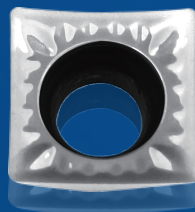
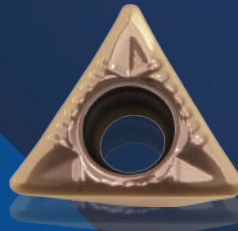
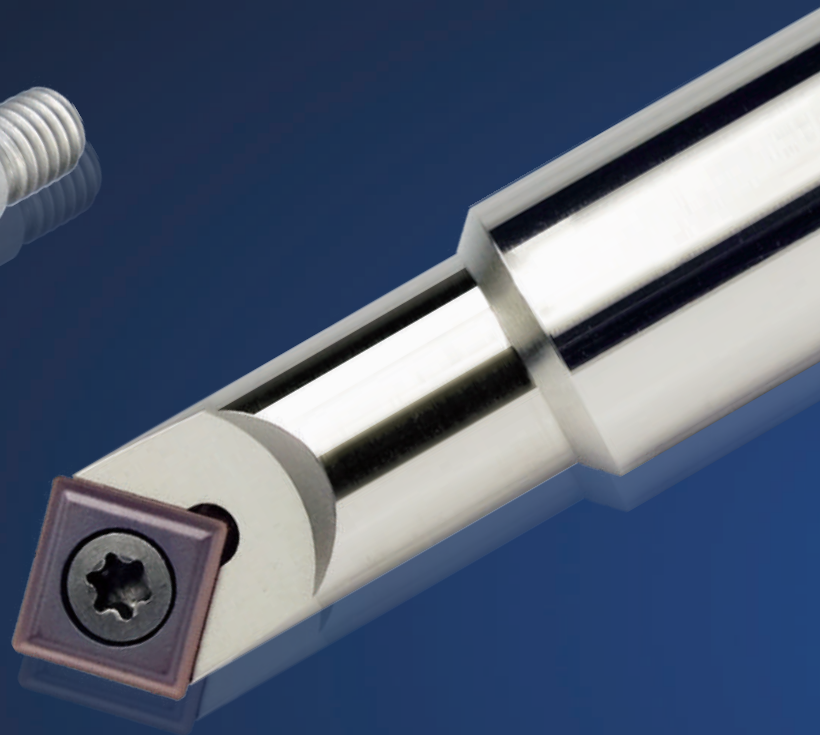
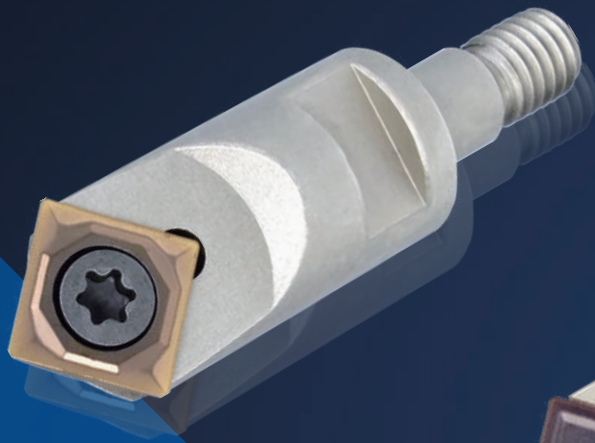






鎢鋼倒角銑刀片系列

CARBIDE CHAMFERING INSERT SERIES



西門德克

鎢鋼倒角銑刀片 Carbide Chamfering Inserts	 <p>SCGX NEW</p> <p>P.141 0.4 r (鋁用)</p>	 <p>SCGX NEW</p> <p>P.141 0.4 r</p>	 <p>SCMX NEW</p> <p>P.141 0.4 r</p>	 <p>TCGX NEW</p> <p>P.141 0.8 r (鋁用)</p>
	 <p>TCGX NEW</p> <p>P.141 0.8 r</p>	 <p>TCMX NEW</p> <p>P.141 0.8 r</p>	 <p>DCEX NEW</p> <p>P.141 0.1~0.4 r</p>	 <p>DCEX NEW</p> <p>P.141 0.4~0.8 r</p>

多功能倒角加工 Multipurpose Chamfering	刀片單面使用 Single-Sided Inserts	 <p>ECSC NEW</p> <p>P.143 ϕ 13</p>	 <p>HCSC NEW</p> <p>P.143 ϕ 13</p>	 <p>ECTCX NEW</p> <p>P.144 ϕ 20</p>
		 <p>ECDC NEW</p> <p>P.145 ϕ 12</p>		

倒角加工 Chamfering	刀片單面使用 Single-Sided Inserts	 <p>ECSP NEW</p> <p>P.146 ϕ 15~50</p>
--------------------	--------------------------------	--

鎢鋼抗震刀桿 Carbide Vibration Holder	 <p>LCL</p> <p>P.147 ϕ 8~32</p>	 <p>LCM</p> <p>P.148 ϕ 11.7~31.5</p>
------------------------------------	--	---

切削條件表 Chamfering Condition Table	P.149~150
-------------------------------------	-----------

加工材質	P	鋼材 Alloy Steels	◎	◎	◎	◎	—	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	—	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	—	
	N	鋁合金 Aluminum Alloys	◎	—	—	—	◎	
	S	高溫合金 High Temp Alloys	◎	○	◎	◎	—	
	H	調質鋼 Hardened Steels	—	○	◎	—	—	

刀片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6012	CM6032	CM6133	CM6143	CM110	A	B	S	r	d1		

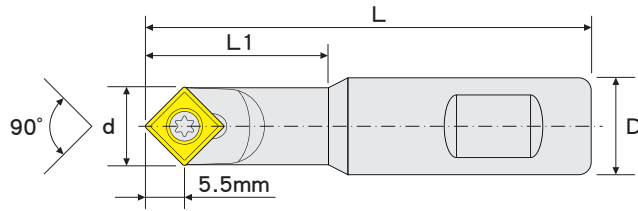
應用於倒角加工、定點加工、開V槽加工、雕刻加工【刀片單面使用】。
Chamfering & Countersinking, Spotting, V-Grooving, Engraving [Single-Sided Inserts] .

	SCGX09T304-AG					●	9.53	9.53	3.97	0.4	4.4		143
F S M R													
	SCGX09T304-FG	●					9.53	9.53	3.97	0.4	4.4		
F S M R													
	SCMX09T304-SM		●				9.53	9.53	3.97	0.4	4.4		
F S M R													
	TCGX16T308-AG					●	16.5	—	3.97	0.8	—		144
F S M R													
	TCGX16T308-FG	●					16.5	—	3.97	0.8	—		
F S M R													
	TCMX16T308-MP		●				16.5	—	3.97	0.8	—		
F S M R													
	DCEX11T301-XF		●				—	—	3.97	0.1	—		145
F S M R													
	DCEX11T302-XF		●				—	—	3.97	0.2	—		
F S M R													
	DCEX11T304-XF		●				—	—	3.97	0.4	—		
F S M R													
	DCEX11T304-XR		●				—	—	3.97	0.4	—		
F S M R													
	DCEX11T308-XR		●				—	—	3.97	0.8	—		
F S M R													

▶ 切削條件表 Chamfering Condition Table → Page : P.149

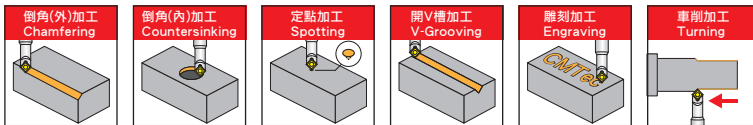
加工材質	加工材質		材質碼 Grade				尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page	
	刀片 Insert	訂購編號 Order No.	CM6032	CM6133	CM6143	A	B	S	r	d1				
P	鋼材 Alloy Steels		◎	◎	◎									◎ : 第一推薦 First Recommend ○ : 第二推薦 Second Recommend - : 不推薦 NO Recommend F : 精加工 Finishing S : 半精加工 Semi Finishing M : 中加工 Medium R : 粗加工 Roughing
M	不銹鋼 Stainless Steels		◎	◎	◎									
K	鑄鐵 Cast Iron		◎	◎	◎									
N	鋁合金 Aluminum Alloys		-	-	-									
S	高溫合金 High Temp Alloys		○	◎	◎									
H	調質鋼 Hardened Steels		○	◎	-									
應用於倒角加工【刀片單面使用】。 Chamfering 【Single-Sided Inserts】。														
	T	SPMG050204-MG	●	●	●		5.00	-	2.38	0.4	2.30			
F	S	M	R											
	T	SPMG060204-MG	●	●	●		6.00	-	2.38	0.4	2.65			
F	S	M	R											
	T	SPMG07T308-MG	●	●	●		7.94	-	3.97	0.8	2.85			
F	S	M	R											
	T	SPMG090408-MG	●	●	●		9.80	-	4.30	0.8	4.05			
F	S	M	R											
	T	SPMG090408-RG	●	●	●		9.80	-	4.30	0.8	4.05			
F	S	M	R											
	T	SPMG110408-MG	●	●	●		11.5	-	4.80	0.8	4.45			
F	S	M	R											
	T	SPMG110408-RG	●	●	●		11.5	-	4.80	0.8	4.45			
F	S	M	R											

▶ 切削條件表 Chamfering Condition Table → Page : P.150



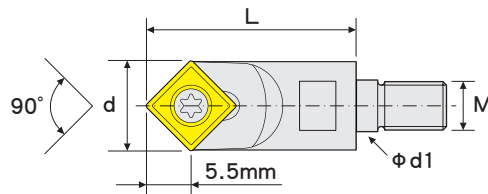
01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片 數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ECSC09-01013-100L	13	29	100	10	1	SCGX..09T3.. SCMX..09T3..	TS3520	ETF15
ECSC09-01013-100L-12	13	29	100	12				
ECSC09-01013-100L-16	13	29	100	16				
ECSC09-01013-150L-16	13	29	150	16				



▶ 搭配刀片 Insert → Page : P.141

▶ 切削條件表 Chamfering Condition Table → Page : P.149



01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片 數量 Teeth	搭配刀片 Insert	開口扳手 Single Open-end Wrench	Screw	Wrench
	d	L1	d1	M					
HCSC09-01013	13	30	6.5	M6	1	SCGX..09T3.. SCMX..09T3..	TC08	TS3520	ETF15



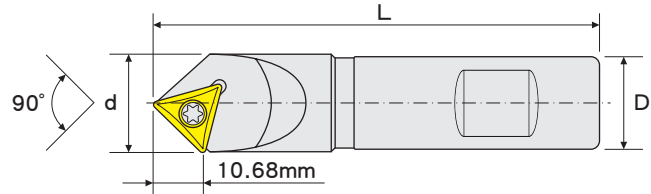
▶ 搭配刀片 Insert → Page : P.141

▶ 切削條件表 Chamfering Condition Table → Page : P.149



▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page : P.147~148

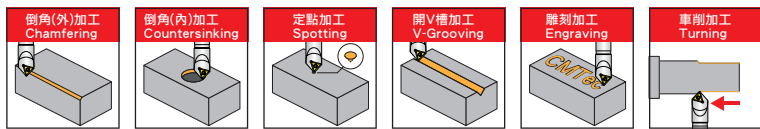
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎ : 第一推薦 First Recommend ○ : 第二推薦 Second Recommend — : 不推薦 NO Recommend



01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片 數量 Teeth	搭配刀片 Insert	Screw 	Wrench 
	d	—	L	D				
ECTCX16-01020-120L	20	—	120	20	1	TCGX16T3..	TS3521	ETF15
ECTCX16-01020-150L	20	—	150	20	1	TCMX16T3..		

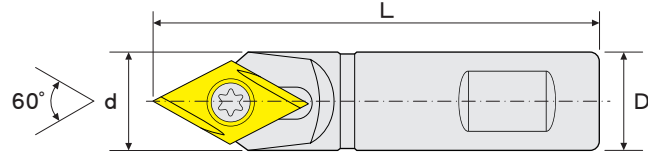


▶ 搭配刀片 Insert → Page : P.141 ▶ 切削條件表 Chamfering Condition Table → Page : P.149



※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

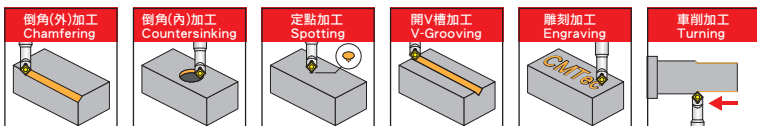
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	◎	○

◎ : 第一推薦 First Recommend ○ : 第二推薦 Second Recommend — : 不推薦 NO Recommend



01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片 數量 Teeth	搭配刀片 Insert	Screw 	Wrench 
	d	—	L	D				
ECDC11-01012-060L	12	—	60	10	1	DCEX11T3..	TS3520	ETF15
ECDC11-01012-100L	12	—	100	12	1			



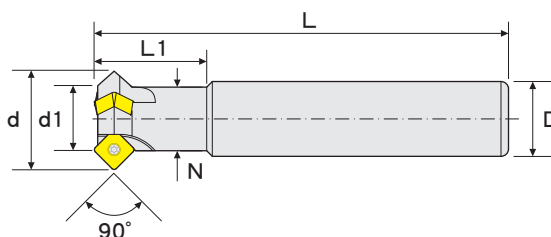
▶ 搭配刀片 Insert → Page : P.141

▶ 切削條件表 Chamfering Condition Table → Page : P.149

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

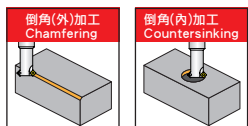
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	—	○

◎ : 第一推薦 First Recommend ○ : 第二推薦 Second Recommend — : 不推薦 NO Recommend



02

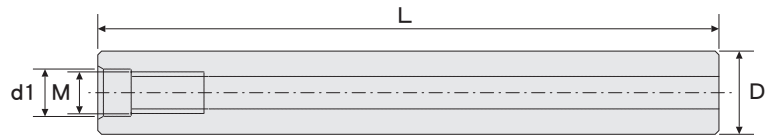
訂購編號 Order No.	尺寸 Dimensions (mm)						刀片 數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	d1	L1	N	L	D				
ECSP05-02015-120L	15	8.26	20	10	120	12	SPMG0502..	TS2003	ETF06	
ECSP05-03017-150L	17	10.26	25	11	150	16				
ECSP05-03019-150L	19	12.26	30	13	150	16				
ECSP05-04024-150L	24	17.26	35	18	150	20				
ECSP06-03022-120L	22	13.85	30	16	120	16	SPMG0602..	TS2205	ETF06	
ECSP07-03027-120L	27	16.44	30	17	120	20	SPMG07T3..	TS2511	ETF08	
ECSP09-02030-150L	30	16.80	40	19	150	20	SPMG0904..	TS3504	ETF15	
ECSP09-03040-150L	40	26.80	40	29	150	25				
ECSP09-04050-150L	50	36.80	40	39	150	25				



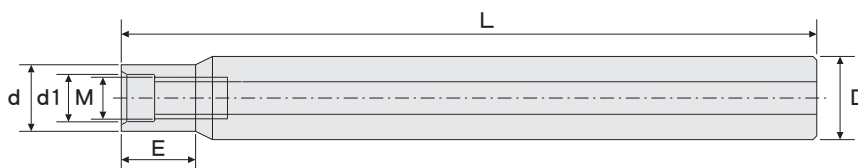
▶ 搭配刀片 Insert → Page : P.142 ▶ 切削條件表 Chamfering Condition Table → Page : P.150
 ※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎ : 第一推薦 First Recommend ○ : 第二推薦 Second Recommend — : 不推薦 NO Recommend



訂購編號 Order No.	尺寸 Dimensions (mm)			
	螺紋 Thread	柄徑 D	d1	全長 L
LCL008-060L	M4 × 0.7	8	4.5	60
LCL008-100L	M4 × 0.7	8	4.5	100
LCL008-120L	M4 × 0.7	8	4.5	120
LCL010-075L	M5 × 0.8	10	5.5	75
LCL010-100L	M5 × 0.8	10	5.5	100
LCL010-150L	M5 × 0.8	10	5.5	150
LCL012-075L	M6 × 1.0	12	6.5	75
LCL012-100L	M6 × 1.0	12	6.5	100
LCL012-150L	M6 × 1.0	12	6.5	150
LCL012-200L	M6 × 1.0	12	6.5	200
LCL016-100L	M8 × 1.25	16	8.5	100
LCL016-150L	M8 × 1.25	16	8.5	150
LCL016-200L	M8 × 1.25	16	8.5	200
LCL016-250L	M8 × 1.25	16	8.5	250
LCL020-100L	M10 × 1.5	20	10.5	100
LCL020-150L	M10 × 1.5	20	10.5	150
LCL020-200L	M10 × 1.5	20	10.5	200
LCL020-250L	M10 × 1.5	20	10.5	250
LCL020-300L	M10 × 1.5	20	10.5	300
LCL025-100L	M12 × 1.75	25	12.5	100
LCL025-150L	M12 × 1.75	25	12.5	150
LCL025-200L	M12 × 1.75	25	12.5	200
LCL025-250L	M12 × 1.75	25	12.5	250
LCL025-300L	M12 × 1.75	25	12.5	300
LCL032-100L	M16 × 2.0	32	17.0	100
LCL032-150L	M16 × 2.0	32	17.0	150
LCL032-200L	M16 × 2.0	32	17.0	200
LCL032-250L	M16 × 2.0	32	17.0	250
LCL032-300L	M16 × 2.0	32	17.0	300



訂購編號 Order No.	尺寸 Dimensions (mm)					
	螺紋 Thread	刃徑 d	d1	有效長 E	全長 L	柄徑 D
LCN011-075L-030E	M6 × 1.0	11.7	6.5	30	75	12
LCN011-100L-040E	M6 × 1.0	11.7	6.5	40	100	12
LCN011-150L-050E	M6 × 1.0	11.7	6.5	50	150	12
LCN015-100L-040E	M8 × 1.25	15.7	8.5	40	100	16
LCN015-150L-050E	M8 × 1.25	15.7	8.5	50	150	16
LCN019-100L-040E	M10 × 1.5	19.5	10.5	40	100	20
LCN019-150L-050E	M10 × 1.5	19.5	10.5	50	150	20
LCN019-200L-060E	M10 × 1.5	19.5	10.5	60	200	20
LCN024-100L-040E	M12 × 1.75	24.5	12.5	40	100	25
LCN024-150L-050E	M12 × 1.75	24.5	12.5	50	150	25
LCN024-200L-060E	M12 × 1.75	24.5	12.5	60	200	25
LCN024-250L-080E	M12 × 1.75	24.5	12.5	80	250	25
LCN031-100L-040E	M16 × 2.0	31.5	17.0	40	100	32
LCN031-150L-050E	M16 × 2.0	31.5	17.0	50	150	32
LCN031-200L-060E	M16 × 2.0	31.5	17.0	60	200	32
LCN031-250L-080E	M16 × 2.0	31.5	17.0	80	250	32

倒角型銑刀桿

Chamfering Toolholders

Table 01

ECSC / HCSC / ECDC / ECTCX 多功能倒角型銑刀桿 切削條件表

INDEXABLE TOOLS- MULTIPURPOSE- CHAMFERING CONDITION TABLE

加工方式 Cutting Mode	倒角加工 Chamfering				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	150~300m/min	100~250m/min	60~120m/min	150~250m/min	150~350m/min
每轉進給量 f	0.15~0.20mm/rev	0.1~0.2mm/rev	0.1~0.2mm/rev	0.15~0.25mm/rev	0.15~0.30mm/rev
切削量 Cutting Amount (mm)	Ap=0.5~1mm 	Ap=0.5~1mm 	Ap=0.5~1mm 	Ap=0.5~1mm 	Ap=0.5~1mm

加工方式 Cutting Mode	定點加工 Spotting				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	60~250m/min	50~200m/min	60~120m/min	100~200m/min	100~300m/min
每轉進給量 f	0.05~0.10mm/rev	0.04~0.06mm/rev	0.03~0.06mm/rev	0.05~0.10mm/rev	0.05~0.10mm/rev
切削量 Cutting Amount (mm)	Ap≤5.5mm 	Ap≤5.5mm 	Ap≤5.5mm 	Ap≤5.5mm 	Ap≤5.5mm

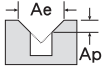
加工方式 Cutting Mode	開V槽加工 V-Grooving				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	60~250m/min	50~200m/min	60~120m/min	100~200m/min	100~300m/min
每轉進給量 f	0.05~0.07mm/rev	0.04~0.06mm/rev	0.03~0.06mm/rev	0.05~0.07mm/rev	0.05~0.07mm/rev
切削量 Cutting Amount (mm)	Ap≤5.5mm 	Ap≤5.5mm 	Ap≤5.5mm 	Ap≤5.5mm 	Ap≤5.5mm

加工方式 Cutting Mode	雕刻加工 Engraving				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	60~250m/min	50~200m/min	60~120m/min	100~200m/min	100~300m/min
每轉進給量 f	0.02~0.05mm/rev	0.02~0.03mm/rev	0.01~0.02mm/rev	0.02~0.05mm/rev	0.02~0.05mm/rev
切削量 Cutting Amount (mm)	Ap=0.2~1mm 	Ap=0.2~1mm 	Ap=0.2~1mm 	Ap=0.2~1mm 	Ap=0.2~1mm

※ 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 02 ECSP 倒角型銑刀桿 切削條件表

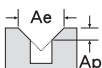
INDEXABLE TOOLS- CHAMFERING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<30	HRC30~45	—	HRC<30	HRC<30
加工方式 Cutting Mode	倒角加工 Chamfering				
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	40~100m/min
外徑 Diameter	每刃進給量 fz (mm)	每刃進給量 fz (mm)	每刃進給量 fz (mm)	每刃進給量 fz (mm)	每刃進給量 fz (mm)
11~15mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.03~0.06
16~22mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.03~0.06
23~33mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.03~0.06
34~41mm	0.12~0.24	0.05~0.10	0.10~0.17	0.12~0.24	0.05~0.10
42~50mm	0.12~0.25	0.05~0.10	0.10~0.17	0.12~0.25	0.05~0.10
備註 Remarks	Ap=0.5~1.0mm 				

※ 切削公式 / Cutting formula : S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π (3.14) F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 03 ECTC 倒角型銑刀桿 切削條件表

INDEXABLE TOOLS- CHAMFERING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<30	HRC30~45	—	HRC<30	—
加工方式 Cutting Mode	倒角加工 Chamfering				
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	150~350m/min
外徑 Diameter	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)
20~25mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.12~0.25
30~40mm	0.12~0.24	0.05~0.10	0.10~0.17	0.12~0.24	0.15~0.30
備註 Remarks	Ap=0.5~1.0mm 				

※ 切削公式 / Cutting formula : S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π (3.14) F(進給速度) = f(每轉進給量) × S(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.