



# TECHNOLOGY

## Detailed Information

### CAPACITOR TECHNOLOGY

## Pattern Printing System

### Introduction

The pattern printing system is used to produce special, segmented, film capacitors. The functional principle of the system is based on the known flexo printing technology of the general printing industry. The major difference compared with the processes of the general printing industry is the transfer of oil instead of paint.

The system consists of an oil evaporator, anilox- and flexo roller. The oil evaporator is an indirectly heated tube and is used as the oil reservoir. The anilox- or transfer roller is made of steel with a ceramic surface and structured with small saucers. The flexo roller consists of a pneumatical cylinder, adapter and sleeve. The structure of the sleeves is the reference to different products. There are diamond-, T-, TD- and special structures in different sizes and dimensions available.



Fig 1: Capacitor film with Al / Zn-HE layer and diamond margin





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### Innovation

Most important for a precise and reproducible printing quality is the consistent transfer and optimum quantity of oil, according to the product and process requirements like individual pattern structure, process speed and layer thickness.

Basic prerequisite for a consistent transfer is a constant contact pressure between anilox- and flexo roller and between flexo roller and coating drum. This constant contact pressure is now achieved by four highly accurate positioning servo motors. Anilox- and flexo rollers are equipped with two servo motors in each case, one on the left and one on the right side, for individual positioning. Via the servo motors, the anilox roller can be approached and removed to/from the flexo roller, and also the flexo roller can be approached and removed to/from the coating drum.

In order to avoid any damage of the sensitive thin sleeves, and for service purposes, the contact between the three rollers must be repealed. During the processes the rollers are approached with a constant pressure to each other.

The optimum quantity of oil can be adjusted via temperature of the oil in the oil evaporator.

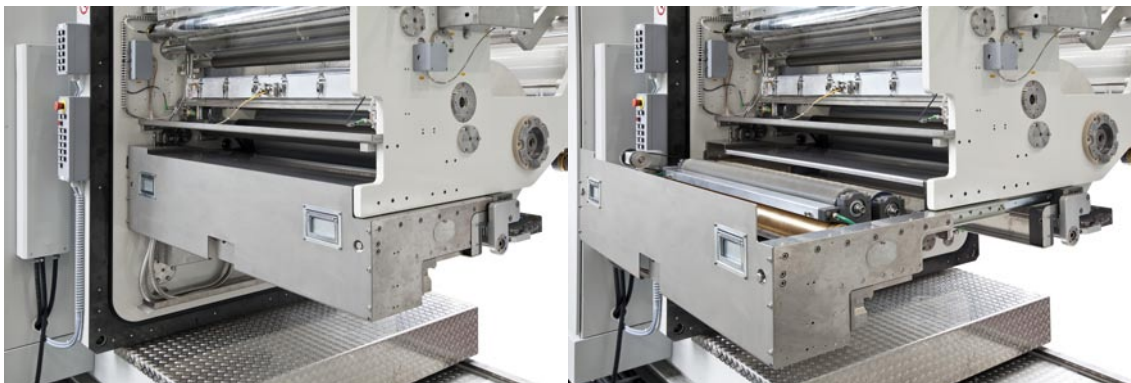


Fig 2: Pattern printing system – drawer closed

Fig 3: Pattern printing system – drawer opened





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### Advantages and benefits

- Capability of continuous mass production.
- Reproducibility of processes.
- Highly precise printing quality<sup>1</sup>.
- Operator convenience and best accessibility due to design in a drawer.
- Option: The component is a selectable option in our CAP-M systems.

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<sup>1</sup> Minimum size of structures on the sleeves is 0,01 mm.

