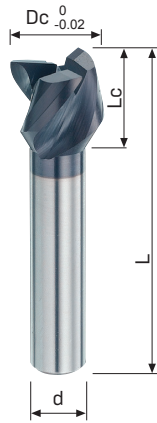


E115HX / E116HX 超微粒鎢鋼塗層短型立銑刀/NC車床用

Short End Mills For Lathe



Work Material

| | | | | | |
|---|---|---|---|---|---|
| P | H | M | K | N | S |
| ● | ● | ● | ● | ○ | ○ |

P 鋼鐵
Steel

H 硬化鋼 <38HRC
Hardened Steel

H 硬化鋼 <48HRC
Hardened Steel

M 不銹鋼
Stainless Steel

N 鋁
Aluminium

N 銅
Copper

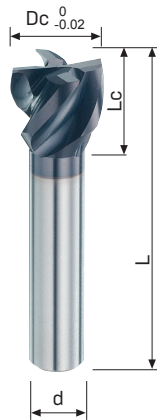
Feature of product:

E115HX 3刃車床動力刀把用立銑刀
E116HX 4刃車床動力刀把用立銑刀
廣泛用於CNC車床搭配動力刀把使用。

搭配高鈹塗層具有優異的耐磨性。
極短的全長可以避免在車床中干涉。

採用同一規格小柄徑設計可提升通用性。

可用於HRC48以下各式鋼鐵材料。



MG
Carbide

AlTiCrN
HX

不等

N

90°

Code No. E115HX-Dc

| Dc 0 -0.02 | Lc mm | L mm | d h6 | AlTiCrN E115HX |
|------------------|----------|---------|---------|-------------------|
| 2 | 6 | 35 | 4 | ● |
| 3 | 6 | 35 | 4 | ● |
| 4 | 6 | 35 | 4 | ● |
| 5 | 6 | 35 | 6 | ● |
| 6 | 6 | 35 | 6 | ● |
| 7 | 6 | 35 | 6 | ● |
| 8 | 6 | 35 | 6 | ● |
| 8A | 6 | 35 | 8 | ● |
| 9 | 6 | 35 | 6 | ● |
| 10 | 6 | 35 | 6 | ● |
| 10A | 6 | 35 | 10 | ● |
| 12 | 6 | 35 | 6 | ● |
| 12A | 6 | 35 | 12 | ● |

MG
Carbide

AlTiCrN
HX

不等

N

90°

Code No. E116HX-Dc

| Dc 0 -0.02 | Lc mm | L mm | d h6 | AlTiCrN E116HX |
|------------------|----------|---------|---------|-------------------|
| 2 | 6 | 35 | 4 | ● |
| 3 | 6 | 35 | 4 | ● |
| 4 | 6 | 35 | 4 | ● |
| 5 | 6 | 35 | 6 | ● |
| 6 | 6 | 35 | 6 | ● |
| 7 | 6 | 35 | 6 | ● |
| 8 | 6 | 35 | 6 | ● |
| 8A | 6 | 35 | 8 | ● |
| 9 | 6 | 35 | 6 | ● |
| 10 | 6 | 35 | 6 | ● |
| 10A | 6 | 35 | 10 | ● |
| 12 | 6 | 35 | 6 | ● |
| 12A | 6 | 35 | 12 | ● |

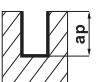
E115HX / E116HX 切削條件參考表

Recommended Milling Conditions

Side Milling 側面切削

| 被削材 Work Material | | GR.1 碳鋼 Carbon Steel | | GR.2 低合金鋼 Low-alloyed Steel (~24HRC) | | GR.3 高合金鋼 Hi-alloyed Steel (~30HRC) | | GR.4 硬化鋼 Hardened Steel (30~38HRC) | | GR.5 硬化鋼 Hardened Steel (38~48HRC) | | GR.8 不銹鋼 Stainless Steel 使用切削液 | |
|----------------------|---|-------------------------|--------------------------|--|--------------------------|---|--------------------------|--|--------------------------|--|--------------------------|--------------------------------------|--------------------------|
| 切削速度 Vc m/min | | 100~120 | | 100~120 | | 100~120 | | 65~80 | | 55~70 | | 55~70 | |
| 型號 Code No. | 刃徑 Dc | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) |
| E115HX/E116HX-3 | 3 | 10,000 | 600 | 10,000 | 600 | 10,000 | 600 | 7,000 | 400 | 7,000 | 400 | 6,000 | 300 |
| E115HX/E116HX-4 | 4 | 7,500 | 600 | 7,500 | 600 | 7,500 | 600 | 5,200 | 400 | 5,200 | 400 | 4,500 | 300 |
| E115HX/E116HX-5 | 5 | 6,000 | 600 | 6,000 | 600 | 6,000 | 600 | 4,200 | 400 | 4,200 | 400 | 3,600 | 300 |
| E115HX/E116HX-6 | 6 | 5,000 | 600 | 5,000 | 600 | 5,000 | 600 | 3,500 | 400 | 3,500 | 400 | 3,000 | 300 |
| E115HX/E116HX-7 | 7 | 4,500 | 560 | 4,500 | 560 | 4,500 | 560 | 3,000 | 360 | 3,000 | 360 | 2,700 | 280 |
| E115HX/E116HX-8 | 8 | 4,000 | 520 | 4,000 | 520 | 4,000 | 520 | 2,800 | 350 | 2,800 | 350 | 2,400 | 260 |
| E115HX/E116HX-9 | 9 | 3,600 | 500 | 3,600 | 500 | 3,600 | 500 | 2,500 | 320 | 2,500 | 320 | 2,200 | 250 |
| E115HX/E116HX-10 | 10 | 3,200 | 450 | 3,200 | 450 | 3,200 | 450 | 2,200 | 300 | 2,200 | 300 | 1,900 | 230 |
| E115HX/E116HX-12 | 12 | 2,700 | 410 | 2,700 | 410 | 2,700 | 410 | 1,900 | 270 | 1,900 | 270 | 1,600 | 210 |
| 切入深度 (mm) |  | ap:1.0D | | ap:1.0D | | ap:1.0D | | ap:1.0D | | ap:1.0D | | ap:1.0D | |
| | | ae:0.2D | | ae:0.2D | | ae:0.2D | | ae:0.2D | | ae:0.2D | | ae:0.2D | |

Slotting 溝切削

| 被削材 Work Material | | GR.1 碳鋼 Carbon Steel | | GR.2 低合金鋼 Low-alloyed Steel (~24HRC) | | GR.3 高合金鋼 Hi-alloyed Steel (~30HRC) | | GR.4 硬化鋼 Hardened Steel (30~38HRC) | | GR.5 硬化鋼 Hardened Steel (38~48HRC) | | GR.8 不銹鋼 Stainless Steel | |
|----------------------|---|-------------------------|--------------------------|--|--------------------------|---|--------------------------|--|--------------------------|--|--------------------------|-----------------------------|--------------------------|
| 切削速度 Vc m/min | | 100~120 | | 100~120 | | 100~120 | | 65~80 | | 55~70 | | 55~70 | |
| 型號 Code No. | 刃徑 Dc | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) | RPM 迴轉速度 (min-1) | Feed 進給速度 (mm/min) |
| E115HX/E116HX-3 | 3 | 10,000 | 600 | 10,000 | 600 | 10,000 | 600 | 7,000 | 400 | 7,000 | 400 | 6,000 | 300 |
| E115HX/E116HX-4 | 4 | 7,500 | 600 | 7,500 | 600 | 7,500 | 600 | 5,200 | 400 | 5,200 | 400 | 4,500 | 300 |
| E115HX/E116HX-5 | 5 | 6,000 | 600 | 6,000 | 600 | 6,000 | 600 | 4,200 | 400 | 4,200 | 400 | 3,600 | 300 |
| E115HX/E116HX-6 | 6 | 5,000 | 600 | 5,000 | 600 | 5,000 | 600 | 3,500 | 400 | 3,500 | 400 | 3,000 | 300 |
| E115HX/E116HX-7 | 7 | 4,500 | 560 | 4,500 | 560 | 4,500 | 560 | 3,000 | 360 | 3,000 | 360 | 2,700 | 280 |
| E115HX/E116HX-8 | 8 | 4,000 | 520 | 4,000 | 520 | 4,000 | 520 | 2,800 | 350 | 2,800 | 350 | 2,400 | 260 |
| E115HX/E116HX-9 | 9 | 3,600 | 500 | 3,600 | 500 | 3,600 | 500 | 2,500 | 320 | 2,500 | 320 | 2,200 | 250 |
| E115HX/E116HX-10 | 10 | 3,200 | 450 | 3,200 | 450 | 3,200 | 450 | 2,200 | 300 | 2,200 | 300 | 1,900 | 230 |
| E115HX/E116HX-12 | 12 | 2,700 | 410 | 2,700 | 410 | 2,700 | 410 | 1,900 | 270 | 1,900 | 270 | 1,600 | 210 |
| 切入深度 (inch) |  | ap:0.2D | | ap:0.2D | | ap:0.2D | | ap:0.2D | | ap:0.2D | | ap:0.2D | |

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。