

DTF
description | direct to film printing is a unique technology that involves
printing designs onto special films for transfer onto textiles



direct to film (DTF)
printing solutions from STS Inks®

STS Inks® direct to film printing

Direct to Film printing is a method that rivals Direct to Garment printing (DTG) and allows users to print their logos and/or artwork onto a special type of coated PET film. This film is then used to transfer the printed image onto textiles using a lightweight powder adhesive that can be applied manually or by using an automatic powder shaker to distribute the adhesive evenly across the artwork and film, and with this added step, the transfer process is made possible. **STS Inks has everything you need to get started.**



This coated PET film is manufactured to handle the high temperatures and pressures used from a heat press. Our high-quality printable film works with any desktop or large format DTF printer **and is available from STS Inks.**

Having the correct adhesive powder can make all the difference in this process. STS Inks has such powders, and you'll be pleased with their results. Our powders can withstand up to 40+ washes with great coverage and a high-level transfer rate. And keep in mind, any excess powder can always be reused for the next transfer to get the most out of your investment.

When it comes to printing inks, STS leads the way with a vast array of high-quality ink types. That's why you're guaranteed STS DTF ink has been specially formulated for this process and is made in the US where rigorous quality testing is the norm. **For over twenty years, STS Inks has provided its customers with the American made quality they've come to expect, and DTF inks are no exception.**

the DTF process



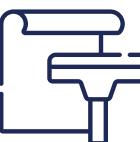
Design – Create your design using your choice of graphic design software (i.e., Photoshop, Illustrator, etc.)



RIP – You'll need a RIP Software to print white on top of color.



Print – Print your design onto your choice of coated PET film.



Apply – Apply powder adhesive evenly onto the printed film. If performing manually shake off any excess, or if using a powder shaker simply follow unit instructions.



Bake – Melt the adhesive onto the film using a heat press, oven or heated shaker unit. Ensure even heat throughout at a temperature of 300-325 F.



Press – Press your design onto a substrate. Applicable on cotton, polyester, leather, cardboard, and other flat, rough, and rigid materials.

works on most any fabric

Since DTG technology works best on cotton pre-treated fabrics, DTF opens the door to a wide range of choices and is capable of printing onto non-treated cotton, silk, polyester, denim, nylon, leather, 50/50 blends, and more. It works equally well on white and dark textiles.

T Shirts • Hoodies • Canvas • Denim • Sweaters



- ✓ No cutting and weeding required
- ✓ Crisp, defined edges and images from start to finish
- ✓ No advanced technical printing knowledge required
- ✓ A great option for small orders
- ✓ Low cost on waste
- ✓ User-friendly
- ✓ Low investment – high reward

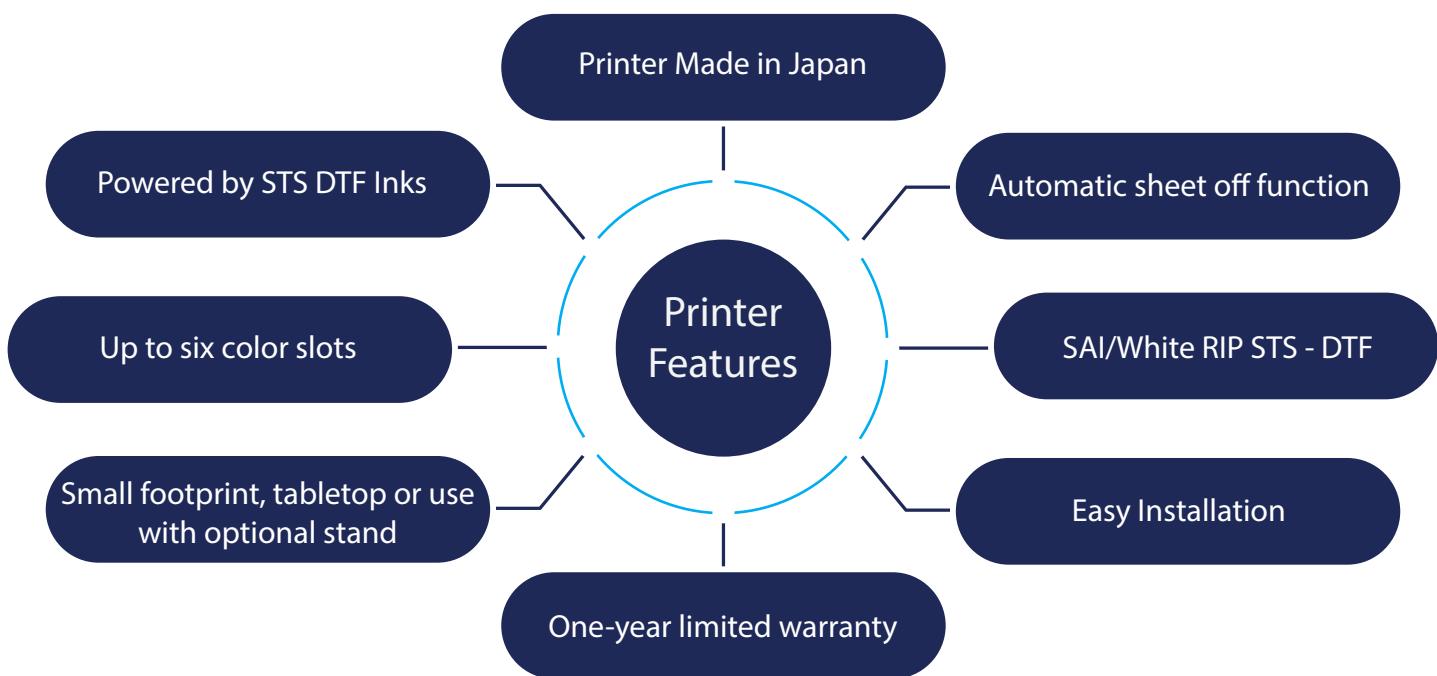
STS DTF modular system



At just 24 inches wide, the STS DTF 24 inch printer fits into any size print shop. And because it's **powered by STS Inks**, you can easily and quickly create custom t-shirts and apparel. This compact printer is **made in Japan** and fits onto a table or portable stand. With a low price point, perfect size and built-in circulation system, the STS DTF 24 inch printer is the best option for anyone entering the custom apparel marketplace, and even contains its own internal circulation system.

Print Method	Drop-On Demand, Piezo Drive
# of nozzles / # of heads	(180 x 8 rows) / 1 head
ink type	DTF
Variable dot	Yes
Minimum droplet size	3.5 pl
Print modes	720/540/360 dpi 12 modes +
Color options	CMYK + 2W + 2 Cleaning
Maximum resolution	1440 dpi
Head height	Low: 12mm / High 2.5mm
Maximum media width	24.8 inches
Maximum print width	24.4 inches
Heating system	Pre / Post

Media roll diameter / Core	6" maximum / Core 3" or 2"
Stand	Optional
Media Auto Cut	Standard
RIP software	SAI / White RIP STS - DTF
Power requirements	110/220 Volt
Operating temperature	68°F - 75°F
Operating humidity range	45% - 55%
Dimensions (printer) WxDxH	47" x 17" x 14"
Dimensions (printer with stand)	47" x 23" x 46"
Weight (printer)	Printer 70 lbs / Stand 19 lbs
Weight (shipping info)	Call for quote
Limited warranty	1 Year



the STS DTF 24 inch printer uses the Flexi DTF Pro RIP



The Flexi/STS DTF Pro RIP was created exclusively for the STS DTF printer series and offers a wide array of features including fast processing speeds and the ability to create multi-layer/white on the fly. Users can control how the ink is printed in both the Flexi Design and Flexi RIP Production Manager functions. With the ability to preview the white channel beforehand, users save RIP and print time and avoid wasted materials.

- ✓ **Enhanced printing while Ripping** – Users no longer have to wait for the print job to finish ripping to start printing, this allows for faster processing time
- ✓ **Custom cut line names and colors** – Users can now define their own custom cut line spot colors and give custom names simplifying the cutting process.
- ✓ **Adobe Illustrator® layer support** – Multi-layer Illustrator or PDF files can be split into multiple jobs which then can be processed as spot colors like white and varnish.
- ✓ **G7 Certification** – Recognizes gray balance and generates linearization that is compliant with G7 color standards.



After your design is printed, our **Automatic TPU Adhesive Powder Shaker** takes over by evenly spreading, then melting the exact amount of adhesive material directly onto your design saving time, effort and cost. Three resources you need to conserve to run a profitable business. Also, with a handy vacuum absorption platform and infrared heat drying, you are assured a smooth result every time.



Having a simple to use touch screen really helps. Just touch the desired option to navigate through the menus and voila, you're ready to go!

Customizable automatic powder recycling feature, increases effectiveness against manual recycling.



Infrared drying and heating improves and protects color reproduction.

The vacuum absorption conveying platform secures the printing material to avoid bulging, run-offs, and media waste.



Shaker Measurements: 35.4" W / 62.9" L / 45.6" H • Power Requirement: 220V



Model 13 Automatic TPU Adhesive Powder Shaker

- Heated by electrical coiled tubes
- Have both auto/manual interface
- Cylinder driven
- Auto sensor controlled
- Uses 13 inch PET film
- 110/220V



STS transfer film curing ovens

STS Curing Ovens have digital controls that are easy to manage and allow precise settings for temperature and time for consistent results. The adhesive gelling process is started at the touch of a button. After the set time has elapsed, an acoustic signal lets you know your transfer is ready.

- ✓ Cures film up to 13x19" (drawer model) and 15x24" (open top model)
- ✓ Small footprints and easy to operate
- ✓ Curing temperature up to 150 C (302 F)
- ✓ Digital timer control of TPU powder curing
- ✓ An Alarm sounds when curing is completed

Power supply: 110 V

Dimension: 23 x 6.6 x 15.7 (drawer model) and 27" x 6 x 19.5 (open top model)

Power consumption: 1.350 W

Controllable digital timer: 0 - 999 s

DTF inks from STS

High color density, wide color gamut, outstanding color saturation

Non-toxic and environmentally friendly

Excellent performance

Consistent color from batch to batch

Great wash fastness

Manufactured in the USA

Print head safe encapsulated resin + nano pigment

Available in CMYK and White



TPU white powder from STS

Polyurethane hot-melt adhesive powder has excellent bonding and flexibility properties with STS DTF inks. It has a softening point of 70-80 uM (particle size). Transfer time is 15-20 seconds at 300 -325 F with low melting point (225 degrees F), sold in 1-gallon bottles (2.02kg).

Physical Properties

Melting range	Kofler	°C	on: 94 off: 110
Melting point	DSC	°C	94
Melt-flow rate (2.16kg), ± 20%	160 °C	g/10min	15
Density		g/cm ³	1.16

Other Parameters

Washing resistance	60 °C
Dry cleaning resistance	good

Delivery units and Storage conditions

Conditions	Must be stored dry at room temperatures. High temperatures and pressures can cause blocking. Pallets must not be double stacked. Storage life is 12 months.
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Particle sizes

0 – 80 µm
80 – 200 µm



DTF transfer film from STS

STS Cold/Hot Peel Film is available in sheets and rolls. This double-sided coated film provides better printer roller traction with minimal static allowing for a great printed image without background artifacts.



Sizes available:

- Rolls: 13" and 24" wide.
- Hot and cold peel sheets: A3+ - 13 x 19 inches and A4 - 8.3 x 11.7.
- Sheets are packaged in 100 sheet boxes.

notes



Color is in Our DNA

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