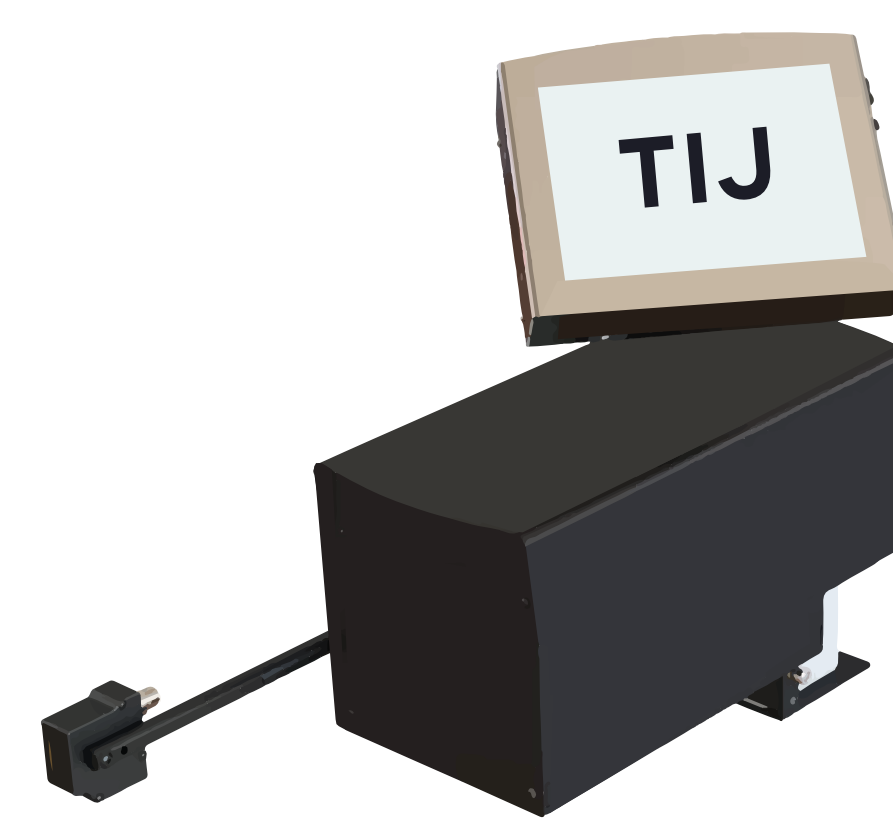




**Thermal Transfer Overprinting**

# TTO versus TIJ



**Entry Level Thermal Inkjet**

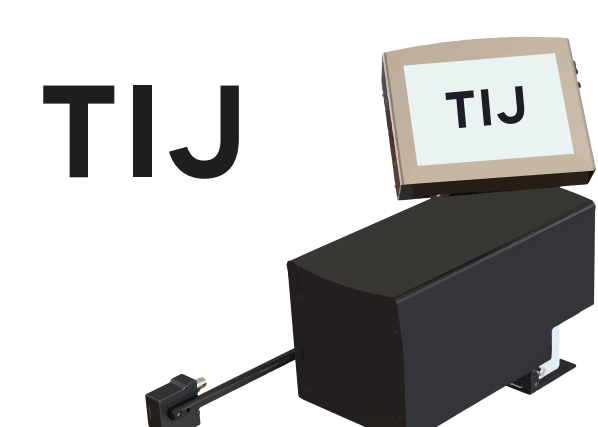
## Which technology is most suitable for my flexible film printing needs?

Entry level TIJ systems do come with some benefits. It's a non-contact process that is often low-maintenance and has a low-acquisition cost. However, Clearmark experts are seeing more and more needing to be replaced with TTO systems due to it not being the most suitable technology for their operations.

The below highlights the benefits of using TTO technology over entry level TIJ systems for flexible film printing.



**TTO**



**TIJ**

### Print format

- ✓ Large print area flexibility for X and Y axis
- ✓ Free to print in any direction

- ✗ Limited to Y axis (head height)
- ✗ Print orientation is more critical on TIJ

### Barcodes

- ✓ More barcode sizes available due to width of printheads
- ✓ No problem for GS1 standards

- ✗ TIJ is restricted to barcode height >12mm - if a twin head is used, 24mm is possible but it will have a gap and cross-stitch

### Substrate Range

- ✓ TTO has many variants of ribbon types in many colours that can cope with a large range of substrates

- ✗ TIJ is limited in range of substrates

### Integration

- ✓ Catalogue of machines - 2000 different styles, all of which have TTO mounting solutions

- ✗ Can incur additional hidden costs when fitted directly onto a packaging machine, e.g. extra encoders, sensors and registration

### Dry Time

- ✓ TTO is clean technology
- ✓ Instantly dry print

- ✗ TIJ has a dry time, meaning there is a potential for the print to smudge if contact is made before fully dry

### Application Limits

- ✓ TTO can print in all orientations

- ✗ TIJ restricted in printing to side or top of pack, but not underside

### Code-checking

- ✓ Can have built-in print checking software, like iAssure for the ICE Zodiac Hawk.

- ✗ No internal code checking software, meaning additional scanners need to be purchased

### Global Standards

- ✓ TTO has been for many years and still is a global standard technology of choice for many packaging operations

- ✗ TIJ is a niche product, only suitable for restricted application

### Support

- ✓ TTO well supported due to decades of being a trusted and proven technology

- ✗ Low cost imported TIJ systems are often poorly supported in the UK.

### Environment

- ✓ TTO has proven capability of operating in harsh environments (salads, meats, fish, and fresh produce) with IP model or EP enclosure

- ✗ TIJ is not as suitable for harsh environments

### Application

- ✓ TTO proven on high speed and low speed application (intermittent and continuous)

- ✗ TIJ has limitations on speed and acceleration particularly on intermittent applications (labelling and thermoforming)

## Looking for impartial coding and labelling advice?

Clearmark does a rigorous application qualification through consultancy. This means that only the appropriate technology will be used for an application. If a Clearmark Sales Engineer doesn't think a technology that a customer wants is appropriate, they advise otherwise or leave the job.

**Speak to a coding expert today**  
Give us a call on: **01 159 640144**

