

PRECISION DOCTOR BLADES



Essco is The Leader in Precision and Performance

Precision is the trademark for Essco doctor blades and quality performance is the standard for Essco.

We offer more than 20 premium quality materials to produce the exact doctor blade you need, engineered and manufactured to precise specifications for superior doctoring efficiency. Essco manufactures doctor blades for every paper and board machine application, doctoring condition and paper grade, as well as for many other industrial doctoring situations.



Choose Essco for your doctor blades

Doctoring is our only business, so you can be confident in receiving prompt, personal attention for quotations, technical consultation, blade recommendations and after-sales service.

Quality Control

Although Essco purchases the highest quality raw materials, our technicians carefully check incoming stock for metallurgical and chemical specifications. We also perform Rockwell hardness tests to confirm the integrity of the materials before the blades are manufactured. Our quality assurance procedure identifies each blade with its raw material source.

Essco is so particular about quality that we're the first doctor blade manufacturer in the USA with an in-house blade material laminating facility. Our Essco Laminates, Inc. subsidiary produces Essco's many custom formulated laminate grades, including the exclusive Fiberline™ family of advanced synthetics – the industry standard for composite blades. This capability allows us to control the quality, inventory, cost, and delivery of the laminated blades you require – on your schedule.

Every Essco doctor blade is parallel ground or machined for straightness to eliminate camber. Dimensional tolerances and bevel uniformity are also assured. Each blade we produce is hand finished, deburred, and cleaned for optimal performance on your machine.

Packaging

Essco blades are finished with clips, tabs, rivets, and buttons for all types of holders. Blades are then coiled, nested, and packaged in specially designed cartons for the protection of the blades and the safety of your personnel. Also available to meet your requirements are:

- Blade edge protectors
- Corrosion resistant packaging
- Individual blade boxing
- Flat wood crates

Shipping and Delivery Options

Your delivery options include:

- Standard shipping 6-8 days
- Same day and overnight
- Emergency shipments including weekends and holidays
- Automated shipments
- Make and hold for release
- Consignment of inventory

Essco also offers storage options, blade carts or racks.

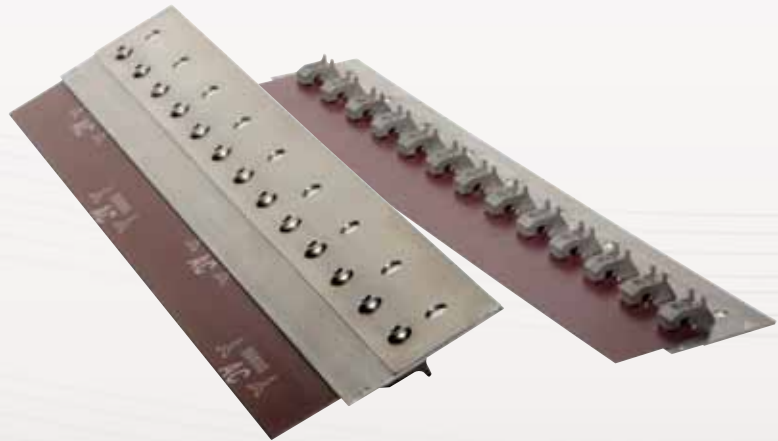
Essco Doctor Blade Applications

MACHINE SECTION	RECOMMENDED BLADES/REMARKS	ANGLE/LOAD PRESSURE
FORMING SECTION	<p>Fiberglass/Excellent blade life and roll cleaning performance.</p> <p>Poly/Used on soft rolls. Normally good life due to water.</p> <p>Micarta/Economical. May remove stickies better than poly.</p>	20°/0.5 pli
PRESS	<p>GRANITE/SYNTHETICS/CERAMIC</p> <p>Fiberglass/Improved wear resistance over metal blades and mild polishing.</p> <p>Carbon Fiber/Best performance for enhanced blade and roll life.</p> <p>Stainless/Less commonly used in recent years.</p> <p>Abrasive/For trailing blade to maintain porosity.</p>	25-30°/1-2 pli
	<p>SOFT ROLLS</p> <p>Polyethylene/Over 10-15 P&J rubber and polyurethane rolls. Good when lubricated.</p> <p>Micarta/Usually 1/4" thick on soft rubber rolls. Not recommended on polyurethane.</p>	20°/0.5 pli
DRYERS	<p>Fiberglass/Improved blade life. Reduced roll scoring over metal blades.</p> <p>Carbon Fiber/Longest wearing. High flex resistance. Excellent cleaning.</p> <p>Metal/Steel, stainless and bronze.</p> <p>Abrasive/For periodic build-up removal. Only on oscillating doctors.</p>	30°/1-2 pli
CALENDERS	<p>Fiberglass/Excellent cleaning. Improved blade and roll life.</p> <p>Carbon Fiber/Maximum blade life. Recommend oscillation.</p> <p>Metal/Steel, stainless or bronze.</p> <p>Micarta/Several grades available, including Spec 277. Inexpensive, but shorter life. Less efficient.</p>	30°/1-2 pli
REELS	<p>Fiberglass/Longer life than metal blades. Reduced roll scoring.</p> <p>Carbon Fiber/Greatest blade life.</p> <p>Metal/Steel and bronze commonly used.</p>	30°/1-2 pli
OTHER APPLICATIONS	Contact Essco to discuss special situations (creping, printing, converting and non-paper related).	Varies

Consult with your Essco representative to determine the best material for your particular application.

Hold on to excellence

Essco offers numerous, highly reliable blade holders, with a model suitable for any application. Whether your setup calls for the rigid styling and versatility of a KF holder, the even blade pressure of the ETUniform,™ or a unique specialty design, we can assure you we have precisely the blade and holder configuration for a job well done.





Additional Blade Applications

You can be confident in your production with our Creping and Coating blades. Each one is custom-made to your specifications for optimal run-times, improved efficiency, and the highest quality end result.

Creping Blades

- Variety of alloys and hardness options
- Wet crepe and dry crepe applications
- Thickness from 0.15 to 0.062"*
- Widths from 1 - 5.5"*

Coating Blades

- Fine grain carbon steel
- Specialty alloys
- From 0.010 to 0.025" thickness*
- Widths from 1 - 4"*
- Specialty blades for other metering applications

* Contact your Essco representative for specific availability.



Essco Fiberline™ Family

Fiberglass Blades



Fiberline™

Proprietary
Fiberglass Cloth and
Epoxy Resin.



Greenline™

Fine Weave
Fiberglass Fabric,
Phenolic Resin
Bonded.



Carbon Fiber Blades



Redline AC™

Proprietary
Graphite/Fiberglass.



Fiberline AC™

High Performance
Carbon Fiber/
Fiberglass.



Fiberline AC3™

Enhanced Carbon
Content for Improved
Performance in
Critical Applications.



Fiberline ACSL™

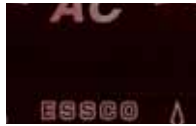
Carbon Fiber
Reinforced with
Non-Abrasive
Fiberglass Alternative.

NOTE: Not all blade materials illustrated.
Custom laminate formulations available.
Materials provided in sizes to suit your
requirements. Many blade modifications such
as deflector tabs, relief slots and perforations
are available.



AC3FW2B

Blended Carbon
Fiber for Enhanced
Wear Resistance.



AC4FW2B

Blended Carbon
Fiber with Higher
Carbon Content.



AC4, AC5

100% Carbon Fiber.



Ultraline AC

Proprietary Long-life
Carbon Fiber.



Custom Fiberline AC™

In-house
Manufacturing Allows
Unique Formulations.



Essco Doctor Blade Materials

Metal Blades



172
High Carbon Spring Steel SAE 1095 and SAE 1075 Grades.



173
Stainless Steel, AISI 410, 420, and Other Special Grades.



174
Monel, Special K-500 Copper/Nickel Alloy.



176
Phosphor Bronze Grade C Alloy.



173HT
Stainless Steel Blade with Tungsten Carbide or Other Wear-resistant HVOF/Plasma Spray Coating.

Laminated Blades



272
Laminated Plastic, Phenolic Resin Bonded Fine Weave Cotton Fabric.



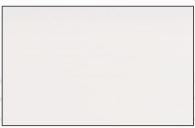
274
Mild Abrasive Polishing Blade, Fine Weave Fiberglass Fabric, Phenolic Resin Bonded.



277
Low Friction Laminate, Fine Weave Cotton and Phenolic Resin Containing Molybdenum Disulfide Lubricant.



Plastic Blades



281
Teflon, White TFE, Low Friction, High Temperature (Fiberglass Reinforced also Available).



285
Ultra High Molecular Weight (UHMW) Virgin Polyethylene, Low Friction Thermoplastic.



285GB
Micron Bead Filled UHMW Polyethylene with Extended Thermal and Wear Properties.

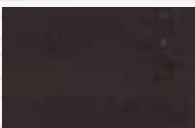


285/SF
UHMW Polyethylene with Impregnated Lubricant.



285XL
Enhanced Wear Life UHMW Polyethylene.

Abrasive Blades



276
Abrasive Cleaning Blade, Variable Grit Cloth, Fiberglass, and Phenolic Resin.




Fiberline ACGR2
Carbon Fiber Polishing Blade, Varying Grit 80-600.



Gritline
Fiberglass and Abrasive. Available in 80-600 Grit.



Troubleshooting — Blade Wear Identification

Blade Appearance and Symptoms	Probable Causes	Remedy
<p>UNEVEN WEAR - Frequent blade change</p> 	<p>A. Poor roll surface. B. Damaged or dirty blade holder. C. Deposits.</p>	<p>A. Use more flexible blade. B. Clean, repair or replace holder. C. Use abrasive blade.</p>
<p>EXCESSIVE WEAR IN CENTER OF BLADE, OR AT ENDS</p> 	<p>A. Doctor not machined to roll crown. B. Old doctor sagging into/away from roll.</p>	<p>A. Refit and shim holder to doctor back as necessary. (Return new doctor for replaning if mismatch is excessive.) B. Replace old, sagging doctor.</p>
<p>EXCESSIVE WEAR ON ONE END</p> 	<p>A. Doctor misaligned – not parallel to roll axis.</p>	<p>A. Shim, or move bearings and brackets as necessary to align doctor parallel to axis of roll.</p>
<p>EVEN WEAR BUT ROUGH EDGE</p> 	<p>A. Deposits on roll. B. Excessive pressure on blade. C. Blade material too hard.</p>	<p>A. Use abrasive blade as required. B. Reduce pressure. C. Use softer blade.</p>
<p>EXCESSIVE WEAR IN SHEET RUN</p> 	<p>A. Deposits left on roll by sheet.</p>	<p>A. Use abrasive blade as required. B. Trim blade edges frequently. C. Use end slotted blades to prevent build-up of excessive pressure on roll ends.</p>
<p>EXCESSIVE WEAR OUTSIDE SHEET</p> 	<p>A. Sheet lubricates roll.</p>	<p>A. Slot blade ends to relieve pressure.</p>
<p>LOCALIZED PITTING</p> 	<p>A. Blade attacked by (1) Electrostatic Discharge, (2) Electrolysis, (3) Heat</p>	<p>A. Insulate doctor from machine frame or use non-metallic blade.</p>
<p>BLADE DEVELOPS FEATHERED EDGE</p> 	<p>A. Blade material too soft. B. Excessive pressure. C. Blade angle too flat.</p>	<p>A. Use harder blade. B. Reduce pressure. C. Move bearings or brackets to increase angle. Check for correct angle with gauge.</p>
<p>HOOKS ON BLADE OUTSIDE ROLL SURFACE</p> 	<p>Blade overhangs roll. A. Not centered. B. Too long. C. Not oscillating properly.</p>	<p>A. Center blade. B. Trim length. C. Adjust oscillation stroke.</p>
<p>DENT IN BLADE EDGE</p> 	<p>A. Blade caught scab on roll at start-up. (Most common on old dryers.)</p>	<p>A. Change blade and remove scab.</p>
<p>INCREASING PRESSURE INCREASES DEFLECTION</p> 	<p>A. Blade pressure changed after initial wear-in; opens blade tip to trap particles and lift blade – may cause wrap.</p>	<p>A. Reduce blade pressure or change blade.</p>

NOTE: ALWAYS INSPECT WORN BLADES FOR CLUES TO ANY PROBLEMS.



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TRUSTED FOR PERFORMANCE

Represented By:

Essco has earned its reputation as the quality leader in doctoring by consistently providing our customers with superior service, value, and innovative, high quality products. In addition Essco manufactures coater blades, doctors, blade holders, The Edge,[™] electronic doctor gauges, oscillators, foils, suction boxes/covers, felt suction pipes/covers, and caliper controls. Contact Essco today for engineering recommendations and details, to schedule a visit from your Essco Sales Representative, or to request a quotation.