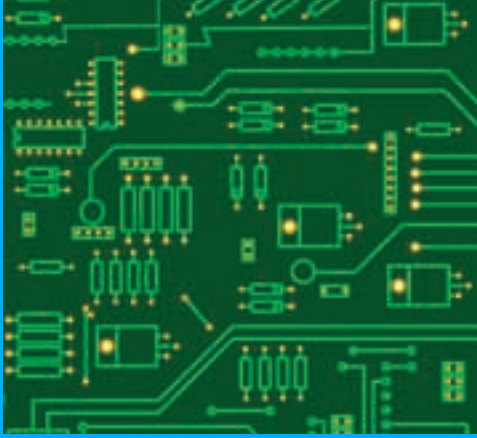


Printed electronics

## The benefits of rotary screen printing



Benefit from rotary screen printing technology in the production of:

- RFID antennas
- solar panels
- other innovative industrial applications

Rotary screen printing has been around for decades. Invented by Stork Prints in 1963, rotary screen printing has proven itself as a highly reliable and cost-effective technology for the textile and graphic industries. However, the advantages of rotary screen printing are also increasingly used for industrial applications, such as the production of RFID antennas and solar panel materials.

❖ 2

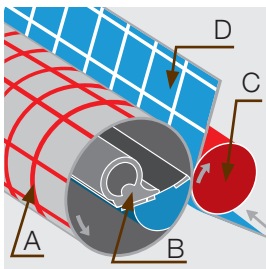
Stork Prints is a global leading company in the textile and graphics printing market. Providing total system solutions: from screens, lacquers and engraving to a broad range of coating and rotary printing systems. Being the expert in electroforming this not only entails highly reliable rotary screen technology but also an extensive programme of precision metal products.

Through continuous innovation and a powerful distribution network Stork Prints adds significant value to its customer's processes and products.

**Please visit [www.storkprints.com](http://www.storkprints.com)**



### Rotary screen printing principle



- A = screen
- B = squeegee
- C = impression roller
- D = substrate

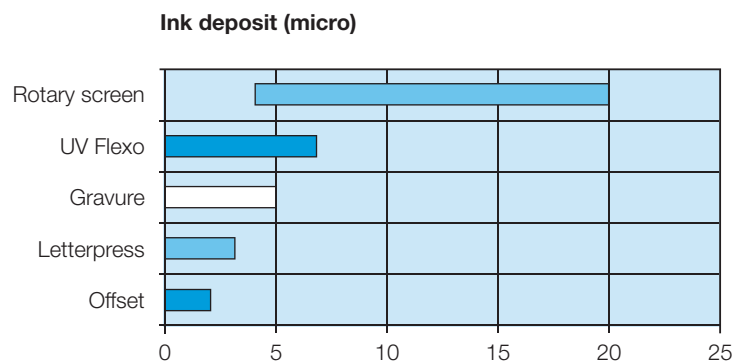
The application of electronics on common substrates such as paper, film and textile using standard printing processes is a relatively new technology. Yet, Stork Prints already delivered its first rotary screen electronics printing solution (for RFID) in 2002. In the mean time, rotary screen printing has become the reliable and accepted printing solution for the application of electronic inks, facilitating high volume, low cost production.

Rotary screen technology enables low cost production of printed electronics by applying paste (water, UV and solvent based) using a roll-to-roll process. Stork Prints rotary screen printing solutions are suitable for direct printing, etching and plating. We offer equipment for both low and high volume printing.

### Considerable advantages

Rotary screen technology offers considerable advantages over other printing techniques. You can easily reach ink deposits from around 5 to 20 microns, or even more if required, at production speeds up to 80 metres per minute. Rotary screen printing offers all the flexibility and versatility that you need to optimize your printing performance.

3 ::



### Continuous development

Over the past several years, Stork Prints has been developing solutions for the printed electronics market. In the mean time, we will continue to develop and improve these solutions. For this purpose, we have a fully equipped Technology Centre, which also enables our customers to test the quality of their products and develop new applications, either with their own substrates and/or chemicals, or with the help and products of the world's leading ink and film suppliers, which whom we closely cooperate.

# Rotary screen printing solutions for printed electronics



## SP 500

We designed our SP 500 rotary screen printing line especially for printed electronics applications. All of the machine's parts are specifically developed for high accuracy printing on (heat) sensitive substrates.

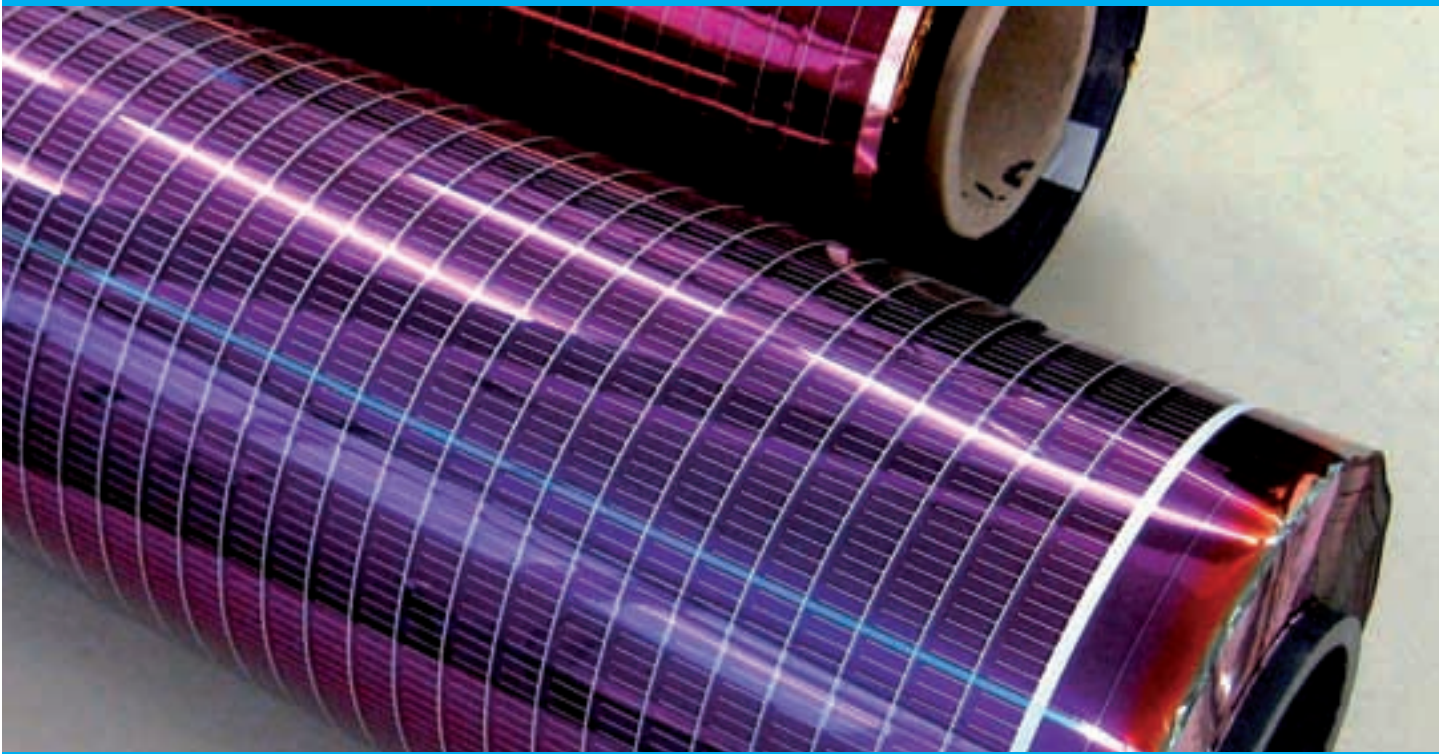
Thanks to its compact design, the SP 500 is perfectly suitable for research and development purposes. It can handle all sorts of substrates, from very sensitive film to heavy paper, and all of its modules are easily accessible. However, the SP 500 can also be used under heavy duty circumstances. The machine is built to perform in a 24/7 production environment. Its modular construction allows you to add printing positions with hot air or UV positions in a later stage.

## Features:

- Maximum printing width 500 mm
- Repeat sizes 12 - 25,25"
- Hot air and/or UV drying
- Hot air with a content of 10 metres
- Very compact and accessible hot air dryer
- Small foot print
- Handy rewind function for pre-printed rolls
- Compact design
- Energy efficient
- Integration of inspection systems possible
- Modular, flexible design

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### PD-RSI 600/900

The PD-RSI 600/900 rotary screen printing line is our high volume solution for printed electronics. The position of the dryers, on top of the printing stations and the platforms between the printing stations, allows for easy (visual) inspection of the printing process. Its design with multiple printing stations in one line enables you to produce an entire RFID tag in one run, at a speed of over 50,000 units per hour.

Thanks to its robust yet effective design, the machine is perfectly suitable for high volume production. It handles all sorts of substrates, from very sensitive film to heavy paper. Also, the PD-RSI 600/900 offers you high accuracy and reproducibility.

#### Features:

- Maximum printing width 600/900 mm
- Repeat sizes 12 - 25,25"
- Hot air and/or UV drying
- Available with one to four printing positions
- Hot air with a content of 9 metres
- Easy maintenance
- Easy, one run production of i.e. High Frequency antennas
- Energy efficient
- Integration of inspection systems possible
- Modular design





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### RotaMesh® and SpecialScreen®

All Stork Prints printing lines are compatible with Stork Prints RotaMesh® screens material, and SpecialScreens®, all of which are manufactured by electroforming, and consist of 100% non-woven nickel. This results in a unique, strong hexagonal structure that gives the mesh an exceptionally high stability, which enables you to print with perfect registration, even at large widths, and reach 100 um or even higher resolutions. Our delivery program includes several types of mesh which are specifically developed to meet the high demands of the printed electronics market, offering you the perfect combination of a high resolution and a high deposit. For more information and technical details, see our RotaMesh® and SpecialScreen® product brochures.

### Direct laser engraving and direct laser exposure

Stork Prints' direct laser engraving systems are the perfect platform for taking your rotary screen engraving process to a higher level. By increasing your production speed or efficiency, improving the quality of your products, reducing the environmental impact... there are many ways in which our laser engraving systems can help you improve your business. All of our systems function fully digitally, which ensures cutting edge engraving well into the future. For more information and technical details, see our laser engraving product brochures.



### Conventional engraving

Flexible and easy in-house rotary screen engraving and significant cost savings. Our RSI® pre-press system offers you the best of both worlds. Thanks to its modular design it can meet any of your narrow web, mid web and semi-rotary screen engraving needs. For more information and technical details, see our conventional engraving product brochures.

### Cleaning

Stork Prints also supplies a full range of cleaning equipment for the screens and tools used in the printing units. Our delivery program includes solutions for water, UV and solvent based equipment.



## Stork Prints

Stork Prints is the leading provider of system and application know-how in textile and graphics printing processes as well as two-dimensional, high accuracy, metal precision products.

For further information, please visit [www.storkprints.com](http://www.storkprints.com).

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