

Reduce coding errors with automatic date code calculations

Application Focus: Replace manual entry low-resolution coders such as valve printers and roller coders with the sophisticated and easy to use Marksman Pro controller.

Target SIC:

Bottle and Canned Soft Drinks
 and Carbonated Waters 2086

Target Customers:

Soft Drink Bottlers
 Carbonated Beverage Bottlers

Key Benefits

- Eliminate human interface errors resulting in box coding errors.
- Meet or beat per box coding costs with a higher quality and more legible code.
- Quickly and easily change label format by scanning product barcode

Application Brief: Many soft drink bottlers need to place a date code, lot code, and expiration code onto their tray packs. A large number of bottlers continue to use outdated low-resolution valve coders and roller coders to accomplish this. However, using these unsophisticated machines requires frequent human interface with the machine resulting in keystroke and other human errors averaging 31 uncorrected keystroke errors for every 1000 keystrokes. Many times, these errors result in incorrect date codes being placed on the tray packs and require the rerun of the batch to correct the error. Utilizing the Marksman Pro controller and the ProSeries AC printhead, the customer can meet low case coding cost requirements. In addition, by using the PSC PowerScan hand scanner and the Marksman Pro's editing capabilities, the customer can simply scan a barcode to completely setup the system for coding.

Equipment List:

Before

MANUAL LOW
 RESOLUTION CODER

After

FoxJet Marksman Pro Case Coding
 System featuring the BoxWriter Pro
 software interface





Application Analysis

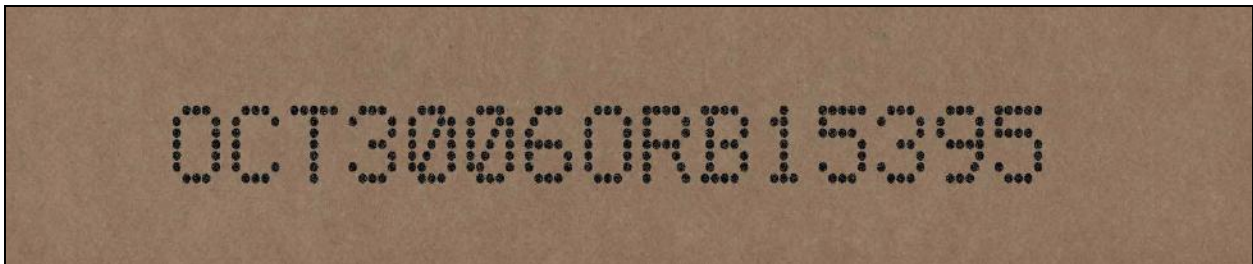
Customer: Name brand soft drink bottlers in the southeast.

Customer Goals:

1. Eliminate Human Input errors
2. Simplify batch changeover process
3. Maintain or reduce box coding costs

Customer's Current Carton Coding Process: The current coding equipment that the bottler uses is a low-resolution valve inkjet system. As the system is limited in its variable coding capabilities, the operators must manually key in all data that is printed on the tray pack. Because different products have different expiration time periods varying from 9 weeks to 52 weeks, the operator must identify and correlate the correct expiration date with the product that is going to be produced. This human interface with the controller is time consuming and in some instances results in keystroke and other errors causing the wrong expiration code to be printed on the tray pack. When this occurs, the bottler must correct the code on the errant tray packs.

Example of Customer's Current Label Layouts:



Note: OCT3006 is a 52 week expiration code rounded down to the first day of the week (Monday)
OR is a plant code
B is the day of the week (Tuesday)
1539 is the hour and minute in 24 hour format (15:39)
5 is the line number

Proposed System: In order to reduce the human interface, the customer will utilize the advanced date and time code options in the Marksman Pro. The Marksman Pro will automatically calculate all codes and store these formats by product code. In order to "call-up" these formats for printing, the operator will use a PSC hand scanner and simply scan a barcode on the individual soft drink can. The Marksman Pro will receive and start the corresponding task, previously created and stored, for printing on the Marksman Pro controller. The ProSeries AC printhead using AlphaMark ink will enable the customer to retain low per box printing cost while beating the coding quality of the low-resolution valve printer.



Installation Details

Installation Brief: After removing the existing valve coders, the customer installed three full systems as documented below. Each line took approximately 6-8 hours to install and train line workers to operate and maintain. In addition, the production line supervisor, who is responsible for all message design, spent a few hours with the distributor technician learning how to create, edit and otherwise manage the message database.

Equipment Layout:

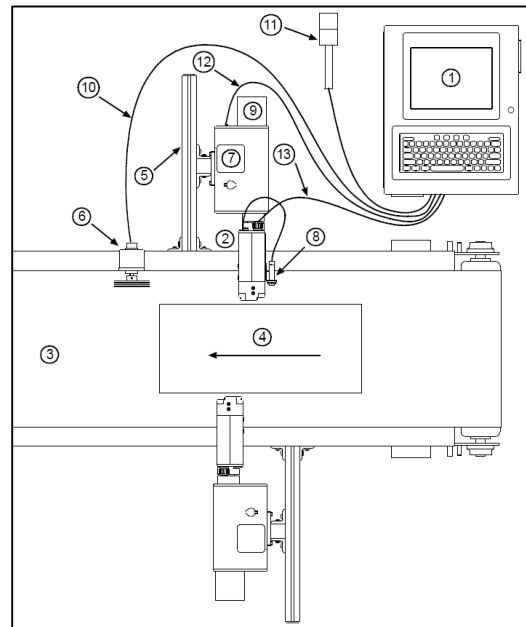
See Figure on Right

- | | |
|--------------------------------|--------|
| 1. Marksman Pro Controller | |
| 2. ProSeries AC Printhead | Qty. 2 |
| 3. Conveyor Belt System* | |
| 4. Can Tray Pack* | |
| 5. Bracketry System | Qty. 2 |
| 6. Encoder | |
| 7. Ink Bottle | Qty. 2 |
| 8. Photosensor | |
| 9. APS Waste Collection Bottle | Qty. 2 |
| 10. Encoder Cable | |
| 11. Strobe Beacon | |
| 12. APS Data Cable | Qty. 2 |
| 13. Printhead Data Cable | Qty. 2 |

Not Shown

- | |
|---------------------------|
| 1. PSC PowerScan Scanner |
| 2. Controller Power Cable |

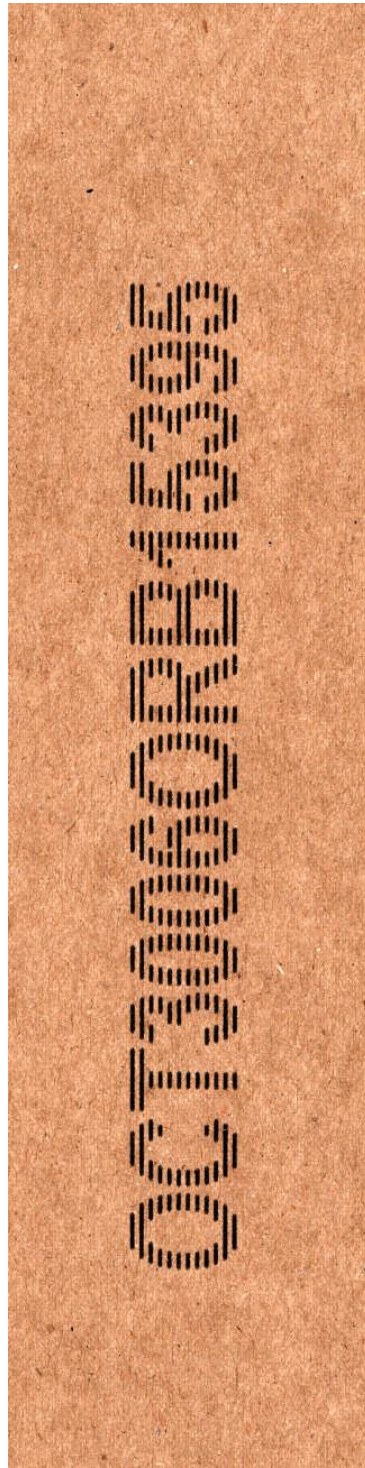
*Customer Supplied Equipment



Total System Cost: \$12,500 including one day installation and training labor.
(Per Line)

Goal Analysis:

1. Human Interface errors such as keystroke errors were virtually eliminated through the use of the sophisticated control of the date and time codes available in the BoxWriter Pro software. The customer simply defines each product in the editor with the appropriate code and settings.
2. The batch changeover process is extremely simplified. The operator only needs to scan the individual can with the PSC hand scanner. The Marksman Pro does the rest of the work setting up the code for printing within a matter of seconds.
3. After varying the Height and DPI of the code applied with the ProSeries Alphacoder printhead, the per box coding cost were nearly identical while beating the quality from the valve printer. After factoring in previously encountered human errors and related costs, the customer has quickly reaped the benefits of using the error-free Marksman Pro and ProSeries AC system.



Reformatted code produced with the ProSeries AC printhead



Standard Industrial Classification Code

2086: Bottled and Canned Soft Drinks and Carbonated Waters

SIC Code Description:

Establishments primarily engaged in manufacturing soft drinks and carbonated waters. Establishments primarily engaged in manufacturing fruit and vegetable juices are classified in Industry Group 203; those manufacturing fruit syrups for flavoring are classified in Industry 2087; and those manufacturing nonalcoholic cider are classified in Industry 2099. Establishments primarily engaged in bottling natural spring waters are classified in Wholesale Trade, Industry 5149.

Product Examples:

Beer, birch and root: bottled or canned
Carbonated beverages, nonalcoholic: bottled or canned
Drinks, fruit: bottled, canned, or fresh
Ginger ale, bottled or canned
Iced tea, bottled or canned

Lemonade: bottled, canned, or fresh
Mineral water, carbonated: bottled or canned
Soft drinks, bottled or canned
Tea, iced: bottled or canned
Water, pasteurized: bottled or canned