



Dye Sublimation Paper Transfer / Direct-to-Fabric Thermo Fixation Calender

Guardian Calenders™ are an affordable, easy to use solution for all your dye sublimation paper transfer and direct-to-fabric applications. The Guardian's intuitive design makes for quick, easy use, maintenance and cleaning, thus saving time on production. Solid, all steel construction provides high quality performance and ensures Guardian Calenders™ are built to last.

EASE OF USE

- **Material Loading:** The calender is delivered with six (6) self locking mandrels; three (3) for feeding and three (3) for take up after sublimation. (Fig. A)
- **Universal Mandrels:** All Mandrels can be used in any position on the calender and are self locking. No tools are required to load or remove media from the calender. (Fig. A)
- **Media Centering:** All mandrels include a material centering system which allows the user to quickly and accurately load the calender for production. (Fig. A)

FEATURES

- All steel component construction
- Temperature accuracy is controlled by a precision Infra-Red sensor, ensuring consistency during the entire transfer process
- Heat is supplied by a specially engineered Infra-Red Quartz Element, providing even temperatures when running pieces or roll-to-roll
- Fast warm-up and cool down times save energy and labor
- Nomex felt belt with a Kevlar reinforced center for added durability.
- Mechanically adjusted belt without compressed air; the belt does not need adjustment before, during or after the transfer process



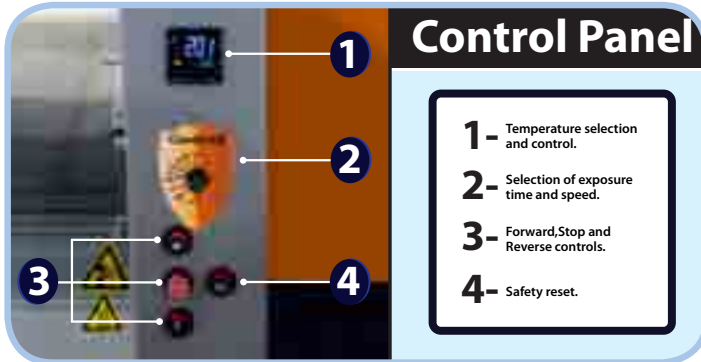
(Fig. A)

ANTI-GHOSTING SYSTEM

- A proprietary system of tension bars separate textile from the transfer paper after sublimation to prevent image ghosting on the fabric.

TEMPERATURE CONTROL

- Temperature is adjustable up to 220°C (428°F)
- Exposure Time: Can be adjusted from 20 to 190 seconds.



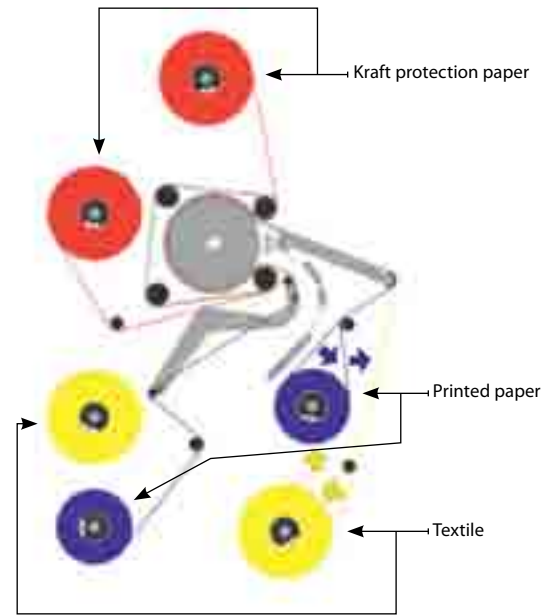
SAFETY FEATURES

Guardian Calenders include safety features engineered to provide a safe working environment for the operator:

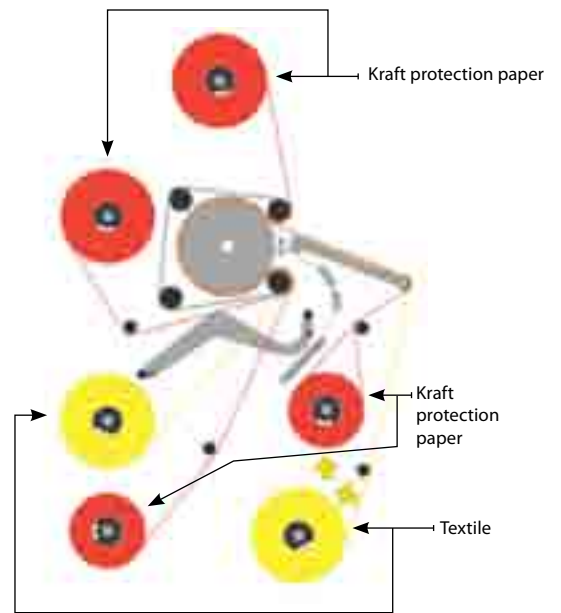
- **Plexiglass Front Cover:** Protects the user from the feed mechanism and the risk of burns; also protects the felt belt and drive system from being damaged by foreign objects.
- **Emergency Stop Buttons:** Two (2) emergency stop buttons are located in the front and rear of the calender.
- **System Override:** If any of the safety features are activated, the user must press the reset button to reengage the calender.
- **Thermo Isolation:** All exposed surfaces have been thermo isolated to protect the user from the risk of burns while operating the calender.

Media Transport Circuit

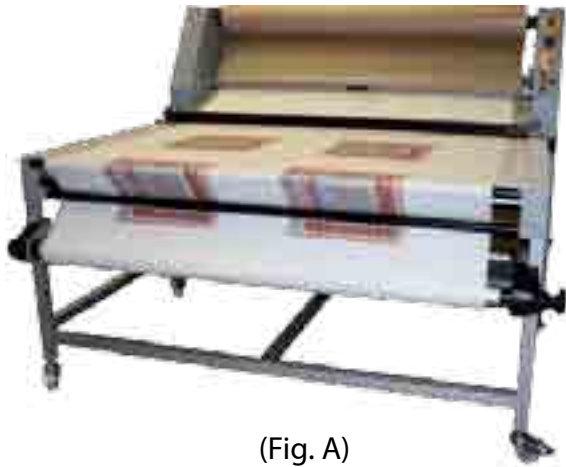
Paper Transfer to Textile



Direct-to-Fabric Thermo Fixation



Guardian Calender™ Production Table and Receptacle for Pre-cut Pieces



(Fig. A)

BENEFITS OF THE PRODUCTION TABLE

- The table is removable, allowing for roll-to-roll or piece production.
- Ideal for the production of sportswear and garments using stretchable or non-stretchable fabric.
- Works with tacky or non-tacky paper.

FEEDING PAPER AND PRE-CUT PIECES

- Transfer paper can be loaded and tensioned on the front of the table using the transfer paper feed mandrel. (Fig. A)
- The roll feeding guide assists in feeding paper flat into the calender. (Fig. B)
- Printed paper is kept in contact with pre-cut pieces by the pressure bar.

TENSIONING OF PAPER

- Paper Tension is adjustable with the tension adjustment knob located on the table paper feed mandrel. (Fig. C)



(Fig. C)



(Fig. B)

CONNECTING THE TABLE TO THE CALENDER

- The table is designed to quickly attach and detach to and from the calender, allowing the operator to seamlessly switch between roll-to-roll and piece production. (Fig. D)



(Fig. D)



(Fig. E)

RECEPTACLE FOR PRE-CUT PIECES

- Easily attaches and detaches to and from the back of the calender for receiving cut pieces after the sublimation process is complete.
- When not in use, the receptacle can be folded for storage. (Fig. E)

Guardian Calender™ Specifications

Maximum working width	67" (1680 mm)
Maximum temperature	428°F (220°C)
Diameter of drum	10" (250 mm)
Heating system	Infra-Red Quartz Element
Heating time from room temperature to 200°C	30 min.
Digital display of temperature	Yes
Belt material	Nomex® belt reinforced with Kevlar for added durability
Speed exposure time 40 seconds	71 yd / hr - 1.18 yd / min , 65 m / hr - 1.08 m / min
Speed exposure time 90 seconds	18 yd / hr - 0.30 yd / min , 17 m / hr - 0.29 m / min
Reverse operation	Yes
Safety features	Safety cover in front of the rollers with safety switches and reset button on the control panel
Fume extraction	2 extraction pipes diameter 2" (50mm) linked to both ends of the machine to vacuum smoke and vapors produced during sublimation
Number of self locking mandrels included	6 universal mandrels, 3 feed, 3 take-up
Maximum material roll dimension	Upper position 10" (250 mm) Mid front position 10" (250 mm) Low front position 10" (250 mm)
Maximum roll weight	66 Lbs. (30kg.)
Power	5500 W
Power adaptor	Plug L6-30P, Receptacle L6-30R
Voltage	208V / 50Hz - 60Hz Single Phase Circuit, Stable Power Required at 214V Output to Calender
Amperes	Max. 28 Amperes
Dimensions of the machine	W 81" x D 38" x H 61" / W 208 x D 96 x H 155 cm
Weight of the machine	1060 Lbs (480 kg)
Dimensions of the shipping crate	W 86" x D 37" x H 66" / W 218 x D 93 x H 170 cm
Shipping weight	1322 Lbs (600 kg)
RoHS Compliant / CE Approved	Yes
CE certified according to Machines Directives (2009) 2006/42/CEE including low tension directive 2006 95 CE norm EN 60204 - 1 (2006) and Electromagnetic Compatibility 2004 108 CE according to norm EN 61000-6-1 and EN 61000-6-3. Edition 2007.	
Dye Sublimation Paper Transfer	Requires 100% polyester fabric for dye sublimation paper transfer applications
Direct Print to Natural Fiber Fabric	Requires Pigmented or Latex ink for direct printing to natural fiber fabric, after printing the fabric is fixed using the calender
Warranty	One year parts warranty 1) Heat elements are a consumable item 2) The belt and drum are not covered by warranty for operator related damage

Feeding Table Specifications

Table delivered without the table top	
Size of the table top	42 3/4" x 76 3/4 x 5 9/10" 1085 x 1950 x 15 mm
Size of the table assembled	L 80" x D 53" x H 41" L 203 x D 135 x H 105
Shipping weight	Ships with calender
Warranty	One year parts warranty

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