

DTF Heat Press Master Cheat Sheet

Quick Calibration, Substrate Parameters & Troubleshooting Guide

Provided by Winnerjet Team

Technical Reference: Winnerjet R&D Application Laboratory • Standard Range: 300°F–320°F (150°C–160°C) • 10–15s • 40–50 PSI

1. Standard Temperature & Time Settings by Fabric Type

Fabric / Garment Type	Temperature (°F / °C)	1st Press Time	Pressure (PSI)	Peel Method	2nd Press (Finish)
100% Cotton (Heavy/Tees)	300°F – 315°F (150°C–157°C)	12 – 15 sec	MEDIUM-FIRM (45 PSI)	HOT / COLD	5 sec @ Teflon/ Kraft
100% Polyester / Dri-Fit	280°F – 295°F (138°C–146°C)	10 – 12 sec	MEDIUM (35-40 PSI)	COLD PEEL ONLY	5 sec @ Low Temp
Cotton/Poly Blends (50/50)	295°F – 310°F (146°C–154°C)	12 – 15 sec	MEDIUM-FIRM (45 PSI)	WARM / COLD	5 sec @ Parchment
Nylon / Spandex / Rayon	275°F – 290°F (135°C–143°C)	8 – 10 sec	LIGHT-MED (30 PSI)	FULL COLD PEEL	5 sec (Low Melt Powder)
Denim / Canvas / Bags	315°F – 325°F (157°C–163°C)	15 – 20 sec	FIRM / HEAVY (50+ PSI)	COLD PEEL	8 sec (Deep bond)
Fleece / Heavy Hoodies	305°F – 315°F (152°C–157°C)	15 sec	FIRM (45-50 PSI)	COLD PEEL	5 sec (Matte finish)

2. 5-Stage Standard Operating Workflow (SOP)

1 Pre-Press (Crucial Step)

- **Duration:** 5–8s before laying transfer.
- **Purpose:** Removes trapped humidity & flattens fabric fibers for 100% contact.

2 Primary Press

- Align transfer, cover with protective Kraft paper or Teflon sheet.
- Press according to fabric table (Standard: 310°F / 15s / 45 PSI).

3 Peel Execution

- **Hot Peel:** Peel smooth & flat within 3-5s of opening platen.
- **Cold Peel:** Wait until film cools below 100°F (~30s).

4 Post-Press (Lock & Matte Finish)

- **Duration:** 5–8s with Kraft paper or parchment.
- **Purpose:** Sinks adhesive into weave, eliminates plastic shine, ensures 50+ wash cycles.

5 Quality & Wash Care

- Texture should display subtle garment weave grain.
- Wait **24 hours** before first wash (Inside-out, cold water, low tumble dry).

3. DTF Heat Press Troubleshooting Matrix

Defect / Problem	Root Cause	Actionable Shop Floor Fix
Print Lifts / Peels Off	• Temperature too low • Insufficient pressure / uneven platen • Film peeled prematurely (Cold film hot)	1. Calibrate platen temp with pyrometer. 2. Increase pressure to 45–50 PSI. 3. Allow 30s cooling for cold-peel film.
Bubbles or Blisters	• Trapped moisture in garment • Hot adhesive outgassing during peel	1. Pre-press garment for 5–8s. 2. Let cool completely or pull film flat at 180°.
Fabric Scorching	• Heat exceeded fabric threshold • Cycle too long on polyester/nylon	1. Drop temp to 280°F–290°F on polyester/synthetics. 2. Reduce press time to 10s and use Teflon cover.
Dye Migration (Poly)	• Disperse dyes vaporized into white ink at heat >305°F	1. Drop heat below 290°F (143°C). 2. Use Winnerjet Anti-Sublimation Black Powder.
Plastic Feel / Low Wash Life	• Missing 2nd post-press • Adhesive sitting on surface	1. Always perform 5s post-press with Kraft paper. 2. Ensures adhesive embeds into fabric fibers.
Cracking on Stretch	• Under-cured TPU powder in oven • Inadequate adhesive layer	1. Cure TPU powder until uniform orange peel finish. 2. Increase pressure slightly on elastic garments.

⚠ Winnerjet Workshop Calibration Tip: Heat platen digital readings often drift ±15°F over time. Test your platen with an infrared thermometer gun and perform a 4-corner paper strip grip test regularly.