度應與轉速按同一比例降低。
 5. 切削加工時如果發生振顫，請降低切削條件。