Index 索引

S910 Series

Modular Endmills for Deep Milling

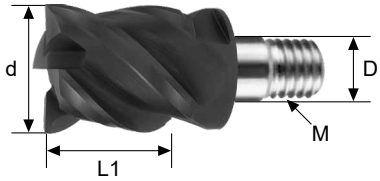
- ISO M thread, diameter 10~32mm.
- Carbide adapters max. lengths 300mm.
- More economical & flexible deep cutting solution.
- ANAX smooth coating.

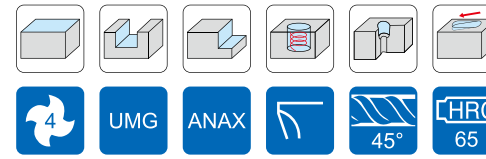
模組化銑刀 , 適用深加工

- ISO M 牙設計，提供 10~32mm 外徑
- 鎢鋼抗震刀桿長度最大為 300mm
- 更經濟與彈性的深加工解決方案
- 含矽平滑塗層

Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Helix 螺旋角	Coating 塗層	P	M	K	N	S	H	Page 頁碼
S910 Series Modular Endmills · Deep Milling 模組化銑刀 · 深加工												
	Square Solid Head · 4F 平銑刀頭 · 4 刃	EHSWH	Ø10~Ø20	45°	SNAX	●	○	●		○	●	B202
	Square Solid Head (Unequal spacing) · 4F 不等分割平銑刀頭 (難削材用) · 4 刃	EPSWV	Ø12~Ø20	38°	ANAX	●	●	●		○	●	B202
	Square Solid Head (Unequal spacing) · 3F 不等分割平銑刀頭 (鋁用) · 3 刃	ENSWV	Ø12~Ø20	40°	–				●			B203
	Ball Nose Solid Head · 2F 球型銑刀頭 · 2 刃	EHBWH	Ø10~Ø20	30°	SNAX	●	○	●		○	●	B203
	Corner Radius Solid Head · 4F 圓鼻銑刀頭 · 4 刃	EHCWH	Ø10~Ø20	30°	SNAX	●	○	●		○	●	B204
	Chamfer Solid Head · 4F / 6F 倒角刀頭 · 4 刃 / 6 刃	EHFWH	Ø10~Ø16	0°	ANAX	●	●	●		○	○	B204

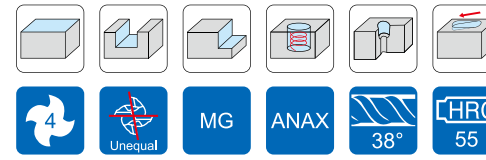
EHSWH Square Solid Head (for hardened steel) 全鎢鋼平銑刀頭 (高硬鋼用)





Order No. 訂購編碼	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHSWH410000A	10	10	6.5	M6	4
EHSWH412000A	12	12	6.5	M6	4
EHSWH416000A	16	16	8.5	M8	4
EHSWH420000A	20	20	10.5	M10	4

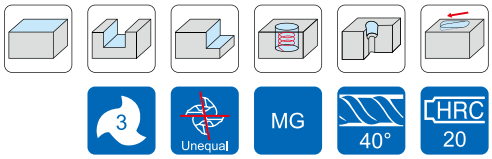
EPSWV Square Solid Head, Unequal spacing (for Exotic) 全鎢鋼平銑刀頭 , 不等分割 (難切削材用)



Order No. 訂購編碼	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EPSWV410000A	10	10	6.5	M6	4
EPSWV412000A	12	12	6.5	M6	4
EPSWV416000A	16	16	8.5	M8	4
EPSWV420000A	20	20	10.5	M10	4

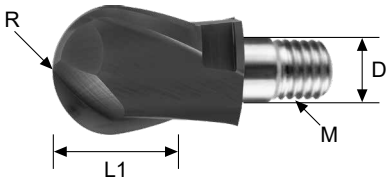
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿，請參考刀具系統

ENSWV Square Solid Head, Unequal spacing (for non-ferrous) 全鎢鋼平銑刀頭 , 不等分割 (非鐵金屬用)



Order No. 訂購編碼	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
ENSWV310000	10	10	6.5	M6	3
ENSWV312000	12	12	6.5	M6	3
ENSWV316000	16	16	8.5	M8	3
ENSWV320000	20	20	10.5	M10	3

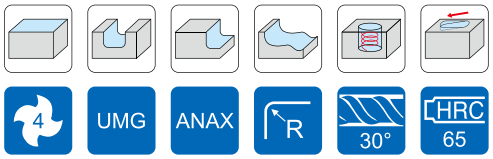
EHBWH Ball Nose Solid Head (for hardened steel) 全鎢鋼球形銑刀頭 (高硬鋼用)



Order No. 訂購編碼	Radius (R)	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHBWH210000A	5R	10	10	6.5	M6	2
EHBWH212000A	6R	12	12	6.5	M6	2
EHBWH216000A	8R	16	16	8.5	M8	2
EHBWH220000A	10R	20	20	10.5	M10	2

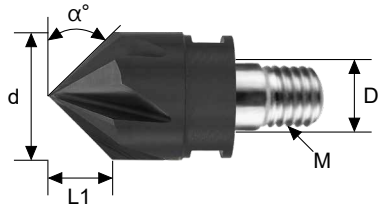
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿，請參考刀具系統

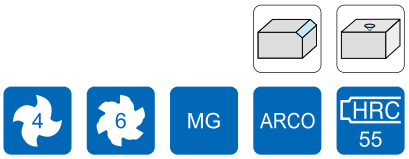
EHCWH Corner Radius Solid Head (for hardened steel) 全鎢鋼圓鼻銑刀頭 (高硬鋼用)



Order No. 訂購編碼	Dia. (d)	Radius (R)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHCWH410005A	10	0.5R	10	6.5	M6	4
EHCWH410010A	10	1.0R	10	6.5	M6	4
EHCWH412005A	12	0.5R	12	6.5	M6	4
EHCWH412010A	12	1.0R	12	6.5	M6	4
EHCWH412020A	12	2.0R	12	6.5	M6	4
EHCWH412030A	12	3.0R	12	6.5	M6	4
EHCWH416010A	16	1.0R	16	8.5	M8	4
EHCWH416020A	16	2.0R	16	8.5	M8	4
EHCWH416030A	16	3.0R	16	8.5	M8	4
EHCWH420010A	20	1.0R	20	10.5	M10	4
EHCWH420020A	20	2.0R	20	10.5	M10	4
EHCWH420030A	20	3.0R	20	10.5	M10	4

EHFWH Chamfer Solid Head (for universal) 全鎢鋼倒角刀頭 (泛用)





Order No. 訂購編碼	Dia. (d)	CL (L1)	α°	ND (D)	M (M)	Flutes (Z)
EHFWH410090A	10	5	45°	6.5	M6	4
EHFWH412090A	12	6	45°	6.5	M6	4
EHFWH610090A	10	5	45°	6.5	M6	6
EHFWH612090A	12	6	45°	6.5	M6	6
EHFWH616090A	16	8	45°	8.5	M8	6

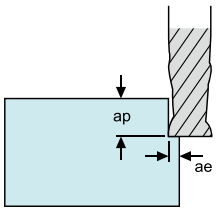
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿，請參考刀具系統

Recommended Cutting Conditions 建議切削數據

EHSWH4, EHCWH4 (Square Head - 4F, Corner Radius Head - 4F)

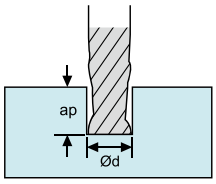
Shoulder Milling L/D ≤ 3 (Reference L/D ratio table, reduce vc, fz and ae value)

Material	Pre-Hardened Steels NAK80 CENA1				Hardened Steels SKD61,SKD11				Hardened Steels SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
VC	90 ~ 150(m/min)				80 ~ 120 (m/min)				70 ~ 100 (m/min)			
Dia	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)
10mm	3820	0.05	8.0	2.0	3190	0.05	8.0	1.5	2390	0.05	8.0	1.0
12mm	3190	0.05	9.6	2.4	2650	0.05	9.6	1.8	2000	0.05	9.6	1.2
16mm	2390	0.06	12.8	3.2	2000	0.06	12.8	2.4	1500	0.06	12.8	1.6
20mm	1910	0.06	16.0	4.0	1600	0.06	16.0	3.0	1190	0.06	16.0	2.0



Slot Milling L/D ≤ 3 (Reference L/D ratio table, reduce vc and fz value)

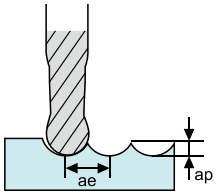
Material	Pre-Hardened Steels NAK80 CENA1			Hardened Steels SKD61,SKD11			Hardened Steels SKD11,SKH51		
Hardness	HRC 35~45			HRC 40~55			HRC 55~65		
VC	60 ~ 100(m/min)			50 ~ 90 (m/min)			40 ~ 80 (m/min)		
Dia	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)
10mm	2550	0.02	4.0	2390	0.02	4.0	1900	0.02	4.0
12mm	2120	0.02	4.8	2000	0.02	4.8	1590	0.02	4.8
16mm	1590	0.03	6.4	1490	0.03	6.4	1190	0.03	6.4
20mm	1275	0.03	8.0	1190	0.03	8.0	950	0.03	8.0



EHBWH2 (Ball Nose Head - 2F)

L/D ≤ 3 (Reference L/D ratio table, reduce vc and fz value)

Material	Pre-Hardened Steels NAK80 CENA1				Hardened Steels SKD61,SKD11				Hardened Steels SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
VC	100 ~ 190(m/min)				90 ~ 160 (m/min)				70 ~ 140 (m/min)			
Dia	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)
10mm	4620	0.1	0.7	2	3980	0.05	0.4	1.5	3345	0.02	0.2	1.0
12mm	3850	0.1	0.84	2.4	3320	0.05	0.5	1.8	2790	0.02	0.2	1.2
16mm	2885	0.15	1.12	3.2	2485	0.075	0.64	2.4	2090	0.03	0.3	1.6
20mm	2300	0.2	1.4	4.0	2000	0.1	0.8	3.0	1670	0.04	0.4	2.0



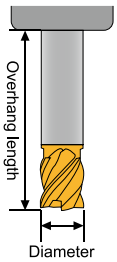
How to set cutting conditions on different overhang length

如何設置不同懸伸長度的切削參數

The recommended cutting condition is depended by the L/D factor.

L/D ratio table :

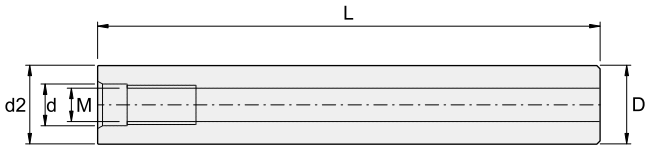
L/D	VC (m/min)	fz (mm/t)	ae (mm)
2 ~ 3	100%	100%	100%
4 ~ 5	70%	80%	50%
6 ~ 7	50%	70%	30%
8 ~ 9	40%	60%	20%



EX :
Tool : Ød=12mm Square Head
Overhang length : 50mm
L/D : 50/12 = 4.16
Material HRC : 35 ~ 45
Application : Shoulder Milling

Cutting condition is recommended as :
*Vc = 120*70% = 84 m/min*
*fz = 0.05*80% = 0.04 mm/t*
ap = 9.6 mm
*max ae = 2.4*50% = 1.2 mm*

SWMEA - Carbide Adapter (Straight)

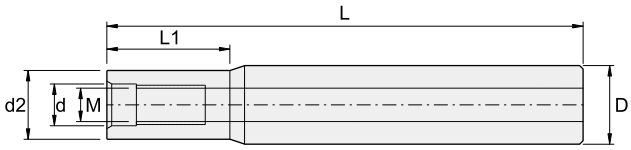


Straight

Order No. 訂購編碼	Dimensions (mm)				
	d2	d	L	D	M
ISWMEA10075050	10	5.5	75	10	M5
ISWMEA10100050	10	5.5	100	10	M5
ISWMEA10150050	10	5.5	150	10	M5
ISWMEA10100060	10	5.5	100	10	M6
ISWMEA10150060	10	5.5	150	10	M6
ISWMEA11100060	11	6.5	100	11	M6
ISWMEA11150060	11	6.5	150	11	M6
ISWMEA12075060	12	6.5	75	12	M6
ISWMEA12100060	12	6.5	100	12	M6
ISWMEA12150060	12	6.5	150	12	M6
ISWMEA12200060	12	6.5	200	12	M6
ISWMEA15100080	15	8.5	100	15	M8
ISWMEA15150080	15	8.5	150	15	M8
ISWMEA15200080	15	8.5	200	15	M8
ISWMEA16100080	16	8.5	100	16	M8
ISWMEA16150080	16	8.5	150	16	M8
ISWMEA16200080	16	8.5	200	16	M8
ISWMEA16250080	16	8.5	250	16	M8
ISWMEA20100100	20	10.5	100	20	M10
ISWMEA20150100	20	10.5	150	20	M10
ISWMEA20200100	20	10.5	200	20	M10
ISWMEA20250100	20	10.5	250	20	M10
ISWMEA20300100	20	10.5	300	20	M10
ISWMEA25100120	25	12.5	100	25	M12
ISWMEA25150120	25	12.5	150	25	M12
ISWMEA25200120	25	12.5	200	25	M12
ISWMEA25250120	25	12.5	250	25	M12
ISWMEA25300120	25	12.5	300	25	M12
ISWMEA32200160	32	17.0	200	32	M16
ISWMEA32300160	32	17.0	300	32	M16

Customize available.

SWMEB - Carbide Adapter (Straight Neck)



Straight Neck

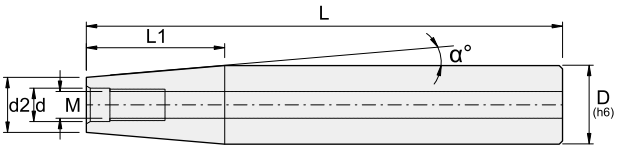
Order No. 訂購編碼	Dimensions (mm)					
	d2	d	L1	L	D	M
ISWMEB12100060	11.5	6.5	24	100	12	M6
ISWMEB12100061	11.5	6.5	40	100	12	M6
ISWMEB12100062	11.5	6.5	60	100	12	M6
ISWMEB12150060	11.5	6.5	24	150	12	M6
ISWMEB12150061	11.5	6.5	100	150	12	M6
ISWMEB16150082	13.0	8.5	32	150	16	M8
ISWMEB16150080	15.0	8.5	30	150	16	M8
ISWMEB16150081	15.0	8.5	100	150	16	M8
ISWMEB16200080	15.0	8.5	40	200	16	M8
ISWMEB16200081	15.0	8.5	120	200	16	M8
ISWMEB20150102	17.0	10.5	40	150	20	M10
ISWMEB20150100	19.0	10.5	40	150	20	M10
ISWMEB20150101	19.0	10.5	100	150	20	M10
ISWMEB20200100	19.0	10.5	40	200	20	M10
ISWMEB20200101	19.0	10.5	120	200	20	M10
ISWMEB25150120	24.0	12.5	48	150	25	M12
ISWMEB25150121	24.0	12.5	100	150	25	M12
ISWMEB25200120	24.0	12.5	48	200	25	M12
ISWMEB25200121	24.0	12.5	100	200	25	M12

Customize available.

Carbide Adapter - ISO M Threads

鎢鋼抗震刀桿 (ISO M 型牙)- 斜頸型

SWMET - Carbide Adapter (Taper Neck)



Taper Neck

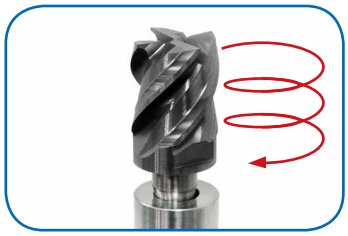
Order No. 訂購編碼	Dimensions (mm)						
	d2	d	α°	L1	L	D	M
ISWMET12150050	9.8	5.5	1°	60	150	12	M5
ISWMET12150060	9.8	5.5	1°	60	150	12	M6
ISWMET16150060	11.8	6.5	1.5°	70	150	16	M6
ISWMET20200080	15.5	8.5	1.5°	90	200	20	M8
ISWMET25200100	19.8	10.5	1.5°	90	200	25	M10
ISWMET32200120	24.5	12.5	2	90	200	32	M12

Customize available.

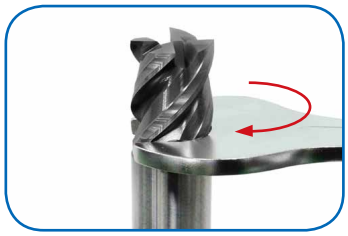
Modular Tools Installation 安裝模組化銑刀

How to install the Modular Solid Head 如何安裝全鎢鋼銑刀頭至抗震刀桿

1. Screw the adapter to the holder and clean.
   將抗震刀桿鎖在刀把上



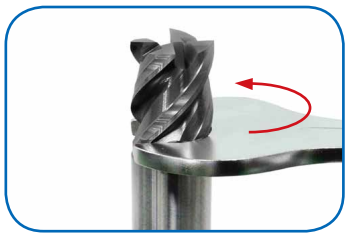
2. Screw the Solid Head to the adapter.
   將全鎢鋼銑刀頭鎖在抗震刀桿上



3. Use the spanner to screw the Solid Head.
   使用板手鎖緊全鎢鋼銑刀頭

4. Complete installation.
   完成安裝

How to uninstall the Modular Solid Head 如何拆卸全鎢鋼銑刀頭



When uninstall the Solid head, please push the spanner lightly for avoiding the neck broken.
拆卸全鎢鋼銑刀頭時，請輕輕推動板手，避免刀頭頸部斷裂

Recommended Torque 建議板手扭力值

Suitable Modular Solid Head Diameter	Recommended Clamping Torque (N・m)
10mm	10
12mm	10
16mm	12
20mm	12