

# Sublimation, Screen Printing & Embroidery

## ✓ 1. Sublimation Printing Process

*(Ideal for sportswear, esports jerseys, leggings, and performance gear)*

### Step-by-Step Process:

#### 1. Design Preparation

- Use high-resolution digital artwork (CMYK) aligned to the garment's template.
- Colors must be calibrated for accurate output on polyester fabrics.

#### 2. Printing on Transfer Paper

- Print the design onto sublimation transfer paper using a large-format sublimation printer and sublimation inks.

#### 3. Heat Transfer to Fabric

- Place the printed paper over pre-cut white polyester fabric.
- Transfer the design using a **heat press** at 190–210°C for 30–60 seconds.
- The ink vaporizes and bonds into the fabric fibers, resulting in vibrant, permanent coloration.

#### 4. Cutting & Stitching

- After sublimation, the fabric is cut and sewn into finished garments.

### Key Advantages:

- No cracking, peeling, or fading
- Full-color, edge-to-edge designs
- Lightweight feel – ink becomes part of the fabric

## ✓ 2. Screen Printing Process

*(Ideal for fashion wear, casual tees, hoodies, and bulk branding with limited colors)*

### Step-by-Step Process:

#### 1. Artwork Preparation

- Convert the logo or graphic into vector format and separate each color into individual layers.

## 2. Screen Creation

- Burn each color layer onto a mesh screen coated with a light-sensitive emulsion.
- Each screen allows ink through only in the areas of that specific color.

## 3. Ink Application

- Place the garment on a printing board.
- Apply plastisol or water-based inks one color at a time through their respective screens.

## 4. Curing

- Run printed garments through a heat tunnel or flash dryer to cure the ink at 150–160°C.

### Key Advantages:

- Vibrant and durable prints
- Cost-effective for large volumes
- Suitable for cotton, blends, and fashionwear

### Limitations:

- Not ideal for full-color or gradient artwork
- Setup cost is higher for small orders

## ✅ 3. Embroidery Process

*(Perfect for high-end sportswear, fashion apparel, caps, polos, and esports teamwear)*

### Step-by-Step Process:

#### 1. Digitizing

- Convert the logo or design into a stitch file format (DST, PES) using embroidery software.
- Assign stitch types, direction, and thread colors.

## **2. Hooping the Garment**

- Mount the garment securely in an embroidery hoop or frame to keep it taut.

## **3. Machine Embroidery**

- Load the garment onto an automated embroidery machine.
- The machine stitches the design using pre-selected threads.

## **4. Finishing**

- Remove excess backing/stabilizer.
- Trim loose threads and steam the embroidery area.

### **Key Advantages:**

- Premium, textured appearance
- Extremely durable – withstands washes and abrasion
- Ideal for logos, initials, and clean vector graphics