



ROLL COVERING SOLUTIONS FOR THE EMBOSSING AND FINISHING OF TISSUE PAPER PAPER CONVERTING

Paper tissue is one of the most widely used products in the world. As hygiene is a growing concern in emerging countries, the demand of hygiene papers is still increasing.

At the same time, the products are rapidly evolving : decor and colour patterns, multi-layered products, soft and smooth hand feel, lotion and tear resistance are features that appeal more and more to potential customers.

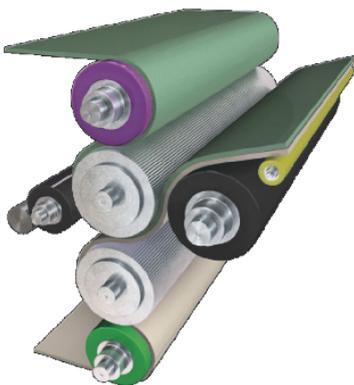
Therefore, many paper converters increase their product range, but at the same time need to reduce cost and improve the efficiency and output.

With the increase in production speed, web width and pattern complexity, the requirements towards elastomer coated rolls have become very stringent.

Hannecard proposes multiple solutions and advantages for all elastomer coated rolls involved in the process.

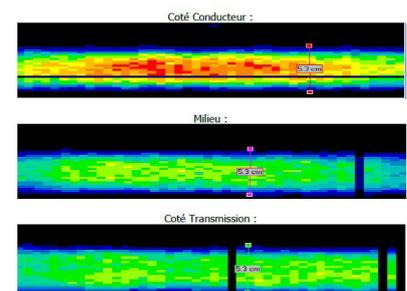
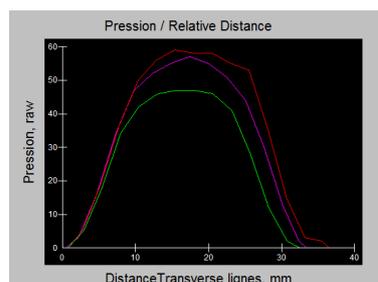
The figure on the left shows a classic concept for nested embossing, widely used for the production of toilet paper and tissue towels.

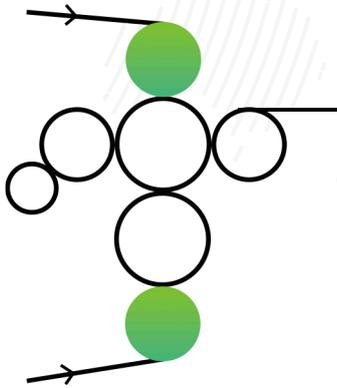
Also different machines can of course be used for simple or combined embossing and for other tissue products.



CNPC: CUSTOMIZED NIP PRESSURE CALCULATION

Rollin® developed a unique calculation tool to simulate the dynamic behaviour of the elastomer into the nip. Thanks to our CNPC the nip pressure can be optimized in function of the desired paper properties. This allows us to choose the best covering solution to adjust and optimize your machine settings in order to get the best results.





YOUR PRODUCT NEEDS :

- Bulk enhancement
- Preservation of soft hand feel
- Good absorption properties

YOUR COVERING NEEDS :

- High resilience
- Low heat build-up
- Long lifetime
- Resistance to perfumed lotion or glue

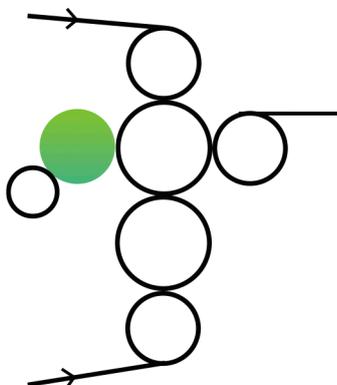
OUR ADVANTAGES :

- Paper optimization thanks to unique Customized Nip Pressure Calculation
- Excellent abrasion resistance
- Stable pattern reproduction at high speed
- Excellent and stable embossing behaviour, both for spot and micro embossing, also at high speed
- Multi-layer technology

EMBOSSING ROLLS

Hannecard has developed 4 product ranges allowing an optimal choice, depending on the specific needs of the embossing machine and the tissue products :

Solutions	Characteristics
<p>Resistoplast Green - Rubber 45 - 98 shore A</p>	<ul style="list-style-type: none"> • High resistance to mechanical stress • High resilience (fast elastic recovery to the original shape) • Superior abrasion resistance • Consistent hardness in time • Suitable for point-to-point, nested and random embossing technologies • Suitable for high machine speed (up to 800 m/min) • Constant pattern reproduction • Anti-static version available
<p>XL Plast Fuchsia - Rubber 50 shore A</p>	<ul style="list-style-type: none"> • Recommended quality for high pattern embossing, embossing of household towels and kitchen paper and/or high density micro patterns (>60 dots/cm²) • High resistance to mechanical stress • High resilience (fast elastic recovery to the original shape) • Superior abrasion resistance • Consistent hardness in time • Constant pattern reproduction
<p>Multiplast Purple - Rubber 55 shore A</p>	<ul style="list-style-type: none"> • Especially developed for polyvalent converting lines (toilet paper, kitchen towels...) • Increased elasticity: allows easy matching with different product configurations • Suitable for a wide range of load • Guarantees perfect thickness of the substrate • Excellent abrasion and mechanical stress resistance assure long lifetime • Faithful pattern reproduction, allows high as well as micro-embossing • Suitable for high speed lines (up to 800 m/min)
<p>EmboFlex XL Blue - Rubber 55 - 60 shore A</p>	<ul style="list-style-type: none"> • Outstanding resilience and compression-set • Very low heat build-up and hysteresis loss • Resistant to aromatic lotions and perfumes • Recommended for combined and slight micro embossing



GLUE APPLICATOR ROLLS

On modern tissue finishing machines, the applicator rolls have become considerably larger and heavier than before. Yet the typical needs of applicator rolls (precise geometry, purity, defect-free surface, transfer affinity) have remained unchanged. Furthermore, the reduction of glue consumption has become an absolute priority.

Hannecard has not only developed products with an exceptional performance, we are also equipped with high precision grinding and finishing machines that assure the required dimensional precision and the correct surface profile.

All Hannecard solutions can be obtained with composite carrier sleeves.

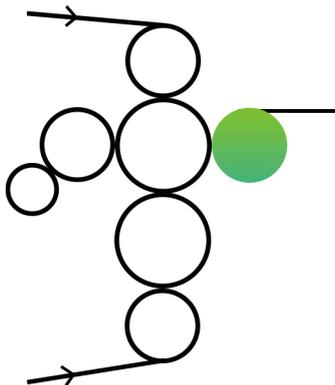
YOUR NEEDS :

- Consistent and even glue transfer
- Resistance to over-pressure

OUR ADVANTAGES:

- Rubber and polyurethane solutions
- Optimal glue transfer
- Compounds with improved purity and homogeneity
- High precision grinding and finishing
- Excellent abrasion and tear resistance
- Sleeve solutions

Solutions	Characteristics
<p>SizeMaster Black - Rubber 58 - 69 shore A</p>	<ul style="list-style-type: none"> • Optimal glue transfer, homogeneous coating • Excellent wettability • Low surface roughness • Product softness is preserved thanks to lower glue consumption • Excellent dimensional stability • Very good lifetime, good abrasion resistance • Limited dust clogging, less cleaning needed • Outstanding chemical compatibility (including lubrication oil)
<p>SizeMaster 4 Blue, black, yellow Polyurethane 60 - 70 shore A</p>	<ul style="list-style-type: none"> • Very high purity • Very good wettability • Optimal glue transfer, homogeneous coating • Low surface roughness • Product softness is preserved thanks to lower glue consumption • Outstanding dimensional stability • Improved lifetime, excellent abrasion resistance • Limited dust clogging, less cleaning needed • Very good chemical compatibility (including lubrication oil)



MARRYING ROLLS

For two and multi-layered paper, the marrying roll will determine the quality and the precision during the lamination process. It is important to achieve a narrow nip and a short residence time in the nip without crushing the paper and re-embossing the inner ply.

YOUR NEEDS :

- Excellent lamination quality without losing the thickness of the paper
- Reduction of the glue consumption
- Long lifetime

OUR ADVANTAGES :

- Rubber and polyurethane solutions
- Optimal paper release
- Enhanced lamination thanks to high pressure nip
- Easy to clean

Solutions	Characteristics
<p>Press Plast 1 Black - Rubber 90 - 98 shore A</p>	<ul style="list-style-type: none"> • Specially designed to enhance tissue plies bonding • Improved mechanical stress resistance, tear strength and abrasion resistance • Long lifetime • Adapted to high speed production lines (up to 800 m/min) • Also available with soft inner layer
<p>Press Plast Gold Green - Rubber 72 shore D</p>	<ul style="list-style-type: none"> • Recommended in case of multi-ply embossing (for 4 or more plies) • Guarantees perfect assembly of the plies even if they are numerous, preserving product softness • No back-side effect (re-embossing of the inner ply) • Excellent resistance to mechanical stress • Very good abrasion resistance and lifetime • Increased release properties
<p>Press Plast 4 Black - Polyurethane 95 - 99 shore A</p>	<ul style="list-style-type: none"> • Outstanding abrasion resistance, extended lifetime • Improved mechanical stress resistance, high dimensional stability • High cut resistance • Low residue deposit, easy cleaning • Possible to supply with high dimensional precision and low surface roughness • Perfect bonding of the paper plies • Suited for high speed process lines (up to 800 m/min)
<p>CombiStar XP White - Polyurethane 90 shore A</p>	<ul style="list-style-type: none"> • Outstanding abrasion resistance, extended lifetime • Improved mechanical stress resistance, high dimensional stability • High cut resistance • Low residue deposit, easy cleaning • Possible to supply with high dimensional precision • Developed with a special glossy surface for improved paper release and easy cleaning

YOUR NEEDS :

- Reliable colour reproduction
- Precise printing registration
- Long lifetime

OUR ADVANTAGES :

- Roller covers and sleeves, both tapered and cylindrical
- Excellent transfer properties
- Pure and homogeneous coverings
- High precision grinding

PRINTING ROLLERS AND SLEEVES

Related to the fast evolution of hygiene products and the growth of the hospitality industry, an attractive appeal of printed tissue paper has become more and more important.

Based on Hannecard's long experience in printing applications, we developed complete solutions for every technology, both for inline and offline printing machines. Hannecard offers roller covers and sleeves for flexographic, rotogravure, offset and digital printing.

Solutions	Characteristics
<p>FlexoGraf-SL Black - Rubber 60 - 65 shore A</p>	<ul style="list-style-type: none"> • Preferred solution for flexo printing • Excellent mechanical properties • Very good resistance to water based inks • Good abrasion resistance • Increased resistance to oils, alkaline products and diluted acids
<p>FlexoGraf-L Black - Rubber 60 - 65 shore A</p>	<ul style="list-style-type: none"> • Laser engraved for cliché rollers and sleeves (flexo printing) • Very good resistance to water based inks • Remarkable purity and homogeneity
<p>PressoGraf-SB Black - Rubber 70 - 90 shore A</p>	<ul style="list-style-type: none"> • Preferred solution for rotogravure impression rollers and sleeves • Adapted to all ink types • Excellent mechanical properties • Anti-static covering

OTHER APPLICATIONS

Hannecard offers specific solutions related to the finishing of tissue paper :

- Fountain rolls for glue application, found on some machine types
- Off-line coating of hygiene paper with softening lotion and/or perfume : applicator rolls
- Cutting and winding : drum and lay-on rolls

NEED MORE INFORMATION?

For more information, please contact your local Hannecard partner or visit our website at: www.hannecard.com