




# Flexo Printing Productivity

HIGH-PERFORMANCE SOLUTIONS FOR THE IMPROVEMENT  
OF YOUR FLEXO PRINTING PROCESS.



## We invented the original ceramic flexo blade

BTG is the inventor and producer of the original high-performance ceramic flexo blade, Duroblade®, a blade that allows not only for fast payback but that can boost your process and help you find your niche in an increasingly competitive world.

DUROBLADE high-performance coating blades were successfully introduced to the market in 1986. Since then, steady product development has resulted in a vast range of blades for different applications in the Pulp & Paper Industry: coating, creping, cleaning etc.

Our longstanding experience enhancing steel with ceramics for increased wear-resistance to friction (cylinder) and abrasion (ink) has led us to enter the market of printing blades for flexo printing with ceramic anilox cylinders as well as for gravure coating with engraved, ceramic rolls.

Blades are ready-to-use. No break-in period is required. The hard-faced tip wears slowly and evenly, providing a virtually constant working edge, thus ensuring consistent quality throughout your printing run.

# Reap the benefits of Duroblade flexibility

## FLEXIBILITY - A SOLUTION FOR EVERY APPLICATION

Ceramic printing blades can help you achieve improvements in most flexo applications:

- Web- or sheet machines
- Water-based or solvent-based inks
- Black-and-white or color process
- Paper as well as other substrates
- UV coating with chambered doctor blades.

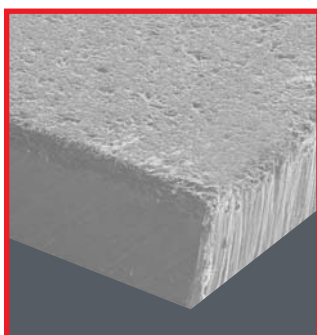
Duroblade can also be used in other applications, such as gravure coating with ceramic anilox rolls.

Both the product and the manufacturing process are patented. Our quality control ensures perfect blade straightness and excellent edge quality across the entire blade length, as well as consistent quality from blade to blade. BTG Eclépens S.A. has a quality management system in conformance with ISO 9001.

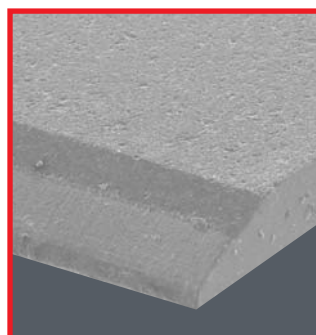
## BENEFITS

BTG's ceramic-tipped printing blade offers:

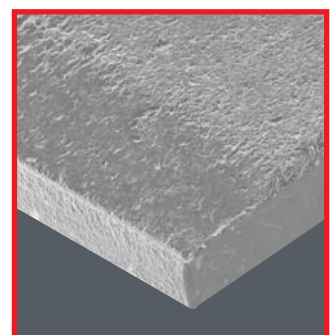
- Substantially longer blade life
- Increased blade chamber seal lifetimes
- Better sealing of the doctor chamber, cleaner production and less waste
- No run-in time – less waste
- Constant printing quality during the blade life
- Improved wiping of the anilox cylinder
- Reduced scoring lines.



SCANNING ELECTRON  
MICROGRAPH OF A NEW  
CERAMIC FLEXO BLADE



SCANNING ELECTRON  
MICROGRAPH OF A USED  
DOCTOR BLADE AFTER ONE WEEK



SCANNING ELECTRON  
MICROGRAPH OF A USED SEALING  
BLADE AFTER ONE WEEK

# Wear-resistance and constant quality

## BLADE WEAR

It is a well-known fact that traditional steel and plastic printing blades wear quickly and unevenly. The wear process that occurs at the blade tip is influenced by many factors, such as linear blade load, printing press speed, pigment type and ink viscosity.

Wear at the blade tip, resulting in material removal, occurs through a complex combination of sliding wear against the engraved roll and abrasive wear caused by pigment particles.

With a ceramic-tipped blade, pigment particles can't plastically deform or cut the surface. Consequently, only a micropolishing effect is produced, which explains the low wear rate

## CONSTANT PRINTING QUALITY

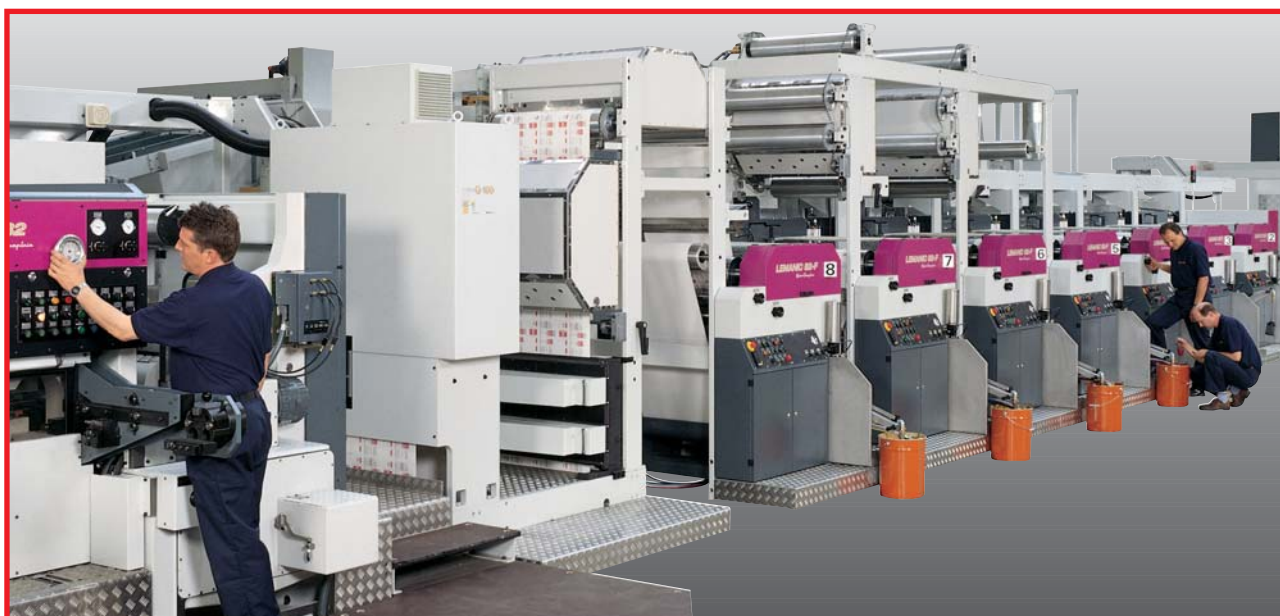
While printing quality from standard steel blades varies from break-in to blade change, ceramic-tipped blades provide constant quality throughout their entire service life. Furthermore, they allow you to reach excellent printing quality faster, since no run-in time is required for these blades.

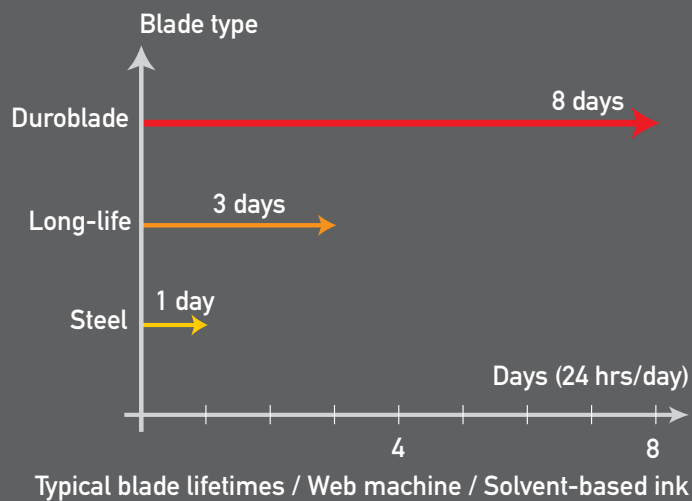
## LONGER LIFETIME – INCREASED PRODUCTIVITY

The benefits cited above all contribute to increased productivity, through reduced downtime due to blade changes, constant quality and fewer defects resulting in less paper/foil to recycle.

Duroblade also provides other, more subtle benefits. We call them bonus benefits:

- Finer inking of the anilox cylinder
- Lower blade consumption, hence less scrap material to dispose of.



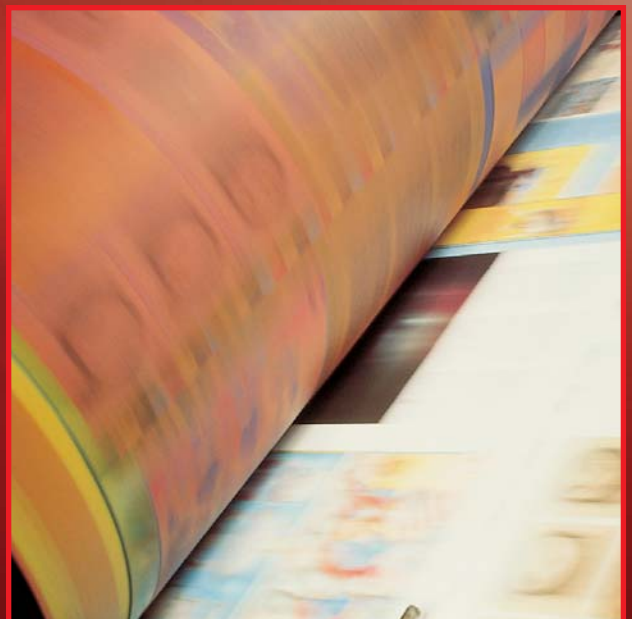


**8x**

**Duroblade Flexo**  
printing blade allows  
up to 8 times longer  
lifetime ... and more!

## Scoring

Scoring lines are a serious problem for ceramic anilox users. Metal shavings are thought to be one of the principal causes of cylinder scoring, as they get caught between the doctor blade and the cylinder. The ceramic-tipped blade reduces scoring because the ceramic edge of the blade contacts the cylinder instead of bringing steel into contact with the anilox. Hence, no metal shavings and slivers wear off the blade, mixing with the ink. Running with ceramic can dramatically reduce or even eliminate score lines.





BTG – RAISING YOUR PRODUCTIVITY



Ref: EB20.52en © BTG 2006