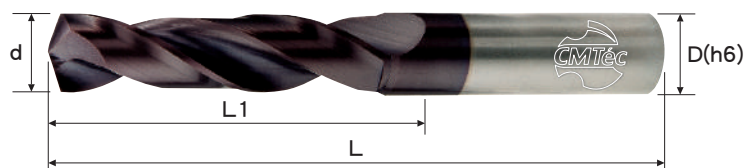


# 鎢鋼高速鑽頭- 短刃型- 2刃(3倍長)

CARBIDE HIGH SPEED DRILLS- End Mill Shank- Short Flute- 2F(3xd)

· CDH20000F



※ 有效加工深度 = 3倍刃徑。  
Cutting effective length = 3xd

※ 其他刃徑公差規格依需求生產。  
Special tolerance(  $\phi$  ) is on request.



| 刃徑 d   | 公差 Tolerance |
|--------|--------------|
| $\phi$ | h7           |

| 刃徑<br>d | 溝長<br>L1 | 全長<br>L | 柄徑<br>D | 刃數<br>F | 白刀訂購編號<br>Uncoated<br>Order No. | 鍍膜訂購編號<br>Coated<br>Order No. |
|---------|----------|---------|---------|---------|---------------------------------|-------------------------------|
| 2.0     | 13       | 50      | 3       | 2       | CDH20200                        | CDH20200F                     |
| 2.1     | 13       | 50      | 3       | 2       | CDH20210                        | CDH20210F                     |
| 2.2     | 15       | 50      | 3       | 2       | CDH20220                        | CDH20220F                     |
| 2.3     | 15       | 50      | 3       | 2       | CDH20230                        | CDH20230F                     |
| 2.4     | 15       | 50      | 3       | 2       | CDH20240                        | CDH20240F                     |
| 2.5     | 16       | 50      | 3       | 2       | CDH20250                        | CDH20250F                     |
| 2.6     | 16       | 50      | 3       | 2       | CDH20260                        | CDH20260F                     |
| 2.7     | 16       | 50      | 3       | 2       | CDH20270                        | CDH20270F                     |
| 2.8     | 18       | 50      | 3       | 2       | CDH20280                        | CDH20280F                     |
| 2.9     | 18       | 50      | 3       | 2       | CDH20290                        | CDH20290F                     |
| 3.0     | 20       | 62      | 3       | 2       | CDH20300                        | CDH20300F                     |
| 3.1     | 20       | 62      | 4       | 2       | CDH20310                        | CDH20310F                     |
| 3.2     | 20       | 62      | 4       | 2       | CDH20320                        | CDH20320F                     |
| 3.3     | 20       | 62      | 4       | 2       | CDH20330                        | CDH20330F                     |
| 3.4     | 20       | 62      | 4       | 2       | CDH20340                        | CDH20340F                     |
| 3.5     | 20       | 62      | 4       | 2       | CDH20350                        | CDH20350F                     |
| 3.6     | 20       | 62      | 4       | 2       | CDH20360                        | CDH20360F                     |
| 3.7     | 20       | 62      | 4       | 2       | CDH20370                        | CDH20370F                     |
| 3.8     | 20       | 62      | 4       | 2       | CDH20380                        | CDH20380F                     |
| 3.9     | 20       | 62      | 4       | 2       | CDH20390                        | CDH20390F                     |
| 4.0     | 24       | 66      | 4       | 2       | CDH20400                        | CDH20400F                     |
| 4.1     | 24       | 66      | 5       | 2       | CDH20410                        | CDH20410F                     |
| 4.2     | 24       | 66      | 5       | 2       | CDH20420                        | CDH20420F                     |
| 4.3     | 24       | 66      | 5       | 2       | CDH20430                        | CDH20430F                     |
| 4.4     | 24       | 66      | 5       | 2       | CDH20440                        | CDH20440F                     |
| 4.5     | 24       | 66      | 5       | 2       | CDH20450                        | CDH20450F                     |
| 4.6     | 24       | 66      | 5       | 2       | CDH20460                        | CDH20460F                     |
| 4.7     | 24       | 66      | 5       | 2       | CDH20470                        | CDH20470F                     |
| 4.8     | 28       | 66      | 5       | 2       | CDH20480                        | CDH20480F                     |
| 4.9     | 28       | 66      | 5       | 2       | CDH20490                        | CDH20490F                     |
| 5.0     | 28       | 66      | 5       | 2       | CDH20500                        | CDH20500F                     |
| 5.1     | 28       | 66      | 6       | 2       | CDH20510                        | CDH20510F                     |
| 5.2     | 28       | 66      | 6       | 2       | CDH20520                        | CDH20520F                     |
| 5.3     | 28       | 66      | 6       | 2       | CDH20530                        | CDH20530F                     |
| 5.4     | 28       | 66      | 6       | 2       | CDH20540                        | CDH20540F                     |
| 5.5     | 28       | 66      | 6       | 2       | CDH20550                        | CDH20550F                     |
| 5.6     | 28       | 66      | 6       | 2       | CDH20560                        | CDH20560F                     |

→ 切削條件表  
Cutting Condition

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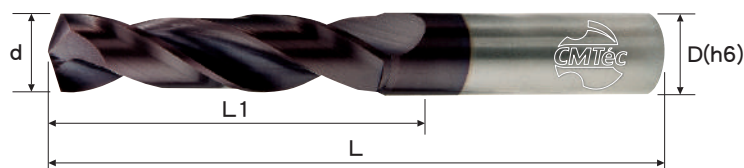
→ 技術資料  
Technical Data

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# 鎢鋼高速鑽頭- 短刃型- 2刃(3倍長)

CARBIDE HIGH SPEED DRILLS- End Mill Shank- Short Flute- 2F(3×d)

· CDH20000F



※ 有效加工深度 = 3倍刃徑。  
Cutting effective length = 3xd

※ 其他刃徑公差規格依需求生產。  
Special tolerance(φ) is on request.

| 刃徑 d | 公差 Tolerance |
|------|--------------|
| φ    | h7           |



| 刃徑<br>d | 溝長<br>L1 | 全長<br>L | 柄徑<br>D | 刃數<br>F | 白刀訂購編號<br>Uncoated<br>Order No. | 鍍膜訂購編號<br>Coated<br>Order No. |
|---------|----------|---------|---------|---------|---------------------------------|-------------------------------|
| 5.7     | 28       | 66      | 6       | 2       | CDH20570                        | CDH20570F                     |
| 5.8     | 28       | 66      | 6       | 2       | CDH20580                        | CDH20580F                     |
| 5.9     | 28       | 66      | 6       | 2       | CDH20590                        | CDH20590F                     |
| 6.0     | 28       | 66      | 6       | 2       | CDH20600                        | CDH20600F                     |
| 6.1     | 34       | 79      | 7       | 2       | CDH20610                        | CDH20610F                     |
| 6.2     | 34       | 79      | 7       | 2       | CDH20620                        | CDH20620F                     |
| 6.3     | 34       | 79      | 7       | 2       | CDH20630                        | CDH20630F                     |
| 6.4     | 34       | 79      | 7       | 2       | CDH20640                        | CDH20640F                     |
| 6.5     | 34       | 79      | 7       | 2       | CDH20650                        | CDH20650F                     |
| 6.6     | 34       | 79      | 7       | 2       | CDH20660                        | CDH20660F                     |
| 6.7     | 34       | 79      | 7       | 2       | CDH20670                        | CDH20670F                     |
| 6.8     | 34       | 79      | 7       | 2       | CDH20680                        | CDH20680F                     |
| 6.9     | 34       | 79      | 7       | 2       | CDH20690                        | CDH20690F                     |
| 7.0     | 34       | 79      | 7       | 2       | CDH20700                        | CDH20700F                     |
| 6.1     | 34       | 79      | 8       | 2       | CDH20610080D                    | CDH20610080DF                 |
| 6.2     | 34       | 79      | 8       | 2       | CDH20620080D                    | CDH20620080DF                 |
| 6.3     | 34       | 79      | 8       | 2       | CDH20630080D                    | CDH20630080DF                 |
| 6.4     | 34       | 79      | 8       | 2       | CDH20640080D                    | CDH20640080DF                 |
| 6.5     | 34       | 79      | 8       | 2       | CDH20650080D                    | CDH20650080DF                 |
| 6.6     | 34       | 79      | 8       | 2       | CDH20660080D                    | CDH20660080DF                 |
| 6.7     | 34       | 79      | 8       | 2       | CDH20670080D                    | CDH20670080DF                 |
| 6.8     | 34       | 79      | 8       | 2       | CDH20680080D                    | CDH20680080DF                 |
| 6.9     | 34       | 79      | 8       | 2       | CDH20690080D                    | CDH20690080DF                 |
| 7.0     | 34       | 79      | 8       | 2       | CDH20700080D                    | CDH20700080DF                 |
| 7.1     | 41       | 79      | 8       | 2       | CDH20710                        | CDH20710F                     |
| 7.2     | 41       | 79      | 8       | 2       | CDH20720                        | CDH20720F                     |
| 7.3     | 41       | 79      | 8       | 2       | CDH20730                        | CDH20730F                     |
| 7.4     | 41       | 79      | 8       | 2       | CDH20740                        | CDH20740F                     |
| 7.5     | 41       | 79      | 8       | 2       | CDH20750                        | CDH20750F                     |
| 7.6     | 41       | 79      | 8       | 2       | CDH20760                        | CDH20760F                     |
| 7.7     | 41       | 79      | 8       | 2       | CDH20770                        | CDH20770F                     |
| 7.8     | 41       | 79      | 8       | 2       | CDH20780                        | CDH20780F                     |
| 7.9     | 41       | 79      | 8       | 2       | CDH20790                        | CDH20790F                     |
| 8.0     | 41       | 79      | 8       | 2       | CDH20800                        | CDH20800F                     |
| 8.1     | 47       | 89      | 9       | 2       | CDH20810                        | CDH20810F                     |
| 8.2     | 47       | 89      | 9       | 2       | CDH20820                        | CDH20820F                     |
| 8.3     | 47       | 89      | 9       | 2       | CDH20830                        | CDH20830F                     |

→ 切削條件表  
Cutting Condition

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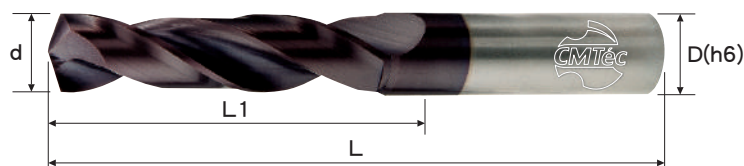
→ 技術資料  
Technical Data

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# 鎢鋼高速鑽頭- 短刃型- 2刃(3倍長)

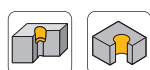
CARBIDE HIGH SPEED DRILLS- End Mill Shank- Short Flute- 2F(3xd)

· CDH20000F



※ 有效加工深度 = 3倍刃徑。  
Cutting effective length = 3xd

※ 其他刃徑公差規格依需求生產。  
Special tolerance(φ) is on request.



| 刃徑 d | 公差 Tolerance |
|------|--------------|
| φ    | h7           |



| 刃徑<br>d | 溝長<br>L1 | 全長<br>L | 柄徑<br>D | 刃數<br>F | 白刀訂購編號<br>Uncoated<br>Order No. | 鍍膜訂購編號<br>Coated<br>Order No. |
|---------|----------|---------|---------|---------|---------------------------------|-------------------------------|
| 8.4     | 47       | 89      | 9       | 2       | CDH20840                        | CDH20840F                     |
| 8.5     | 47       | 89      | 9       | 2       | CDH20850                        | CDH20850F                     |
| 8.6     | 47       | 89      | 9       | 2       | CDH20860                        | CDH20860F                     |
| 8.7     | 47       | 89      | 9       | 2       | CDH20870                        | CDH20870F                     |
| 8.8     | 47       | 89      | 9       | 2       | CDH20880                        | CDH20880F                     |
| 8.9     | 47       | 89      | 9       | 2       | CDH20890                        | CDH20890F                     |
| 9.0     | 47       | 89      | 9       | 2       | CDH20900                        | CDH20900F                     |
| 8.1     | 47       | 89      | 10      | 2       | CDH20810100D                    | CDH20810100DF                 |
| 8.2     | 47       | 89      | 10      | 2       | CDH20820100D                    | CDH20820100DF                 |
| 8.3     | 47       | 89      | 10      | 2       | CDH20830100D                    | CDH20830100DF                 |
| 8.4     | 47       | 89      | 10      | 2       | CDH20840100D                    | CDH20840100DF                 |
| 8.5     | 47       | 89      | 10      | 2       | CDH20850100D                    | CDH20850100DF                 |
| 8.6     | 47       | 89      | 10      | 2       | CDH20860100D                    | CDH20860100DF                 |
| 8.7     | 47       | 89      | 10      | 2       | CDH20870100D                    | CDH20870100DF                 |
| 8.8     | 47       | 89      | 10      | 2       | CDH20880100D                    | CDH20880100DF                 |
| 8.9     | 47       | 89      | 10      | 2       | CDH20890100D                    | CDH20890100DF                 |
| 9.0     | 47       | 89      | 10      | 2       | CDH20900100D                    | CDH20900100DF                 |
| 9.1     | 47       | 89      | 10      | 2       | CDH20910                        | CDH20910F                     |
| 9.2     | 47       | 89      | 10      | 2       | CDH20920                        | CDH20920F                     |
| 9.3     | 47       | 89      | 10      | 2       | CDH20930                        | CDH20930F                     |
| 9.4     | 47       | 89      | 10      | 2       | CDH20940                        | CDH20940F                     |
| 9.5     | 47       | 89      | 10      | 2       | CDH20950                        | CDH20950F                     |
| 9.6     | 47       | 89      | 10      | 2       | CDH20960                        | CDH20960F                     |
| 9.7     | 47       | 89      | 10      | 2       | CDH20970                        | CDH20970F                     |
| 9.8     | 47       | 89      | 10      | 2       | CDH20980                        | CDH20980F                     |
| 9.9     | 47       | 89      | 10      | 2       | CDH20990                        | CDH20990F                     |
| 10.0    | 47       | 89      | 10      | 2       | CDH21000                        | CDH21000F                     |
| 10.2    | 55       | 102     | 11      | 2       | CDH21020                        | CDH21020F                     |
| 10.5    | 55       | 102     | 11      | 2       | CDH21050                        | CDH21050F                     |
| 10.8    | 55       | 102     | 11      | 2       | CDH21080                        | CDH21080F                     |
| 11.0    | 55       | 102     | 11      | 2       | CDH21100                        | CDH21100F                     |
| 10.2    | 55       | 102     | 12      | 2       | CDH21020120D                    | CDH21020120DF                 |
| 10.5    | 55       | 102     | 12      | 2       | CDH21050120D                    | CDH21050120DF                 |
| 10.8    | 55       | 102     | 12      | 2       | CDH21080120D                    | CDH21080120DF                 |
| 11.0    | 55       | 102     | 12      | 2       | CDH21100120D                    | CDH21100120DF                 |
| 11.2    | 55       | 102     | 12      | 2       | CDH21120                        | CDH21120F                     |
| 11.5    | 55       | 102     | 12      | 2       | CDH21150                        | CDH21150F                     |

→ 切削條件表  
Cutting Condition

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→ 技術資料  
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**CARBIDE HIGH SPEED DRILLS- End Mill Shank- Short Flute- 2F(3xd)**

Technical drawing of a double-flute drill bit. The drawing shows the bit's profile with the following dimensions labeled:

- $d$ : Diameter of the drill bit.
- $L_1$ : Length of the cutting edge.
- $L$ : Total length of the drill bit.
- $D(h6)$ : Diameter of the shank, indicating a tolerance of h6.

The brand logo "CMTEC" is visible on the shank.

|        |              |
|--------|--------------|
| 刃徑 d   | 公差 Tolerance |
| $\phi$ | h7           |



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➡ 切削條件表 P.561  
Cutting Condition

→ 技術資料 P.630  
Technical Data

Table 52

CDH 鎢鋼短刃型高速鑽頭- 2刃(3倍長)(鍍膜) 切削條件表

## SOLID CARBIDE DRILLS- DRILLING CONDITION TABLE

| 加工材質<br>Material      | 碳素鋼<br>Carbon Steels                                                                    |               | 合金鋼<br>Alloy Steels |               | 合金鋼<br>Alloy Steels |               | 不銹鋼<br>Stainless Steels |               | 鑄鐵<br>Cast Iron |               |
|-----------------------|-----------------------------------------------------------------------------------------|---------------|---------------------|---------------|---------------------|---------------|-------------------------|---------------|-----------------|---------------|
| 工件料號<br>Material Code | S35C,S45C,S50C                                                                          |               | SCM,SKT,SKD         |               | SCM,SKT,SKD         |               | SUS304                  |               | FC,FCD          |               |
| 硬度<br>Hardness        | HRC<20                                                                                  |               | HRC20~30            |               | HRC30~45            |               | —                       |               | HRC<30          |               |
| 切削速度 Vc               | 120m/min                                                                                |               | 100m/min            |               | 60m/min             |               | 40m/min                 |               | 130m/min        |               |
| 外徑<br>Diameter        | S<br>(rpm)                                                                              | F<br>(mm/min) | S<br>(rpm)          | F<br>(mm/min) | S<br>(rpm)          | F<br>(mm/min) | S<br>(rpm)              | F<br>(mm/min) | S<br>(rpm)      | F<br>(mm/min) |
| 3mm                   | 12,740                                                                                  | 1,040         | 10,620              | 770           | 6,370               | 510           | 4,250                   | 290           | 13,800          | 1,080         |
| 4mm                   | 9,550                                                                                   | 1,040         | 7,960               | 770           | 4,780               | 510           | 3,180                   | 290           | 10,350          | 1,080         |
| 5mm                   | 7,640                                                                                   | 780           | 6,370               | 590           | 3,820               | 380           | 2,550                   | 220           | 8,280           | 810           |
| 6mm                   | 6,370                                                                                   | 780           | 5,310               | 590           | 3,190               | 350           | 2,120                   | 220           | 6,900           | 810           |
| 8mm                   | 4,780                                                                                   | 720           | 3,980               | 540           | 2,390               | 350           | 1,590                   | 200           | 5,180           | 760           |
| 10mm                  | 3,820                                                                                   | 640           | 3,180               | 490           | 1,910               | 320           | 1,270                   | 180           | 4,140           | 680           |
| 12mm                  | 3,180                                                                                   | 600           | 2,650               | 430           | 1,590               | 290           | 1,060                   | 160           | 3,450           | 610           |
| 14mm                  | 2,730                                                                                   | 600           | 2,270               | 430           | 1,370               | 290           | 910                     | 160           | 2,960           | 610           |
| 16mm                  | 2,390                                                                                   | 490           | 1,990               | 380           | 1,190               | 260           | 800                     | 140           | 2,590           | 530           |
| 18mm                  | 2,120                                                                                   | 490           | 1,770               | 380           | 1,060               | 260           | 710                     | 140           | 2,300           | 530           |
| 20mm                  | 1,910                                                                                   | 390           | 1,590               | 300           | 960                 | 210           | 640                     | 110           | 2,070           | 420           |
| 備註<br>Remarks         | ※ 未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。<br>Uncoated Drills Reduce 30% RPM & FEED From Coating One. |               |                     |               |                     |               |                         |               |                 |               |

※ 切削公式 Cutting Formula :  $S(\text{主軸轉速}) = Vc(\text{切削速度}) \times 1000 / D(\text{外徑}) / \pi (3.14)$   $F(\text{進給速度}) = f(\text{每轉進給量}) \times S(\text{主軸轉速})$

Table 53

CDHF 鎢鋼標準型高速鑽頭- 2刃(5倍長)(鍍膜) 切削條件表

## SOLID CARBIDE DRILLS- DRILLING CONDITION TABLE

| 加工材質<br>Material      | 碳素鋼<br>Carbon Steels                                                                    |               | 合金鋼<br>Alloy Steels |               | 合金鋼<br>Alloy Steels |               | 不銹鋼<br>Stainless Steels |               | 鑄鐵<br>Cast Iron |               |
|-----------------------|-----------------------------------------------------------------------------------------|---------------|---------------------|---------------|---------------------|---------------|-------------------------|---------------|-----------------|---------------|
| 工件料號<br>Material Code | S35C,S45C,S50C                                                                          |               | SCM,SKT,SKD         |               | SCM,SKT,SKD         |               | SUS304                  |               | GG40            |               |
| 硬度<br>Hardness        | HRC<20                                                                                  |               | HRC20~30            |               | HRC30~45            |               | —                       |               | HRC<30          |               |
| 切削速度 Vc               | 120m/min                                                                                |               | 100m/min            |               | 60m/min             |               | 40m/min                 |               | 130m/min        |               |
| 外徑<br>Diameter        | S<br>(rpm)                                                                              | F<br>(mm/min) | S<br>(rpm)          | F<br>(mm/min) | S<br>(rpm)          | F<br>(mm/min) | S<br>(rpm)              | F<br>(mm/min) | S<br>(rpm)      | F<br>(mm/min) |
| 3mm                   | 12,740                                                                                  | 930           | 10,620              | 690           | 6,370               | 470           | 4,250                   | 260           | 13,800          | 970           |
| 4mm                   | 9,550                                                                                   | 930           | 7,960               | 690           | 4,780               | 470           | 3,180                   | 260           | 10,350          | 970           |
| 5mm                   | 7,640                                                                                   | 700           | 6,370               | 520           | 3,820               | 350           | 2,550                   | 200           | 8,280           | 730           |
| 6mm                   | 6,370                                                                                   | 700           | 5,310               | 520           | 3,190               | 350           | 2,120                   | 200           | 6,900           | 730           |
| 8mm                   | 4,780                                                                                   | 660           | 3,980               | 490           | 2,390               | 320           | 1,590                   | 180           | 5,180           | 680           |
| 10mm                  | 3,820                                                                                   | 580           | 3,180               | 430           | 1,910               | 280           | 1,270                   | 160           | 4,140           | 610           |
| 12mm                  | 3,180                                                                                   | 530           | 2,650               | 390           | 1,590               | 270           | 1,060                   | 150           | 3,450           | 550           |
| 14mm                  | 2,730                                                                                   | 530           | 2,270               | 390           | 1,370               | 270           | 910                     | 150           | 2,960           | 550           |
| 16mm                  | 2,390                                                                                   | 450           | 1,990               | 350           | 1,190               | 240           | 800                     | 130           | 2,590           | 470           |
| 18mm                  | 2,120                                                                                   | 450           | 1,770               | 350           | 1,060               | 240           | 710                     | 130           | 2,300           | 470           |
| 20mm                  | 1,910                                                                                   | 360           | 1,590               | 280           | 960                 | 190           | 640                     | 100           | 2,070           | 380           |
| 備註<br>Remarks         | ※ 未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。<br>Uncoated Drills Reduce 30% RPM & FEED From Coating One. |               |                     |               |                     |               |                         |               |                 |               |

※ 切削公式 Cutting Formula :  $S(\text{主軸轉速}) = Vc(\text{切削速度}) \times 1000 / D(\text{外徑}) / \pi (3.14)$   $F(\text{進給速度}) = f(\text{每轉進給量}) \times S(\text{主軸轉速})$

- 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
- 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
- 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
- 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統...等而改變。  
These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.