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Flexo Services, Inc.
SPECIALISTS IN FLEXOGRAPHY

ALLISON
Systems Corporation

Product Guide

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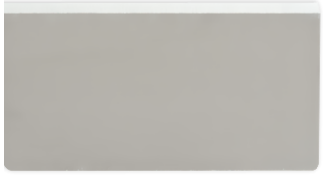
Metal Doctor Blades



White (CX)*

The most common carbon steel blade material is a silver colored, high quality steel with economical life and excellent metallurgical properties. CX can be used in all gravure and flexo doctoring and containment applications.

Blue (CB)*

This is CX material with a blue oxide layer that helps to identify the beveled edge. CB can be used everywhere CX is used.

Stainless (SS)*

All of the quality properties of CX material with the added corrosion resistance needed for certain applications. This material has a silver surface color and is magnetic, so check labels to distinguish from CX. SS can be used in all gravure and flexo doctoring and containment applications although it should be used cautiously with ceramic anilox rolls.

Gold (QR)*

Special tool steel metallurgy with very long life that is excellent for abrasive inks. QR material can also help reduce roll scoring issues because it wears in a powder form that can easily be flushed away from the blade. This is unlike other materials that can form wire burrs that break off and become trapped between the blade and cylinder as the blade wears. QR can be used in gravure and flexo doctoring and containment applications with both chrome and ceramic rolls.

Laser Gold (QRH)†

Our Gold material, QR, with an added laser hardened tip for high wear applications. QRH is proven to last 5 to 10 times longer than CX material and is a good alternative to costly ceramic tipped blades. QRH can help reduce spitting problems with UV inks. QRH is mainly used in flexo doctoring applications with ceramic anilox rolls. Gravure customers who are running ceramic rolls can also use QRH but this material cannot be used on chrome cylinders.

Not all bevels are available with all material thicknesses.
Call Allison Systems for guidance with selecting the correct product for your application.

Metal Doctor Blades

White Plus (CXP4)*

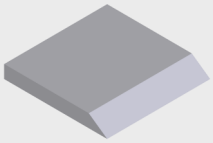
White carbon steel material, CX, with a precision low-friction metallic coating for difficult Flexo and Gravure doctoring applications. This material is not recommended to be used in Flexo containment applications. CXP4 is beneficial when running chrome gravure cylinders with minimal engraving since the coating helps to provide lubrication between the blade and cylinder and reduce haze and streaking issues. The coating will also provide corrosion resistance when used with water based inks

Gold Plus (QRP4)*

Special tool steel metallurgy with very long life, QR, and a precision low-friction metallic coating for difficult Flexo and Gravure applications. This material is not recommended to be used in Flexo containment applications. QRP4 is beneficial when running chrome gravure cylinders with minimal engraving since the coating helps to provide lubrication between the blade and cylinder and reduce haze and streaking issues. The coating will also provide corrosion resistance when used with water based inks.

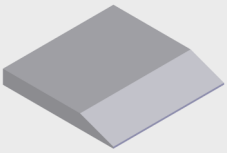
EDGE SHAPES:

Standard (STD)*



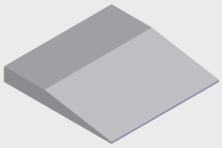
A beveled edge shape with a nominal 15° bevel angle. Some inks or cylinder conditions require the more rigid tip for maximum cylinder clean-up that the Standard bevel provides. The thin initial tip of the Standard bevel will provide quick startups and works well for short run work.

Superhoned® (SUP)*



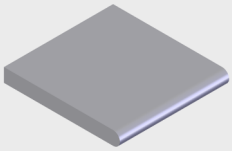
A beveled edge shape with a nominal 4.5° bevel angle. The long bevel provides effective tip deflection and contact angle control under applied blade loading forces with minimal tip growth as the blade wears

Superhoned® Plus (SUS)*



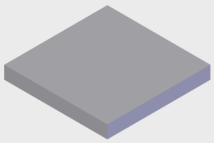
A beveled edge shape with a nominal 2.2° bevel angle. The very long bevel provides the same force control features of the Superhoned shape with even less tip growth as the blade wears.

Rounded (RND)*



A rounded edge blade offers a strong, rigid, precision polished working edge, that is not easily damaged, at an economical price. The rounded edge shape is suitable for ceramic anilox rolls that are rough or have fragile cell walls, very abrasive inks, and where maximum anilox clean-up is not required. Rounded edge blades are typically not recommended for gravure applications.

Unhoned (UNH)‡



An unhoned blade has a square edge and is typically used only for backer blade applications.

Plastic & Composite Doctor Blades

Fiberglass (FR)†

A composite material made from fiberglass for flexo doctor and containment blades on ceramic anilox rolls and abrasive inks. FR provides longer life than carbon steel metal blades with good metering quality. FR is best used with ceramic anilox rolls with <500 LPI screens.

Fiberglass Plus (FRS)†

A composite material made from fine weave fiberglass for flexo doctor and containment blades on ceramic anilox rolls and abrasive inks. FRS provides all the features of FR with improved metering quality approaching that of metal blades. FRS can be used with any ceramic anilox.

Graphite (GR)†

A composite fiberglass material with added graphite lubricant to extend blade life. For flexo doctor and containment blades on larger ceramic anilox rolls, long runs, and abrasive inks. GR is commonly used for higher-end graphics in corrugated applications.

Mylar (MY)†

MY is a good choice for flexo containment blade applications since it can reduce back doctoring and allow debris to pass by the blade instead of trapping the debris behind the blade like metal blades can. To further allow debris to pass by the blade, use a blade width that is 1/16” to 1/8” wider than the doctoring blade.

Celanex (PBT)†

PBT is another good choice for flexo containment blade applications when you need a blade that is a little stiffer than MY.

Not all bevels are available with all material thicknesses.
Call Allison Systems for guidance with selecting the correct product for your application.

Plastic & Composite Doctor Blades

Delrin (DE)†

DE can be used in flexo doctor and containment applications that require moderate metering quality. DE provides longer life than carbon steel metal blades and can reduce cut hazards associated with metal blades in chambered applications.

Delrin Plus (DET)*

DET can be used in flexo doctor and containment and some gravure applications that require moderate metering quality. DET has all the properties of the DE material with added lubrication for long runs and abrasive inks.

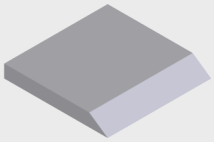
Nylon Plus (NY)‡

NY can be used in special gravure applications that do not require the wipe quality of a metal blade. The lubricant in NY can help extend the life of chrome cylinders.

UHMW (PE)†

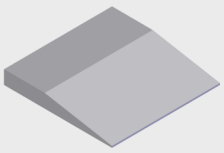
PE can be used in corrugated and flexo doctoring applications that have coarse anilox rolls and do not require the wipe quality of a metal blade as well as flexo containment blades. Since PE material is soft, use with caution because there is a risk of particle embedment that could lead to roll damage.

EDGE SHAPES:



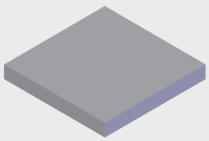
Standard (STD)*

A plastic beveled edge shape with a nominal 20° - 55° bevel angle depending on material. Provides good tip support and wiping characteristics.



Seal Relief (SLR)†

A plastic or composite material beveled edge shape with a nominal 10° to 15° bevel angle, depending on material. Long bevel profile to help reduce ink leakage past the flexo chamber end seals.



Unhoned (UNH)†

An unhoned plastic blade has a square edge and is typically used for flexo chamber containment blade applications and limited use as flexo doctor blades on low line screen corrugated anilox rolls.

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† - Flexo
‡ - Gravure
* - Flexo or Gravure

Doctor Blade Packaging

Tray (TRA)

Trays are the most economical method of packaging multiple blades and backers that are 100” long or less, and makes blades safely and easily accessible for most applications. Trays are available for all materials.

Dispenser Box (BOX)

Dispenser Boxes are available for individual, cut-to-length blades and backers. Dispenser Boxes allow for easy installation of the blade to the blade holder. Dispenser Boxes are available for all steel and select plastic materials. Check for availability on size and quantity restrictions.

Coil Dispenser Box (CBX)

Coil Dispenser Boxes are available for continuous coil lengths, or smaller precut blades taped end-to end. Coil Boxes are available for all materials. Check for availability on size and quantity restrictions.

Accessories

Blade Edge Guards

When blades are in your holders or chambers, put the Allison Blade Edge Guard on, to help protect the blade edge from damage and your employees from cuts.

- Allison Blade Edge Guards reduce the risk of blade damage when multiple chambers or holders are prepared ahead of time.
- Allison Blade Edge Guards can help protect employees from cuts when storing or working with a chamber or holder off-press.

Seal Strip Tapes

Allison Systems has seal strip tapes to keep your doctor blade chambers running at peak efficiency.

- Allison Seal Strip Tapes help prevent ink from flowing back into the chamber.
- Adhere SASS directly on the chamber and carefully position the blade before securing.
- Adhere SAPE directly on the underside of the blade, opposite of the working edge and secure into the chamber.

Engraved Roll Cleaning Brushes

Allison Systems has brushes to help keep your engraved roll or printing plate clean and running efficiently. Allison Brushes are comfortable in your hand and have a wood or plastic block grip.

- Both blocks come with either stainless steel, brass wire, or horse hair bristles. Both metal bristles are available in extra fine, if desired.
- Natural materials like horse hair are considered antistatic and essentially remain electrically neutral when used only in a liquid environment.
- All brushes are designed to be used with any cleaning solution for both Flexo and Gravure applications.

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Cleaning Solutions

Cleaning Solutions

Allison Systems offers many cleaners for general press clean up and roll cleaning. Contact us if you would like more information.

- **Real Cleen**: A translucent amber, liquid, alkaline cleaning solution formulated to remove dried inks from varied surfaces on contact.
  Real Cleen is recommended for use with UV inks and coatings.
- **Deep Cleen**: A green, liquid, alkaline cleaning solution formulated to remove dried inks from varied surfaces on contact.
  Deep Cleen is recommended for use with Water-Based inks and coatings.
- **Plate Cleen**: A translucent green, liquid, alkaline cleaning solution formulated to remove dried inks from printing plates on contact.
  Plate Cleen is recommended for use with Water-Based inks.
- All liquid cleaners are water soluble and contains lubricants & rust inhibitors and is safe to use on chrome and ceramic engraved rolls and rubber rollers.

- **Venom II** and **Viper**: Colored, powder, alkaline cleaning solution formulated to remove dried inks from varied surfaces on contact.
  Venom II and Viper are designed to make 5 gallons of cleaning solution.
  Venom II is green and designed for Water-Based inks and coatings.
  Viper is purple and is designed for UV inks and coatings.

- **Eliminator**: A clear, liquid, highly concentrated, and technically advanced cleaning solution formulated to remove dried inks from ceramic and chrome engraved rolls.
  Eliminator is specially designed to clean and condition ceramic and chrome engraved rolls.
  Eliminator is designed to be applied using the E-Razor applicator sponge.
  This solution can be irritating and should be handled with safety glasses and gloves on at all times during application.