

# E Technical Information for Chamfer Tool

All applications for chamfers

## Chamfer Tool

- All chamfer applications
- Chamfer angles 15°, 30°, 45°, 60° for a variety of customer's needs
- The long cutting-edge provides a wide chamfering range



Back & Front Chamfer Tools



Long Chamfer Tools

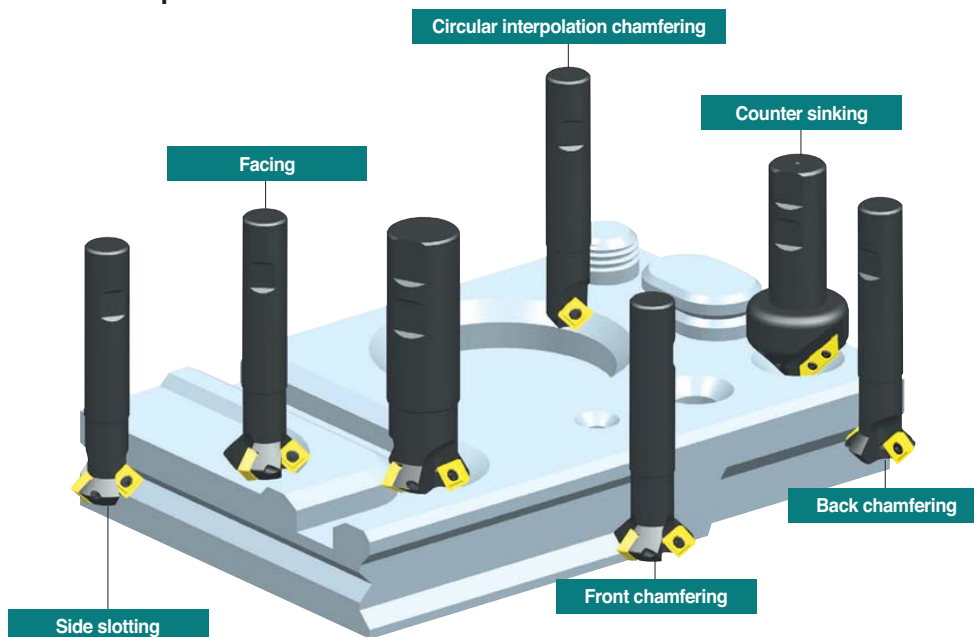
### Code system

<b>CE</b>	<b>45</b>	<b>- 11</b>	<b>25</b>	<b>R - S</b>	<b>20</b>
<b>Chamfer Endmill</b>	<b>Chamfer angle</b>	<b>Inscribed circle of insert</b>	<b>Min. Cutting Dia.</b>	<b>Hand</b>	<b>Overall length</b>
	45°	11: SPMT110408-KC 12: SPMN120308 31: XCET310404ER-KC	Ø25	R: Right L: Left	S: Standard M: Middle L: Long
					Ø20

### Recommended cutting condition

Workpiece	Grades	ØD (Ø5~Ø20)		ØD (Ø25~Ø35)	
		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)
P	PC3500	160~270	0.05~0.25	160~270	0.05~0.25
	PC5300	190~310		190~310	
	ST30A	60~100		60~100	
M	PC5300	100~160	0.05~0.20	100~160	0.10~0.30
	PC5400	70~120		70~120	
K	PC5300	110~180	0.10~0.30	110~180	0.30~0.50
	G10	50~90		50~90	

### Application example

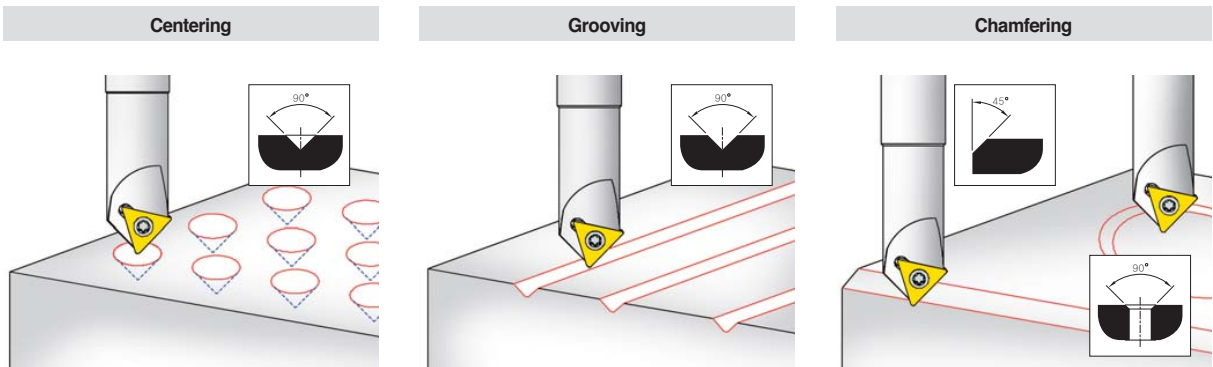


Multi-functional Chamfer Tool

Code system

<b>CE</b>	<b>45</b>	<b>-</b>	<b>16</b>	<b>00</b>	<b>R</b>	<b>-</b>	<b>S</b>	<b>20</b>
<b>Chamfer Endmill</b>	<b>Chamfer angle</b> 45°		<b>Inscribed circle of insert</b> 16: TWX16R-KC 22: TWX22R-KC	<b>Min. Cutting Dia.</b> Ø0	<b>Hand</b> R: Right L: Left		<b>Overall length</b> S: 90,110 L: 200	<b>Shank Dia.</b> Ø12 Ø20 Ø25

Application area and recommended cutting condition



Workpiece	Hardness (HrC)	Centering, Grooving		Chamfering	
		vc (m/min)	fz (mm/t)	vc (m/min)	fz (mm/t)
Mild steel, Carbon steel, Alloy steel	Under HrC 30	80~200	0.01~0.04	100~250	0.04~0.06
High Carbon steel, Alloy steel	HrC 30, 40	150~250	0.02~0.06	150~300	0.05~0.10
Aluminum, Copper	-	150~300	0.04~0.08	150~350	0.05~0.10
Cast iron	-	80~150	0.02~0.06	100~250	0.05~0.10
Stainless steel	-	60~120	0.01~0.03	60~150	0.03~0.06
HRSA	-	60~80	0.01~0.03	60~100	0.03~0.06

Note) Please keep fz. backtouch & chipping one caused by wrong fz

Machining example



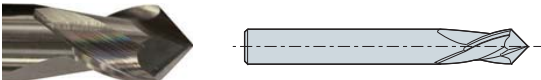
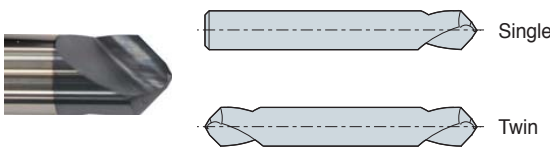
# E Technical Information for Solid Chamfer Tool

## Solid Chamfer Tool



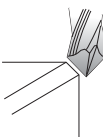
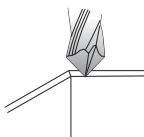

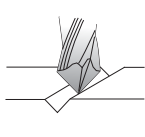


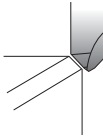
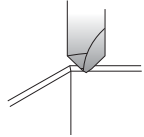

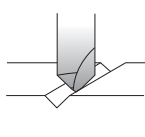
### Code system

<b>CCT</b>	<b>090</b>	<b>T</b>	<b>- 080</b>	<b>L</b>
<b>Type</b>	<b>Chamfer angle</b>	<b>Cutting-edge</b>	<b>Diameter</b>	<b>Tool length</b>
CCT: Centering & Chamfering Tool CET: Centering & Chamfering Endmill Tool	060: 60° 090: 90° 120: 120°	None: Single T: Twin	080: Ø8.0	None: Standard L: Long

### Features

CET (Centering & Chamfering Endmill Tool)	CCT (Centering & Chamfering Tool)
	
<ul style="list-style-type: none"> <li>• For internal chamfering up to 0.5 mm</li> <li>• Can be applied to side milling and easy to regrinding</li> </ul>	<ul style="list-style-type: none"> <li>• Chipping resistance realizes machining in high speed due to double point angle</li> <li>• Lowers cutting load due to web thinning</li> </ul>

### CET/CCT Application example

	Centering	Hole Chamfering	Chamfering (External)	Chamfering (Internal)	Side milling	Slot milling
Applications (CET)						
60°	×	●	●	●~▲	●	×
90°	▲	●	●	●	●	●~▲
120°	●	●	●	●	●	●
Applications (CCT)						
60°	●	●	●~▲	▲~×	×	×
90°	●	●	●~▲	▲~×	×	×
120°	●	●	●	●	×	●



# CE (Back & Front)

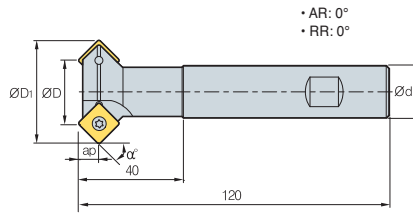


Fig. 1

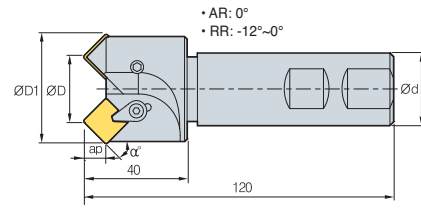


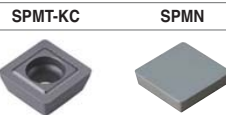
Fig. 2



(mm)

Designation	ØD	ØD <sub>1</sub>	Ød	ap	Fig.	Available inserts	α° (Chamfer angle)		Machining range (Min~Max)	Uses
							Front	Back		
CE	15-1125R-S20	25	30.5	20	9.5	SPMT110408-KC	15°	-	Ø25~Ø30	Front chamfering
	30-1125R-S20	25	35.5	20	8.5		30°	60°	Ø25~Ø35	Front, Back chamfering
	45-1107R-S20	7	21.9	20	7.0		45°	-	Ø7~Ø21	Front chamfering
	45-1119R-S20	19	33.9	20	7.0		45°	45°	Ø19~Ø33	Front, Back chamfering
	45-1125R-S20	25	39.9	20	7.0		45°	45°	Ø25~Ø39	Front, Back chamfering
	60-1125R-S32	25	43.3	32	5.0		60°	30°	Ø25~Ø42	Front, Back chamfering
	45-1207R-S32	7	23.3	32	7.8	SPMN120308	45°	-	Ø7~Ø22	Front chamfering
	45-1220R-S32	20	37.3	32	7.8		45°	-	Ø21~Ø36	Front chamfering
	45-1225R-S32	25	42.3	32	7.8		45°	-	Ø26~Ø41	Front chamfering
	45-1235R-S32	35	52.3	32	7.8		45°	-	Ø36~Ø51	Front chamfering

## Available inserts



Designation	Cermet		Coated										Uncoated			page	
	CN2000	CN30	NC5330	NC5340	NC5350	PC2505	PC2510	PC3500	PC3600	PC9530	PC6510	PC5300	PC5400	ST30A	G10		H01
SPMT 110408-KC	●							●						●	●		E25
SPMN 120308														●			

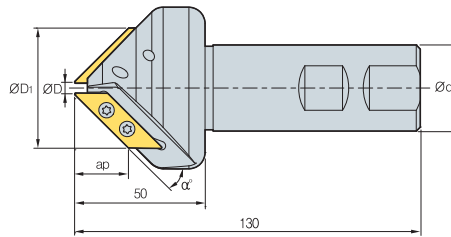
## Parts

Specification					
	Screw	Clamp	C-Ring	Wrench	Wrench
Ø7~Ø25 (1100 type)	FTKA0408	-	-	TW15S	-
Ø7~Ø35 (1200 type)	CHX0617L	CH6R2	CR05	-	HW30L

Available inserts E25

# E Chamfer Tools

## CE (Long chamfer)



- AR:  $-5^{\circ}\sim-1^{\circ}$
- RR:  $0^{\circ}$

(mm)

Designation		ØD	ØD <sub>1</sub>	Ød	ap	α° (Chamfer angle)	Machining range (Min-Max)	Uses
<b>CE</b> 30-3105R-S32	1	5	35	32	26	30°	Ø5-Ø35	Front Chamfering
45-3105R-S32	2	5	48	32	21	45°	Ø5-Ø48	Front Chamfering
60-3105R-S32	2	5	57	32	15	60°	Ø5-Ø57	Front Chamfering

### Available inserts

XCET-KC



Designation	Cermet		Coated								Uncoated			page			
	CN2000	CN30	NC5330	NC5340	NC5350	PC2505	PC2510	PC3500	PC3600	PC9530	PC6510	PC5300	PC5400		ST30A	G10	H01
XCET 310404ER-KC								●						●	●		E29

### Parts

Specification		
Ø5	Screw FTKA03510	Wrench TW15S

Available inserts E29



# CE (Multi-functional)

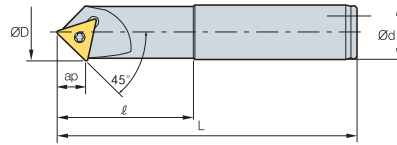


Fig. 1

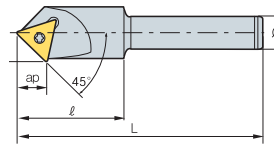
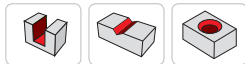


Fig. 2



• AR: -12°~15°  
• RR: 0°

(mm)

Designation	ØD	Ød	ℓ	L	ap	Fig.	Available Inserts	Machining range (Min-Max)	Uses	
CE	45-1600R-S12	21.2	12	40	90	10	2	TWX16R-KC	Ø0~Ø20	Centering Grooving Chamfering
	45-1600R-S20	21.2	20	50	110	10	1	TWX16R-KC	Ø0~Ø20	
	45-1600R-L20	21.2	20	60	200	10	1	TWX16R-KC	Ø0~Ø20	
	45-2200R-S12	28.8	12	40	90	14	2	TWX22R-KC	Ø0~Ø27	
	45-2200R-S25	28.8	25	50	110	14	1	TWX22R-KC	Ø0~Ø27	
	45-2200R-L25	28.8	25	60	200	14	1	TWX22R-KC	Ø0~Ø27	

## Available inserts

TWX-KC



Designation	Cermet		Coated										Uncoated			page	
	CN2000	CN80	NC5330	NC5340	NC5350	PC2505	PC2510	PC3500	PC3600	PC9530	PC8510	PC5300	PC5400	ST30A	G10		H01
TWX 16R-KC								●									E27
TWX 22R-KC								●									

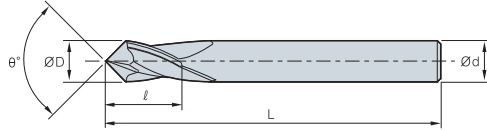
## Parts

Specification	Screw	Wrench
Ø22~Ø29	FTNA0408	TW15L

Available inserts E27

# E Solid Chamfer Tool

## CET

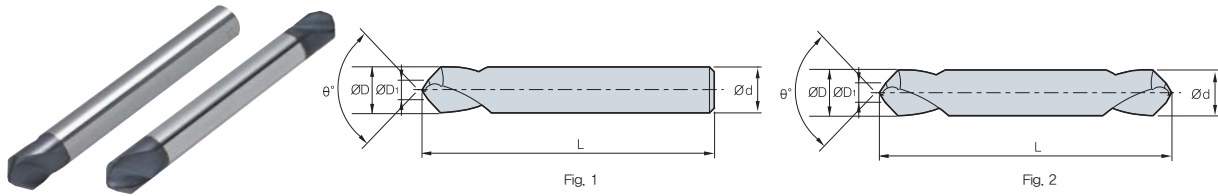


(mm)

Designation	ØD	Ød	ℓ	L	θ°
CET060 -	030	3	3	5.5	60°
	040	4	4	7	
	060	6	6	10	
	080	8	8	13	
	100	10	10	16	
	120	12	12	18	
	160	16	16	24	
CET090 -	030	3	3	5.5	90°
	040	4	4	7	
	060	6	6	10	
	080	8	8	13	
	100	10	10	16	
	120	12	12	18	
	160	16	16	24	
CET120 -	030	3	3	5.5	120°
	040	4	4	7	
	060	6	6	10	
	080	8	8	13	
	100	10	10	16	
	120	12	12	18	
	160	16	16	24	



# CCT



(mm)

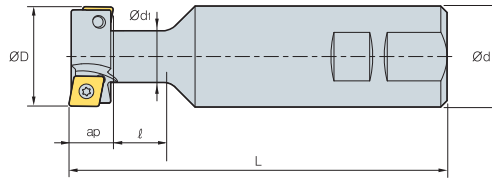
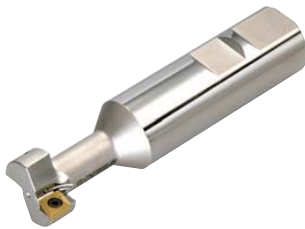
Designation	$\text{ØD} = \text{Ød}$	$\text{ØD}_1$	L	$\theta^\circ$	Fig
CCT060 -	030	3	40	60°	1
	040	4	40		
	060	6	50		
	080	8	60		
	100	10	70		
	120	12	80		
CCT060T -	030	3	40		2
	040	4	40		
	060	6	50		
	080	8	60		
	100	10	70		
	120	12	80		
CCT060T -	030L	3	100	90°	1
	040L	4	100		
	060L	6	100		
	080L	8	120		
	100L	10	120		
	120L	12	150		
CCT090 -	030	3	40		2
	040	4	40		
	060	6	50		
	080	8	60		
	100	10	70		
	120	12	80		
CCT090T -	030	3	100	1	
	040	4	100		
	060	6	100		
	080	8	120		
	100	10	120		
	120	12	150		
CCT090T -	030L	3	100	2	
	040L	4	100		
	060L	6	100		
	080L	8	120		
	100L	10	120		
	120L	12	150		
CCT120 -	030	3	40	120°	1
	040	4	40		
	060	6	50		
	080	8	60		
	100	10	70		
	120	12	80		
CCT120T -	030	3	40		2
	040	4	40		
	060	6	50		
	080	8	60		
	100	10	70		
	120	12	80		
CCT120T -	030L	3	100	1	
	040L	4	100		
	060L	6	100		
	080L	8	120		
	100L	10	120		
	120L	12	150		





# E T-Cutter

## TFE



AA  
90°  
• AR: 5°  
• RR: -5°

(mm)

Designation		ØD	Ød	Ødi	ℓ	L	ap	Available inserts	
TFE	2125R/L	2	21	25	10.5	20	109	9	CPMT06
	2525R/L	2	25	25	12.5	21	112	11	CPMT08
	3232R/L	2	32	32	16.5	26	120	14	CPMT09
	4032R/L	2	40	32	20.5	32	130	18	CPMH12
	5032R/L	4	50	32	26.5	38	140	22	CPMH12

### Available inserts



CPMT

CPMH

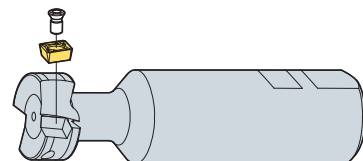


Designation	Cermet		Coated								Uncoated			page			
	CN2000	CN30	NC5330	NC5340	NC5350	PC2505	PC2510	PC3500	PC3600	PC9530	PC6510	PC5300	PC5400		ST30A	G10	H01
CPMT	060204-MM							●									E07
	080308-MM							●									
	09T308-MM							●									
CPMH	120408-MM							●									

### Parts

Specification	 Screw	 Wrench
Ø21	FTNA02555	TW08S
Ø25	FTNA0306	TW09S
Ø32	FTNA0407	TW15S
Ø40	PTMA0511A	TW15S
Ø50		

Assembling



Available inserts E07



E Milling

320