

What is thermal transfer overprinting?

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Thermal transfer overprinting (TTO) is a digital printing process that offers an alternative to hot stampers and other traditional analogue printing techniques.



Thermal transfer overprinting works by creating high-quality and high-definition marks, codes and images by transferring ink onto a flexible substrate from a coated ribbon. This ribbon is covered with a wax-resin compound, or just resin, depending on the coding requirements.

TTO printheads have small resistors that swiftly and accurately heat the print area, transferring the relevant colour to the surface of the substrate. The fast on/off action is precise, ensuring that the heat causes no damage to the substrate.

Thermal transfer printers can be used for continuous or intermittent printing, making this technology suitable for an array of challenging applications including prices, date and time codes, barcodes, QR codes, logos, and ingredient or other mandatory information.

TTO technology is ideal for flexible substrates, including:

- Plastics
- Foils
- Films (plastic or foil)

- Paper label stock
- Flat packaging
- Low-density polyethylene shrink-wrap and other delicate materials

The difference between TTO and direct thermal printing is that in direct thermal printing there is no ribbon used in the printing process. However, leading thermal transfer overprinting machinery is engineered to use only a minimal amount of ribbon, which reduces wastage and means that this technology provides your packaging and labelling line with an economical and modern coding solution.

The benefits of choosing this technology for your business include:

- Extremely high-resolution print quality
- The ability to code fast moving products in real time
- Optimum water-fastness, which is ideal for industrial label printing and coding
- Wax-resin compounds and full resins can be used on materials such as polypropylene to increase durability.
- Solvent-free printing
- Low cost of ownership due to the optimal use of ribbon

We have the experience and knowledge to assist you in selecting the perfect machine for your requirements. [Contact](#) Pyrotec PackMark today.

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