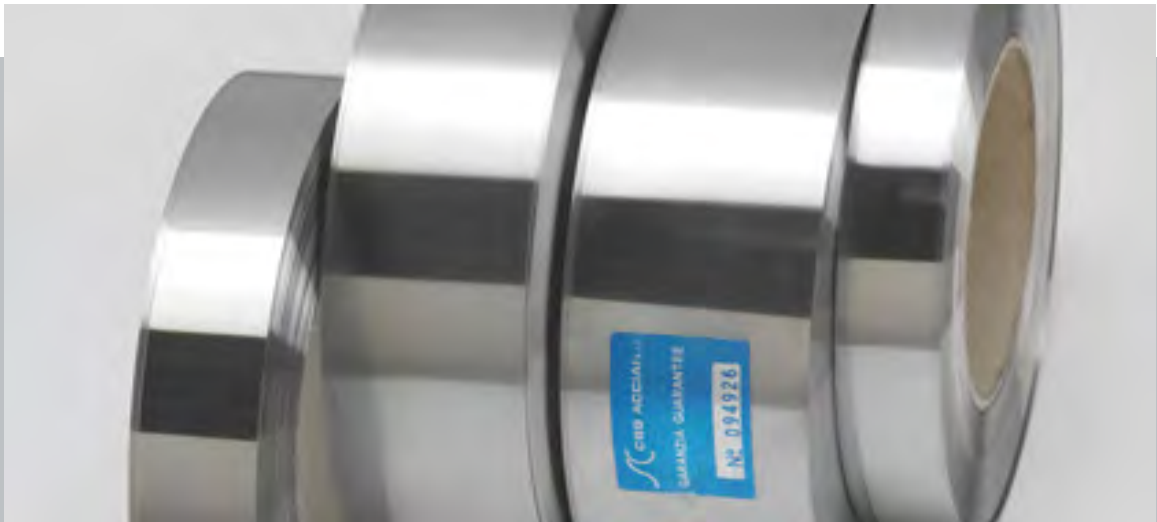




## PREMIUM DOCTOR BLADES AND SEALS for Flexographic and Rotogravure Printing

2020



### The CBG Advantage

- Millions of meters produced every year
- 1,000 m<sup>2</sup> site specifically dedicated to manufacturing
- 90 years experience in manufacturing
- 86 global distribution partners
- Only the best Swedish Steel used
- State of the art CAD & CNC equipment
- 60 qualified employees

1 Goal: Providing the best for all customers all over the globe

MADE IN ITALY

☎ 1300 859 960 or +61 2 9748 2577

✉ [salesav@grogangroup.com](mailto:salesav@grogangroup.com)

📍 Avflex, 108-110 Carnarvon St, Silverwater NSW 2128



[www.avflex.com.au](http://www.avflex.com.au)

# BLADE GRADES

## Red Label

TOP quality carbon  
Swedish steel

SELECTED refined  
chemical composition

HIGH carbide  
dispersion for  
long life

STRICT tolerances



## Gold Label

LONG LIFE micro  
alloyed Swedish  
steel

UNIQUE high density  
composition

HIGHEST wear resistance  
for steel blades

IDEAL for long runs and  
very abrasive inks



## Silver Label

STAINLESS STEEL  
Extrafine Swedish  
Stainless steel

TOTAL corrosion  
protection

HIGH wear resistance

PERFECT for water based  
inks



## White Label

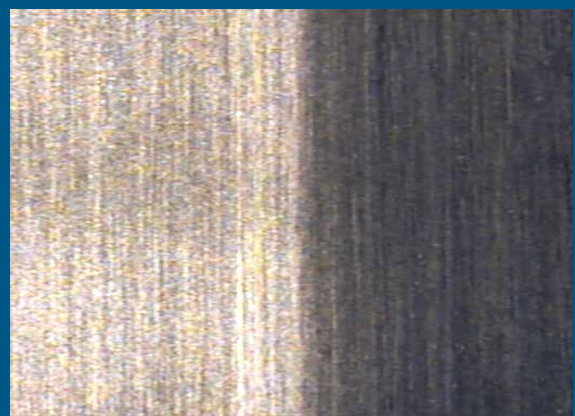
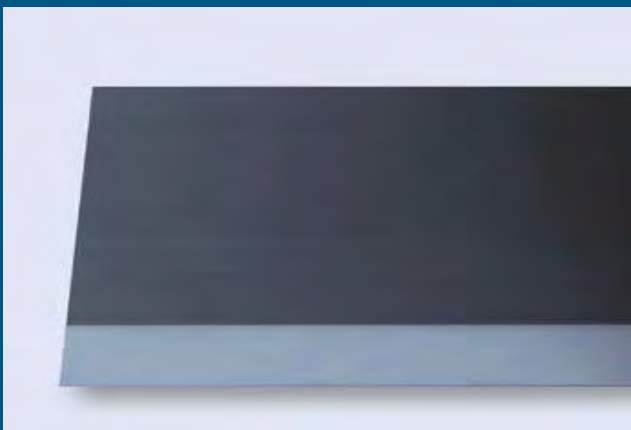
PLASTIC COMPOSITE  
medium & high density  
OPTIMAL flexibility and  
adaptability

GOOD wear resistance  
at speed

PERFECT for  
corrugated printing with  
water based inks



All CBG Metal blades feature mirror finishing on edge surfaces for extreme smoothness



# EDGE TYPES



## WING LAMELLA®

Special pre-honed doctor blades

EXTREMELY HIGH printing definition (tiny letters, pictures, drawings...)

LONGER lamella life

SLOWER & MORE UNIFORM blade wear

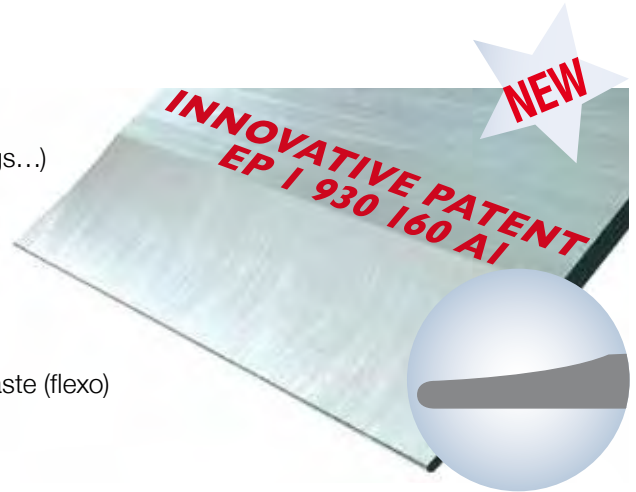
REDUCED lamella bending: real working angle equal to nominal

ELIMINATION of steel burrs & slivers (flexo)

BETTER chamber sealing with consequent less ink spilling and waste (flexo)

LESS oscillation-bound cracks (gravure)

QUICK run-in time thanks to rounded tip Mirror Edge®



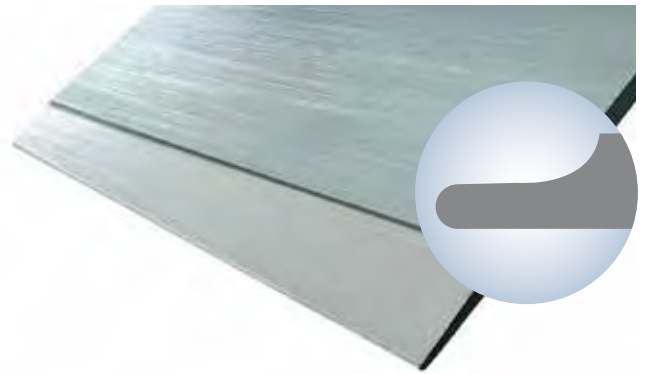
## SC - LAMELLA

Standard pre-honed doctor blade

EXCELLENT printing definition under all conditions

FULLY SATISFACTORY ratio lasting-quality

QUICK run-in time thanks to rounded tip Mirror Edge®



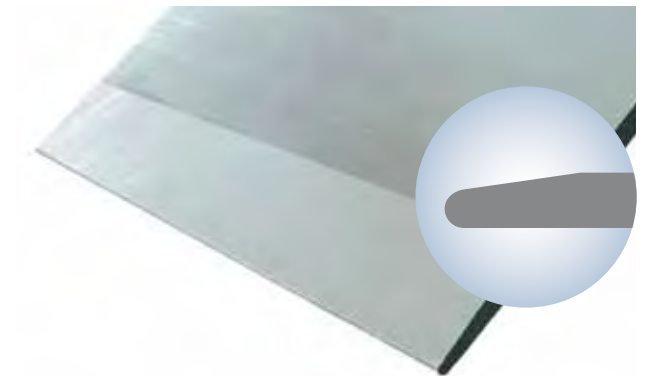
## TMC - BEVEL

Straight bevel pre-honed doctor blade

IDEAL blade for high pressure working conditions (minimal blade deformation)

PERFECT for short jobs

QUICKEST run-in time thanks to very thin rounded tip Mirror Edge®



## N - ROUND EDGE

Rounded edges doctor blade

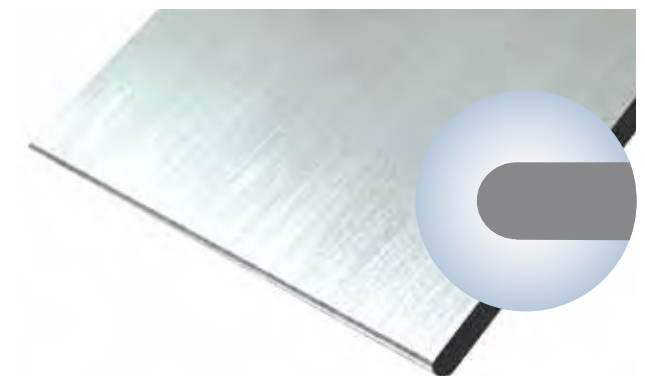
HIGHEST blade rigidity

LONG lasting

Slow run-in time (depending on thickness)

Medium printing definition

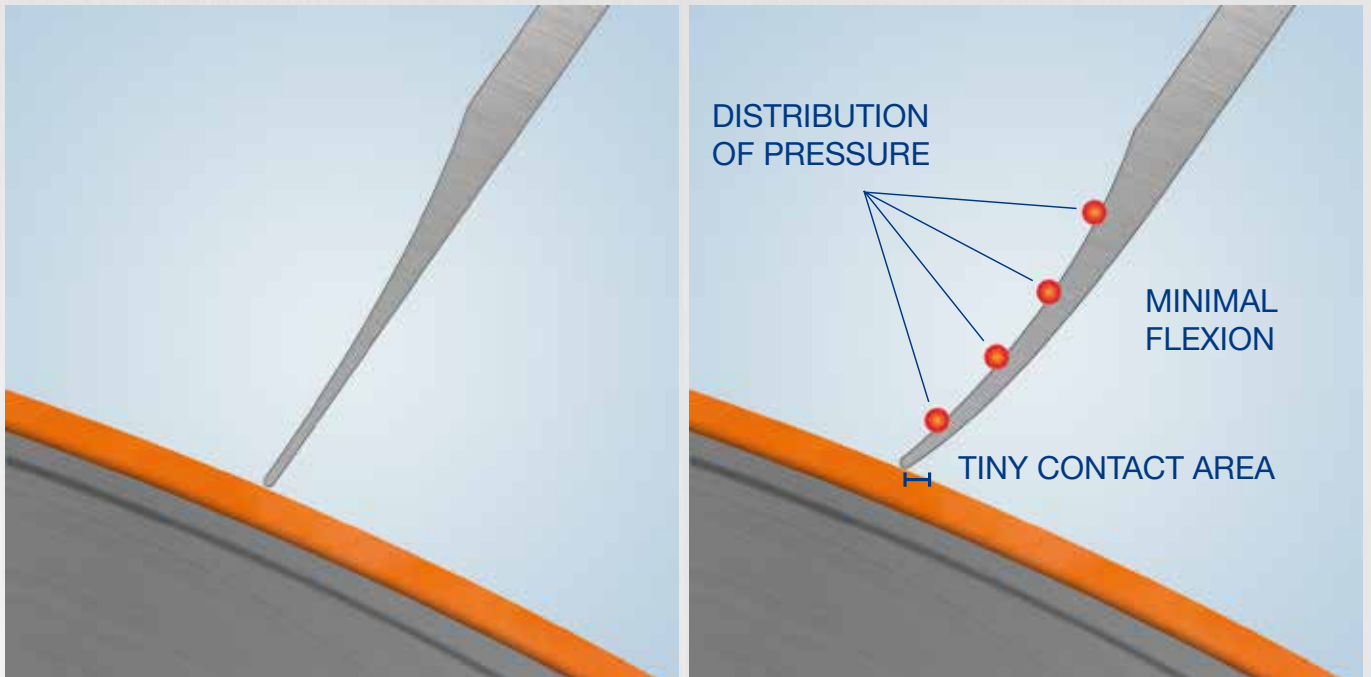
SUGGESTED for full tones & anilox with few lines/cm



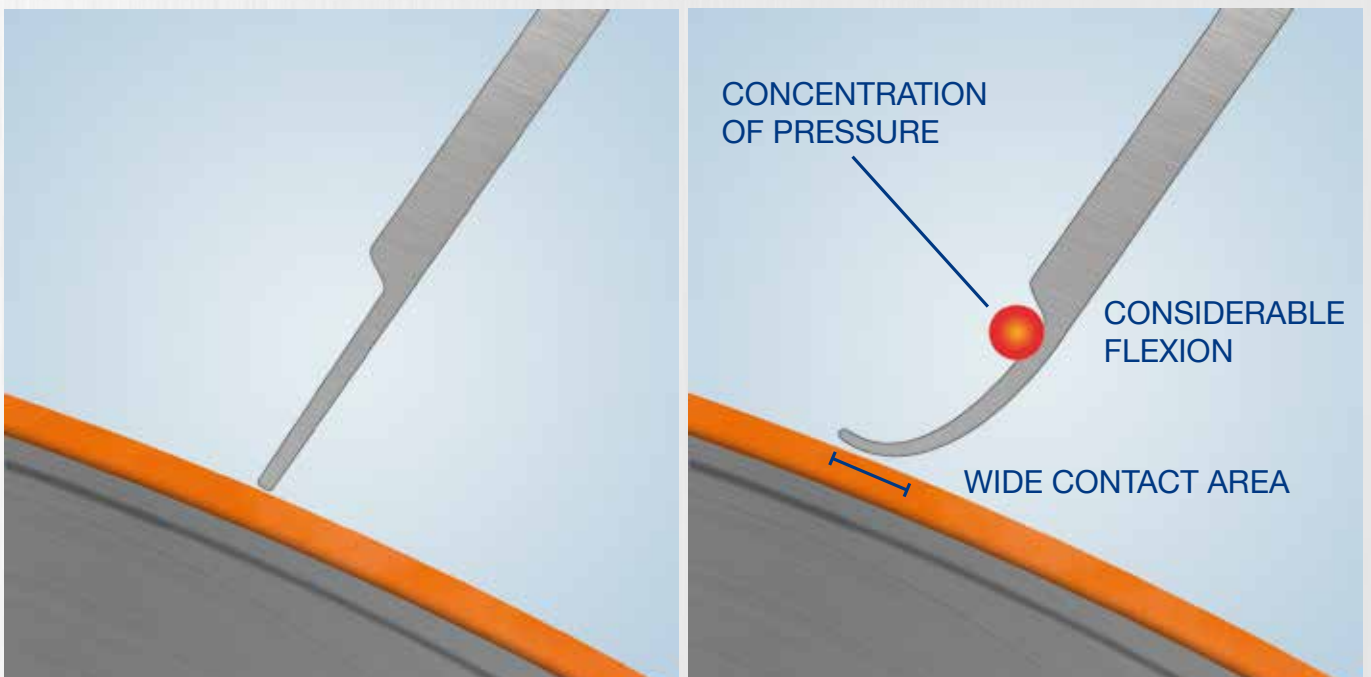
# The WING LAMELLA® Advantage

WING LAMELLA®

INNOVATIVE PATENT • EP 1 930 160 A1



STANDARD LAMELLA



# TECHNICAL PROFILES

## RED LABEL Doctor Blades (High carbon steel)

Surface:	bright polished
Tensile strength:	1960 ± 100 N/mm <sup>2</sup> (580 Hv)
Straightness maximum deviation:	1,0/3000 mm

## GOLD LABEL Doctor Blades (Micro Alloyed steel)

Surface:	yellow polished
Tensile strength:	2100 ± 100 N/mm <sup>2</sup> (615 Hv)
Straightness maximum deviation:	1,3/3000 mm

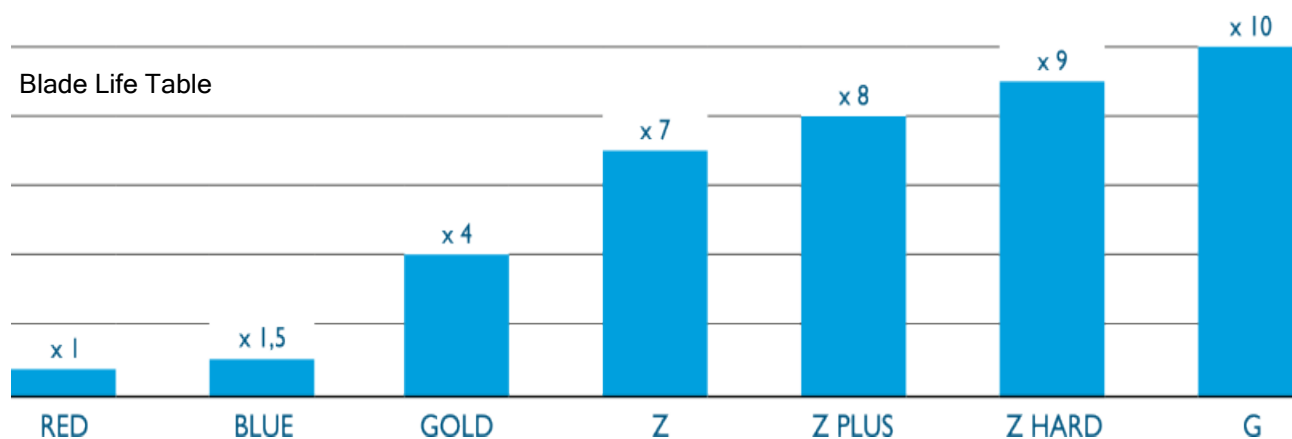
## SILVER LABEL Doctor Blades (Stainless steel)

Surface:	bright polished
Tensile Strength:	1910 ± 100 N/mm <sup>2</sup> (565 Hv)
Straightness maximum deviation:	1,1/3000 mm

## Technical Specifications

Flatness maximum deviation:	0,3% across the strip width
Width tolerance (blade):	± 0,10 mm if blade width < 50 mm ± 0,15 mm if blade width ≥ 50 mm
Thickness tolerance (blade):	± 0,009 mm if blade thickness ≤ 0,152 mm ± 0,011 mm if blade thickness > 0,152 mm
Width tolerance (lamella):	± 0,025 mm
Thickness tolerance (lamella):	± 0,003 mm
Contact edge roughness:	Ra 0,10 ± 0,05 µm

Blade Life Table



# PROFILE SPECIFICATIONS RANGE

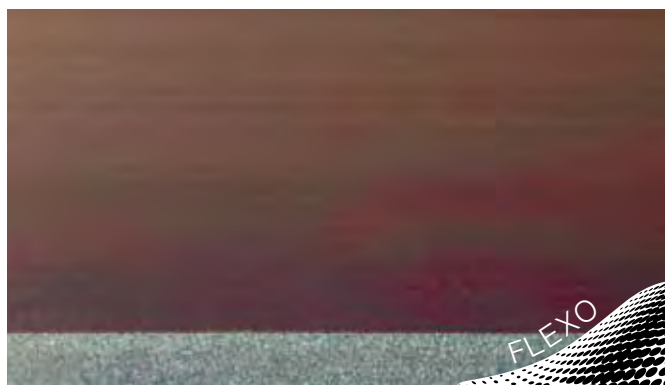
Blade Profile	Width (mm)	Thickness (mm)	Profile Specifications	
			Range	Standard
WING	from 8 to 90	0,102 0,152 0,203 0,254 0,305 0,381	Lamella 1,0 min - 4,0 max mm x from 0,04 mm	Thickness 0,152 mm: 2,47 x 0,065 mm  Thickness 0,203 mm: 2,86 x 0,095 mm  Thickness 0,254 mm: 3,20 x 0,125 mm
SC	from 8 to 90	0,102 0,152 0,203 0,254 0,305 0,381	Lamella 0,5 min - 2,5 max mm x from 0,04 mm	Thickness 0,152 mm: 1,3 x 0,068 mm  Thickness 0,203 mm: 1,3 x 0,100 mm  Thickness 0,254 mm: 1,3 x 0,130 mm
TMC	from 8 to 90	0,102 0,152 0,203 0,254 0,305 0,381	Bevel from 2° to 60°	4° & 15°
N	from 8 to 90	0,065 0,076 0,102 0,152 0,203 0,254	Round	radius = ½ thickness

Custom-made sizes and/or edge profiles are available upon request



SUPER

LONG LASTING lubricant coating specific for flexo  
HIGH wear resistance  
LOW friction blade/cylinder  
IMPROVED anilox life  
TOP printing quality  
VERY LONG LASTING (beyond 1'100'000 m)  
IDEAL for abrasive inks



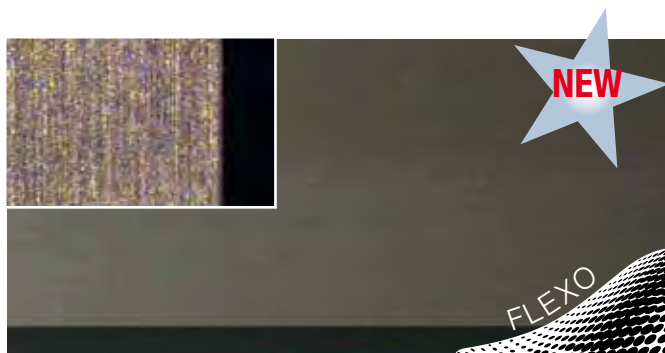
## IRIDIUM

- LUBRICANT coating specific for flexo
- LOWEST friction blade/cylinder
- IMPROVED anilox life
- LONG LASTING (beyond 500'000 m)
- HIGH printing definition
- TOTAL SHIELD against rust & corrosion
- IDEAL for water based inks



## MEGA

EXTREME Lubricant Coating  
HIGH Hardness  
UNIQUE long lasting  
SEVERE wear resistance



# CERAMIC COATINGS

## Z PLUS

NEW

ENGINEERED FOR **ROTOGRAVURE**

Innovative CERAMIC High Density Coating with increased Ceramic Concentration – Medium / High Hardness

ROTO: superior printing definition and consistency / very long lasting

## Z

CERAMIC High Density Coating with Medium Hardness  
Suitable for all printing conditions  
Excellent for UV Varnishes

ROTO: high quality printing quality & long lasting

FLEXO: very long blade lasting

## Z HARD

CERAMIC High Density Coating with High Hardness  
Extreme lasting with excellent printing quality  
Suitable for any ink including abrasive and metallic

## Z FLEXO HARD

ENGINEERED FOR **FLEXO**

CERAMIC High Density Coating with High Hardness  
Highly lubricant contact surface  
Extreme lasting with excellent printing quality

## Z FLEXO KIND

ENGINEERED FOR **FLEXO**

CERAMIC High Density Coating with Softer Hardness  
Excellent lubricant properties

FLEXO: fast start-up + very fine printing

## Z ICE

NEW

ENGINEERED FOR **FLEXO**

CERAMIC High Density Coating with Superior Lubricant Properties

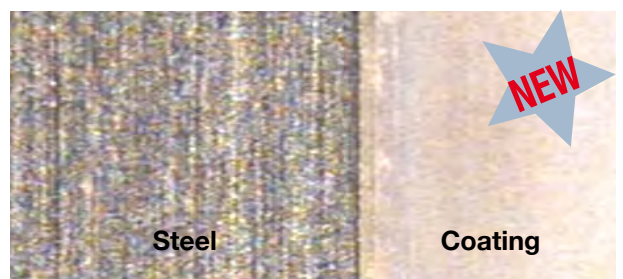
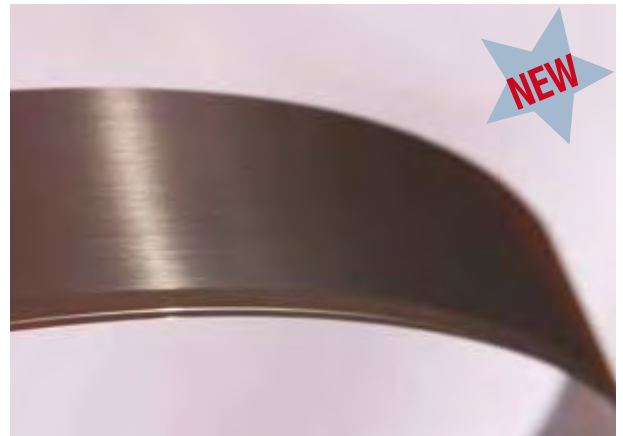
FLEXO: superior cylinders care + very long lasting

## Z ICE PLUS

ENGINEERED FOR **FLEXO**

CERAMIC High Density Coating with Superior Lubricant Properties and increased Ceramic Concentration  
Perfect for abrasive and metallic inks

FLEXO: superior cylinders care + extreme lasting





# FULL CERAMIC COATINGS

## G

ENGINEERED FOR **ROTOGRAVURE**

CERAMIC high density full blade coating  
(innovative technology)  
STABILIZATION of chrome surface roughness  
HIGHEST printing definition and quality  
SOLUTION for all veiling troubles  
STRONG LUBRICATION of blade contact surface  
INCREASED wear resistance  
LONGEST LASTING



## G PLUS

ENGINEERED FOR **ROTOGRAVURE**

HIGHEST concentration of ceramic particles  
SPECIFIC for chrome major roughness problems  
SOLUTION for worst veiling troubles  
IDEAL for cylinders partially engraved  
ELIMINATION of chrome polishing effect



## G KIND

ENGINEERED FOR **ROTOGRAVURE**

IMMEDIATE start up  
IDEAL for high quality short runs  
SUITABLE for cylinders with below average hardness



## G HARD

ENGINEERED FOR **ROTOGRAVURE**

IMPROVED surface hardness  
LONGEST runs  
IDEAL for extremely long jobs without blade change



## ICE

ENGINEERED FOR **COLD SEAL**

ENRICHED chemical composition  
VERY LOW friction  
COOL working temperature  
SELF CLEANING surface  
IDEAL for cold seal & thick inks



## F

EXTRA HARD coating specific for flexo  
SELF LUBRICANT properties  
TOP printing definition  
EXTREME wear resistance  
IDEAL for abrasive, thick and gripping inks



# BLADE GUILLOTINE

Professional quality precision blade cutting is easily achieved with the new CBG Blade Cutting Guillotine.

This simple bench-top unit can allow:

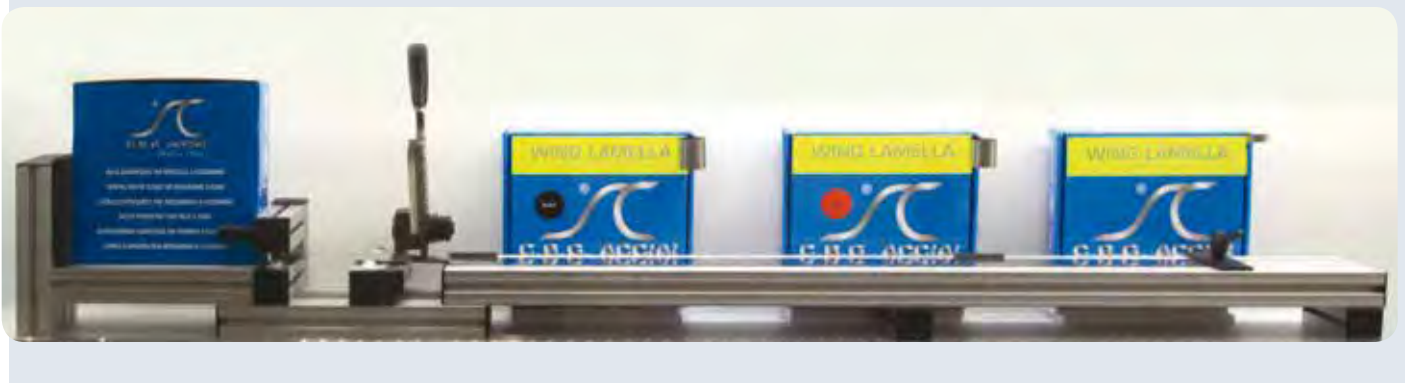
Professional blade cutting to length

Clean and square perpendicular cuts

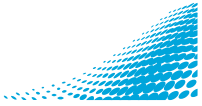
Tailor made to suit standard CBG packaging

Fully constructed in strong aluminum

Hard Metal Knives that are fully reversible and can be resharpened for long service life



# SPECIALS



## VARI-THICK

To achieve the best performance and reduce blade's cracks at cylinder extremities (mostly on gravure presses due to holder oscillation) we developed VARI-THICK® execution.

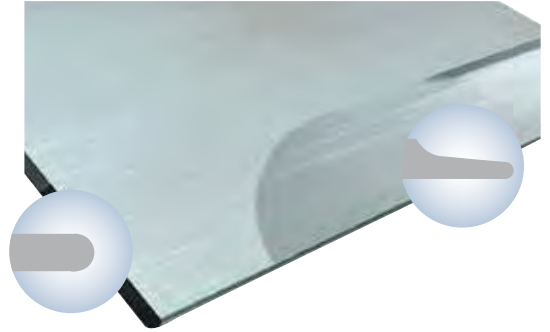
It consists of a lamella blade (either WING or SC profile) "tailor ground" matching the cylinder's engraved portion and with full thickness ends.

This allows to enjoy all doctoring benefits of a pre-honed blade as well as crack resistance properties of rounded edge blades.

TOP QUALITY doctoring

REDUCED cracks at cylinder extremities (up to -70%)

INCREASED blade stability all along printing process



## ROUNDED CORNERS & HOLES

For operator safety reasons, cut to length blades can be supplied with SMOOTH ROUNDED CORNERS (instead of traditional sharp squared corners) which allow a safe handling of the blade.

BURRS FREE extremities grant an easier insertion of the blade into the holder.

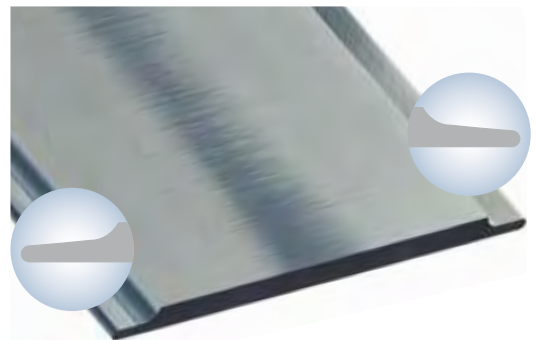
For special holders, blades can be supplied with holes for a more stable fixing.



## DOUBLE LAMELLA EDGE

For those printers who have the possibility to use different blade width, we can supply blades pre-ground on both edges.

Such execution is available in both WING & SC types.



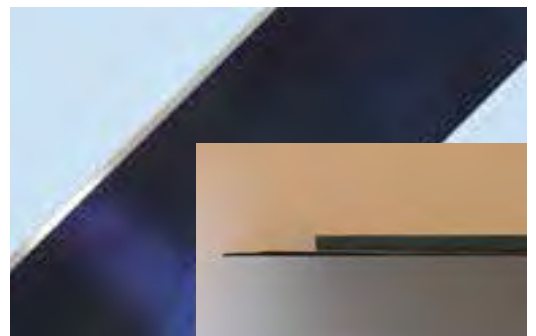
## BACK-UP BLADES

In order to increase doctor blade rigidity while maintaining the proper flexibility of the pre-ground zone we suggest to use a back-up blade to be coupled with the doctoring blade.

Materials: High tensile strength carbon steel & stainless steel

Width: Doctor Blade width -3 mm or -5 mm

Thickness: 0,30-0,38-0,45-0,50-0,60-0,70 mm



# FLEXO SEALS

CBG high precision seals are made to strict tolerances in a choice of 6 different foam grades to suit individual applications and ink systems (i.e: solvent based , water based , UV cure)

Allows proper ink chamber sealing and a long service life for less downtime on press (*up to 250-300, 000 meter print runs*).

Seals can be produced on demand , in any shape for any press configuration using highly accurate CAD technology with CNC high precision cutting for perfect sealing in all ink chambers

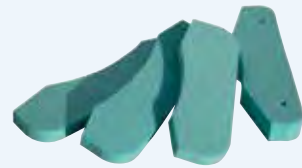


## FOAM GRADES

### **FLEXO 1 Compound**

medium hardness & medium density

*most commonly used*



### **FLEXO 2 Compound**

high hardness & medium density

*high working pressure*



### **FLEXO 3 Compound**

medium-low hardness & high density

*very high wear resistance*



### **FLEXO 4 Compound**

medium-low hardness & medium density

*very high wear resistance*



### **FLEXO 8 Compound**

low hardness & low density

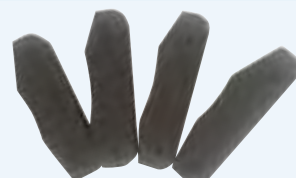
*medium working pressure*



### **FLEXO 9 Compound**

Low hardness & medium density

*extreme wear resistance properties*





# SPECIAL FLEXO SEALS

## SELF LUBRICANT SEALS

REVOLUTIONARY self lubricant seals.

Seals are impregnated with lubricant oil to reduce friction & covered with a **shell of solid rubber** to bear any working pressure.

Lasting beyond 1,500,000 m runs.



## PURE FELT LUBRICANT SOAKED SEALS

Made with the most pure high density felt Soaked with highly lubricant oil for excellent Chamber sealing

Suitable for Medium Runs



## NEW: Innovative Dual Component Seals

Exclusive to CBG. The next generation of Flexo Seal with extremely long life and performance.

Innovative polyester insert to provide outstanding wear and zero leakage compared to conventional foam or felt seals .

ZERO LEAK factor to keep ink in place and press clean.

Can be produced in any size for any press model.





# SLITTING BLADES

## THE STEEL

C.B.G. ACCIAI Slitting Razor Blades are manufactured with the best Swedish steel.

The absolute cleanness of the chemical composition and the homogeneity of the structure guarantee the lack of non-metallic inclusions (that could cause micro-cracks along the shaving edge) and uniform wear of the edge.

The hardening and tempering procedure leads to a higher hardness that makes the steel become extremely resistant to the friction wear.

C.B.G. ACCIAI razor blades are available in stainless steel as standard specification and some items in high carbon steel too. Stainless steel prevents from oxidation and corrosion when blades are in contact with solvents, other aggressive chemicals or when used in very wet environments.

## TECHNOLOGY & QUALITY

The peculiar characteristic of C.B.G. ACCIAI Slitting Razor Blades is the “variable angle” slitting edge. The technology consists in a double or triple edge sharpening with decreasing inclinations which results in a slitting edge with variable angle.

This advanced technique allows to drastically diminish the friction between blades and slit material, first reducing the mutual overheating (avoiding micro-weldings and/or burnings) and secondly the wear of the razor blade's slitting edge.

## THE COATING

The sharp edges of C.B.G. ACCIAI Slitting Razor Blades are all coated using sophisticated technologies to improve blade life. The extreme hardness of the materials used for coating, its high adhesivity to the steel and the low friction factor dramatically improve the blade life by reducing the wear of slitting edges.

The coating protects the blade by wear whatever is the material to slit.

Aside the standard coating grade other coatings are available on request for specific needs.

