

Full electrostatic control on flexoprinting machines

Flexographic printing lines are developed to produce flexible packaging in a variety of colours and finishes at high speeds. You can recognise static electricity by experiencing static shocks or seeing sparks as a discharging effect. Electrostatic charges can create problems in numerous sections of the flexoprinting process.

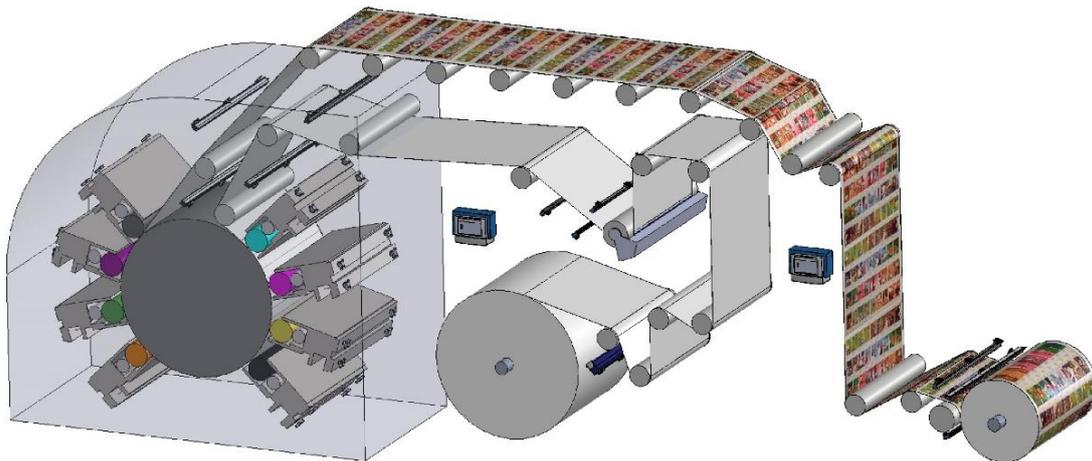


Discharging the web directly after the unwinding process will prevent that an electrostatic charge will attract dust particles from the environment and operators will not experience shocks while passing the web.

If the material passes a corona treater a massive electrostatic charge is created on the material, here a discharging section (in Close Loop Feedback; CLFB) is recommended. If the printing section is indicated as Ex-area due to the use of solvents, electrostatic charges on the material can act as a possible ignition source that could result in a fire. Neutralising before the material touches the central drum is done by an ATEX approved static eliminator; the [Performax IQ Easy EX](#).

Inside the printing section the material is passing multiple rollers and static electricity is re-created. Directly after the material is releasing from the central drum the material is again neutralised by ATEX approved static eliminators. Pollution of the ionisation bars is a major issue in the printing Ex environment, so the efficiency level of the ionisers is monitored by the [Simco IQ Manager System](#). If the efficiency goes below a pre-defined static level the IQ Manager will warn the operator to do maintenance on the anti-static equipment.

After the printing section the material is re-charged in the dryer, optional anti-static eliminators can neutralise the static charge before it goes to the next section.



Note: Drawings and pictures do not show the application one to one, but clarify the situation and approach reality

On the winding station, static eliminators are installed to neutralise the material during winding, this will also prevent possible static shocks to the operator that performs the roll change. Another effect that can be prevented by discharging the material is the telescoping effect on the end roll.

[In-line measuring](#) and datalogging of static charge levels during winding can be used in quality reporting. The [IQ Manager System](#) can be directly connected to the PLC of the flexoprinting machine via Fieldbus connection. An alarm level alerts the operator in case the static charge reaches a dangerous level. This is how the IQ Manager System provides all essential information to maintain high speed, high quality and competitive flexoprinting. Interested to learn more about the effect of static electricity?

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