

**Leading the World in Product Identification Technology**



# TELESIS

Product Identification Systems

Telesis is the leader in Product Identification and Traceability Technology. Our wide range of permanent, programmable, PROSCRIPT® Lasers and PINSTAMP® Marking Systems are fast and durable. They are relied on in thousands of manufacturing environments every day, throughout the world. ALL Telesis systems — whether standard or custom engineered — are backed by a global network of knowledgeable Sales and Service Professionals.

## TELESIS LASER MARKING SYSTEMS

TELESIS' line of Nd:YAG, Nd:YVO<sub>4</sub>, CO<sub>2</sub>, Diode-Pumped and Fiber Laser Marking Systems offers the ultimate in high-speed, high quality product identification. Manufacturers of delicate plastic products, ceramics, glass or medical instruments can mark virtually any material with text, bar codes, 2-D\* codes, logos and graphics.

Our ECLIPSE® Lamp-Pumped Nd:YAG laser is designed for high speed, deep to shallow marking on hard surfaces. Extremely fast, ECLIPSE® is the choice for marking titanium and other high strength alloys, medical implants and hard plastics. The SABRE® CO<sub>2</sub> laser can mark a variety of industrial and consumer products. Materials like glass, plexiglass, plastics and acrylics, wood, leather, vinyl and rubber benefit from CO<sub>2</sub> Laser marking.

The compact, portable, economical line of TLM Diode-Pumped and ZENITH® Nd:YAG, Nd:YVO<sub>4</sub> and Fiber Lasers are ideal for high precision marking on medical instruments, products made from metal, coated materials and some plastics.

Program design for any of our lasers is easy with specially designed, Merlin® II LS Software. Unique to Telesis, it's based on the Windows™ NT and 2000 platforms and features user-friendly, drop-down menus and popular graphic interfaces.

## PIN MARKING SYSTEMS

Fully programmable PINSTAMP® Single and Multiple-Pin Marking Systems are based on Telesis' original, patented "Floating Pin" design. A pneumatically driven and returned metal pin permanently indents the marking surface with either dot matrix or continuous line characters — even logos, graphics or 2-D\* Codes. Since the marking pin "floats" on constant return air pressure, surface irregularities up to 1/4" are easily accommodated. And, no stress concentrations occur.

Since the force of the mark is controlled by air pressure, product marking can be "customized" to suit most any application. Telesis manufactures over 10 versatile PINSTAMP® Models. They are cost-effective in a wide range of stand alone or on-line manufacturing situations.

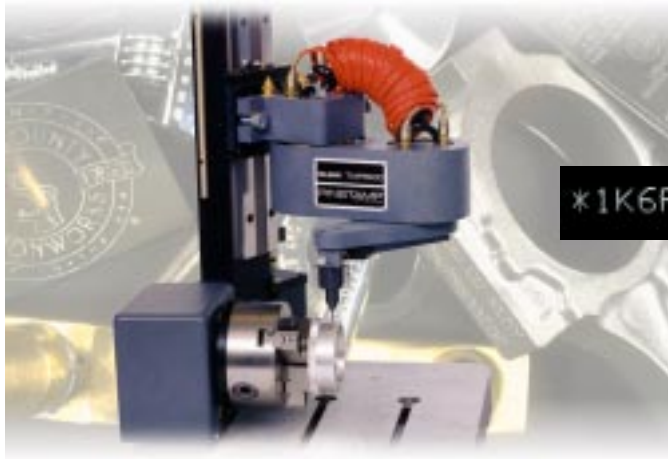


# IDENTIFICATION SOURCE

**TELESCRIBE® Marking Systems** inscribe high quality, continuous line characters in materials from plastics to hardened steel — in virtual silence. Other Pin Marking Systems include the **BENCHMARK® 320**, a low cost marker for stand-alone, benchtop applications and **IDENTIPLATE®**, which provides efficient, automated tag marking for a variety of industrial or consumer products.

## QUALITY - ISO9001

At Telesis, manufacturing management processes must comply with rigorous ISO Quality Standards. Product Testing in every phase of production ensures reliability throughout the life of your marking system.



## CUSTOM ENGINEERED SOLUTIONS

Telesis is the leader in custom engineered/factory integrated marking technology. Whether it's a fully automated on-line application or a stand-alone manual workstation, Telesis Applications Engineers will work with you to solve your parts handling and custom software needs.

They can integrate any of our standard marking products within your specific application. You can expect a responsive, cost-effective, quality design solution to meet your unique requirements.



**To learn more – or discuss a Custom Engineered Marking System, call 800.654.5696 TODAY – or visit us at [www.telesis.com](http://www.telesis.com).**

\* Most Telesis Marking Systems are in compliance with the U.S. Department of Defense UID Requirements and ATA SPEC 2000 Aerospace Industry Standards for Data Matrix™ 2-D Code Parts Marking. Data Matrix™ is a registered trademark of Robotic Vision Systems, Inc.



All product descriptions subject to change without notice. Please refer to Product Specification Sheets or call the Applications Engineering Department at 800.654.5696 for current information.

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<b>ECLIPSE® Nd:Yag Lasers .....</b>	<b>Page 5</b>
<i>For the ultimate in high speed, high quality marking of hard surfaces and materials.</i>	
<b>SABRE® CO<sub>2</sub> Lasers .....</b>	<b>Page 6</b>
<i>Available in 10, 30, and 50 watt configurations, Sabre® is the choice for marking substrates like wood, glass, ceramics and fabrics.</i>	
<b>ZENITH® 50 Watt Nd:Yag Diode-Pumped Lasers .....</b>	<b>Page 7</b>
<i>Choose the Zenith® 50 watt for high speed, high quality marking on a variety of surfaces.</i>	
<b>ZENITH® 10F+ and 20F+ Pulsed Fiber Lasers .....</b>	<b>Page 8 and 9</b>
<i>Select the ZENITH® 10F+ for low to medium speed applications and the ZENITH® 20F+ when higher power/faster process speeds are required. The 20F+ features upgraded power, and both lasers offer the long-term safeguard of a built-in, polarization/optical isolator.</i>	
<b>TLM500 E Series .....</b>	<b>Page 10</b>
<i>TELESIS NEW TLM500 E Series Diode-Pumped, Solid State Laser Marking Systems are extremely reliable, low cost alternatives to other laser designs.</i>	
<b>Telesis Laser Software .....</b>	<b>Page 11</b>
<i>Designed to drive all core Telesis Laser Products. Simply highlight, click and mark!</i>	
<b>TMP6100/090 PINSTAMP® Marking System .....</b>	<b>Page 12</b>
<i>The Single Pin TMP6100 is the most versatile PINSTAMP® Marking Head. It is easily integrated into either on or off-line applications. Since the marking pin can be positioned anywhere in the generous 6" x 12" (152 x 304mm) marking window, the TMP6100 can mark any character height or style, or number of lines desired. Its robotic design allows clear access to the marking window for loading and unloading of parts.</i>	
<b>TMC090 Marking System Controller .....</b>	<b>Page 13</b>
<i>Compact design features WIN 32 Merlin®II interface and virtually unlimited pattern storage capacity.</i>	
<b>Merlin® II Visual Design Software .....</b>	<b>Page 13</b>
<i>Telesis' new WIN 32 Merlin® II Visual Design Software makes pattern design quick and intuitive. "WYSIWYG" (what you see is what you get) displays a to-scale image of the pattern as it's created. Just "click &amp; drag" for immediate adjustments to field size, location or orientation.</i>	
<b>TMP1700/420 and TMP1700/090 PINSTAMP® Marking Systems .....</b>	<b>Page 14</b>
<i>The TMP1700/420 and TMP1700/090 are the lowest cost PINSTAMP® Marking Systems. The rugged Single Pin TMP1700 marking head features a compact, 1-1/2" x 2-1/2" (38.1 x 63.5mm) window, and marking speeds up to six characters per second. It's an excellent choice for many factory-automated or on-line processes. When combined with optional mounting post and base, the TMP1700 is cost-effective in off-line marking applications, too.</i>	
<b>TMP4210/420 PINSTAMP® Marking System .....</b>	<b>Page 15</b>
<i>The TMP4210/420 is an extremely lightweight, hand-held, single pin marker satisfying a wide range of portable marking applications. Its robust rack-and-pinion design and compact envelope also make it the right choice for many high production, on-line applications.</i>	
<b>TMP3200/420 and TMP3200/090 PINSTAMP® Marking Systems .....</b>	<b>Page 16</b>
<i>The TMP3200/420 is a rugged, cost effective utility marker for on-line and off-line high speed marking applications. Its low-maintenance design features a 4" x 6" (100 x 150mm) marking window for multi-line text, and marking speeds up to six characters per second. The TMP3200/090 includes the TMP3200 Marking Head, plus our WIN 32 Merlin®II Visual Design Software, with state-of-the-art graphical user interface.</i>	
<b>TMC420 Marking System Controller .....</b>	<b>Page 17</b>
<i>The TMC420 is a versatile, compact system controller that can be used with most PINSTAMP® marking heads. The TMC420 is fully self-contained and requires no Personal Computer.</i>	

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<b>TMM4200/420 PINSTAMP® Marking System .....</b>	<b>Page 19</b>
<i>The unique TMM4200 Multiple Pin Marking Head can mark up to eight characters per second at depths to .013" (.33mm). Weighing 4.5 pounds, its compact, hand-tool like design with pistol-grip handle makes the TMM4200 the ultimate hand held permanent marker.</i>	
<b>TMM4250/420 PINSTAMP® Marking System .....</b>	<b>Page 20</b>
<i>The TMM4250/420 Multiple Pin Marking System can mark up to eight characters per second. A NEMA 12 (IP55) enclosure with industrial grade, protective rubber "boot" makes it highly resistant to both solid and liquid contaminants. The TMM4250 features an extremely compact envelope. It can be integrated easily within a wide range of manufacturing settings.</i>	
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<i>With up to six pins marking simultaneously, the TMM5100 Multiple Pin Marking system can mark up to six characters per second. Its lightweight, compact design and minimal footprint make it ideal for either automated or hand-held operations. A variety of pin cartridges are available for optimal character size/depth, cycle times and marking window areas.</i>	
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<i>Powerful, heavy duty, low noise Scribe Marker with a 2-1/2" x 7-1/2" (63.5 x 190.5mm) marking window. Well suited for VIN applications.</i>	
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<i>2-D and UID Code applications, where accurately marked codes are the key to readability.</i>	
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All of our systems — standard and custom — are designed and built to your specifications at our 46,000 square foot (4087 square meter) facility located in Circleville, Ohio. We maintain state-of-the-art manufacturing tools for all of the mechanical, electrical and software functions needed to support your marking system. Telesis also maintains Sales and Distribution Offices in California, Michigan, The Netherlands, Germany, France and England.



## Technical Service

We back our customers with support and service for every system we build — world-wide. This includes on-site installation and start-up by our experienced Field Service Engineers. They'll even train your operating personnel — further assurance that your Telesis Marking System will perform dependably.

Have a technical question or concern? Call our Technical Service Department at **800.867.8670** or e-mail a Telesis Service Technician at [technical\\_services@telesistech.com](mailto:technical_services@telesistech.com). Telesis Service Technicians are available 24 hours a day — every day — to help you. Often, they can troubleshoot and fix a problem over the phone, saving you time and money.

**At Telesis, we're dedicated to support you for the life of your Marking System, We're with you 100% of the way.**

## Component Exchange Programs

Should your Telesis System need out of warranty factory repair, we can provide a Loaner System for a nominal fee. This innovative program helps avoid downtime. If repairs or up-grades to your original marking system are cost prohibitive, the loaner system may be purchased at a reduced exchange price. Call us for a complete, up-to-date price listing of Exchange Marking Heads and Controller Options.

## Training

Telesis' commitment to customers is evident in our Training Facility. It features classroom-oriented and hands-on product training by experienced instructors. Our 3,000 square foot (279 square meter) facility gives us the flexibility to accommodate up to 40 people in a classroom setting. Smaller groups use product workstations for a very effective, individual learning experience. All Product Training Classes are taught by experienced instructors.

Do you need basic start-up instructions for a Standard Telesis System? Our "Quick Start" Compact Discs feature an easy, 10-step program to get your marker on-line in minutes. Each CD is interactive to our website ([www.telesis.com](http://www.telesis.com)). For immediate assistance, simply call or E-mail [technical\\_services@telesistech.com](mailto:technical_services@telesistech.com) with your questions.

## Our Warranty and Guarantee

Every Telesis Marking System carries a complete Parts and Service Warranty. During this time, replacement parts can be shipped free of charge, overnight in the continental United States. Plus, component exchange programs for reconditioned equipment can reduce downtime.

Extended Service warranties are available for all Telesis Marking Equipment. Contact your Telesis Representative or our Customer Service Department for details.



For the Ultimate in High Speed, High Quality Product Identification, Lamp-Pumped ECLIPSE® is designed for hard surface treatments. It's the powerful, reliable choice for deep, engraved to shallow, annealed marking on titanium and other high strength alloys, medical implants and hard plastics.



**FEATURES**

- Unique, Straight INVAR Rail Design for Easy Alignment, Increased Power and Thermal Stability
- Lightweight, Dust Sealed Rail Cover features "Hideaway Handles" for easy access
- Fixed Beam Expander
- Safety Shutter, Co-Axial Red Diode Pointer and Emission Light for Simple Operation

**DIMENSIONS**

Laser ..... 8" W x 9" H x 56" L  
 Laser Power/DI Water  
 Supply Cabinet ..... 24" W x 27" H x 30" D  
 Umbilical Length ..... 10 Feet [detachable]

**All Marking Head Components and Assembly Warranted for One Year**



**LASER CONTROLLER/DI WATER CABINET FEATURES**

- Compact, "All in One Design" Mounted on Casters
- Slide-out DI Water System / DI and Particle Filters
- Flow, Temperature and DI Sensors
- Keyswitch and E-Stop with Manual Shutter Control
- 1<sup>st</sup> Pulse Suppression Circuitry

**SPECIFICATIONS**

Compliance ..... CDRH, CE, UID  
 Type ..... Nd: Lamp-pumped YAG  
 Wavelength ..... 1,064 Nm  
 Average Power ..... 100 Watts  
 Mode ..... Q-Switched or CW  
 (Continuous Wave)  
 Q-Switch Frequency ..... 0 to 100 KHz  
 Marking Speed ..... .02 to 197 in/sec  
 (.5 to 5000 mm/sec.)  
 Marking Fields ..... Several Available  
 Electrical ..... 3 phase/3 wire, 230V.  
 50-60Hz nominal  
 Total System Power Consumption ..... 7.5 KVA  
 Internal DI Water ..... Requires (5) gallons, steam distilled  
 External Cooling Water ..... 5 gallons/min. (19 liters/min.)  
 50° F - 65° F, (10°- 18° C)

**LENS CONFIGURATIONS AVAILABLE**

Focal Length	Marking Field	Work Clearance
100mm	45mm x 45mm (1.8" x 1.8")	97mm (3.82")
160mm	90mm x 90mm (3.5" x 3.5")	176mm (6.93")
163mm	110mm x 110mm (4.3" x 4.3")	185mm (7.28")
254mm	155mm x 155mm (6.1" x 6.1")	296mm (11.65")
* 330mm	215mm x 215mm (8.4" x 8.4")	387mm (15.23")
* 420mm	275mm x 275mm (10.8" x 10.8")	493mm (19.40")

\* Application dependent



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

Available in 10, 30 and 50 watt configurations, SABRE® can mark substrates like wood, glass, plexiglass, quartz, ceramics, even fabrics and other organic materials.



**FEATURES**

- Unique, Single Rail Design for Easy Alignment and Increased Power
- Compact Marking Head with Two Piece Cover and Simple Mounting System
- Hand Held Pendant for Convenient Remote Operation
- Co-Axial Red Pointer Diode for Pin Point Marking Alignment
- TELESIS DESIGNED Fixed Beam Expansion and Shutter Assembly
- DETACHABLE 6' Laser End Umbilical Cable
- Air-cooled — No External DI Water Needed
- Keyswitch, E-Stop Manual Safety Shutter and Emission Light

**DIMENSIONS**

- Controller ..... 17" W x 7" H x 20" D
- Laser [30W] ..... 5.83" W x 8.2" H x 38.5" L
- Laser [50W] ..... 5.8" W x 8.2" H x 50" L
- Umbilical Length ..... 6 Feet [detachable]

**Small Laser Controller and Unique, Dual Function Control Pendant**



**All Marking Head Components and Assembly Warranted for One Year**


**SPECIFICATIONS**

Compliance ..... CDRH, CE, UID  
 Laser Type ..... CO<sub>2</sub>, Self-contained  
 Wavelength ..... 10.6 Micrometers  
 Wattage ..... 10W, 30W, 50W  
 Control ..... Proprietary Laser Controller  
 Computer Pentium® III 128 Mb RAM [minimum] Multi-gigabyte HDD Video, Sound Card, CD-ROM and 3.5" Floppy Disk Drive, SVGA Monitor, Mouse and Keyboard  
 Operating System ..... Windows® NT or Windows® 2000  
 Operator Interface ..... Graphical User Interface [proprietary]  
 Marking Alignment ..... Coaxial Red Diode  
 Safety ..... Interlocked Safety Shutter, Emission Light, Keyswitch, Emergency Stop Palm Button  
 Electrical ..... 110 Volts, Single Phase  
 Cooling ..... Air Cooled  
 Environmental ..... 10° C to 25° C, 90% Relative Humidity — Non-Condensing

**LENS CONFIGURATIONS AVAILABLE**

Focal Length	Marking Field	Work Clearance
100mm	70mm x 70mm (2.7" x 2.7")	81mm (3.18")
150mm	100mm x 100mm (4.0" x 4.0")	131mm (5.15")
200mm	140mm x 140mm (5.5" x 5.5")	184mm (7.24")
* 250mm	170mm x 170mm (6.6" x 6.6")	233mm (9.17")
* 300mm	205mm x 205mm (8.0" x 8.0")	283mm (11.14")
* 360mm	250mm x 250mm (9.8" x 9.8")	351mm (13.8")

\* Application dependent

 Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements





The diode-pumped ZENITH<sup>®</sup> 50 Watt is configured for high precision, high speed marking. Features include high quality beam performance and low maintenance. It's an economical choice for marking titanium and other high strength alloys and medical implants.



**FEATURES**

- Unique, Three Rail Design for Easy Alignment, Increased Power and Thermal Stability
- Lightweight, Dust Sealed Rail Cover
- Fixed Beam Expander
- Safety Shutter, Co-Axial Red Diode Pointer and Emission Light for Simple Operation

**DIMENSIONS**

Laser ..... 8" W x 8" H x 33" L  
 Water Chiller System ..... 12.6" W x 23.5" H x 20.9" D  
 Umbilical Length ..... 6 Feet [detachable]

**SPECIFICATIONS**

Compliance ..... CDRH, CE, UID  
 Type ..... Nd: Diode-pumped YAG  
 Wavelength ..... 1,064 Nm  
 Average Power ..... 50 Watts  
 Mode ..... Q-Switched  
 Q-Switch Frequency ..... 2 to 50 KHz  
 Marking Speed ..... .02 to 197 in/sec  
 (,.5 to 5000 mm/sec.)  
 Marking Fields ..... Several Available  
 Electrical ..... Single phase, 110V,  
 60Hz nominal  
 Total System Power  
 Consumption ..... 2.2 kW input AC Power  
 Internal DI Water ..... Requires (1.5) gallons,  
 steam distilled  
 External Cooling Water ..... Not required

**LASER CONTROLLER SYSTEM FEATURES**

- Self-Contained Remote DI Water System / DI and Particle Filters (No External Chiller Required)
- Flow and Temperature Sensors
- Keyswitch and E-Stop with Manual Shutter Control
- 1<sup>st</sup> Pulse Suppression Circuitry
- System PC, Mounted directly in control cabinet
- Alternate electrical box for mounting/wiring peripheral components

**LENS CONFIGURATIONS AVAILABLE**

Focal Length	Marking Field	Work Clearance
100mm	45mm x 45mm (1.8" x 1.8")	97mm (3.82")
160mm	90mm x 90mm (3.5" x 3.5")	176mm (6.93")
163mm	110mm x 110mm (4.3" x 4.3")	185mm (7.28")
254mm	155mm x 155mm (6.1" x 6.1")	296mm (11.65")
* 330mm	215mm x 215mm (8.4" x 8.4")	387mm (15.23")
* 420mm	275mm x 275mm (10.8" x 10.8")	493mm (19.40")

\* Application dependent



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements



Innovative, compact and flexible ZENITH® Pulsed Fiber to Fiber Ytterbium Lasers are perfectly suited for marking applications that require 24/7 “set and forget”, unattended operation.

Select the **ZENITH® 10F** for low to medium speed applications and the **ZENITH® 20F** when higher power/faster process speeds are required. The 20F features upgraded power. Both lasers offer the additional long-term safeguard of built-in, polarization/optical isolators.



Example — Laser marking on Coated Label Stock



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

## Zenith® 10F PULSED FIBER TO FIBER

### LASER SPECIFICATIONS

Compliance .....	CDRH, CE, UID
Wavelength .....	1,060nm
Laser Type .....	Ytterbium Fiber Laser, Galvo Steered
Laser Source .....	Diode-pumped, Fiber to Fiber, Pulsed
Pulse Repetition.....	20 KHz to 125KHz
Average Power ZENITH® 10F+ .....	10 Watts
Average Power ZENITH® 20F+ .....	20 Watts
Long term Output Power .....	<5% Instability
Peak Power ZENITH® 10F + .....	>4KW
Peak Power ZENITH® 20F + .....	>8KW
Beam Quality .....	M <sup>2</sup> < 2
Fiber Length ZENITH® 10F+ .....	5 Meters (16 ft) Std.
Fiber Length ZENITH® 20F+ .....	3 Meters (9.8 ft) Std.
Optical Isolator ZENITH® 10F+ .....	Optional
Optical Isolator ZENITH® 20F+ .....	Standard
Positioning .....	Visible Red Diode Light. 636nm

Marking Speed .....	Raster = 300 CPS; Vector>500 CPS (application dependent)
Input Power .....	Selectable 115VAC / 230VAC, 50/60HZ
Cooling .....	Air Cooled, Fan/Filter (no water cooling required)
Operating Range .....	10° to 42° C Non-Condensating (32° F to 107° F)
Expected MTBF (diode) .....	Greater than 50,000 hrs. maintenance free

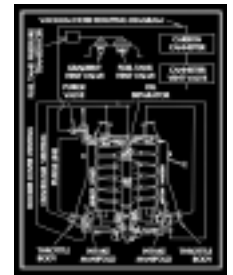
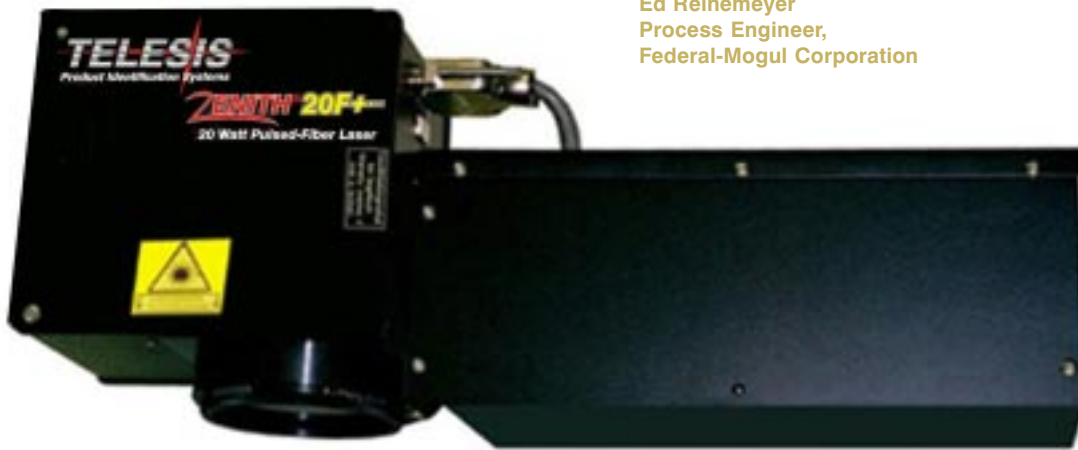


Customized  
Part Handling  
Options Available

Powered by 110/230VAC with no water-cooling requirements, these units are extremely dependable over a long life, and are backed by a full TWO-YEAR factory warranty on the diode light source — one of the longest warranties in the laser industry.

*"All of your employees seem to be willing and able to give that "little bit extra" to make everything go right. The laser marking equipment you have supplied to us thus far has been totally reliable and continues to perform flawlessly, helping Federal-Mogul Corporation reduce costs as it continues to improve product quality. I look forward to a continued relationship with the people I consider my "friends" at Telesis Technologies."*

**Best Regards,**  
Ed Reinemeyer  
Process Engineer,  
Federal-Mogul Corporation



**Example — Laser marking on Coated Label Stock**



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

## Zenith® 20F YTTERBIUM LASER SYSTEMS

### DIMENSIONS

- ZENITH® 10F+ Marking Head . 11.8cm(W) x17cm(H)x 30.2 cm (L)  
(4.96" W x 6.7" H x 11.9"L)  
Weight 3.8Kg (8 lbs.)
- ZENITH® 10F+ Laser Controller ..... Standard Rack Mount  
48.3cm (W) x 20cm (H) x 60 cm (L)  
(19"W x 7.8"H x 23.6"L) Weight 24Kg (53 lbs.)
- ZENITH® 20F+ Marking Head .... 11.8cm(W) x17cm(H)x 70 cm (L)  
(4.96" W x 6.7" H x 17.9"L)  
Weight 7.7Kg (17 lbs.)
- ZENITH® 20F+ Laser Controller ..... Standard Rack Mount  
48.3cm (W) x 20cm (H) x 60 cm (L)  
(19"W x 7.8"H x 23.6"L) Weight 30Kg (66 lbs.)

### LENS CONFIGURATIONS AVAILABLE

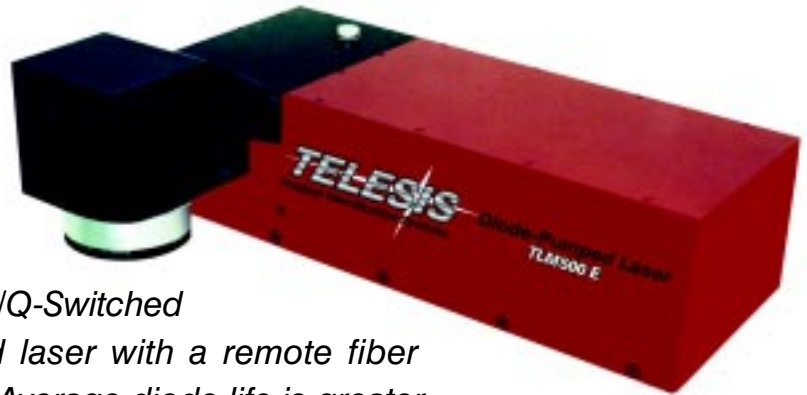
Focal Length	Marking Field	Work Clearance
100mm	45mm x 45mm (1.8" x 1.8")	97mm (3.82")
160mm	90mm x 90mm (3.5" x 3.5")	176mm (6.93")
163mm	110mm x 110mm (4.3" x 4.3")	185mm (7.28")
254mm	155mm x 155mm (6.1" x 6.1")	296mm (11.65")
* 330mm	215mm x 215mm (8.4" x 8.4")	387mm (15.23")
* 420mm	275mm x 275mm (10.8" x 10.8")	493mm (19.40")

\* Application dependent

### SOFTWARE

- Software ..... Merlin® II LS
- Operating System ..... Windows™, 2000, XP, Desktop PC (Std),  
Optional Laptop
- Font Generation ..... True Type Fonts
- Barcodes and Matrix ..... 2D Data Matrix TM, PDF417, BC 39,  
Interleaved 2 of 5, UPCA/UPCE BC 128,  
Maxi Code, Code 93, QR Code and Others
- Graphic Formats ..... Raster and Vector,  
BMP, .GIF, JPG, .WMF, .EMF, .PLT, .DXF
- Serialization ..... Automatic and Manual Input Host  
Interface Capable
- Linear Marking ..... Scalable with Letter Spacing Control
- Arc Text Marking ..... Scalable and Adjustable
- Drawing Tools ..... Line, Rectangle, Arc, Circle
- Interface ..... Serial, I/O and Host capable
- Power Monitoring ..... Self-Calibrating, Output Power Feedback  
and Auto Adjustment

**TELESIS NEW TLM500 E Series**  
 Diode-Pumped, Solid-State Laser  
 Marking Systems are extremely  
 reliable, low cost alternatives to  
 other laser designs.



Features include a CW/Q-Switched  
 Nd:YAG end pumped laser with a remote fiber  
 coupled light source. Average diode life is greater  
 than 15,000 working hours. The TLM500 E is a flexible,  
 compact, low maintenance, easily integrated package.



## TLM500 E Specifications

### Laser Specs

Compliance .....	CDRH
Wavelength .....	1,064nm
Marker Type .....	DPSS, Nd:YAG, Galvo Steered
Laser Source .....	End Pumped, Solid State, Laser Crystal, with Remote Fiber Coupled Diode Light Source, Q-Switched
Diode Light Source Wavelength .....	808nm
Q-Switch Frequency .....	1 KHz to 50 KHz
Pulse Energy .....	> 0.8mJ
Mode .....	TEM <sub>00</sub>
Beam Polarity .....	Random
CW Average Power .....	5 Watts
Peak Power .....	Up to 40Kw
Long term Output Power .....	< 2 % Instability
Lens (Std) .....	160mm Focal Length 110mm x 110mm Field, (4.33" x 4.33")
Lens (opt) .....	100mm Focal Length 65mm x 65mm Field, (2.55" x 2.55")
Lens (opt) .....	254mm Focal Length 155mm x 155mm Field, (6.1" x 6.1")
Positioning .....	Standard: Visible Red Diode Light, 650nm
Marking Speed .....	Raster=300 CPS, Vector >500 CPS (application dependent)
Input Power .....	Selectable 115VAC / 230VAC, 50/60HZ
Cooling .....	Air Cooled, Thermoelectric (No water cooling required)
Laser Operating Range .....	15° to 35° C (62° F to 98° F) Non-Condensing
Expected MTBF (diode) .....	Greater than 15,000 Hours maintenance free

### Dimensions

TLM500 E Galvo and Rail Assembly .....	31.75 cm (W) x 15.72 cm (H) x 42.9 cm (L) (12.5 in W x 6.187 in H x 16.885 in L)
TLM500 E Laser Controller .....	Std. Rack mount 43 cm (W) x 14 cm (H) x 51cm (L) (17 in W x 5.5 in H x 20 in L)
Optical Fiber Umbilical Length Rail to Controller .....	1.37 Meters (4.53 feet) Std.

### Software

Software .....	Merlin II LS®
Operating System .....	Windows™, 2000, XP Desktop PC (Std) Optional Laptop
Font Generation .....	True Type Fonts
Barcodes and Matrix .....	2D Data Matrix™, PDF417, BC 39, Interleaved 2 of 5, UPCA/UPCE BC 128, Maxi Code, Code 93, QR Code and Others
Graphic Formats .....	Raster and Vector .BMP, .GIF, .JPG, .WMF, .EMF, .PLT, .DXF
Serialization .....	Automatic and Manual Input Host Interface Capable
Linear Marking .....	Scalable with Letter Spacing Control
Arc Text Marking .....	Scalable and Adjustable
Drawing Tools .....	Line, Rectangle, Circle
Interface .....	Serial, I/O and Host Capable



This powerful Merlin® II Visual Design Software is capable of driving any of the core Telesis Laser Products — Eclipse®, Sabre® or Zenith®. Each system is shipped with a fully functioning version of the Software (on CD), that allows off-line program development.



Main Programming Screen



Raster Profile

Bar Code Editor

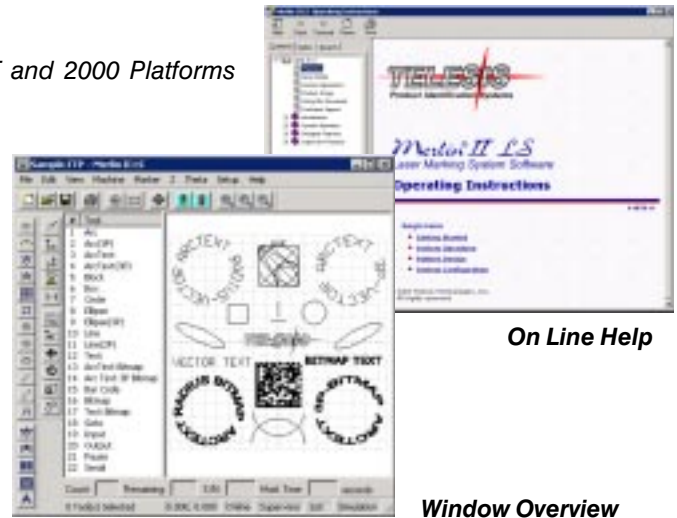
Vector Profile

**TELESIS LASER SOFTWARE FEATURES:**

- Specially Designed by TELESIS – based on WINDOWS® NT and 2000 Platforms
- Import a wide range of Graphic Formats including DXF from AutoCAD™, WINDOWS® Bitmaps, True Type Fonts as Vector or Raster Files
- Supports 4 Axis Movement (XYZ & Rotary)
- Highlight, click and mark !

**COMPUTER REQUIREMENTS:**

- Pentium® III 128 Mb RAM (minimum)
- Multi-gigabyte HDD
- Video, Sound Card
- CD-ROM and 3.5" Floppy Disk Drive
- SVGA Monitor, Mouse and Keyboard



On Line Help

Window Overview

**STANDARD and CUSTOM LASER WORKSTATIONS AVAILABLE**



The TMP6100 is the most versatile PINSTAMP® Marking Head. It is easily integrated into either on or off-line applications. Since the marking pin can be positioned anywhere in the generous 6" x 12" (152 x 304mm) marking window, the TMP6100 can mark any character height, style or number of lines desired. Its robotic design allows clear access to the marking window for loading and unloading of parts.

*"We recommend Telesis hardware to our clients because we believe it is the best marking equipment available. The success of our software business depends on high quality 2D Data Matrix™ dot peen marks and Telesis consistently delivers quality marks — every day — every time!"*

Chuck Stewart, Stewart Technologies Inc.



## FEATURES

- Large 6" x 12" (152 x 304mm) marking window
- Unique rigid positioning drive features robotic technology
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Dot density up to 200 dots per inch (79 per centimeter)
- Choice of Interchangeable Marking Pin Types for depths from .001"-.018" (.02 - .45mm) (see chart on pages 30 - 31)
- Pin travel accommodates surface irregularities to .25" (6mm)
- Compact TMC090 controller with WIN 32 Merlin® II graphical user interface (see page 13)
- RS232 or TCPIP Host interface to download text to individual fields or call up entire patterns
- Automatically generates serial numbers, time, date and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers)
- Virtually unlimited marking pattern (File) storage capacity
- Mark straight line text, angled text, arc text, circles, boxes, ellipses, lines and arcs; import logos as DXF files



## OPTIONAL ACCESSORIES

- Rotary fixtures for marking circumferences of cylindrical parts
- Marking head mounting posts, including programmable Z-axis version
- Logo/Font design Software Package for design of custom fonts or simple logos
- Optional TMP6100/090EAS configuration is available with electromechanical marking pin and autosense Z-axis.



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

**FEATURES**

- Compact 11.4" W x 10.2" D x 2.9" H (290 x 259 x 74mm) footprint is convenient for table-top or integrated applications
- Use in conjunction with any PC with a USB port running on Windows®98, 2000, Millennium or XP
- RS232 or TCP/IP Host Port via PC for interface to Host Computer or Bar Code Scanner
- "Start Print" and "Abort Print" signals from a simple contact closure
- 12-24 VDC "Start Print", "Abort," "Read" and "Done" I/O Signals
- Conforms to all European Community (CE) norms
- Operates on 100-130 VAC or 200-250 VAC, 50-60 Hz Power



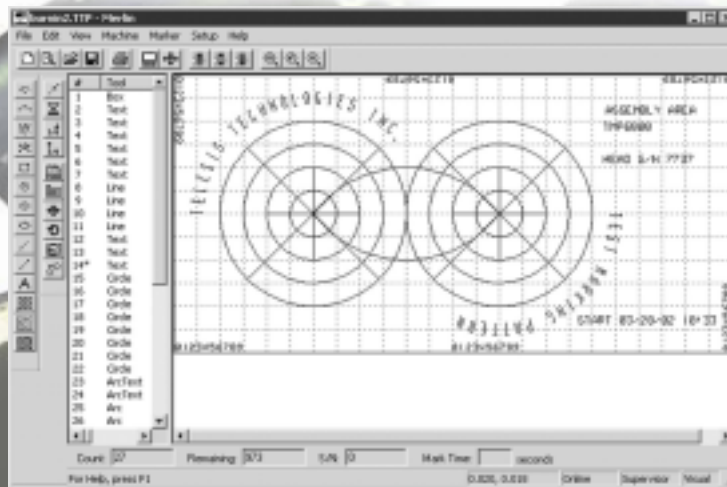
- Up to 15 different marking patterns remotely selectable via 12-24 VDC discrete inputs
- Available with TMP6100, TMP3200 and TMP1700 Marking Heads



**Merlin® II**  
**VISUAL DESIGN SOFTWARE**

Telesis' powerful WIN 32 Merlin® II Visual Design Software with its state-of-the-art graphical user interface, makes marking pattern design quick and easy.

**"WYSIWYG"** (what you see is what you get) interface provides a to-scale image of the pattern as it's created. Just **"click & drag"** for immediate adjustment to field size, location or orientation. Pattern Wizard Mode makes simple pattern design a snap even for the computer novice.



Marking "tools" available include text (at any angle), arc text, rectangles, circles, ellipses and lines. Multiple fields can be grouped and saved as a block to form a logo, or import logos via DXF CAD files. Non-printable fields

clearly show the graphical representation of the part being marked. Use the convenient, "GO TO" command to avoid obstacles within the marking window.



The TMP1700/420 is the lowest cost PINSTAMP® Marking System. The rugged TMP1700 marking head features a compact, 1-1/2" x 2-1/2" (38.1 x 63.5mm) window, and marking speeds up to six characters per second. It's an excellent choice for many factory-automated or on-line processes. The TMP1700/090 includes the TMP1700 Marking Head, but features our WIN 32 Merlin®II Visual Design Software, providing a state-of-the-art graphical user interface.

**FEATURES**

- 1-1/2" x 2-1/2" (38.1 x 63.5mm) Marking Window
- Rugged, low-maintenance X/Y platform
- Compact Marking Head — approximately 6.6" x 6.2" x 4.7" (168 x 158 x 120mm)
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Shutter assembly protects marking head from solid and liquid contaminants
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LED Display — no PC required (see page 17)
- Dot density up to 200 dots per inch (79 per centimeter)
- Choice of Interchangeable Marking Pin Types for depths from .001" - .018" (.03 - .45mm) (see chart on pages 28 - 29)
- Pin travel accommodates surface irregularities to .25" (6mm)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 75 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers

**OPTIONAL ACCESSORIES**

- TMP1700/090 System includes the TMC090 Controller and Merlin®II Visual Design Software in lieu of TMC420 Controller (see page 13)
- Rotary fixtures for marking circumferences of cylindrical parts
- Marking head mounting post including programmable Z-axis version
- Panel-mount and IP/NEMA Rated Controllers (see page 17)
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)

**Compact TMC420 Controller features 4-line LCD Display — no PC required.**



**A protective shutter assembly shields the TMP1700 marking head from liquid and solid contaminants.**



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements



The TMP4210/420 is an extremely lightweight, hand-held, single pin marker satisfying a wide range of portable marking applications. Its robust rack-and-pinion design and compact envelope also make it the right choice for many high production, on-line applications.



**FEATURES**

- Simple, Easy to Use Single Pin Design
- Compact and Ergonomic; Weighs about 2.0kg (4.4 pounds)
- Available with 25S or 150SA Marking Pin
- 50 x 13mm (2" x .5") Marking Window
- Economically Priced
- Marks up to 3.5 3mm (1/8") High Characters per Second
- Utilizes Same Rugged Rack-and-Pinion X/Y Platform as Field-Proven TMM4200
- Detachable Electronics Cable for Improved Serviceability
- Teamed with Reliable, Self-Contained TMC420 Controller (see page 17)
- Also Available Without Handle and Stand-Off for Fixtured Applications

**OPTIONAL ACCESSORIES**

- Cable Balancer Attachment Bracket
- Marking Head Standoff V-Blocks for Marking the Circumference of Cylindrical Parts
- Bar Code Scanner for automatic data entry
- Logo-Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern (marking file) Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



**Compact TMC420 Controller features 4-line LCD Display — no PC required.**



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

The TMP3200/420 Single Pin Marking System features a large 4" x 6" (100 x 150mm) marking window, and marking speeds up to six characters per second. Well suited for both bench top and factory-automated applications, its simple, yet robust belt-driven dual rail, X/Y platform yields high quality characters and low maintenance operation. The TMP3200/090 includes the TMP3200 Marking Head, plus our WIN 32 Merlin®II Visual Design Software, with state-of-the-art graphical user interface.



**FEATURES**

- 4" x 6" (100 x 150mm) Marking Window
- Belt-driven, dual rail X/Y mechanism with superior wear characteristics
- Patented floating pin technology accommodates surface irregularities of up to .25" (6mm)
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Choice of pin sizes for marking depths from .001" - .018" (.03 - .45mm)
- Compact, convenient TMC420 controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 75 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Dot density up to 200 dots per inch (79 per centimeter)

**OPTIONAL ACCESSORIES**

- TMP3200/090 System includes the TMC090 Controller and Merlin®II Visual Design Software in lieu of TMC420 Controller (see page 13)
- Rotary fixtures for marking circumferences of cylindrical parts
- Marking head mounting post including programmable Z-axis version
- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)

**Compact TMC420 Controller features 4-line LCD Display — no PC required.**



**A protective shutter assembly shields the TMP3200 marking head from liquid and solid contaminants.**



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

The TMC420 is a versatile, compact system controller that can be used with a wide range of Telesis Marking Heads. The TMC420 is fully self-contained and requires no Personal Computer. Other features include a 4-line LCD display and rugged membrane keyboard. With an RS232/485 serial port and eight discrete inputs/outputs, the TMC420 is easily integrated with factory automated applications.



## FEATURES

- No PC required
- Three standard character fonts
- Automatic serialization, date coding and shift coding
- Four-line LCD display and rugged, sealed keyboard
- User-friendly pattern design software and prompted, interactive data entry
- Stores up to 75 marking patterns
- Extremely compact 12-1/2" W x 8" D x 2.8" H (317 x 203 x 71mm) envelope
- 12-24 VDC "Start Print," "Abort," "Ready" and "Done" I/O signals
- Up to 15 different marking patterns remotely selectable via 12-24 VDC discrete inputs
- RS232 Host/Scanner Interface to download text to individual fields or call up entire patterns
- Up to 31 controllers can be networked to a single host
- "Start Print" and "Abort Print" signals from a simple contact closure

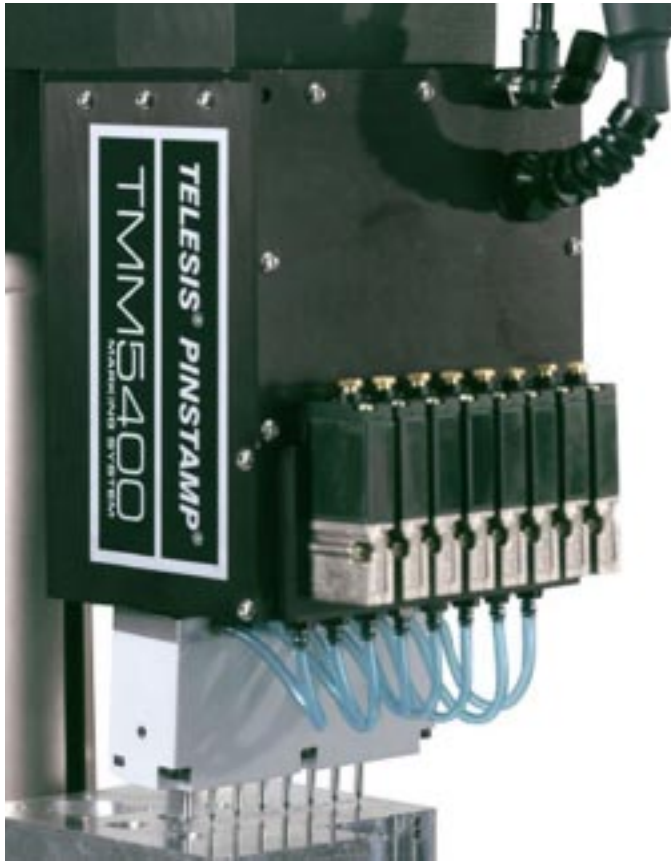
**The TMC420P is a panel-mount version designed specifically for mounting in industrial enclosures.**

**The TMC420N is a NEMA 12 (IP55) rated version for wall mounting or table top use.**



- Operates on 100-130 VAC or 200-250 VAC, 50-60 Hz power
- Conforms to all European Community (CE) norms
- Flash memory and PC-based software utility provide for software upgrades without Eprom change
- Optional PC-based Logo-Font Design Software allows user-defined fonts or logos to be created in a PC, then downloaded to the TMC420
- Available with TMP1700, TMP3200, TMM4200, TMM4250, TMM5100, TMM5400, TMM7200, SC3500, and SC5000 Marking Heads.

Equipped with eight marking pins, the TMM5400/420 is the fastest dot peen marker available. Its speed and its compact envelope make it the perfect solution for many on-line, high-speed marking applications.



### FEATURES

- Marks up to 16 Characters per Second
- Marking windows as large as .5" x 3.78" (13 x 96mm)
- Two marking pin cartridge configurations available to optimize marking window size/cycle time combinations
- Extremely compact marking head for easy integration into factory-automated applications
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Telesis' patented "Floating Pin" technology accommodates surface irregularities up to .25" (6mm)
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)
- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Stores up to 75 marking patterns

### OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements

Compact TMC420 Controller features 4-line LCD Display — no PC required.

The unique TMM4200 Multiple Pin Marking Head can be equipped with up to four marking pins for very high speed marking, yet weighs only 4.5 pounds (2.0kg). Its light weight, compact ergonomic design, plus optional pistol-grip handle make the TMM4200 the ultimate hand-held permanent marker.



## FEATURES

- Compact, Ergonomic Design
- Weighs 4.5 pounds (2.0kg)
- Available with four 25S or two 150SA Marking Pins
- Marks up to eight .125" (3mm) high Characters per Second
- Marking Windows up to 0.5" x 2" (13 x 50mm)
- Depths up to 0.013" (.33mm) in Mild Steel
- Rugged Rack-and-Pinion X/Y Platform for low maintenance operation
- Simple Shutter Plate Protects Head from Solid and Liquid Contaminants
- Detachable Electronics Cable for Improved Serviceability
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)
- Also Available Without Handle and Stand-Off for Fixtured Applications
- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers

## OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements



Compact TMC420 Controller features 4-line LCD Display — no PC required.

The TMM4250/420 Multiple Pin Marking System can mark up to eight characters per second. It is ideal for many on-line applications with severe spatial constraints — or in wet or dirty environments. The TMM4250 Marking Head features an extremely compact envelope and provides marking windows up to 0.5" x 2" (13 x 50mm). It can be easily integrated within a wide range of manufacturing settings. A NEMA 12 (IP55) enclosure with industrial grade, protective rubber “boot” makes it highly resistant to both solid and liquid contaminants, including machine tool coolants.



### FEATURES

- NEMA 12-Rated (IP55) with Rubber Boot for Protection Against Solid and Liquid Contaminants
- Extremely Compact for Ease of Integration
- Available with four 25S or two 150SA Marking Pins
- Marks up to eight .125" (3mm) high Characters per Second
- Marking Windows up to 0.5" x 2" (13 x 50mm)
- Depths up to 0.013" (.33mm) in Mild Steel
- Rugged Rack-and-Pinion X/Y Platform for low maintenance operation
- Detachable Electronics Cable for Improved Serviceability
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)
- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers

### OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements



Compact TMC420 Controller features 4-line LCD Display — no PC required.

Mark up to six characters/second with the TMM5100/420 Multiple Pin Marking System. Its lightweight, compact design and minimal footprint are ideal for hand-held, stand-alone or completely integrated, factory automated operations. A variety of pin sizes/configurations are available to mark character heights from .04" - .63" (1 - 16mm) on a wide range of materials.



**FEATURES**

- High speed — up to six pins marking simultaneously
- Marking windows up to .625" x 4.5" (16 x 114mm)
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Available with a variety of marking pin cartridge configurations for optimal combination of character size, marking depth, marking window size and cycle time
- Compact, rugged X/Y positioning mechanism
- The right choice for many VIN (Vehicle Identification Number) Marking Applications
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 75 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Pin travel accommodates surface irregularities to .25" (6mm)

**OPTIONAL ACCESSORIES**

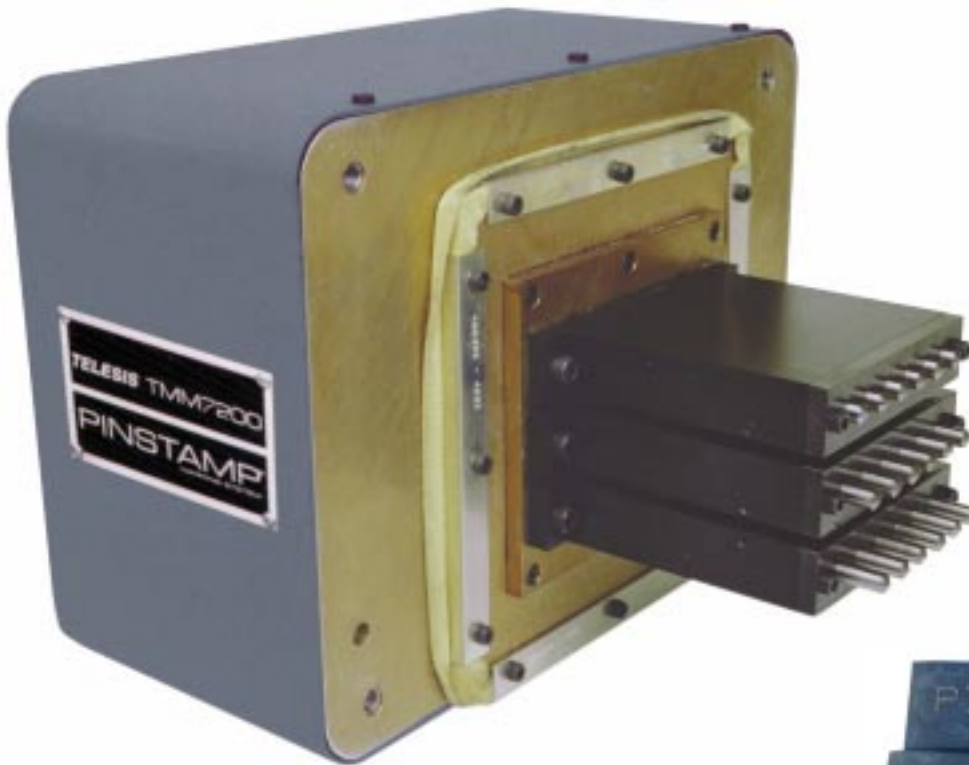
- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Marking head support tooling and balancers
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



**Compact TMC420 Controller features 4-line LCD Display — no PC required.**



The TMM7200 is an extremely heavy duty multiple pin marking system configured on a “per project” basis to provide optimum solutions for individual applications. The TMM7200 is the right choice for the deep penetration marking required for large character sizes, or when marking especially rough surfaces. The flexible TMM7200 can be equipped with up to 21 marking pins, allowing it to print 21 characters in 1.5 seconds. In addition, marking pins can be located on varying horizontal and vertical center distances from .25" (6mm) to 1.75" (44.5mm) to provide a wide range of very large marking windows.



**The TMM7200 is easily adapted to custom designs and fixturing options.**



Virtually silent, the economical SC3500/420 inscribes high quality, continuous line characters in most metals and plastics. It is well suited for a wide range of automated on-line and stand-alone bench top applications.



### FEATURES

- Extremely low noise marking
- Durable, heavy duty marking head provides large 4" x 6" (100 x 150mm) marking window
- Economically priced Scribe Marker, well suited for a wide range of automated on-line and stand-alone Bench Top applications
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)
- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Marks a wide range of materials from soft plastics up to hardened steel
- Stores up to 75 marking patterns

### OPTIONAL ACCESSORIES

- Marking head mounting post with base
- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Marking head support tooling and balancers
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



**Compact TMC420 Controller features 4-line LCD Display — no PC required.**

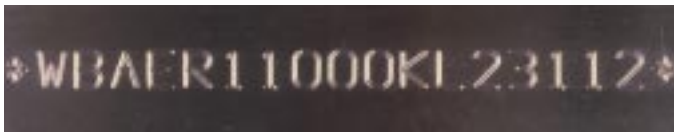


The powerful, extremely heavy-duty SC5000/420 is the right choice when deep, low noise marking is required. It is especially well-suited for VIN (Vehicle Identification Number) Marking applications.



**FEATURES**

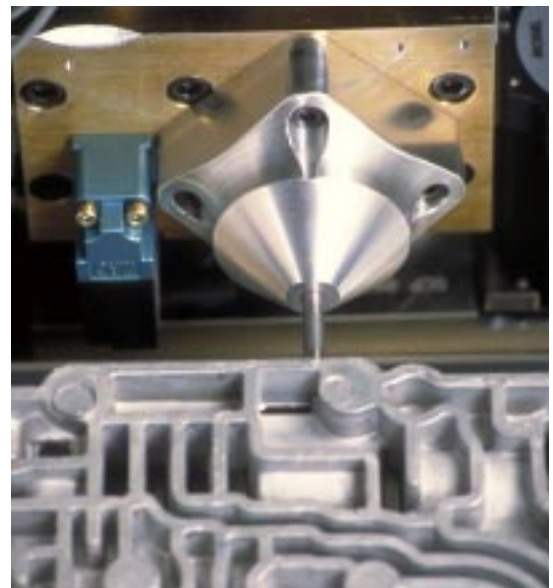
- Extremely low noise marking
- Powerful, rugged marking head drive mechanism for deep scribe marking
- 2½" x 7½" (63.5 x 190.5mm) marking window
- Especially well suited for VIN (Vehicle Identification Number) applications
- Compact, convenient TMC420 Controller with rubber keyboard and 4-line LCD display — no PC required (see page 17)



- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Marks a wide range of materials from soft plastics up to hardened steel
- Stores up to 75 marking patterns

**OPTIONAL ACCESSORIES**

- Marking head support tooling and balancers
- Panel-mount and IP/NEMA-Rated Controllers (see page 17)
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)
- Optional SS5500/420 Servo Motor Driven Versions Available For High Speed Applications



**Compact TMC420 Controller** features 4-line LCD Display — no PC required.

The BenchMark® 320 is an economical, fully programmable alternative to old-fashioned permanent marking techniques. This complete system, with self-contained controller and extruded aluminum marking head mounting post and base, is the right choice for many stand-alone bench top marking applications. An ELECTROMECHANICAL marking pin eliminates the need for any air supply, making it easy to move the BenchMark® 320 from one work area to another.



*"I want to thank Telesis for manufacturing a product that performs as well in real life as it states in your literature.*

*Our new BenchMark® 320 Marking System from Telesis has performed above our expectations since putting it into service. The BenchMark® 320 greatly simplified our identification tag printing process and provided Krispy Kreme with "just in time" tag production capabilities. If you are looking for high quality, flexibility and reliability in permanent marking equipment, Telesis has the solution."*

Jeff Renz, Krispy Kreme

## FEATURES

- Extremely affordable
- High quality, permanent, programmable marking on a wide range of materials — from soft plastics to hard metals up to Rc60
- Large 4" x 6" (100 x 150mm) marking window
- Unique marking arm design allows clear access for loading and unloading of parts
- Electromechanical marking pin eliminates the need for air supply
- Marks up to 5 characters per second
- Automatically generates serial numbers, as well as date, time and shift codes
- Compact, convenient controller with rubber keyboard and 4-line LCD display — no PC required

## OPTIONAL ACCESSORIES

- Rotary fixture for marking circumferences of cylindrical parts
- Bar Code Scanner for automatic data entry
- Start-Print footswitch and pushbutton station
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements



The BenchMark® 460 is a fully programmable, cost effective alternative to old-fashioned permanent marking techniques for parts too large or heavy to be carried to a marking station. Its hand-held marking head is lightweight and ergonomically designed, while providing a generous 25 x 100mm (1" x 4") marking window. An electromechanical marking pin eliminates the need for any air supply, making the BenchMark® 460 truly portable.



**FEATURES**

- Compact, ergonomic marking head weighs only 1.7 kg (3.75 pounds)
- Generous 25 x 100mm (1" x 4") marking window
- High quality, permanent, programmable marking on a wide range of materials — from soft plastics to hard metals up to Rc60
- No consumables
- Electromechanical marking pin eliminates the need for air supply
- Marks up to 5 characters per second
- Automatically generates serial numbers, as well as date, time and shift codes

**OPTIONAL ACCESSORIES**

- Bar Code Scanner for automatic data entry
- Logo-Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from [www.telesis.com](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern (marking file) Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)



Features DATA MATRIX™ 2-D Code Marking Capability — Meets all Department of Defense UID Requirements



Compact, BenchMark® Controller with rubber keyboard features 4-line LCD Display — no PC required

The fast, flexible DPP2000 automatically feeds and prints metal data plates in a wide range of sizes and thicknesses. This fully programmable, table-top unit prints multiple character sizes from .03" to 4.00" (.76 to 101.6mm) on a single plate using Telesis' patented, low maintenance floating pin technology. Marking pattern design is quick and easy with DPP2000 user-friendly software.



**Compact, Convenient Controller with Rubber Keyboard and 4-line LCD Display — no PC required.**



**FEATURES**

- Character height programmable from .03" to 4.00" (.76 to 101.6mm)
- Dot matrix or continuous line characters
- Compact, table-top design
- Easily adjustable plate feed magazine accommodates plate sizes from 3/4" x 1-1/4" (19 x 31mm) to 4" x 5" (101 x 127mm) and thicknesses from 0.02" to 0.07" (.05 to 1.7mm)
- Automatically feed up to 250 data plates per batch (varies with plate thickness)
- No expensive tooling to wear out
- Long lasting, inexpensive, pneumatically driven marking pin is easy to replace
- Stores up to 75 patterns for instant access. No need to repeat pattern setups
- RS232/485 serial port for data entry via optional Bar Code Scanner or Host Computer
- Rugged data entry terminal with four-line LCD display
- Automatic serialization, date and shift coding, including user defined codes
- Discrete I/O for START PRINT, ABORT, PRINTING, and DONE signals

**OPTIONAL ACCESSORIES**

- Choose VS2000 software to back-up, design and edit patterns on a personal computer
- Bar code scanner for data entry
- Restacker neatly and automatically stacks data plates after marking
- Pre-load additional plate feed magazines for nearly continuous operation



Manufacturers are increasingly turning to the use of 2-D code direct part marking (DPM) and reading technologies. DPM reduces costs, improves quality, and satisfies a number of industry-specific and government mandates, including U.S. Department of Defense UID (Universal Identification) requirements. Successful implementation requires the integration of robust, industrial marking systems with 2-D code verifiers located at the marking station. Together, they insure the ability to easily read and track the 2-D code.

Telesis' extensive experience in the automotive, aerospace and firearms industries makes us uniquely qualified to provide, completely integrated, "mark-read" solutions. We offer the following products and services to satisfy a wide range of 2-D code applications:

- Telesis' PINSTAMP® Dot Peen Marking Systems
- Telesis' PROSCRIPT® Laser Marking Systems
- Expert integration of these Telesis products, as well as the integration of 2-D code verifiers marketed by a number of suppliers

PINSTAMP® Markers provide an effective but extremely economical solution to many 2-D code DPM applications on materials as diverse as plastics and hardened steel. Telesis' patented PINSTAMP® Marking Technology provides highly accurate dot placement at specific X/Y locations. This process makes PINSTAMP® Markers far superior to conventional "oscillating stylus" dot peen markers, especially in 2-D code applications, where accurately marked codes are the key to readability.



TELESIS Lasers are truly "state-of-the-art", producing almost perfectly formed 2-D codes nearly instantly on a wide range of materials, including virtually all plastics and metals. These qualities make PROSCRIPT® Lasers the perfect choice for applications requiring extremely high throughput or very small 2-D codes.

### COMPLIANCE

All TELESIS LASERS and all PINSTAMP® Markers except for the TMM5100/420 and TMM7200 comply with all major 2-D code DPM standards, including:

- SAE AS9132 (as adopted by the International Aerospace Quality Group)
- AIAG B-4
- AIAG B-17
- NASA-STD-6002
- NASA-STD-HDBK-6003
- Department of Defense Guide to Uniquely Identifying Items (UID)
- MIL-STD-130L

Choose from a variety of options to enhance your Telesis Marking System. All are tested for compatibility and carry a one-year limited warranty. Ask your Telesis Sales Representative about the options best suited for your application.

**Rotary Fixtures**

For easy circumferential marking



**Desktop and Notebook Computers**

For systems requiring computers



**Marking Head Gimbals, Stand-offs and Cable Balancers**

For flexible, virtually weightless, hand-held marking



**Bar Code Scanners and Wands**

Eliminates manual data entry

**Manual Push Button Stations and Foot Switches**

For manual control of on-line automated marking stations and remote start control



**A variety of Industrial Controller Enclosures are Available**

Protect control components from harsh environments. Several wall and floor-mount styles/ colors available



**Marquee Displays**

Increase production and avoid errors with quick verification of downloaded messages



**Four Wheeled Carts**

For portable applications



**Marking Head Mounting Posts**

With manual, pneumatic or stepper motor-driven head positioning mechanisms



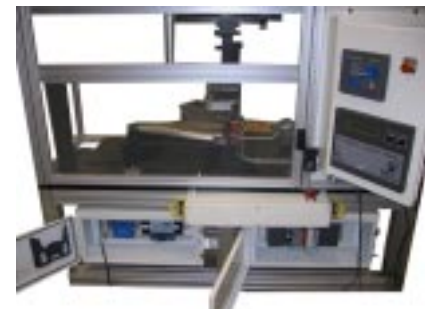
**Laser Carts**



**Custom Engineered Solutions**

Telesis is the leader in custom engineered/ factory integrated marking technology. Whether it's a fully auto-mated on-line application or a stand-alone manual workstation, Telesis Applications Engineers will work with you to solve your parts handling and custom software needs.

They can integrate any of our standard marking products with your specific application. You can expect a responsive, cost-effective, quality design solution to meet your unique requirements. Just call 800.654.5696. Our Engineering Group will capably assist you.



PIN STYLE	CONE ANGLES	MATERIALS*	LENGTH	MAJOR DIAMETER	MINOR DIAMETER
25S	22°	Carbide, Powdered Metal	1.8" 45mm	0.19" 4.8mm	0.09" 2.4mm
	30°				
	45°				
	60°				
25L	22.5°	Carbide, Powdered Metal	2.2" 55mm	0.19" 4.7mm	0.09" 2.4mm
	30°				
	45°				
	60°				
25XL	22.5°	Carbide, Powdered Metal	2.5" 64mm	0.19" 4.7mm	0.09" 2.4mm
	30°				
	45°				
	60°				
25XLE	30°	Carbide	1.8" 46mm	0.16" 4.0mm	0.09" 2.4mm
	45°				
101	30°	Carbide, Powdered Metal	3.9" 99mm	0.31" 7.9mm	0.15" 3.9mm
	45°				
	60°				
150S	30°	Powdered Metal, Carbide-Tipped	2.75" 70mm	0.62" 15.7mm	0.37" 9.5mm
	45°				
	60°				
150SA	30°	Carbide-Tipped	2.75" 70mm	0.62" 15.7mm	0.37" 9.5mm
	45°				
150	30°	Powdered Metal	5.25" 133.4mm	0.62" 15.7mm	0.37" 9.5mm
	45°				

\* Carbide = Tungsten Carbide (Hardness approximately 92 Rockwell A), Powdered Metal (Hardness 63-65 Rockwell C)

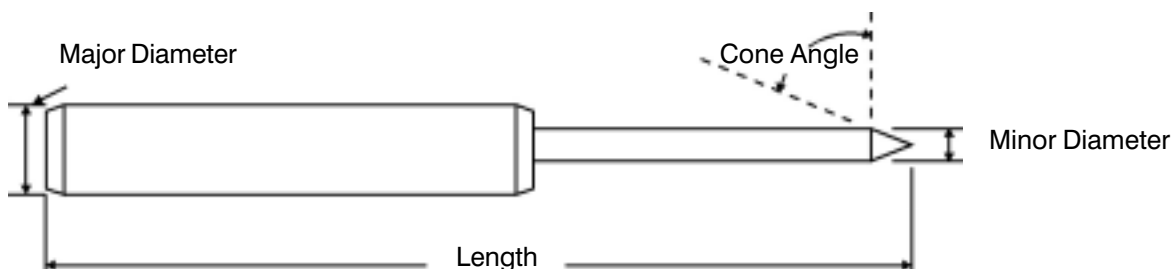
\*\* Varies with material hardness, cone angle and marking head utilized.





# IMPACT PIN SELECTION GUIDE

MARKERS	APPLICATIONS	NOMINAL STROKE LENGTH	TYP. MAX Depth of Mark**
TMP4210 TMM5400 TMP3200 TMM4200 TMM4250	Extremely fast, limited penetration marking. For marking small characters on relatively smooth surfaces. Pneumatically driven.	0.38" 9.6mm	0.0025-0.011" 0.06-0.28mm
TMP6100 TMM5100 TMP1700 TMP3200 TMM7200	Fast, limited penetration marking. For marking small characters on relatively smooth surfaces. Pneumatically driven.	0.50" 12.7mm	0.0025-0.016" 0.06-0.40mm
TMP6100 TMM5100 TMM7200 TMP1700 TMP3200 DPP2000	Similar to 25L. Extra length for recessed or hard to reach marking surfaces. Pneumatically driven.	0.50" 12.7mm	0.0025-0.016" 0.06-0.40mm
Benchmark <sup>®</sup> 320 Benchmark <sup>®</sup> 460	Fast, limited penetration marking. For marking small characters on relatively smooth surfaces. Electrically driven.	0.15" 3.8mm	0.0025-0.011" 0.06-0.28mm
TMM5100 TMM7200	For deep marks, large dots and characters, and/or rough surfaces. Pneumatically driven.	0.75" 19mm	0.006-0.022" 0.15-0.56mm
TMP6100 TMM5100 TMM7200 TMP1700 DPP2000	Similar to 101. High speed marking. Pneumatically driven.	0.25" 6.35mm	0.006-0.022" 0.15-0.56mm
TMP6100 TMP3200 TMM4200 TMP4210 TMM4250 TMM7200 TMP1700	Similar to 150S.	0.75" 19mm	0.006-0.022" 0.15-0.56mm
TMM7200 TMP7000	Very heavy duty, deep penetration, large character marking; and/or very rough surfaces such as castings and mill surfaces. Pneumatically driven.	1.00" 25.4mm	0.020-0.030" 0.51-0.76mm



FEATURES	TMP6100	TMM5100	TMP3200	TMM7200	TMM4200	TMP4210
	Versatile Tabletop Marker for Batch Processes/Job Lots or On-Line Processes	Rapid, On-Line, Hand-Held, or Automated Marking, VIN Numbers	Cost-Effective On-Line High Speed Marking	Heavy-Duty, Large Character, Deep Penetration Marking	High Speed Lightweight, Hand-Held Marking or Fixtured Applications with Severe Spatial Constraints	Hand-Held Marking or Fixtured Applications with Severe Spatial Constraints
Controller	TMC090	TMC420	TMC420/TMC090	Various	TMC420	TMC420
Hand-Held Application:		•	Consult Factory	Consult Factory	•	Yes
Mark Depth (Based on Rb53 Material Hardness)	0.001-0.013 in. (.03-.33mm)	0.001-0.013 in. (.03-.33mm)	0.001-0.013 in. (.03-.33mm)	0.001-0.022 in. (.03-.56mm)	0.001-0.010 in. (.03-.25mm)	0.001-0.013 in. (.03-.33mm)
Noise Level	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
PS-OCR Readable Font:	•	•	•	•	•	•
Marking Speed - MAX	Up to 3 Char./Sec.	Up to 6 Char./Sec.	Up to 6 Char./Sec.	Up to 21 Char. in 1.5 Seconds	Up to 8 Char./Sec.	Up to 8 Char./Sec.
Maximum Marking Window Size	6 x 12 in. (152 x 304mm)	0.625 x 4.5 in. (16 x 114mm)	4 x 6 in. (100 x 150mm)	64 sq. in. (413cm <sup>2</sup> )	0.50 x 2.00 in. (13x 50mm)	0.50 x 2.00 in. (13x 50mm)
Maximum Character Height	6.0 in. (152mm)	0.63 in. (16mm)	4 in. (100mm)	1.75 in. (44.5mm)	0.50 in. 13mm	0.50 in. 13mm
Programmable "Z" Axis:	Optional		Optional			
Maximum No. of Pins	1	6	1	21	4	1
Multiple Line Marking	•	•	•	•	•	•
Arc Text	Yes	Yes	Yes	Custom Software	No	No
Continuous Characters	•	•	•		•	•
Logos	Yes	Optional Software	Optional S.W./Yes	Custom Software	Optional Software	Optional Software
2-D Codes	Yes		Yes		Yes	Yes
Serialization	•	•	•	•	•	•
Date Codes	•	•	•	•	•	•
Surface Irregularities	Up to 0.25".(6mm)	Up to 0.25" (6mm)	Up to 0.25" (6mm)	Up to 0.25" (6mm)	Up to 0.25" (6mm)	Up to 0.25" (6mm)
Number of Std. Fonts	3	3	3	3	3	3
User Defined Custom Fonts	Optional Software	Optional Software	Optional Software	Optional Software	Optional Software	Optional Software
Host Interface	Yes	Yes	Yes	Yes	Yes	Yes
Resolution	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)
Power	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC
Air Supply	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)
Circumferential Marking	Optional		Optional			

# PIN Marking System Selection Guide

TMM4250	TMP1700	TMM5400	SC3500	SC5000	BenchMark®320	BenchMark®460
Fixture Applications in Wet or Dirty Environments	Extremely Cost-Effective On-Line, High Speed Marking	8-Pin Marking Head for Extremely High Speed On-Line Applications	Nearly Silent, Moderate Penetration Scribe Marking	Nearly Silent, Deep Penetration Scribe Marking	Stand-Alone Benchtop Applications	Stand-Alone Hand-Held Applications
TMC420	TMC420/TMC090	TMC420	TMC420	TMC420	BenchMark®	BenchMark®
	Consult Factory	Consult Factory	Consult Factory	Consult Factory		Yes
0.001-0.013 in. (.03-.33mm)	0.001-0.013 in. (.03-.33mm)	0.001-0.010 in. (.03-.25mm)	Varies	Varies	0.001-0.010 in. (.03-.25mm)	0.001-0.010 in. (.03-.25mm)
Moderate	Moderate	Moderate	Very Low	Very Low	Moderate	Moderate
No	No/Yes	No	No	No	No	No
•	•	•	•	•	•	•
Up to 8 Char./Sec.	Up to 6 Char./Sec.	Up to 32 Char. in 2 Seconds	Up to 2 Char./Sec.	Up to 2 Char./Sec.	Up to 4 Char./Sec.	Up to 5 Char./Sec.
0.50 x 2.00 in. (13 x 50mm)	1.50 x 2.50 in. (38.1 x 63.5mm)	0.5 x 3.78 in. (12.7 x 96mm)	4 x 6 in. (100 x 150mm)	2.5 x 7.5 in. (63.5 x 190.5mm)	4 x 6 in. (100 x 150mm)	1 x 4 in. (25 x 100mm)
0.50 in. (13mm)	1.50 in. (38.1mm)	0.5 in. (12.7mm)	4 in. (100mm)	2.5 in. (63.5mm)	4 in. (100mm)	1 in. (25mm)
	Optional					
4	1	8	1	1	1	1
•	•	•	•	•	•	•
No	Yes	No	Yes	Yes	Yes	Yes
•	•	•	•	•	•	•
Optional Software	Optional S.W./Yes	Optional Software	Optional Software	Optional Software	Optional Software	Optional Software
Yes	Yes	Yes			Yes	Yes
•	•	•	•	•	•	•
•	•	•	•	•	•	•
Up to 0.25" (6mm)	Up to 0.25" (6mm)	Up to 0.25" (6mm)	Up to 0.3" (7mm)	Up to 0.5" (12mm)	Up to 0.10" (2.5mm)	Up to 0.10" (2.5mm)
3	3	3	2	2	3	3
Optional Software	Optional Software	Optional Software	Optional Software	Optional Software	Optional Software	Optional Software
Yes	Yes	Yes	Yes	Yes	No	No
Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)	Continuous	Continuous	Up to 200 dpi (79 d/cm)	Up to 200 dpi (79 d/cm)
115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC	115 or 220 VAC
60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	None	None
	Optional				Optional	

Telesis is the leader in product identification technology. Our stand-alone and factory integrated systems are found in a wide range of production settings around the world. All Telesis Products — Standard or Custom are backed by a global network of experienced Distributors, Representatives, highly skilled Field Service and Customer Support Professionals.



# TELESIS

**Product Identification Systems**

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