



**AccuMill™ LMDW**



**AUTOMATION SYSTEMS**  
**CORPORATION**

## Benefits & Features

### Benefit

Using the AccuMill eliminates the need for several unique & costly pieces of equipment accomplishing your process goals easily and integrating your capability's into one platform reducing process time. Training of operators in more than one software environment is simplified with one platform. In this photo the AccuMill has been configured with the large size work area 12" Z axis X 35" X axis X 52" Y axis capable of handling larger work pieces than any other direct write system on the market.

### Software

Our software is EMC compliant as directed by NIST:

"The Enhanced Machine Controller (EMC) program is a NIST effort to develop and validate a specification for interfaces to open architecture controllers."

<http://www.nist.gov/>

### Dispensing:

We dispense conductive, resistive, nano Tube, nano wire & nano partial tracks & spray an insulation layer over the track. This allows us to fabricate multi layered circuits. Each dispenser can be interpolated as a servo axis insuring proportional dispensing. A major advantage of the linear dispensing technology is the ability to cope with an extremely broad range of viscosities such as solvent based inks to very thick metallic based pastes. Volume deposition is another advantage with capability to deposit minute (.00003cc) volumes to large geometry current conductive bus traces.

### Pick & Place

This system is capable of picking & placing discrete components, dispensing solder paste, epoxies & then soldering the components in place. Most pick & place systems only operate on a planar level. All our operations can be applied to a 3 dimensional surface.

### Hot bar soldering

This option as mentioned above picks then places the components such as photonic devices & solders them in place on a level or 3 dimensional conductive surface.

### Machining

With our year of experience in micro machining traces, track cutting, board prototyping, mechanical prototyping & etching silicon.

### Digitizer or Touch probe

With the addition of a 3 dimensional laser digitizer you gain the ability to reverse engineer & apply conductive traces. For example if you wanted to apply a pattern array to a helmet or any other contoured surface and did not have the CAD data you first would digitize the desired surface. Using this information you would then add your conductive traces & send all the information out to the software which in turn dispenses your conductive tracks to the physical exterior.



**AccuMill LMDW**



*The AccuMill LMDW was designed to optimize parallel processing with scalability and flexibility.*

\* All designs are covered by international patent pending

\* Due to constant product improvement and development the above specifications are subject to change without prior notice

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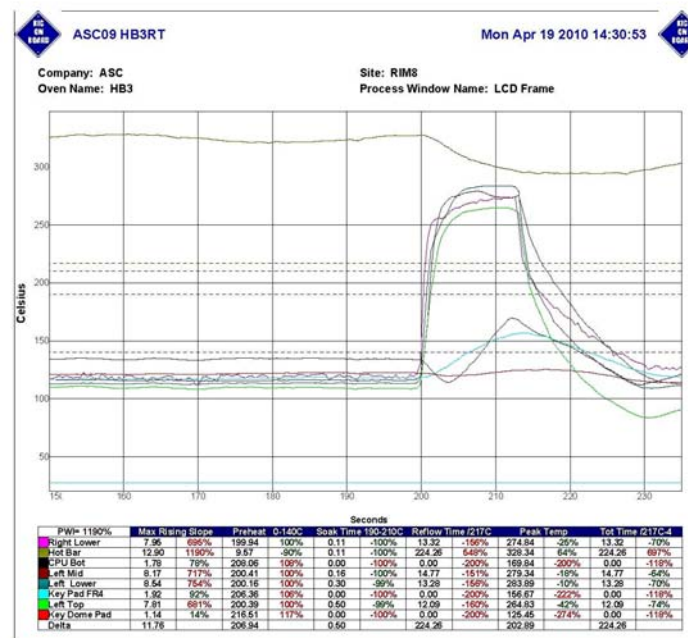
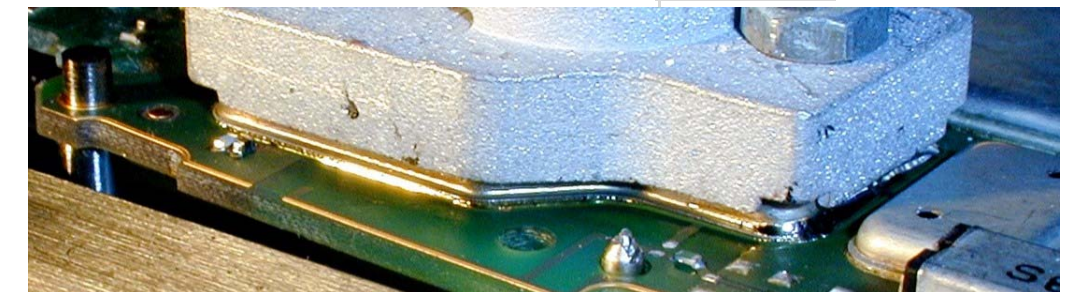
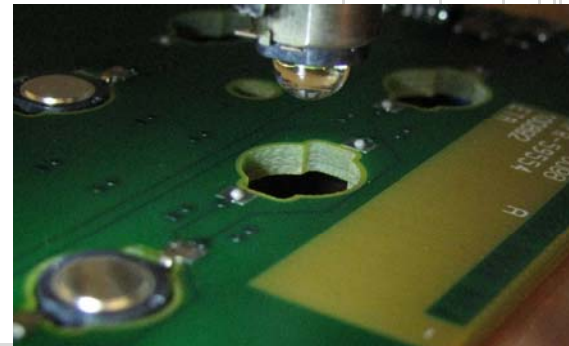


## Hot Bar Features

- High performance Linear motors 1200"/min
- Exceptional, consistent soldering quality
- 1 x Pick and Place –Hot Bar Rotating Head (Mirror)
- Force controlled nozzle /hot bar
- Closed loop quick change Hot Bar Heads
- Simple intuitive programming - board temp/Hot Bar temp/Force and Time
- Large 100+ program capacity and expandable
- USB programming interface
- Flexible user configuration
- Modular platform
- High Throughput / Co-axial hot bar design
- Bottom board pre heat near IR with closed loop board temperature
- User Interface: Windows XP based

## Modules & Options

- Automatic head changer
- Inspection camera & monitor
- Ethernet interface
- Memory expansion per 100programs
- X Y programmable
- Replacement Hot Bar Head- Small  
Medium  
Large
- Low maintenance, high reliability linear motor option
- Dispensing
- Test nest
- Solder past dipping station
- Pick and Place module
- Line or batch configurations
- Multi-Head capable
- Feeders
- Rotary multi station fixture
- Low maintenance, High reliability linear motor option
- Automated Hot-Bar maintenance option
- Touch probe digitizer
- Enclosure - for clean room



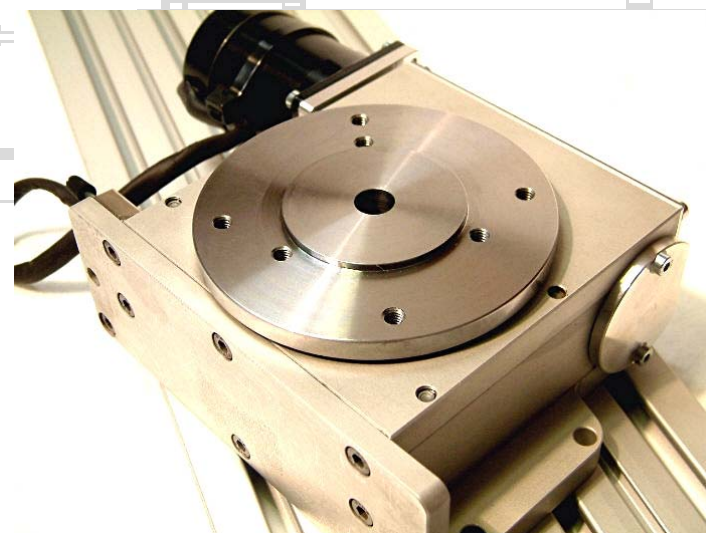
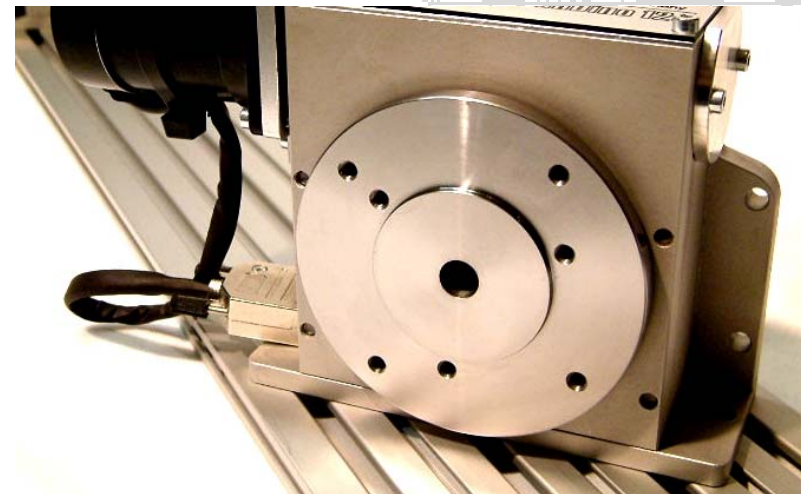
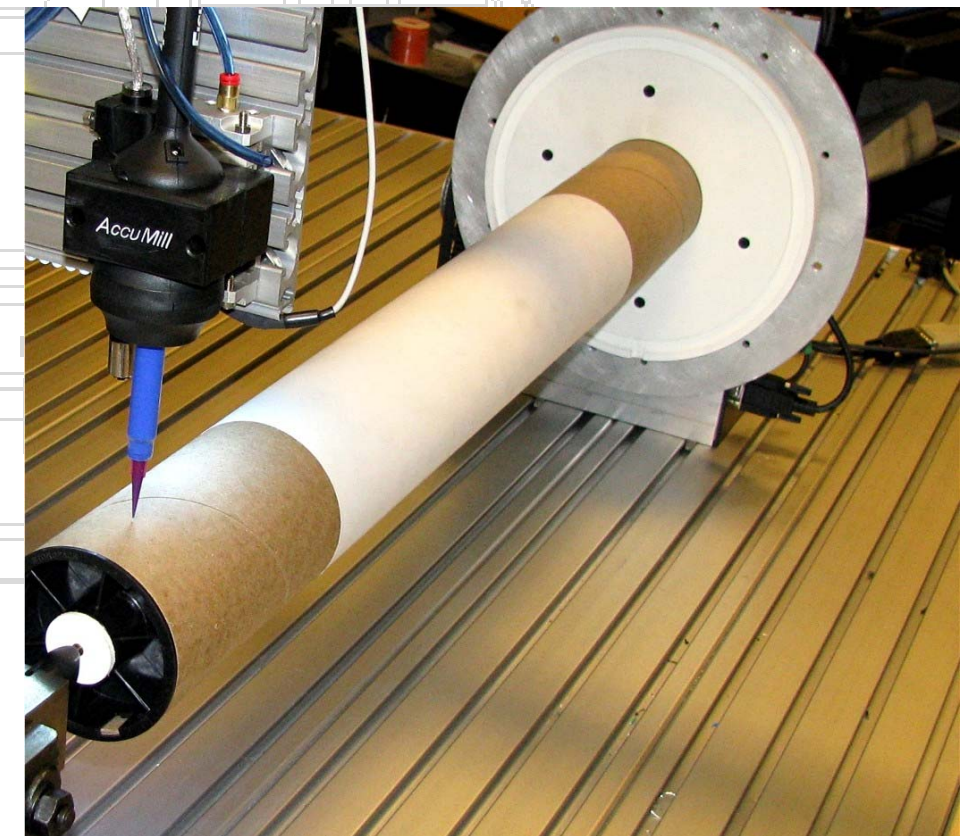
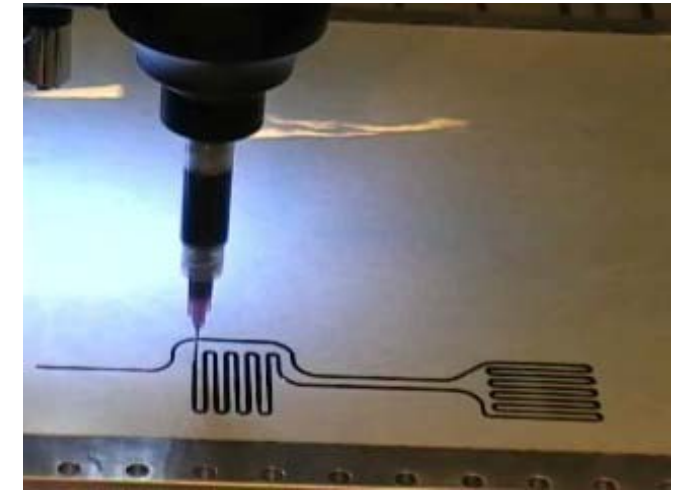
ASC provides a complete process solution with exceptional technology.

\* All designs are covered by international patent pending  
 \* Due to constant product improvement and development the above specifications are subject to change without prior notice  
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## Machining & Dispensing Features

- Height offset sensor Or passive float for contour machining
- Inert gas ready for cooling /shrouding laser target
- Fume extraction capable
- To change from conductive to resistive writing only requires a syringe change
- Reliable - predictable system performance
- Very quiet operation
- Ease of programming using Cad/Gerber/STL data
- Flexible user configuration
- Modular platform
- Flexible work fixturing
- Multi head /Multi gantry capable
- High positioning accuracy
- Most options can be field up-gradable and Scalable
- Highly repeatable dispensing Axis with interpolated path capability. All options are field upgradeable
- B Axis for head (Vertical Rotation)
- C Axis rotary table, convertible from vertical to horizontal (A Axis)



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## Safety Features

- Protective shroud covering hot bar nozzle so operator can load and unload PCB boards
- Emergency stop button
- Pause button
- Optional light curtain
- Optional enclosure
- Optional safety mats

## Conformance & Approvals

- Intertek ETL approval - conforms to UL STD 73
- SPE 1000 – 94
- CDN/CSA C22.1-1998 CEC
- RoHS compliant

## Facilities Requirement for the AccuMill™ LMDW

- AccuMill LMDW (physical envelope) Scalable to customers needs
- Air Consumption: 6 cfm
- Air pressure 75-90 psi -clean and dry
- Machine Weight: 100- 500 lbs.
- \*Location must be level and flat

## Electrical Requirements

- 220 – 240 @ 15A volt Canada, US, Asia and Europe

## Specifications

- Z Axis : Servo actuated
- Soldering head force: Adjustable/Programmable
- Soldering Tips: Coaxial/ long life/ high thermal recovery alloy
- Programming Board Temp/Hot Bar Temp/Force & Contact
- 



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