



## 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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