C.B.G. ACCIAI

Made in Italy

PRINTING DOCTOR BLADES & FLEXO GRAVURE

2.0 16

C.B.G. ACCIAI

NATURALLY SCIENTIFIC

Company & Facilities

11.000 m^2 dedicated to stock & production

90 years experience in manufacturing high precision steel blades out of the best Swedish steel

86 specialized distributors & agents selling millions of meters every year all over the world

60 qualified employees with unique know-how and top quality attitude

4th founding family generation running the company

1 daily goal: providing best tools to all converters in the globe

STEEL GRADES

Original Swedish Steel

Red Label

TOP quality carbon Swedish steel

SELECTED refined chemical composition

HIGH CONSISTENCY carbide dispersion

STRICTEST tolerances

Blue Label

EXTRA FINE carbon Swedish steel

SPECIAL metallurgical structure

UNIFORM & MINIMAL carbide size

EXTREMELY PURE chemical composition

Black Label

NEW high carbon alloyed Swedish steel

SUPER REFINED structure for the most uniform wear

INNOVATIVE hardening & tempering process for an increased wear abrasion resistance

IMPROVED doctoring precision and superior lasting

Gold Label

LONG LIFE micro alloyed high density Swedish steel

UNIQUE chemical composition

HIGHEST wear resistance

IDEAL for long runsand very abrasive inks

Silver Label

STAINLESS extra fine Swedish steel

TOTAL oxydation and corrosion protection

HIGH wear resistance

PERFECT for water based inks and to solve rust problems

White Label

PLASTIC & COMPOSITE with medium & high density

OPTIMAL flexibility and adaptability

GOOD wear resistance at medium working speed

SPECIFIC for corrugated printing with water based inks

TECHNICAL DATA

RED LABEL printing doctor blades (High carbon steel)

Surface:	bright polished
Tensile strength:	1960 ± 100 N/mm² (580 Hv)
Straightness maximum deviation:	1,0/3000 mm

BLUE LABEL printing doctor blades (Extra refined high carbon steel)

Surface:	bright polished
Tensile strength:	1960 ± 100 N/mm² (580 Hv)
Straightness maximum deviation:	0,6/3000 mm

BLACK LABEL printing doctor blades (High carbon Cr alloyed steel)

Surface:	bright polished
Tensile Strength:	2060 ± 100 N/mm² (605 Hv)
Straightness maximum deviation:	1,0/3000 mm

GOLD LABEL printing doctor blades (Micro alloyed steel)

Surface:	yellow polished
Tensile strength:	2100 ± 100 N/mm² (615 Hv)
Straightness maximum deviation:	1,3/3000 mm

SILVER LABEL printing doctor blades (Stainless steel)

Surface:	bright polished
Tensile strength:	1910 ± 100 N/ mm² (565 Hv)
Straightness maximum deviation:	1,1/3000 mm

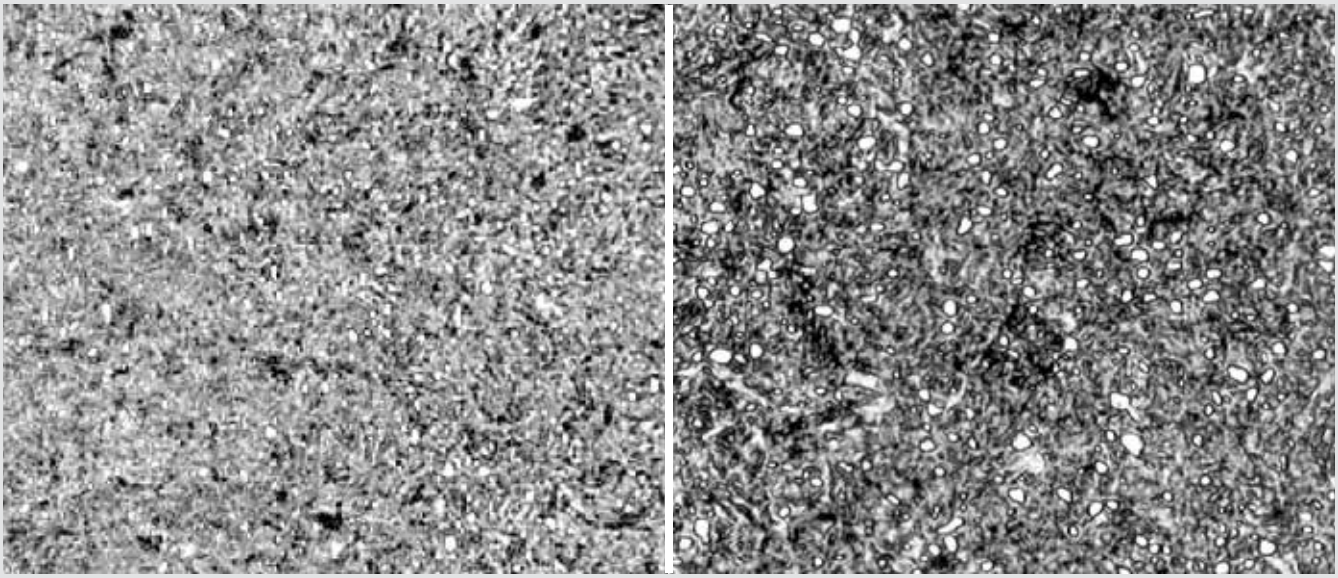
ALL LABELS

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

WHY A 1st CLASS BLADE

METALLURGICAL STRUCTURE & CARBIDE DISPERSION
Uniform & slow blade wear depend on:

- Pure chemical composition
- Small size of carbides
- High density (no porosity)
- Lack of non metallic inclusions
- Fine carbide dispersion through steel section
- Undifferentiated metallurgical structure

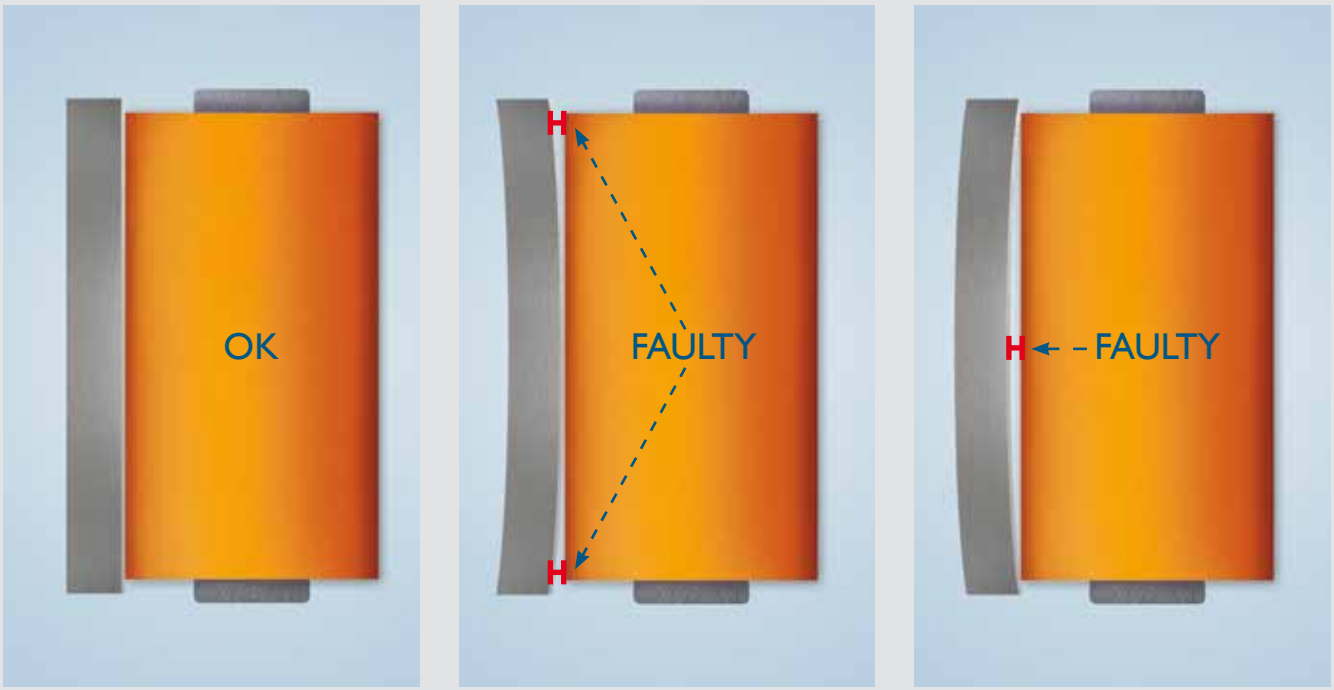


SUPER REFINED 1000x STANDARD 1000x

STRAIGHTNESS

Strict straightness tolerance:

- perfect parallelism blade-cylinder
- low working pressure
- uniform blade wear all through its length
- long blade lasting

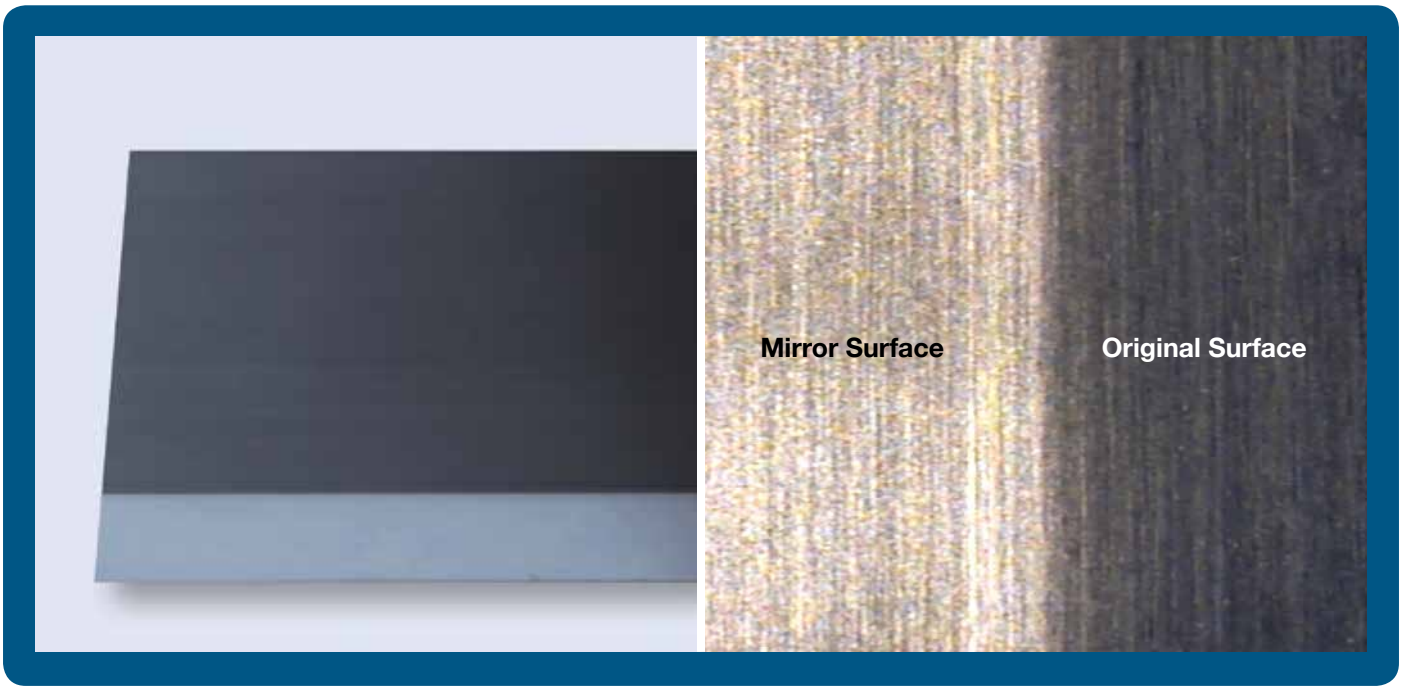


MIRROR SURFACE REVOLUTION IN FINISHING

NEW

MIRROR-LIKE finishing of edge surface
EXTREME SMOOTHNESS of the edge

SUPERIOR ink doctoring
AVAILABLE under any profile (WING, SC, TMC, N)



BLADE GUILLOTINE

PROFESSIONAL blade guillotine for cutting to length

CLEAN & PRECISE perpendicular easy cut

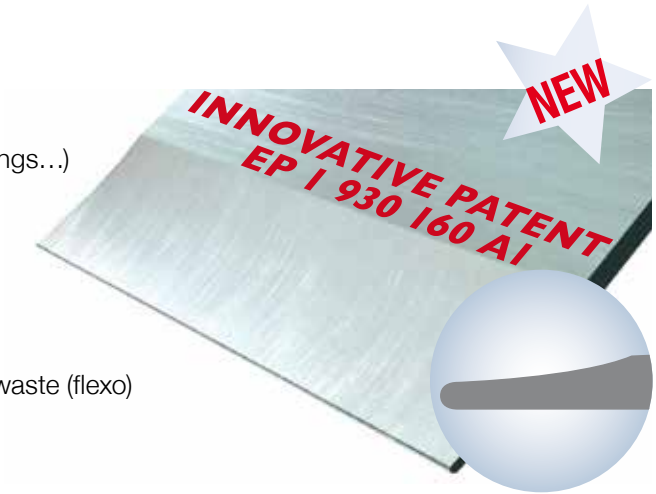
COMFORTABLE tailor made seat for CBG d.blades package

REVERSIBLE & RESHARPENABLE hard metal knives for life time lasting

EDGE PROFILES

FLEXO&GRAVURE

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)

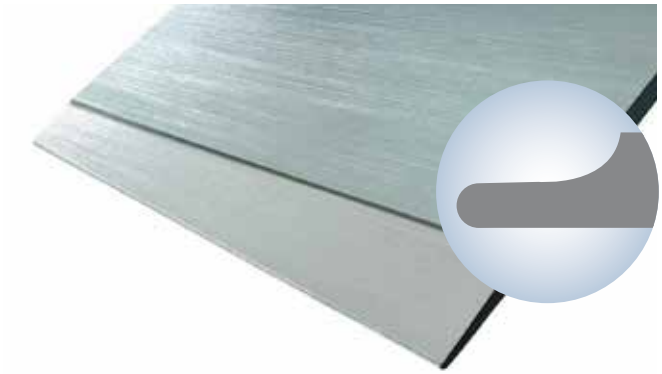
BETTER chamber sealing with consequent less ink spilling and waste (flexo)

LESS oscillation-bound cracks (gravure)

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

FLEXO&GRAVURE

SC - LAMELLA



Standard pre-honed doctor blade

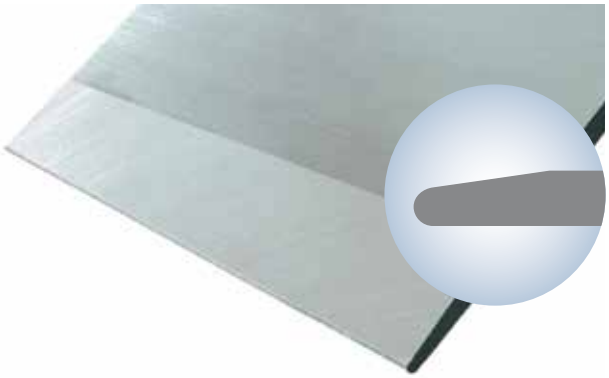
EXCELLENT printing definition under all conditions

FULLY SATISFACTORY ratio lasting-quality

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

FLEXO&GRAVURE

TMC - BEVEL



Straight bevel pre-honed doctor blade

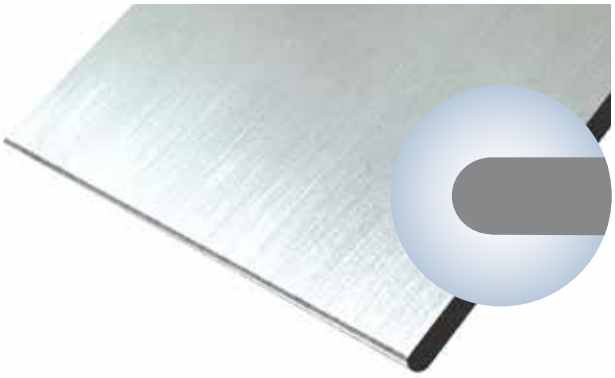
IDEAL blade for high pressure working conditions (minimal blade deformation)

PERFECT for short jobs

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

FLEXO

N - ROUND EDGE



Rounded edges doctor blade

HIGHEST blade rigidity

LONG lasting

Slow run-in time (depending on thickness)

Medium printing definition

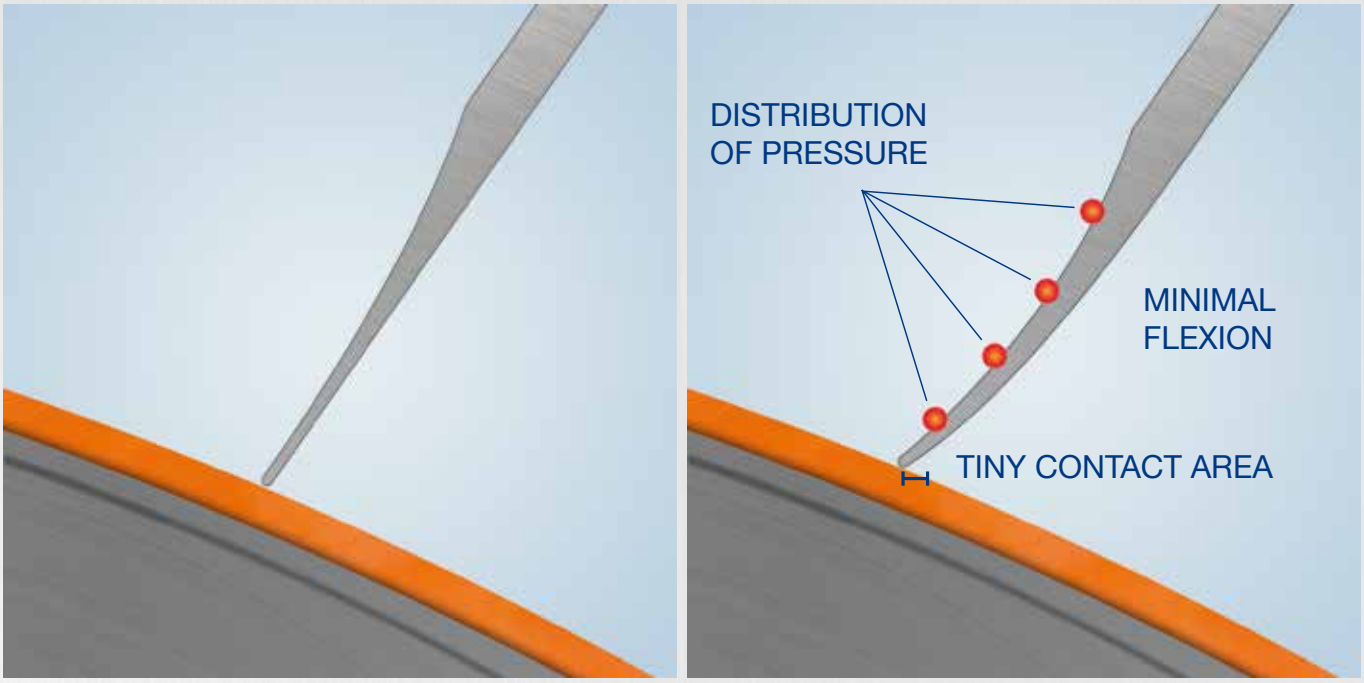
SUGGESTED for full tones & anilox with few lines/cm

WING LAMELLA®: Boost your Printing Quality

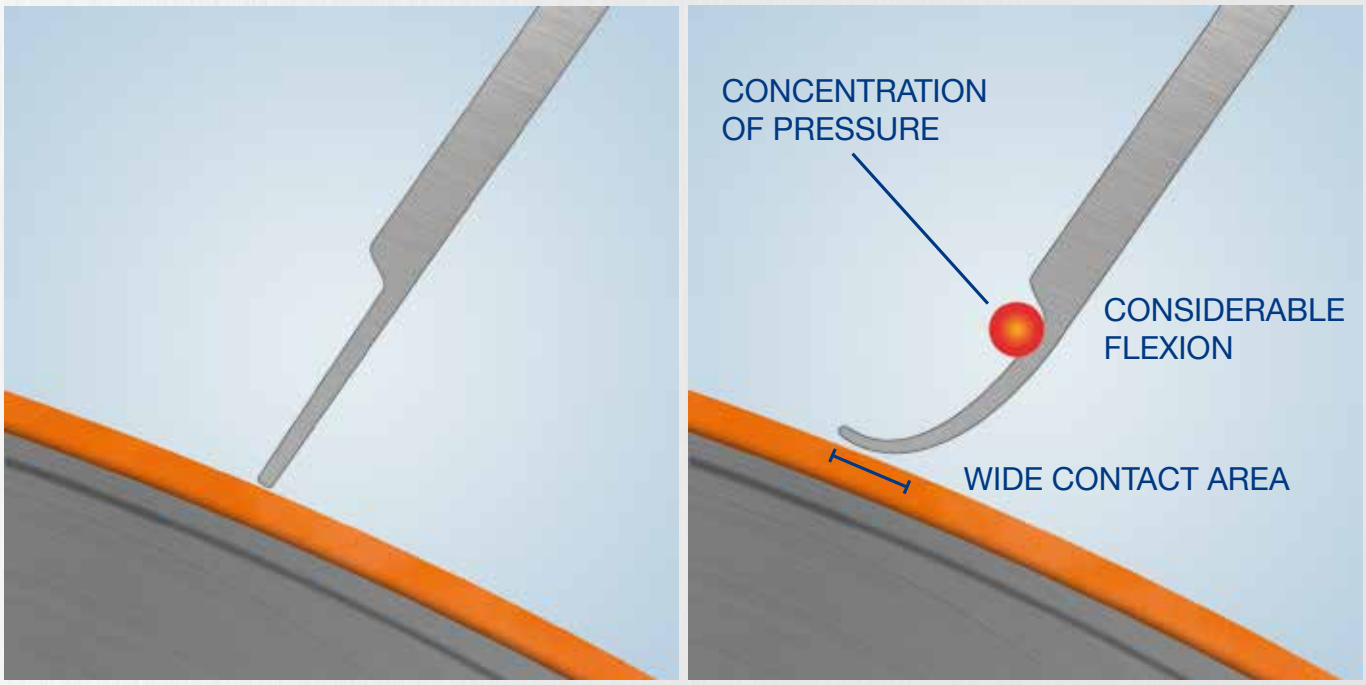
EP1930 160 A1

WING LAMELLA®

INNOVATIVE PATENT • EP 1 930 160 A1



STANDARD LAMELLA



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

COMMON SIZES

STEEL	
THICKNESS mm	WIDTH mm
0,065	10
0,076	10
0,102	10-15-30-40-50-60
0,152	8-8,5-10-12,7-15-17-19-20-22-25-25,4-28,6-30-32-35-38,1-40-41,3-45-50-52-50,8-55-60-63-65-70-80-90
0,203	10-12,7-15-17-19-20-25-25,4-28,6-30-32-35-38,1-40-45-50-52-55-60-70-80
0,254	20-25-25,4-28,6-30-32-35-38,1-40-50-60
0,305	20-30-35-40-50-55-60-70-80-90
0,381	40-50-60

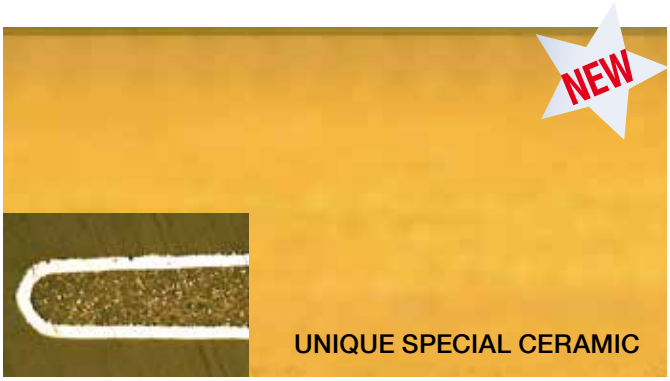
PLASTIC	
THICKNESS mm	WIDTH mm
0,35	20-25-30-32-35-40-45-50-60
0,50	25-30-32-35-40-45-50-60
0,80	25-30-32-35-38-40-45-50
1,30	25-30-32-35-38-40-45-50
1,60	25-30-32-35-38-40-45-50
2,00	25-30-32-35-38-40-45-50

FULL CERAMIC COATINGS

G

ENGINEERED FOR **ROTOGRAVURE**

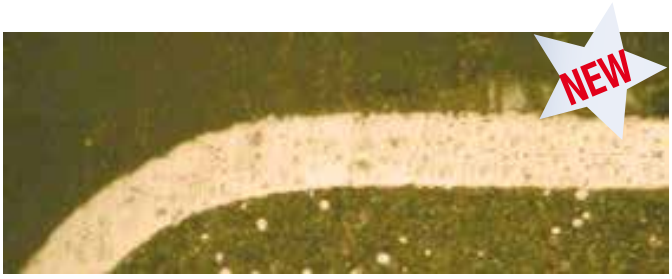
CERAMIC high density full blade coating (innovative technology)
STABILIZATION of chrome surface roughness
HIGHEST printing definition and quality
SOLUTION for all veiling troubles
STRONG LUBRICATION of blade contact surface
INCREASED wear resistance
LONGEST LASTING



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

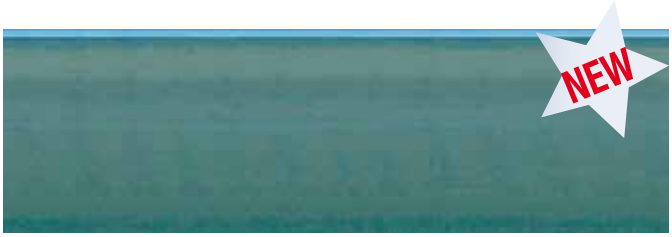
ENGINEERED FOR **ROTOGRAVURE**

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

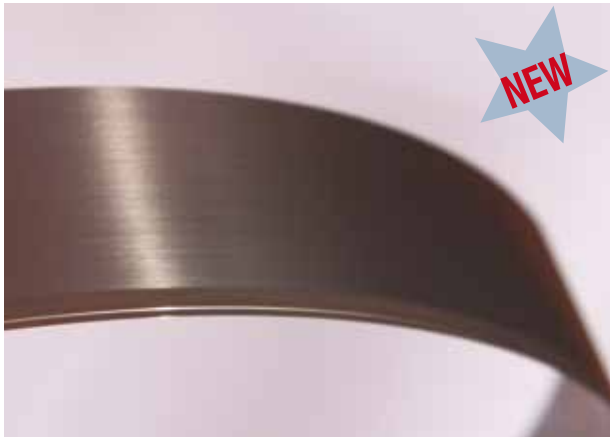
EDGE CERAMIC COATINGS

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

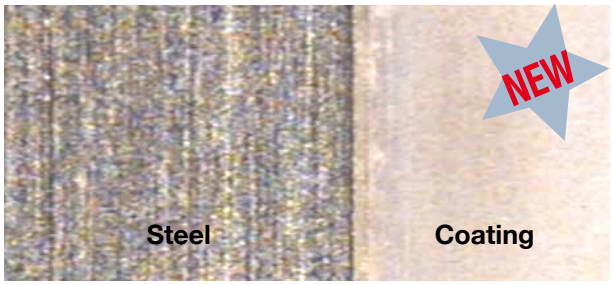
FLEXO: superior cylinders care + very long lasting

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



THE "**FLEX**CLUSIVE" COATINGS

SUPER

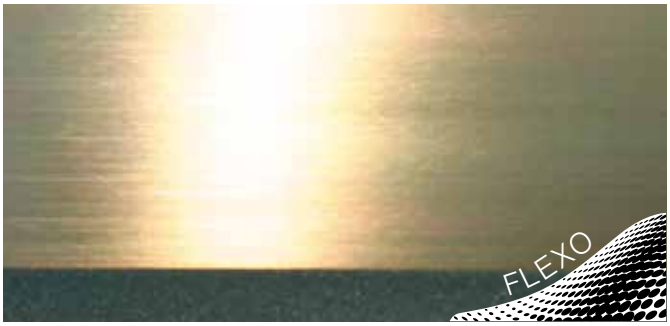
ENGINEERED FOR **FLEXO**

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

ENGINEERED FOR **FLEXO**

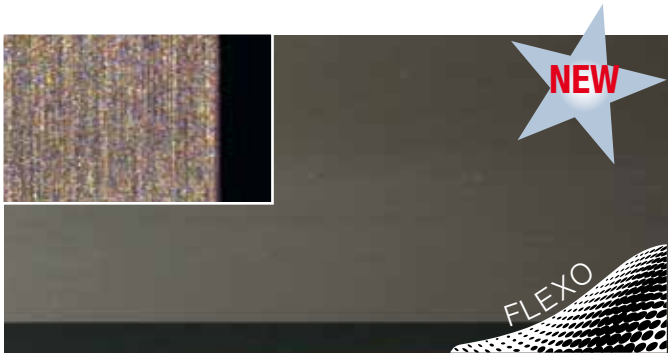
LUBRICANT coating specific for flexo
LOWEST friction blade/cylinder
IMPROVED anilox life
LONG LASTING (beyond 500'000 m)
HIGH printing definition
TOTAL SHIELD against rust & corrosion
IDEAL for water based inks



MEGA

ENGINEERED FOR **FLEXO**

EXTREME Lubricant Coating
HIGH Hardness
UNIQUE long lasting
SEVERE wear resistance



PACKAGING

PROFESSIONAL safe & heavy packaging

PLASTIFIED water proof cardboard

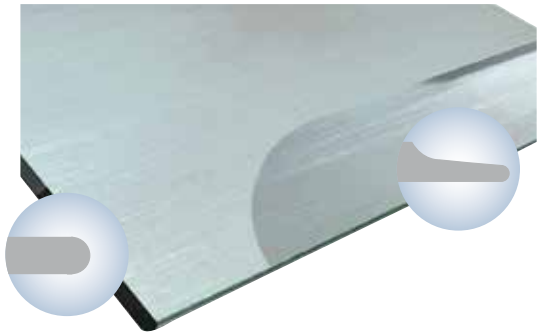
SMOOTH & EASY blade's pull out

VACUUM WRAPPING for extreme protection

SPECIALS

VARI-THICK

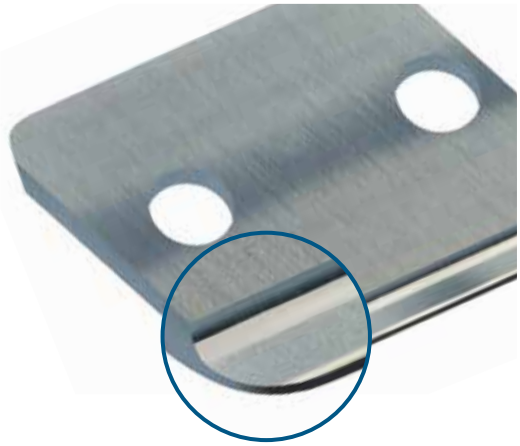
To achieve the best performance and reduce blade's cracks at cylinder extremeties (mostly on gravure presses due to holder oscillation) we developed VARI-THICK® execution.
It consists of a lamella blade (either WING or SC profile) "tailor ground" matching the cylinder's engraved portion and with full 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 extremeties (up to -70%)
INCREASED blade stability all along printing process



ROUNDED CORNERS & HOLES

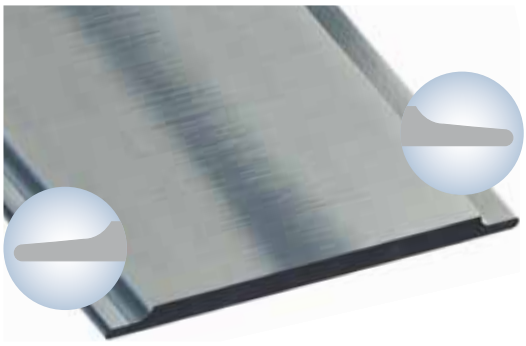
For operator safety reasons, cut to length blades can be supplied with SMOOTH ROUNDED CORNERS (instead of traditional sharp squared corners) which allow a safe handling of the blade.
BURRS FREE extremeties grant an easier insertion of the blade into the holder.

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

High precision seals with strict tolerances made of 6 different FOAM grades suitable for all applications (solvent base, water base, UV) aimed to a proper ink chamber sealing and a long lasting (up to 250-300'000 m runs).
Seals are produced with any shape on demand, using CNC technology with high cutting precision which grants a smooth contact surface seal-cylinder.
Extreme flexibility in manufacturing out of samples and drawings as well as in modifing shapes & sizes.

FOAM GRADES

FLEXO 1
medium hardness & medium density
most commonly used

FLEXO 2
high hardness & medium density
high working pressure

FLEXO 3
medium-low hardness & high density
very high wear resistance

FLEXO 4
medium-low hardness & medium density
very high wear resistance

FLEXO 8
low hardness & low density
medium working pressure

FLEXO 9
Low hardness & medium density
extreme wear resistence properties

LONGLIFE SEALS

NEW

Double Component Innovative Seals

Specific for High Speed Presses & Very Long Runs (to be used in combination with CBG ACCIAI Coated Blades range selection).

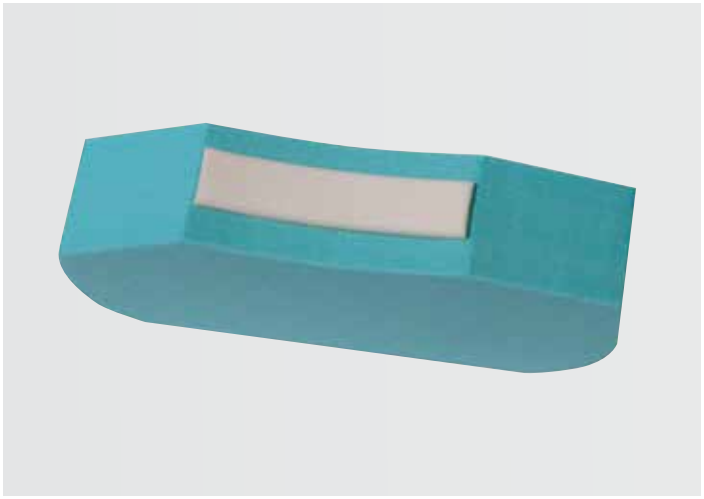
Outstanding performance compared to any conventional seal.

ZERO LEAK factor. Save ink. Keep press clean.

Available for any press model.

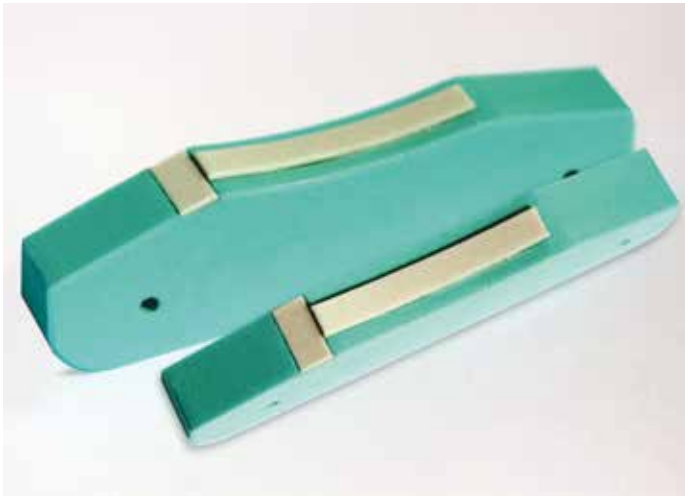
P GRADE LONGLIFE SEAL

SINGLE ANTI FRICTION INSERT



PT GRADE EVERLASTING SEAL

DOUBLE ANTI FRICTION INSERT



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 SELF LUBRICANT SEALS

Made with the most pure high density felt

Soaked with highly lubricant oil

Excellent Chamber sealing

Suitable for Medium Runs

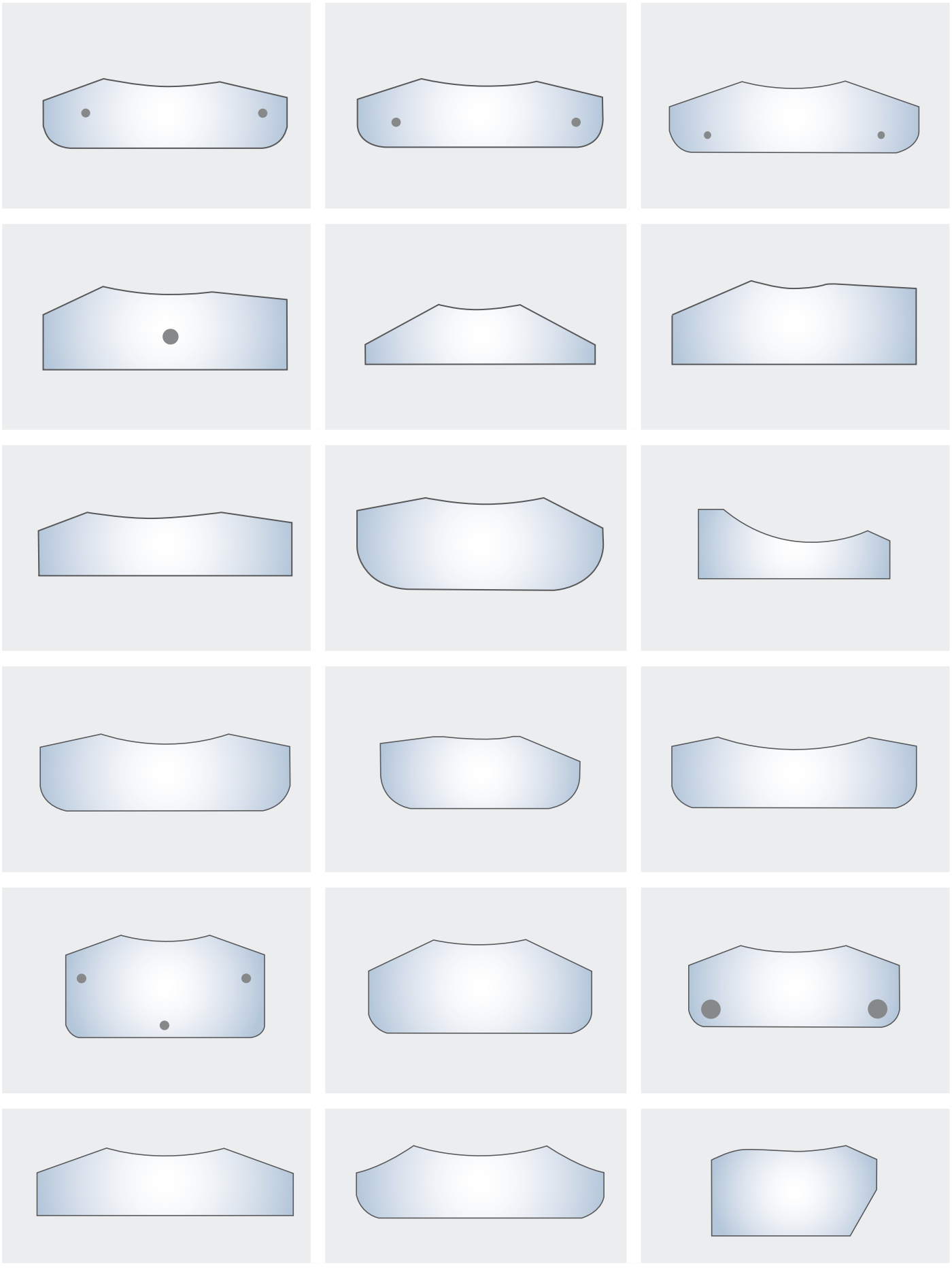
COATED SEALS x000

Special anti-friction coating to improve seal life x 3-4 times.
Ideal combination with FLEXO 3 & 4 foam grades.
Lasting beyond 800'000 m.

"GREAZEAL"

Special food-contact approved grease to be used with CBG seals (any kind).
It helps sealing the flexo chamber, drastically reducing ink leaks.
It improves lubrication limiting seal wear.

COMMON SHAPES



SLITTING RAZOR BLADES

for FILMS, ADHESIVE TAPES and else

THE STEEL

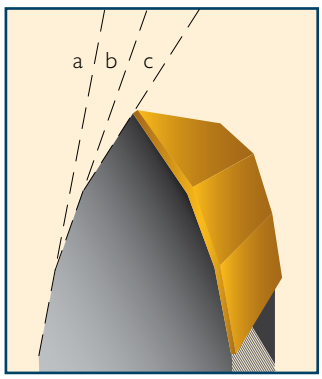
C.B.G. ACCIAI Slitting Razor Blades are manufactured with the best Swedish steel.
The absolute cleanness of the chemical composition and the homogeneity of the structure guarantee the lack of non-metallic inclusions (that could cause micro-cracks along the shaving edge) and uniform wear of the edge.
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

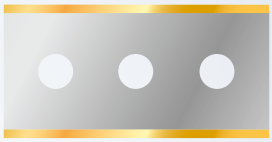
The peculiar characteristic of C.B.G. ACCIAI Slitting Razor Blades is the “variable angle” slitting edge. The technology consists in a double or triple edge sharpening with decreasing inclinations which results in a slitting edge with variable angle.
This advanced technique allows to drastically diminish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



3FBT
43 x 22,2 x 0,10 / 0,15 / 0,20 / 0,30



3FBQ
43 x 22,2 x 0,10 / 0,15 / 0,20 / 0,30

1A60
57 x 19 x 0,38

2FBS
38 x 8 x 0,25

CUTTER 18 mm
PRE - CUT
100 x 18 x 0,50

CUTTER 18 mm
SOLID
100 x 18 x 0,50

CUTTER 9 mm
PRE - CUT
85 x 9 x 0,40

CUTTER 9 mm
SOLID
85 x 9 x 0,40

CUTTER 9 mm 30°
PRE - CUT
90 x 9 x 0,40

TRP
52 x 19 x 0,65

OFFICE & FACTORY

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QUALITY CERTIFICATE

Certificate N. IT98/0277

The quality management system of

C.B.G. ACCIAI S.r.l.

Head Office and Plant :
Via G. Carducci, 680 - 21042 CARONNO PERTUSELLA (VA) - Italy

has been assessed and certified as meeting the requirements of

ISO 9001 / UNI EN ISO 9001:2008

For the following activities

Production of pre-sharpened and not pre-sharpened steel blades for rotogravure printing, flexographic printing, silk-screen printing, coating, refining and coupling machines.

EA Sector: 17

This certificate is valid from 30/01/2014 until 30/01/2017 and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 30/01/2017.
Issue.8. Certified since 23/12/1998.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization.

Authorized by
Paola Santarelli

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