

DApra™

Spring, 2001

News and Information about Marking Systems

The Mark-It *REPORT*

To Our Readers:

Welcome to the first issue of *The Mark-It Report*. The objective of this newsletter is to provide you, our valued customers, with the latest information on Dapra Marking Systems and marking technology in general.

Each issue will highlight new products and include a case study on how one of our marking systems has provided a solution for a customer's specific need. Because we want this newsletter to be relevant to our readers, we welcome your suggestions for topics to be covered in future issues. Thank you for your interest.

Product Spotlight: PryorMark Maxim III



Dapra Marking offers the PryorMark Maxim III as a low-cost, versatile answer to today's marking and traceability challenges. This Dot Peen system provides the capability for linear, angular and circular marking on a wide range of materials.

Manufactured utilizing the latest technology, the Maxim III includes lead screw drives for superior accuracy and is virtually maintenance-free. Since it is electromechanically-operated, no air is required. Both LCD (self-contained) and PC (WinMAX) versions of the Maxim III are available.

Capabilities of this flexible marking system include time/date/shift coding and incremental serialization. A mark preview and trial run feature ensure accurate placement. The unit's RS-232 and digital I/O interfaces enable communications with external equipment.

Please contact us for complete information on how the PryorMark Maxim III can meet the requirements of your marking application.

Case Study:

Dapra Marking Provides Universal Marking Table for Aerospace Customer

Marking Requirement

A customer in the aerospace industry needed to mark a variety of large parts measuring up to 48" in diameter and weighing up to 600 pounds. They wanted a single fixture that could mark all of the parts for a single production cell. The requirements of this application included serialization of all parts and marking human-readable text and/or DataMatrix™ code(s).

Solution Provided

Dapra Marking provided a modified HD2 Portadot marking system, attached to a custom table with three axes of motion: vertical (36"), radial

(36"), and angular (180°). All three axes are manually adjusted and locked in place. The radial arm is supported by a counterbalance that holds the arm in place when the locking handle is loosened. Each axis of motion has a scale in the appropriate units to facilitate consistent placement of the marking head. The table also includes two general-purpose locking drawers, one drawer for the marking controller, a keyboard and mouse tray, an adjustable monitor arm, and space for a PC.

To use the system, the operator places the part against the two 90° locating

blocks. Next, the clamp is placed in the appropriate holes to allow the v-block to engage the part. The marking head is then moved into position so that the marking window of the head is over the area that needs to be marked. The trial run feature of the marking system is used to fine-tune the final placement of the text, logos, and/or DataMatrix codes.



How to Contact Dapra Marking: 1-800-442-6275 • 860-286-8728 • Fax 860-726-9555
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www.dapramarking.com • Email sales@dapramarking.com



A "Who-to-Call" Guide Key Contacts at Dapra Marking Systems

This list of key contacts should simplify the process of contacting the member of Dapra Marking's staff who can best assist you.

All of the following can be reached by calling our Bloomfield, Connecticut, office at either (800) 442-6275 or (860) 286-8728:

Department	Contact	Extension
Customer Service	Sue Machowski	254
Service/Repair	Richard Tatem (supervisor)	226
	Carl Williams	238
Custom Engineering/ Special Software	Kermit Bierut	234

For Sales, choose the Territory Manager for the area in which you are located:

Territory	Manager	Phone
Southeast (FL, GA, TN, NC, SC, AL, MS, VA)	Steve Poitras	(813) 657-8488
Western Midwest (IL, WI, MN, ND, SD, IA, MO, W.MI)	Shane Anderson	(773) 325-2113
Eastern Midwest (W.PA, IN, WV, KY, OH, E.MI)	Scott Michel	(216) 521-6649
Northern New England (ME, VT, NH)	Jim Swanson	(800) 442-6275 x237
Northeast/Mid-Atlantic (CT, MA, RI, MD, NY, DE, NJ, E.PA)	Ray Boudreau	(800) 442-6275 x251
Southwest (TX, OK, LA, NE, AR, KS, CO)	Jim Swanson	(800) 442-6275 x237
West (CA, OR, WA, AZ, NV, WY, NM, ID, MT, UT)	Paul Carrocino	(714) 281-8739

Mark Your Calendar: Dapra Marking Will Participate in Two Upcoming Trade Shows



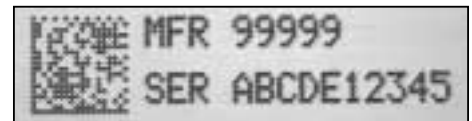
We will have exhibits at the Eastec[®] Show in Springfield, MA, from May 22-24 (Booth Number 5100) and the Advanced Productivity Expo in Detroit, MI, from September 25-27 (Booth Number 1018). Please stop by to see us!

DataMatrix™ Code Packs a Lot of Information in a Small Space

The DataMatrix™ Code, invented by RVSI Acuity CiMatrix, is a digital 2-D, machine-readable symbology that is capable of storing large amounts of information within a small physical space. This code has been adopted by many industries, including aerospace, automotive, and electronic, as the best symbology for reliable, direct part marking. Compared to linear barcodes, DataMatrix encodes much more data – 25 to 100 times more information – into a smaller area, allowing code placement on a wide range of product configurations. DataMatrix requires less contrast (as low as 20%) between the code and the marking surface than linear barcodes. This allows the code to be marked on difficult surfaces of metal, non-metallic, and plastic components. Built-in error correction allows the encoded information to be captured even if the DataMatrix symbol is somewhat degraded.

Dapra Marking Systems has been very successful encoding DataMatrix codes with our PryorMark 2068 Dot Peen Marking Systems. To meet the requirements of ATA (Air Transport Association) SPEC 2000 for permanent part marking, Dapra Marking has been providing standard and special Dot Peen Marking Systems for marking the DataMatrix codes on jet engine LRU components, jet engine internal components, air frame components, and data tags. All PryorMark 2068 systems can mark the optional DataMatrix code using our Win2068 Windows-based software.

If you have an application where DataMatrix may be the best solution for direct, permanent part traceability, we'd be happy to discuss it with you.



DataMatrix™ codes can be marked in a square or rectangular configuration, as small as 1/8", to best fit the marking application.

Q & A

Dot Peen Marking

What is Dot Peen marking?

Actuating a stylus, with low-stress geometries, to cold-form dots directly into the workpiece, with an accurate, compressive force. The results are discrete dots, creating alphanumeric characters, symbols, logos, and 2-D symbologies that are a permanent part of the workpiece.

What materials can be Dot Peen-marked?

Almost any material, from wax and plastic to nickel alloy and hardened tool steels, can be marked with our Dot Peen Marking Systems. Depth and contrast are two main factors in determining whether Dot Peen marking is the practical method for a specific application.

What is the hardest material that can be marked with the Dot Peen process?

Dapra Marking has been successful marking materials as hard as 65 Rc. To mark parts successfully at this hardness, the maximum depth must not exceed .001". In some cases, though, the marking application may require a maximum depth of less than .001".

How many character sizes can be marked with these systems?

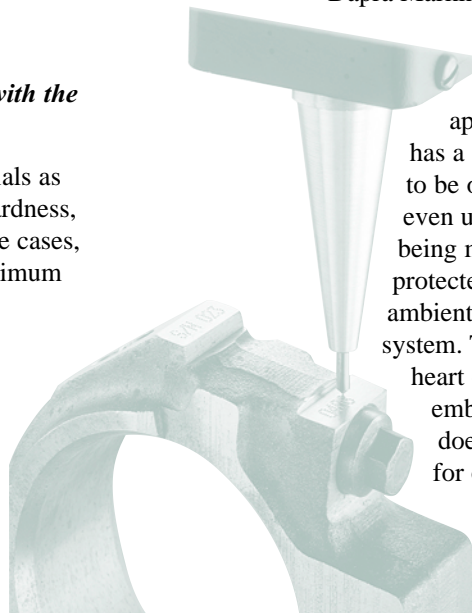
Dapra Dot Peen Marking Systems can mark characters in heights from .012" to 1.00", based on the application. All character sizes are programmed through the marking software. One stylus will mark all character sizes.

Can the marking stylus be reground?

If the stylus material is HHS or carbide, it can be reground using standard grinding techniques, similar to drill regrinding. When regrinding, make sure that the proper included angle is regenerated and that a point radius is ground. The typical included angles used are 90° and 120°, with the latter used when marking hardened materials or 2-D symbologies. The minimum tip radius should be .005". Never use a sharp point.

Can PryorMark Dot Peen Systems be integrated into automated systems?

Dapra Marking offers the 2x2EG and 4x3EG Integrator Systems, designed to be placed directly into automated production lines or other special applications. The marking head has a standard adapter plate that allows it to be oriented vertically, horizontally, or even upside down in relation to the part being marked. Each marking head is protected with a deflecting shield to keep ambient dirt and oil out of the marking system. The 2068 controller, which is the heart of the Integrator Systems, is embedded, and, therefore, the system does not require an external PC for operation. The 2068 also contains digital I/O to set inputs and outputs with external equipment, such as a PLC or remote cell controller.



New from Dapra: Diode-Pumped Laser Marking Systems

Dapra's new diode-pumped laser marking systems have a Nd:YAG laser source with a red LED diode laser for mark alignment. The electrical control unit incorporates the main power supply and the laser control. The typical life of the laser diode module is over 10,000 hours (*warranted for 5,000 hours*). Available in two models, these systems feature:

- User-friendly interface
- Graphic import facility
- Time/date coding
- Digital I/O control
- Fully scalable text and fonts
- Advanced fill routines
- Data logging and network options
- DataMatrix™ and barcode options

