

# PrimeBlade

 S W E D E N

## THE SWEDISH DOCTOR BLADE

**Prime** | Seal

**Prime** | Supplies

**Prime** | Support



# PrimeBlade | Team





## **Our mission is to make it easier.**

Today's demands on quality and increased printing speeds, which includes more colors and finer details, is a challenge in the printing process. Doctor blades are used in the most sensitive part of the printing process where the end-result is determined, impacting whether or not the job will deliver on demands from brand owners.

The R&D team at PrimeBlade is constantly looking into new materials, different doctor blade production methods and what is around the corner in terms of future development. By continuously interacting with representatives from the printing industry, we have gained valuable information, which has led us to the decision to challenge industry conventions and deliver more of a total concept on a new and higher level. We have also defined and adapted how and when we deliver, handle technical issues, find the best solution for different print methods, develop products adopted for new challenges and how to be a strong partner.

A worry-free production, with high uptimes, creating less waste and keeping production teams happy is our goal. Looking into optimized profitability by using calculation tools for the best possible choice of products is a natural part of our method to achieve all this. It is not the price; it is the cost!

Complete commitment is a promise to our customers. We are ready to meet and deliver on your challenges and we hope that you are too.

## **About PrimeBlade**

PrimeBlade Sweden AB is a global manufacturer and supplier of Doctor Blades for flexo, gravure, offset printers, and coating applications. Together with our Swedish raw material supplier and end users the doctor blade is produced to improve production quality, blade life, and to increase machine speeds.

The company was formed by a dedicated team with long experience from the printing, doctor blade and steel industry. Our goal is to help our clients improve their business by continuously developing new and innovative products for them and delivering renowned service.

# Nano | Series

PATENTED  
NANO  
UNIQUE  
TECHNOLOGY

## PrimeBlade NANO (Nano-treated)

Innovation is key to development and growth. At PrimeBlade we take such truths to heart and proudly offer our world-class 900 Nano series products. The Nano series is a unique range of doctor blades with enhanced properties, produced using our patented Nano treatment. The process induces changes in the steel that provide reduced wear and thus longer lifetime, as well as improved surface quality. This is achieved in an environmentally friendly and safe

process, free from the hazardous chemicals typically used for producing, e.g., coated blades.

The three Nano blade types have been tailored to meet the demands from our customers with regards to blade lifetime, print quality and ease of use.

All this has been out of a printers perspective where productivity, satisfied partners, worry-free working day, and profit to all parts that has something to do with a printed product.

## PrimeBlade Nano I

SPECIAL TREATED  
REFINED CARBON STEEL

## PrimeBlade Nano II

SPECIAL TREATED REFINED  
STAINLESS STEEL

## PrimeBlade Nano III

SPECIAL TREATED  
MICRO ALLOYED TOOL STEEL



Non-treated



Nano-treated

## PrimeBlade Nano Xi

NEW!

SPECIAL TREATED  
REFINED CARBON STEEL

Our NANO X-Tended concept includes a package of important parts to be able to get the worry-free print. We have fine-tuned the NANO process itself to the next level R&D defined the best possible lamella tip for a smooth printing process.

All this has been out of a printers perspective where productivity, satisfied partners, worry-free working day, and profit to all parts that has something to do with a printed product.

# Original | Series

## PRIMEBLADE PRODUCTS

### PrimeBlade 100 (Polymers)

A series of doctor blades are precision engineered from advanced polymer materials. Mainly used as containment blades in chamber systems for flexographic printing and within the tissue and corrugated industry.

### PrimeBlade 300 (Carbon)

Our basic high quality carbon steel blade, used at printing houses worldwide. Consists of genuine Swedish steel optimized for print quality and high press speed. Developed together with our raw material suppliers and end users.

### PrimeBlade 600 (Refined carbon)

Our finest Swedish carbon steel, with a high carbon content and excellent carbide particle microstructure. The microstructure has been refined by a small addition of chromium and by consecutively optimizing the heat treatment.

### PrimeBlade 400 (Stainless)

If blade corrosion is your main issue, then 400 is our answer, our most corrosion resistant doctor blade. The moderate carbon content, while high enough to allow for an appropriate hardening, allows for retention of chromium where it is most needed, i.e., for corrosion protection.

### PrimeBlade 500 (Refined stainless)

Our standard martensitic stainless steel, with a medium-high carbon content and an optimized trade-off between hardness, abrasive wear resistance and corrosion resistance. Excellent performance for water-based inks. Very good corrosion resistance.

### PrimeBlade 700 (Ceramic coated carbon)

The PrimeBlade® 700 series is our coated doctor blade, developed by combining our unique edge preparation and surface treatment technologies. This guarantees excellent bonding between steel and coating, providing the highest level of wear resistance. The uniquely smooth surface finish of the blade translates to a clean and smooth wipe, which gives excellent print quality.

### PrimeBlade 800 (Micro alloyed tool steel)

When it comes to low- to medium-alloyed tool steels, 800 is as good as it gets. The microstructure of the steel consists of evenly distributed and very small carbide particles, originating from the molybdenum and vanadium additions, giving it an exceptional wear resistance and performance better than many alternatives.

# Prime | Seals

Article:

**LD 40**



The LD 40 material is a polyethylene synthetic, which is suitable for almost all applications and inks. This favors exchanging the seal rather than cleaning it.

LD 40 is favorable also for applications, of which we do not know the exact geometry, since the LD 40 adapts very easily to the outline of the chamber.

Article:

**NW**



The NW material is a stiff synthetic which can be used for all ink systems. The geometry of some doctor blade chamber systems requires a quite thin seal, which makes the NW material ideal for these conditions.

Users also report very good sealing results in connection with UV inks.

Article:

**ZVK**



The ZVK seal is based on synthetic rubber with a very long lifetime. ZVK is often used for oil based or UV inks.

Flexibility is less but returns well to original shape. However, this material is sensitive to light and air, which is why it must always be stored properly packed and protected from light.

Article:

**AIR 80**



Our Air 80 material is special synthetic with extremely high restoring force and a very good chemical stability. We recommend it in combination with the use of solvent based inks, but it is also suitable for water based applications.

If the end seal is used in high speed printing machines, the sealing surface can be coated with PTFE. The PTFE coating reduces the friction and diminishes the accumulation of dried ink in the sealing area.

Article:

## FLEXI-LF



A new series of end seal for chamber doctor blade systems, which combine the advantages of two components: A basic material with high restoring force is enhanced by a very wear-resistant sealing lip made of rubber or thermoplastic.

This end seal show an extremely high lifetime and excellent sealing properties.

Article:

## LONGLIFE



For a lot of applications we use different felt types, which we then treat in a thermo impregnation method that we developed explicitly for this purpose.

These impregnated felt seals have an extremely long life span and remain nearly 100% tight for a long period. There is a variety of felt types and choosing the right one is a challenging task. Felt seals require a very precise adaption and geometrical precision to work reliably, because this material is hardly deformable and does not show any restoring force.

Article:

## UNIVERSAL



For some end seals, like the TRESU seal, a very complex shaping is used, that can only be put into practice by injection molding process.

These end seals are very wear resistant and can be used in various applications. To be able to produce end seals as a molded part, relatively large production volumes are required.

Article:

## LUBRICATION GREASE FOR SEALS

We recommend greasing the sealing surfaces with our special lubrication grease before the first use and after cleaning.

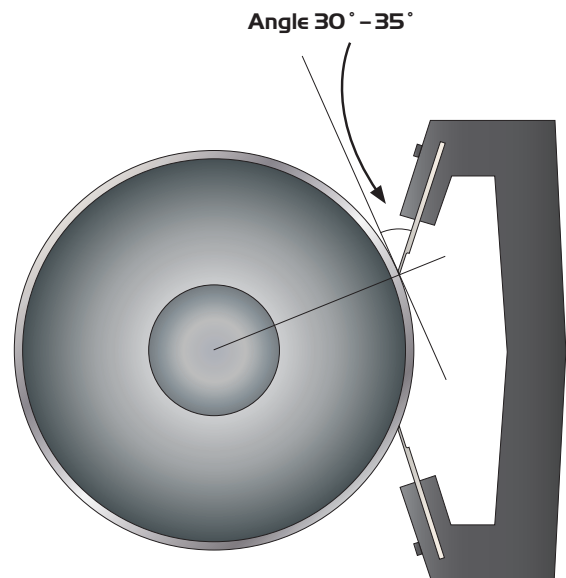
Supplied in 100 ml or 250 ml tube.



## FLEXTM CHAMBER SETTING

Make sure the doctor blade is mounted straight and that no waviness in the blade is observed.

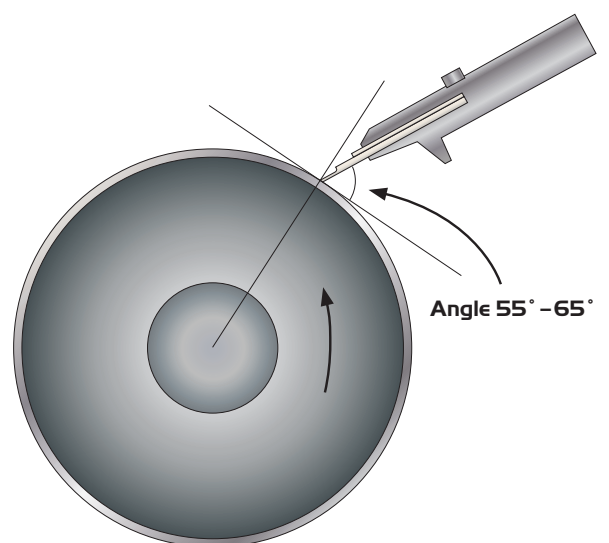
Apply lowest chamber/holder pressure needed (less doctor blade flex and blade/anilox wear). Only press so chamber doesn't leak and doctor blade wipe correctly at production speed.



## GRAVURE SETTINGS

Try to achieve a 55°-65° contact angle between doctor blade and cylinder (less doctor blade pressure is needed).

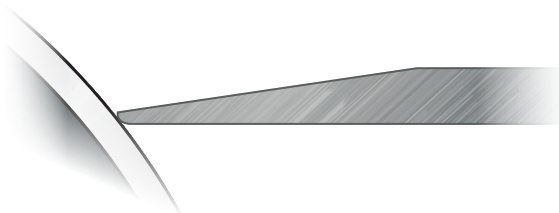
Use a blade pressure of 0,5-1,0 bar, increase more if there is no clean wipe, but try to use as low blade pressure as possible. (Less blade flex and blade/cylinder wear).





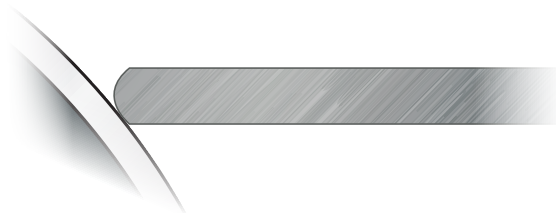
# PrimeBlade | Profiles

## PROFILE BEVEL



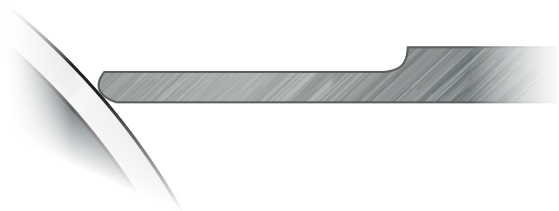
- Used in coating, gravure and flexo printing
- Wipes well up to the point that the contact zone becomes too large

## PROFILE ROUND



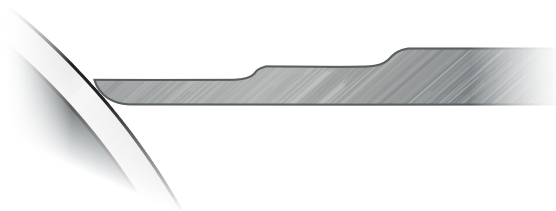
- Used in coating, gravure and flexo segments
- Polished radius ends for instant run
- Excellent seal against roller
- Double sided radius edge

## PROFILE LAMELLA



- Most frequently used edge in coating, gravure, flexo and offset industry
- Constant contact area during wear
- Lower friction and wear against roller
- Standard dimension 1,3/0,07mm for gravure and 1,3/0,10mm For flexo 1,3/0,10mm, but trend is toward longer and thicker lamellas as 1,7/0,125mm.

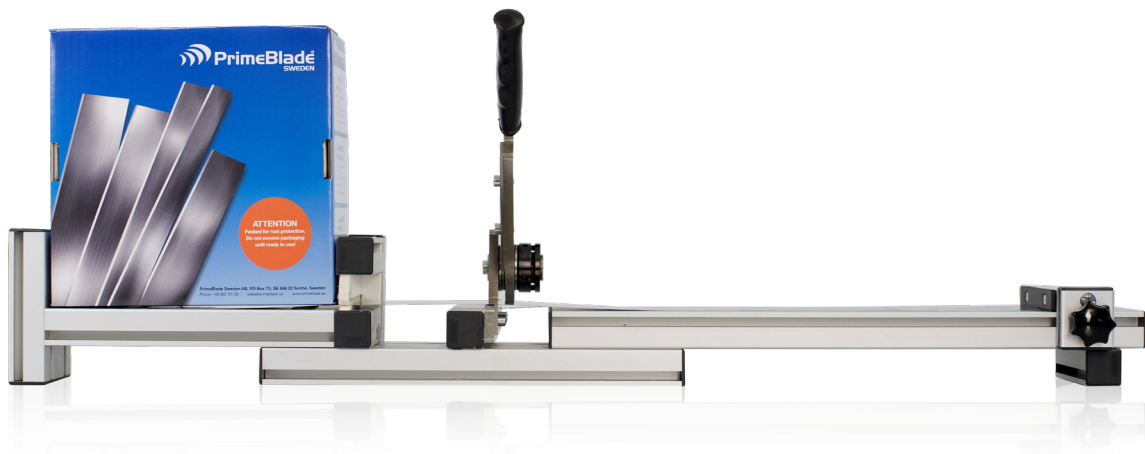
## PROFILE DUAL



- An alternative to the standard lamella or bevel edge, where the usage of a fine lamella edge in combination with stability of the dual profile can solve printing issues in the label printing process.
- Is available from thickness 0,25mm.

## PRIMECUTTER

The PrimeBlade cutter simplifies the cutting of blades into exact lengths and gives a clean cut of the doctor blade. Together with the doctor blade cassette, it makes the blade handling very easy and efficient. The cutter is produced with high quality knives, made of special steel.



## ANGLE GAUGE FOR GRAVURE PRINTING

PrimeBlade offer a tool that helps gravure printers to better be able to know the set doctor blade angle.

The angle gauge is produced in a size that the operator can keep it in their pocket and is handy to use when changing doctor blades.

The PrimeBlade angle gauge comes in two sizes. One from circumference 300mm to 785mm and the other from circumference 785mm to >6.280mm.



# Prime | Support

## EDUCATION



## EDUCATION

PrimeBlade is known for our way to support our partners. Everything that happens nowadays with new requirements from the Brand owners demands more knowledge about how to use our products in a professional way. Our complete crew at PrimeBlade have our customers as priority 1 in all steps from customers' requirements to the actual printing process.

## CONSULTATION



## CONSULTATION

100% focus towards our partners and their customers is always a must for us. We have a global network with OEM's, producers, suppliers to the printing business where we have the possibility to talk, solve issues in the daily printing world and by that be the one stop partner when our partners have any problems.

## TECHNICAL SUPPORT



## TECHNICAL SUPPORT

Our sales staff including R&D have a very high level of knowledge in the industry we are active. We have consistent contacts with our partners worldwide and gather information from all sorts of issues (out there in the real world). Through all the years in the business are we prepared for technical support inhouse but even more out at the press due to our local presence.

## COST CALCULATION



## COST CALCULATION

We have as a mission to educate our partners where the real advantage to use the right product for the right purpose. It is very easy to understand where the cost really makes the difference and how we can help the printers to get more profit in their own pocket. Effective tools is available to help choosing the right blade/seal for the job; **It is not the price it is the cost.**

# PrimeBlade

// SWEDEN



Scan the QR-code to visit our  
website for more information



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