

# Data Matrix: The Active Ingredient for Proper Pharmaceutical Tracking - Datalogic

ACME Drugs selects Datalogic's PowerScan PM8500 bar code reader to track and trace products through the production process. ACME Drugs has evolved from a manual system to a fully automated pharmaceutical management system.

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## Overview

ACME Drugs is a pharmaceutical manufacturer for the veterinary industry, focusing specifically on medications for horses and domestic animals. The company's mission is to prevent and treat major animal diseases and improve the overall quality of animal life, without harming the environment.

In consideration of public health, animal welfare and environmental conservation, ACME decided to adopt an automatic identification (Auto ID) system to manage their pharmaceutical production process. This system would enable ACME to comply with legislation, which requires complete traceability of each drug from production and through the supply chain.

## The Challenge

The law-decree published in the Official Gazette (January 2008) on "How to Use the Bar Code on the Individual Packaging of Veterinary Medicinal Products Marketed" states that the traceability of pharmaceuticals is critical to control the movement and abuse of drugs as well as to combat illegal importing of products or active ingredients. The document also states that this must be guaranteed with the use of a bar code reader.

This law requires pharmaceutical producers to use the international standard GS1 System for bar coding; using syntax GS1-128 one-dimensional (1D) linear bar codes for marking large packages of drugs and two-dimensional (2D) bar codes for smaller packages due to their ability to store more information, such as Data Matrix, GS1 and GS1-128 codes. Both 1D and 2D symbologies use a unique product identifier assigned by the GTIN, which identifies each drug with its manufacturer and assigns a tracking number (through the Ministry of Health). The codes must include the drug's expiration date and batch number.

The introduction of a system based on international standards allows the drug identification process to be simplified. This is an important step for GS1 in the pharmaceutical field because it eliminates the need for a proprietary system. Today, 50% of all products on the market are now encrypted with standard GS1 codes, but the technology is still not fully utilized.

## The Solution

ACME Drugs leveraged the technological expertise of Uni Sistemi S.p.A., a system integrator focused on Auto ID applications, to select an industrial strength bar code reader to comply with the Italian legislation and to ensure the customers security, reliability and trustworthiness in the distribution of all pharmaceutical products.

Datalogic's PowerScan™ PM8500 reader was chosen for its advanced 2D reading capabilities and ability to transfer data via radio to the main system in real-time. By choosing this reader, ACME enjoys the benefit of a cordless solution capable of providing excellent reading performance with very intuitive features. With an IP65 rating, the PowerScan reader thrives in ACME's tough production environments with excellent resistance to water and dust.

Using the new bar coding system has enhanced the production process at ACME tremendously. When raw materials arrive, ACME now labels each lot / pallet load with a reference number. Before the production process begins, the PowerScan reader scans the bar code printed on the pallets containing raw materials and the system automatically manages the production order. The chemical ingredients are then carried on special scales to begin production of the medications. The products are then semi-labeled with a unique bar code containing information regarding the raw materials used and the date of manufacture and then subjected to additional laboratory testing for quality control.

The finished product is then identified with a Data Matrix bar code, which is printed directly on the drug's packaging. The SSCC (Serial Shipping Container Code), GTIN (Global Trade Item Number), batch number, date of production, packaging, expiration and serial number of each package and the number of products is encoded to the Data Matrix code. This code ensures that the management and traceability of the drug is accurate and includes complete information about the product.

## The Results

By utilizing the capabilities of 2D codes, ACME Drugs has evolved into a fully automated pharmaceutical management system. ACME is now able to solve problems in data collection procedures for the management of goods, which improves their production process and controls their functions in real-time. The software and new scanning solution for warehouse management, traceability, production monitoring and control has enabled Acme to significantly enhance their reliability and ease of use.

"The introduction of a bar code ID system complies with Italian legislation," asserts Celso Bedogni, CEO of Uni Systems S.p.A. "With a new bar code system and software from Uni Track, ACME Drugs can easily manage all information required by the new regulations."

"The project resulted in an improved inventory management system, which allowed the company to

recoup about 30% of our space,” said Dr. Paolo Predieri, owner of ACME Drugs. “We’ve also considerably reduced our risk since the automated tracking of raw materials eliminates the chance of using the wrong product. All of these benefits translate into improved standards of uniformity and security of processes, resulting in savings for our company. “

Customer

ACME Drugs

Industry

Healthcare

Sub-Industry

Pharmaceutical Manufacturing and Distribution

Application

Track and Trace

Country

Italy

Datalogic Product

PowerScan™ PM8500

Datalogic Quality Partner

Uni Sistemi S.p.A.