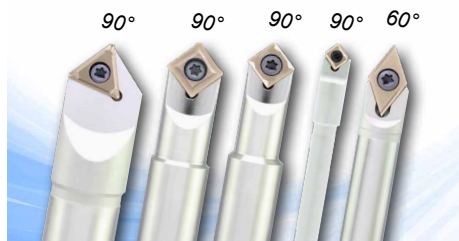


DTS Series



- Use DCEX, SCGX, SCMX, SDMX, TCMX inserts.
- Engraving, chamfering, countersinking, grooving and spotting functions in one tool.
- 使用 DCEX, SCMX 或 TCMX 銑刀片
- 一種刀具搞定雕刻、倒角、開槽和定位等功能

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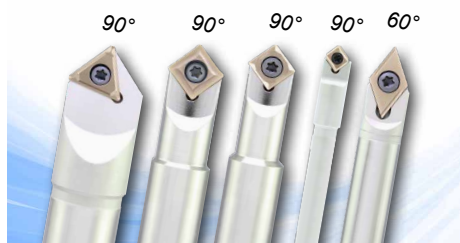
CSPC Series



- Use SPMG inserts with 4 cutting edges.
- T-slot cutter with up and down chamfering applications.
- 11~50mm cutter diameter.
- 使用 SPMG 銑刀片，4 個可用切削角
- T 型刀桿適用於上下倒角加工應用
- 11~50mm 刀桿直徑

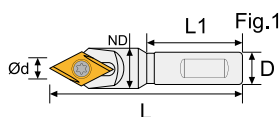
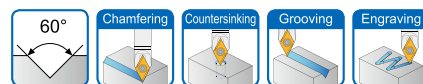
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DTS Series



- Use DCEX, SCGX, SCMX, SDMX, TCMX inserts.
- Engraving, chamfering, countersinking, grooving and spotting functions in one tool.
- 使用 DCEX, SCMX 或 TCMX 銑刀片
- 一種刀具搞定雕刻、倒角、開槽和定位等功能

DTS60 - Milling Tools 雕刻倒角銑刀



DTS 60 - DCEX11T3

Insert Brand : Winstar

Order No.	D	ND	L	L1	Fig	Insert	Screw	Wrench	Stock
IDTS1006006011	10	12	60	30	1	DCEX11T3	ITS3520	ITK15	●
IDTS1210006011	12	12	100	-	2				●

● stock ○ by inquiry

Recommended Cutting Conditions 建議切削數據

DTS 60 Chamfering / Countersinking

Material	Vc (m/min)	fr (mm/rev)
Carbon steel	12 ~ 180	0.05 ~ 0.15
Alloy steel	12 ~ 180	0.05 ~ 0.15
Stainless steel	12 ~ 180	0.05 ~ 0.15
Cast iron	12 ~ 180	0.05 ~ 0.15
Aluminum	12 ~ 180	0.10 ~ 0.20
Hardened steel	12 ~ 180	0.03 ~ 0.10

DTS 60 Grooving / Engraving

Material	Vc (m/min)	fr (mm/rev)
Carbon steel	10 ~ 170	0.005 ~ 0.05
Alloy steel	10 ~ 170	0.005 ~ 0.03
Stainless steel	10 ~ 170	0.005 ~ 0.05
Cast iron	10 ~ 170	0.005 ~ 0.03
Aluminum	10 ~ 170	0.005 ~ 0.08
Hardened steel	10 ~ 170	0.005 ~ 0.02

DTS 60 Cutting Depth of Passes

No. of Passes	ap of one pass (mm)					
	Aluminum	Cast iron	Carbon steel	Alloy steel	Stainless steel	Hardened steel
1	1.0	0.8	0.8	0.6	0.5	0.2
2	0.8	0.7	0.6	0.5	0.4	0.2
3	0.2	0.3	0.3	0.3	0.3	0.15
4		0.2	0.2	0.3	0.3	0.15
5			0.1	0.2	0.2	0.1
6				0.1	0.2	0.1
7					0.1	0.1

※ Max ap is 2mm

Engraving / Chamfering - DTS60 雕刻倒角銑刀

Insert Designation 刀片型號

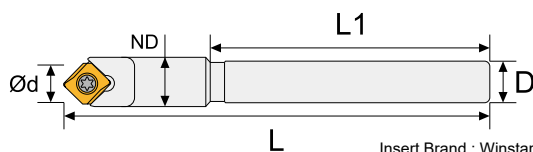
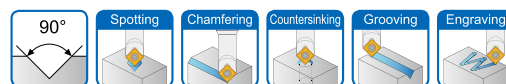
Insert	Order No.	Code-Chipbreaker-Grade	r	Engraving Ød	P	M	K	N	S	H
	IDCEX11T301SG32HS	DCEX11T301-SG-CX32HS	0.1	0.2 ~ 1	●	●	●	●	●	
	IDCEX11T302SG32HS	DCEX11T302-SG-CX32HS	0.2	0.4 ~ 2	●	●	●	●	●	
	IDCEX11T304SG32HS	DCEX11T304-SG-CX32HS	0.4	0.8 ~ 3	●	●	●	●	●	
	IDCEX11T30132HS	DCEX11T301-CX32HS	0.1	0.8 ~ 3	●	●	●		●	●
	IDCEX11T30232HS	DCEX11T302-CX32HS	0.2	0.8 ~ 3	●	●	●		●	●
	IDCEX11T30432HS	DCEX11T304-CX32HS	0.4	0.8 ~ 3	●	●	●		●	●
	IDCEX11T30832HS	DCEX11T308-CX32HS	0.8	0.8 ~ 3	●	●	●		●	●

Indexable Milling

Engraving / Chamfering - DTS90

雕刻倒角銑刀

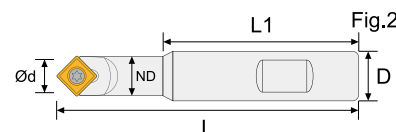
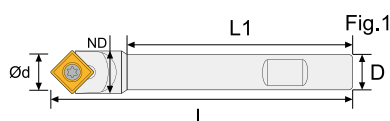
DTS90 - Milling Tools 雕刻倒角銑刀



DTS90 - SDMX05T1 (for small lathe)

Insert Brand : Winstar

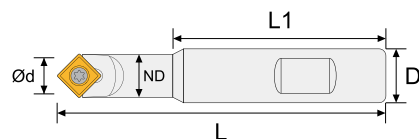
Order No.	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS0604009005	6	40	7	20	1 ~ 5	0.8 ~ 1.5	SDMX05T1	ITS1801	ITK06	●
IDTS0606009005	6	60	7	40						●



DTS90 - SCGX09T3, SCM09T3

Insert Brand : Winstar

Order No.	D	L	ND	L1	Fig	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS1010009009	10	100	12.2	71	1	2 ~ 11	0.8 ~ 2.5	SCGX09T3 SCMX09T3	ITS3520	ITK15	●
IDTS1210009009	12	100	12.2	71							●
IDTS1610009009	16	100	12.2	71	2						●
IDTS1613009009	16	130	12.2	101							

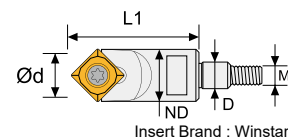


DTS90 - SDMX11T3

Insert Brand : Winstar

Order No.	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS1610009011	16	100	14.1	71	3 ~ 14	1.6 ~ 4.0	SDMX11T3	ITS3521	ITK15	●

DTS90 - Modular Milling Heads 雕刻倒角銑刀頭



Insert Brand : Winstar

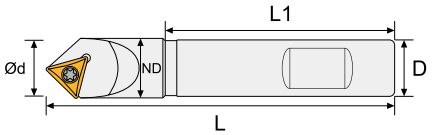
Order No.	L1	ND	D	M	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTSM603009009	30	12.4	6.5	M6	2 ~ 11	0.8 ~ 2.5	SCMX09T3	ITS3520	ITK15	○

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

Engraving / Chamfering - DTS90 雕刻倒角銑刀

DTS90 - Milling Tools 雕刻倒角銑刀



DTS90 - TCMX16T3 Insert Brand : Winstar

Order No.	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS2012009016	20	120	21.2	78	3 ~ 20	1.6 ~ 4.0	TCMX16T3	ITS3521	ITK15	●

● stock ○ by inquiry

Recommended Cutting Conditions 建議切削數據

DTS 90 Spotting

Material	Vc (m/min)		Fr (mm/rev)	
	Ød = 2 ~ 4.9 mm	Ød ≥ 5 mm	Ød = 2 ~ 4.9 mm	Ød ≥ 5 mm
Carbon steel	60 ~ 120	90 ~ 220	0.04 ~ 0.08	0.06 ~ 0.10
Alloy steel	50 ~ 100	75 ~ 180	0.03 ~ 0.06	0.05 ~ 0.08
Stainless steel	30 ~ 60	45 ~ 120	0.02 ~ 0.04	0.04 ~ 0.06
Cast iron	40 ~ 80	60 ~ 130	0.04 ~ 0.08	0.06 ~ 0.10
Hardened steel	20 ~ 40	30 ~ 60	0.02 ~ 0.04	0.04 ~ 0.08

DTS 90 Chamfering / Countersinking

Material	Vc (m/min)	Fr (mm/rev)
Carbon steel	60 ~ 270	0.15 ~ 0.24
Alloy steel	50 ~ 220	0.12 ~ 0.20
Stainless steel	35 ~ 120	0.10 ~ 0.20
Cast iron	60 ~ 220	0.15 ~ 0.25
Hardened steel	20 ~ 60	0.03 ~ 0.08

DTS 90 Grooving / Engraving

Material	Vc (m/min)	Fr (mm/rev)
Carbon steel	40 ~ 140	0.12 ~ 0.18
Alloy steel	35 ~ 120	0.10 ~ 0.14
Stainless steel	25 ~ 70	0.08 ~ 0.12
Cast iron	30 ~ 100	0.12 ~ 0.18
Hardened steel	20 ~ 50	0.02 ~ 0.04

Insert Designation 刀片型號

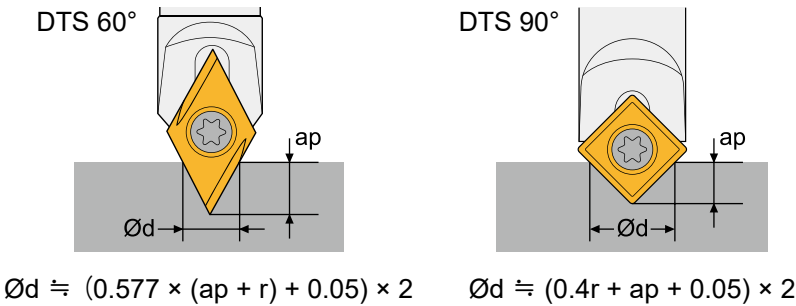
Insert	Order No.	Code-Chipbreaker-Grade	r	Spotting Ød	Engraving Ød	P	M	K	N	S	H
	ISCX09T304AG10	SCGX09T304-AG-CX10	0.4	2 ~ 11	0.8 ~ 2.5				●		
	ISCX09T304FG13TX	SCGX09T304-FG-CX13TX	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	○	●	●
	ISCMX09T304SM32HS	SCMX09T304-SM-CX32HS	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	○	●	○
	ISDMX05T104FG13TX	SDMX05T104-FG-CX13TX	0.4	1 ~ 5	0.8 ~ 1.5	●	●	●	○	●	●
	ISDMX05T104FG33TX	SDMX05T104-FG-CX33TX	0.4	1 ~ 5	0.8 ~ 1.5	●	●	●	○	●	●
	ISDMX11T308SG33TX	SDMX11T308-SG-CX33TX	0.8	3 ~ 14	1.6 ~ 4.0	●	●	●		●	●
	ITCMX16T308SM32HS	TCMX16T308-SM-CX32HS	0.8	3 ~ 20	1.6 ~ 4.0	●	●	●	○	●	●

How to calculate Ød ,RPM and Feed 如何計算 Ød ,RPM 和 Feed

Formula :

$$RPM = \frac{V_c \times 1000}{\varnothing d \times \pi}$$

$$Feed = RPM \times fr$$



EX :

Working Material : Cast iron
Insert : SCGX09T304
Application : 90° Spotting
ap : 2.5mm

$\varnothing d = (0.4r + ap + 0.05) \times 2 = (0.4 \times 0.4 + 2.5 + 0.05) \times 2 = 5.42 \text{ mm}$
Reference conditions table get $V_c \approx 85 \text{ m/min}$ and $fr \approx 0.075 \text{ mm/rev}$
 $RPM = (V_c \times 1000) / (\varnothing d \times \pi) = (85 \times 1000) / (5.42 \times \pi) \approx 5000$
 $Feed = RPM \times fr = 5000 \times 0.075 = 375 \text{ mm/min}$

Working Demonstration 加工實例



Cutting parameter	
Tools	DTS 90° with SCMX09T304-SP CX32HS
Material	Cast Iron
Coolant	Dry
Application	Spotting
Vc	85 m/min
S	4800 rpm
Feed	360 mm/min
ap	2.5 mm

Chamfering - CSPC

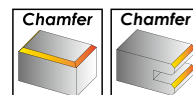
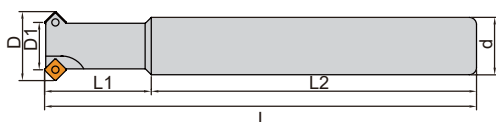
倒角銑刀

CSPC Series



- Use SPMG inserts with 4 cutting edges.
- T-slot cutter with up and down chamfering applications.
- 11~50mm cutter diameter.
- 使用 SPMG 銑刀片, 4 個可用切削角
- T 型刀桿適用於上下倒角加工應用
- 11~50mm 刀桿直徑

CSPCE - Milling Tools 倒角銑刀



Insert Brand : Winstar, Taegutec, ...

Order No.	D	D1	d	L1	L2	L	T	Inserts	Screw	Wrench	Stock
ICSPCE501011100	11	6	10	17	83	100	1	SPMG0502	ITS2003	ITK06	●
ICSPCE502015120	15	10	12	20	100	120	2				●
ICSPCE503017150	17	11	16	25	125	150	3				●
ICSPCE503019150	19	13	16	30	120	150	3				●
ICSPCE504024150	24	18	20	35	115	150	4				●
ICSPCE603022120	22	16	16	30	90	120	3	SPMG0602	ITS2205	ITK06	●
ICSPCE703027120	27	17	20	30	90	120	3	SPMG07T3	ITS2511	ITK08	●
ICSPCE902030150	30	19	20	40	110	150	2	SPMG0904	ITS3504	ITK15	●
ICSPCE903040150	40	29	25	40	110	150	3				●
ICSPCE904050150	50	39	25	40	110	150	4				●

● stock ○ by inquiry

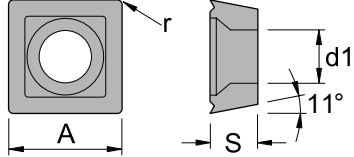
Recommended Cutting Conditions 建議切削數據

Working Material	Vc	fz				
		Ø11 ~ Ø15	Ø16 ~ Ø22	Ø23 ~ Ø33	Ø34 ~ Ø41	Ø42 ~ Ø50
Carbon Steel / Alloy Steel	120 ~ 250	0.06 ~ 0.12	0.06 ~ 0.12	0.06 ~ 0.12	0.12 ~ 0.24	0.12 ~ 0.25
Stainless Steel	100 ~ 180	0.05 ~ 0.10	0.05 ~ 0.10	0.05 ~ 0.10	0.10 ~ 0.17	0.10 ~ 0.17
Cast Iron	120 ~ 250	0.06 ~ 0.12	0.06 ~ 0.12	0.06 ~ 0.12	0.12 ~ 0.24	0.12 ~ 0.25
High Temperature Alloy	40 ~ 100	0.03 ~ 0.06	0.03 ~ 0.06	0.03 ~ 0.06	0.05 ~ 0.10	0.05 ~ 0.10
Hardened Steel	50 ~ 100	0.03 ~ 0.06	0.03 ~ 0.06	0.03 ~ 0.06	0.05 ~ 0.10	0.05 ~ 0.10

Chamfering - CSPC

倒角銑刀

Insert Specifications 刀片規格

Insert	Dimensions (mm)				
	A	S	r	d1	
SPGG050204	5.00	2.38	0.4	2.30	
SPGG060204	6.00	2.38	0.4	2.65	
SPGG07T308	7.94	3.97	0.8	2.85	
SPGG090408	9.80	4.3	0.8	4.05	
SPMG050204	5.00	2.38	0.4	2.30	
SPMG060204	6.00	2.38	0.4	2.65	
SPMG07T308	7.94	3.97	0.8	2.85	
SPMG090408	9.80	4.3	0.8	4.05	

Insert Designation 刀片型號

Insert	Order No.	Code-Chipbreaker-Grade	Working Material					
			P	M	K	N	S	H
	ISPGG050204SG33TX	SPGG050204-SG-CX33TX	○	●	○	●	○	
	ISPGG060204SG33TX	SPGG060204-SG-CX33TX	○	●	○	●	○	
	ISPGG07T304SG33TX	SPGG070304-SG-CX33TX	○	●	○	●	○	
	ISPGG090408SG33TX	SPGG090408-SG-CX33TX	○	●	○	●	○	
	ISPMG050204MG32HS	SPMG050204-MG-CX32HS	●	○	●			
	ISPMG050204MG33TX	SPMG050204-MG-CX33TX	●	○	●		○	●
	ISPMG050204MG33UX	SPMG050204-MG-CX33UX	●	●	●		●	○
	ISPMG050204MG43TX	SPMG050204-MG-CX43TX	●	●	○		●	
	ISPMG060204MG32HS	SPMG060204-MG-CX32HS	●	○	●			
	ISPMG060204MG33TX	SPMG060204-MG-CX33TX	●	○	●		○	●
	ISPMG060204MG33UX	SPMG060204-MG-CX33UX	●	●	●		●	○
	ISPMG060204MG43TX	SPMG060204-MG-CX43TX	●	●	○		●	
	ISPMG07T308MG32HS	SPMG07T308-MG-CX32HS	●	○	●			
	ISPMG07T308MG33TX	SPMG07T308-MG-CX33TX	●	○	●		○	●
	ISPMG07T308MG33UX	SPMG07T308-MG-CX33UX	●	●	●		●	○
	ISPMG07T308MG43TX	SPMG07T308-MG-CX43TX	●	●	○		●	
	ISPMG090408MG32HS	SPMG090408-MG-CX32HS	●	○	●			
	ISPMG090408MG33TX	SPMG090408-MG-CX33TX	●	○	●		○	●
	ISPMG090408MG33UX	SPMG090408-MG-CX33UX	●	●	●		●	○
	ISPMG090408MG43TX	SPMG090408-MG-CX43TX	●	●	○		●	