

# SwellFormPro

## USERS MANUAL



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## Introduction

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The Swell Form Pro is the high-speed commercial/production version of our popular Swell Form machine, which is used to create stunning tactile graphics and tactile diagrams. It was designed to improve productivity, as the machine can process our Swell Touch paper up to 7 times faster than the standard Swell Form machine.

The speed specifications of the Swell Form Pro are amazing: up to 34 A4 pages per minute (A4 and 8.5x11" size, portrait side-to-side), and up to 25 A4 and 8.5x11" pages per minute in landscape orientation; and up to 17 A3 and 11x17" pages per minute (in landscape orientation).

The Swell Form Pro was designed and produced with the braille production facility and commercial customers in mind, as its speed and heavy-duty build quality ensures that it is ready for extended production cycles.

The Swell Form Pro has several safety features, and a simple to use and intuitive user interface.

## Safety Information

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**Caution: Risk of electric shock!  
No user serviceable parts inside!**



**Caution: Hot surface!  
Always allow to cool before  
touching the top cover!**

- The Swell Form Pro should only be operated in well-ventilated areas.
- Always ensure that the machine is in the correct working position, and stable on the ground.
- Do not use any other type of paper besides Swell Touch.
- Ensure Swell Touch paper is flat when entering the machine, and that any curl or bent edges have been reduced.
- If the paper jams, immediately stop the machine and turn it off. Once the power is off, remove the paper before turning it back on and feeding more paper.
- Do not block any fans/cooling vents.
- Leave adequate space behind the machine for proper paper exit.
- Avoid any operational action that may cause a hazardous situation.
- Do not use any kind of liquid to clean the machine.

## Main Features

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### Functional features:

- Paper size: A2, A4, 8.5x11", A3, 11x17" and everything in between.
- Maximum speed: up to 34 A4 / 8.5x11" pages per minute; up to 17 A3 / 11x17" pages per minute.
- Speed regulation from 10 to 25 (approx. 10 - 25ppm, A4 paper, landscape orientation).
- Recommended start up speed: 15 pages per minute, and then adjust accordingly as machine warms up.
- Large, 5-inch LCD display that shows current paper speed value, lamp and motor status, internal frame temperature (IntT) and external frame temperature (ExtT). Please note temperature is shown in °C.
- Beeps that notify user of start/stop commands, speed regulation and paper feed detection.
- Start/Stop system with belt cooling mechanism (belt stops 15 seconds after the lamp has turned off).
- Soft-start mechanism ensures long life of the heating lamp.
- Automatic paper detection avoids the need for "start" commands - the fuser automatically detects the paper feed, keeping the lamp on as long as paper is detected.

\*Note: repeated feeding of paper without intervals, with the edges of the paper overlapped will result in the machine stopping for safety reasons. \*

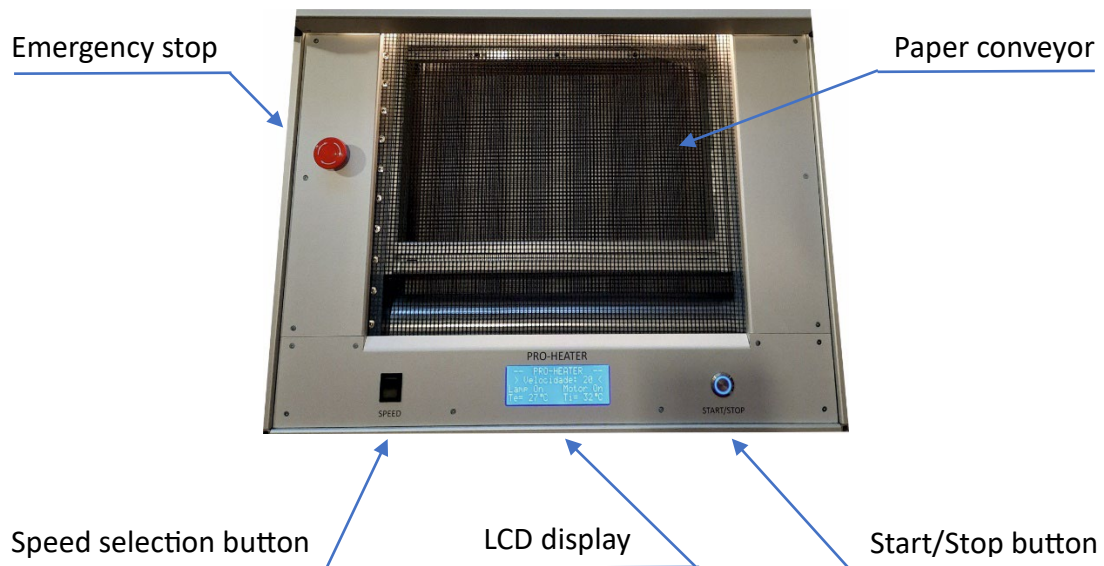
### Safety features:

- Emergency button turns off the power supply, requiring a manual "Reset" to reset the power supply.
- For safety reasons, a continued press on the start/stop button results in the "stop" status (lamp off).
- Real-time indication of external frame temperature (ExtT) and internal frame temperature (IntT).
- Automatic audible high temperature warning resulting in an error message - "Maximum Temperature - Wait".
- Conveyor blocked detection with audible warning system and error message - "Start" inhibition - "Belt blocked".
- The secondary safety system protects against excess temperature in the internal frame (turns off the fuser until the temperature decreases).
- Venting system for direct connection to the extractor hood.

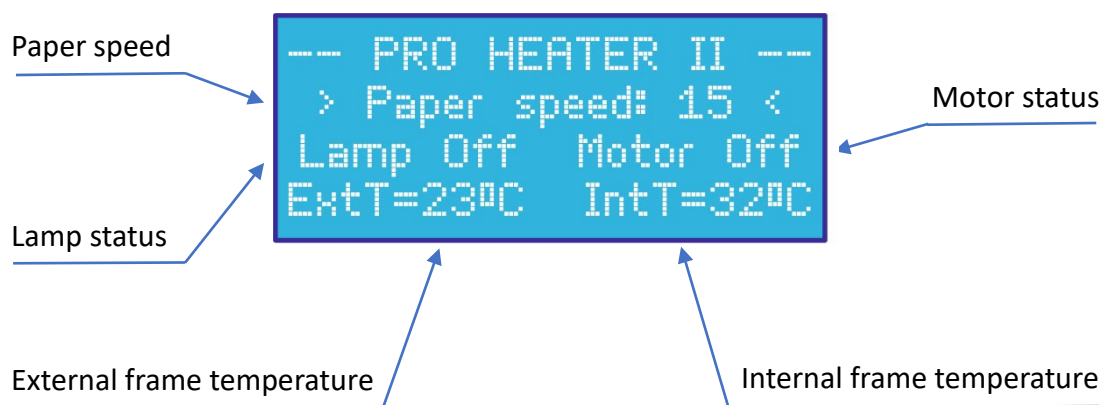
## Description

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### Pro Heater II Front panel:



### Swell Form Pro Heater II LCD display information:



### **Swell Form Pro Heater II operation:**

1. Turn the machine on. A series of short beeps will confirm that the machine is starting up. This information is also shown on the LCD display with the message "Starting Up...".
2. After the start-up sequence, only the cooling fans should be heard. The status will be shown on the LCD display, including internal frame and external frame temperatures. The belt motor and lamp will be "Off".
3. Set the paper speed to the desired value. When the machine is cool, a lower value is needed for the Swell Touch to work properly. After a few minutes of use, the machine will be warmer, and the paper speed may be increased. Please note that for consistent results, the machine may need to be pre heated, and the top paper speed will only be achieved after the machine reaches its normal operating temperature.
4. Press the "Start/Stop" button. A beep will be heard, and the belt will start at the selected speed. You may now feed the Swell Touch facing up onto the conveyor belt. Once the paper is detected, a second beep will be heard, and the paper will be pulled through the machine.
5. From the rear of the machine, paper should fall into the collection tray, or onto a table if no collection tray is used.
6. If no additional paper is detected, the lamp will go off after approximately 30 seconds. The belt will stop approximately 45 seconds after the last paper detection, ensuring proper belt cooling.
7. During continuous use, a beep will be heard whenever a new sheet of paper is detected, making it unnecessary to press the "Start" button again. Please do not overlap sheets of paper (not allowing gaps between sheets) as this will cause the lamp to turn off for safety reasons.
8. Pressing the "Start/Stop" button while the lamp is on will issue a "stop" command, provided enough time has elapsed from the last "start" command. This will turn off the lamp, saving energy and extending lamp life.

## Operation

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### Display information:

```
American Thermoform
-- PRO HEATER II --

Starting Up...
```

Swell Form Pro is starting up. This sequence lasts a few seconds. A continuous beep is heard during the start-up sequence.

```
-- PRO HEATER II --
> Paper speed: 15 <
Lamp Off  Motor Off
ExtT=23°C  IntT=32°C
```

Swell Form Pro is now ready after the start-up sequence is completed. The lamp is off, and the motor (belt) is off. The external frame and internal frame temperatures are displayed.

```
-- PRO HEATER II --
> Paper speed: 15 <
Lamp On   Motor On
ExtT=23°C  IntT=32°C
```

After a "Start" command, the lamp and motor turn on, and Swell Touch paper can be placed and fed through the machine.

```
-- PRO HEATER II --
> Paper speed: 15 <
Lamp Off  Motor On
ExtT=23°C  IntT=32°C
```

If no further Swell Touch is fed into the machine, the lamp will go off after 30 seconds. The belt will stop after an additional 15 seconds, allowing the belt to cool down.

```
-- WARNING --
Max. Temperature!

-- Please wait! --
```

If an extremely high temperature is detected, either in the internal or external frames, the lamp shuts down and a warning message is shown. After cooling down, normal operation may resume.

```
-- WARNING --
Belt blocked!
Turn off the fuser
and remove the lock!
```

If a mechanical malfunction is detected (belt blocked, or loose), a warning message is shown. The machine must be turned off, and the cause investigated. Do not start the machine until the malfunction is fixed.



## Specifications

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Swell Form Pro Heater II specifications:

- Paper size: A2, A4, 8.5x11", A3, 11x17", and everything in between.
- Maximum speed: up to 34 A4 / 8.5x11" pages per minute; up to 17 A3 / 11x17" pages per minute.
- Power supply: 220 - 240V, 50/60Hz.
- Power consumption: 2100W max.
- Ambient operating temperature: 0 - 40°C, 32 - 104°F.
- Dimensions: 100cm / 40" (L) x 75cm / 30" (W) x 96 cm / 38" (H).
- Weight: 48kg / 105 pounds.
- Fusing lamp rating: 2000W.
- Power inlet fuse rating: 5x20mm T10AH 250V (slow-blow, high breaking).

## Troubleshooting

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### Troubleshooting:

The machine does not turn on:

- Confirm that the machine is plugged in correctly (both the cable into the machine input power receptacle, and into the wall socket).
- Confirm that the electrical socket is getting power.
- Check/replace fuse located in the input power receptacle.

Paper jams:

- Immediately press the emergency stop button.
- Turn off the machine using the main power switch.
- Remove the jammed paper.
- Confirm that there is no paper left in the conveyor belt mechanism.

Paper swelling issues:

- Ensure that the machine is warmed up and the speed isn't too fast.
- If the machine is cold, or has just been turned on, slow down the speed.
- As the machine warms up, increase the speed.
- If the machine is warmed up, but speed is kept low, burning of the paper/graphic may occur.

If you notice any mechanical malfunction, turn the power off and contact American Thermoform / Zychem, or your distributor. Do not try to power the machine on again until the malfunction has been corrected.