

Monarch® Tabletop Barcode Printer Solutions

Monarch®
Products and Services

All Barcode Printers Are Not Created Equal!

Avery Dennison recently conducted a comparison of printers from several manufacturers. We were delighted to see that our Monarch® 9800® tabletop printer line truly is better than the competition in several ways that are of significance to our customers!!

Supplies Are Easiest To Load

We manufacture our print module to tilt up, making operator loading virtually foolproof. Some of our competitors have tried to duplicate our tilt-up print module, yet when we tested those printers which claim to match our easy load tilt-up module, we discovered that their printheads tilt but not the ribbon drive. **This means those printers are very prone to problematic ribbon wrinkle.**

In addition, our plastic ribbon core makes the ribbon incredibly easy to load – just slide it on and the ribbon is automatically positioned correctly.

Tilt up supplies loading and snap-in printhead replacement.



Easier and faster to load means more productivity – ask us for a demonstration of this feature.

Customer Replaceable Printhead

The Monarch 9800 printer was the very first thermal printer on the market to provide a customer replaceable printhead. What we found in our recent analysis is that, while most of our competitors now claim customer-replaceable printheads, the Monarch 9800 still has the easiest to replace printhead in the industry!!

The Avery Dennison Difference

The quality and unique features of our tabletop printers differentiate Avery Dennison from the competition. We manufacture and service the printers we sell. You can make your printer investment with confidence, knowing you're purchasing the industry's best.



Some of our competitors require the customer to use screwdrivers to remove the printhead, while others provide thumbscrews that are difficult to access.

We even tested one printer in which we were not able to remove the printhead at all for fear that we would break the printer!

By contrast, the printhead on the Monarch 9800 printers simply snap in and out *with no tools required*.

Reliability

The Monarch® 9825™ printer has a 5.7 year MTBF (Mean Time Between Failure) and our Model 9855 has a 4-year MTBF!!

This means that, on average, our Monarch 9825 printer runs for 5.7 years between service calls.

While we don't know our competitors' MTBF, we can tell you from a design perspective why we think our competition can't rival us.

Dual motor ribbon control:

While almost every one of our competitors use clutches in their ribbon drive systems, the Monarch® 9825™, 9855™, and 9860™ printers do not. **Our printers use AC motors on both the ribbon supply and ribbon takeup.**

This is better for two reasons:

1. *Clutch-driven printers require more frequent service calls and cause increased opportunities for ribbon wrinkle.* Because clutches work by

two parts rubbing against each other, they are wear items and must be replaced on a regular basis. This means clutch printers require more service calls by default in order to replace ribbon clutches and their customers likely experience significant ribbon wrinkle for some time before they actually get those clutches changed.

We even found that some of our competitors consider their ribbon clutches as wear items just like a printhead or platen roller so they don't even calculate clutch wear into their MTBF.



2. *Ribbon motors are superior because the ribbon tension is constantly controlled as the diameter of the ribbon rolls change.* Constant tension is critical in preventing ribbon wrinkle.

With clutch-driven systems, the ribbon tension changes as the diameter of the ribbon roll changes.

No Belts: The Monarch 9800 printer design uses only gear-driven supply, peel, and ribbon motors. Many of our competitors use belts to drive their systems. Belts require the tension to be set and over time, the belts stretch, making adjustments necessary on a regular basis in order to optimize the tension.

Patented Dot Shifting: Used in the Monarch 9800 printers to extend usable printhead life. Every time the printhead is opened, a complete test of every dot on the printhead is conducted, and this information is used to intelligently shift barcodes slightly so that no bad dots are in the area of the barcode, (the barcode shifts in



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order to allow dots that may be “burnt out” to be moved to the white spaces in the barcode). We do not report a bad printhead to the user until we get to the point that we cannot shift around the barcodes or if the printhead just has too many bad dots. This significantly improves the usable life of most printheads. Several of our competitors do not even test their printheads, and none utilize the “dot-shifting” technique we employ.

Customization

Over 50% of the tabletop printers we sell in the US include customized applications that we implement for our customers. Sometimes, this is in the form of our ADK™ script, sometimes it’s custom firmware, and sometimes it’s custom configurations or formats that we load for our customers.



This is an offering we are uniquely positioned to provide due to the direct relationship that we have with our customers, coupled with the fact that **each one of our printers is built in Dayton, Ohio.** If you build printers in China and sell the bulk of them through resellers, it becomes much more difficult to provide this level of direct support to your customers. **Customization, Systems Integration and our Nationwide, award-winning, Service Organization set us apart from the competition and provide our customers with an uncommon value in the industry.**

Superior Options to Support Our Customers

Knives and Stackers for High Volume Tags:

Almost all of our competitors advertise knife options for their printers. However, almost none of these knives support the high volume tags that our knives support.

Verifiers – Closely Integrated:

The Monarch® 938™ Verifier is one of the most integrated solutions in the industry. When a format is sent to our printer, the printer determines which barcodes are printed, where they are located on the label, and how many scans the verifier can achieve (there are criteria for the minimum scans required for ANSI verification).

The printer calculates exactly when to turn the scan beam on and off and

which barcodes to look for in order for the verifier to run at optimal efficiency and with minimal configuration required by the user. The printer can store the data in a database for later upload to a host so that the user has a history of the barcode grades in case of future charge backs.

Offline Data Entry Capability:

Our Monarch® 939™ Keyboard was designed specifically to meet the demands of retail data entry. It has separate alpha and numeric keys as well as a durable rubber boot. The Monarch® 939I™ Intelligent Keypad provides custom programming and database capability. If you look at the competitive solutions, they are typically



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small off-the-shelf keypads without the durability or intelligence of our solution.

DC Version of the Monarch 9800® Printer: We believe we are the only tabletop printer manufacturer to provide a DC version of our printer for use in mobile workstation (i.e. cart) applications. By providing DC power, the workstation batteries can last up to 3 times longer!

RFID – Best in Class:

Although many of our competitors' RFID printers have improved over the past few years, ours is the **ONLY** printer in the industry qualified to run **a full range of item level tags and labels at near 100% yield!** Combine that with our unique RFID tag cutting capability, and you have a perfect solution for item-level RFID applications.

Our Goal is Your Success

Avery Dennison can help improve productivity in your price labeling, bar code, RFID, and other item identification processes. Put our leading edge barcode tabletop solutions to work for you and watch your bottom line improve!



Monarch® Supplies: For smooth and reliable performance, only Monarch supplies are recommended for use with Monarch printers. Our labels scan virtually 100% of the time, cutting wasted rescanning and labeling time.

Monarch® Service: Every Monarch printer is fully supported by Monarch Service, the largest network of experienced, full-time bar code technicians in the industry.

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