

Transfer printing



Graphic



Dye sublimation
Dye fixation

Dye sublimation units
for professionals



Dye Sublimation and Transfer Printing

Dye sublimation by means of transfer printing

Transfer printing is a well proven technology capable of delivering high definition prints in a wide range of colours. The process enables the user to transfer an image from printed paper onto various synthetic fabrics, simply by using heat, time and pressure. This is possible because the Disperse dye applied to the printed paper will sublimate and fix itself to the adjacent fabric at temperatures around 200°C. Fabrics suitable for printing in this way include 100% polyester, nylon and acrylic and synthetic rich blends of these fibres.

Fixation of direct to textile prints.

In some cases, it may be preferable to digitally print an image directly onto the synthetic substrate, because of different requirements from the printed image or limitations in the substrate being printed. In this case the calender can be used to fix the dye to the substrate, using heat and time, providing a very economical and consistent process, thanks to the direct contact of the substrate with the heated cylinder of the calender. In most cases the fabric will need to be pre-treated with a coating chemical, prior to printing, to ensure clarity of print. This coating will need to be washed off after fixation.

Klieverik can deliver the following standard models:

Model	Working width	Speed	Production m ² /hour at 30 seconds dwell time	Temperature	Drum Diameter in mm	Dwell Time
GTC 81/1850	1650 mm	0,1 - 2 m/min	70 m ²	0 - 220 °C	195	210 -10 sec
GTC 81/2300	2100 mm	0,1 - 2 m/min	90 m ²	0 - 220 °C	195	210 -10 sec
GTC 81/3400	3200 mm	0,1 - 2 m/min	140 m ²	0 - 220 °C	195	210 -10 sec
GTC 101/2000	1800 mm	0,1 - 4 m/min	185 m ²	0 - 240 °C	365	500 -12 sec
GTC 101/2750	2550 mm	0,1 - 4 m/min	260 m ²	0 - 240 °C	365	500 -12 sec
GTC 101/3500	3300 mm	0,1 - 4 m/min	340 m ²	0 - 240 °C	365	500 -12 sec
GTC111/2000	1800 mm	0,1 - 5 m/min	270 m ²	0 - 240 °C	500	750 -15 sec
GTC 111/2500	2300 mm	0,1 - 5 m/min	345 m ²	0 - 240 °C	500	750 -15 sec
GTC Sport System	Various	0,1 - 5 m/min	Various	0 - 240 °C	500	Various

Advantages of the Transfer printing system

Being able to immediately transfer a digitally printed image onto a range of synthetic substrates is creating a totally different approach and new opportunities in the production of advertising materials. An image can be quickly created on computer and digitally printed onto paper, preserving every photographic-sharp detail and making handling on the printer very simple because of the use of only one substrate. After printing the image can be transferred, in any length, onto stock fabrics and shipped immediately, without the need for further processing. Print quality is excellent, even at close quarters. Colour yields are high and good light and wash fastness, make these prints very suitable for outdoor use.

Klieverik transfer printing calenders are used for wide format transfer of paper-printed images and fixation of direct to textile prints for advertising, exhibition displays, banners and flags, towels, bedding products, sportswear etc. We offer a complete range of calenders providing the perfect choice to suit your production requirements. With our own engineering department and technical center, we can also deliver a totally customized calender which meets the specific requirements of the customer.

The standard equipment of the GTC includes unwinding positions for fabric, transfer paper and protection paper, together with after print cloth, transfer paper and protection paper winding positions. A cooling down timer is fitted as standard. It is also possible, when larger capacities are required to work with a roll to roll arrangement or just with single printed sheets.

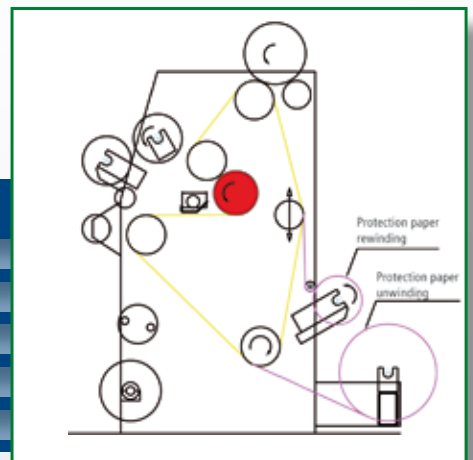
Narrow Width Production



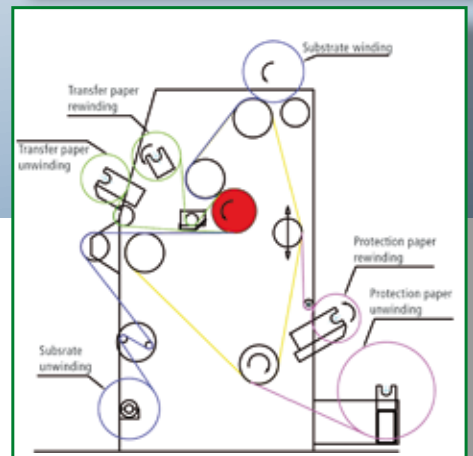
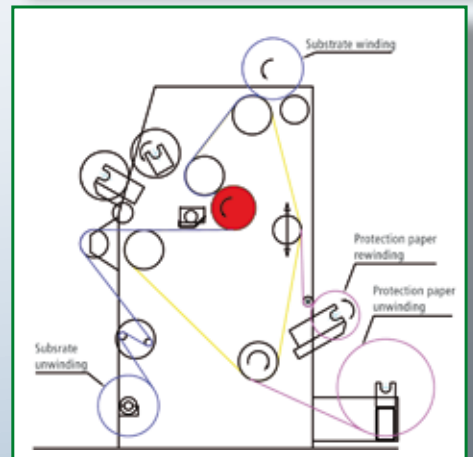
GTC 81/1850 and GTC 81/2300 Narrow width production

A Graphic Transfer Calender for Dye Sublimation, available in 1850 mm and 2300 mm drum width. This model has been designed especially for smaller production needs.

	GTC 81/1850	GTC 81/2300
Maximum textile width	1650 mm	2100 mm
Mechanical speed	0,1 – 2 m/min	0,1 – 2 m/min
Total installed power	10 kVA	13 kVA
Heating cylinder diameter	195 mm	195 mm
Maximum temperature	220°C	220°C



The GTC 81/1850 and GTC 81/2300 can be used as transfer printing machine as well as a sublimation unit for direct printed fabric with disperse inks on polyester. Another application is dye fixation of pigment printed fabric. Klieverik has been able to combine in this model, the well-proven oil-based contact temperature for the highest quality, with a professionally designed sturdy built calender. This machine is standard equipped with fabric unwinder and tensioning device; contact-winder for finished fabric; unwinder and winder for printed paper; unwinder and winder for protection paper. Another feature is the built-in cooling down timer, which will increase your production time considerably.



Beachflags and banners

- Blanket
- Protection paper
- Fabric/substrate
- Transfer paper

Grand Format



GTC 81/3400 – Grand Format

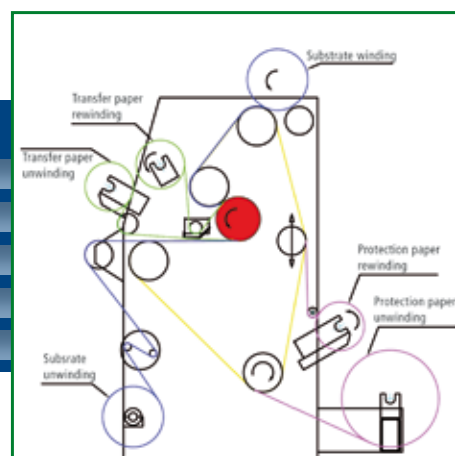
The GTC 81/3400 is for the professional printing company with the need for high quality production of super wide prints or smaller, multiple prints next to each other.

The combination of an adjustable belt tension with an electrical, thermo-oil heated system guarantees a very uniform and accurate temperature. Pressure together with the dwell time and the temperature ensures a good penetration of the dyestuff into the fibres.

The temperature of the drum can be adjusted from 0 – 220°C. With a speed up to 2 m/min contact times between 112 – 12 seconds can be achieved, sufficient time for the transfer print of all kinds of substrates. Production of 140 m²/hr at 30 seconds dwell time. The GTC 81/3400 can handle the production of several digital printing machines.



	GTC 81/3400
Maximum textile width	3200 mm
Mechanical speed	0,1 – 2 m/min
Total installed power	19 kVA
Heating cylinder diameter	195 mm
Maximum temperature	220°C

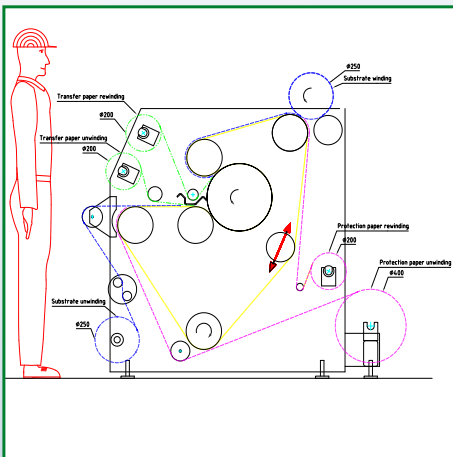


—	Blanket
—	Protection paper
—	Fabric/substrate
—	Transfer paper



GTC 101 Serie

The GTC 101 is meant for the professional printer with multiple digital printing machines. This Graphic Transfer Calender can meet this output at the highest standard. It is a reliable calender especially made for heat transferring and thermo-fixation of very wide format prints, with a high output.



	GTC 101/3500
Maximum textile width	3200 mm
Mechanical speed	0,1 – 4 m/min
Total installed power	47 kVA
Heating cylinder diameter	365 mm
Maximum temperature	240°C

The GTC 101/3500 has a production capacity of 340 m²/hr at 30 seconds dwell time.

This calender is available in 3 different widths:

- 2000 mm
- 2750 mm
- 3500 mm



Sport System for Pre-cut Pieces

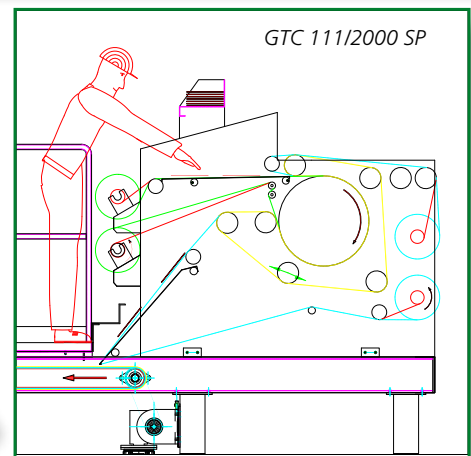
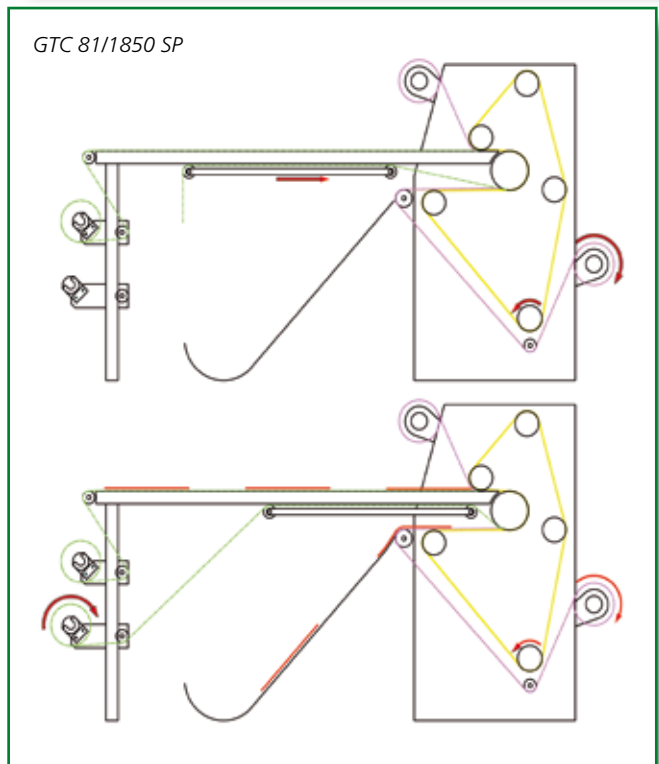
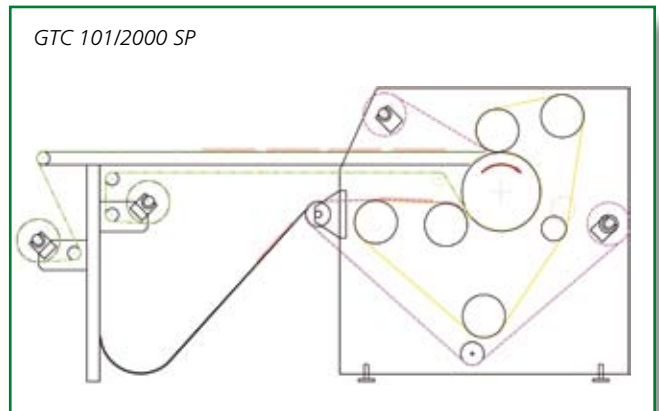


Sport system for pre-cut pieces

The Sport System enables continuous printing of single panels/pieces or transfer printing in a more conventional roll to roll configuration. The images, which can vary from one to the other, are digitally printed onto a continuous roll of transfer paper and fed into the calender print face up. The printed paper is presented to the operator over a horizontal table, with an area large enough to allow sufficient time for the single, pre cut or preformed items to be placed in register with the print. The printed paper, the single items and an overlaying protection paper are transported around the face of the calender. After transfer printing the single panels/pieces are transported, via a conveyor belt, to the front of the machine for collection. Thanks to the ergonomic layout of the machine and its continuous process it's possible to produce large volumes of individual panels, using less energy, with greater consistency and with fewer operators compared to a hand operated flatbed press.

Available standard models:

GTC 81/2300 SP, GTC 81/1850 SP, GTC 101/2000 SP, GTC 111/2000 SP, GTC 111/2500 SP

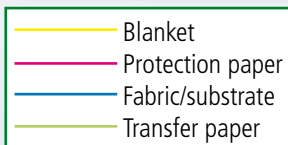
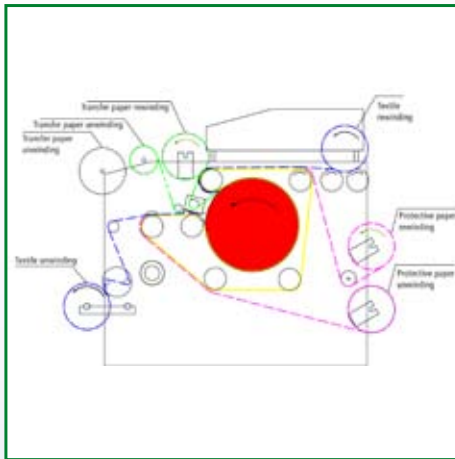
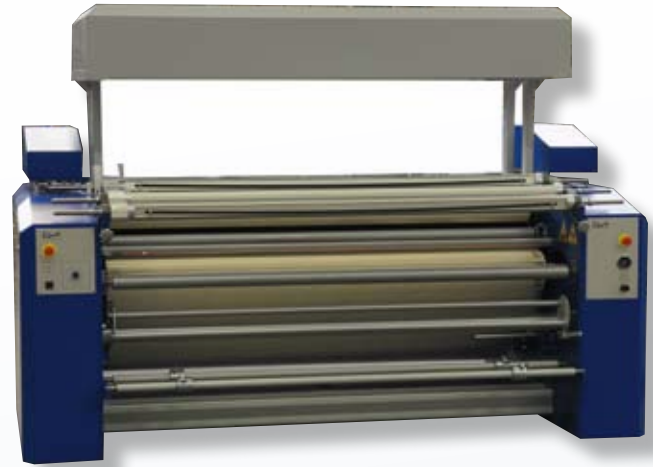


Sport System GTC 111/2000 expanded with high platform and driven conveyor belt.



GTC 111/2000 + exhaust hood

The GTC 111 is a production machine designed for the highest output.

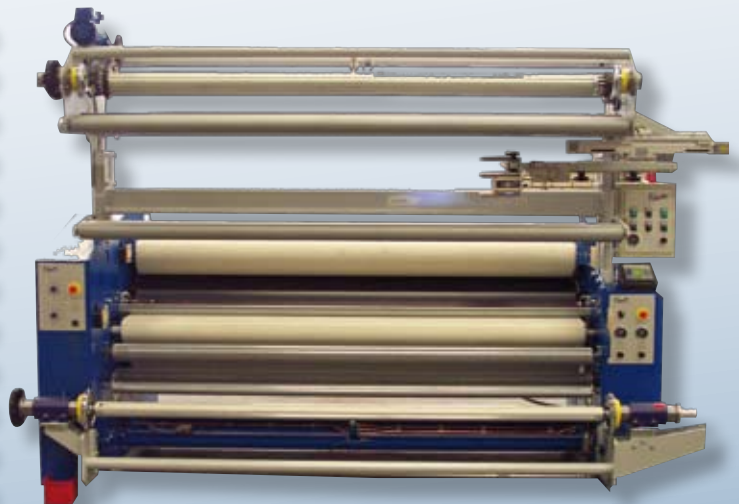


	GTC 111/2500	GTC 111/2000
Mechanical speed	0,2 – 5 m/min	0,2 – 5 m/min
Total installed power	47 kVA	47kVA
Heating cylinder diameter	500 mm	500 mm
Maximum temperature	240°C	240°C
Maximum textile width	2300 mm	1800 mm
Production output at 30 sec. dwell time	345 m ² /hr	270 m ² /hr

GTC 111 DSB – Double Sided Banner

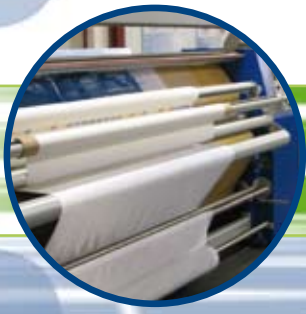
GTC 111/2500 DSB

This calender is especially made for heat transfer and laminating of double sided articles with accurate matching of the front and back side.



	GTC 111/2500 DSB
Production output at 30 sec. dwell time	345 m ² /hour
Textile width	2350 mm
Mechanical speed	0,2 – 5 m/min
Total installed power	47 kVA
Heating cylinder diameter	500 mm
Maximum temperature	240°C





Optional Parts GTC-Range

Optional Parts GTC-Range

All GTC-calenders can be expanded with the following optional parts:

- Built-in compressor
- Side guiding winding section (standard at large width)
- Infeed table (standard at Sport System)
- Exhaust hood
- Cutting knives
- Meter counter

Klieverik
THE NETHERLANDS

Supplier of (thermo) processing equipment for:

transferprinting

coating & laminating

thermobonding for non-woven

heatsetting

carpet fusing - latex free

Technical Center

In order to provide optimum customer service Klieverik has an on-site technical center for testing new techniques. It is also a valuable facility for jointly developing processes with other suppliers who enthusiastically use the facilities in order to improve the combination of materials. This way, one can respond efficiently to the wishes of customers and to new technical and technological developments in the market.



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