PRINTING TECHNOLOGY & INNOVATION DAYS FOR FLEXIBLE PACKAGING

ESA & Static Control in the packaging printing

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ENULEC® Global Presence:

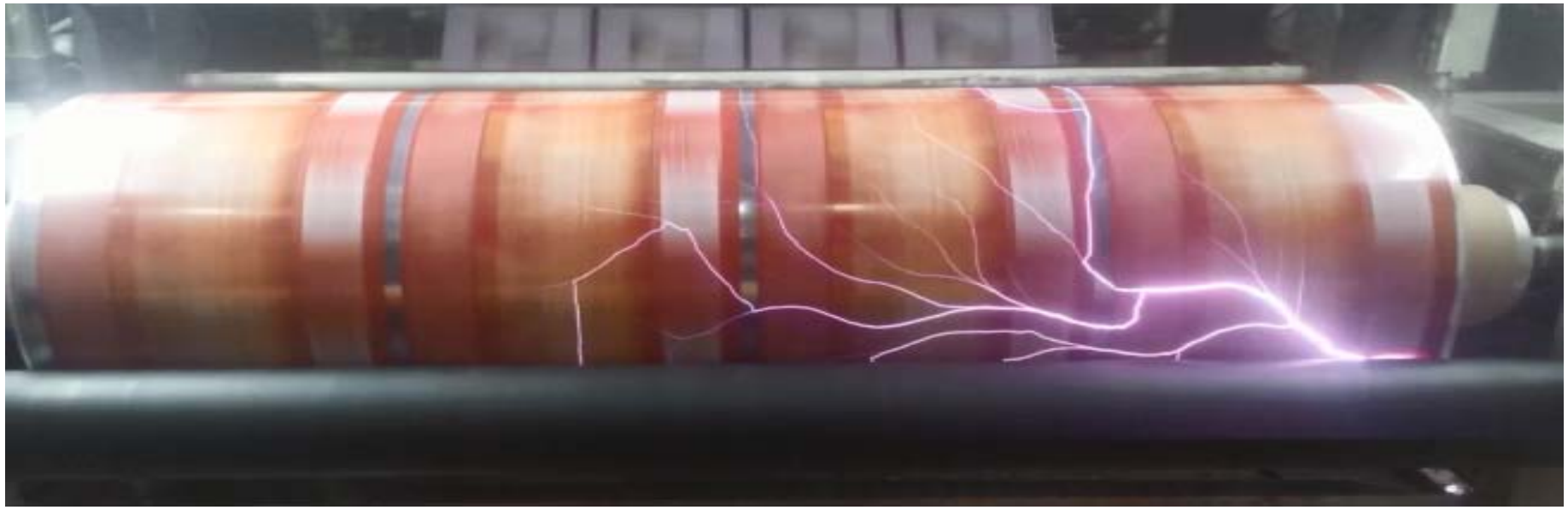
- Headquarter Trittau, Germany
- Subsidiary Lugano, Switzerland
- Subsidiary St. Louis, USA
- Subsidiary Shanghai area, China
- 43 Sales partner worldwide
- 12 Service center worldwide

ENULEC is a leading global supplier of ESA systems and more electrostatic systems.

More than 90 % of Enulec customers are doing flexible packaging business.

What are static charges?

What can static charges do?

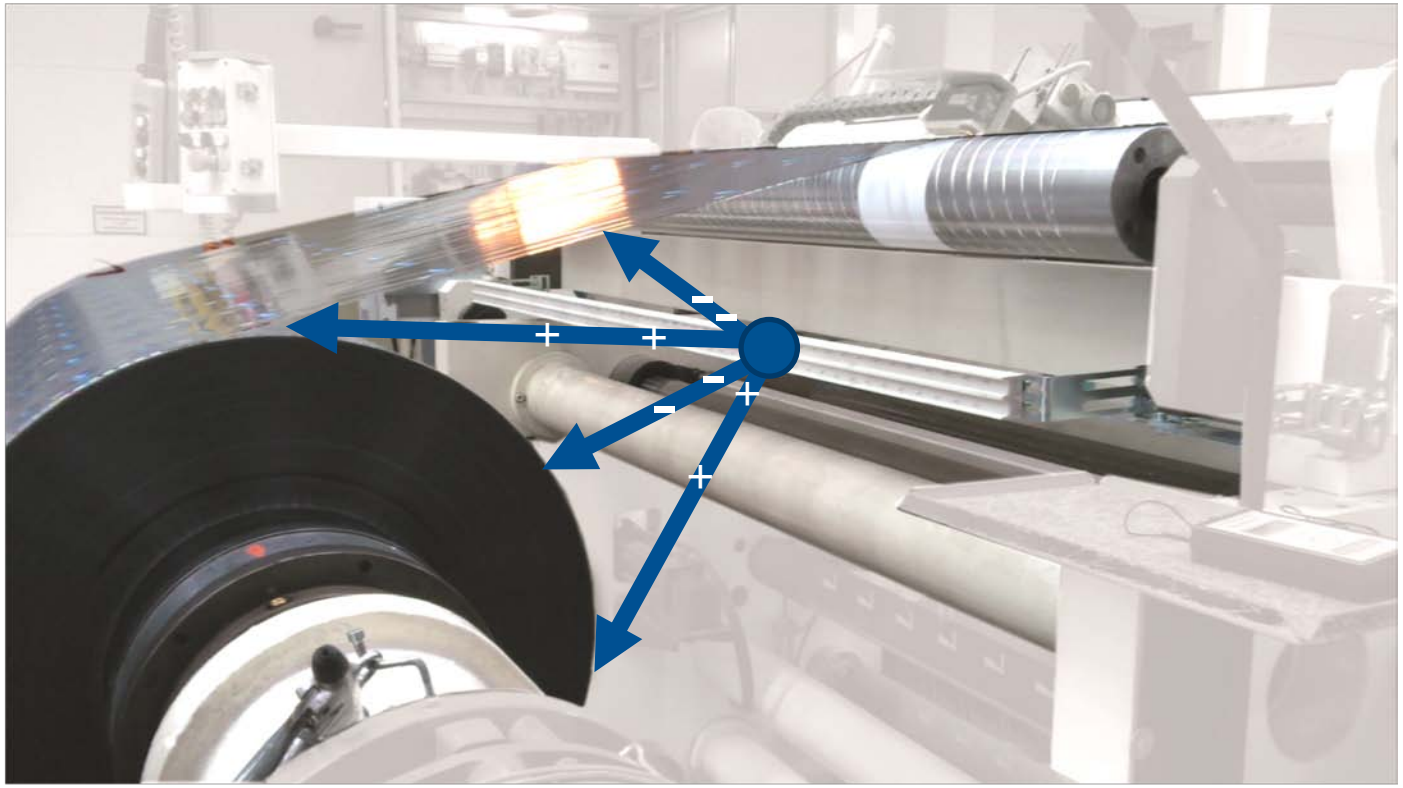


Static charges can damage material

Static charges can hurt operator

Static charges can create sparks

How are discharging systems working?

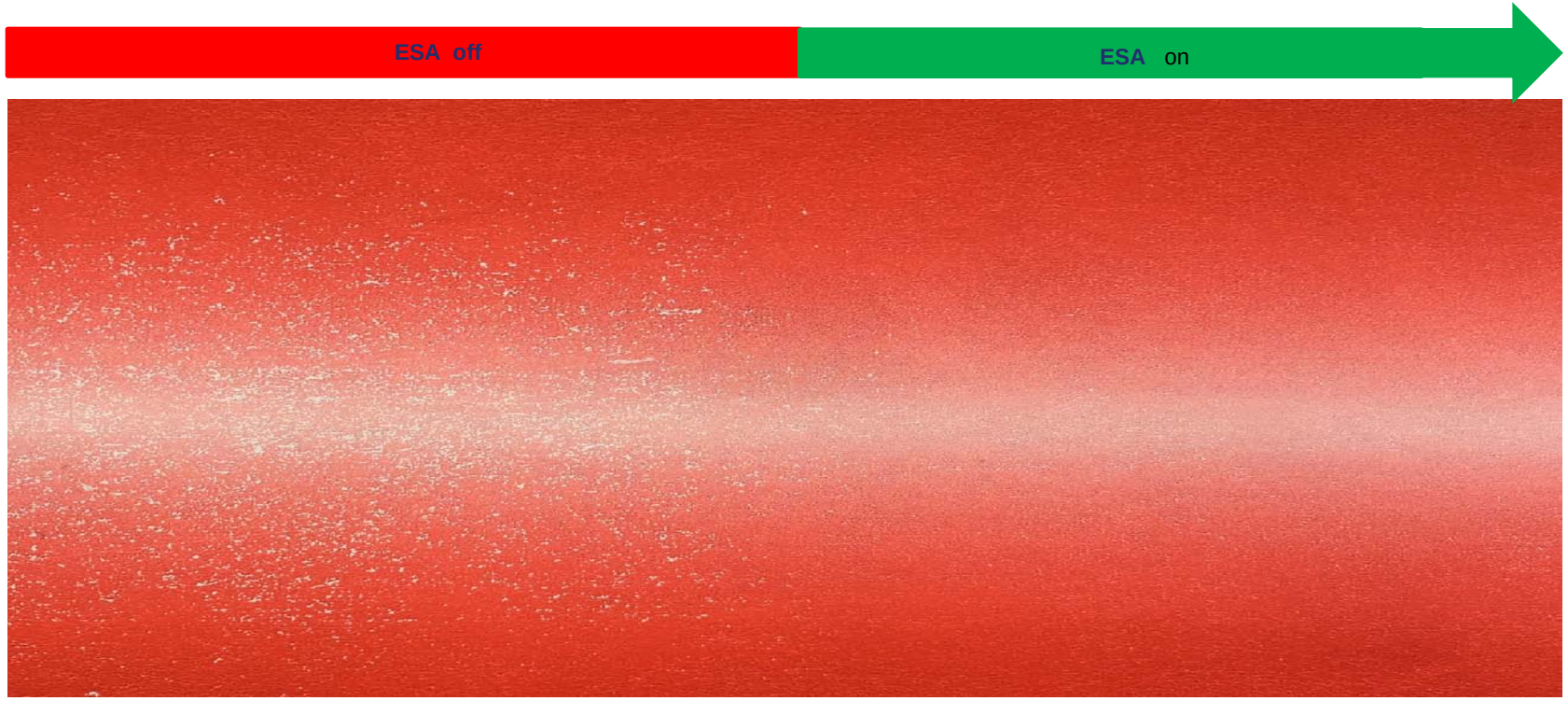


Always highest safety in printing machines

New rotogravure machines are equipped with active Enulec discharge bars

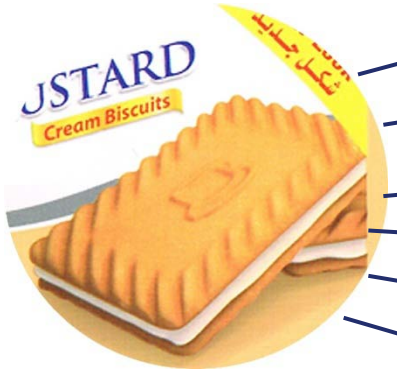
Enulec improves print quality of rotogravure machines

Start of ENULEC ESA



Electro Static Assist = ESA

No ESA



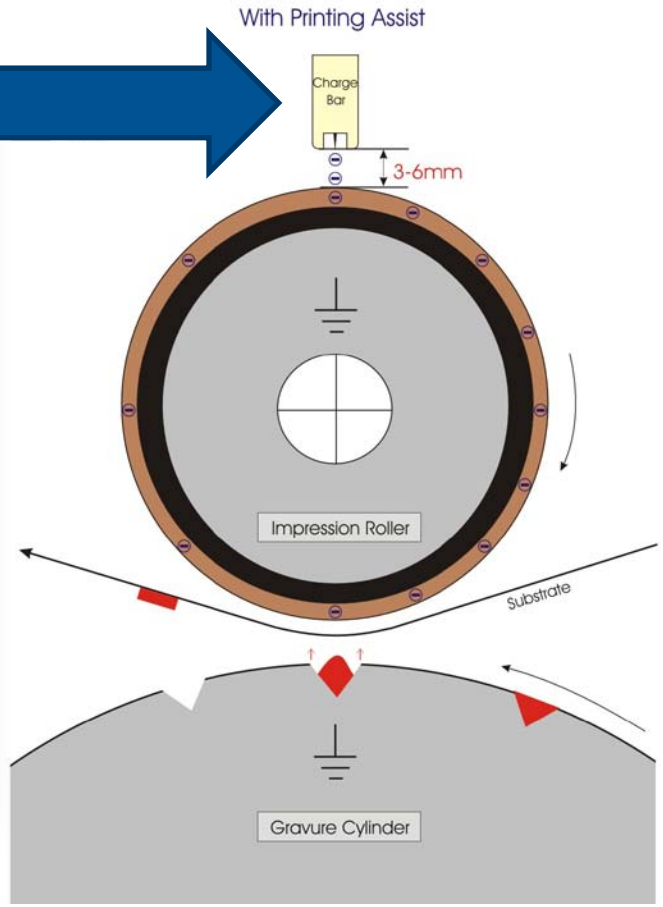
printed with ENULEC ESA

Sample -> film PET 12 micron

What does Enulec ESA do?

- ENULEC ESA ensure always optimum ink transfer
- Prevents the cell dry blocking issue
- On all types of plastic film material
- Eliminates “ Missing dots”
- Improves ink density
- Complete Gravure Cell Evacuation

ENULEC® ESA Princible



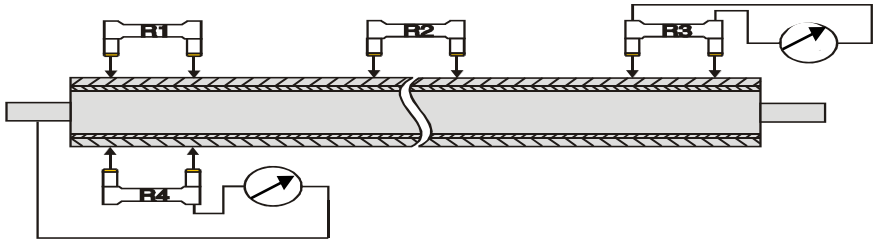
ESA impression roller → semi conductive roller

- roller need special surface resistance
- roller need special isolation resistance
- roller supplier will take care for resistance
- excellent experiences with Rossini

Surface resistance
R1 1 – 20 MOhm

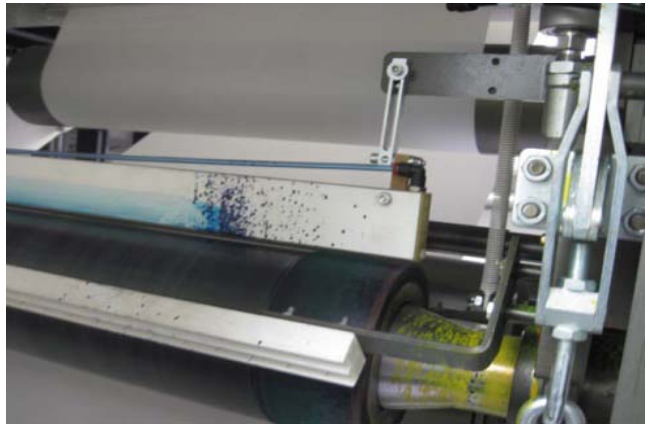
Surface resistance
R2 1 – 20 MOhm

Surface resistance
R3 1 – 20 MOhm



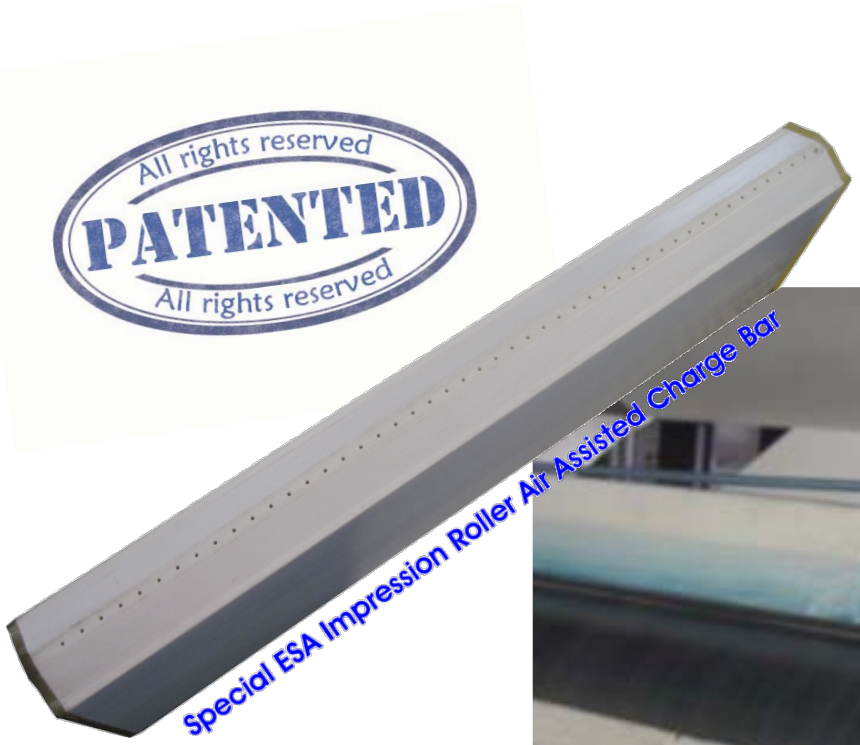
İsolation resistance
R4 1 – 2 GOhm

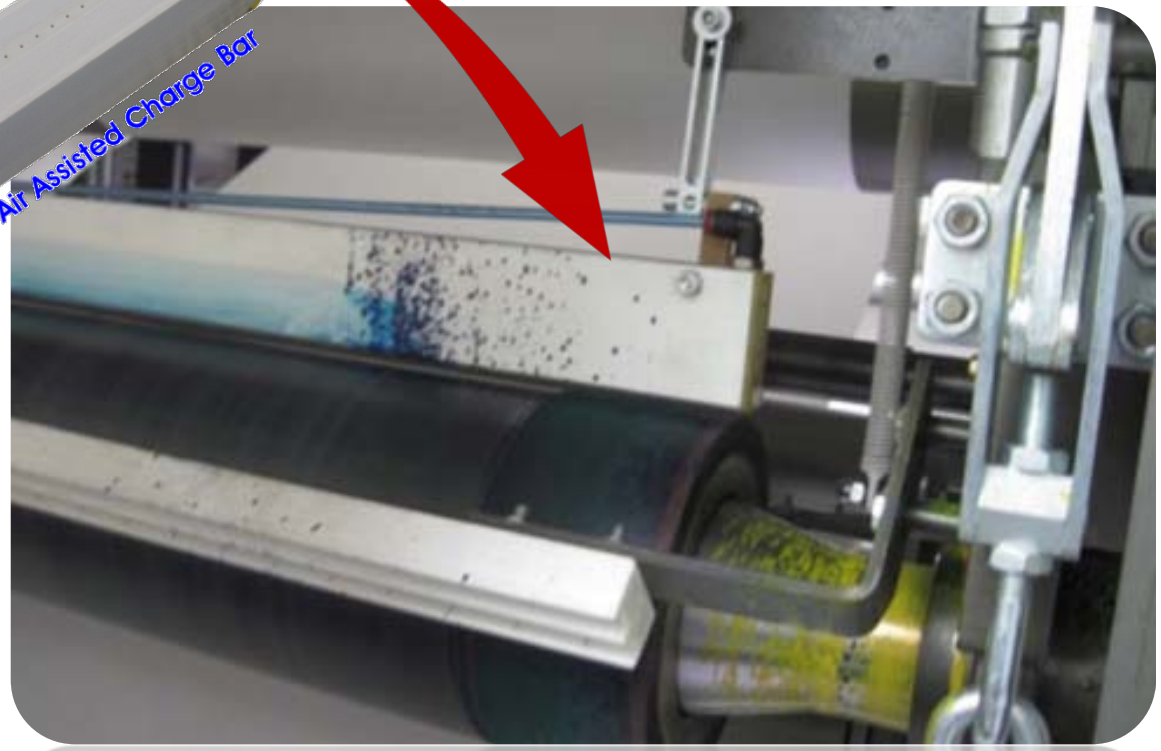
ENULEC Standard Charge Bar



- Life expectancy of up to 15 years !
- 5 mm needle pitch for consist ESA!
- ATEX Certification class IIA and IIB !

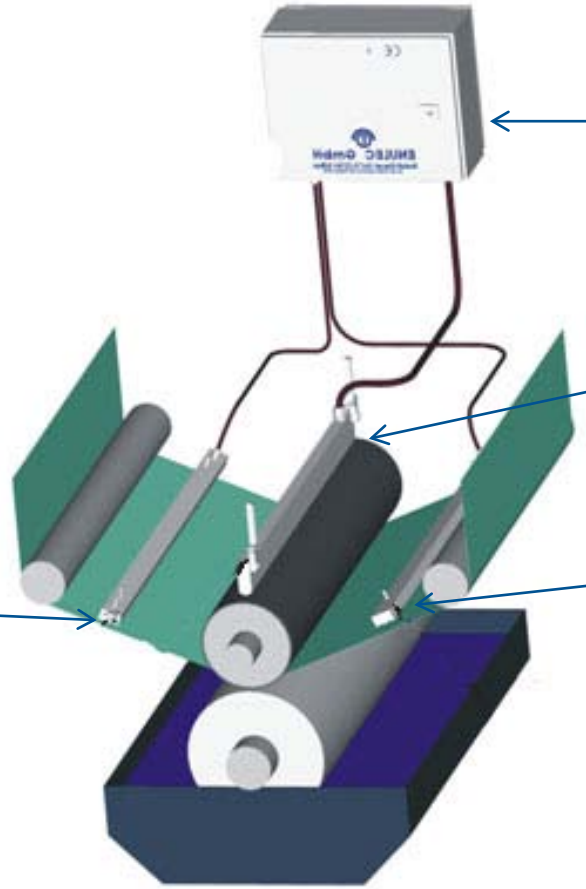
ENULEC® ESA Air Assisted Top Loading



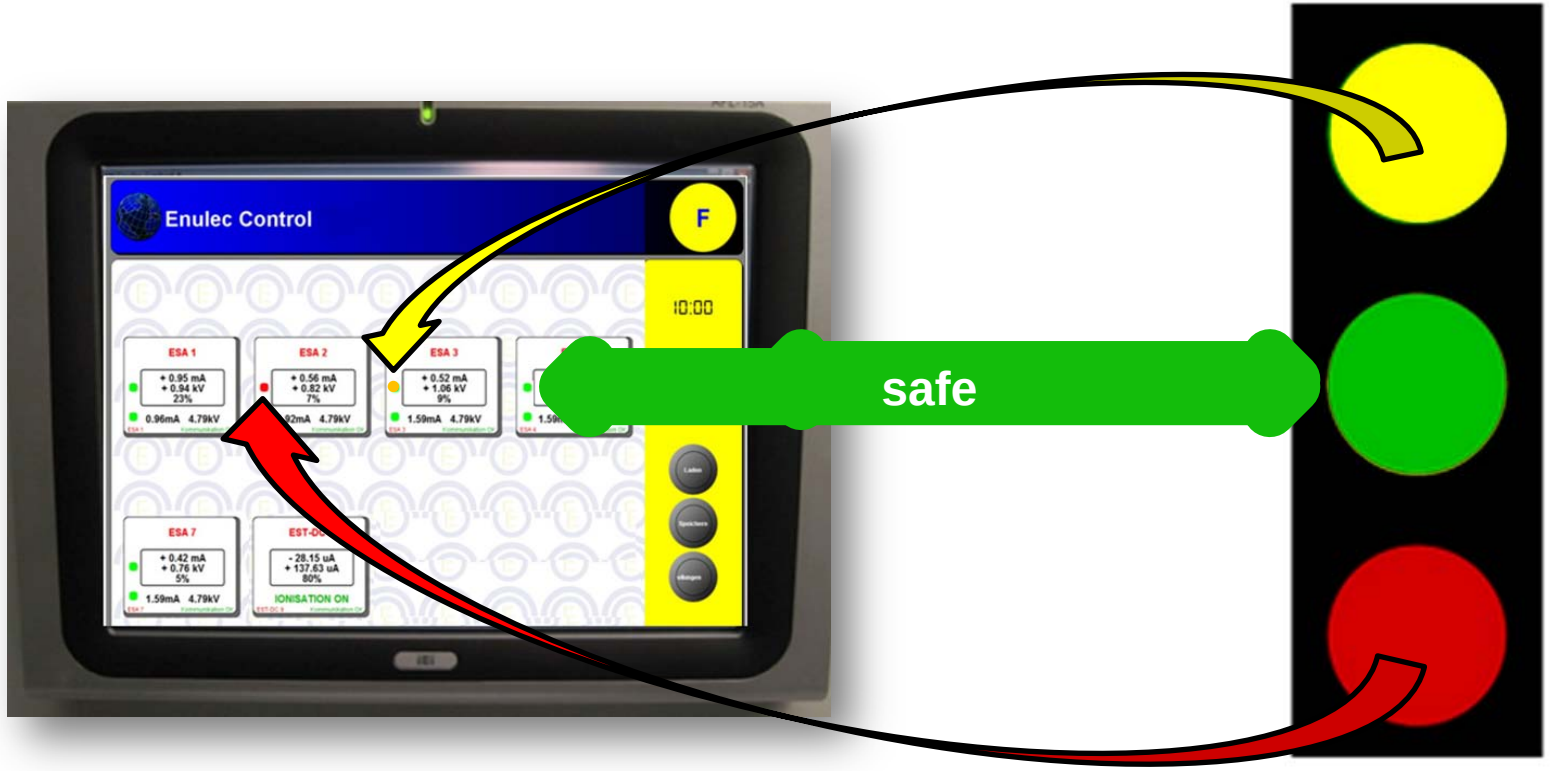


- Highest safety
- Air stream keeps pins clean

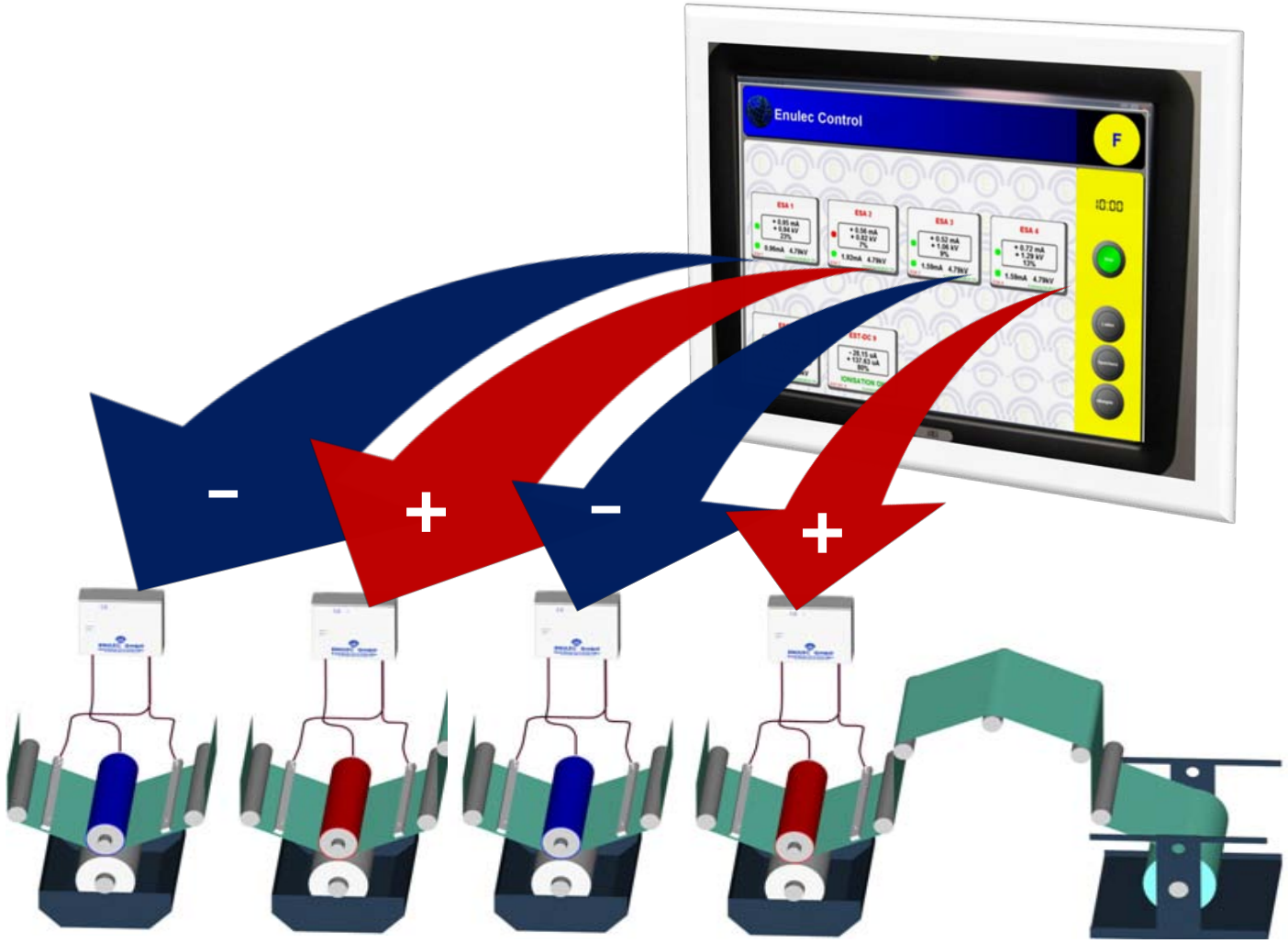
ESA components in printing units



ENULEC® ESA Control increase the safety

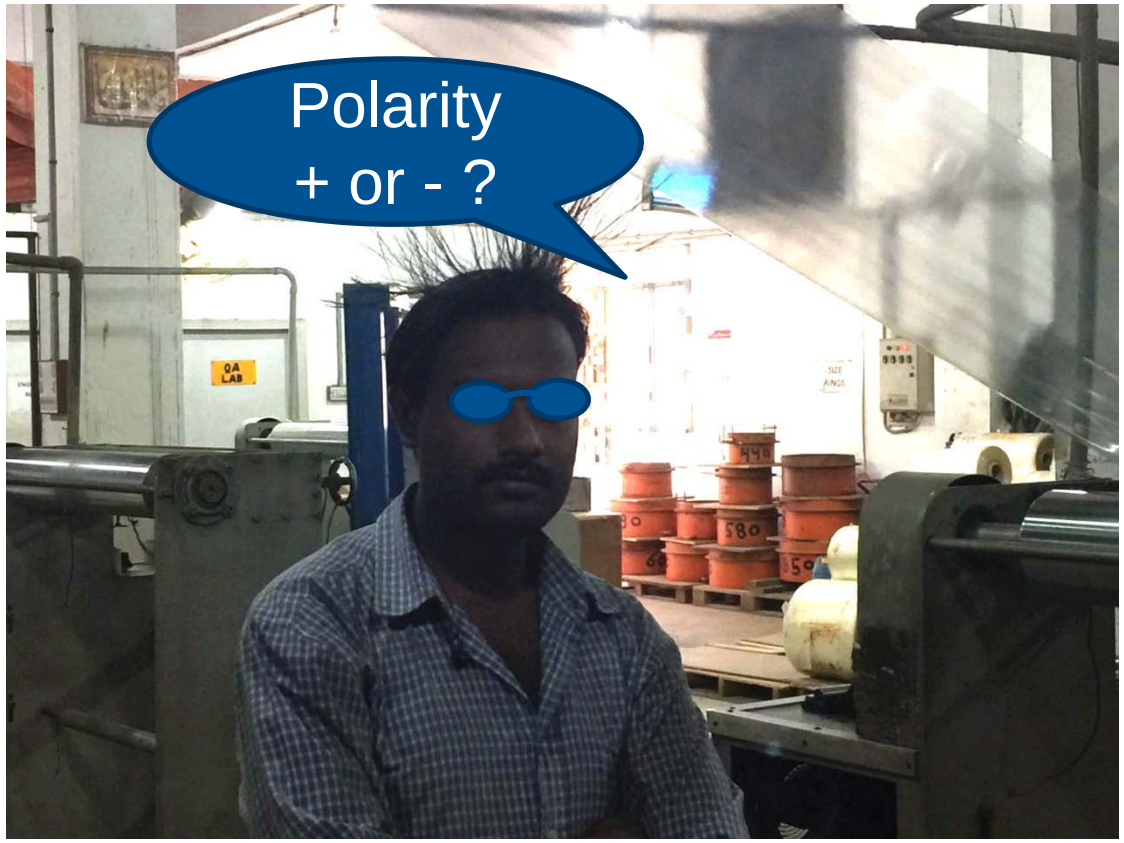


ENULEC® ESA Roto-Film Control



ENULEC® Balanced Charging keeps the static low

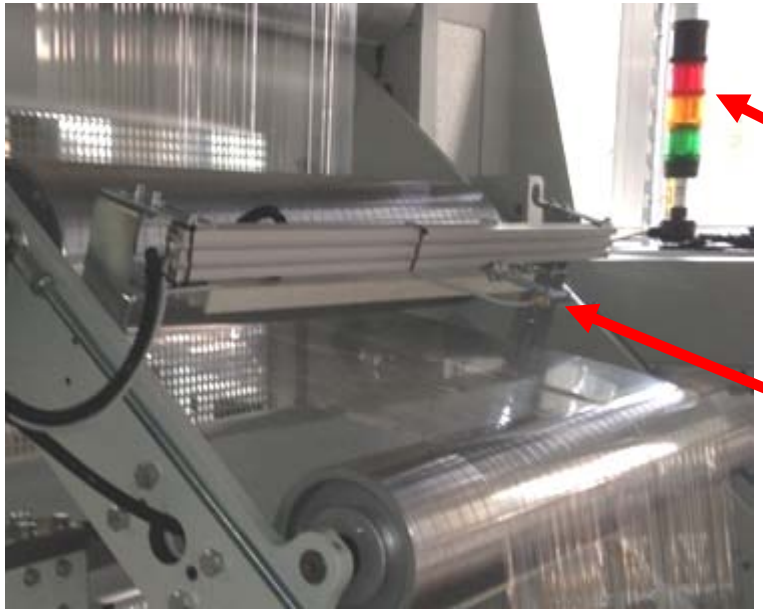
Static Control, any more required?



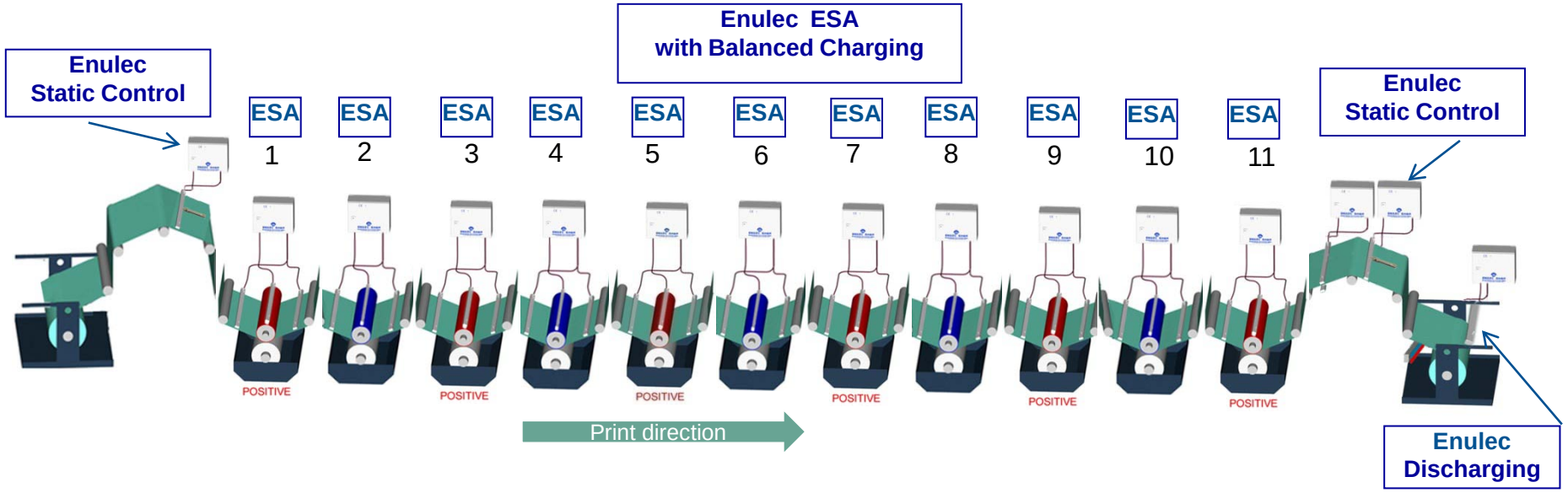
ENULEC Static Charge Inline Control

Electrostatic Field Measurement

- Detection of static charges on printing-, lamination-, slitting- and blown film machines



ENULEC
European configuration of rotogravure



Thank you for joining

the world of Enulec Electrostatic

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THANK YOU FOR YOUR ATTENTION.

janoschka

nordmeccanica group

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IMAGE TO PRINT