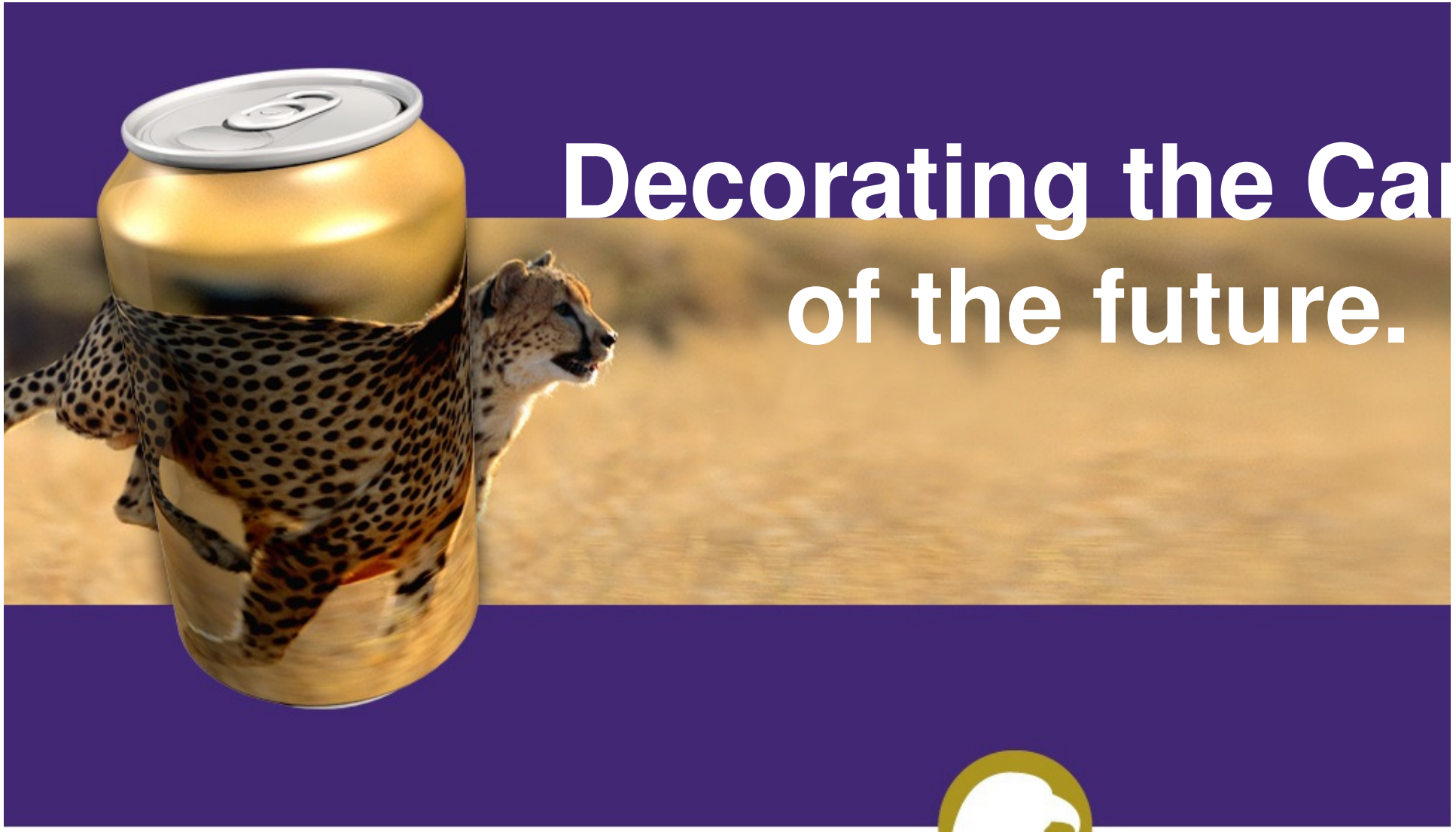

Harry van Tuyn CEO

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Our History

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1946 -1986 CCBC

Started in 1965

Rosario Today

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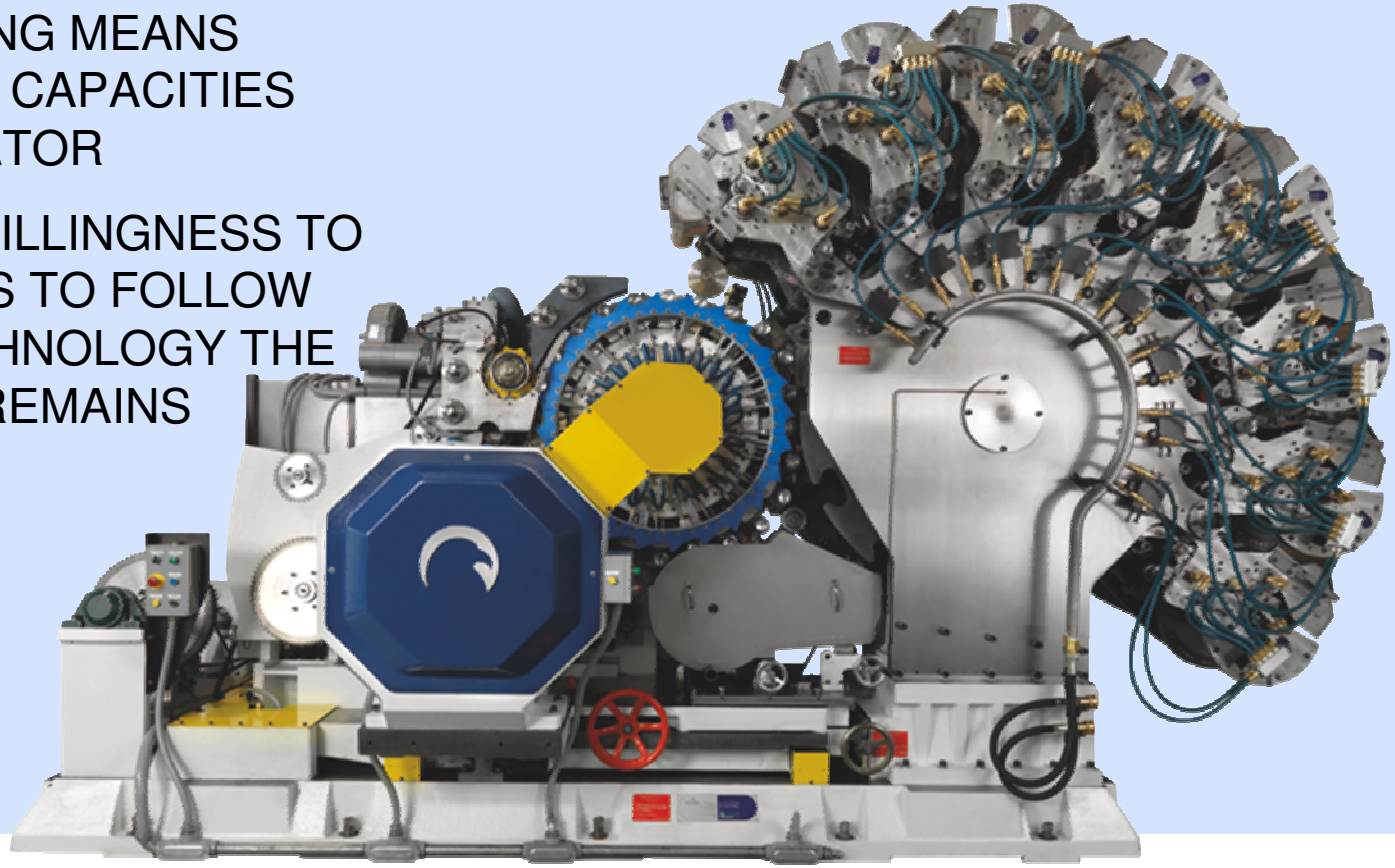
QUALITY PRINTING MEANS
OPTIMIZING THE CAPACITIES
OF THE DECORATOR

WITHOUT THE WILLINGNESS TO
BUILD MACHINES TO FOLLOW
NEW PRINT TECHNOLOGY THE
CANS QUALITY REMAINS
STANDARD



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Market requirement makes us change our machines

- »High Definition printing of other packaging.
- »Special surface finishes on cans
- »Colour stability
- »More production with less waste
- »Decrease of the Carbon Footprint.

This challenged standard can making practice.

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The canmaker's customers are demanding for a lower cost per thousand and at the same time a much better can

Suppliers without the desire to improve an the machine capacities loose share to those which do care to improve.

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Rosario's has that ongoing desire to be one of them!

We daily deal to improve the process and we send our design engineers a few times a year on a project on the canmakers floor for them to understand processes alike maintenance or Label changes are daily practice.

Through customers we do continuously improve our Machines, hereby some examples which were beneficial for customers and our Decorator capacities;

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The Tactile project with Rexam Recklinghausen;

(The desire to put special finishes on cans effectively.)

»Any layer on the can has to be effective to avoid damage or leaks.

»Application normally mists material which has to be vacuumed away and has to be eliminated.

»Any application requiring two wraps had to change to one as two polluted the machine surfaces and caused bad work areas.

»Changing between materials has to be fast to decrease downtime.

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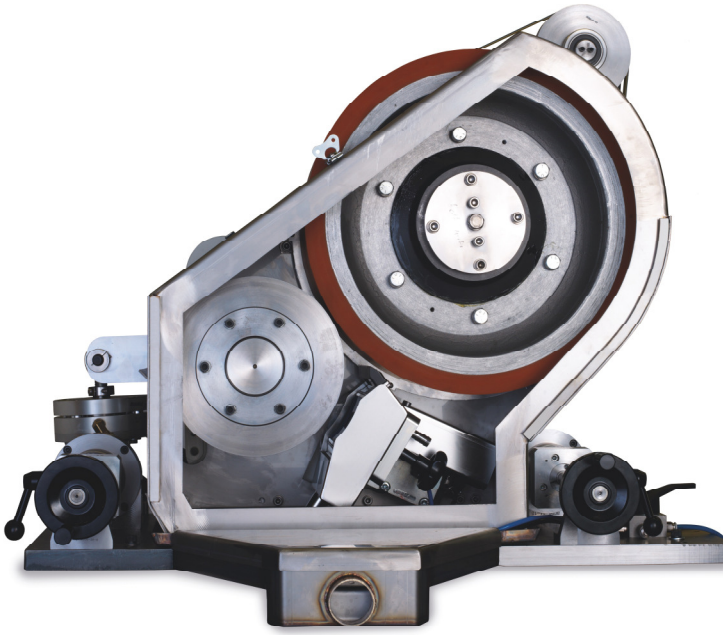
As the Reverse OV unit was unable to hold variation of weights on the can we designed a special fountain and quick change Gravure roller and is able running Tactile (textured) finishes in a standard style.

The old Varnish unit also has a flexing Gravure shaft.

Today;

- We control the weight variation and can reduce usage,
- We run any material with one wrap on the can
- We reduced misting & splashing to a minimum leaving air and machine cleaner.
- Operator friendly as cleaning a Gravure roller is easy, Gravure scraper blades exchange in minutes.



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Another projects were the Print sleeve projects;

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Print Quality included more control over dot gain;

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A change of four colours within the same label done in a minute

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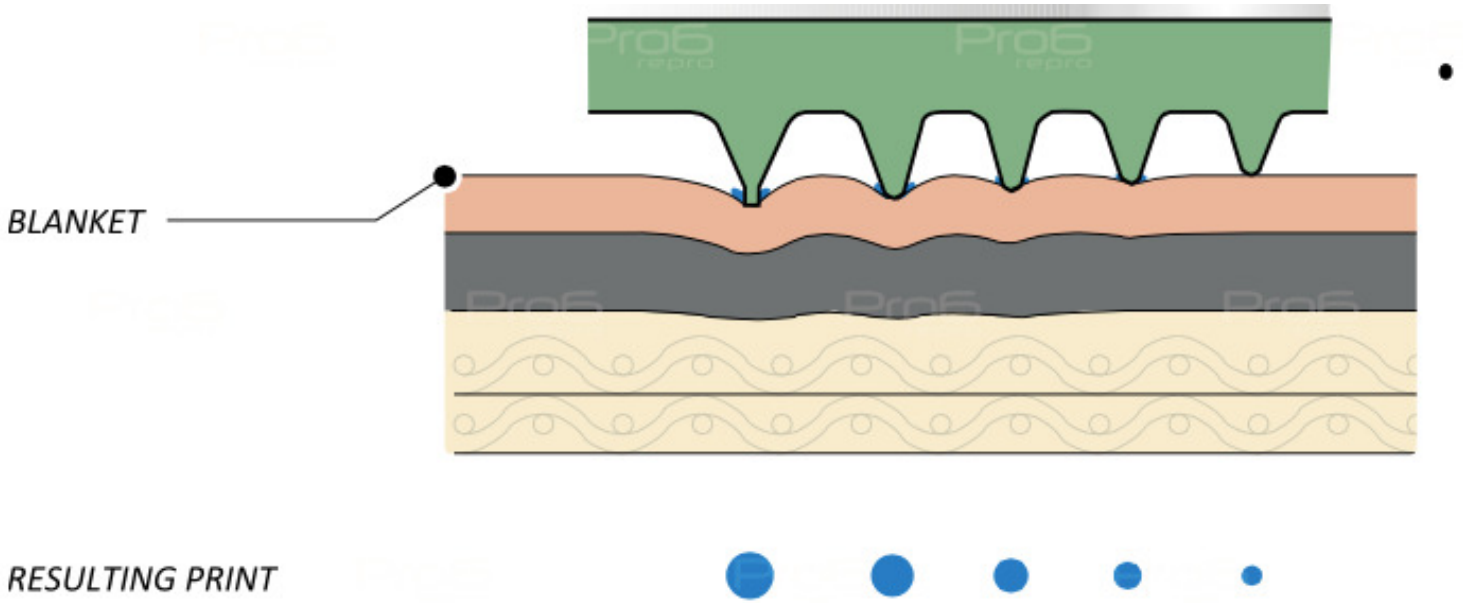
Dot gain is the pressure growth of isolated surface plate material due to the lack of support of other surface.

Dot gain shows especially at edges of images which at that position grow blanket pressure.



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To eliminate Dot Gain, platemakers engrave under surface, and that process needs the right application, to explain this we discuss the common plate making methods;

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Remember;

Any canmaker can print cans but only as good as the quality of the machine supplied to him!!

Kiss printing is a term used as the plate to blanket pressure is only 0,04 mm, over that principle the plate makers add Under surface engraving;

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On beverage can printers Kiss printing is allowed to be 0,04 mm!

Below factors are through the industry fixed known tolerances found in the decorator buy off documents!

These are;

»Runout Blanket cylinder maximum allowable variation; 0,012mm

»Runout Plate Cylinder shaft; 0,012mm max allowable variation

Add in the industry blankets are sorted within 0,01 mm variation

»Blanket thickness; 0,01mm (max variation).

Standard tolerances do allow Dot Gain as the variation count does exceed the Below surface values. Our decorators excel on tolerance to improve quality as we reduced these variations with 30% (Blanket can give additional improvements)

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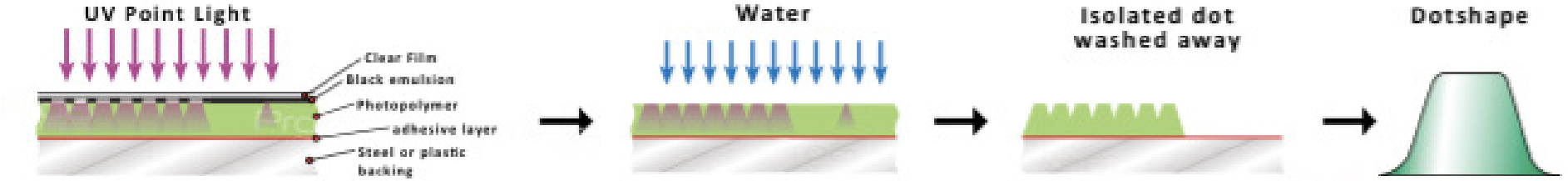
The plate making methods;

The conventional method which is phasing out, Film with UV light

The differences in the plate making process

- Conventional method.



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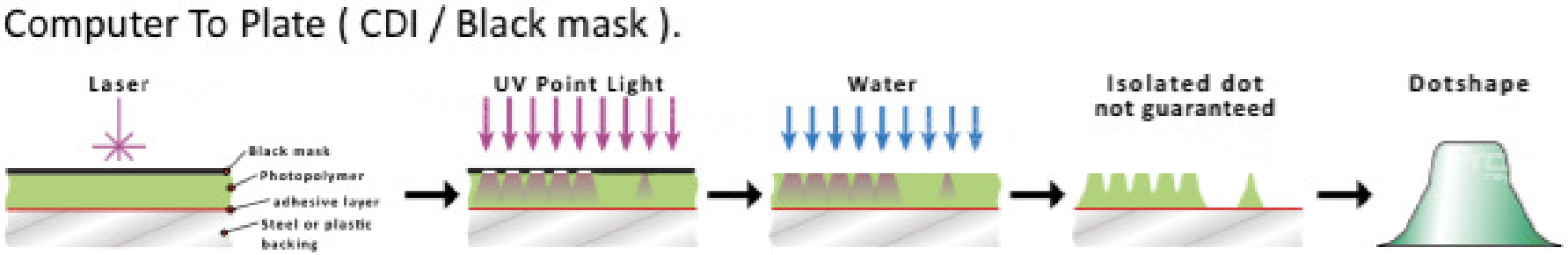
Laser engraving by puncturing masked surfaces CDI;



Gives a much better result than conventional but is not superb!

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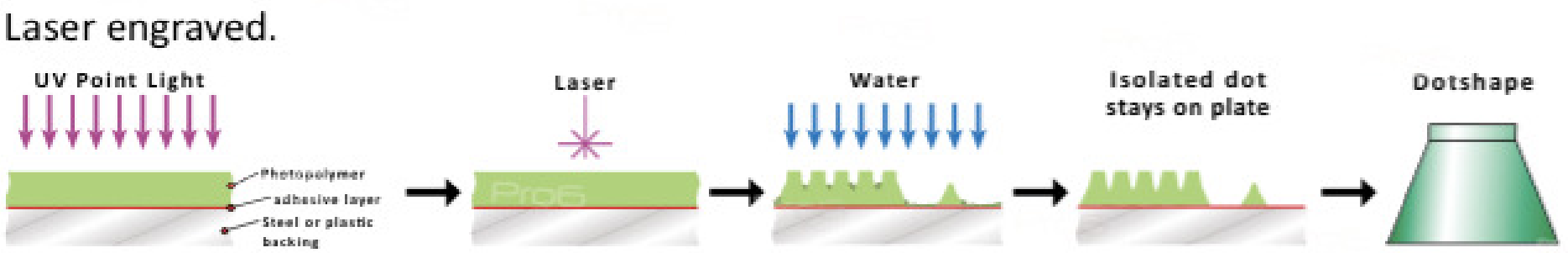
UV baked plate and Laser engraving; DLE, Direct Laser Engraving.



Gives a superb result but all methods need registration!

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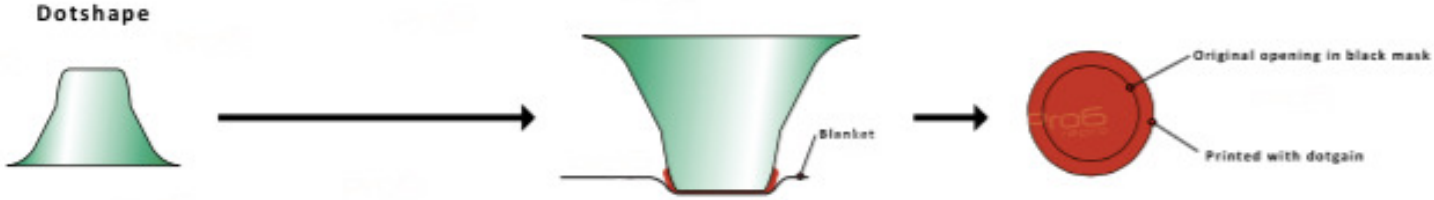
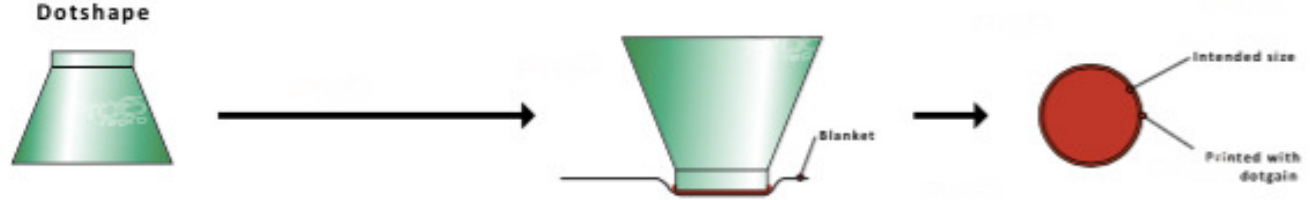
The differences in dot shapes

- Conventional.

- Computer To Plate (CDI / Black mask).



- Laser engraved.



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Our method, Direct Laser Engraving on virgin material:

By using the laser engraver immediately on our Thermoplast Sleeve using a registered to an on the laser engraver same reference makes time consuming manual registration no longer required.

OUR DLE SLEEVE ON TESTS WITH CANMAKERS

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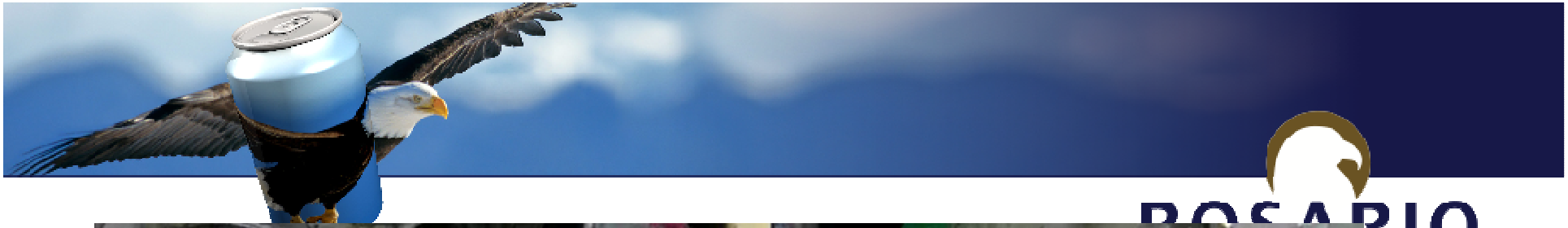
Rosario -TIGER DLE Sleeve



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ADVANTAGES OF THE ROSARIO PRINTING SLEEVE;

- Per Label change between 20 and 30 minutes production gain
- Per Label Change only 50 cans prove registration compared to 2000 wasted.
- On Diameter Direct laser engraving does not cause distortion, plates do!
- Relief for the operators as Cylinders stay in place keeping registration optimal
- Thanks to the improved registration and better print, higher line work is allowed,
- The sleeves have a superb Ink transfer
- Compared to printing plates, it takes only10 minutes to engrave a sleeve
- Return on investment is between a few weeks and 4 months
- Enormous decrease of Carbon footprint, sleeves will recycle.

Largest production run was so far is 150.000 50cl cans, next November 2.000.000
Canplant financial data available to support above.

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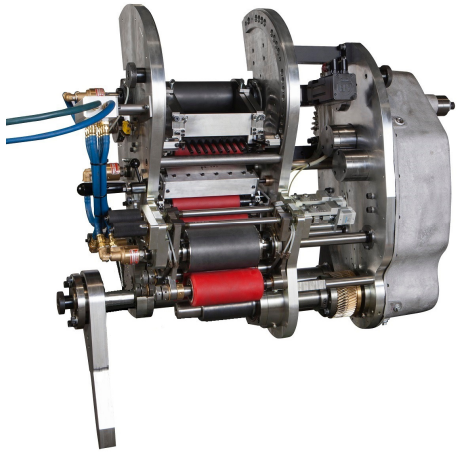
Next; Ink transport;

Factors to be kept in control on the inker;

- »Right amount of Ink from fountain Pick-up made electronic
- »Precision plate cylinder shaft to eliminate runout
- »Ideal form and distributor roller set-up
- »Three form rollers instead of two
- »Cooling ΔT with IR sensors (optional)
- »Temperature control unit (optional)



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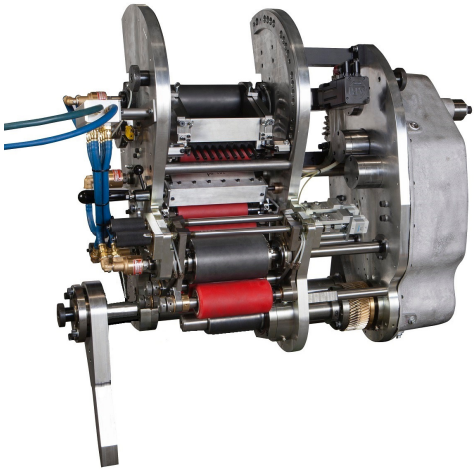
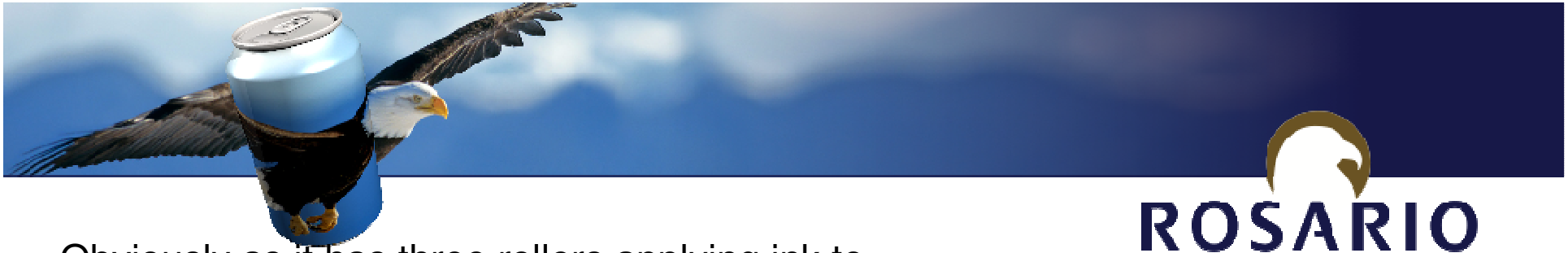
Ink Application;

To control film weight a lot of factors have to be controlled;

- »Distribution
- »Ink Viscosity,
- »Ink Temperature
- »Roller alignment
- »Positioning of ink on plate where required

Our new three form roller inker does all of the above better than any other inker for the following reason;





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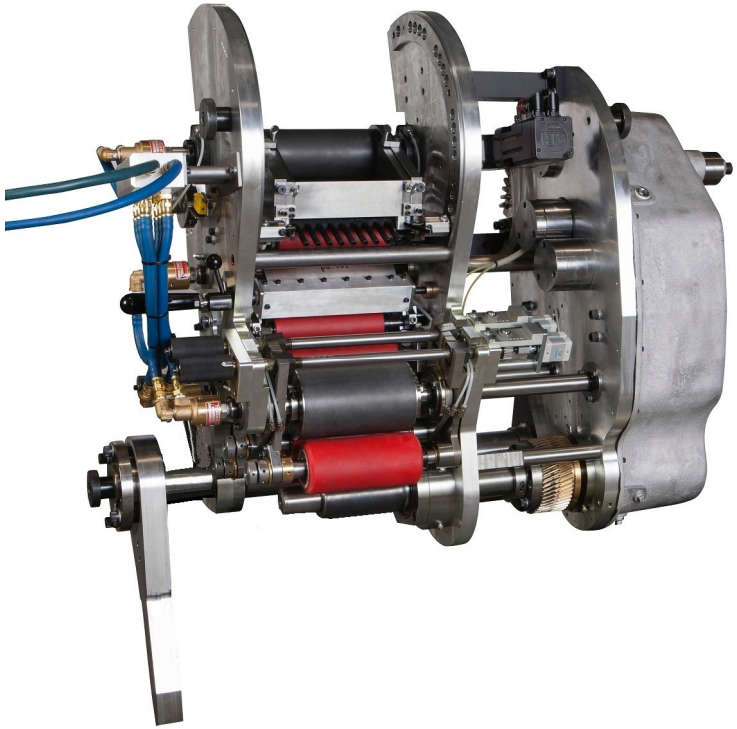
- Obviously as it has three rollers applying ink to the plate,
- Better control over light to dark with a servo driven fountain,
- Pneumatic ductor roller control,
- A more accurate Form roller throw off, to add accuracy for blown off cans,
- Parallel water-cooling, and optionally we can provide high flow rollers which correct faster.

Add that these inkers have easy adjustable from the front form rollers, a very effective wash-up system (quick ink changing) and require almost no maintenance.

Add this inker hardly creates misting



15 sold in two months time

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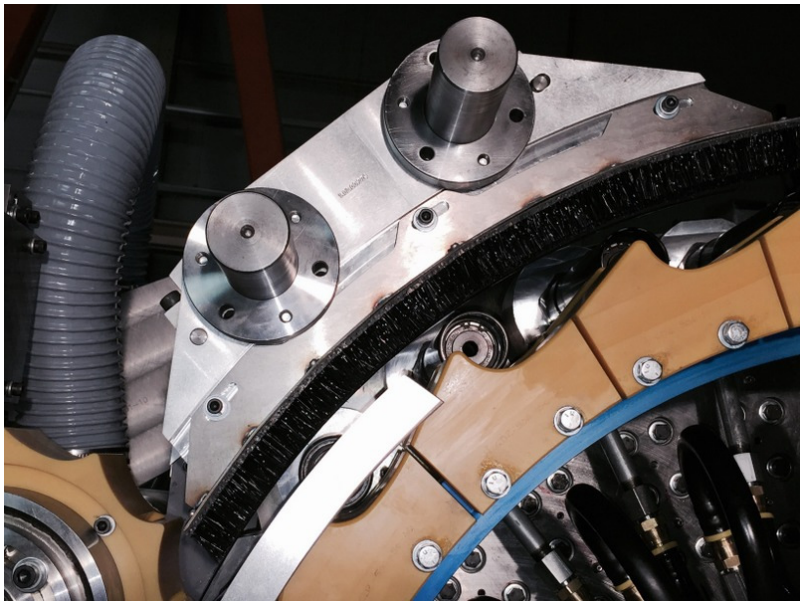
In case all previous is right you are set for speed;

but you obverse;



»Perfect Starwheel to Cancarrier relation

»Can loading based on Volume of vacuum

»effective can discharge on Pinchain

»Quality of the mandrels

»Cancarrierring stability

»Can stabilizer brush assembly

»Off machine factors alike mobility and conveyor capacity

working within tighter tolerances

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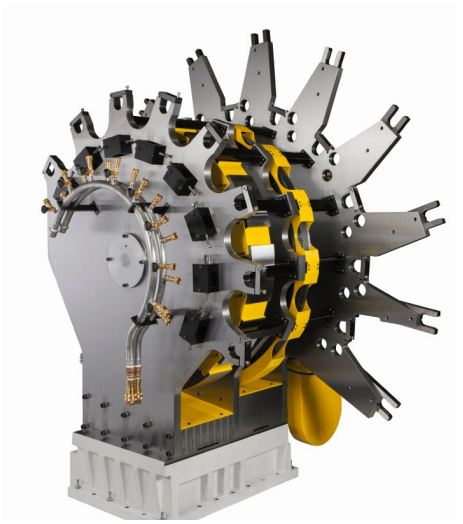
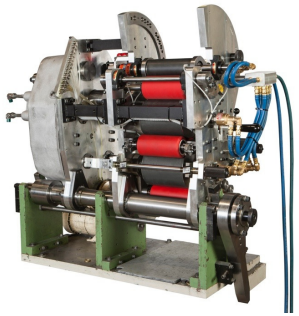
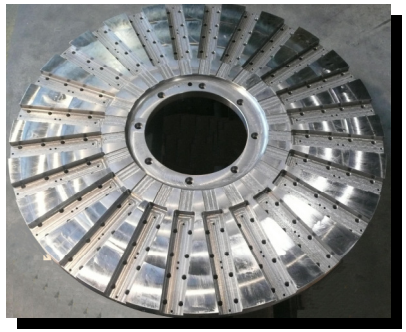
Improved Vacuum Infeed

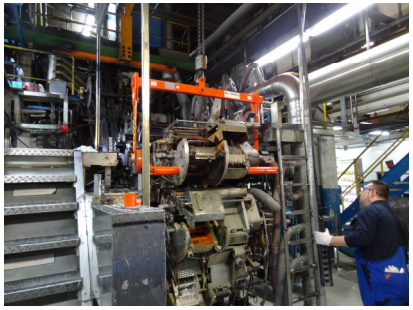


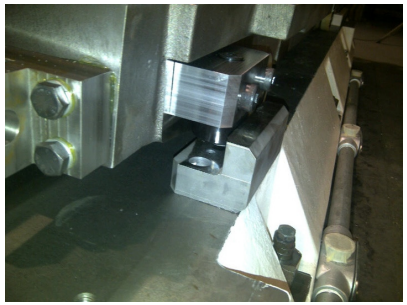




Reverse Varnish U

20 Station Transfer





Low Clearance I

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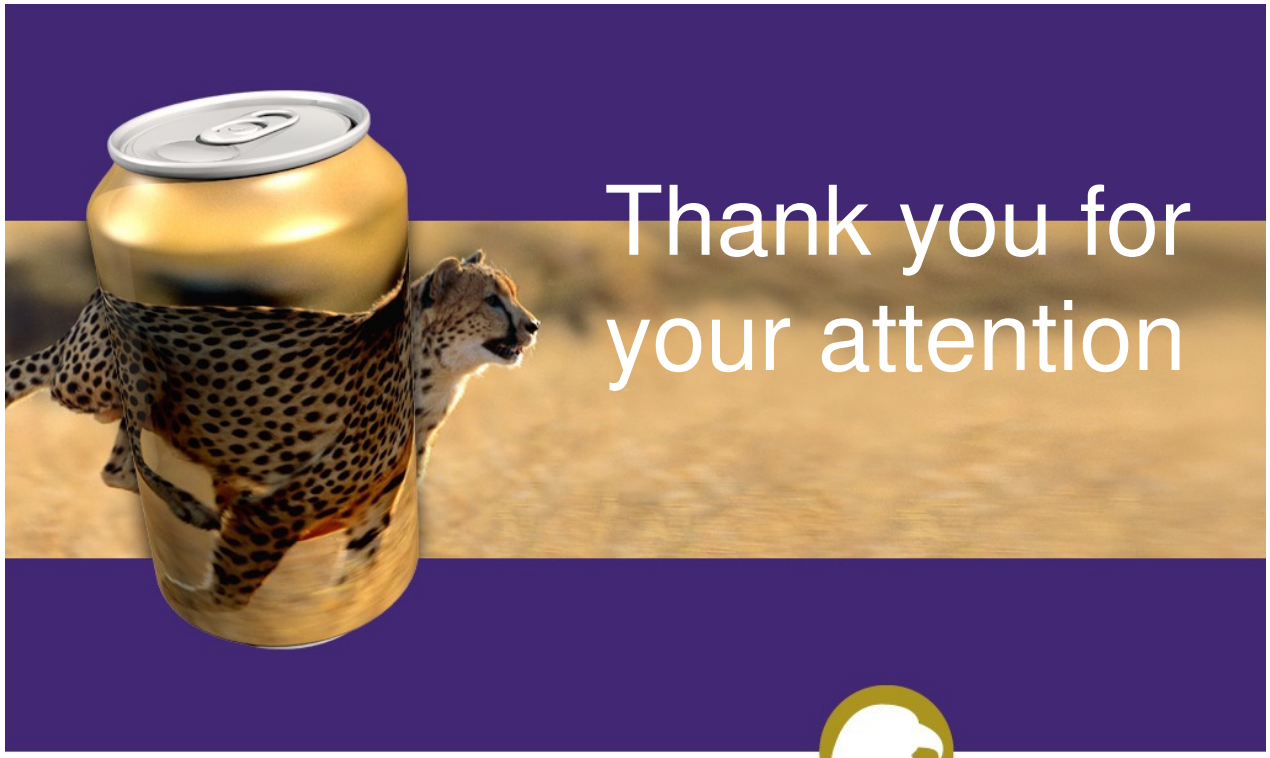

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