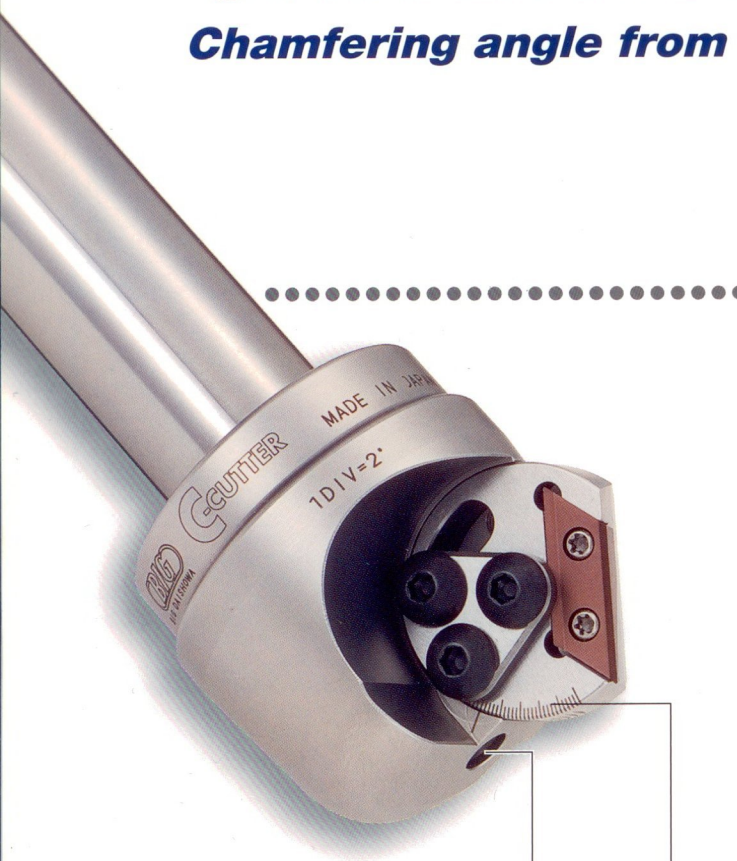
ALCA TOOLS LIMITED

Tel. +44 (0)1227 366051 Fax. +44 (0)1227 740033
Email sales@alcatools.co.uk Web www.alcatools.co.uk

UNIVERSAL

Chamfering angle from 5°to 85°with one cutter.



Model	ST20-C5 / 85A-40

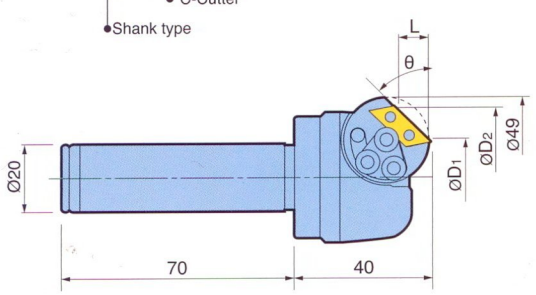
Cartridge

Angle Adjuster

● Model description

ST20 - C 5 / 85 A -40

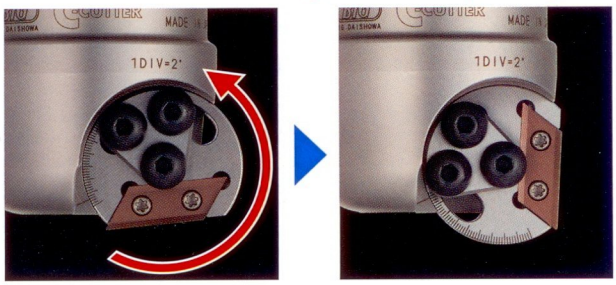
- ST20 : Shank type
- C : C-Cutter
- 5 / 85 : Chamfering angle



Insert : CW1206A

C-CUTTER Universal Type

Universal cartridge for any angle



● Easy angle adjustment from 5° to 85° with a hex key.

Rotate the Angle Adjuster with a hex key and revolve the Cartridge to achieve the target angle. Scale on the Cartridge eases the adjustment.

【Chamfering range】

Angle θ	Smallest hole dia. ØD1	Largest chamfering dia. ØD2	L
5°	5.5	33.5	1.2
10°	7.3	34.7	2.4
15°	9.0	36.2	3.6
20°	11.2	37.4	4.7
25°	13.0	38.6	5.9
30°	15.2	39.6	7.0
35°	17.4	40.5	8.0
40°	19.6	41.2	9.0
45°	21.8	41.8	10.0
50°	24.0	42.2	10.8
55°	26.4	42.4	11.4
60°	28.5	42.5	12.1
65°	30.7	42.4	12.5
70°	32.9	42.1	12.6
75°	34.9	41.7	12.7
80°	36.9	41.1	11.9
85°	38.8	40.3	8.6

Chamfering range and L dimensions are reference figures.

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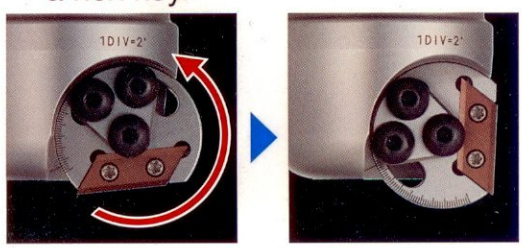
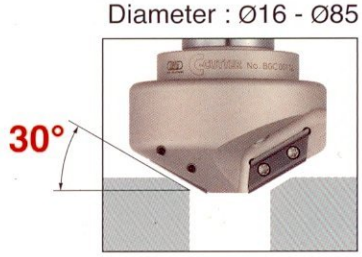
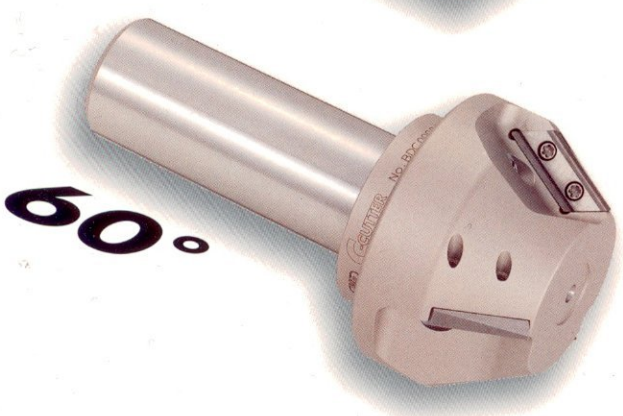
- Easy angle adjustment with a hex key.



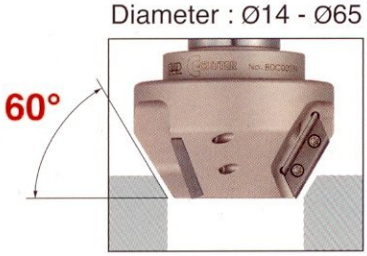
New chamfering angles available from C-CUTTER series!!

Diameter : Ø16 - Ø85





Diameter : Ø14 - Ø65



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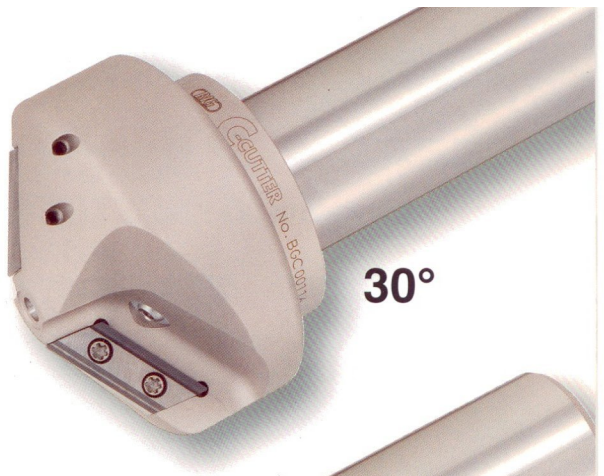
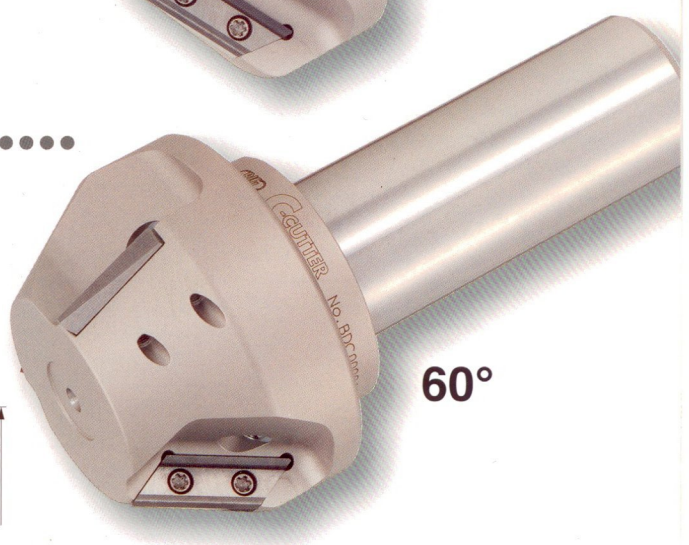
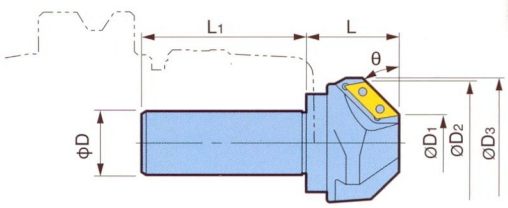
30° & 60°

One C-CUTTER covers wide chamfering range!





C-CUTTER 30° & 60° Types



● Model description

ST32 - C 16 52 C -30

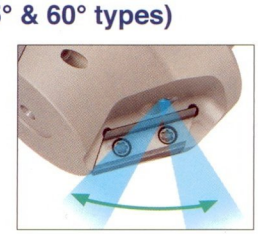
- Angle (blank for 45°)
- Coolant nozzle
- Largest chamfering dia.
- Smallest hole dia.
- C-Cutter
- Shank type

Angle θ	Model	φD	Smallest hole dia. ØD1	Largest chamfering dia. ØD2	Body dia. ØD3	L	L1	No. of insert	Insert
30°	ST32-C1652C-30 NEW	32	16	52	68	48	80	2	CW1909A
	ST42-C5085C-30 NEW	42	50	85	96	52	80	3	
45°	ST20-C0525C	20	5	25	33	25	48	1	CW1206A
	ST25-C1040C	25	10	40	45	35	58	2	CW1909A
	ST32-C3060C	32	30	60	65	45	80	3	
	ST42-C50100C	42	50	100	106	70	80	3	CW3115A
60°	ST25-C1434C-60 NEW	25	14	34	39	37	58	2	CW1909A
	ST32-C3050C-60 NEW	32	30	50	54	45	80	3	
	ST32-C4565C-60 NEW	32	45	65	69	50	80	3	

1. Inserts are ordered separately.
2. Insert clamping key and screws are included.
3. CK shank type is available for 45°models.

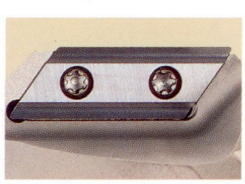
Coolant nozzles (30°, 45° & 60° types)

Adjustable nozzles direct coolant to cutting point. Excellent surface finish is obtained by sharp cutting edge and secure coolant supply. Especially effective in chamfering materials difficult to cut or easy to create built-up edge.



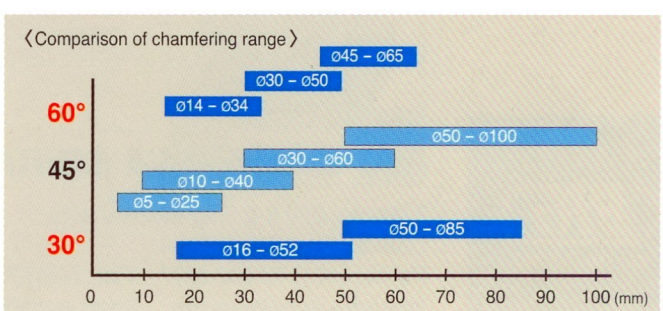
Double-screwed insert

Parallelogram shaped long inserts are securely clamped with double screws for stable chamfering.

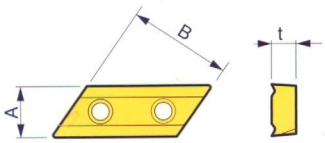


Reduced number of cutters and machining time

The wide chamfering range saves on the number of toolholders required and thus tool changing times. Effective use of magazine pots and shorter machinig times are achievable.



《 Insert 》



(Material : P30 carbide equivalent)

ZX coated insert for steel

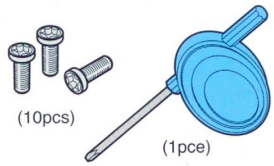
TiN & AlN super multi-layer coating on tough carbide. Extended tool life and excellent surface finish avoiding built-up edge are achieved.

Model		A	B	t
Coated	Non-coated			
CW1206A(ZX)	**CW1206A**	6.35	12.7	2.7
CW1909A(ZX)	**CW1909A**	9.525	19.05	4.5
CW3115A(ZX)	**CW3115A**	15.875	31.75	7.0

1. Insert is available from 1 pce.

Insert set is available in packs of 10 pcs.
Please add "S" before each model number when ordering.
〈Example〉 **SCW1206A(ZX)**

《 Insert clamping screw set 》



(10pcs) (1pce)

Insert size	Set model	Wrench
CW12	**S2S-B**	FLR-13S
CW19	**S3S**	FLR-20S
CW31	**S5S**	FLR-28S

1. 10 pcs. of screws and 1 pce. of wrench are included. (Wrench only is also available.)

Recommended cutting conditions

Model	Max. chamfer	Chamfering	General steel		Stainless steel		Cast iron		Aluminum	
			V	f	V	f	V	f	V	f
ST20-C5/85A-40 NEW	※2mm	Plunge cutting	50	0.1	30	0.08	40	0.1	80	0.1
		Side cutting	80	0.15	60	0.1	50	0.15	100	0.2
ST20-C0525C	C2	Plunge cutting	50	0.1	30	0.08	40	0.1	80	0.1
		Side cutting	80	0.15	60	0.1	50	0.15	100	0.15
ST25-C1040C	C3	Plunge cutting	90	0.15	40	0.12	60	0.15	100	0.2
ST25-C1434C-60 NEW **ST32-C1652C-30** NEW	※3mm	Side cutting	120	0.3	60	0.2	90	0.3	150	0.3
ST32-C3060C	C4	Plunge cutting	120	0.3	60	0.18	90	0.25	150	0.3
ST32-C3050C-60 NEW **ST32-C4565C-60** NEW **ST42-C5085C-30** NEW	※4mm	Side cutting	150	0.45	60	0.3	120	0.6	200	0.6
ST42-C50100C	C4	Plunge cutting	150	0.4	80	0.25	120	0.35	180	0.4
		Side cutting	150	0.45	60	0.36	120	0.6	240	0.6

V: Cutting speed (m/min) f: Feed per revolution (mm/rev.)

1. Cutting condition is the same for both non-coated and coated inserts. Coated insert provides better surface finish in extended period.
2. Reduce cutting speed if a larger chamfer than the max. amount shown in the table is required.
3. Peck feed is necessary in case cutting chips are too long in plunge cutting.
4. High rigidity toolhoder is recommended, such as BIG HMC or MEGA-D chuck.
5. Max. chamfering amount with ※ in Universal Type and 30°& 60°Types indicates the chamfering length of the longer side.

Extensive chamfering range

C-CUTTER 45° Type

Reduced number of tool holders and machining time by wide chamfering range.

Cylindrical shank

CKB shank

1 cutter covers Ø5 – Ø25
1 cutter covers Ø10 – Ø40
1 cutter covers Ø30 – Ø60
1 cutter covers Ø50 – Ø100

Ultra high feed chamfer mill

C-CUTTER mini

4 inserts, small diameter and new coating achieve ultra high feed rate.

Front & back chamfering

World smallest Ø3.97 hex insert

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