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A DURAVANT COMPANY

SECURE CLOSURES IN BAG CLOSING TECHNOLOGY

(VIVIANE MPINGA

MARKETING MANAGER – FISCHBEIN INTERNATIONAL)

IAOM LEBANON REGIONAL FORUM

16-17 SEPTEMBER 2019



DURAVANT

Main segments & Brands



FOOD PROCESSING



PACKAGING EQUIPMENT



MATERIAL HANDLING



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SUPPORTPRO™

A DURAVANT SERVICE

Key factors for bags and closures

- A mechanical performance
- The evolutions of the bags themselves
- An « esthetical » or « cosmetic » performance

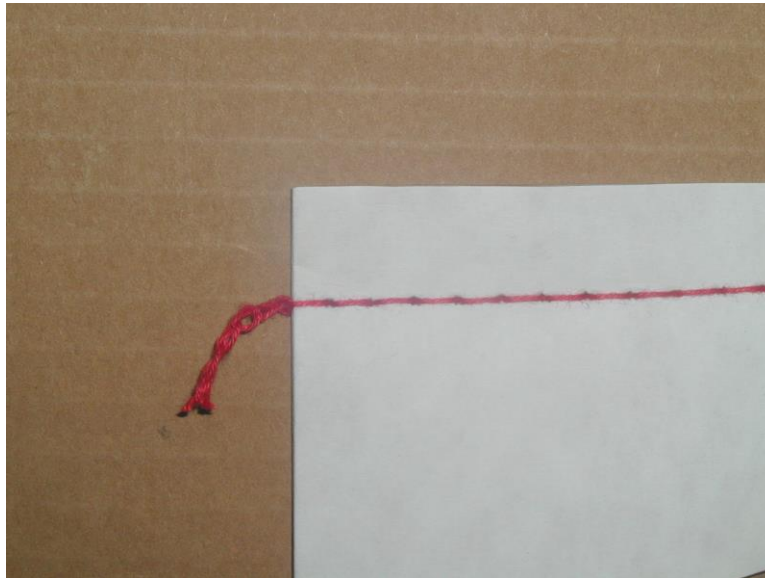
Sewing Technology



Sewing Technique: Evolutions

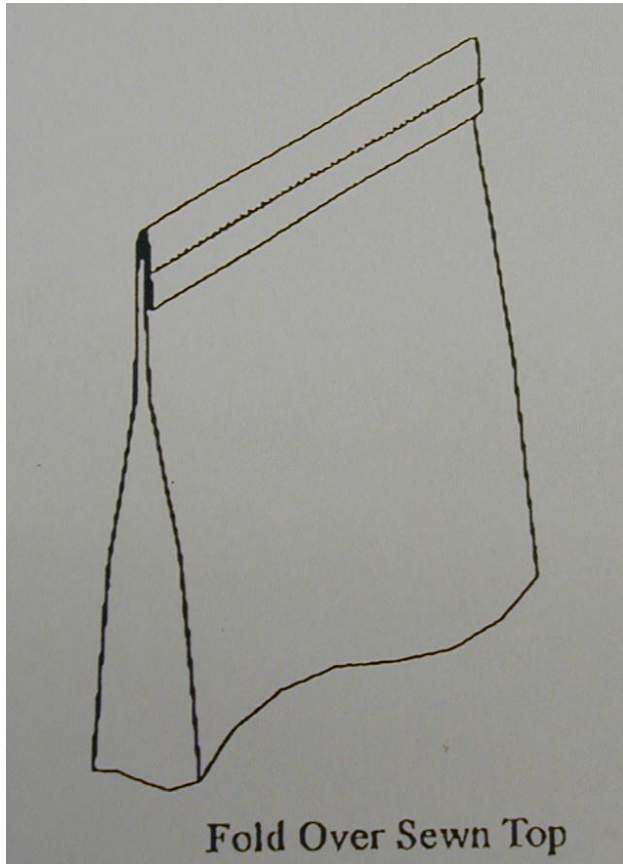
- From the simple basic plain sewing **to** :
 - fold over sewn top
 - sewing with crepe paper
 - sewing with twin needle
 - tape over sew

Plain sewing



TO....

Sewing technique: Fold over sewn top

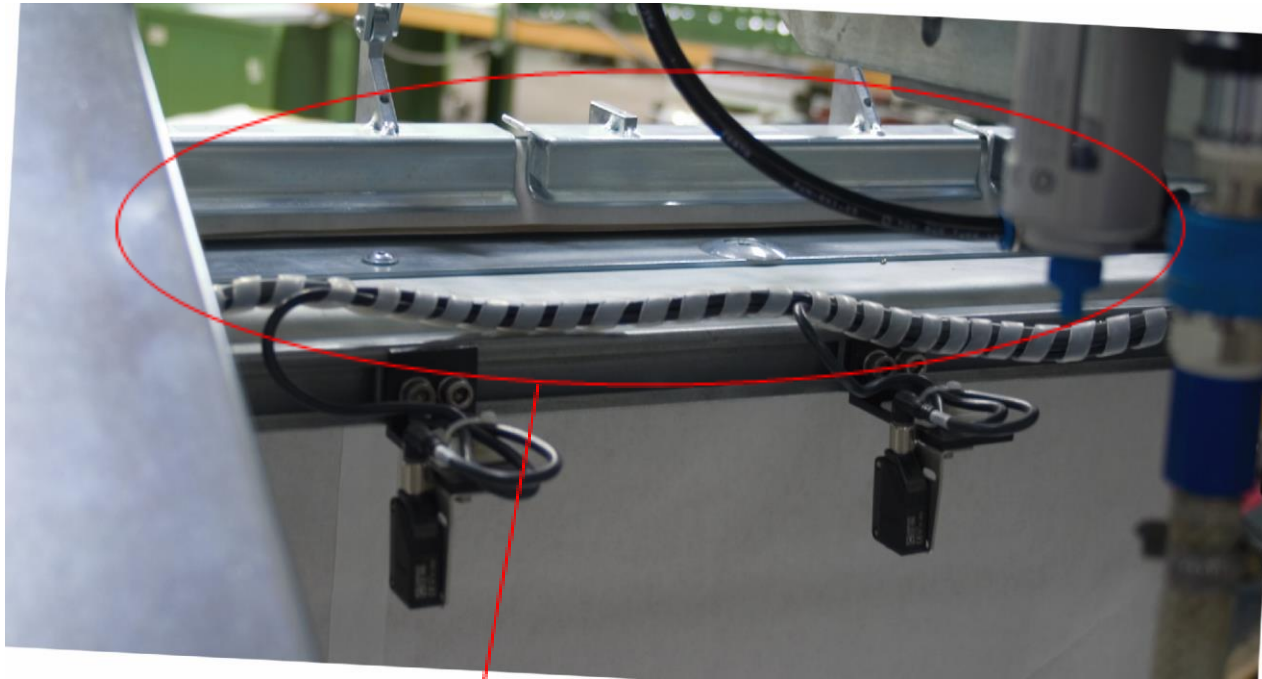


Sewing technique: Fold over sewn top



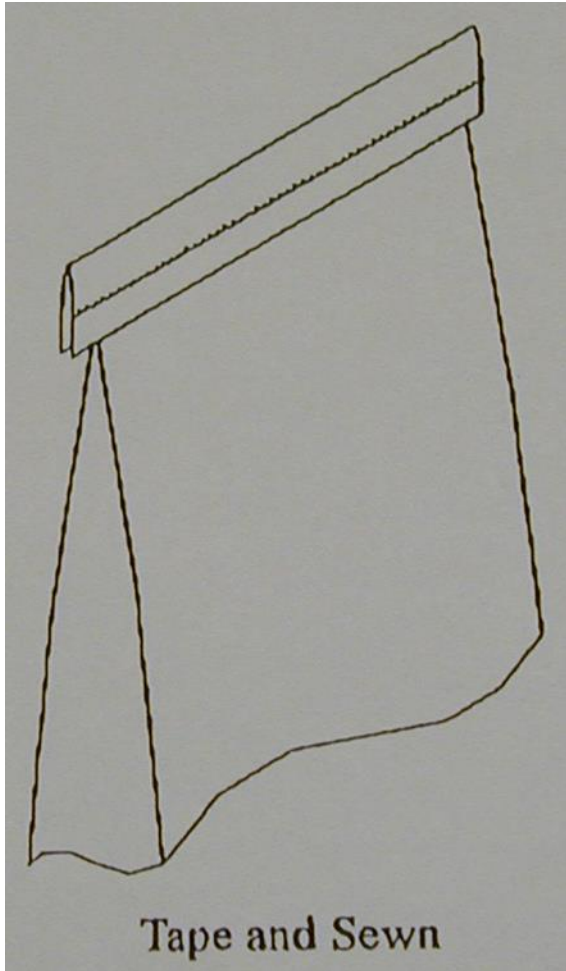
Flap folding sewing system

Sewing technique: Fold over sewn top



Folded bag top (view from the rear)

Sewing technique : Sewing with crepe paper



Filler cord

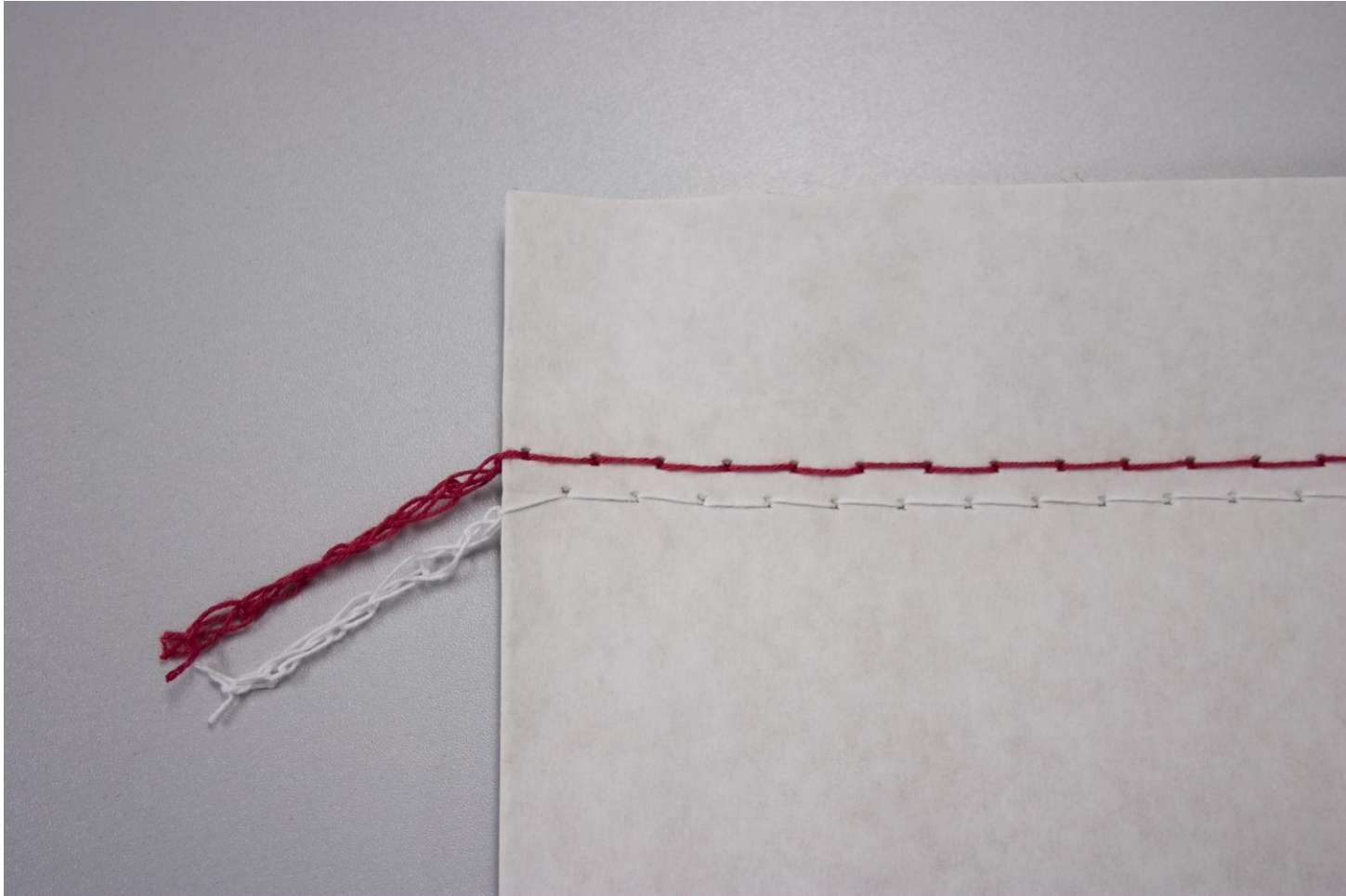
Sewing technique : Sewing with crepe paper

Sewing System MUA



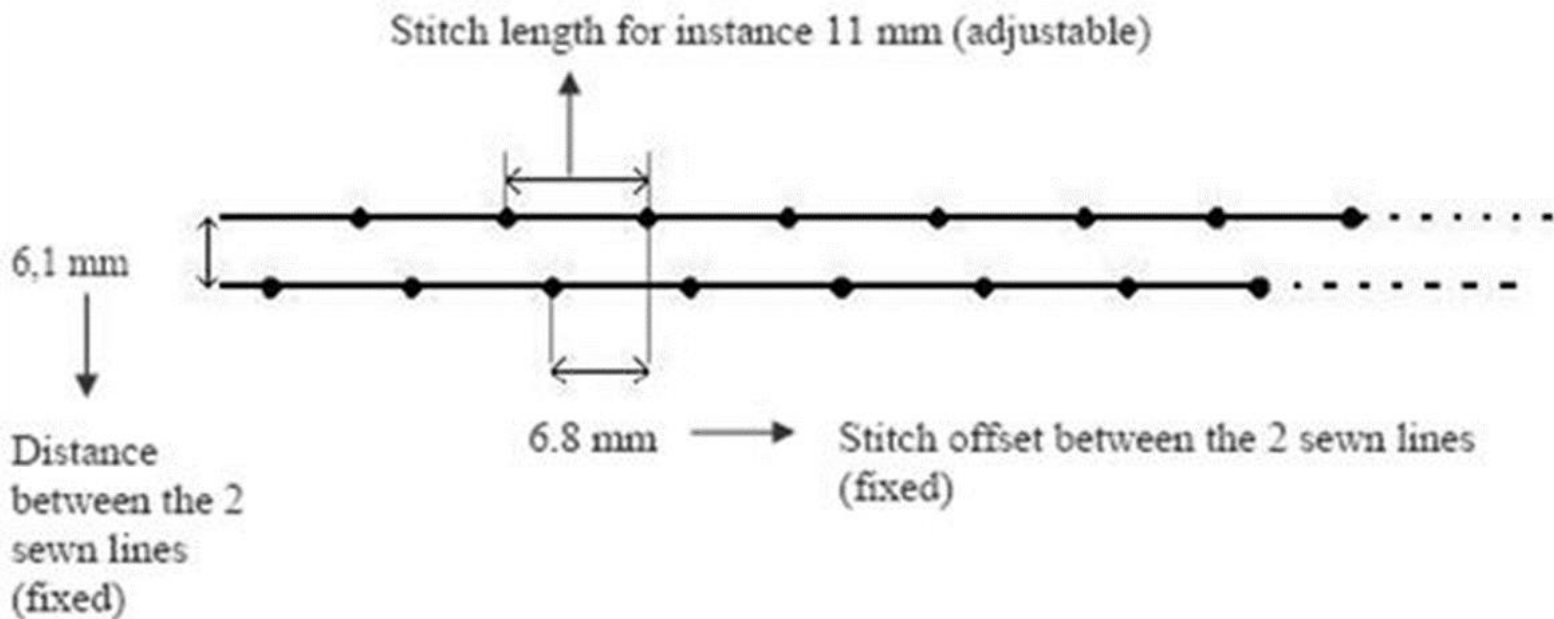
Crepe paper

Sewing technique: Sewing with Twin needle



Sewing technique: Sewing with Twin needle

Stich and sewn line dimensions:

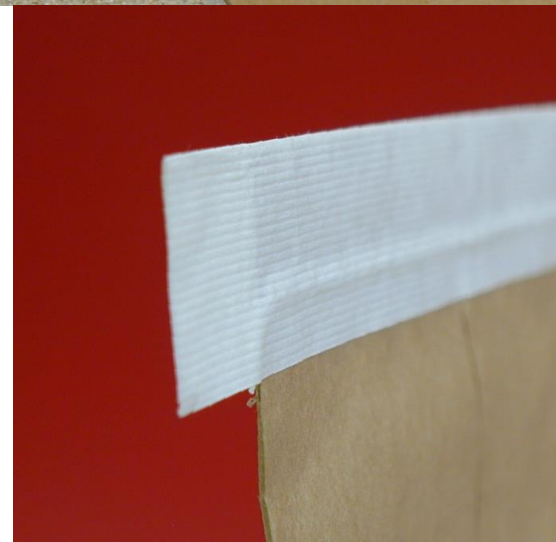
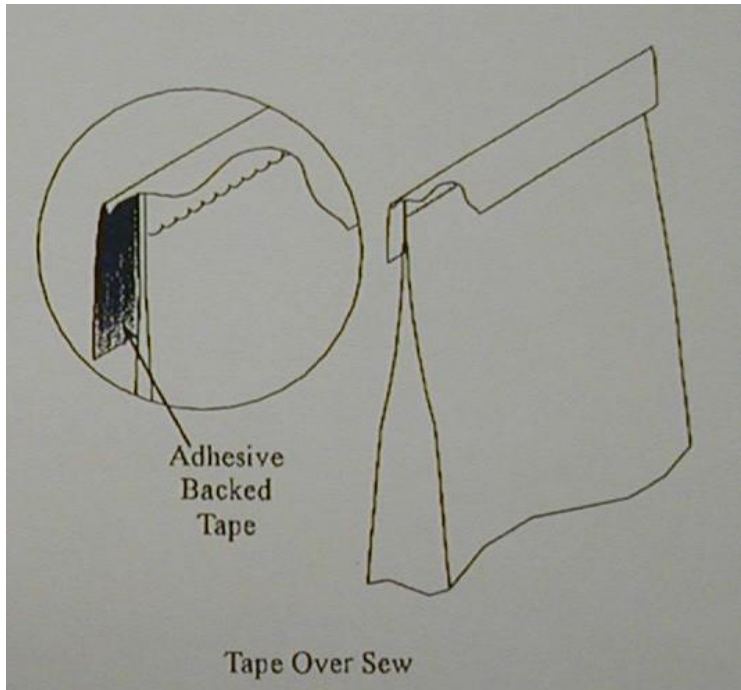


Sewing technique: Sewing with Twin needle

Twin needle sewing system



Sewing + sealing techniques: Tape over sew



Sewing + sealing techniques: Tape over sew (TOS 3000-SW)



Open mouth bags vs Valve bags



Open mouth bags



Valve bags

Open mouth bags vs Valve bags

- Valve bags have always been more expensive than open mouth bags.
- Open mouth bags are largely available in the market
- Open mouth bags are very flexible as the spout will accept various sizes of bags whatever the material
- Open mouth bags exist in various sizes and material
- Open mouth bags are easy to open
- To ensure a strong sealed closure, polypropylene valve bags must be closed with an ultrasonic method, which increases the price of the whole investment
- Various bag closing technologies (sewing, gluing, sealing or combined means) can apply to open mouth bags, depending on the product requirements

Sealing technology

3 techniques of Heat Transfers:

- Hot Air
- Bands
- Radiant



Sealing technique: convection

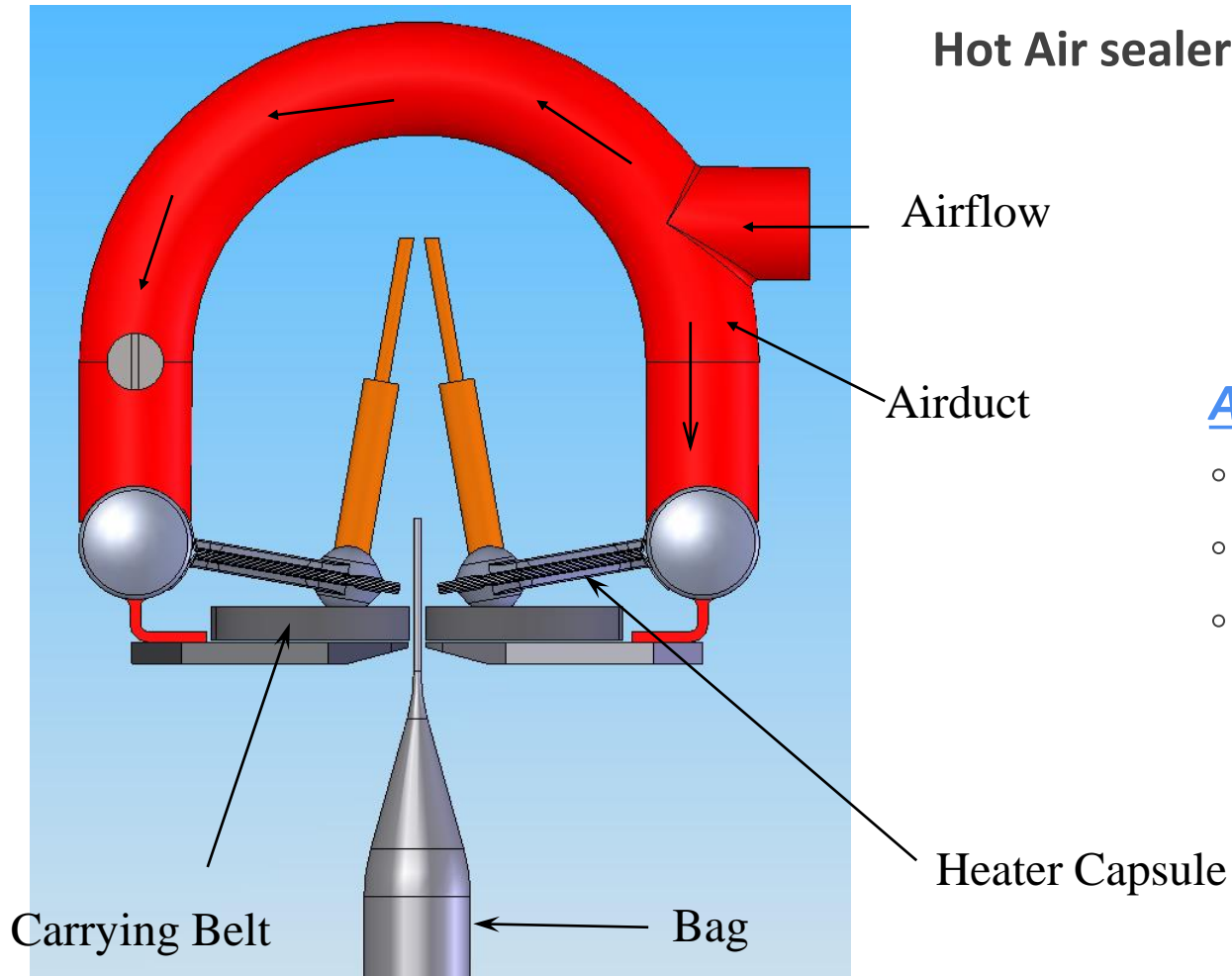
Convection relates to **Hot Air sealers** where the ambient air is heated by heating capsules and blown to the PE bags to assure the sealing process.

The sealer features an enhanced airflow design guaranteeing a high efficiency heat transfer system.



Saxon Hot Air sealer

Sealing technique: convection



ADVANTAGES:

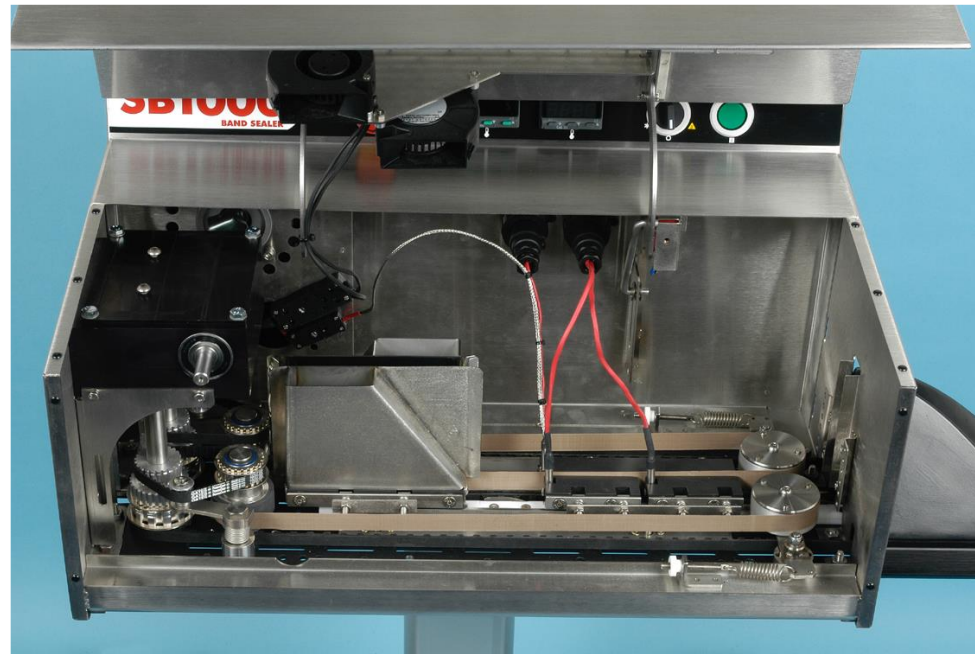
- Increased capacity
- Easy set up
- Low maintenance

Sealing technique: conduction

Conduction relates to **Band sealers** where fixed heating elements heat the bags by direct contact through a pair of bands.

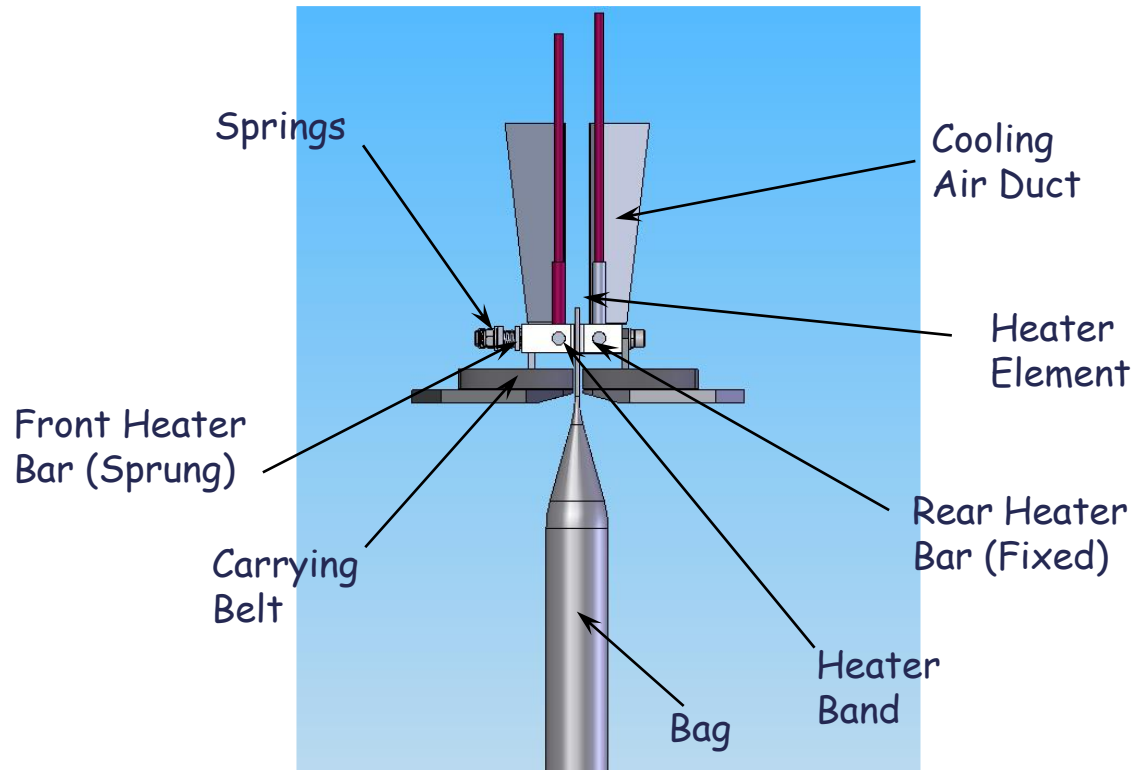
These bands have a high thermal conductivity and move in perfect synchronisation with transport belts.

Saxon Band sealer



Sealing technique: conduction

Band sealer



ADVANTAGES:

- Wider seals possible
- Easy maintenance

Sealing technique: radiation

Radiation relates to **Radiant sealers** where the heat is radiated from the heater bars to the bag's top and penetrates through the outer layer to the inner liner. Pressure wheels compress the two heated inner portions of the bag together to form a permanent airtight seal.

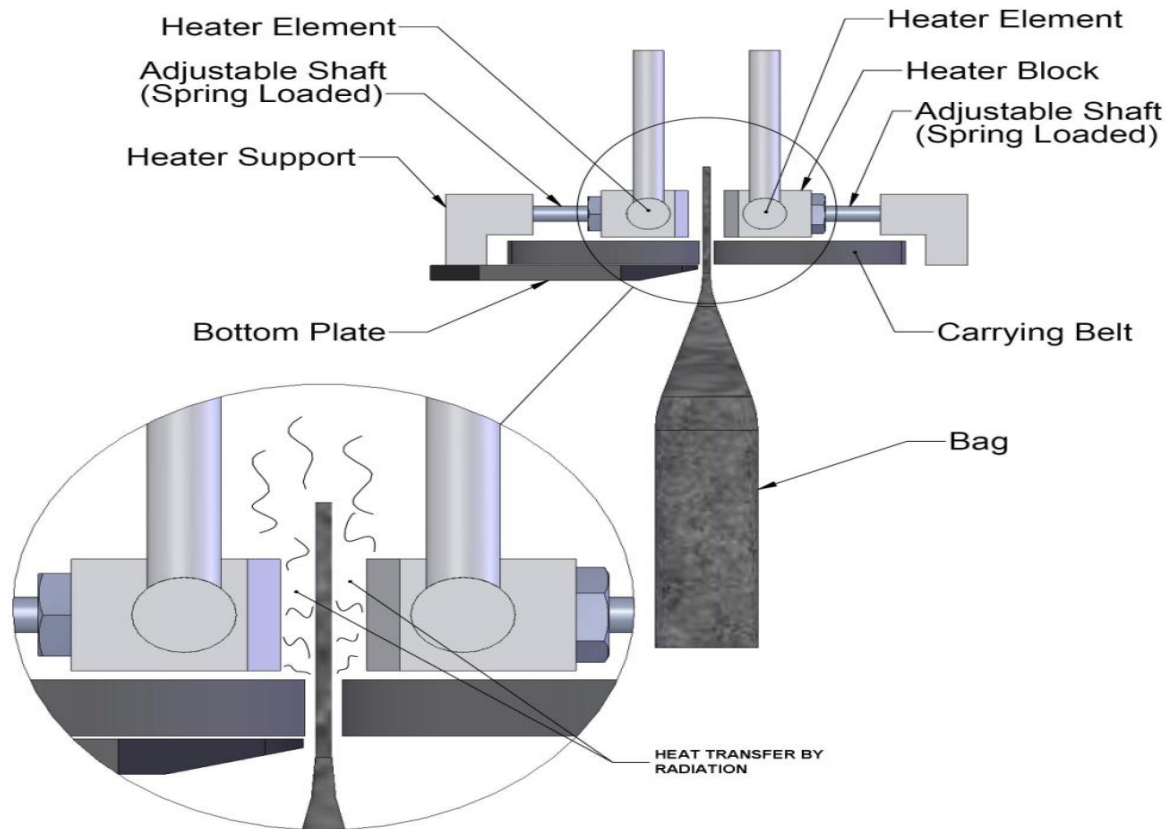
Saxon Radiant sealer



Saxon Radiant sealer is highly recommended for coated paper bags, for paper or poly bags with header cards and for aluminium foils!

Sealing technique: radiation

- Radiant sealer



Sealing technique: Industrial continuous sealers: Saxon range

A Large choice of strong optional extras to provide secure and siftproof closures:

- Large choice of pressure/crimp wheels → appearance of the seal
- Air Evac
- Validatable version
- Air wash
- Variable speed
- Bag top trimmers
- Temperature controller PID
- Ergonomic infeed
- Vortex coolers
-

Sealers: crimp wheels

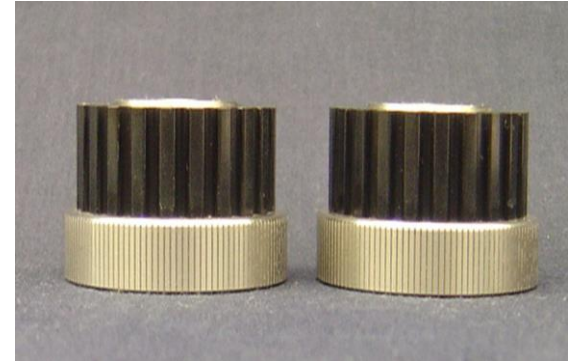
Plain



Fine
Knurl



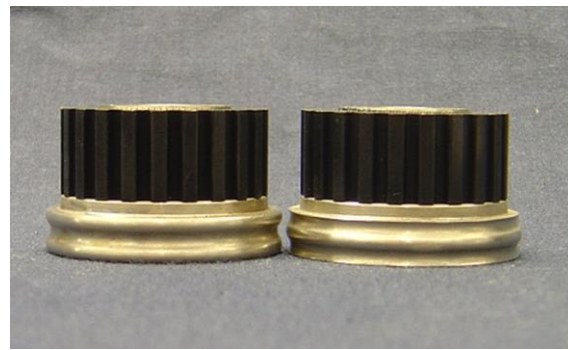
Coarse
Knurl



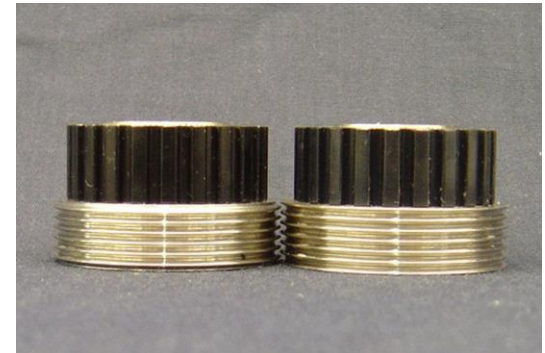
Coarse
Diamond



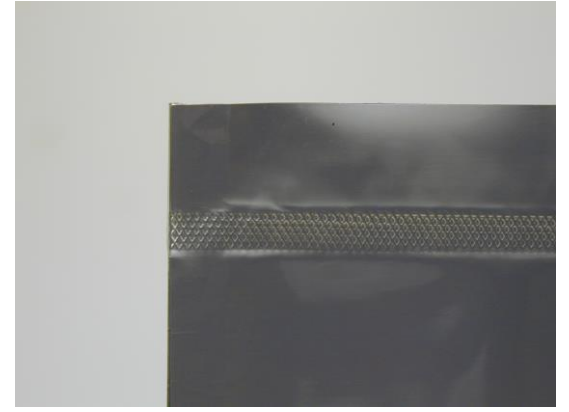
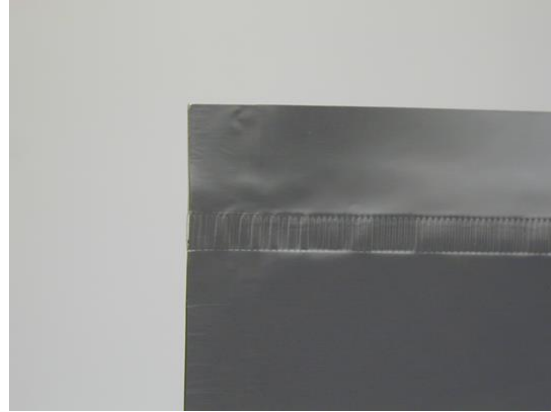
Wavy line



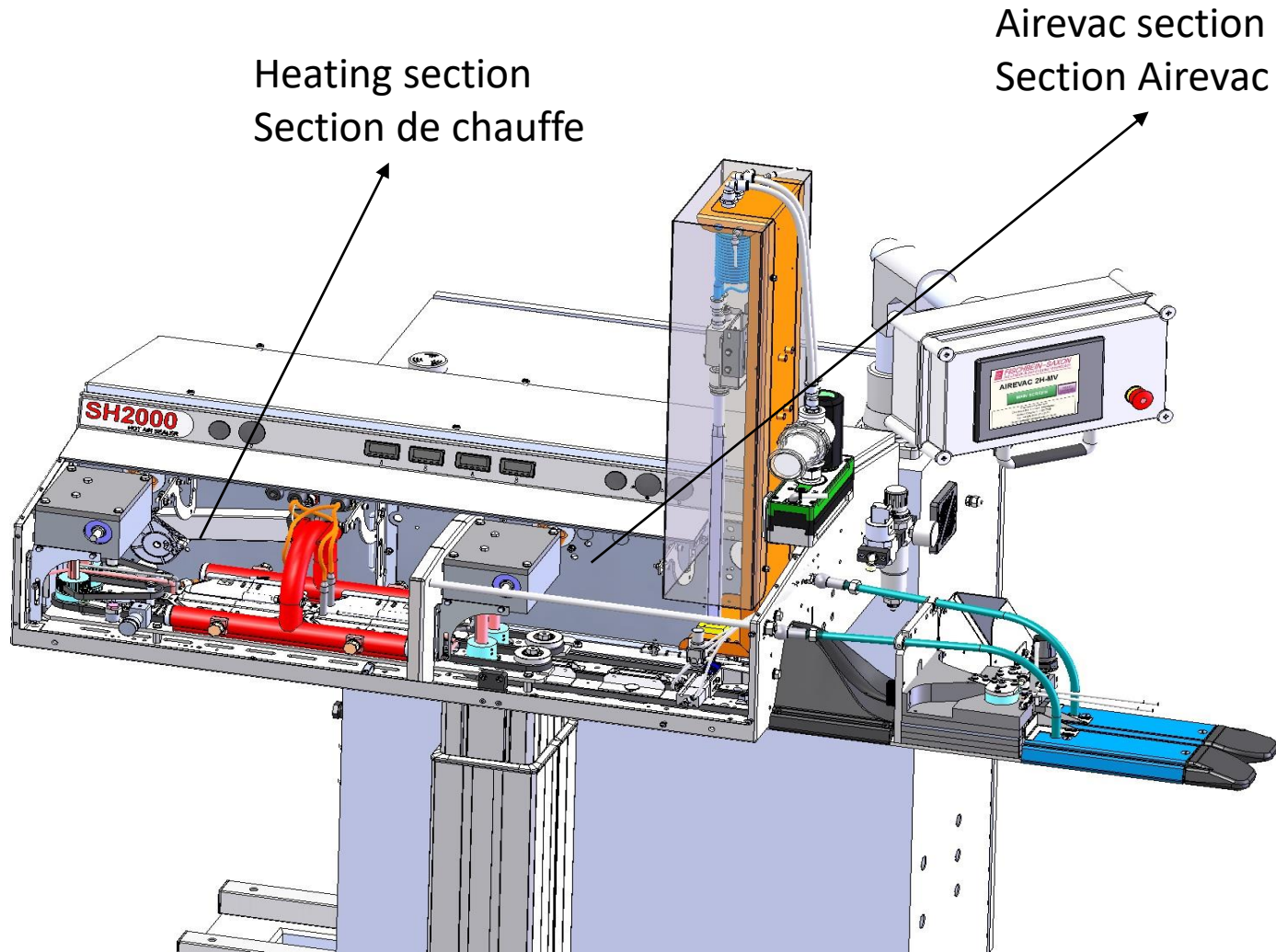
Thread form



Sealers: crimp wheels

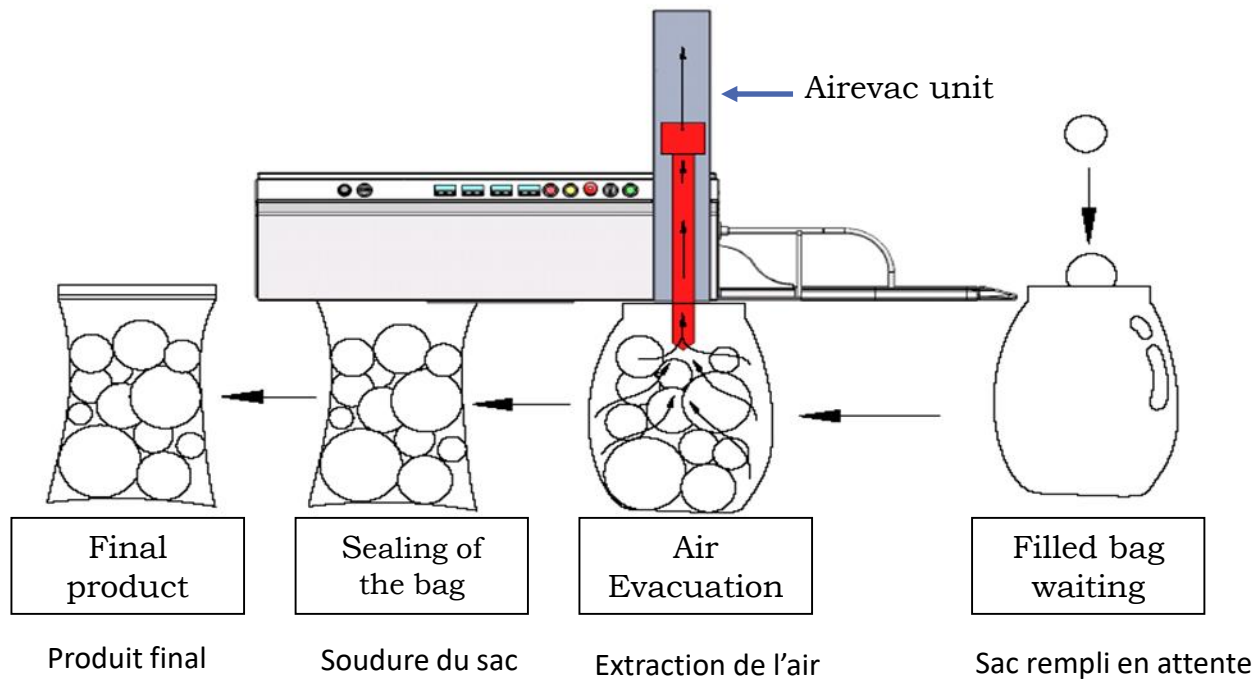


Sealers: Airevac



Sealers: Airevac

Full process of Air-Evacuation
Processus complet de l'extraction d'air



Sealers: Airevac



To extract partially air from the bag before closing → to avoid a ballooning effect



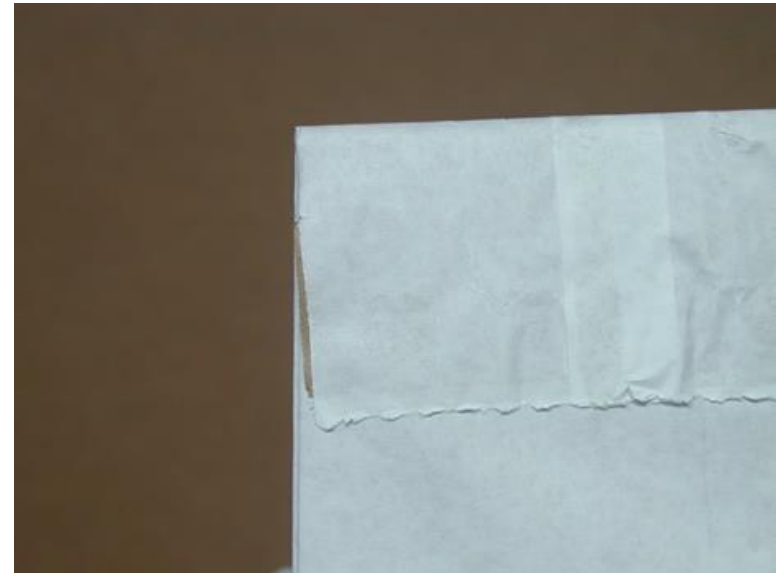
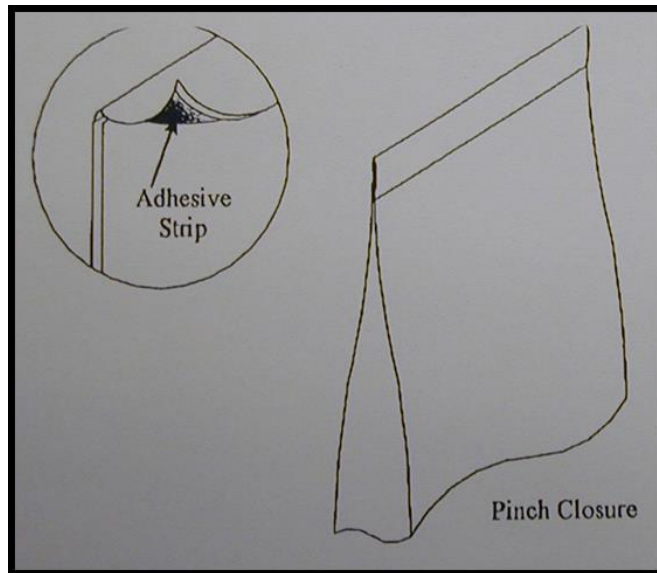
To extract partially air from the bag before closing with the option of inserting inert gas → to increase the level of protection of the product

Sealers: validatable range



Combined closures

Very high level of product protection provided by a double closure!
Gluing after sealing a PE inner liner: closure by gluing pre-glued « Pinch » top bags after the heat sealing of an inner liner → PILS



Pinch bag

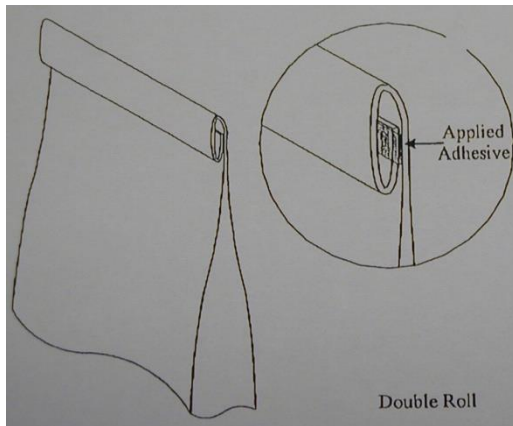
Combined closures



PILS

Gluing Technique

Very high level of product protection provided by DRC “double roll closure”! Closing paper bags by double fold and with “hot melt” glue → DRC



Gluing Technique



DRC

FISCHBEIN: bag closing machines

- ❖ SOLUTIONS to your specific bag closing requirements from an extensive range of top quality equipment .
- ❖ DEVELOPMENT using the latest proven technology
- ❖ WORLDWIDE SERVICE through a large distributors network
- ❖ « JUST IN TIME » DELIVERIES of spare parts and new machines
- ❖ QUALITY PRODUCTS