

# PRO-MATION

***THE NEXT GENERATION IN SELECTIVE LASER SOLDERING***

## PRO 8<sub>b</sub>

SELECTIVE LASER SOLDERING SYSTEM FOR BOTTOM SIDE APPLICATIONS

When speed and repeatability are crucial, the **PRO 8<sub>b</sub>** selective laser soldering system meets the challenge head on. Built on a rugged steel frame, this work horse has been designed for around the clock productivity.

Capable of soldering a wide range of applications, the **PRO 8<sub>b</sub>** can quickly solder most bottom side applications. The multi axis soldering head allows for precise movement and approach to each solder joint. Motion is programmable in X, Y, Z and Theta (with a +/- 10 degree tilt range).

Standard features include:

- Premium Diode Laser
- Variable Beam Size (0.7 mm up to 2.5 mm)
- Multi Axis Cartesian robot
- Adept motion control
- Vision Guidance system
- Fiducial recognition
- Automated solder feeder
- Multiple Micro Cameras w/split screen viewing
- Master Control Panel (Windows XP based format)
- CAD down load interface
- “On the fly” editing
- In-line Conveyor system
- Fume extraction plumbing and more...



**2004  
ADVANCED PACKAGING AWARD  
RECIPIENT**



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## TECHNICAL SPECIFICATIONS

<b>Model:</b>	<b>Version PRO 8b</b> <b>Selective Laser Soldering Work Cell</b>
<b>Length:</b>	In-Line (1500 mm) (may be positioned in-line with other automation or operated as a stand alone)
<b>Frame Style:</b>	Heavy duty, precision welded steel framing with powder coated vanity panels
<b>Description:</b>	This in-line soldering station combines superior performance, user-friendly software, and precise movement to selectively solder bottom side applications. The Version 8 work cell is packed with useful features and can dial in the desired spot size for each pin location.

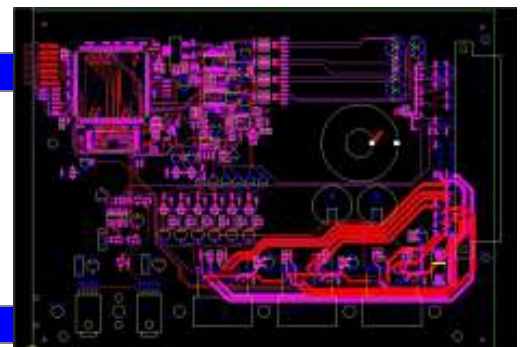
### Standard Features:

- **60 Watt (940 nm) Diode Laser**
- Thirty two 50 micron fibers ensure Gaussian distribution (no hot spots)
- **Variable beam sizes** (0.7 mm up to 2.5 mm) dynamic software control
- **Multi Axis Cartesian robot** with enhanced Adept motion controls
- **Fast pin to pin movement (up to 1.2 meters/second and 1G acceleration)**
- **Repeatability of .0004"**
- Dust covers (on robot arm) prevent foreign debris entry and reduces maintenance
- **Vision Guidance system** with fiducial recognition and dynamic compensation
- Fiducial recognition points may be copied - lessens need for precision fixture
- Air knife across lens reduces risk of debris and fume contamination
- **Automated solder feeder** (wire perforation allows fumes to escape freely)
- Solder tube angle dynamically adjustable through software
- **Micro Cameras** interface into a flat panel display for "Real Time" viewing
- **Master Control Panel** (Windows XP based format) – Network capable
- **CAD down load interface** with superior graphics and pin to pin management
- **"On the fly" editing** allows you to dial in the exact process parameters
- Rugged Adept I/O technology provide bulletproof reliability
- **In-line Conveyor system** operates left to right travel – front fixed rail
- Product clamping (front and rear rails)
- **Fume extraction** plumbing (optional stand alone HEPA filter available)
- 3 Color Light Tower and audible alarm
- Powder coated safety guarding (laser compliant), "Pro-mation Steel" color
- Conforms to SMEMA Spec. 1.2 / Full safety guards



### Product / Fixture Handling Capability:

<b>Edge Contact:</b>	3 mm
<b>Length:</b>	3.0" – 18" (76 mm - 460 mm)
<b>Width:</b>	3.0" – 18" (76 mm – 460 mm)
<b>Thickness:</b>	0.045" (1 mm) minimum (less deflection)
<b>Above board clearance:</b>	2.2" (60 mm) or to customer's design
<b>Below board clearance:</b>	1." (22 mm)



### Facilities Requirements:

<b>Electrical:</b>	220/240 VAC – 1 Phase
<b>Air:</b>	Pump and vacuum/80 PSI dry filtered air
<b>Line height:</b>	(37.5") +/- 1" or (950 mm) +/- 30 mm
<b>Footprint:</b>	1500 mm Long by 1500 mm deep

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