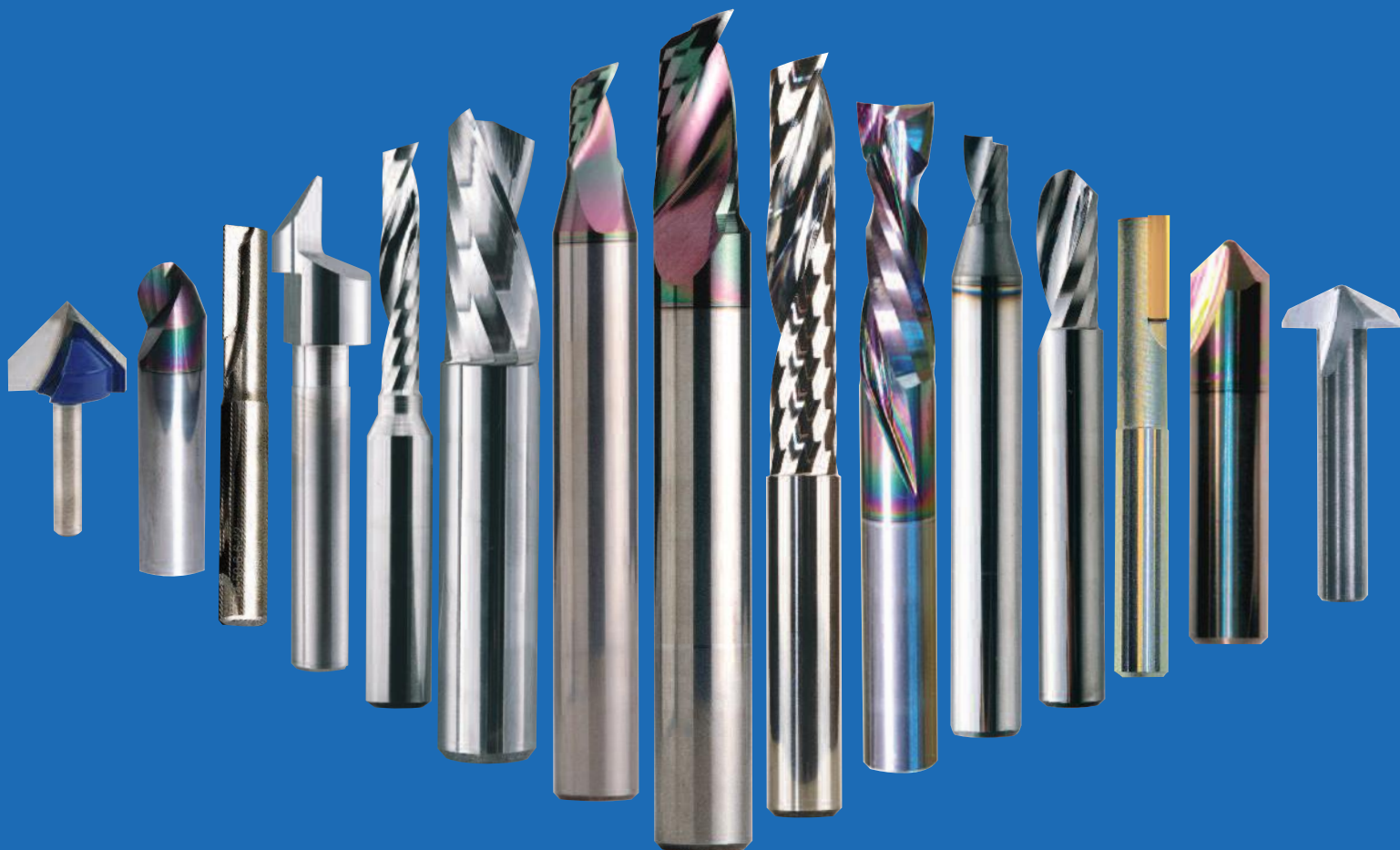
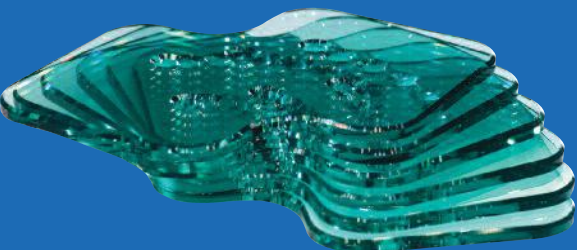


Innovative cutting tools

The professional's first choice



ACRYLIC



ACM



ALUMINIUM



For more information and videos, please visit www.crown-norge.no

Crown Norge, the perfect partner you can trust. Precise and high quality tooling designed to fully optimise your machine's cutting performance. The innovation, knowledge and experience to significantly improve your manufacturing process.

Reduce cost, labour and machine time with the revolutionary range of tooling designed to meet the requirements of the professional machine operator of today. The geometry of these tools is specifically designed to maximise the surface finish, with high feed rates and tool longevity, to truly revolutionise your business.

Achieve consistent quality. Burr free edges with a high gloss finish, giving you the advantage to retain customers, reduce cost and eliminate hand finishing. Machine operators will be safe in the knowledge that every Crown Norge tool they use is of the same consistent high quality, tolerances and longevity as the last.

High speed routing.

The SUPERIOR range of tooling has been extended to include new tool dimensions. The revolutionary coating on these tools allow for super fast dry routing of aluminium, ACM (DIBOND®), ACM mineral core (ALUCOBOND® A2), TRESPA® (HPL) ++. No need for coolant or oil as the coating provides a 60% reduction in friction compared to standard DLC coated tools. In addition, the hardened coating prolongs the cutting edge, thus dramatically increasing tool longevity. The SUPERIOR range of tools provides an exceptional finish.



B1-ACM 10,0/10-10-50 MP-SUP-B



The best selection of single fluted router tools.

With the machine operator in mind and a keen focus on optimisation of the tooling performance, Crown Norge has an exceptional range.

The new ACRYLIC GENERATION 2 (A GEN2) acrylic range of tools provides a near polished edge on clear acrylic in a single pass. The dedicated, wider range of "ACRYLIC" (A) tools provides additional sharpness compared to the MP range for a higher gloss finish on Acrylic.

The "Multi-Purpose" (MP) range covers a wider cross section of materials.

Polished acrylic

with high quality MCD, MCVD and PCD diamond tools, which provide an unsurpassed high gloss finish. Hand finishing and flame polishing are eliminated with the extensive range of dimensions, which match each material thickness perfectly.



All tools manufactured from premium grade tungsten carbide.

DIBOND® is a Registered Trademark of 3A Composites.

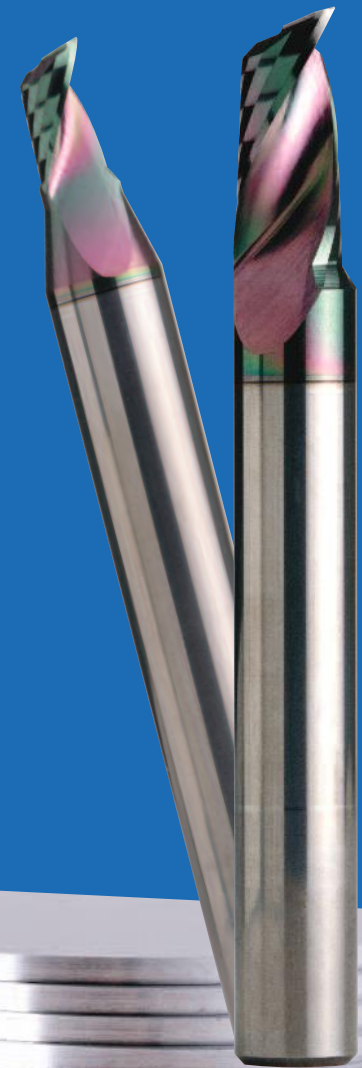
MP-SUP. (Multi-Purpose SUPERIOR coated)

Single flute routing tools with revolutionary coating for dry or wet cutting of aluminium, ACM, ACM mineral core, TRESPA® (HPL) ++. With 60% less friction and exceptional longevity, the tools perform perfectly in hard and difficult materials.

Videos on: www.crown-norge.no

Art.no. UP-CUT		d	D	ℓ	L
S1-3,0/3-6-38 MP-SUP.	NEW	3.0	3	6	38
S1-4,0/4-6-50 MP-SUP.	NEW	4.0	4	6	50
S1-2,0/6-6-50 MP-SUP.		2.0	6	6	50
S1-3,0/6-6-50 MP-SUP.		3.0	6	6	50
S1-4,0/6-6-50 MP-SUP.		4.0	6	6	50
S1-4,0/6-12-50 MP-SUP.		4.0	6	12	50
S1-5,0/6-12-50 MP-SUP.	NEW	5.0	6	12	50
S1-6,0/6-12-50 MP-SUP.		6.0	6	12	50
S1-6,0/6-12-50 MP-SUP-B		6.0	6	12	50
S1-6,0/6-22-50 MP-SUP.		6.0	6	22	50
S1-6,0/6-22-58 MP-SUP-B		6.0	6	22	58
S1-8,0/8-22-64 MP-SUP-B		8.0	8	22	64
S1-8,0/8-32-76 MP-SUP-B	NEW	8.0	8	32	76
S1-8,0/8-42-76 MP-SUP-B	NEW	8.0	8	42	76
S1-10,0/10-22-64 MP-SUP-B		10.0	10	22	64
S1-10,0/10-32-76 MP-SUP-B		10.0	10	32	76
S1-10,0/10-42-76 MP-SUP-B	NEW	10.0	10	42	76
S1-10,0/10-55-100 MP-SUP-B	NEW	10.0	10	55	100

B=Balanced



MP-DLC (Multi-Purpose)

Multi-purpose routing tools with DLC coating for dry or wet cutting of aluminium.

- S1 = Single flute routing tools
- d = Cutting diameter
- D = Shank diameter
- ℓ = Length of cut
- L = Total length
- MP= Multi-Purpose
- B = Balanced

Art.no. UP-CUT	d	D	ℓ	L
S1-2,0/6-6-50 MP - DLC	2.0	6	6	50
S1-3,0/6-6-50 MP - DLC	3.0	6	6	50
S1-4,0/6-6-50 MP - DLC	4.0	6	6	50
S1-4,0/6-12-50 MP - DLC	4.0	6	12	50
S1-5,0/6-12-50 MP - DLC	5.0	6	12	50
S1-6,0/6-12-50 MP - DLC	6.0	6	12	50
S1-6,0/6-12-50 MP - DLC - B	6.0	6	12	50
S1-6,0/6-22-50 MP - DLC	6.0	6	22	50
S1-6,0/6-22-58 MP - DLC - B	6.0	6	22	58
S1-8,0/8-22-64 MP - DLC - B	8.0	8	22	64


B=Balanced

"ACRYLIC" SINGLE FLUTE ROUTING TOOLS. Razor sharp, polished for acrylic, plastics, foam and wood

UP-CUT

Art.no. UP-CUT	d	D	ℓ	L
S1-1,0/3-4-30 A	1.0	3	4	30
S1-1,5/3-6-30 A	1.5	3	6	30
S1-2,0/3-6-30 A	2.0	3	6	30
S1-2,0/3-8-30 A	2.0	3	8	30
S1-2,0/3-11-38 A	2.0	3	11	38
S1-2,5/3-6-30 A	2.5	3	6	30
S1-2,5/3-11-38 A	2.5	3	11	38
S1-3,0/3-6-30 A	3.0	3	6	30
S1-3,0/3-11-38 A	3.0	3	11	38
S1-3,0/3-22-50 A	3.0	3	22	50
S1-2,0/4-6-50 A	2.0	4	6	50
S1-3,0/4-11-50 A	3.0	4	11	50
S1-4,0/4-8-50 A	4.0	4	8	50
S1-4,0/4-12-50 A	4.0	4	12	50
S1-4,0/4-14-50 A	4.0	4	14	50
S1-4,0/4-22-50 A	4.0	4	22	50
S1-4,0/4-32-64 A	4.0	4	32	64
S1-2,0/6-6-50 A	2.0	6	6	50
S1-3,0/6-6-50 A	3.0	6	6	50
S1-3,0/6-11-50 A	3.0	6	11	50
S1-3,0/6-14-50 A	3.0	6	14	50
S1-3,0/6-22-60 A	3.0	6	22	60
S1-4,0/6-8-50 A	4.0	6	8	50
S1-4,0/6-12-50 A	4.0	6	12	50
S1-4,0/6-14-50 A	4.0	6	14	50
S1-4,0/6-22-50 A	4.0	6	22	50
S1-5,0/6-12-50 A	5.0	6	12	50
S1-5,0/6-16-50 A	5.0	6	16	50
S1-5,0/6-22-50 A	5.0	6	22	50
S1-6,0/6-12-50 A	6.0	6	12	50
S1-6,0/6-22-50 A	6.0	6	22	50
S1-6,0/6-32-64 A	6.0	6	32	64
S1-6,0/6-32-100 A	6.0	6	32	100
S1-6,0/6-42-76 A	6.0	6	42	76
S1-8,0/8-22-64 A	8.0	8	22	64
S1-8,0/8-32-64 A	8.0	8	32	64
S1-8,0/8-42-76 A	8.0	8	42	76
S1-8,0/8-42-100 A	8.0	8	42	100
S1-8,0/8-55-100 A	8.0	8	55	100
S1-10,0/10-22-64 A	10.0	10	22	64
S1-10,0/10-32-76 A	10.0	10	32	76
S1-10,0/10-42-76 A	10.0	10	42	76
S1-10,0/10-55-100 A	10.0	10	55	100

DOWN-CUT



Art.no. DOWN-CUT	d	D	ℓ	L
S1-1,0/3-3-38 A-DC	1.0	3	3	38
S1-1,5/3-4-38 A-DC	1.5	3	4	38
S1-2,0/3-6-38 A-DC	2.0	3	6	38
S1-3,0/3-6-38 A-DC	3.0	3	6	38
S1-3,0/3-11-38 A-DC	3.0	3	11	38
S1-4,0/4-8-50 A-DC	4.0	4	8	50
S1-4,0/4-12-50 A-DC	4.0	4	12	50
S1-4,0/4-14-50 A-DC	4.0	4	14	50
S1-2,0/6-6-50 A-DC	2.0	6	6	50
S1-3,0/6-6-50 A-DC	3.0	6	6	50
S1-3,0/6-11-50 A-DC	3.0	6	11	50
S1-4,0/6-8-50 A-DC	4.0	6	8	50
S1-4,0/6-12-50 A-DC	4.0	6	12	50
S1-4,0/6-14-50 A-DC	4.0	6	14	50
S1-5,0/6-12-50 A-DC	5.0	6	12	50
S1-5,0/6-16-60 A-DC	5.0	6	16	50
S1-5,0/6-22-60 A-DC	5.0	6	22	60
S1-6,0/6-12-50 A-DC	6.0	6	12	50
S1-6,0/6-22-60 A-DC	6.0	6	22	60
S1-8,0/8-22-64 A-DC	8.0	8	22	64
S1-8,0/8-32-70 A-DC	8.0	8	32	70
S1-10,0/10-22-64 A-DC	10.0	10	22	64

S1 = Single flute routing tools
 d = Cutting diameter
 D = Shank diameter
 ℓ = Length of cut
 L = Total length
 A = Acrylic
 B = Balanced
 DC = Down-cut

NEW!

ACRYLIC SINGLE FLUTE ROUTING TOOLS GENERATION 2 (GEN2)

In 1996 Crown Norge introduced the "Multi-Purpose" single flute routing tools. These tools exceeded all expectations and achieved great success. Our customers experienced significant improvements in both surface finish and efficiency in production.

In 2001 Crown Norge introduced the single flute "ACRYLIC" routing tools, which are sharper and designed to give an optimal surface finish in acrylic and other plastic materials. In further trials, these tools have also proven to give excellent results in materials such as wood and softer materials such as foam.

We are now proud to introduce the "ACRYLIC" GEN 2" range of tools. After a long period of development and testing in several countries, Crown Norge can now offer eight dimensions which are designed to match the material thicknesses most commonly used. These new tools give a polished and clear surface finish, close to what is achieved when using diamond polishing tools on clear acrylic. The new "ACRYLIC" GEN 2" range have been tested on many different machine types with spindle speeds ranging from 18,000 to 60,000 RPM.



"ACRYLIC UP-CUT" GEN2

Art.no.	d	D	ℓ	L
S1-3,0/6-7-50 A-GEN2	3.0	6	7	50
S1-3,0/6-11-50 A-GEN2	3.0	6	11	50
S1-4,0/6-8-50 A-GEN2	4.0	6	8	50
S1-4,0/6-12-50 A-GEN2	4.0	6	12	50
S1-6,0/6-12-50 A-GEN2	6.0	6	12	50
S1-6,0/6-12-50 A-GEN2-B	6.0	6	12	50
S1-6,0/6-22-50 A-GEN2	6.0	6	22	50
S1-6,0/6-22-58 A-GEN2-B	6.0	6	22	58

BALANCED single flute routing tools

RESULT:

- Improved productivity
- Better surface finish
- Reduced spindle repair costs
- Extended tool life
- Less noise
- Less vibration

Balanced routing tools should always be used in high frequency spindles. In all spindles, tools Ø 8.0 mm and larger should be balanced.

Art.no. UP-CUT	d	D	ℓ	L
S1-5,0/6-12-50 A-B	5.0	6	12	50
S1-5,0/6-22-58 A-B	5.0	6	22	58
S1-6,0/6-12-50 A-B	6.0	6	12	50
S1-6,0/6-22-58 A-B	6.0	6	22	58
S1-6,0/6-32-64 A-B	6.0	6	32	64
S1-6,0/6-42-76 A-B	6.0	6	42	76
S1-8,0/8-22-64 A-B	8.0	8	22	64
S1-8,0/8-32-64 A-B	8.0	8	32	64
S1-8,0/8-42-76 A-B	8.0	8	42	76
S1-8,0/8-55-100 A-B	8.0	8	55	100
S1-10,0/10-22-64 A-B	10.0	10	22	64
S1-10,0/10-32-76 A-B	10.0	10	32	76
S1-10,0/10-42-76 A-B	10.0	10	42	76
S1-10,0/10-55-100 A-B	10.0	10	55	100

The balancing flute also improves the chip flow.



Same cutting geometry as on our standard "Acrylic" routing tools

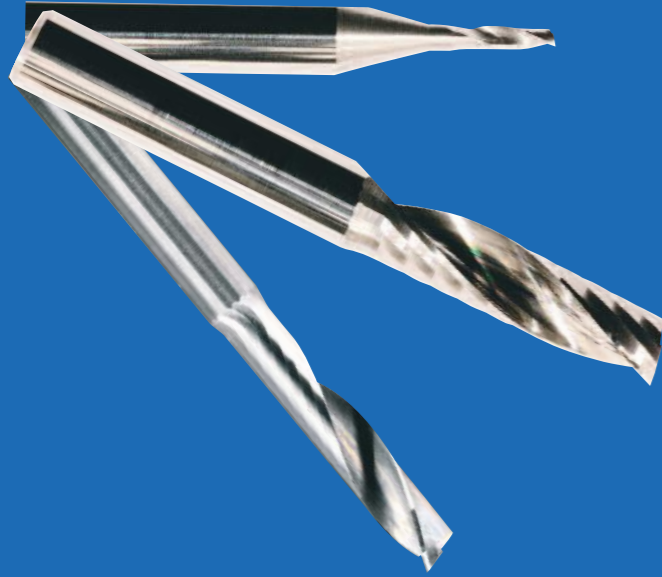


Speaker monitor used at 6 Nobel Peace Prize concerts
 Produced by: plexx.no



"MULTI-PURPOSE" SINGLE FLUTE ROUTING TOOLS

for aluminium, ACM,
brass, plastics, MDF etc...



UP-CUT

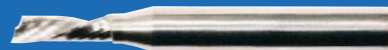
Art.no. UP-CUT	d	D	ℓ	L
S1-1,0/3-4-38 MP	1.0	3	4	38
S1-1,5/3-6-38 MP	1.5	3	6	38
S1-2,0/3-6-38 MP	2.0	3	6	38
S1-3,0/3-6-38 MP	3.0	3	6	38
S1-3,0/3-11-38 MP	3.0	3	11	38
S1-2,0/4-6-50 MP	2.0	4	6	50
S1-3,0/4-6-50 MP	3.0	4	6	50
S1-3,0/4-11-50 MP	3.0	4	11	50
S1-4,0/4-6-50 MP	4.0	4	6	50
S1-4,0/4-12-50 MP	4.0	4	12	50
S1-4,0/4-14-50 MP	4.0	4	14	50
S1-4,0/4-22-50 MP	4.0	4	22	50
S1-2,0/4,365-4-165 MP	2.0	4,365	4	165
S1-3,0/4,365-4-165 MP	3.0	4,365	4	165
S1-2,0/6-6-50 MP	2.0	6	6	50
S1-2,5/6-6-50 MP	2.5	6	6	50
S1-3,0/6-6-50 MP	3.0	6	6	50
S1-3,0/6-11-50 MP	3.0	6	11	50
S1-3,0/6-14-50 MP	3.0	6	14	50
S1-3,5/6-12-50 MP	3.5	6	12	50
S1-4,0/6-6-50 MP	4.0	6	6	50
S1-4,0/6-12-50 MP	4.0	6	12	50
S1-4,0/6-14-50 MP	4.0	6	14	50
S1-4,0/6-22-50 MP	4.0	6	22	50
S1-5,0/6-12-50 MP	5.0	6	12	50
S1-5,0/6-16-50 MP	5.0	6	16	50
S1-5,0/6-22-50 MP	5.0	6	22	50
S1-6,0/6-12-50 MP	6.0	6	12	50
S1-6,0/6-22-50 MP	6.0	6	22	50
S1-6,0/6-32-64 MP	6.0	6	32	64
S1-6,0/6-32-100 MP	6.0	6	32	100
S1-8,0/8-22-64 MP	8.0	8	22	64
S1-8,0/8-32-64 MP	8.0	8	32	64
S1-8,0/8-42-76 MP	8.0	8	42	76
S1-8,0/8-42-100 MP	8.0	8	42	100
S1-10,0/10-22-64 MP	10.0	10	22	64
S1-10,0/10-32-76 MP	10.0	10	32	76
S1-10,0/10-42-76 MP	10.0	10	42	76
S1-10,0/10-55-100 MP	10.0	10	55	100



S1 = Single flute routing tools
d = Cutting diameter
D = Shank diameter
ℓ = Length of cut
L = Total length
MP= Multi-Purpose
B = Balanced
DC = Down-cut

Performs better.
Lasts longer.

DOWN-CUT



Art.no. DOWN-CUT	d	D	ℓ	L
S1-1,0/3-2-38 MP-DC	1.0	3	2	38
S1-1,5/3-3-38 MP-DC	1.5	3	3	38
S1-2,0/3-4-38 MP-DC	2.0	3	4	38
S1-3,0/3-6-38 MP-DC	3.0	3	6	38
S1-3,0/3-11-38 MP-DC	3.0	3	11	38
S1-4,0/4-12-50 MP-DC	4.0	4	12	50
S1-2,0/6-4-50 MP-DC	2.0	6	4	50
S1-3,0/6-6-50 MP-DC	3.0	6	6	50
S1-3,0/6-11-50 MP-DC	3.0	6	11	50
S1-4,0/6-8-50 MP-DC	4.0	6	8	50
S1-4,0/6-12-50 MP-DC	4.0	6	12	50
S1-5,0/6-12-50 MP-DC	5.0	6	12	50
S1-5,0/6-22-60 MP-DC	5.0	6	22	60
S1-6,0/6-12-50 MP-DC	6.0	6	12	50
S1-6,0/6-22-60 MP-DC	6.0	6	22	60
S1-8,0/8-22-64 MP-DC	8.0	8	22	64
S1-8,0/8-32-70 MP-DC	8.0	8	32	70
S1-10,0/10-22-64 MP-DC	10.0	10	22	64

From small to large scale manufacturing,
the Crown Norge range of tools perform perfectly



BALANCED single flute routing tools

Art.no. UP-CUT	d	D	ℓ	L
S1-5,0/6-12-50 MP-B	5.0	6	12	50
S1-5,0/6-22-58 MP-B	5.0	6	22	58
S1-6,0/6-12-50 MP-B	6.0	6	12	50
S1-6,0/6-22-58 MP-B	6.0	6	22	58
S1-6,0/6-32-64 MP-B	6.0	6	32	64
S1-8,0/8-22-64 MP-B	8.0	8	22	64
S1-8,0/8-32-64 MP-B	8.0	8	32	64
S1-8,0/8-42-76 MP-B	8.0	8	42	76
S1-10,0/10-22-64 MP-B	10.0	10	22	64
S1-10,0/10-32-76 MP-B	10.0	10	32	76
S1-10,0/10-42-76 MP-B	10.0	10	42	76
S1-10,0/10-55-100 MP-B	10.0	10	55	100

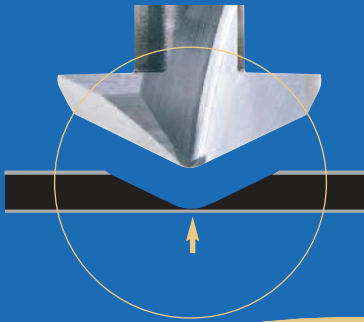
Balanced routing tools should
always be used in high frequency
spindles. In all spindles, tools
Ø 8.0 mm and larger should be
balanced.



V grooving ACM

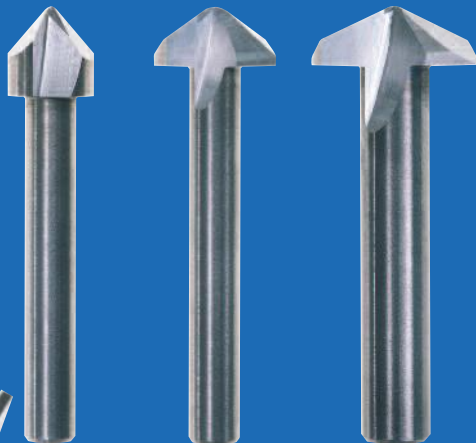
30 m/min!

SOLID CARBIDE • BALANCED

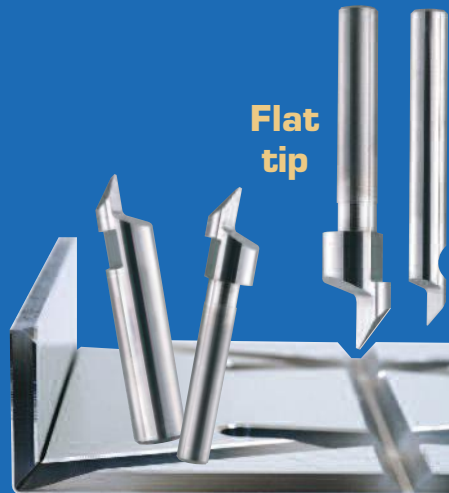


Rounded tip
for more precise bending.

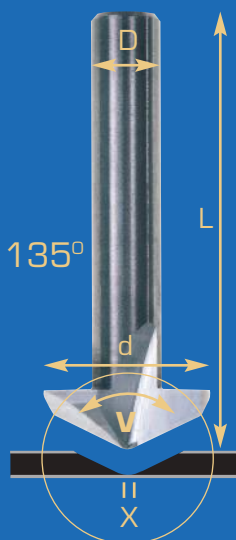
90° - 120° - 135°



Flat
tip



Also
excellent for
acrylic, plastics
and wood.



Art.no. ACM routing tools	V	d	D	L	X	FLAT TIP	ROUNDED TIP	For maximum material thickness				
								3mm	4mm	5mm	6mm	
ACM 6.0/6-50-92° *	92°	6.0	6	50	0.2	•		•				
ACM 10.0/6-45-90° * *	90°	10.0	6	45	1.8	•		•	•			
ACM 10.0/10-45-90° * *	90°	10.0	10	45	1.8	•		•	•			
B2-ACM 10.0/6-50-90° *	90°	10.0	6	50	1.8		•	•	•			
B2-ACM 10.0/10-50-90° *	90°	10.0	10	50	1.8		•	•	•			
B2-ACM 13.0/6-50-90°	90°	13.0	6	50	1.8		•	•	•	•	•	
B2-ACM 11.5/6-50-120°	120°	11.5	6	50	1.8		•	•				
B2-ACM 11.5/8-50-120°	120°	11.5	8	50	1.8		•	•				
B2-ACM 15.0/6-50-120°	120°	15.0	6	50	1.8		•	•	•			
B2-ACM 15.5/6-50-135°	135°	15.5	6	50	1.8		•	•				
B2-ACM 15.5/8-50-135°	135°	15.5	8	50	1.8		•	•				
B2-ACM 20.5/8-50-135°	135°	20.5	8	50	1.8		•	•	•			

B = Ball nose
2 = 2 flute

ACM = Aluminium Composite Material
* = Also in stock with DLC coating
* = Also in stock with SUPERIOR coating

DIAMOND POLISHING TOOLS FOR ACRYLIC

Designed for clear cast or extruded acrylic, these tools give a superior polished surface finish when used with the correct machine. We recommend using a high end, rigid CNC router with a strong vacuum hold down and good extraction to avoid excessive vibration.

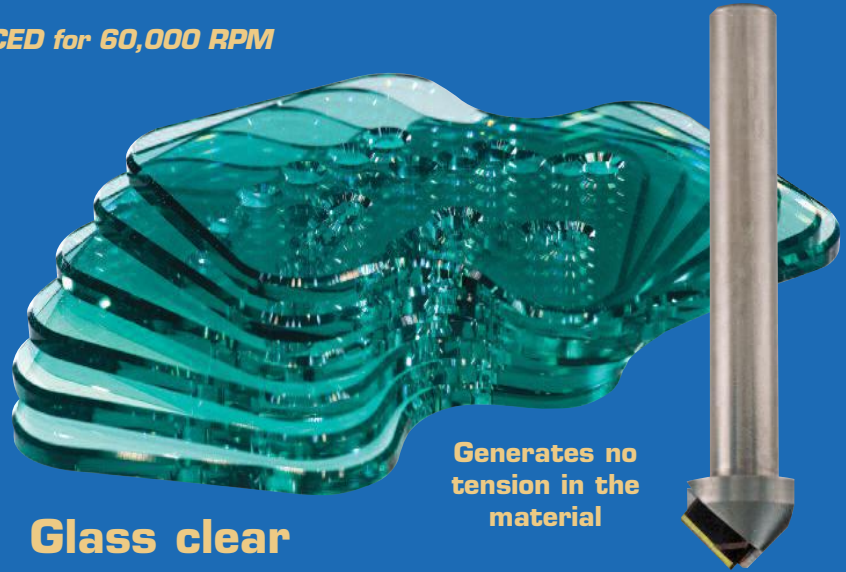
BALANCED for 60,000 RPM

**MCD (Monocrystalline)
MCVD (Mono chemical vapor deposition)**

Art.no.	ℓ	L	d	D	L3	
MCD ℓ3 - L50 - d3 - D6	3	50	3	6	11	
MCD ℓ4 - L50 - d4 - D6	4	50	4	6	13	
MCD ℓ6 - L50 - d6 - D6	6	50	6	6	15	
MCVD ℓ7 - L50 - d6 - D6	NEW	7	50	6	17	
MCVD ℓ8 - L50 - d6 - D6	NEW	8	50	6	17	
MCVD ℓ11 - L50 - d6 - D6		11	50	6	23	
MCVD ℓ11 - L60 - d6 - D8		11	60	6	8	23
MCVD ℓ12 - L50 - d6 - D6	* NEW	12	50	6	8	23
MCVD ℓ12 - L60 - d6 - D8	* NEW	12	60	6	8	23
MCVD ℓ14 - L50 - d6 - D6	NEW	14	50	6	6	23
MCVD ℓ14 - L60 - d6 - D8	NEW	14	60	6	8	27
MCVD ℓ17 - L60 - d8 - D8	* NEW	17	60	8	8	27
MCVD ℓ22 - L60 - d8 - D8	NEW	22	60	8	8	34
MCVD ℓ27,4 - L76 - d10 - D10	NEW	27,4	76	10	10	35
MCD Chamfering tool 45° (Total 90°)	6	50		6		
MCD Chamfering tool 45° (Total 90°)	6	60		8		
MCD Engraving tool 30° (Total 60°) Tip size 0,4mm	3	50		6		
MCD Chamfering-/engraving tool 45° (Total 90°) Tip size 0,4mm	6	50		6		

* Not in stock. Delivery time 4-6 weeks.

The MCD and MCVD tools achieve the same quality of polishing and tool life in clear acrylics.



Generates no tension in the material

Glass clear surface finish in acrylic.



NEW!
Polish up to **25.4mm (1")** thick acrylic in a single pass.

PCD (Polycrystalline)

Art.no.	ℓ	L	d	D	L3
PCD ℓ14 - L50 - d6 - D6	14	50	6	6	22
PCD ℓ22 - L60 - d8 - D8	22	60	8	8	33
PCD ℓ33 - L75 - d8 - D10	33	75	8	10	43

**Lengths of cut PCD:
14-22-33 mm**

Engraving cutters for acrylic, plastics



Polished and balanced

A-GR-3,0/60° (0,2)

A-GR-6,0/40° (0,4)

A-GR-6,0/60° (0,4)

* A-GR-6,0/92° (0,2)

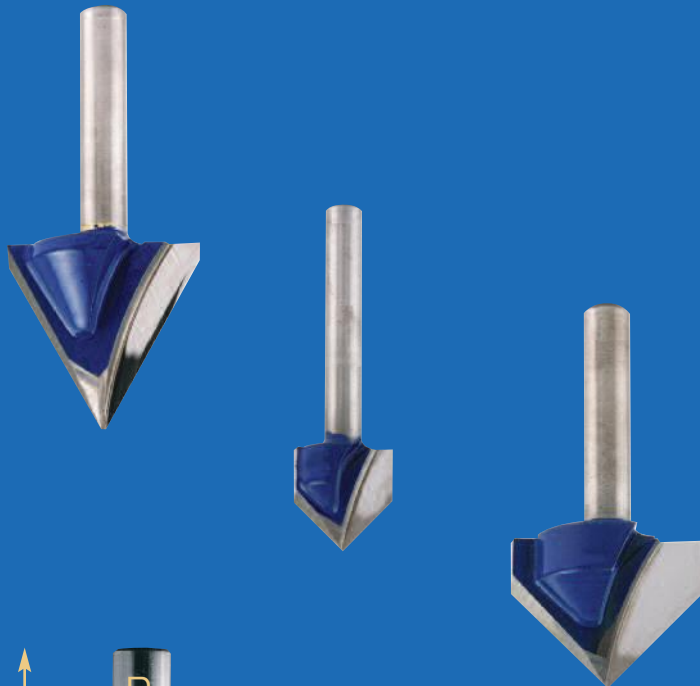
*Also excellent for V grooving 3 mm ACM!



Single flute **BALL NOSE** routing tools for wood, acrylic, plastics and rubber.

Art.no. BALL NOSE	d	D	ℓ	L
b1-2,0/3-8-50-A	2.0	3	8	50
b1-3,0/3-11-50-A	3.0	3	11	50
b1-4,0/4-12-75-A	4.0	4	12	75
b1-5,0/6-12-60-A	5.0	6	12	60
b1-6,0/6-12-80-A	6.0	6	12	80
b1-6,0/6-22-80-A	6.0	6	22	80
b1-8,0/8-22-80-A	8.0	8	22	80
b1-10,0/10-22-80-A	10.0	10	22	80

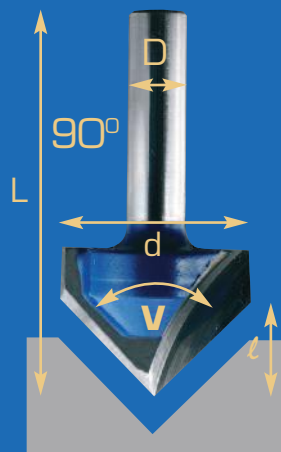
S1 = Single flute routing tools
 S2 = 2 flute routing tools
 d = Cutting diameter
 D = Shank diameter
 ℓ = Length of cut
 L = Total length
 A = Acrylic
 b = Ball nose



2 flute, coated routing tools for stainless/hardened steel.

r = radius

Art.no. 2 FLUTE	d	D	ℓ	L	r
S2-1,5/3-3-35	1.5	3	3	35	0.2
S2-2,0/3-4-35	2.0	3	4	35	0.2
S2-3,0/3-5-35	3.0	3	5	35	0.2
S2-1,0/6-2-40	1.0	6	2	40	0.1
S2-1,5/6-3-40	1.5	6	3	40	0.2
S2-2,0/6-4-40	2.0	6	4	40	0.2
S2-3,0/6-5-40	3.0	6	5	40	0.2
S2-4,0/6-5-40	4.0	6	5	40	0.2



3D / V grooving tools

for plastics/wood/MDF. Solide carbide core, 5 mm thick. Very stable. Extremely long life.

Art.no. V grooving	V	d	D	ℓ	L
3D-32/8-60°	60°	32	8	28	72
3D-16/6-90°	90°	16	6	8	55
3D-16/8-90°	90°	16	8	8	55
3D-32/8-90°	90°	32	8	16	65
3D-32/12-90°	90°	32	12	16	65
3D-32/8-120°	120°	32	8	10	58
3D-32/8-150°	150°	32	8	5	58



NEW: PCD routing tools developed for mineral core ACM:

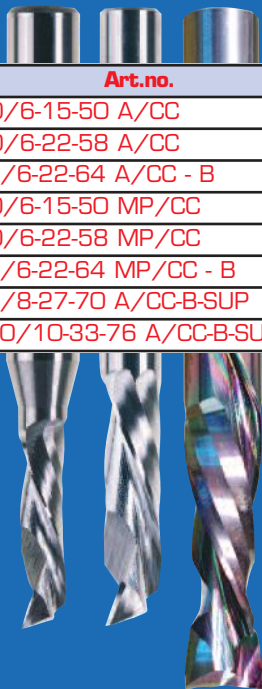


AMAZING RESULTS in
DIBOND[®]FR
ALUCOBOND[®]A2
ALUCOBOND[®]PLUS

Compression cutters. (CC)

Combined up/down spiral for use on materials where the finish is important on the top and bottom face. This would include plywood and veneers.

Art.no.
S1-4,0/6-15-50 A/CC
S1-6,0/6-22-58 A/CC
S1-6,0/6-22-64 A/CC - B
S1-4,0/6-15-50 MP/CC
S1-6,0/6-22-58 MP/CC
S1-6,0/6-22-64 MP/CC - B
S2-8,0/8-27-70 A/CC-B-SUP NEW
S2-10,0/10-33-76 A/CC-B-SUP NEW



Solid carbide, 2 flute routing tools with negative radius for rounded corners. Excellent for acrylic, plastics and wood.



Art.no.	d	D	L	r	X
NR2 10,0/6	10	6	50	4.1	1.8
NR2 10,0/10	10	10	50	4.1	1.8



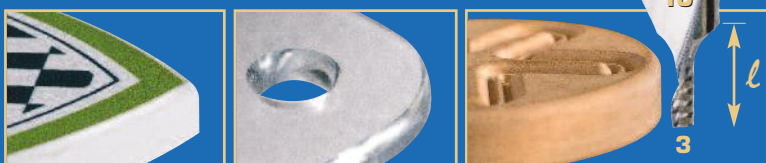
"ROUND & ROUT"

ℓ 5.2 - 10.2 - 13.0 mm
 Balanced for 60,000 RPM



NEW CUTTING LENGTHS
 Matched to 5 mm, 10 mm and 12.7 mm (1/2") thicknesses

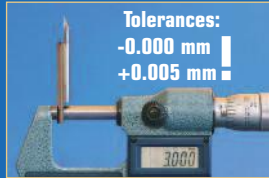
Art.no. "Round & Rout"	d	D	ℓ	L	r
NR1 3,0-10/6 - 5,2 - 52	3.0-10	6	5.2	52	3.5
NR1 3,0-10/6 - 10,2 - 56	3.0-10	6	10.2	56	3.5
NR1 3,0-10/6 - 13,0 - 60	3.0-10	6	13.0	60	3.5



NO. 1 FOR STAINLESS/HARDENED STEEL!

"THE NANO GRAVER"

Excellent for fine engraving in steel.
(Only for rigid machines with high frequency spindles.)



"THE MICRO GRAVER"

for high frequency-
and belt-driven spindles.
Also excellent for brass and aluminium.



- "THE NANO GRAVER"
- | D | L |
|------------|----------------------|
| 3,0mmx38mm | (7) HR-SE(30°) |
| 4,0mmx38mm | (7) HR-SE(30°) |
| 4,0mmx38mm | (9 + 9) HR-DE(30°) |
| 4,0mmx45mm | (10 + 10) HR-DE(30°) |

SUPERIOR QUALITY
TUNGSTEN CARBIDE WITH SUPER THIN COATING,
ONLY 0.5 MICRON THICK.

- "THE MICRO GRAVER"
- | D | L |
|---------------|---------------------------|
| 3,0mmx38mm | (7) HR-SE(30°) |
| 4,0mmx38mm | (8) HR-SE(15°, 30°, 45°) |
| 4,0mmx38mm | (9+9) HR-DE(30°) |
| 4,0mmx45mm | (10 + 10) HR-DE(30°) |
| 6,0mmx45mm | (12) HR-SE(15°, 30°, 45°) |
| 6,0mmx45mm | (12/10) QR-SE(30°) |
| 6,0mmx50mm | (12 + 12) HR-DE(30°) |
| 4,365mmx165mm | (13) HR(30°) |
| 4,365mmx165mm | (13/11) QR(30°) |

- D: Shank diameter
- L: Total length
- (): Length of flat
- HR: Half round
- QR: Quarter round
- SE: Single end
- DE: Double end = balanced
- (): Cutting angle
- BL: Blanks
- E: Economy line

"An unbeatable team: LANG milling- and engraving machines and tools from Crown Norge!"

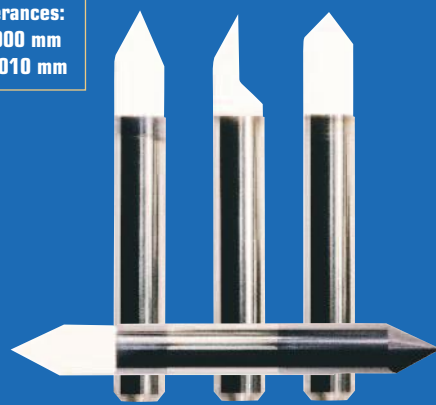
Joachim Steidel, Sales Manager, Graphics & Mint Industry, LANG GmbH & Co. KG

- Rotating diamonds:**
3.175 x 127mm
4.365 x 178mm
- Tip size:**
0.125mm
0.25mm
0.38mm
0.51mm
0.64mm
0.76mm
1.02mm (Only in dimension 4.365 x 178 mm)



- Drag diamonds:**
90° and 120°
3.175 x 28mm
3.175 x 114mm
4.365 x 165mm

Tolerances:
-0.000 mm
+0.010 mm



- SHARPENED TO 0.00 mm.**
COATING 1-2.5 micron thick.
- 3,0mmx38mm(7)HR-SE-E (30°)
 - 3,0mmx38mm(7/5)QR-SE-E (30°)
 - 4,0mmx38mm(8)HR-SE-E (30°, 45°)
 - 4,0mmx38mm(8/6)QR-SE-E (30°)
 - 4,0mmx38mm(9+9)HR-DE-E (30°)
 - 6,0mmx50mm(13)HR-SE-E (30°, 45°)
 - 6,0mmx50mm(13/11)QR-SE-E (30°)
 - 6,0mmx50mm(13+13)HR-DE-E (30°)
 - 4,365mmx165mm(13)HR-E (30°)
 - 4,365mmx165mm(13/11)QR-E (30°)



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