



Selecting a DieMark® Inking System

Which Xandex DieMark Inking System is right for you?

Xandex DieMark® Inking technology revolutionized die marking at wafer sort and has set the standard worldwide since 1981. DieMark Inking Systems are available in Electric and Pneumatic models and utilize convenient, disposable DieMark Ink Cartridges to streamline and optimize the process of marking defective die. With models available for nearly every test platform and configuration, Xandex inking systems are in operation daily in every corner of the world where wafer sort is performed.

All DieMark Inking equipment is built and tested to a demanding quality standard at our California manufacturing plant to insure that no matter what DieMark equipment you choose, it will operate with “around the clock” efficiency and dependability.



DM-2 Pneumatic Ink Cartridge

Xandex Electric Inking Systems



EG 600 Electric Inker

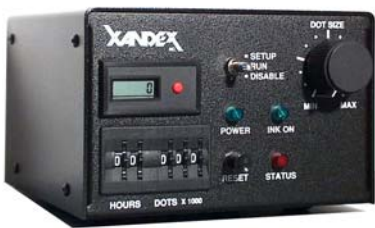
Electric Inking systems deposit ink dots through actuation of a solenoid, which in turn moves the DieMark cartridge nylon filament up and down. Filament movement draws ink down the filament from the cartridge reservoir to the wafer surface. DieMark cartridge needle size, filament diameter, filament length, and ink viscosity are factory tuned. A standard ink reservoir is combined with a variety of needle and filament configurations for different applications and dot sizes.

A wide range of Electric Inker models are available along with a variety of cartridge holders (solenoid and cartridge holder only). All use DieMark disposable cartridges. Many holders are designed to retrofit other manufacturers marking equipment. Retrofit of an existing inker is an inexpensive way to utilize the convenience and reliability of DieMark ink cartridges.



Cartridge Holder

Xandex Pneumatic Inking Systems



Standard Pneumatic Controller

Pneumatic Inking systems incorporate the convenience of DieMark disposable ink cartridges with the reliability of a microprocessor-controlled pneumatic dispensing system for the ultimate inking solution. Ink dots are deposited via pneumatic actuation of the inker shuttle mechanism and a simultaneous pulse of air into the cartridge reservoir. There is no filament and no direct contact with the wafer surface.

A probe signal to the controller initiates the inking sequence, actuating the shuttle mechanism downward and sending an air pulse to the cartridge. Dot size is determined by adjusting a controller setting to change cartridge air pulse duration *without* changing the cartridge. Pneumatic cartridges are factory tuned, ensuring consistent dots and contain 40% more ink than DieMark filament cartridges.



Motorized Z Pneumatic Inker





Pneumatic and Electric Inking System Comparison Table

Variable	Pneumatic Inking	Electric Inking
Dot Size Adjustment:	Electronic Adjustment (dial or thumbwheels) on Controller	Change cartridge size (10mil, 15 mil, etc)
Dot Size Range:	5 mil-60mil	5-mil-30mil
Inking Speed:	12 dots per second	6 dots per second
Wafer Contact:	No contact	Potential contact
X-Y Adjustment:	Joystick on inker base	None or Joystick on inker base
Z Adjustment:	Manual or Motorized	Manual only
Cartridge Type:	DM-2 (pneumatic; no filament)	DM-1 (filament)
Cartridge Reservoir Size:	1 gram	0.60 gram
Cartridge Priming:	Push button	Manual
Applications:	<ul style="list-style-type: none"> All applications (subject to mounting area) High Speed Off-line inking Post Probe Inking Hand held model for inspection/rework 	<ul style="list-style-type: none"> Inline Inking Overhead Inking Laser Trimming Low Speed Off-line or post probe inking

Ink and Cartridge Types

The heart of any Xandex inking system is the patented DieMark Ink Cartridge. Pre-filled, factory tuned DieMark disposable ink cartridges are easy to use and require no adjusting, refilling or cleaning. All inks utilized in DieMark cartridges are selected to produce consistent dots over a wide range of speeds without dripping, or skipping. Listed below are the primary cartridge and ink types offered by Xandex.

Pneumatic Ink Cartridges

Cartridge Type	Description
DM-2	Pneumatic, 0.50" needle, Teflon tube (no filament)
DM-2.3	Pneumatic, 0.30" needle, Teflon tube (no filament)
Cartridge Size	Size is determined by Teflon tube diameter. A5 = 0.005" / A6 = 0.006" / A8 = 0.008"

Electric (filament) Ink Cartridges

Cartridge Type	Description
DM-1	Nylon monofilament (5 mil also with tungsten wire), 0.75" straight needle
DM-1.25	Nylon monofilament, 1.25" straight needle
DM-S	Curved needle, nylon monofilament
Filament Sizes	5, 8, 10, 15, 25, 30 mil. Some inks are not available in every filament size or cartridge type.

Ink Types

Ink Type	Description
Xandex 8103	Air dry. Sodium and chloride levels certified less than 10 PPM. Glycol Ether Free. Black, Red and White*
Xandex 8104	Air dry. Sodium and chloride levels certified less than 20 PPM. Glycol Ether Free. Black
Xandex 7824, 7824T	Air dry or heat cure. Sodium and chloride levels certified less than 10 PPM. Black
Markem 6990	Heat cure. Sodium and chloride levels certified less than 25 PPM. Black
Markem 6993	Heat cure. Less than 100 ppm Sodium and 300 ppm Chloride. Black, Red, Green
Markem 6997	Heat cure. Less than 100 ppm Sodium and 300 ppm Chloride. Black, Red

Ink Removal

DieMark Ink Remover 8000	Glycol Ether Free ink remover for all inks provided by Xandex. US Quart and Gallon
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* 8103 White ink is a special order and sold subject to limited warranty conditions.

