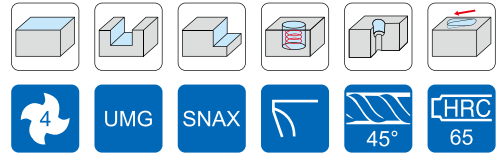
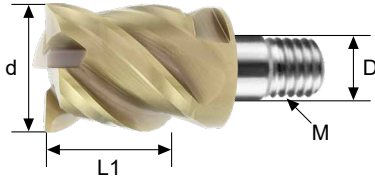
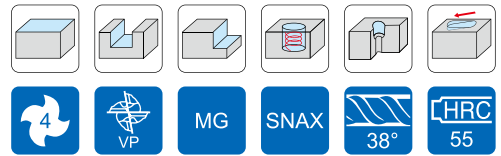
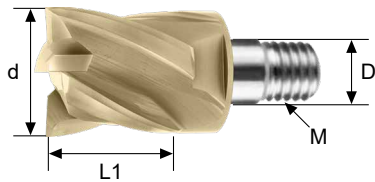


**EHSWH** Square Solid Head (for hardened steel) 全鎢鋼平銑刀頭 (高硬鋼用)



Order No.	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHSWH410000S	10	10	6.5	M6	4
EHSWH412000S	12	12	6.5	M6	4
EHSWH416000S	16	16	8.5	M8	4
EHSWH420000S	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)



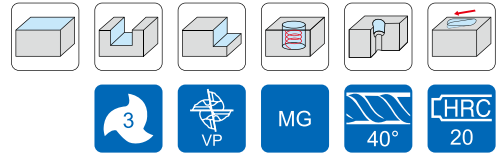
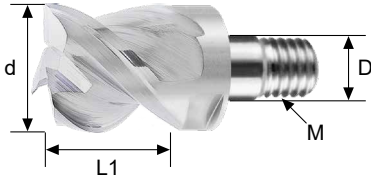
Order No.	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EPSWV410000S	10	10	6.5	M6	4
EPSWV412000S	12	12	6.5	M6	4
EPSWV416000S	16	16	8.5	M8	4
EPSWV420000S	20	20	10.5	M10	4

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

S910 - Modular Endmills · Solid Head

模組化銑刀 · 立銑刀頭

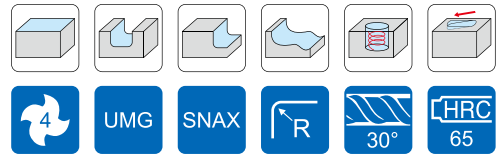
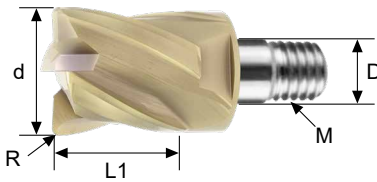
**ENSWV** Square Solid Head, Unequal spacing (for non-ferrous) 全鎢鋼平銑刀頭, 不等分割 (非鐵金屬用)



Order No.	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

Solid End Milling

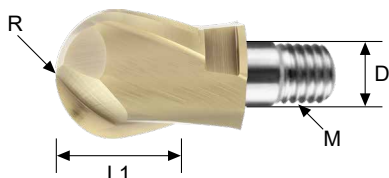
**EHCWH** Corner Radius Solid Head (for hardened steel) 全鎢鋼圓鼻銑刀頭 (高硬鋼用)



Order No.	Dia. (d)	Radius (R)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHCWH410005S	10	0.5R	10	6.5	M6	4
EHCWH410010S	10	1.0R	10	6.5	M6	4
EHCWH412005S	12	0.5R	12	6.5	M6	4
EHCWH412010S	12	1.0R	12	6.5	M6	4
EHCWH412020S	12	2.0R	12	6.5	M6	4
EHCWH412030S	12	3.0R	12	6.5	M6	4
EHCWH416010S	16	1.0R	16	8.5	M8	4
EHCWH416020S	16	2.0R	16	8.5	M8	4
EHCWH416030S	16	3.0R	16	8.5	M8	4
EHCWH416040S	16	4.0R	16	8.5	M8	4
EHCWH416050S	16	5.0R	16	8.5	M8	4
EHCWH420010S	20	1.0R	20	10.5	M10	4
EHCWH420020S	20	2.0R	20	10.5	M10	4
EHCWH420030S	20	3.0R	20	10.5	M10	4

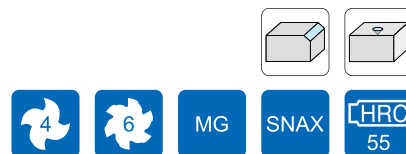
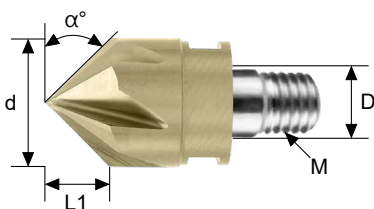
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿, 請參考刀具系統

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



Order No.	Radius (R)	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHBWH210000S	5R	10	10	6.5	M6	2
EHBWH212000S	6R	12	12	6.5	M6	2
EHBWH216000S	8R	16	16	8.5	M8	2
EHBWH220000S	10R	20	20	10.5	M10	2

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



Order No.	Dia. (d)	CL (L1)	$\alpha^\circ$	ND (D)	M (M)	Flutes (Z)
EHFWH410090S	10	5	45°	6.5	M6	4
EHFWH412090S	12	6	45°	6.5	M6	4
EHFWH610090S	10	5	45°	6.5	M6	6
EHFWH612090S	12	6	45°	6.5	M6	6
EHFWH616090S	16	8	45°	8.5	M8	6

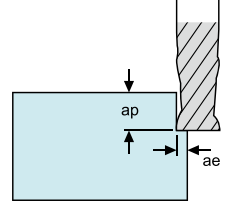
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿，請參考刀具系統

Recommended Cutting Conditions 建議切削數據

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

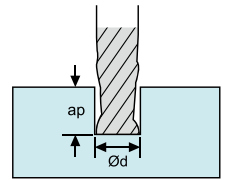
Shoulder Milling L/D ≤ 3 (Reference L/D ratio table, reduce vc, fz and ae value)

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)

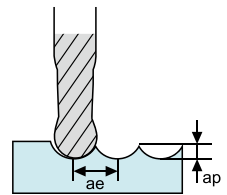
Material	Pre-Hardened Steels NAK80 CENA1			Hardened Steels SKD61,SKD11			Hardened Steels SKD11,SKH51		
Hardness	HRC 35~45			HRC 40~55			HRC 55~65		
VC	60 ~ 100(m/min)			50 ~ 90 (m/min)			40 ~ 80 (m/min)		
Dia	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)
10mm	2550	0.02	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



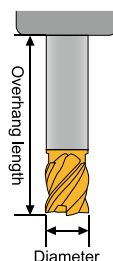
How to set cutting conditions on different overhang length

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 :

$Vc = 120 * 70\% = 84 \text{ m/min}$   
 $fz = 0.05 * 80\% = 0.04 \text{ mm/t}$   
 $ap = 9.6 \text{ mm}$   
 $max \text{ ae} = 2.4 * 50\% = 1.2 \text{ mm}$

S910 - Modular Endmills Installation

安裝模組化銑刀

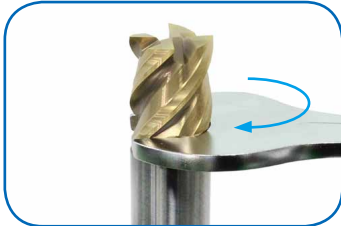
How to install the Modular Solid Head 如何安裝全鎢鋼銑刀頭至抗震刀桿



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

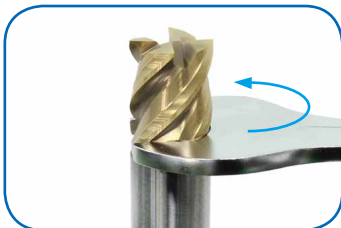


3. Use the spanner to screw the Solid Head.  
使用板手鎖緊全鎢鋼銑刀頭



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