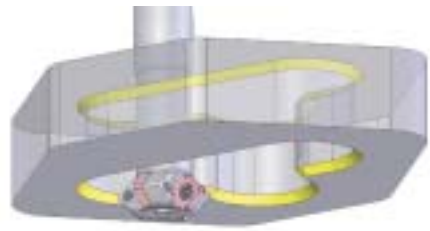


Application example

● Front & Back chamfering for Stainless



Workmaterial : X5CrNi18-9
C h a m f e r : 3mm x 45°
Feed per tooth : 0.1mm

	Competitor's cutter (with TiAlN coated carbide insert)	C cutter mini (ST20-C2232-45B-50)
Chamfering dia.	ø30	ø28
Number of tooth	1	4
Cutting speed(m/min)	140	180
Spindle speed(min ⁻¹)	1,490	2,050
Feed(mm/min)	149	819
Result	5 times better Cutting efficiency	

● Chamfering for Aluminum



Workmaterial : Al-Si7Mg(Fe)
C h a m f e r : 0.5mm x 45°
Feed per tooth : 0.1mm

	Competitor's cutter (with Non-coated carbide insert)	C cutter mini (ST12-C1116-45B-25)
Chamfering dia.	ø40	ø12
Number of tooth	3	4
Cutting speed(m/min)	200	600
Spindle speed(min ⁻¹)	1,590	15,920
Feed(mm/min)	477	6,370
Result	13 times better Cutting efficiency	

Chamfering



Hole Dia : ø5-ø100

Optimized Chamfering.
One C-Cutter to cover a wide chamfering range.
Reduced number of tool holders and machining time.

1 cutter covers ø5-ø25mm
1 cutter covers ø10-ø40mm
1 cutter covers ø30-ø60mm
1 cutter covers ø50-ø100mm



Cylindrical shank



CKB shank*



ABS shank*



No. 37

For C-CUTTER, please refer to Catalog

* License product for limited sales territory only.

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JQA-QMA11602
AWAJI No.1 Factory
JQA-QM3913
FA Dept.

CATALOG No. EXm154-0707-1

Subject to technical changes by further developments.

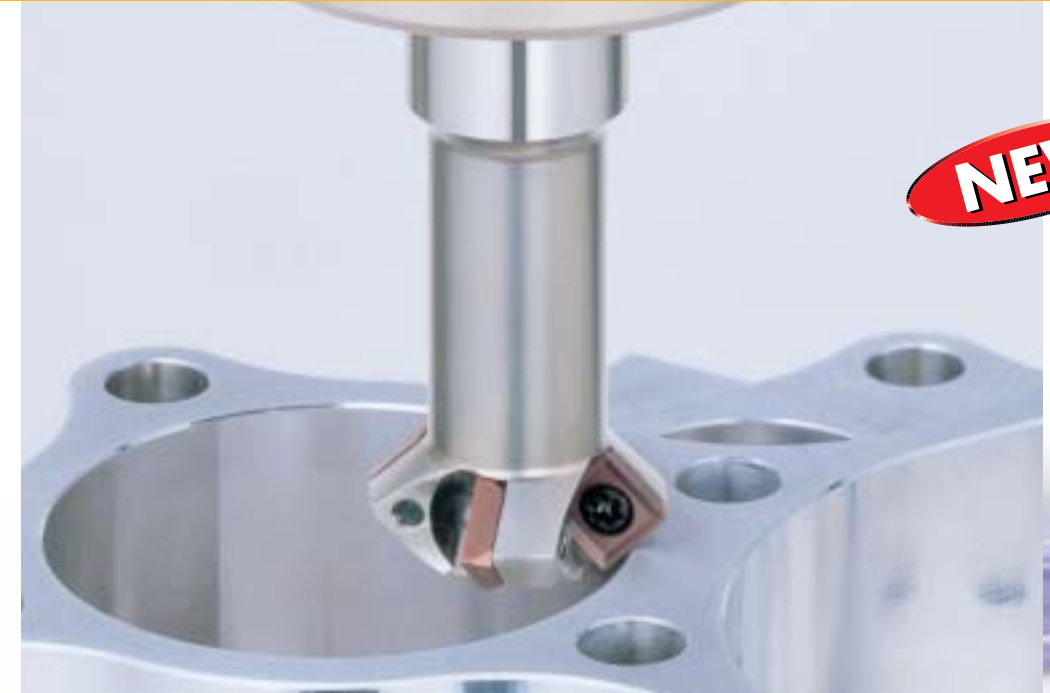


The Ultra High Feed Chamfer mill

C-CUTTER mini

BIG DAISHOWA SEIKI CO LTD

CATALOG No. **EXm154**



NEW

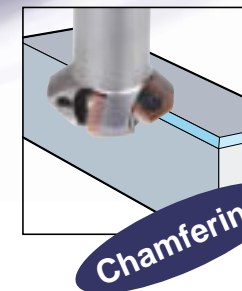
Ultra High Feed Rate!

Increases the feed rate up to 400% using 4 Inserts!

(Compared with competitor's cutter)



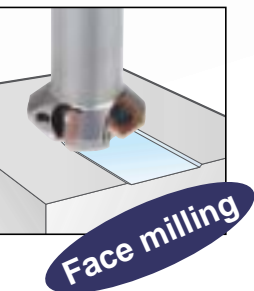
(Full-scale)



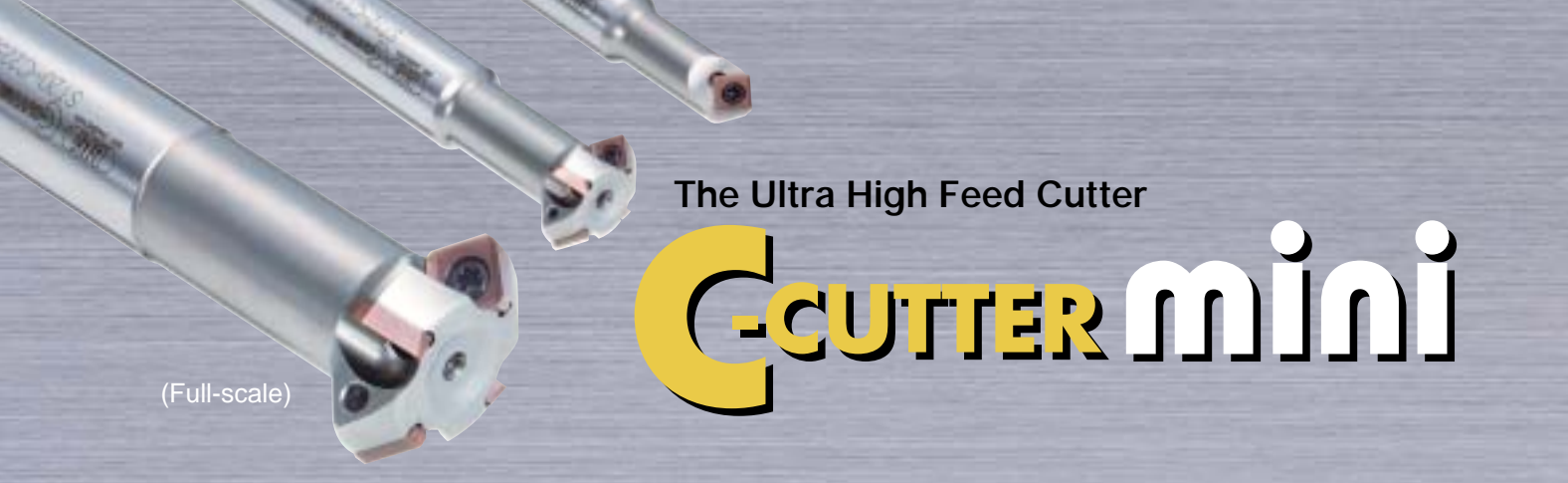
Chamfering



Back chamfering



Face milling



Compact design with 4 inserts & small cutting diameter!!
High performance chamfer cutter to achieve ultra high feed rate by reducing the cutting diameter to the lowest limit.

For multi-functional cutting

- Chamfering
- Back chamfering
- Face milling



Work material: Ck55
 Chamfering amount: 1mm x 45°
 Feed per tooth: 0.1mm

Cutting efficiency is improved by **8 times.**

	Competitor's Tool	C-cutter mini (ST12-C1116-45B-25)	
Chamfering dia.	ø29	ø13.5	Small dia.
Number of teeth	2	4	UP
Cutting speed (m/min)	150	300	UP
Spindle speed (min ⁻¹)	1,646	7,040	UP
Feed (mm/min)	329	2,820	8.5x Higher!

4 Inserts, small diameter and new coating achieve Triple effect.

- Effect 1** **Maveric design.** Ultra high feed by 4 Inserts. Compared with 1 or 2 Inserts per cutter, A 4 Insert cutter multiplies feed rate.
- Effect 2** **Increased Spindle speed by Ultra compact diameter.** A smaller tool diameter means faster spindle speeds.
- Effect 3** **Latest coating [ACP200] increases the Cutting speed.** Wear resistant multi layer PVD coating increases the cutting speed!!

C-cutter mini vs **Competitor's cutter**

Small cutting diameter and 4 Inserts!! vs **Large cutting diameter with only 1 or 2 Inserts.**

Considerably Improved!!

Feed rate = $\frac{\text{Spindle speed} \times \text{Feed per tooth} \times \text{Number of teeth}}{\pi \times \text{Cutting diameter}}$

Spindle speed = $\frac{\text{Cutting speed}}{\pi \times \text{Cutting diameter}}$

UP **Small dia.**

World's smallest 5mm square insert is used.

World's smallest 5mm square insert with 4 cutting edges.



High speed back-chamfering!!

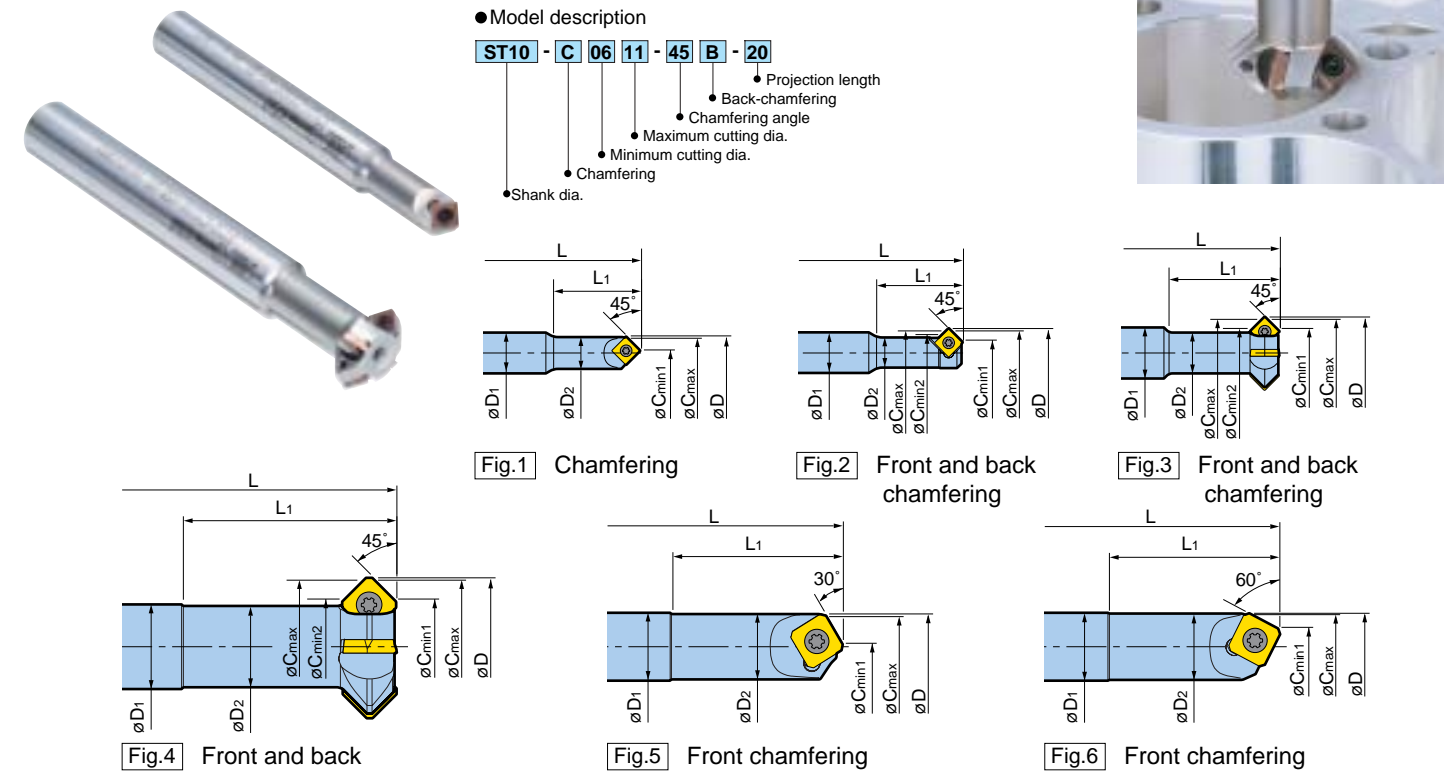
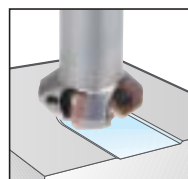
High speed back-chamfering reduces hand de-burring!!



Face milling is possible even with this chamfering cutter.

(Possible only with 45 degree chamfering type with 10mm square insert)

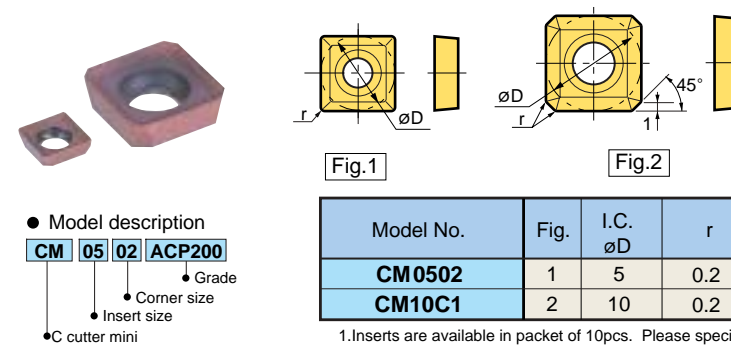
Minor cutting edge allows light face milling.



Chamfering angle	Application			Model No.	Fig.	Number of tooth	øD	øD1	øD2	Chamfering dia.			L	L1	Insert Model No.	Weight (kg)
	Face milling	Front chamfering	Back chamfering							øCmax	øCmin1	øCmin2				
45°	-	○	-	ST10-C0207-45 -20	1	1	8.1	10	7.8	7	2	-	81	20	CM0502	0.04
	-	○	○	-C0611-45B-20	2		12.0	10	7.4	11	6	8	81	20		0.05
	-	○	○	ST12-C1116-45B-25	3		17.1	12	9.6	16	11	11	98	25		0.1
	-	○	○	ST20-C2232-45B-50	4	4	32.7	20	19.2	32	22	22	130	50		0.3
30°	-	○	-	ST32-C3242-45B-65	4		42.7	32	30.6	42	32	32	175	65	CM10C1	1.0
	-	○	-	ST16-C0214-30 -40	5	1	15.9	16	15.4	14	2	-	105	40		0.2
60°	-	○	-	-C0916-60 -40	6		16.5	16	15.6	16	9	-	105	40		0.2

- Wrench and screw are included. Inserts must be ordered separately (10/pkg).
- Centering is not possible.
- In case of chamfering with 4 insert type, chatter may occur due to increasing cutting force when plunge cutting. Please try the different types with less inserts, 1 or 2.

《Indexable Inserts》 Optional



Explanation of Insert grade

ACP200	DS20
For all steel and Stainless steel materials.	For aluminum and non-ferrous materials.
Multi layer PVD coating on carbide base with nanoscale TiAlN & AlCrN. Excellent performance and wear resistance.	DLC coating on carbide base with very smooth surface for a low coefficient of friction. Excellent performance against built-up edge.

Model No.	Fig.	I.C. øD	r	Insert Grade		Insert Clamping Screw Set	Anti-seize Lubricant
				ACP200	DS20		
CM0502	1	5	0.2	○	○	S2TS-T6	BN-5
CM10C1	2	10	0.2	○	○	S4S-T15	

- Inserts are available in packet of 10pcs. Please specify model number and grade. (ie: CM0502-ACP200)
- 10 screws and 1 wrench are included in Insert Clamping Screw Set.
- It is recommended to regularly replace clamping screws and wrench to ensure the correct clamping force is maintained.

■ Cutting condition

Workmaterial	Insert Grade	Cutting speed (m/min)	Feed (mm/tooth)		Coolant
			Chamfering	Face milling	
Carbon steel	ACP200	100 - 350	0.05 - 0.4	0.05 - 0.2	Dry
Alloy steel		100 - 300	0.05 - 0.4	0.05 - 0.2	Dry
Stainless		100 - 250	0.08 - 0.3	0.08 - 0.2	Dry / Wet
Cast iron		100 - 350	0.1 - 0.5	0.05 - 0.25	Dry
Aluminum/Unalloyed steel	DS20	200 - 800	0.1 - 0.5	0.05 - 0.3	Dry / Wet

- The table is just a reference to determine cutting conditions. It should be adjusted according to the condition of the machine tool and workpiece.
- Wet cutting is recommended to obtain the good surface quality.
- In case built-up edge occurs cutting aluminum and stainless steel, use soluble oil.