THE EXPERTS IN INK TRANSFER TECHNOLOGIES

DOCTOR BLADES FOR FLEXO NARROW WEB APPLICATIONS

Doctor blade life on modern flexo presses, with their combination anilox roller/doctor blade inking systems, is of great importance. The surface of ceramic anilox rollers requires minimal doctor blade pressure to prevent excessive blade and anilox wear.

Equally important for blade life is the relationship between cell configurations (shape / count) and the blade tip thickness. Daetwyler manufactures a wide variety of doctor blades to meet your specifications and applications.

Daetwyler

STANDARD

This special design of our European steel is the most commonly used product in water-based, narrow web applications. Our most popular tip configuration is a lamella tip of 95 microns and this combination is widely used in all types of narrow web presses. It provides a clean, continuous wipe on mid to high anilox line screens.

GAMUTSTAR

A new coating designed to extend blade life and reduce anilox scoring, while providing the cleanest possible wipe. This is specifically suited when blade changes need to be predetermined (such as in ECG printing). This allows the blades changes to occur at specific times, eliminating unnecessary downtime.

MULTIFLEX

This combination of special engineered steel and tip configuration was designed to reduce or eliminate UV spitting on specific narrow web presses where doctor blade adjustment is limited.

PEARLSTAR

New coating technology significantly reduces ink adherence to the doctor blade and lowers friction values. This has proven to greatly reduce or eliminate UV spitting in Flexo label printing. Because of its non-stick properties, it can also be used as a containment blade in chamber applications to reduce back doctoring. It also performs very well with (cold seal) lacquers and in combination with adherent fluids.

LONGLIFE

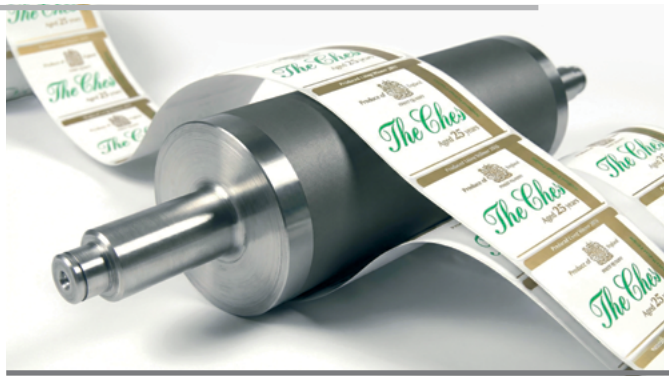
The doctor blade of choice for fighting print defects, such as streaking. It is commonly used for abrasive inks and coating. This hardened-coating significantly lengthens blade life, therefore reduces the amount of steel contamination in the ink. Fewer blade changes are needed, resulting in reduced downtime and waste.

ONE STEP

A long time standard used in UV printing to reduce UV spitting. Its special base material and tip design allows for clean doctoring regardless of ink viscosity and can be used on medium to high anilox line screens. A good choice for use with more viscous inks.

ANILOX ENGRAVING SELECTION FOR NARROW WEB APPLICATIONS

In narrow web printing, inks are typically press-ready and consistent, making ink release from the anilox the most critical factor in print performance. Anilox engraving plays a key role in how ink is transferred on press, especially across varying image types and applications. The specially engineered engravings are designed based on how they transfer ink on press, not just theoretical volume.



CONTROLLED INK RELEASEFOR COMBINATION PRINTING

For applications requiring both solids and screens from a single anilox

- Balanced ink release for solids and fine detail
- Reduces need for anilox changes
- Supports stable performance across varying image types

Regular Printing HD Printing

HIGH DEFINITION PROCESS PRINTING

For labels and packaging requiring fine detail and consistency

- Clean reproduction at high line screens
- Controlled dot gain with maintained color density
- Supports extended gamut and multi-color workflows

UV INK STABILITY

For UV printing where spitting and misting are common challenges

- Reduces UV spitting and ink instability
- Improves consistency at higher press speeds
- Maintains cleaner ink transfer under demanding conditions

WHITE INK AND HIGH OPACITY APPLICATIONS

For applications requiring strong, uniform white laydown

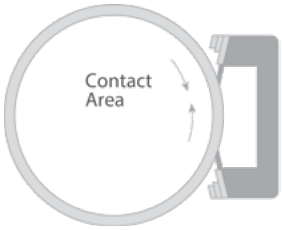
- Improved opacity and surface coverage
- Reduced pinholing and inconsistency
- More uniform ink film across the substrate

COATINGS AND SPECIALTY APPLICATIONS

For varnishes, adhesives, and specialty finishes

- Improved transfer of higher viscosity fluids
- Reduced foaming and surface defects
- Consistent laydown for specialty coatings

Stable ink transfer in narrow web applications depends on the full system — engraving, blade geometry, ink rheology, and press conditions working together.

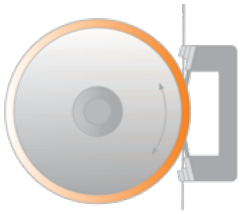


THE CORRECT PRESSURE

Minimum pressure ensures consistent blade wear and extended anilox life. The thinner the tip, the less pressure required to achieve a clean and brilliant printing result. It is recommended to use the same material on both sides of the chamber to eliminate uneven pressure. Increased pressure leads to a deflection of the doctor blade, resulting in a reduced angle and therefore in an increased contact area. The actual wiping is done by the back of the blade, leading to excessive anilox and blade wear.

THE INCORRECT PRESSURE

Or excessive blade pressure creates free floating metal slivers that contaminate ink systems. When a hard particle becomes trapped between the deflected blade tip and the anilox, this particle rides there, effectively destroying rows of cells. These rows of cells appear as thin bands running the circumference of an anilox and are commonly called score lines.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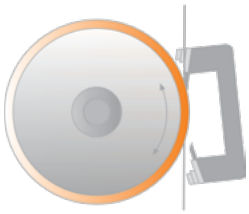
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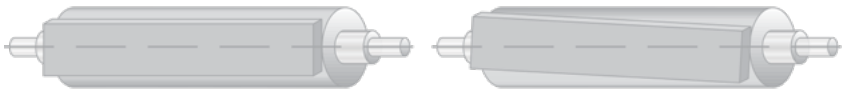
PROPER SYSTEM ALIGNMENT

For consistent ink metering, best print quality and optimized blade life, an enclosed chamber system requires perfect alignment (both horizontal and vertical) so that both blades have equal amounts of pressure. Incorrect alignment creates uneven blade pressure, blade wear and/or ink leakage.

A common error that results from correcting alignment problems is excessive blade pressure. This excessive pressure will lead to a variety of previously discussed problems, like score lines.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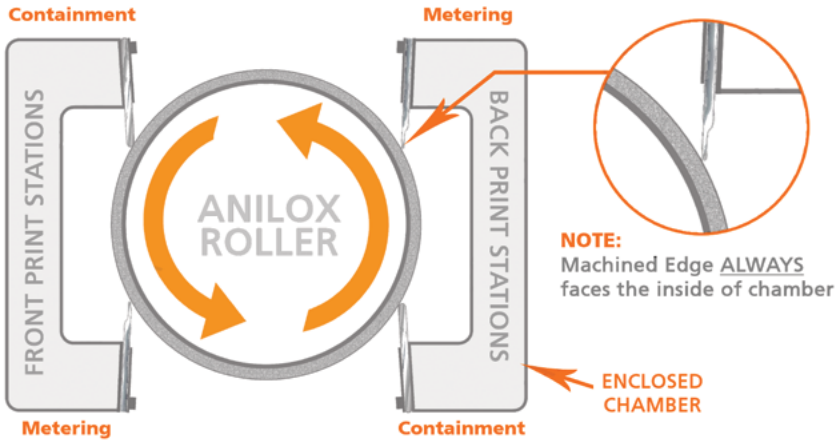
DAETWYLER PROPER MACHINED TIP INSTALLATION FOR ENCLOSED CHAMBERS



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