

Instructions are for manual and pneumatic (air) heat seal machines. Please refer to the section that most closely represents your machine and platen size. If you require assistance please contact Debbie Schuster at (817) 714-8400 or by e-mail at [Debbie@IPC-Tags.com](mailto:Debbie@IPC-Tags.com).

**CAUTION:** DO NOT expose barcodes to raw heated metal such as shirt or pants presses. They may melt if they were initially under-applied and leave particles behind on the press. Remember, barcodes should be applied to a smooth, flat surface. DO NOT apply over seams, creases, stitching, buttons or embellishments. Contact us if you require assistance.

***Using Manual Model Heat Seal Machines***

<b>Temperature:</b>	<b>Top Heat:</b> 380° - 400° F 193° - 204° C	<b>Bottom Heat:</b> 300° - 330° F * 148° - 165° C
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**Note:**                    \* If your machine is NOT equipped with bottom heat we recommend that you warm the bottom platen during machine warm up or when the machine has been idle for long periods of time. Pre-warm the bottom platen by pulling the heated top platen down and resting it on the lower platen. It is not necessary to engage pressure.

**Press Time:**            Add 2 seconds to these times if you DO NOT have bottom heat.

<b>Light Garments:</b>	<b>10 - 12 Seconds (Shirts, linings, light jackets, aprons)</b>
<b>Heavy Garments:</b>	<b>12 - 14 Seconds (Waistbands, coveralls, heavy jackets)</b>

***Using Texas Automation Air Models  
MS, ES or DES-32 or 42 with 3" cylinder***

<b>Temperature:</b>	<b>Top Heat:</b> 380° - 400° F 193° - 204° C	<b>Bottom Heat:</b> 300° - 330° F 148° - 165° C
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**Press Time:**            Light weight garments: 10 - 12 seconds (Shirts, linings, light jackets, aprons)  
                                  Heavy weight garments: 12 - 14 seconds (Waistbands, coveralls, heavy jackets)

**Pressure:**                Do NOT exceed 25 lb. ipc (Inter-Platen Clamping Pressure \*\* page 2)

**Gauge Setting:**        These setting are for machines with 3" cylinders. For machines with larger cylinders please refer to the Conversion Chart on page 2.

<u>2" x 4" Platen</u> 25 - 30 psi	<u>4" x 6" Platen</u> 70 - 85 psi	<u>3" x 5" Platen</u> 50 - 60 psi	<u>3-1/4" x 5" Gooseneck</u> 55 - 65 psi
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## CONVERSION & TROUBLE SHOOTING GUIDE

Please refer to this guide when applying bar codes using non-Texas Automation Products equipment.

### TEMPERATURE CONVERSION:

To convert Fahrenheit to Celsius (Centigrade) - ( F - 32) divided by 1.8

To convert Celsius (Centigrade) to Fahrenheit - (1.8 x C) plus 32

### CALCULATING INTERNAL CYLINDER (Piston) AREA:

Check with your manufacturer to determine Piston Diameter and refer to the following chart:

Piston Diameter	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"
Piston Area/Inches	2.4	3.14	3.97	4.91	5.94	7.07	8.29	9.62	11.04	12.56

### \*\* FORMULA FOR CALCULATING GAUGE PRESSURE:

IPC-Tags bar codes require 20 - 25 lbs. INTER-PLATEN CLAMPING (ipc) pressure for proper adhesion. For non-Texas Automation equipment you will need to determine the proper amount of air gauge pressure required to meet specifications.

25 lbs. Desired Inter-Platen Pressure X Platen Area Square Inches = Gauge Pressure  
Area/Inches Internal Piston

For example: 25 lb. inter-platen pressure  
x 16.25 square inches of 3-1/4" x 5" platen  
406.25  
7.07 area of 3" diameter internal piston  
57.46 psi pressure

Use 55 - 60 psi air gauge pressure

**Dye Migration:** Dye take-up may occur at application if heat or pressure settings are too high, especially on new garments. Reduce top heat incrementally 5 at a time but **not** below 350 F. Increase press time 2 - 4 seconds depending on heat reduction. Check pressure. Call IPC-Tags for assistance. Pre-washing may be required.

**Fabric Types:** There are no specific application rules by fabric type. Some general guidelines follow:

Nylon: Labels applied to nylon show little dye migration but may not bond as well as to polyester.

Polyester: Labels applied to polyester may show increased dye migration compared to nylon but improved adhesion.

Wool: Never apply directly to wool. The combination of temperature and pressure will have a "felting" effect and damage your garment. Labels should be applied to the lining inside the garment.

**Label Shrinkage:** This uncommon problem is caused by excessive garment shrinkage in the wash. Should this occur we recommend you pre-wash garments before bar code application. May occur on 100% cotton fabrics.

**Labeling Over:** When labeling over, remove loose particles from original label. Apply new label normally, let cool, remove paper and seal for an additional 5 seconds to release trapped air. Offset second label for best results.

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