

High-performance chamfering tool, more compact and with ultra-high feed.

- Ultra-high feed machining enables drastic reduction of chamfering time.
- Supports various machining applications including front and back chamfering as well as face milling.

[Multi-Insert Type] Registered Design

Front and back chamfering



We recommend the **BIG** NEW BABY CHUCK for chucking.

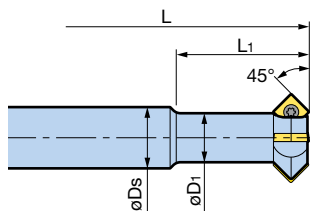
We recommend the **BIG** NEW HI- POWER MILLING CHUCK for chucking.



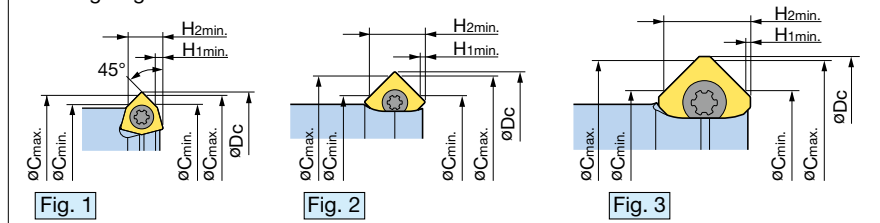
● Model Description

ST10 - C 08 10 - 45 B - 15

- Projection length (L₁)
- Chamfering angle
- Max. chamfer diameter
- Min. bore
- Chamfering
- Shank diameter



Cutting Edge Details

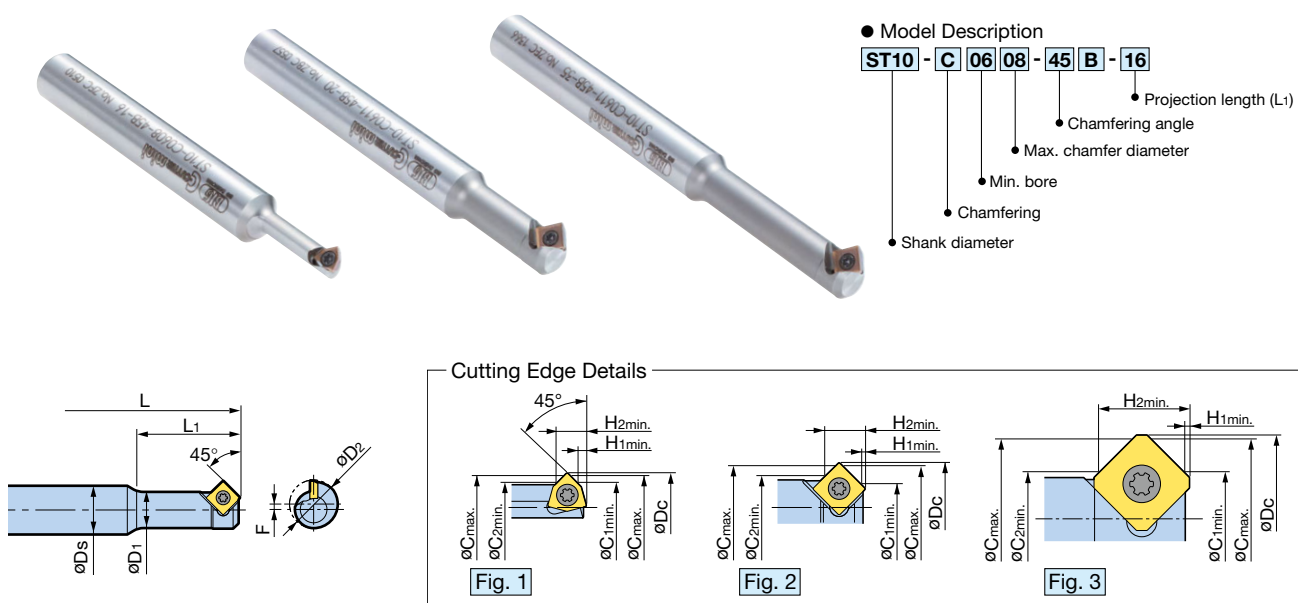


Model	Face Mill Cutter	Fig.	øDc	øDs	øD1	L	L ₁	øCmin.	øCmax.	H1min.	H2min.	Insert Model	Number of inserts
ST10-C0810-45B-15	—	1	10.5	10	7.4	78	15	8	10	0.7	3.2	CM03...	3
-27	—	1	10.5	10	7.4	90	27	8	10	0.7	3.2	CM03...	3
ST12-C1012-45B-20	—	1	12.7	12	9	93	20	10	12	1.0	3.7	CM04...	3
-35	—	1	12.7	12	9	108	35	10	12	1.0	3.7	CM04...	3
ST12-C1116-45B-25	—	2	17.1	12	9.6	98	25	11	16	0.4	6.5	CM05...	4
-40	—	2	17.1	12	9.6	113	40	11	16	0.4	6.5	CM05...	
ST16-C1520-45B-50	—	2	20.7	16	13.2	123	50	15	20	0.6	6.3	CM05...	
ST20-C1924-45B-60	—	2	24.7	20	17.2	143	60	19	24	0.6	6.3	CM05...	
ST20-C2232-45B-50	○	3	32.7	20	19.2	130	50	22	32	0.4	12.4	CM10...	4
-80	○	3	32.7	20	19.2	160	80	22	32	0.4	12.4	CM10...	
ST32-C3242-45B-65	○	3	42.7	32	30.6	175	65	32	42	0.4	12.4	CM10...	
-100	○	3	42.7	32	30.6	211	100	32	42	0.4	12.4	CM10...	4

1. A wrench and screws are included. Inserts must be ordered separately.
2. In case of chatter in plunge cutting, it is recommended to reduce the number of inserts to only 1 or 2 pcs.

For cutting conditions, refer to Cutting Conditions A on J34.

For inserts, **J34**

[Single Insert Type] Front and back chamfering

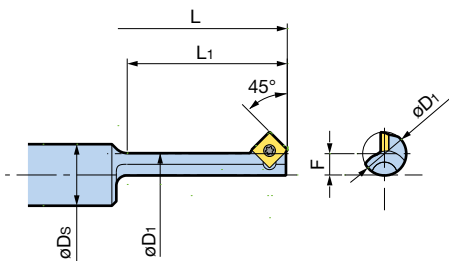
Model	Fig.	øDc	øDs	øD1	øD2	L	L1	øC1min.	øC2min.	øCmax.	H1min.	H2min.	Offset amount F	Insert Model
ST10-C0608-45B-16	1	8.8	10	5.7	5.7	78	16	6	6	8	1.0	3.8	1.55	CM04...
ST10-C0409-45B-20	2	9.8	10	5.4	7.7	86	20	4	6	9	0.5	5.4	1.1	CM05...
ST10-C0611-45B-20	2	12.0	10	7.4	9.8	81	20	6	8	11	0.4	5.5	1.1	CM05...
-35						96	35							
ST16-C1222-45B-40	3	22.6	16	11.0	16.9	117	40	12	12	22	0.3	12.4	2.9	CM10...

1. A wrench and screws are included. Inserts must be ordered separately.

For cutting conditions, refer to Cutting Conditions A on J34.

For inserts, **J34**

[Spot Facing Hole Type] Front and back chamfering Hole diameter: $\phi 10 - \phi 27$



Cutting Edge Details

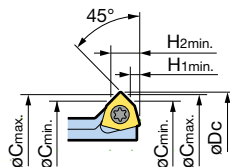


Fig. 1

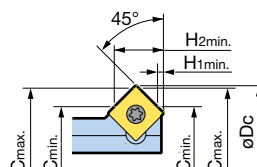


Fig. 2

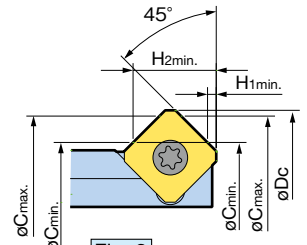


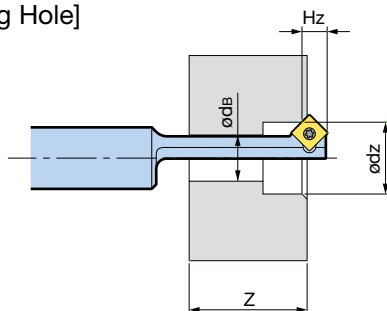
Fig. 3

Model	Fig.	ϕD_c	ϕD_s	ϕD_1	L	L ₁	$\phi C_{min.}$	$\phi C_{max.}$	H _{1min.}	H _{2min.}	Offset Amount F	Insert Model
ST10-CZ06-45B-23	1	12.8	10	6.1	85	23	10.0	12.0	1.0	3.8	3.35	CM04...
ST12-CZ08-45B-31	2	16.8	12	8.5	104	31	11.0	16.0	0.5	6.3	4.15	CM05...
ST16-CZ10-45B-37		20.3	16	10.5	111	37	14.5	19.5			4.90	
ST16-CZ12-45B-50	3	24.8		13.5	124	50	14.0	24.0	0.3	12.0	5.65	CM10...
ST20-CZ14-45B-56		27.8	20	15.5	139	56	17.0	27.0			6.15	

1. A wrench and screws are included. Inserts must be ordered separately.

For inserts, J34

[Spot Facing Hole]



Cutter size	ϕd_s	Spot Facing Hole		Z
		ϕd_z	H _z	
CZ06	6.6(M 6)	11.0(M 6)	3.3	17
CZ08	9.0(M 8)	14.0(M 8)	4.9	23
CZ10	11.0(M10)	17.5(M10)	4.9	29
CZ12	14.0(M12)	20.0(M12)	9.4	37
CZ14	16.0(M14)	23.0(M14)	9.4	43



[Bolt Hole & Tap Starting Hole Type] Front and back chamfering Tap starting size: M6 - M20

● Model Description

ST8 - C M06 - 45 B - 14

- Shank diameter
- Chamfering
- Tap size
- Chamfering angle
- Projection length (L₁)

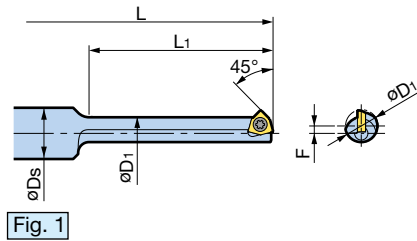


Fig. 1

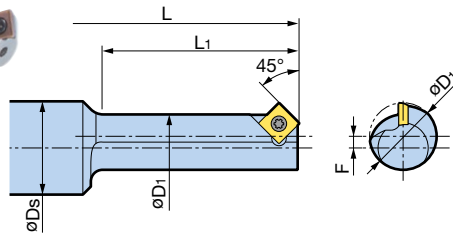
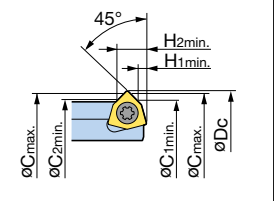
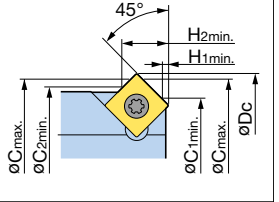


Fig. 2

Cutting Edge Details



Cutting Edge Details

The ● mark in the table indicates **LONG TYPE** with long projection length.

Model	Fig.	øDc	øDs	øD ₁	L	L ₁	øC _{1min.}	øC _{2min.}	øC _{max.}	H _{1min.}	H _{2min.}	Offset amount F	Insert Model
ST 8-CM06-45B-14	1	7.0	8	4.6	66	14	4.9	4.9	6.3	0.9	3.1	1.20	CM03...
-26 ●					78	26							
ST10-CM08-45B-19	1	9.2	10	6.3	81	19	6.4	6.6	8.4	1.0	3.7	1.45	CM04...
-35 ●					97	35							
ST12-CM10-45B-25	2	11.3	12	8.0	99	25	5.5	8.3	10.5	0.5	5.0	1.65	CM05...
-45 ●					119	45							
ST12-CM12-45B-29	2	13.4	12	9.7	102	29	7.6	10.0	12.6	0.5	5.2	1.85	
-53 ●					126	53							
ST16-CM14-45B-33	2	15.5	16	11.5	107	33	9.7	11.8	14.7	0.5	5.3	2.00	
-61 ●					135	61							
ST16-CM16-45B-37	2	17.6	16	13.5	110	37	11.8	13.8	16.8	0.5	5.4	2.05	
-69 ●					142	69							
ST20-CM18-45B-42	2	19.7	20	14.9	126	42	13.9	15.2	18.9	0.5	5.7	2.40	
-78 ●					162	78							
ST20-CM20-45B-46	2	21.8	20	16.9	129	46	16.0	17.2	21.0	0.5	5.8	2.45	
-86 ●					169	86							

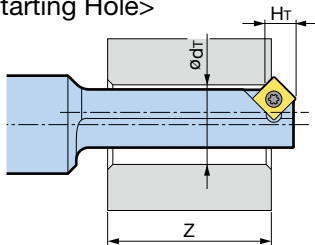
1. A wrench and screws are included. Inserts must be ordered separately.

2. When using an insert model CM05... with the ● mark (LONG TYPE), use the standard insert (CM0502 ACP200) for resistance to chatter.

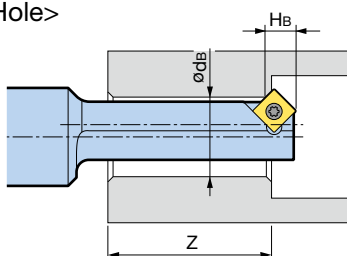
For cutting conditions, refer to Cutting Conditions B on J34 for the ● marked LONG TYPE, and A for others.

For inserts, J34

<Tap Starting Hole>



<Bolt Hole>



Cutter size	Tap starting hole		Bolt hole		Z	
	øDt	Ht	øDb	Hb	Standard Type	Long Type
CM06	5.0 (M 6)	3.0	5.5 (M5)	2.8	10	22
CM08	6.8 (M 8)	3.6	6.6 (M6)	3.7	13	29
CM10	8.5 (M10)	4.9	9.0 (M8)	4.6	17	37
CM12	10.3 (M12)	5.0	11.0 (M10)	4.7	21	45
CM14	12.0 (M14)	5.2	—	—	25	53
CM16	14.0 (M16)	5.3	14.0 (M12)	5.3	29	61
CM18	15.5 (M18)	5.6	16.0 (M14)	5.3	33	69
CM20	17.5 (M20)	5.6	18.0 (M16)	5.4	37	77

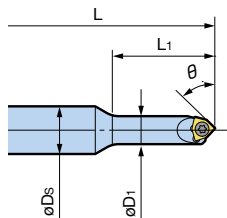
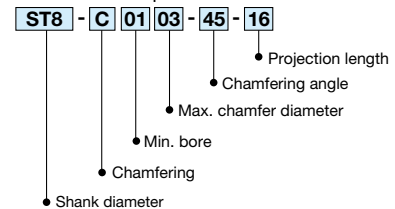
For back spot facing tool for cap bolt...
Back spot facing tool
BF-CUTTER

J47

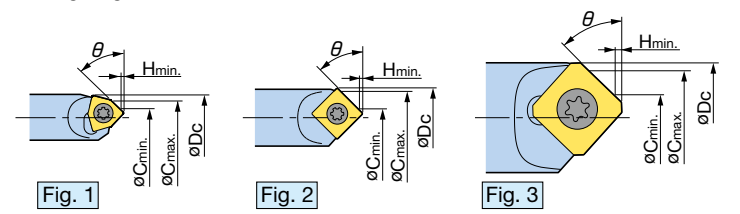
[Single Insert Type] Front chamfering



● Model Description



Cutting Edge Details



Model	Fig.	θ	ϕD_c	ϕD_s	ϕD_1	L	L ₁	$\phi C_{min.}$	$\phi C_{max.}$	H _{min.}	Insert Model
ST 8-C0103-45-16	1	45°	4.9	8	4.7	68	16	1	3	0.1	CM03...
ST10-C0204-45-15	1	45°	6.3	10	6	78	15	2	4	0.4	CM04...
-25						88	25				
ST10-C0207-45-20	2	45°	8.1	10	7.8	81	20	2	7	0.4	CM05...
-35						96	35				
ST16-C0515-45-50	3	45°	15.8	16	15.2	122	50	5	15	0.4	CM10...
ST16-C0214-30-40	3	30°	15.9	16	15.4	105	40	2	14	0.2	CM10...
ST16-C0916-60-40	3	60°	16.5	16	15.6	105	40	9	16	0.8	CM10...

1. A wrench and screws are included. Inserts must be ordered separately.
2. Spot drilling (centering) cannot be performed.

For cutting conditions, refer to Cutting Conditions A on J34.

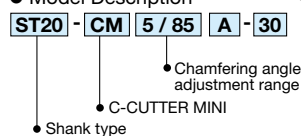
For inserts, J34

[Universal Type] Front chamfering

Covers chamfering angles from 5° to 85°.



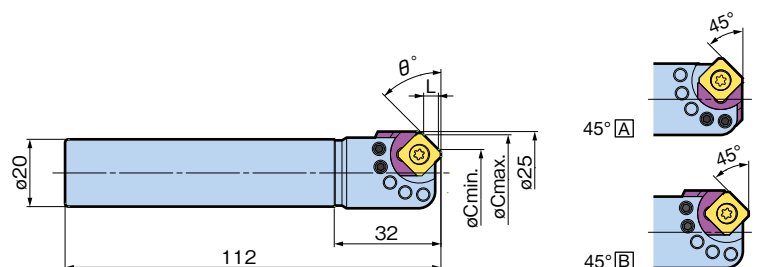
● Model Description



Model **ST20-CM5 / 85A-30**

Compatible insert: **CM10C1**

For inserts, J34



[Chamfering Range]

Chamfering angle θ	Min. hole $\phi C_{min.}$	Max. chamfer diameter $\phi C_{max.}$	L
5°	5.7	18.8	0.6
10°	6.7	19.7	1.2
15°	7.6	20.5	1.7
20°	8.5	21.2	2.3
25°	9.6	21.8	2.9
30°	10.6	22.3	3.4
35°	11.6	22.7	3.9
40°	12.7	23.0	4.4
45° [A]	13.7	23.3	4.8
45° [B]	13.4	23.0	4.8

Chamfering angle θ	Min. hole $\phi C_{min.}$	Max. chamfer diameter $\phi C_{max.}$	L
50°	14.4	23.2	5.2
55°	15.5	23.3	5.6
60°	16.4	23.3	5.9
65°	17.4	23.2	6.2
70°	18.3	23.0	6.4
75°	19.1	22.7	6.6
80°	19.9	22.3	6.7
85°	20.7	21.9	6.8

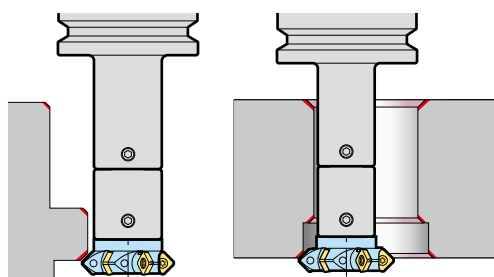
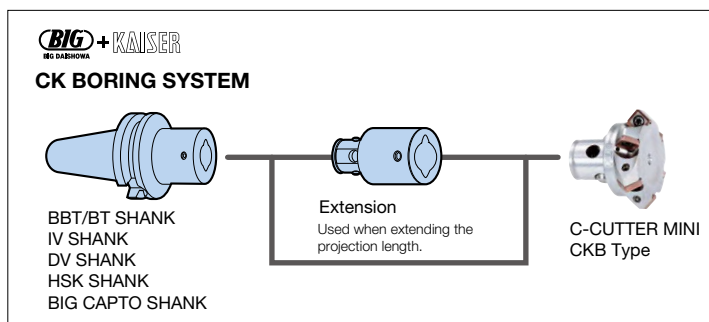
Values in the table are reference only. Measure accurate values with a presetter.

Ultra High Feed Chamfer Mill **C-CUTTER MINI**

BIG + **KAISER** CK BORING SYSTEM

[CKB Type] Front and back chamfering

Modular system allows chamfering of deep holes.



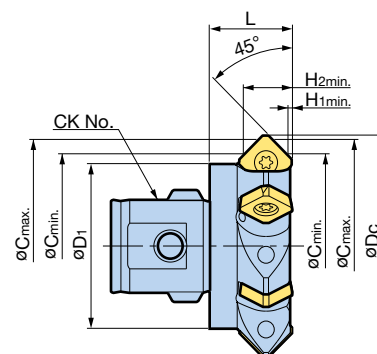
Front and back chamfering of grooves and steps located at a distance.

Front and back chamfering of deep holes

Model Description

CKB1 - C 22 32 - 45 B - 20

- CK No.
- C
- 22
- 32
- 45
- B
- 20
- L dimension
- Chamfering angle
- Max. diameter
- Min. diameter
- Chamfering



Model	Face milling capability	øDc	øD1	L	Chamfering diameter		H1min.	H2min.	Insert Model	Number of inserts
					øCmin.	øCmax.				
CKB1-C2232-45B-20	○	32.7	19	20	22	32	0.3	12.4	CM10...	4
CKB3-C3242-45B-20		42.7	31		32	42				
-C5262-45B-20		62.7	31		52	62				6
CKB4-C4252-45B-20		52.7	39		42	52				
CKB5-C5262-45B-20		62.7	51		52	62				

1. A wrench and screws are included. Inserts must be ordered separately.

2. In case of chatter in plunge cutting, it is recommended to reduce the number of inserts to 1 or 2 pcs.

For cutting conditions, refer to Cutting Conditions A on J34.

For inserts, **J34**

Connection mechanism boasting outstanding reliability

CK BORING SYSTEM **CK BORING SYSTEM**

Supports various boring applications with abundant heads and accessories.



BIG + **KAISER**
BIG DASHOWA

J

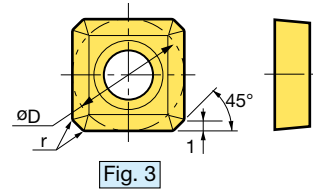
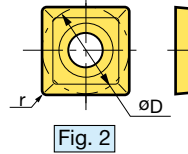
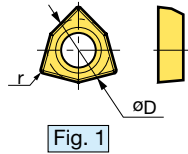
Deburring/Chamfering/Back Spot Facing

<Insert> Optional



● Model Description

CM	03	02	ACP300
			Grade
			Corner radius
			Insert size
			C-CUTTER MINI



Suffix **SE** model designates a sharp cutting edge insert.

Model	Fig.	Inscribed circle øD	r	Insert grade				Insert Clamping Screw Set Model
				ACP200	ACP300	ACM250F	DS20	
CM0302	1	3.31	0.2	—	○	—	—	S1.6S-T3
CM0402	1	3.97	0.2	—	○	—	—	S2SS-T6
CM0502	2	5	0.2	○	—	○	○	S2TS-T6
CM0502SE				○	○	—	—	
CM10C1	3	10	0.2	○	—	○	○	S4S-T15
CM10C1SE				○	—	—	—	

1. Inserts are available in packets of 10 pcs. Please specify the insert model number and grade when ordering.
2. The insert clamping screw set contains 10 screws and 1 wrench.
3. Insert clamping screws and tightening wrench are consumables. Order periodically for replacement or spares.

Example: **CM0502 ACP200**.....10 Pcs

Insert Grade Description

ACP200/300	ACM250F	DS20
For steel/cast iron	For stainless steel	For aluminum/non-ferrous metals
PVD-coated carbide with superior wear resistance due to its nanometer-level thickness ultra-multilayered TiAlN and AlCrN film.	PVD-coated carbide with excellent smoothness and resistance to welding and chipping, due to the ultra-multilayered thin film structure made of AlTiN and TiAlCrN.	DLC-coated carbide exclusive for aluminum and non-ferrous metals, ultra-smooth with a low wear coefficient and superior welding resistance.



Sharp-edge inserts

Sharp cutting edge effectively prevents burrs.

Cutting Conditions

A (Standard Cutting Conditions)

Workpiece material	Insert grade	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)		Coolant
			Chamfering	Face Milling	
Unalloyed Steel, Carbon Steel, Alloy Steel	ACP200 ACP300	100 - 350	0.05 - 0.4	0.05 - 0.2	Dry
Pre-hardened Steel HRC40 or less		60 - 100	0.05 - 0.1	0.05 - 0.1	Wet
Cast Iron	ACM250F DS20, ACP300	100 - 350	0.1 - 0.5	0.05 - 0.25	Dry
Stainless Steel		100 - 250	0.08 - 0.3	0.08 - 0.2	Dry/Wet
Aluminum/Non-ferrous		100 - 800	0.1 - 0.5	0.05 - 0.3	Dry/Wet

1. This table is a guideline for selecting cutting parameters. Adjust them as needed according to the machine and workpiece conditions.
2. Generally, wet cutting effectively improves finishing surfaces.
3. Wet cutting effectively suppresses built-up edges occurring on stainless steel or aluminum chamfering.

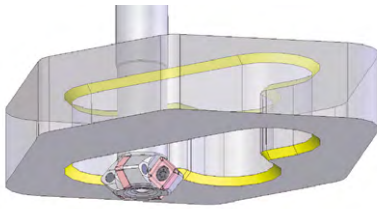
B (Cutting Conditions for Spot Facing Hole Type and Long Type of Bolt Hole & Tap Starting Hole Type)

Workpiece material	Insert grade	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)	Coolant
Unalloyed Steel, Carbon Steel, Alloy Steel	ACP200 ACP300	20 - 100	0.03 - 0.12	Wet
Cast Iron		50 - 160	0.05 - 0.20	Dry
Aluminum/Non-ferrous		30 - 100	0.03 - 0.12	Wet

1. This table is a guideline for selecting cutting parameters. Adjust them as needed according to the machine and workpiece conditions.
2. Short projection length types other than the LONG TYPE are recommended for stainless steel and pre-hardened steel.

APPLICATION EXAMPLES

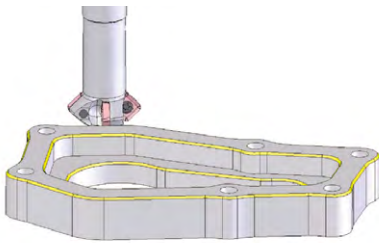
■ Front and back chamfering of stainless steel machine parts



Workpiece: SUS304
Chamfering amount: C3
Feed per tooth: 0.1mm/tooth

	Third-party product (TiAlN-coated carbide insert used)	C-CUTTER MINI (ST20-C2232-45B-50)
Chamfering diameter	ø30	ø28
Number of inserts	1	4
Cutting speed Vc (m/min)	140	180
Spindle speed n (min ⁻¹)	1,490	2,050
Feed Vf (mm/min)	149	819
Result	5 times greater machining efficiency	

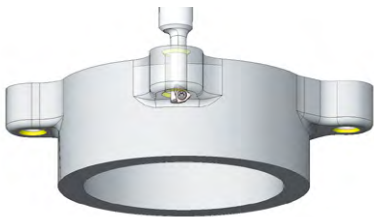
■ Aluminum case chamfering



Workpiece: AC4C
Chamfering amount: C0.5
Feed per tooth: 0.1mm/tooth

	Third-party product (Non-coated carbide insert used)	C-CUTTER MINI (ST12-C1116-45B-25)
Chamfering diameter	ø40	ø12
Number of inserts	3	4
Cutting speed Vc (m/min)	200	600
Spindle speed n (min ⁻¹)	1,590	15,920
Feed Vf (mm/min)	477	6,370
Result	13 times greater machining efficiency	

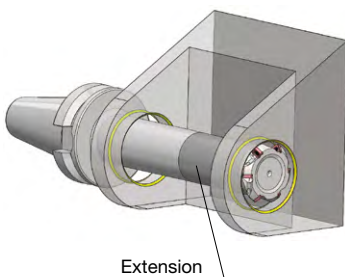
■ Front and back chamfering of M8 Tap Starting Holes



Workpiece: FC250
Hole diameter: ø6.6
Chamfering diameter: ø8.4

	Third-party product (Non-coated carbide insert used)	C-CUTTER MINI (ST10-CM08-45B-19)
Cutting speed Vc (m/min)	30	150
Spindle speed n (min ⁻¹)	1,140	5,680
Feed f (mm/rev)	0.05	0.1
Feed Vf (mm/min)	57	568
Result	No chatter even with a tenfold feed increase.	

■ Front and back chamfering of carbon steel parts



Modular system handles
deep holes, too

Workpiece: S35C
Chamfering amount: C0.5
Feed per tooth : 0.1mm/tooth
Projection length: 275mm

	Third-party product	C-CUTTER MINI (CKB5-C5262-45B-20)
Number of inserts	Chatter prevents machining	6
Cutting speed Vc (m/min)		200
Spindle speed n (min ⁻¹)		1,230
Feed Vf (mm/min)		735
Result	Front and back chamfering of conventionally impossible projection lengths is also possible.	