GRAVURE SLEEVES
Introduction

TERRY LINDSEY
RSMP MANAGER
Rothtec nickel sleeves are the ideal solution for gravure printing. These highly-durable, electrical conductivity, corrosion resistant, and accurate seamless sleeves act as an interface between the printing cylinder and flexible printing plates, bringing you several clear advantages.
SLEEVE FLOATS ON AIR POCKET
ROTHTEC SLEEVES

Sleeves are used in combination with a printing plate on an air cylinder, as opposed to a solid steel cylinder. The sleeve/printing plate combination is much lighter than an entire cylinder, and is consequently far easier to replace in transport.
Your change over times are also shortened as a result, which means more efficient production.
The sleeve and printing plate are removed from the cylinder and stored while still joined together, which makes storage more efficient and reprinting a lot easier.
The sleeves are positioned on the air cylinder with the help of compressed air (80 PSI). The air is fed into the cylinder (a printing cylinder with an air feed and air outlet holes). When the sleeve is slid onto the cylinder, the air outlet holes are covered up and an air cushion is created under the sleeve, which allows it to be positioned relatively effortlessly.
MOUNTING FINISHED GRAVURE SLEEVE
Once the sleeve is in the correct position, the air supply is turned off, the sleeve contracts and clamps tightly around the cylinder, because its diameter is a fraction smaller. The printing plate is then attached to the sleeve, and you are ready to print.
SLEEVE NOW MARRIED TO AIR MANDREL READY FOR PRESS
Mounting procedure preparing to print using a sleeve is a straightforward and physically undemanding procedure. The first step is to mount the sleeve on the air cylinder. The air cylinder should be clean, dry and free of any ink or other surface residue before the mounting procedure begins.
INSIDE OF SLEEVE MUST BE VERY CLEAN
MANDREL SURFACE MUST BE VERY CLEAN
EXTRA CARE NEEDED TO CLEAN MANDREL
ROTHTEC SLEEVES

Slide the sleeve onto the chamfered end of the air cylinder until the leading edge of the sleeve fully covers all air holes. Turn on the air supply for 10 to 15 seconds. This will create an air cushion underneath the sleeve, effectively causing it to 'inflate'. Carefully slide the sleeve into position, taking particular care not to uncover the air holes.
INSTALLING SLEEVE EXTRA AIR HOLE ON OPPOSITE END JUST IN CASE
ROTHTEC SLEEVES

Disconnect the air supply when the sleeve is in its final position. The sleeve will now be clamped securely onto the air cylinder, and will remain in that position until the air supply is turned on again. Tip: To minimize loss of sleeves due to accidental deflation, you can also drill a set of auxiliary air holes at the opposite end of the air cylinder which can be used if required.
CHROME SURFACE FOR SMOOTH WARE RESISTENT MOUNTING
CLEAN NITRE GLOVES
Simplifying mounting and removing sleeves, a cylinder mounting stand is recommended. This stand will hold the air cylinder firmly in place while allowing complete access to one end, making the process of mounting and removing sleeves much easier. Using a mounting stand also eliminates the need for a second person to hold the cylinder steady during the mounting procedure.
NOTE \( \frac{1}{4}'' \) RADIUS FOR EASY MOUNTING
VERY CLEAN AIR SUPPLY
PORTABLE STAND FOR MOUNTING SLEEVES
ROTHTEC SLEEVES

Easy storage provides a special carton for storing the sleeves and attached printing plates when not in use. The rigid construction of these storage cartons means they can be stacked without the need for supporting racks. The cartons are also resistant to ultraviolet light, which helps prolong the lifespan of the sleeve/plate. Cartons can be arranged by job number and color breakdown to simplify retrieval for repeat orders.
SOME ADVICES OF SLEEVES COMPARED TO HEAVY STEEL MANDRELS

Transport and logistic huge reduction of costs in transportation sector by reducing the weight for over 95% possibility to pack the sleeves in card board boxes on palettes - no complex steel constructions
When investing in a new printing machine you will only have once expenses for the production of the air cylinder and an air station.

We have carried out many calculations and we came to the conclusion that the costs will be reduced by 60% - 75% when using sleeves in comparison to investments in steel bases.
REDUCTION OF COSTS AT INVESTMENTS

The additional expenses for air cylinder and air station will be regained already after 6-10 jobs (set of printing cylinders)

If a client needs 300 - 800 new cylinders per year, a cost advantage of $100,000,00 up to $250,000,00 will result very quickly
Of course for the presentation you need the essential support for the start of such a project. Especially for mounting of the sleeves and for other handling it is important to know that the air cylinder should have a special structured surface to avoid dust particles between the surface of the air cylinder and the sleeve will be mapped onto the printing.
MAXIMUM FLEXIBILITY

The sleeve provides an alternative method of getting the image to the press. For example, the sleeve may be imaged at one common site and shipped to multiple locations.
EASY HANDLING

An average engraved sleeve weighs only 15 pounds, allowing printers to move sleeves easily from one location to another.
INVENTORY REDUCTION

Printers can greatly reduce their inventory of bases. For example, an eight color press requires one set of cylinders per repeat for the press. To increase efficiency, one extra set of bases could be utilized for off press mounting and imaging of sleeves. This translates into a huge warehouse cost savings generated by eliminating the need for a large cylinder inventory, and the labor and equipment necessary to maintain this facility.
New bases are not always necessary for a sleeve system implementation. Existing bases can be undercut and used as a mounting base. Utilizing existing bases that are becoming obsolete is just one cost effective solution.
LOW SHIPPING COSTS

The reduced shipping costs associated with shipping sleeves versus bases is obvious. However, the ability to ship the sleeve by overnight carrier is another strategic advantage.
QUICK CHANGEOVER

Rothtec sleeves also provide rapid job changeover on cantilever type presses which are designed to accommodate sleeves without removing bases from the press.
JOB IMPLEMENTATION

Sleeves can be kept on hand at your engraver, allowing new rush jobs to be engraved and shipped to your printing facility without cylinder transfers to and from the engraver.
BROAD SIZE RANGE

Rothtec sleeves are available on any print repeat from 5” dia. To 15” dia

and at lengths up to 140” wide.
SLEEVE CUTTING
LARGER CUTTER SPLIT
88” SLEEVE
LARGER CUTTER SPLIT
88” SLEEVE
About ROTHTEC

The city of New Bedford in the US state of Massachusetts has been the headquarters of ROTHTEC ENGRAVING CORPORATION since 1979. A family owned company for 65 years, Frederick E. Roth and Bruce L. Roth continue the tradition started by their father of engraving high-quality screens for printing textiles. Constantly adapting their technology and service to meet the demands in quantity and quality, the high tech computer-to-screen technology now used is a far cry from the original production methods of the 1940s.

Being located close to the printing houses to provide swift and efficient turnaround of engraved ready to print lacquer and galvano rotary screens, has been a key to the company’s successful growth. On average the company engraves around 30,000 lacquer and galvano screens a year. This makes ROTHTEC ENGRAVING CORPORATION one of the largest, if not the largest, engraving company in the world.

A steady rise in the number of export orders reflect on the ability of ROTHTEC ENGRAVING CORPORATION to supply any kind of rotary screen or derivative product quickly and at a price which is internationally competitive.

Take advantage of the ROTHTEC ENGRAVING CORPORATION edge and let them supply your requirements.

Engravers of rotary and electroformed nickel screens & sleeves for:

- Printing
- Coating
- Laminating
- Forming
- Embossing
- Filtration
- Sieving

Serving the woven & nonwoven industries for 65 years
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<th>FIND ROTHTEC</th>
<th>NONWOVEN</th>
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<th>INTERLACE</th>
<th>FLOCK</th>
<th>FILM</th>
<th>SURFACES</th>
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<th>SIEVING</th>
<th>FILTERING</th>
<th>SLEEVES</th>
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<td>MANUFACTURING PROCESS</td>
<td>Spunbond</td>
<td>Meltblown</td>
<td>Hydroentanglement</td>
<td>Woven and Knitted</td>
<td>Dyestuff</td>
<td>Extinction, coating</td>
<td>Plastic, soft, etc.</td>
<td>Hard</td>
<td>Draining</td>
<td>Liquid, gas</td>
<td>Various</td>
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<td>MANUFACTURING PROCESS</td>
<td>TYPICAL SUBSTRATES, MATERIAL, OR MEDIA</td>
<td>PP/PE/PA, PA</td>
<td>PP/PE/PA, PA</td>
<td>Cotton, rayon, viscose</td>
<td>Cotton, CottonViscose</td>
<td>PE/Pt</td>
<td>PP/PE/PA, Polyester</td>
<td>Cotton, nylon, etc.</td>
<td>Animales, woods, metals</td>
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<td>Wastewater</td>
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<td>SELECTED PRODUCTION PHASE</td>
<td>TEC-Form, TEC-Emboss</td>
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<td>TEC-Emboss, TEC-Screen</td>
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<td>OTHER PRODUCTS/ SERVICES</td>
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The activities of the ROTHTEC ENGRAVING CORPORATION extend beyond the core business of engraving rotary and galvano screens for the textile printing industry. To such fields as the development and production of complex electroformed nickel screens, galvano screens and other hybrid cylindrical forms for process applications in the formation, finishing, coating, laminating and embossing of woven fabrics, knit, nonwoven fabrics, plastics, film, foil, food, labels, paper, as well as filtration and sieving.

TEC-Print is the nomenclature for all ROTHTEC engraved rotary and galvano screens for printing, coating and laminating. Customer designs are faithfully integrated using the latest computer-to-screen engraving technology.

TEC-Print Galvano screen engraving ROTHTEC has been manufacturing galvano screens for nearly 30 years. Screen lengths are available from 500 mm up to 3000 mm and are available in standard repeat sizes ranging from 680 mm up to 1016 mm. Special repeat sizes on request.

TEC-Print Rotary screen engraving Using the highest quality electroformed nickel only, all the usual mesh sizes from 40 to 125 up to 130 to 195 mesh can be engraved in all lengths from 650 mm up to 3000 mm and all repeat sizes e.g. 680 - 725 - 820 - 914 - 1016 mm.

LAMINATING
TEC-Print Screens for laminating
For laying down adhesive or bonding two surfaces together, TEC-Print laminating screens are available in sizes from 500 mm up to 3000 mm in length, with variable wall thicknesses from 125 mm up to 450 mm in 640 mm - 688 mm - 914 mm repeat sizes. Open areas are variable from 40% to 50% or customer specification.

STRUCTURING/EMBOSSING
TEC-Emboss embossing cylinders
TEC-Emboss cylinders enable a structured or embossed effect to be made on a wide variety of substrates. These can be activated with a support cylinder. The embossing process is mounted onto a support cylinder. The biggest advantage of the TEC-Emboss cylinders is their very light weight (around 0.6 kg/sq.m), greatly facilitating handling. Available from 800 mm up to 3000 mm in length, with wall thicknesses from 125 mm up to 450 mm in 640 mm - 688 mm - 914 mm repeat sizes or to customer specification.

TEC-Emboss air embossing screens
TEC-Emboss screens create an embossed effect by forcing high-pressure air through the patterned areas of the screen. Good results can be achieved on both surfaces (while adhesive is still wet) and other types of malleable surfaces. Seamless, cylindrical screens of the highest quality electroformed nickel, TEC-Emboss screens are available from 500 mm up to 3500 mm in length and in standard repeat sizes of 640, 688, 914 mm.

FORMING
TEC-Form Screens for forming
TEC-Form screens are used for forming (e.g. perforation) a web whilst it is still malleable. Seamless, cylindrical screens of the highest quality electroformed nickel, TEC-Form screens are available in sizes from 500 mm up to 3000 mm in length and in repeat sizes of 640, 688 and 914 mm and special repeat sizes can be ordered on request. Wall thicknesses in excess of 1000 mm can be manufactured.

ELECTROFORMED SLEEVES
For Flexo - Offset - Gravuro - Holography
Custom made, either pure nickel or nickel-copper base, the ROTHTEC sleeves are available in various diameters, repeat sizes and wall thicknesses, depending on the application. A polymer cushion coating is also available.

FILTRATION
TEC-Filter cylindrical and flat mesh filters
These products are all custom-built to customer specifications.

SIEVING
TEC-Sieve rotary screens and sleeves
These products are all custom-built to customer specifications.