

ROLLER COVERING FOR PUBLICATION, PACKAGING & DECORATIVE PRINTING

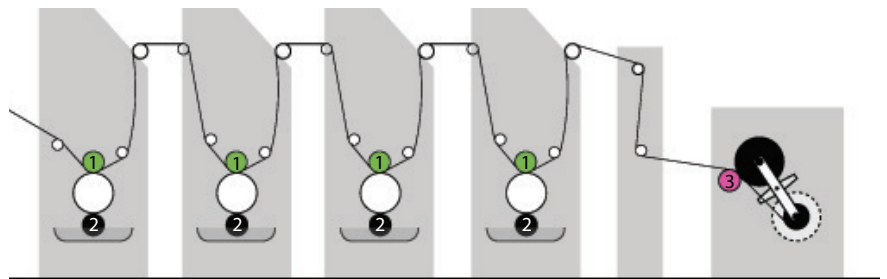
ROTOGRAVURE

Gravure printing is dedicated to high quality results in the 3 product types where there is no better printing mean for high productivity : Décor, Flexible packaging and Cardboard Packaging. The rollers and sleeves involved play a critical role in the final result and must fulfil the requested printed quality. In Hannecard we are active in gravure for more than 50 years and in ESA for more than 30 years. This experience is detailed in this leaflet.

RELATED DOCUMENTS

- Product Information Sheet **'MicroGraf'**
- Solutions **'Flexography'**

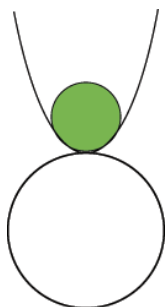
OUR SOLUTIONS



1. **PressoGraf / HanneResist / Performa / HanneStat**
New : HanneVision/HanneCrystal/HannePearl
2. **DoseRight**
3. **Micrograf**

IMPRESSION ROLL COVERING FOR CLASSICAL ROTOGRAVURE (Non-ESA)

The **PressoGraf**-range for classical rotogravure presses, comes in the following variants, each with their own specific qualities. All versions are by default antistatic and so reduce fire risk as a result of sparkover. The impression roll coverings or sleeves are available for the applications of decorative printing, cardboard printing and flexible packaging.

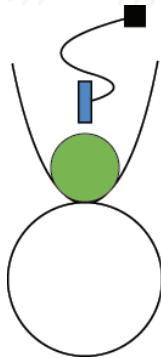


Classic Rotogravure

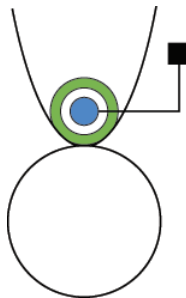
Solution	Characteristics
PressoGraf-SB Black - Rubber 70-90 shore A	<ul style="list-style-type: none"> • Very good mechanical & dynamical behaviour • Perfect chemical resistance against ketones, alcohols and acetates • Anti-static covering
PressoGraf-XP Black - Polyurethane 70-90 shore A	<ul style="list-style-type: none"> • Best possible mechanical & dynamical behaviour, increased service time • Very good chemical resistance against ketones, alcohols. Cith acetates, to be used in combination with cut-backs to webwidth. • Anti-static covering

IMPRESSION ROLLS FOR ESA PRINTING

HanneResist, Performa & the ESA 2.0 new generation : HanneCrystal, HannePearl, HanneVision.



Indirect charge



Direct charge

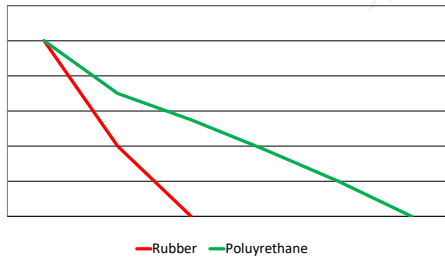
Today's consumers are more and more demanding when it comes to quality of printed cardboard or flexible packaging and the architectural influenced application of decorative printing. Therefore, a growing number of printing presses is equipped with ESA (ElectroStatic Assistance) systems. The ESA function yield into a major improvement of the quality of the printed matter.

By now, a wide variety of different systems are available on the market, depending on factors like application, producer, load type and deflection compensation type. In all of these systems however, the impression roller must dispose of a specific semi-conductive covering to make sure that the applied charge is properly transferred.

For such ESA systems, Hannecard offers roll covering types consisting of 1, 2 or 3 layers that can be applied to either a sleeve or a steel core. The following table shows an overview of the customized products we have developed to optimize your print performance.

Solution		Characteristics
Publication	HanneStat Rubber 85-90 shore A	<ul style="list-style-type: none"> • Good chemical resistance to Toluene based inks • Uniform stable resistance • Higher temperature resistance vs. PU
	HanneResist Polyurethane 85-90 shore A	<ul style="list-style-type: none"> • Increased abrasion resistance (2.5 x higher than rubber) • Superior cut resistance (1.5 x higher than rubber) • Lasting and stable electrical resistance • Homogeneous electrical resistance over the roller face
Cardboard Packaging	Performa Rubber 80-90 shore A	<ul style="list-style-type: none"> • Uniform stable electrical properties • Good performance
	HanneResist Polyurethane 80-90 shore A	<ul style="list-style-type: none"> • Increased abrasion resistance (3 x higher than rubber) • Superior cut resistance (1.5 x higher than rubber) • Stable electrical resistance • Long service time
	HannePearl Polyurethane new generation 80-90 shore A ESA 2.0	<ul style="list-style-type: none"> • All the possible mechanical & dynamical advantages of a polyurethane covering • Long lasting and stable electrical resistance • Use of the ESA at lower power levels compared to any other coverings • Homogeneous electrical resistance over the roller face • Lower heat build-up in the press

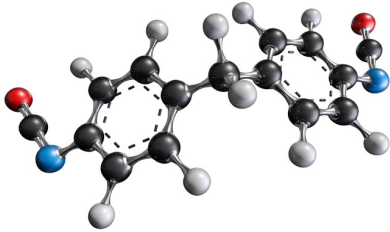
Time before grinding



ESA 2.0

Solution	Characteristics
Decorative	Performa Rubber 80-90 shore A <ul style="list-style-type: none"> Uniform stable electrical properties Good performance
	HanneResist Polyurethane 90 Shore A <ul style="list-style-type: none"> Superior abrasion resistance (4 x higher than rubber) Superior cut resistance (2 x higher than rubber) Stable electrical resistance Long service time Compounds versions available 'tuned' for water-based inks
	HanneVision Polyurethane new generation 80-90 Shore A ESA 2.0 <ul style="list-style-type: none"> All the possible mechanical & dynamical advantages of a polyurethane covering Long lasting and stable electrical resistance Use of the ESA at lower power levels compared to any other coverings Homogeneous electrical resistance over the roller face Lower heat build-up in the press
Flexible packaging	Performa Rubber 70-85 shore A <ul style="list-style-type: none"> Uniform stable electrical properties Lasting performance
	HanneResist Polyurethane 70-80 shore A <ul style="list-style-type: none"> Superior abrasion resistance (4 x higher than rubber) Superior cut resistance (2 x higher than rubber) Stable electrical resistance Long service time
	HanneCrystal Polyurethane new generation 70-80 shore A ESA 2.0 <ul style="list-style-type: none"> All the possible mechanical & dynamical advantages of a polyurethane covering Long lasting and stable electrical resistance Use of the ESA at lower power levels compared to any other coverings Homogeneous electrical resistance over the roller face Lower heat build-up in the press

ESA 2.0



Carbon black powder

Increase Your Performance With Hannecard Technology !

Our polyurethane coverings, HanneResist, HannePearl, HanneCrystal & HanneVision guarantee better performance and longer service periods. This automatically results in an increased printing reliability and a considerable cost reduction.

- Superior mechanical & dynamical behavior guarantee a long and reliable cover performance.
- The high quality homogeneous & nano technology based PU formulations are designed by and with Swiss precision. Advances manufacturing methods gives absolute printing reliability and less press downtime.
- The unique patented Glue&Grind system enables bonding to the rolls without removing metal from the cores. At no stage the roll bodies are subjected to high temperatures which results in longer lifetime of roll bodies.
- Stable electrical and physical properties even under highly dynamical conditions guarantee long, stable and high quality printing.
- Low heat build up and low vibration.

LASER ENGRAVED INKING ROLLERS

DoseRight

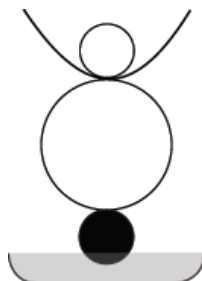
The disadvantage of traditional textile covered rollers is that they do not assure uniform inking jobs at high printing speeds. Therefore, Hannecard has developed a solid alternative :

DoseRight, a laser-engraved 60 shore A rubber roll covering.

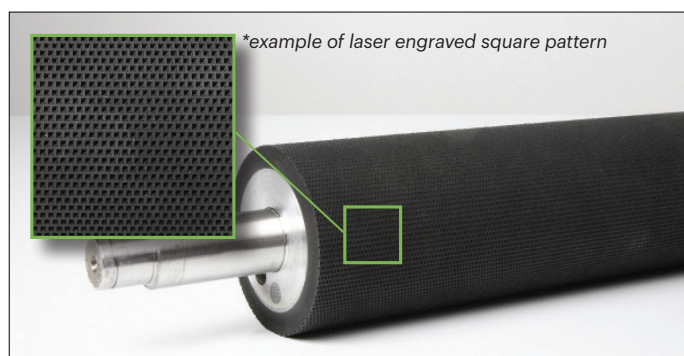
Different laser engraved patterns* (squared, pyramical, honeycomb, scattered,...) are available, in function of inking type and application. Laserengraved inking rollers assure a uniform & correct inking of the printing roll, avoid ghost images appearance and reduce the ink spillage.

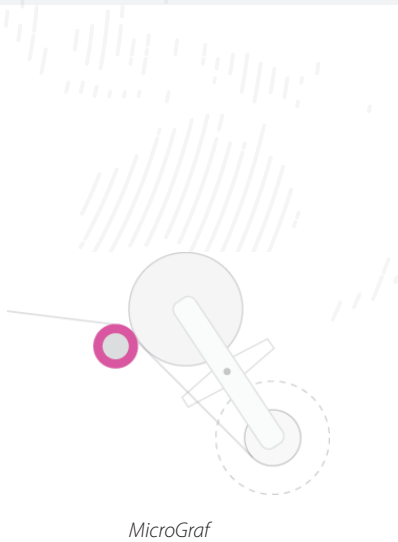
The advantages of DoseRight :

- No cell filling
- No lines
- No ghost image



DoseRight





PASTER ROLLERS FOR SPLICERS

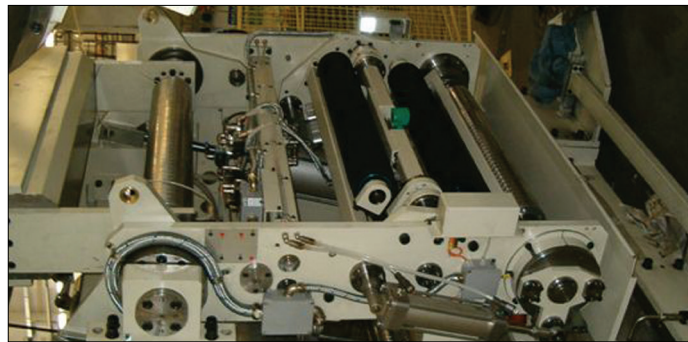
MicroGraf

To assure non-stick, non-crushing and non-marking for fine media (low density paper, thin film & flexible packaging) and 'correcting' characteristics for the contacting web, Hannecard has developed a micro-cellular foam rubber for the covering of the paster rollers for the splices : **MicroGraf**.

MicroGraf is soft and assures the desired, constant elasticity. This quality allows for planar corrections and the elimination of air pockets in the spliced web reels.

As a variant we can extend the Micrograf paster roller covering in a double layered version "**MicroGraf+**". In this case, the top layer is a compact harder rubber, which can be finished helicoidal or with other special types of grooves, according to the web medium.

For rougher media like kraft paper you can rely on our low hardness polyurethane series Splice-O-Graf, that comes in hardnesses of 22 or 30 shore A, and which combines a high elasticity with increased mechanical and dynamical properties.



THE ADVANTAGES OF HANNECARD SLEEVES

- Comply with the former "Speedwell" standard and can as such be used on your existing mandrels
(ex-™ StrachanHenshaw)
- Electrical properties adapted to your printing needs
- Selected composite materials guarantee a longer lifetime
- Stable and controlled mounting pressure, even after years of use
- Stable and controlled conductivity during the whole lifespan
- Available in dimensions up to Ø 300 mm and 3,000 mm length

MORE INFORMATION ?

For more information about our products and solutions, please contact your local partner or visit our website: www.hannecard.com

FIBERGLASS SLEEVES

EasySleeve Series

Next to its comprehensive range of compounds, Hannecard has added a series of in-house designed and manufactured fiberglass sleeves that come in a wide range of dimensions.

Especially for rotogravure applications, we have developed the following sleeve types :

- **Insulating sleeves**
- **Conductive sleeves**
Thanks to the matrix-type structure of these sleeves, Hannecard guarantees a volume resistivity lower than 10 kOhm. In combination with our conductive elastomers, it enables the effective static discharge to the metal core
- **NEW Semi-insulating sleeves : sleeves with controlled and limited insulation resistance**
Specially developed for most of ESA topload system gravure printing on materials with a risk of static load build-up. This results in the right compromises between high quality printing and a security within your press.

