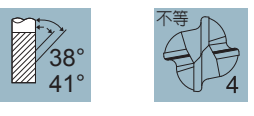


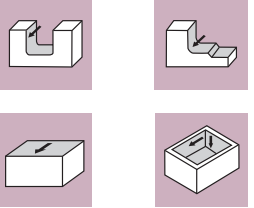
B252-2.5HX 極超微粒鎢鋼塗層多用途R角立銑刀

Multipurpose End Mills With Corner Radius

UMG Carbide
AlTiCrN HX



Type of Operation

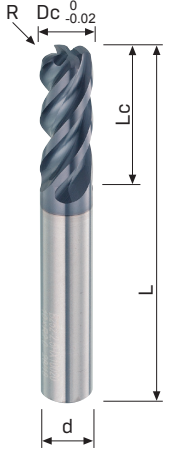


Work Material

P	H	M	K	N	S
●	●	●	●	●	●

- P** 鋼鐵 Steel
- H** 硬化鋼 <38HRC Hardened Steel
- H** 硬化鋼 <48HRC Hardened Steel
- H** 硬化鋼 <56HRC Hardened Steel
- M** 不銹鋼 Stainless Steel
- K** 鑄鐵 Cast Iron
- S** 鈦合金 Titanium
- S** 鎳 Nickel
- S** 高溫合金 High Temp Alloys

Feature of product:
 4刃多用途R角立銑刀
 採用UMG極超微粒碳化鎢鋼材料，更加耐磨。
 採不等螺旋、不等分劃設計，有效抑制振動。
 大排屑溝使其排屑順暢，可應對各式材料。
 刀尖部R角設計並搭配AlTiCrN奈米多層膜塗層，有效提升刀具壽命。
 適用於多種類材料中、精加工。



Code No. B252-2.5HX-Dc×R											
Dc	R	Lc	L	d	AlTiCrN	Dc	R	Lc	L	d	AlTiCrN
0 -0.02	±0.01	mm	mm	h6	B252-2.5HX	0 -0.02	±0.01	mm	mm	h6	B252-2.5HX
1	R0.1	2.5	50	4	●	7	R0.5	17.5	60	8	●
1	R0.2	2.5	50	4	●	7	R1	17.5	60	8	●
1	R0.3	2.5	50	4	●	7	R1.2	17.5	60	8	●
1.5	R0.1	3.75	50	4	●	7	R1.5	17.5	60	8	●
1.5	R0.2	3.75	50	4	●	7	R1.6	17.5	60	8	●
1.5	R0.3	3.75	50	4	●	7	R1.8	17.5	60	8	●
2	R0.1	5	50	4	●	7	R2	17.5	60	8	●
2	R0.2	5	50	4	●	7	R3	17.5	60	8	●
2	R0.3	5	50	4	●	8	R0.2	20	60	8	●
2	R0.5	5	50	4	●	8	R0.3	20	60	8	●
2.5	R0.1	6.25	50	4	●	8	R0.4	20	60	8	●
2.5	R0.2	6.25	50	4	●	8	R0.5	20	60	8	●
2.5	R0.3	6.25	50	4	●	8	R0.8	20	60	8	●
2.5	R0.5	6.25	50	4	●	8	R1	20	60	8	●
3	R0.1	7.5	50	6	●	8	R1.2	20	60	8	●
3	R0.2	7.5	50	6	●	8	R1.5	20	60	8	●
3	R0.3	7.5	50	6	●	8	R1.6	20	60	8	●
3	R0.4	7.5	50	6	●	8	R1.8	20	60	8	●
3	R0.5	7.5	50	6	●	8	R2	20	60	8	●
4	R0.1	10	50	6	●	8	R3	20	60	8	●
4	R0.2	10	50	6	●	9	R0.2	22.5	72	10	●
4	R0.3	10	50	6	●	9	R0.3	22.5	72	10	●
4	R0.4	10	50	6	●	9	R0.4	22.5	72	10	●
4	R0.5	10	50	6	●	9	R0.5	22.5	72	10	●
4	R1	10	50	6	●	9	R1	22.5	72	10	●
5	R0.2	12.5	50	6	●	9	R1.2	22.5	72	10	●
5	R0.3	12.5	50	6	●	9	R1.5	22.5	72	10	●
5	R0.4	12.5	50	6	●	9	R1.6	22.5	72	10	●
5	R0.5	12.5	50	6	●	9	R1.8	22.5	72	10	●
5	R1	12.5	50	6	●	9	R2	22.5	72	10	●
6	R0.2	15	50	6	●	9	R3	22.5	72	10	●
6	R0.3	15	50	6	●	10	R0.2	25	72	10	●
6	R0.4	15	50	6	●	10	R0.3	25	72	10	●
6	R0.5	15	50	6	●	10	R0.4	25	72	10	●
6	R0.8	15	50	6	●	10	R0.5	25	72	10	●
6	R1	15	50	6	●	10	R0.8	25	72	10	●
6	R1.2	15	50	6	●	10	R1	25	72	10	●
6	R1.5	15	50	6	●	10	R1.2	25	72	10	●
6	R1.6	15	50	6	●	10	R1.5	25	72	10	●
6	R1.8	15	50	6	●	10	R1.6	25	72	10	●
6	R2	15	50	6	●	10	R1.8	25	72	10	●
7	R0.2	17.5	60	8	●	10	R2	25	72	10	●
7	R0.3	17.5	60	8	●	10	R3	25	72	10	●
7	R0.4	17.5	60	8	●						

B252-2.5HX 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.6 硬化鋼 Hardened Steel (48~56HRC)		GR.8 不銹鋼 Stainless Steel		GR.9 鑄鐵 Cast Iron		GR.15 鈦合金 Titanium	
切削速度 Vc m/min		Ø1.0~2.5 60~80 Ø3.0~20 80~85		Ø1.0~2.5 47~70 Ø3.0~20 70~75		Ø1.0~1.5 47~57 Ø1.5~20 57~70		Ø1.0~2.5 30~47 Ø3.0~20 50~60		Ø1.0~2.5 30~47 Ø3.0~20 50~60		Ø1.0~2.5 75~80 Ø3.0~20 80~85		Ø1.0~2.5 60~80 Ø3.0~20 80~85		Ø1.0~2.5 15~25 Ø3.0~20 25~35	
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)	
		B252-2.5HX-1	1	20,000	240	15,000	215	15,000	215	10,000	85	7,100	40	25,000	350	20,000	240
B252-2.5HX-1.5	1.5	13,500	245	12,000	215	12,000	215	8,000	90	5,100	50	16,500	375	13,500	245	5,100	100
B252-2.5HX-2	2	13,000	300	11,000	280	11,000	280	7,000	110	3,900	60	12,500	390	13,000	300	4,000	120
B252-2.5HX-2.5	2.5	10,000	320	9,000	300	9,000	300	6,000	120	3,000	60	10,000	400	10,000	320	3,200	150
B252-2.5HX-3	3	8,800	500	7,200	350	7,200	350	5,300	125	2,700	60	8,500	400	8,800	500	3,200	180
B252-2.5HX-4	4	6,600	530	5,500	360	5,500	360	4,200	130	2,200	70	6,500	440	6,600	530	2,400	180
B252-2.5HX-5	5	5,300	600	4,350	420	4,350	420	3,500	140	1,900	75	5,200	460	5,300	600	2,000	190
B252-2.5HX-6	6	4,500	610	3,700	425	3,700	425	2,900	145	1,500	70	4,300	460	4,500	610	1,600	190
B252-2.5HX-7	7	3,800	600	3,200	425	3,200	425	2,500	145	1,200	70	3,650	460	3,800	600	1,400	180
B252-2.5HX-8	8	3,300	590	2,700	425	2,700	425	2,200	145	1,100	65	3,200	460	3,300	590	1,200	170
B252-2.5HX-9	9	2,900	590	2,500	425	2,500	425	2,000	145	1,000	65	2,850	460	2,900	590	1,100	165
B252-2.5HX-10	10	2,600	580	2,200	420	2,200	420	1,700	145	950	65	2,600	460	2,600	580	1,000	160
切入深度 (mm)		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.0D		ap:1.5D		ap:1.0	
		ae: < 3 0.05D ≥ 3 0.1D		ae: < 3 0.05D ≥ 3 0.1D		ae: < 3 0.05D ≥ 3 0.1D		ae: < 3 0.05D ≥ 3 0.1D		ae:0.02D		ae:0.05D		ae: < 3 0.05D ≥ 3 0.1D		ae: < 3 0.05D ≥ 3 0.1D	

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。

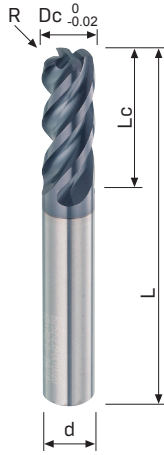
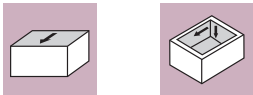
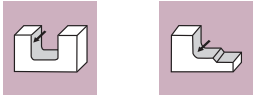
B252-2.5HX 極超微粒鎢鋼塗層多用途R角立銑刀

Multipurpose End Mills With Corner Radius

UMG Carbide
AlTiCrN HX



Type of Operation



Code No. B252-2.5HX-Dc×R

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

H 硬化鋼 <56HRC
Hardened Steel

M 不銹鋼
Stainless Steel

K 鑄鐵
Cast Iron

S 鈦合金
Titanium

S 鎳
Nickel

S 高溫合金
High Temp Alloys

Feature of product:

4刃多用途R角立銑刀
採用UMG極超微粒碳化鎢鋼材料，更加耐磨。
採不等螺旋、不等分割設計，有效抑制振動。
大排屑溝使其排屑順暢，可應對各式材料。
刀尖部R角設計並搭配AlTiCrN奈米多層膜塗層，有效提升刀具壽命。
適用於多種類材料中、精加工。

Dc	R	Lc	L	d	AlTiCrN	Dc	R	Lc	L	d	AlTiCrN
0 -0.02	±0.01	mm	mm	h6	B252-2.5HX	0 -0.02	±0.01	mm	mm	h6	B252-2.5HX
11	R0.2	27.5	75	12	●	16	R4	40	100	16	●
11	R0.3	27.5	75	12	●	17	R0.5	42.5	100	20	●
11	R0.4	27.5	75	12	●	17	R1	42.5	100	20	●
11	R0.5	27.5	75	12	●	17	R1.5	42.5	100	20	●
11	R1	27.5	75	12	●	17	R2	42.5	100	20	●
11	R1.2	27.5	75	12	●	17	R3	42.5	100	20	●
11	R1.5	27.5	75	12	●	18	R0.5	45	100	20	●
11	R1.6	27.5	75	12	●	18	R1	45	100	20	●
11	R1.8	27.5	75	12	●	18	R1.5	45	100	20	●
11	R2	27.5	75	12	●	18	R2	45	100	20	●
11	R3	27.5	75	12	●	18	R3	45	100	20	●
12	R0.2	30	75	12	●	19	R0.5	47.5	100	20	●
12	R0.3	30	75	12	●	19	R1	47.5	100	20	●
12	R0.4	30	75	12	●	19	R1.5	47.5	100	20	●
12	R0.5	30	75	12	●	19	R2	47.5	100	20	●
12	R0.8	30	75	12	●	19	R3	47.5	100	20	●
12	R1	30	75	12	●	20	R0.5	50	100	20	●
12	R1.2	30	75	12	●	20	R1	50	100	20	●
12	R1.5	30	75	12	●	20	R1.5	50	100	20	●
12	R1.6	30	75	12	●	20	R2	50	100	20	●
12	R1.8	30	75	12	●	20	R3	50	100	20	●
12	R2	30	75	12	●	20	R4	50	100	20	●
12	R3	30	75	12	●	20	R5	50	100	20	●
12	R4	30	75	12	●						
13	R0.5	32.5	100	16	●						
13	R1	32.5	100	16	●						
13	R1.5	32.5	100	16	●						
13	R2	32.5	100	16	●						
13	R3	32.5	100	16	●						
14	R0.5	35	100	16	●						
14	R1	35	100	16	●						
14	R1.5	35	100	16	●						
14	R2	35	100	16	●						
14	R3	35	100	16	●						
15	R0.5	37.5	100	16	●						
15	R1	37.5	100	16	●						
15	R1.5	37.5	100	16	●						
15	R2	37.5	100	16	●						
15	R3	37.5	100	16	●						
16	R0.5	40	100	16	●						
16	R1	40	100	16	●						
16	R1.5	40	100	16	●						
16	R2	40	100	16	●						
16	R3	40	100	16	●						

B252-2.5HX 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.6 硬化鋼 Hardened Steel (48~56HRC)		GR.8 不銹鋼 Stainless Steel		GR.9 鑄鐵 Cast Iron		GR.15 鈦合金 Titanium	
切削速度 Vc m/min		Ø1.0~2.5 60~80 Ø3.0~20 80~85		Ø1.0~2.5 47~70 Ø3.0~20 70~75		Ø1.0~1.5 47~57 Ø1.5~20 57~70		Ø1.0~2.5 30~47 Ø3.0~20 50~60		Ø1.0~2.5 30~47 Ø3.0~20 50~60		Ø1.0~2.5 75~80 Ø3.0~20 80~85		Ø1.0~2.5 60~80 Ø3.0~20 80~85		Ø1.0~2.5 15~25 Ø3.0~20 25~35	
型號 Code No.	刃徑 Dc	RPM 迴轉速度 (min-l)		Feed 進給速度 (mm/min)		RPM 迴轉速度 (min-l)		Feed 進給速度 (mm/min)		RPM 迴轉速度 (min-l)		Feed 進給速度 (mm/min)		RPM 迴轉速度 (min-l)		Feed 進給速度 (mm/min)	
		B252-2.5HX-11	11	2,400	580	2,000	420	2,000	420	1,600	140	850	60	2,350	440	2,400	580
B252-2.5HX-12	12	2,200	580	1,800	420	1,800	420	1,400	140	800	60	2,150	410	2,200	580	800	160
B252-2.5HX-13	13	2,000	560	1,700	410	1,700	410	1,350	140	700	55	2,000	400	2,000	570	750	160
B252-2.5HX-14	14	1,900	550	1,600	410	1,600	410	1,250	130	650	55	1,820	400	1,850	560	700	160
B252-2.5HX-15	15	1,700	540	1,500	400	1,500	400	1,250	130	600	50	1,700	400	1,700	540	650	150
B252-2.5HX-16	16	1,600	530	1,300	400	1,300	400	1,200	130	600	45	1,600	390	1,600	530	600	150
B252-2.5HX-17	17	1,500	520	1,250	390	1,250	390	1,100	120	550	45	1,500	390	1,500	530	550	150
B252-2.5HX-18	18	1,450	520	1,200	390	1,200	390	1,000	120	520	40	1,450	380	1,450	520	500	150
B252-2.5HX-19	19	1,350	520	1,150	380	1,150	380	950	115	500	40	1,350	380	1,400	510	530	150
B252-2.5HX-20	20	1,300	510	1,100	370	1,100	370	890	110	470	35	1,300	370	1,300	510	480	140
切入深度 (mm)		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.0D		ap:1.5D		ap:1.0	
		ae: <3 0.05D ≥3 0.1D		ae: <3 0.05D ≥3 0.1D		ae: <3 0.05D ≥3 0.1D		ae: <3 0.05D ≥3 0.1D		ae:0.02D		ae:0.05D		ae: <3 0.05D ≥3 0.1D		ae: <3 0.05D ≥3 0.1D	

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。