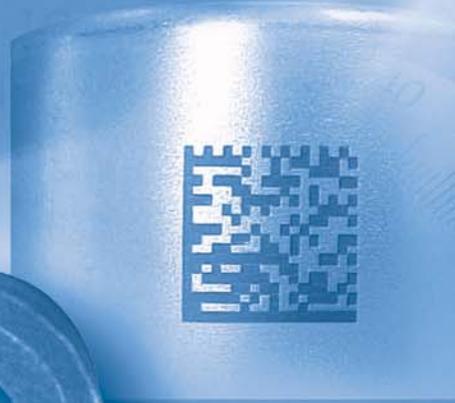


Telesis Technologies

Product Guide



MARK OF CONFIDENCE

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TMP1700/470 PINSTAMP® Marking System Page 35
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 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.

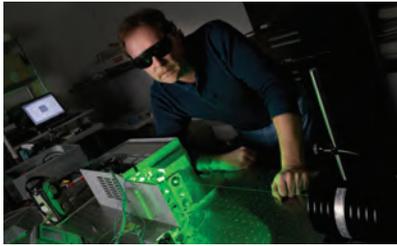
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TMP4210/470 PINSTAMP® Marking System Page 40
 The TMP4210/470 is an extremely lightweight, hand-held, single pin marker satisfying a wide range of portable marking applications. Its robust rack-and-pinion design and compact envelope also make it the right choice for many high production, on-line applications.

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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.	
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2-D and UID Code applications, where accurately marked codes are the key to readability.	
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TELESIS is the leader in Product Identification and Processing Technologies. Our wide range of permanent, programmable, LASER, PINSTAMP® and TELEScribe® 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 offers a full line of laser marking systems capable of satisfying even the most demanding laser marking applications for industry. These laser systems cover the spectrum of wavelengths enabling applications to a wide range of products, from medical devices and instruments to automotive components, delicate plastics, ceramics, glass and airframe components, and can mark virtually any material with text, bar codes, 2-D codes, logos and graphics. At the cutting edge of laser marking technology, TELESIS now offers optional “mark-on-the-fly” capable versions of all of our standard laser systems and the new Vari-Z series of 3-Axis laser markers for applications that require sophisticated marking on multiple surface levels or optimized rapid deep engraving.

Our E-Series diode-pumped, vanadate air-cooled lasers can operate in the harshest environments while maintaining peak performance for many thousands of hours of maintenance free operation with diode MTTF times up to 500,000 hours. In addition, they offer superior beam characteristics that make them uniquely capable among near IR lasers for many difficult applications, such as marking high resolution graphics, fine text or 2D codes as well as marking many heat sensitive materials and components. The versatile E-Series is a broad family including eight different systems. It starts with the powerful infrared EV40, capable of high speed, high quality, deep engraving of virtually any non-organic material, and includes the EV4GDS green laser, the best choice for many electronic components, medical applications, precious metals, as well as for a wide variety of plastics.

We pioneered the use of fiber lasers with our F-Series fiber lasers, and continue to be the leader in fiber laser marking technology. These markers offer low maintenance marking of almost all metals at an affordable price. The air cooled F-Series models include systems with average powers from 10W up to 100W for applications in which faster process speeds are required; and all models are available with the DS (Dual Safety Shutter) option.

The CO-Series of CO₂ lasers are ideal for marking organic materials such as glass, plexiglass, plastics and acrylics, wood, fiberboard, leather, vinyl and rubber. With three power levels to choose from, the CO-series is led by the powerful 60W CO60 laser marking system and followed with 30W and 10W systems with the fastest galvo systems in the industry.

Pattern design for any of our lasers is easy with the TELESIS designed MERLIN® II LS Software. This extremely user-friendly software runs on the Windows® 2000, Windows® XP, Windows Vista®, Windows® 7 and Windows® 8 platforms. Our Automated Marking Interface (AMI) version of MERLIN® II LS addresses the need for a safe, easy operator interface. It provides the operator the capability to barcode scan to load patterns, load a picture of the part and fixture, and insert the marking data in the proper field all without the need of a keyboard. TELESIS offers full turnkey single source custom integrated or standard laser systems backed by our first-in-class service team and worldwide support by a network of representatives and distributors.



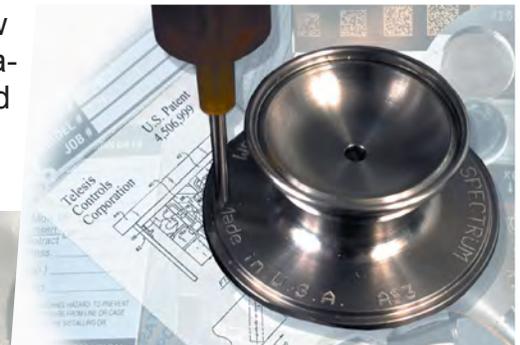
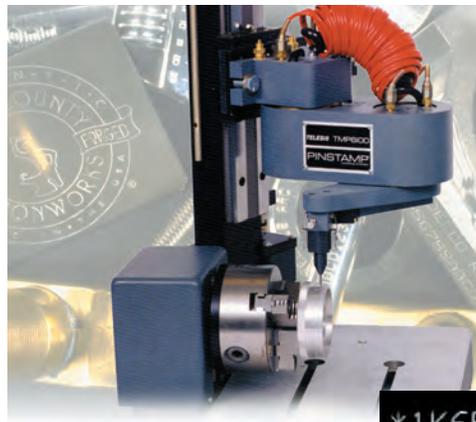
PIN MARKING SYSTEMS

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, logos, graphics or 2-D* Codes. Since the marking pin "floats" on constant return air pressure, surface irregularities up to ¼" 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.

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® Series of low cost markers for stand-alone, benchtop and hand-held 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.



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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 to discuss a Custom Engineered Marking System, call (800)654-5696 TODAY – or visit us at 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.

AEROSPACE

Precision. Quality. Permanence. TELESIS has been helping the Aerospace industry meet and exceed the ATA SPEC 2000 direct part marking standard for more than 40 years with robust equipment, innovative engineering, and dependable service and support. TELESIS PINSTAMP® dotpeen marking systems are designed to permanently mark a wide range of materials, including plastics, steel, and aluminum. We offer the largest range of configurations and accessories available, and all of our markers are built with precision servo driven stepper motors to quickly and accurately position the marking pin in the correct location within 0.00125". Our unique and proprietary pneumatic floating pin technology allows you to mark uneven or curved surfaces precisely with a minimum of moving parts, and our industrial rated guide rails, gearing and motors all combine to provide our customers with a robust, dependable marking system capable of meeting their specific needs. TELESIS pulsed laser products have a long history of industrial success in direct part marking. Accurate, fast, and reliable, our lasers offer the widest range of solutions for your marking requirements. We were first to market with the introduction of the TELESIS FQ fiber laser in 2003, and continue to innovate and expand our offerings with the EV and CO families of galvo steered part marking lasers. Let TELESIS help you select the right product for your SPEC2000 application. TELESIS is more than just marking equipment, we supply a full range of support for your Aerospace application, with our Merlin® Design software, our Custom Engineering Group for Turn Key solutions, and our 24 hour Technical Support Center, we are here for you.



AUTOMOTIVE

TELESIS has over 40 years experience as the leading Automotive part marking solutions provider in the industry. TELESIS Technologies not only meets all AIAG requirements for marking, but we have been part of the work group responsible for creating the various stringent industry specifications. From single or multi pin, electric or pneumatic PINSTAMP® systems, to the state-of-the-art solid-state YVO₄, pulsed fiber and CO₂ laser marking systems, TELESIS continues its leading role as the key supplier to the automotive manufacturing sector. TELESIS has had VIN systems placed in factories over 25 years ago that are still operating today. The longevity of our systems are matched only by our ongoing service and support by our global corporation that is part of every marking system sold by TELESIS. Along with our PINSTAMP® systems, TELESIS prides itself on our robust laser systems like the TELESIS EV4GDS - Green Laser Marker; driving your overall ownership costs down with no down time or consumables. This laser marker has a patented robust mechanical and optical design that can operate in industrial environments where shock, vibration and dust often cause problems for other laser and conventional marking systems. With a vast background in engineered marking solutions including robotics, vision, 2D verification and conveyor systems, TELESIS offers full turnkey systems through its in-house engineering team to serve your every marking and traceability application. When it comes to automotive part marking solutions, TELESIS has been "The driver" for over 40 years!



ELECTRONICS

TELESIS Laser Marking Systems provide traceability for a wide range of electronic components and appliances. We offer a variety of 532nm and 1064nm YVO₄, pulsed fiber, and CO₂ to suit your specific requirements.

From circuit boards and keypads to delicate micro chips and capacitors, high-speed laser marking is the answer for many manufacturers.

The specialty laser marking solution for your electronics parts is the TELESIS EV4GDS Green Laser System. It is ideal for marking and processing difficult materials; colored plastics, acrylic and polymer materials and is perfectly positioned for use in the electronics, semiconductor



packaging and highly reflective materials. The fiber-coupled diode-pumped solid-state (DPSS) green wavelength laser marking system features optimized laser beam and Q-switched

pulse characteristics for applications that require high beam quality and stability. In addition, the TELESIS EV4GDS Green Laser Marking System offers extra power and speed for precision marking, and is an excellent choice for laser marking, scribing, trimming and other material processing applications. In addition, our material handling experts have

years of experience, so they can work with you to develop the most effective solutions to your most sophisticated electronics part-marking challenges. We can provide material handling systems for standard component, high-volume manufacturing lines-- as well as for batch marking, and lower-volume parts lines.

FIREARMS AND DEFENSE

TELESIS Technologies has been the leader in robust, innovative, and dependable industrial permanent marking solutions for more than 40 years, and offers a wide range of PINSTAMP[®] and laser products to satisfy the unique identification requirements of the Defense and Firearms markets. Whether you need to meet the deep engraving requirements of CFR 478 and 479, add a Ull barcode to meet the Department

of Defense UID specification MIL STD 130N, or simply want to permanently brand your product with your logo and company ID, TELESIS has the solution! Our broad family of laser marking systems provides the versatility to satisfy almost every marking surface processing technique required. Whether it's marking polymers, composites, permanent color change in your product such as annealing metal, deep engraving in excess of

0.020" in steel, or anodized coating bleaching or removal; TELESIS Technologies can help. Our FQ, EV and CO families of lasers offer proven reliable marking solutions. These lasers are

extremely dependable in high production manufacturing environments, with expected pump diode lifetimes that can exceed 500,000 hours. In addition to our laser marking systems, is our trusted world-famous, low stress



PINSTAMP[®] marking systems. Low cost, durable, and available in a range of models, they are the choice in DPM applications. With text, logos, and 2-D codes marked to depths in excess of 0.020" in steel, programmable text heights and 2-D matrix capable, they offer a proven economical solution for your industry.

FIREARMS AND DEFENSE (CONTINUED)

With our floating pin technology, TELESIS PIN-STAMP® units are the better option for marking on uneven and rounded frame and barrel components; they are also available in a range of configurations for ease of use, operation, and integration, with electric or pneumatic options. Overseeing it all is our Merlin® visual design and control software, available for both LASER and PINSTAMP® product lines. This full function software allows the customer to design, integrate, and record messages and data easily, and reliably using a Window's based PC. This software offers WYSIWYG (What You See Is What You Get) design capability with remote data import and export, log, and recording options (particularly helpful with UID and CFR recording requirements). Automatic Serialization, date codes, time codes, graphics, logos, 1 and 2-D barcodes including QR and UID configurations allow you to meet your CFR and UID requirements with ease. All of our products come standard with TELESIS' renowned service and support, industry leading warranties, and the access to over 40 years of knowledge and experience in the marking industry with our custom Engineering and Applications Department. Our Process Lab is the largest in the US, and available to test your process, record the results and present a complete recommendation to you to insure the best result for your application. Always made in the USA, TELESIS is the company that quality Defense Suppliers and Firearms Manufacturers turn to for all their DPM (Direct Parts Marking) requirements per the following standard specifications:

- ATF/ Code of Federal Regulations 27 CFR 478.92 and 479.102
- MIL-STD-130N
Department of Defense (UID / UII)
- ISO/IEC 15434
- ISO/IEC 16022
- SAE AS9132A

TELESIS is a GSA supplier; #GS-25F-0042R

HEAVY EQUIPMENT

The TELESIS name has a 40 year proven track record of providing turnkey solutions to the Heavy Equipment Manufacturing Industry. Our history involves Fortune 500 companies producing everything from earth moving machines to heavy truck frames. Our wide assortment of products affords us the opportunity to satisfy virtually all identification needs. PINSTAMP® and TELEScribe® products are designed to provide the deepest of VIN (vehicle identification number) marking on a variety of components. Engines, transmissions, components and structural frames are just a few of the parts we have marked. Each marker has been designed to provide identification, that not only survives secondary processing (e.g. heat treating, blasting, coating, etc.), but survives the life cycle of the part in the harshest of environments. Integrated laser markers, vision systems and databases have been successfully implemented into a wide range of production line operations to control manufacturing and



data collection processes. By providing high contrast marks on a variety of components and tracking them through the entire manufacturing operation, TELESIS Technologies is able to provide extremely valuable information to manufacturing engineering and quality controls. Implementation of this type of turnkey system at a world renowned heavy equipment supplier has resulted in a cost savings of dollars in recalls.

INDUSTRIAL

Since 1982 we have been the supplier of choice for Industrial Identification & Traceability Equipment. Companies such as Ford, Chrysler, General Motors, Volvo, Delco, GE Aerospace, Boeing, Pratt & Whitney, Nordson and AT&T trust TELESIS to provide quality solutions within their production processes. Our product line has been developed by meeting a wide range of manufacturing demands. Today, TELESIS offers the broadest standard selection of permanent identification and material processing systems available in the world. Whether your products are plastic or delicate medical instruments, large diesel engines or tiny 1/8" bolts, you'll benefit from our extensive design and product integration experience.

OIL & ENERGY

For over 40 years, TELESIS Technologies has been supplying permanent direct part marking solutions for the energy industry. Our robust equipment offers a heavy duty solution to the harsh production environments of the component manufacturers to the Oil and Energy industries. Dot matrix indent marking is a proven method of marking text and 2-D matrix barcodes onto the steel pipe and tube components used in the oil supply and refining markets. Capable of indenting greater than 0.10" depth into steel, and with character sizes up to 2.0" in height, makes this technology perfect for customers needing a durable, long lasting mark capable of surviving the outdoor and underground environments industry products typically find themselves in. In addition to our dot peen products, TELESIS manufactures the widest array of galvo steered

marking laser systems in the industry. With the TELESIS' PC based Merlin® visual design software, they offer a complete solution for your marking requirements. All of TELESIS equipment offers the advantage of TELESIS' 24 hour Technical support, with on-site service and support via TELESIS trained technicians for worry free operation. Custom installations and turnkey applications are welcome and

supported by our Custom Engineered Solutions Group.



MEDICAL

At TELESIS, we have more than 40 years experience in producing turn-key marking and traceability solutions to the world's largest and most respected manufacturing companies in the world.

As the needs of medical device manufacturers continue to become more stringent, TELESIS has proven our commitment to serving up solutions for medical device industry by partnering with our clients by focusing on their needs for medical market specific high quality, close tolerance workstations along with state-of-the-art laser systems. Through our investments in laser technology and innovative software packages, along with our process expertise and material handling know-how, we have developed a portfolio of capabilities that is second to none. Our large installed base of laser marking systems demonstrates the focus TELESIS has in the medical device marketplace. Exceptional laser marking solutions, standardized to simplify the medical device manufacturing process.

MEDICAL (CONTINUED)

TELESIS has developed a broad line of laser sources that is designed specifically for medical device marking. This versatility allows us to mark virtually any material whether the need is corrosion-proof annealing, deep engraving, and high contrast 2D matrix codes to meet HIBCC standards, “color” marking on SS and titanium, or virtually any type of traceability on any material. Medical device corrosion resistant marking on implants and surgical instruments.



Are you concerned with achieving corrosion resistance and surviving passivation with your laser marking of critical surgical implants? Are you having problems meeting the tight laser marked graduation tolerance specifications and repeatability on those medical instruments?

Does your medical device laser marking application require the flexibility that only robotics can deliver or does a closed-loop XY with Theta answer as the best solution? Isn't it time you own a laser with a software solution that offers an operator interface with test mark power adjust, barcode scan for pattern load and variable

text, and a log function to track the critical FDA data for marking, traceability, and validation? TELESIS offers a Medical Manufacturing Standards “best fit” laser workstation and material handling solution with our full in-house engineering staff to customize to your specific application when needed!

CODING AND MARKING

TELESIS Technologies is your solution provider for your packaging applications requiring permanent laser marking on labels, product, packages and vessels. Our years of experience in pharmaceutical, cosmetic, food industries and others serve as a vast knowledge base to answer all your packaging needs. We offer a full array of “First-In-Class” laser solutions for marking/coding on everything packaging, and every laser is completely air-cooled. No one has more experience in marking/coding and traceability on static or “Mark-On-The-Fly” applications. With thousands of marking systems installed in packaging, automotive, medical and aerospace applications around the world, and with static or dynamic at rates of over 1,000 feet per minute and 1300 characters-per-second, TELESIS Technologies is the expert! We can provide flexible solutions, with custom or standard lasers to fit your application, and an expert team with packaging backgrounds second to none.



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 with custom software needs, TELESIS Applications Engineers will work with you to solve your parts handling and software integration needs, and tailor any of our standard marking products to match your specific application. You can expect a responsive, cost-effective, quality design solution to meet your unique requirements.

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, Service and Distribution Offices in The Netherlands, Germany, England, and China.



Customer Service

At TELESIS, Customers come First. Our Customer Support Specialists are fully trained to help with questions on pricing, product capabilities, accessories, spare parts and availability. They provide timely up-dates on the status of your order. Call us at **(800)654-5696** for the answers to any of your questions!



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? 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. Call our Technical Service Department at **(800)867-8670** or e-mail us at: service@telesistech.com.



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 facility gives us the flexibility to easily accommodate up to 40 people in a classroom setting. Smaller groups use product

work-stations for a very effective, individual learning experience. Customized on-site training for the customer can be also be developed as needed to meet the customers needs.

Our Warranty and Guarantee

Every TELESIS Marking System carries a complete Parts and Service Warranty. During this time, we can send replacement parts, free of charge, overnight in the continental United States. Plus, we have component exchange programs for reconditioned equipment to reduce downtime. Extended Service warranties are available for all TELESIS Marking Equipment. Contact your TELESIS Representative or our Customer Service Department for details.



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



E-Series - EV40 Diode-Pumped Solid State Laser

The EV40 is a high throughput laser marker featuring a Q-switched Nd:YVO₄ diode pumped, air-cooled laser design with high speed digital galvo scanners. This laser provides high quality laser beam characteristics including a long focal tolerance combined with up to 2mJ pulse energies and high average powers at 1064nm, allowing these systems to achieve high-speed, rapid deep marking of metals or composite materials on flat and curved surfaces and offers the user best-in-class reliability with a low cost of ownership. In addition, the integrated proprietary graphical laser software and optimized electronics make these systems the best solution for many high speed marking on the fly (MOTF*) applications. The robust mechanical and optical design allows these lasers to operate without any chiller in an industrial environment where shock, vibration, and dust are a concern while maintaining stable output power and an expected diode MTTF of 75,000 hours. The small footprint allows for easy integration into manual off-line and automated on-line configurations, making it ideal for a wide range of industrial marking applications.



LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	1,064nm
Laser Type.....	Fiber-coupled diode end-pumped Q-switched Nd:YVO ₄ laser
Laser Beam Mode.....	TEM ₀₀
Average Power.....	Up to 40W
Positioning.....	Visible Red Diode Light
Optical Fiber Length.....	1.75 meters (5.74 feet) standard
Mounting Weight.....	approx. 20.0kg (44.2lbs.)
Marking head dimensions.....	22.4(W) x 23.0(H) x 74.3cm(L) (8.8" x 9.1" x 29.3")
Controller dimensions.....	43.9(W) x 21.1(H) x 43.9cm(L) (17.3" x 8.3" x 17.3")
Controller Weight.....	17.3kg (38.0lbs.)
Input Power.....	115/230VAC 50/60Hz
System Power Consumption.....	< 950W
Cooling.....	Air Cooled, active thermo-electric (no water cooling required)
Operating Temperature Range.....	18° to 35°C (65° to 95°F)
Humidity.....	10% to 85% Non-condensing

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	110mm X 110mm (4.33" X 4.33")
254mm.....	175mm X 175mm (6.88" X 6.88")
330mm.....	230mm X 230mm (9.06" X 9.06")
350mm.....	250mm X 250mm (9.84" X 9.84")
420mm.....	290mm X 290mm (11.42" X 11.42")

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O

*MOTF Versions and embedded PC versions available
at an additional charge



Engraved approximately 4mm deep in aluminum



QR Code Web Page Product Link

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



E-Series - EV25DS Diode-Pumped Solid State Laser

At the heart of the EV25DS marking system is our air cooled, high power, industrial grade, diode-pumped, solid-state vanadate laser. It is designed to operate in the harshest of environments. With a pump diode MTTF of 250,000 hours, it will be able to maintain a peak performance for many thousands of hours of maintenance-free operation. The EV25DS offers distinct advantages



over fiber lasers and other solid state lasers due to its superior beam quality, providing smaller focused spot sizes and a longer working depth of field than competing lasers. The EV25DS provides the strength to tackle metals such as stainless steel, cobalt, and titanium, as well as provide the high marking speeds required for marking-on-the-fly (MOTF). It also has the ability to do fine detail work, trimming, edge heat treating, and even marking delicate materials like plastics, foils, and labels. It produces superb annealed marks that stand up to the harshest of tests, high resolution 2D codes, and can produce unique color marks on various metals.

LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	1,064nm
Laser Type.....	Fiber-coupled diode end-pumped Q-switched Nd:YVO ₄ laser
Laser beam mode.....	TEM ₀₀
Average Power	Up to 25W
Positioning.....	Visible Red Diode Light
Optical Fiber Length.....	1.75 meters (5.74 feet) standard 4.75 meters (15.58 feet) optional
Mounting Weight.....	Approx.24kg (53lbs.)
Marking Head Dimensions.....	70.6(L) x 23.8(W) x 22.5cm(H) (27.8" x 9.4" x 8.8")
Controller Dimensions.....	42.7(W) x 14.0(H) x 48.8cm(L) (16.8" x 5.5" x 19.2")
Input Power	115/230VAC 50/60Hz
Maxium Power Consumption.....	Less than 800 Watts
Cooling	Air Cooled, active thermo-electric (no water cooling required)
Operating Temperature Range.....	18° to 30°C (65° to 86°F)
Humidity.....	10% to 85% Non-condensing



Model E10 Series Controller

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	90mm X 90mm (3.54" X 3.54")
254mm.....	175mm X 175mm (6.88" X 6.88")
330mm.....	230mm X 230mm (9.06" X 9.06")
350mm.....	250mm X 250mm (9.84" X 9.84")
420mm.....	290mm X 290mm (11.42" X 11.42")

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



QR Code Web Page Product Link

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

E-Series - EV15DS, EV10SDS Diode-Pumped Solid State Laser

The TELESIS EV15DS and EV10SDS markers are based on advanced Q-Switched, fiber-coupled diode end-pumped Nd:YVO₄ laser technology. The outstanding beam quality of these lasers makes them superior to all other markers of equivalent power for high resolution and high speed marking. Additionally, the shorter pulse widths and high peak powers of this marker makes it the preferred choice for challenging marking applications on silicon or heat sensitive materials such as plastics or thin foils. The smaller spot size and extended depth of focus allows these lasers to mark much more highly irregular or curved surfaces than fiber lasers. They are air-cooled and an excellent choice for high speed Marking-On-the-Fly applications as well. With an expected pump diode MTTF of over 250,000 hours for the EV15DS and 500,000 hours for the EV10SDS, system down time is dramatically reduced. Diode replacement can be completed quickly and the fiber coupled diode design eliminates the need to re-align the laser marker. The marker's modular design, housing the diode in the laser controller, eliminates a large heat source from the laser insuring maximum stability as well as the need for water cooling.



LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	1,064nm
Laser Type.....	Fiber-coupled diode end-pumped, Q-switched Nd:YVO ₄ laser
Laser beam mode.....	TEM ₀₀
Average Power (EV15DS).....	Up to 15W
Average Power (EV10SDS).....	Up to 10W
Positioning.....	Visible Red Diode Light
Optical Fiber Length.....	1.75 meters (5.74 feet) standard 4.75 meters (15.58 feet) optional
Mounting Weight.....	Approx. 20kg (45lbs.)
EV10SDS Marketing Head Dimensions	79.5(L) x 16.6(W) x 17.2cm(H) (31.3" x 6.6" x 6.8")
EV15DS Marketing Head Dimensions	71.9(L) x 16.2 (W) x 19.1cm(H) (28.3" x 6.4" x 7.5")
Controller Dimensions.....	42.7(W) x 14.0(H) x 48.8cm(L) (16.8" x 5.5" x 19.2")
Input Power	115/230VAC 50/60Hz
Max. Power Consumption.....	Less than 500W
Cooling.....	Air-cooled, active thermo-electric (no water cooling required)
Operating Temperature Range.....	18° to 35°C (65° to 95°F)
Humidity.....	10% to 85% Non-condensing



STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	110mm X 110mm (4.33" X 4.33")
254mm.....	175mm X 175mm (6.88" X 6.88")
330mm.....	230mm X 230mm (9.06" X 9.06")
350mm.....	250mm X 250mm (9.84" X 9.84")
420mm.....	290mm X 290mm (11.42" X 11.42")

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



Model E10 Series Controller



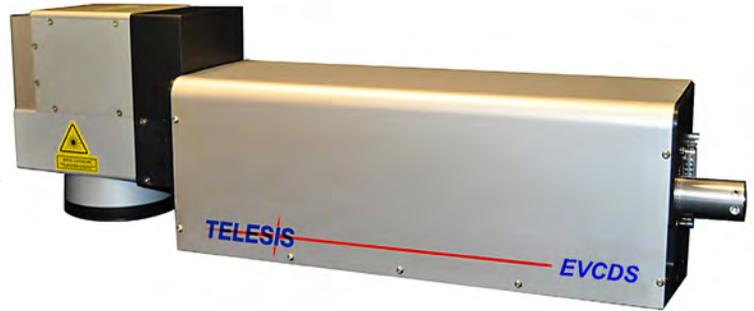
QR Code Web Page Product Link

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



E-Series - EVCDS Diode-Pumped Solid State Laser

The TELESIS EVCDS marker is an extremely cost effective DPSS laser based on a proven advanced Q-Switched, fiber-coupled diode end-pumped Nd:YVO₄ laser platform for applications requiring high beam quality and stability. It features a dual sensor shutter safety system and its exceptional power stability at all power levels makes the EVCDS an ideal choice for engraving, annealed marking, or high speed marking on delicate and heat sensitive electronic components, thin foils and medical instruments. The EVCDS is completely air cooled with a very compact, easily integrated package requiring very little maintenance. With an expected lifetime for the pump diode of over 500,000 hours, down time is dramatically reduced. Because of the modular fiber coupled design, diode replacement can be completed quickly with no need to realign the laser. The compact footprint of the system allows for the easy integration into both manual off-line and automated in-line applications with Marking-On-The-Fly (MOTF) support for high volume applications.*



Model E10 Series Controller

LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	1,064nm
Laser Type.....	Fiber-coupled diode end-pumped, Q-switched Nd:YVO ₄ laser
Laser Beam Mode	TEM ₀₀
Average Power.....	Up to 9W
Positioning	Visible Red Diode Light
Optical Fiber Length	1.75 meters (5.74 feet) standard
Mounting Weight.....	Approx. 14.5kg (32lbs.)
Marking Head Dimensions	15.4(W) x 18.8(H) x 61.1cm(L) (6.1" x 7.4" x 24.1")
Controller Dimensions.....	42.7(W) x 14.0(H) x 48.8cm(L) (16.8" x 5.5" x 19.2")
Controller Weight.....	15kg (33lbs.)
Input Power.....	95-250VAC, 6A, 50/60Hz
System Power Consumption.....	< 400W
Cooling	Air Cooled, active thermo-electric (no water cooling required)
Operating Temperature Range.....	15° to 35°C (65° to 95°F)
Humidity.....	10% to 85% Non-condensing

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	110mm X 110mm (4.33" X 4.33")
254mm.....	175mm X 175mm (6.89" X 6.89")

Other lens configurations are available

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



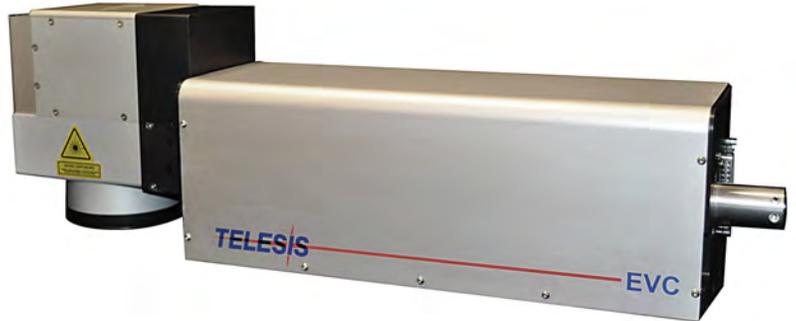
QR Code Web Page Product Link

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

*MOTF Version and embedded PC controller versions available at additional charge

E-Series - EVC Diode-Pumped Solid State Laser

The TELESIS EVC marker is an extremely cost effective DPSS laser based on a proven advanced Q-Switched, fiber-coupled diode end-pumped Nd:YVO₄ laser platform for applications requiring high beam quality and stability. Its exceptional power stability at all power levels makes the EVC an ideal choice for engraving, annealed marking, or high speed marking on delicate and heat sensitive electronic components, thin foils and medical instruments. The EVC is completely air cooled with a very compact, easily integrated package requiring very little maintenance. With an expected MTTF for the pump diode of over 500,000 hours, down time is dramatically reduced. Because of the modular fiber coupled design, diode replacement can be completed quickly with no need to realign the laser. The compact footprint of the system allows for the easy integration into both manual off-line and automated in-line applications with Marking-On-The-Fly (MOTF) support for high volume applications.*



LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	1,064nm
Laser Type.....	Fiber-coupled diode end-pumped, Q-switched Nd:YVO ₄ laser
Laser Beam Mode.....	TEM ₀₀
Average Power.....	Up to 8W
Positioning.....	Visible Red Diode Light
Optical Fiber Length	1.75 meters (5.74 feet) standard
Mounting Weight.....	Approx. 14.5kg (32lbs.)
Marking Head Dimensions	
	15.4(W) x 18.8 (H) x 61.1cm(L)
	(6.1" x 7.4" x 24.1")
Controller Dimensions.....	
	41.9(W) x 14.0(H) x 49.5cm(L)
	(16.5" x 5.5" x 19.5")
Controller Weight.....	10kg (22lbs.)
Input Power	115/230VAC 50/60Hz
System Power Consumption.....	< 400W
Cooling	Air Cooled, active thermo-electric (no water cooling required)
Operating Temperature Range.....	18° to 35°C (64° to 95°F)
Humidity.....	10% to 85% Non-condensing



Model XP1 Series Controller

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	110mm X 110mm (4.33" X 4.33")
Other lens configurations are available	

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O

*MOTF Version available at additional charge

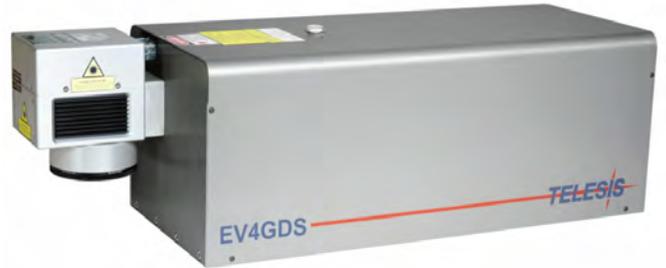


QR Code Web Page Product Link

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

E-Series - EV4GDS Green Diode-Pumped Solid State Laser

The EV4GDS marker is based on an advanced Q-switched, fiber-coupled, diode end-pumped and frequency doubled (green wavelength) Nd: YVO₄ laser. Its laser beam and Q-switched pulse characteristics are optimized for applications that require high beam quality and stability. The 532nm wavelength of the EV4G offers extra power and speed for precision marking, scribing, trimming and other material processing that is not well suited for near IR or CO₂ wavelength lasers. The robust mechanical and optical design of the EV4GDS enables operation in industrial environments where shock, vibration and dust are a concern. The EV4GDS is a completely air-cooled, very compact, easily integrated package requiring very little maintenance. With an expected lifetime for the pump diode of over 250,000 hours, downtime is dramatically reduced. Because of the modular fiber coupled design, diode replacement can be completed quickly with no need to re-align the laser.



Model E10 Series Controller

LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	532nm
Laser Type.....	Fiber-coupled diode end-pumped, Q-switched Nd:YAG Laser
Laser Beam Mode.....	TEM ₀₀
Average Power.....	Up to 4W
Positioning.....	Visible Red Diode Light
Optical Fiber Length	1.75 meters (5.74 feet) standard 4.75 meters (15.58 feet) optional
Mounting Weight.....	approx. 25kg (55lbs.)
Marking Head Dimensions	80.6(L) x 24.9(W) x 19.7cm(H) (31.7" x 9.8" x 7.7")
Temperature Controller Dimensions	21.3(W) x 9.6(H) x 21.2cm(D) (8.4" x 3.7" x 8.3")
Controller Dimensions.....	42.7(W) x 14.0(H) x 48.8cm(L) (16.8" x 5.5" x 19.2")
Input Power	115/230VAC 50/60Hz
Maximum Power Consumption.....	Less than 600W
Cooling	Air Cooled, active thermo-electric (no water cooling required)
Operating Temperature Range	18° to 35°C (65° to 96°F)
Humidity.....	10% to 85% Non-condensing



STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	55mm X 55mm (2.17" X 2.17")
160mm.....	110mm X 110mm (4.33" X 4.33")
250mm.....	170mm X 170mm (6.69" X 6.69")

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



QR Code Web Page Product Link

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



E-Series - EY6DS Diode-Pumped Solid State Laser

The TELESIS EY6DS marker is based on an advanced Q-switched, fiber-coupled diode end-pumped Nd:YAG laser, which provides high pulse energies and exceptional



beam quality for marking, scribing, trimming, and other material processing applications. The EY6DS is a completely air cooled, very compact, easily integrated package requiring very little maintenance. With an expected lifetime for the pump diode of over 500,000 hours, down time is dramatically reduced. Because of the modular fiber coupled design, diode replacement can be completed quickly with no need to realign the laser. The EY6DS is an extremely reliable, low cost alternative to other laser markers.



LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	1,064nm
Laser Type.....	Fiber-coupled diode end-pumped, Q-switched Nd:YAG Laser
Laser Beam Mode.....	TEM ₀₀
Average Power.....	Up to 6W
Positioning.....	Visible Red Diode Light
Optical Fiber Length.....	1.75 meters (5.74 feet) standard 4.75 meters (15.58 feet) optional
Mounting Weight.....	approx. 13.6kg (30lb.)
Marking Head Dimensions.....	30.4(W) x 13.8(H) x 48.2cm(L) (12.0" x 5.4" x 19.0")
Controller Dimensions.....	42.7(W) x 14.0(H) x 48.8cm(L) (16.8" x 5.5" x 19.2")
Input Power.....	115/230VAC, 50/60Hz
Max. Power Consumption.....	Less than 500W
Cooling.....	Air Cooled, active thermo-electric (no water cooling required)
Operating Temperature Range.....	18° to 35°C (65° to 95°F)
Humidity.....	10% to 85% Non-condensing

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	110mm X 110mm (4.33" X 4.33")

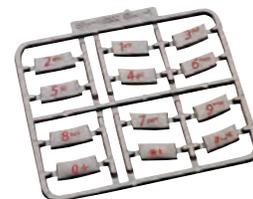
Other lens configurations are available

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



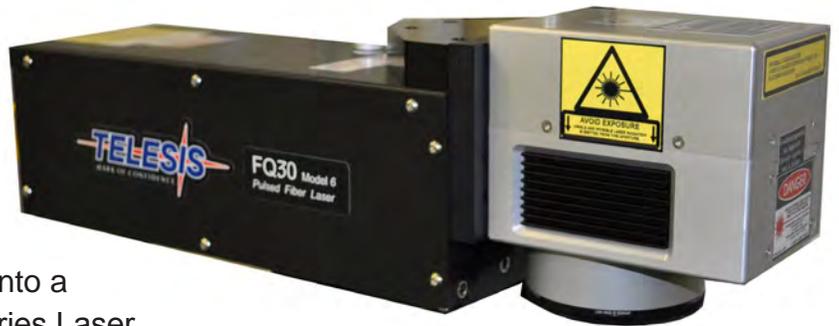
Model E10 Series Controller



QR Code Web Page Product Link

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

The TELESIS FQ50 is the latest laser in a family of maintenance free Q-switched ytterbium fiber lasers specifically designed for marking applications with average power levels from 10-50W. These lasers deliver a high power laser beam directly to the marking head via a flexible metal sheathed fiber optic cable. The fiber based optical design and rugged mechanical design allows these markers to operate in an industrial environment where shock, vibration and dust are a concern. The F-Series fiber marker's unique design allows the overall package to be very small and modular for ease of integration into a variety of industrial applications. The F-Series Laser Marking Systems offers a best in class 100,000 hour MTBF diode reliability with no water cooling requirements, and only single phase 110/220VAC power requirements.



STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
100mm.....	65mm X 65mm (2.56" X 2.56")
160mm.....	90mm X 90mm (3.54" X 3.54")
163mm.....	110mm X 110mm (4.33" X 4.33")
254mm.....	175mm X 175mm (6.89" X 6.89")
330mm.....	230mm X 230mm (9.06" X 9.06")
350mm.....	250mm X 250mm (9.84" X 9.84")
420mm.....	290mm X 290mm (11.42" X 11.42")

SOFTWARE

Software.....**MERLIN® II LS** (see page 24)
 Operating System.....Windows® 2000, Windows XP,
 Windows Vista™, Windows® 7, or Windows® 8
 with Optional Embedded, Desktop or Rackmount PC
 Communication Interface.....Serial, TCP/IP, I/O



Model 6
Series Controller

LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE, CSA, UL
Wavelength.....	1,060nm
Laser Type.....	Q-Switched Ytterbium Fiber Laser
Average Power FQ50/30/20/10	50/30/20/10W
Peak Power FQ10	>4kW
Peak Power FQ50/30/20	>8kW
Beam Quality FQ50/30/20/10	M ² < 2
Fiber Length FQ10	5 meters (16.4ft.) Std.
Fiber Length FQ50/30/20	3 meters (9.8ft.) Std.
Long Term Power Drift.....	< +/- 5%
Optical Isolator.....	Standard
Positioning.....	Visible Red Diode Light
Mounting Weight.....	6.8kg (15lbs.)
Marking Head Dimensions.....	51.0 (L) x 12.7 (W) x 14.0 cm (H) (20.1 x 5.0 x 5.5in.)
Dimension with Selected Lens (H).....	
	100mm: 14.4cm (5.7in.)
	160mm: 14.2cm (5.6in.)
	163mm: 15.8cm (6.2in.)
	254mm: 17.2cm (6.8in.)
	330mm: 17.8cm (7.0in.)
	350mm: 15.9cm (6.3in.)
	420mm: 17.8cm (7.0in.)
Model 6 Controller Dimensions.....	42.7(W)x 14.5(H)x 50.8cm(D) (16.8 x 5.7 x 20.0in.)
Laser Marking Head Cable.....	5m (16.4ft.), detachable
Laser Extension Cable.....	3m (10.0ft.), detachable
Input Power (Selectable).....	95-250VAC, 50/60Hz
Maximum Power Consumption FQ50.....	Less than 400W
Maximum Power Consumption FQ30.....	Less than 280W
Maximum Power Consumption FQ20.....	Less than 250W
Maximum Power Consumption FQ10.....	Less than 200W
Cooling.....	Air Cooled, Fan/Filter (no water cooling required)
Operating Temperature Range	15° to 35°C (55° to 95°F)
Humidity.....	10% to 85% Non-condensing



QR Code Web Page Product Link

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

The innovative, **patent pending** FQD100 dual beam pulsed fiber laser system is perfectly suited for advanced applications that require rapid processing over a wide range of materials. The dual beam deflection system enables increased throughput over single head laser systems. Unique to this system is the ability to simultaneously mark in two separate fields, with the flexibility of independent parameter control for each marking head. For example, it is possible to mark with one beam and simultaneously use the second for a cleaning pass, or simultaneously mark the first half of a serial number with one beam and the second half with the second beam, or to combine the two beams on a single pattern for efficient high fluence material removal. The dual head configuration allows for significantly larger marking fields and sophisticated pattern generation that can outperform the cycle times of much higher power lasers. This system maintains the beam quality all Telesis fiber lasers are known for as well as a 100,000 hour MTBF diode reliability. It is the only fiber laser system of its kind that is entirely aircooled and powered from a single phase power outlet. The

Windows® based control software is intuitive to use, easily run on a laptop, and requires only 2 USB ports and an Ethernet port for external interfacing.



FQD Series System Components

LASER MARKER SPECIFICATIONS

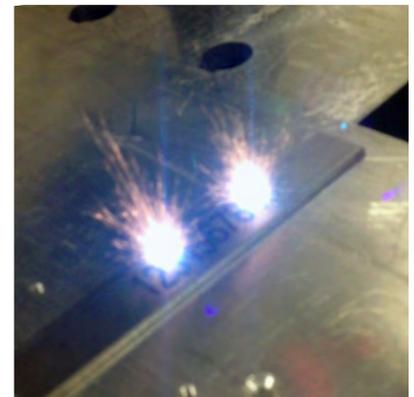
Compliance.....	CDRH, CE
Wavelength.....	1,060nm(+/-20nm)
Laser Type.....	Q-Switched Ytterbium Fiber Laser
Average Power.....	100W
Peak Power.....	>8kW
Beam Quality.....	M ² < 2
Fiber Length.....	2.74 meters (9.0ft) Std.
Long Term Power Drift.....	< +/- 5%
Optical Isolator.....	Standard
Positioning.....	Dual Visible Red Laser Diode
Mounting Weight.....	Approx. 15.9kg (35.0 lbs.)
Marker Head Dimensions.....	47.5(L) x 23.9(W) x 18.6cm(H) (18.7" x 9.0" x 7.3")
Controller Dimensions.....	51.1(L) x 43.8(W) x 21.3cm(H) (20.1" x 17.3" x 8.4")
Controller Weight.....	Approx. 27.2kg (60.0lbs.)
Input Power (Selectable).....	95-250VAC, 50/60Hz
Max. Power Consumption.....	<600W
Cooling.....	Air Cooled (no water cooling required)
Operating Temperature Range.....	18° to 35°C (65° to 95°F)
Humidity.....	10% to 85% Non-condensing

SOFTWARE

Software.....	MERLIN® DM
Operating System.....	WindowsXP®, or Windows® 7 with Optional Laptop, Desktop or Rackmount PC
Communication Interface.....	2x USB, Ethernet TCP/IP

OPTIONS

- Multiple Axis Automation for X, Y, Z and rotation
- Fume/Dust Extractor
- CDRH Class 1 enclosures
- Design, build and integration of custom engineered solutions available



QR Code Web Page Product Link

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

Vari-Z Series - EV and FQ 3-Axis Laser Marking Systems



The innovative, compact and flexible VARI-Z Series of solid state laser marking systems are perfectly suited for advanced applications that require the processing of non-flat parts, multiple or uneven surfaces. The 3-Axis beam deflection systems enable processing in three dimensions. The focusing optic is galvo motor-driven, enabling it to quickly generate continuously variable stepwise image field sizes and the longest standard working distance available in the industry up to a total focused depth of 78mm. This allows the user to

change the working distance, field and spot size with the same galvo head, all under software control. With 3-Axis Marking, you can maintain a consistent system focus and fluence throughout the working volume to achieve deeper engraving as well as faster material removal. This functionality can be added to both the EV series and FQ series of laser markers.

LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE, CSA, UL
Wavelength.....	1,060nm
Laser Type.....	Q-switched Nd:YVO ₄ laser Q-Switched Ytterbium Fiber Laser
Average Power (Model Dependent).....	8-50W
Available Laser Systems.....	EV40/EV25DS/EV15DS/EVCDS FQ50/30/20/10
Positioning.....	Visible Red Diode Light
Mounting Weight (Model Dependent).....	Approx. 10 - 25kg (32 - 55lbs.)
Input Power (Selectable).....	95-250VAC, 50/60Hz
Max. Power Consumption (Model Dependent).....	300-1000W
Cooling.....	Air Cooled (no water cooling required)
Operating Temperature Range.....	15° to 35°C (59° to 95°F)
Humidity.....	10% to 85% Non-condensing

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



QR Code Web Page Product Link

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



OPTIONS

- Lens options of 160mm (+/- 15mm focus) and 254mm (+/- 39mm focus)
- 3 position galvo head can be configured at 0°, 90° or 180°
- Visible Red Aiming Diode
- Integrated PC system controller
- CDRH Class 1 enclosures
- MOTF (Marking On The Fly) encoders and part presence sensor kit
- Additional Axis Automation for X, Y, Z and rotation
- Fume/Dust Extractor
- Design, build and integration of custom engineered solutions available

The TELESIS CO-Series Laser Markers, available with standard power levels at 60W and 10W and are excellent choices for high duty cycle applications on plastic, rubber, wood, paper, anodized metal and label marking applications. They are perfect for “Marking-on-the Fly” as well as stationary marking. Their RF-excited CO₂ tube assures a long life cycle as well with virtually maintenance-free operation. Due to their compact size and modular construction, the CO-Series markers can go almost any place they are needed on the plant floor.



Model C10 Controller



LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	10.6um
Laser Type.....	CO ₂
Average Power (CO10A).....	Up to 10W
Average Power (CO60).....	Up to 60W
Head Weight.....	19.1kg (42.0lbs.)(10W) 30.0kg (66lbs.)(60W)
Controller Weight.....	8.0 kg (18.0lbs.)
CO10A.....	85.7(L) x 16.5(W) x 22.1cm(H) (33.7" x 6.5" x 8.7")
CO60.....	97.1(L) x 21.0(W) x 22.1cm(H) (38.2" x 8.3" x 8.7")
Controller Dimensions.....	42.5(W) x 14.0(H) x 50.4cm(D) (16.7" x 5.5" x 19.9")
Input Power.....	100 – 240 VAC, 50 – 60 Hz
Maximum Power Consumption CO10A.....	Less than 480W
Maximum Power Consumption CO60.....	Less than 1000W
Cooling.....	Air Cooled, Fan/Filter (no water cooling required)
Operating Temperature Range.....	15° to 30°C (59° to 86°F)
Humidity.....	10% to 90% Non-condensing

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
75mm.....	50mm X 50mm (1.97" X 1.97")
100mm.....	70mm X 70mm (2.76" X 2.76")
150mm.....	100mm X 100mm (3.94" X 3.94")
200mm.....	140mm X 140mm (5.51" X 5.51")

Other lens configurations are available

MARKING SPEED*

- Up to 152m/minute (500ft./minute) line speed for “Mark-on-the-fly” applications
- 1300 characters/second

*Character marking speeds and production line speeds depend on material, character size and the desired marking quality.

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O



QR Code Web Page Product Link

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

The TELESIS CO-Series AP Laser Markers, available in two different power levels, the 10W Model CO10AP and the 30W Model CO30AP are excellent choices for many plastic, fiberboard, anodized metal and label marking applications. They are perfect for “Marking-on-the Fly” as well as stationary marking. A 10” USB LCD touch screen controller is available for embedded applications. The unique 3 position rotatable scan heads can be configured to easily integrate the laser into your application (also available in a linear “straight shooter” marking configuration) and the RF-excited CO₂ tube assures a long life cycle as well with virtually maintenance-free operation. Due to their compact size and modular construction, the CO-Series AP markers can go almost any place they are needed on the plant floor.



LASER MARKER SPECIFICATIONS

Compliance.....	CDRH, CE
Wavelength.....	10.6um
Laser Type.....	CO ₂
Average Power (CO10AP).....	Up to 10W
Average Power(CO30AP).....	Up to 30W
Marking Head Weight.....	15.0kg (33.0lbs.)(10W) 26.3kg (58.0lbs.)(30W)
Controller Weight	8.1kg (17.9lbs.)
CO10AP.....	90.5(L) x 12.7(W) x 20.6cm (H) (35.6" x 5.0" x 8.1")
CO30AP.....	86.7(L) x 21.1(W) x 22.7cm(H) (34.1" x 8.3" x 8.6")
Controller Dimensions.....	42.5(W) x 14.0 (H) x 50.4cm(D) (16.7" x 5.5" x 19.9")
Input Power.....	100–240 VAC, 50–60Hz
Maximum Power Consumption CO10AP.....	Less than 480W
Maximum Power Consumption CO30AP.....	Less than 850W
Cooling.....	Air Cooled, Fan/Filter (no water cooling required)
Operating Temperature Range ¹	10–40°C(50-104°F)
Humidity.....	10% to 90% Non-condensing

STANDARD LENS CONFIGURATIONS

FOCAL LENGTH	MARKING FIELD
75mm.....	50mm X 50mm (1.97" X 1.97")
100mm.....	70mm X 70mm (2.76" X 2.76")
150mm.....	100mm X 100mm (3.94" X 3.94")
200mm.....	140mm X 140mm (5.51" X 5.51")

Other lens configurations are available

MARKING SPEED²

- Up to 152m/minute (500ft./minute) line speed for “Mark-on-the-fly” applications
- Up to 1300 characters/second

SOFTWARE

Software.....	MERLIN® II LS (see page 24)
Operating System.....	Windows® 2000, Windows XP, Windows Vista™, Windows® 7, or Windows® 8 with Optional Embedded, Desktop or Rackmount PC
Communication Interface.....	Serial, TCP/IP, I/O

¹ Extended operational ranges for less than 100% duty cycle. The optimized cooling design provides the best performance at high temperatures available in the market for CO₂ markers.

² Character marking speeds and production line speeds depend on material, character size and the desired marking quality.



QR Code Web Page Product Link
DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements

The powerful Merlin[®] II LS Visual Design Software package is capable of driving any of the core TELESIS Laser Products. Each system is shipped with a fully functioning version of the Software (on CD), that allows for off-line program development.



Main Programming Screen

TELESIS LASER SOFTWARE FEATURES:

- Specially Designed by TELESIS – for 32 bit and 64 bit Windows[®] operating systems, compatible with Windows 2000, Windows XP, Windows Vista[™], Windows[®] 7 or Windows[®] 8
- Import a wide range of Graphic Formats including DXF from AutoCAD[™], Adobe Illustrator, Windows[®] Bitmaps, True Type Fonts as Vector or Raster Files.
- Supports 4 Axis Movement (X,Y, Z & Rotary)
- Supports marking-on-the-fly (MOTF)
- Highlight, click and mark!

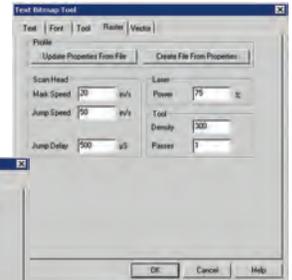
COMPUTER REQUIREMENTS:

- Pentium[®]III with RAM as recommended per operating system
- 2 GB Hard Disk Drive, CD-ROM drive
- SVGA Video, Sound Card
- SVGA Monitor, Mouse and Keyboard
- Additional application dependent requirements may include one RS-232 Serial Port, two USB Ports, two Ethernet Ports, two Half-length PCI Slots

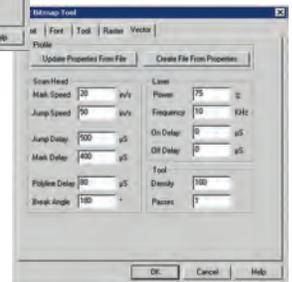
OPTIONAL AUTOMATED MARKING INTERFACE (AMI) VERSION:

Our AMI version of Merlin[®] II LS addresses the need for a safe, easy operator interface that allows barcode scanning to load patterns, load a picture of the part and fixture, and insert the marking data in the proper field all without the need of a keyboard - virtually mistake free.

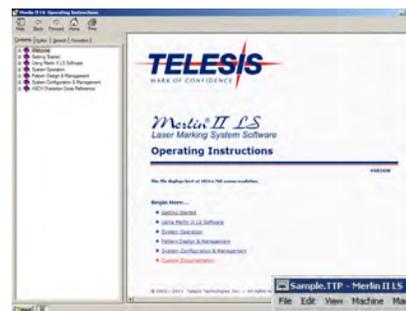
Raster Profile



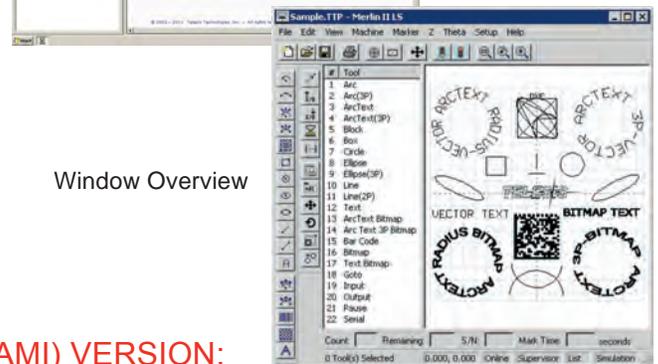
Bar Code Editor



Vector Profile



On Line Help



Window Overview



QR Code Web Page Link

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

TELESIS offers a wide variety of commercially available Class 1 and Class 4 laser marker enclosure styles and sizes. When the situation demands it, our experienced custom engineering staff can design one to fit the specific needs of your application.



TELESIS can provide a complete solution to your laser marking requirements with parts handling accessories such as X/Y tables, rotary fixtures, rotary tables and manual and automated Z-axis.

Laser Marker Enclosures Accessories and Systems Integration



ProStation CLASS 1 Industrial Laser Workstations

CLASS 1 LASER ENCLOSURE FEATURING:

- Attractive, rugged fabricated sheet metal design
- Transverse laser head mounting for convenient loading and unloading
- Extruded aluminum floor for convenient attachment of work piece fixturing and parts handling accessories
- Fume extraction port
- Interior work lamp and door interlock
- Mounted keyboard and monitor arm
- Tower computer with 19" flat panel monitor, keyboard and mouse
- Heavy duty dual rail manually adjusted laser head mounting post

AVAILABLE OPTIONS INCLUDE:

- Programmable Z-Axis laser head mounting post with 2-Axis stepper controller
- Industrial rack mount computer system
- Matching industrial base with equipment shelves and casters
- Machine safety lighting tower and machine I/O interface kits
- Fume extraction systems
- 115/230VAC and 50/60Hz versions

MiniStation CLASS 1 Reduced Footprint Industrial Laser Workstations

CLASS 1 LASER ENCLOSURE FEATURING:

- Same attractive, rugged fabricated sheet metal design with almost a 50% smaller footprint
- Transverse laser head mounting for convenient loading and unloading
- Extruded aluminum floor for convenient attachment of work piece fixturing and parts handling accessories
- Fume extraction port
- Interior work lamp and door interlock
- Mounted keyboard and monitor arm
- Tower computer with 19" flat panel monitor, keyboard and mouse
- Adjustable laser head mounting post

Available options are identical to those available for all ProStations



TablePro CLASS 1 Table Top Industrial Laser Workstations

CLASS 1 LASER ENCLOSURE FEATURING:

- Attractive, rugged metal design in a compact 20" x 28" x 20" (WxDxH) envelope
- Top mounted laser head with external manual hand crank access
- Workstation viewing window
- Fume extraction port
- Interior work lamp and door interlock

Consult the factory for available options to best fit your application

DrawerPro CLASS 1 Table Top Industrial Laser Workstations

CLASS 1 LASER ENCLOSURE FEATURING:

- Interlocked sliding drawer assembly for convenient part loading
- Attractive, small footprint rugged metal design
- Large fixture area for fixed focus applications
- Workstation viewing window
- Fume extraction port
- Interior work lamp and interlocked drawer door



Consult the factory for available options to best fit your application

LASER SYSTEMS/ APPLICATIONS	EV40	EV25DS	EV15DS EV10SDS	EVCDS/EVC
	1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, High pulse energy, 40 Watt, Nd:YVO ₄ laser marker	1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, 25 Watt Nd:YVO ₄ laser marker	1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, 15 Watt and 10 Watt, Nd:YVO ₄ laser marker	1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, compact, high reliability, 9 Watt and 8 Watt, Nd:YVO ₄ laser marker
Marking metals	Best choice for high speed surface and deep marking of almost every type of metal.	Excellent choice for high speed surface and deep marking of almost every type of metal.	Good choice for high speed surface and deep marking of almost every type of metal.	Good choice for surface marking of almost every type of metal with very small heat effected zone.
Marking plastics and label materials (3M, Tesa, etc.)	Best choice for high speed marking of plastics and label materials.	Excellent choice for high speed marking of plastics and label materials.	Excellent choice for high speed marking of plastics and label materials.	Good choice for marking plastics and label materials.
Marking silicon	Best choice for deep marking of silicon.	Excellent choice for deep marking of silicon.	Excellent choice for surface marking of silicon.	Can do surface marking of silicon.
Marking organic materials	Cannot mark wood. Can mark some other organic materials.	Cannot mark wood. Can mark some other organic materials.	Cannot mark wood. Can mark some other organic materials.	Cannot mark wood. Can mark some other organic materials.
Marking high quality graphics	Best choice for high speed marking high resolution graphics due to small spot size.	Excellent choice for marking high resolution graphics due to small spot size.	Excellent choice for marking high resolution graphics due to small spot size.	Excellent choice for marking high resolution graphics due to small spot size.
Workstations	ProStation	ProStation	ProStation	Prostation MiniStation TablePro DrawerPro
Vari-Z 3-Axis Marking	Available	Available	Available on EV15DS	Available on EVCDS



LASER SYSTEMS/ APPLICATIONS	FQD100	FQ50, FQ30, FQ20	FQ10	EY6DS
	1060nm wavelength, air-cooled, single phase, Q-switched, Dual 50 Watt Yb fiber laser marker	1060nm wavelength, air-cooled, single phase, Q-switched, 50,30, and 20 Watt Yb fiber laser marker (Will provide faster cycle times than FQ10.)	1060nm wavelength, air-cooled, single phase, Q-switched, 10 Watt Yb fiber laser marker	1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, 6 Watt, Nd:YAG laser marker
Marking metals	Best choice complex or multi-surface and deep marking of most metals. Special care is required for copper, brass or any other highly reflective or polished metals.	Better choice for surface and deep marking of some metals. Special care is required for copper, brass or any other highly reflective or polished metals.	Good choice for surface and deep marking of some metals. Special care is required for copper, brass or any other highly reflective or polished metals.	Good choice for surface and deep marking all metals.
Marking plastics and label materials (3M, Tesa, etc.)	Best choice for complex or multi-surface marking many plastics and label materials. (Some surface melting can occur due to long pulse width.)	Better choice for marking many plastics and label materials. (Some surface melting can occur due to long pulse width.)	Better choice for marking many plastics and label materials. (Some surface melting can occur due to long pulse width.)	Good choice for marking plastics and label materials.
Marking silicon	Capable of multi-surface and deep marking of silicon.	Capable of deep marking of silicon.	Capable of deep marking of silicon.	Capable of deep marking of silicon.
Marking organic materials	Cannot mark wood. Can mark some other organic materials.	Cannot mark wood. Can mark some other organic materials.	Cannot mark wood. Can mark some other organic materials.	Cannot mark wood. Can mark some other organic materials.
Marking high quality graphics	Can mark high quality graphics simultaneously in different locations	Can mark high quality graphics on some metals.	Can mark high quality graphics on some metals.	Excellent choice for marking high resolution graphics due to small spot size.
Workstations	ProStation	ProStation MiniStation TablePro DrawerPro	ProStation MiniStation TablePro DrawerPro	ProStation MiniStation TablePro DrawerPro
Vari-Z 3-Axis Marking	Not Available	Available	Available	Not Available



LASER SYSTEMS/ APPLICATIONS	EV4GDS	CO60	CO30AP	CO10A/CO10AP
	532nm wavelength; air-cooled; single phase; diode end-pumped, Q-switched, green laser marker	10.6um wavelength, air-cooled, single phase, RF excited, 60W CO ₂ laser marker (provides faster cycle times than CO30 series)	10.6um wavelength, air-cooled, single phase, RF excited, 30W CO ₂ laser marker (provides faster cycle times than CO10 series)	10.6um wavelength, air-cooled, single phase, RF excited, 10W CO ₂ laser marker
Marking metals	Excellent choice for high speed surface marking all metals with very small heat effected zone produced.	Can mark anodized metal surfaces. With short focal length lenses, can mark some non-plated metal surfaces.	Can mark anodized metal surfaces. With short focal length lenses, can mark some non-plated metal surfaces.	Can mark some anodized metal surfaces.
Marking plastics and label materials (3M, Tesa, etc.)	Excellent choice for marking plastics. Marks large variety of plastics.	Excellent choice for high speed marking plastics and some label materials.	Excellent choice for high speed marking of plastics and some label materials.	Excellent choice for high speed marking of plastics and some label materials.
Marking silicon	Excellent choice for surface marking of silicon.	Not recommended	Not recommended	Not recommended
Marking organic materials	Cannot mark wood. Can mark some other organic materials.	Excellent choice for marking wood and other organic materials.	Excellent choice for marking wood and other organic materials.	Excellent choice for marking wood and other organic materials.
Marking high quality graphics	Excellent choice for marking high resolution graphics due to small spot size. Highest resolution capability.	Can mark high quality graphics on plastics and on some anodized metal surfaces.	Can mark high quality graphics on plastics and on some anodized metal surfaces.	Can mark high quality graphics on plastics and on some anodized metal surfaces.
Workstations	ProStation TablePro DrawerPro	TablePro DrawerPro others consult factory	TablePro DrawerPro others consult factory	ProStation TablePro DrawerPro others consult factory
Vari-Z 3-Axis Marking	Available	Not Available	Not Available	Not Available



For all applications, it is highly recommended that samples be sent to TELESIS for qualification and testing purposes.



TMC600 marking system controller runs the Merlin®Touch PS software and provides a touch screen user interface for operating the marking system. The controller features an integrated, 10-in., high-resolution, touch screen monitor in the top panel. The back panel of the controller provides the electrical interfaces for connecting to the marking system and optional, remote I/O sources.

The powerful Telesis Merlin®Touch PS software is a Windows®

based software package that comes installed in the TMC600 controller. It is a graphical user interface that makes pattern design and marking quick and easy. The WYSIWYG (what-you-see-is-what-you-get) interface provides a scale image of the pattern as it is created. The Merlin®Touch PS software includes tools to create and edit pattern files for marking. Each pattern can contain one or more fields; each field defines a single object. Printable objects may be created consisting of any combination of text strings, arc-text strings, geometric text strings, geometric shapes, graphics, and machine-readable data matrix symbols. Just “click and drag” for immediate adjustment to object size, location, or orientation.

Printable text fields may include alphanumeric characters, symbols, and special message flags. Message flags automatically insert data into the text string, such as serial numbers, times, dates and user-defined codes. Multiple fields may be grouped and saved as a block to form a logo. Existing DXF files can also be imported for marking. Non-printable fields can be created to clearly display a graphical representation of the part being marked. Commands may be defined to perform specific tasks during the marking cycle (e.g., Pause, Go to, Input, or Output).



CONTROLLER FEATURES:

- Powerful Windows® 8.1 based OS
- 10” Hi-Res Capacitive touch screen
- Multiple integrated I/O ports including, TTL, opto-isolated, VGA, and 4 USB ports
- Easy Networking capabilities with Ethernet port for TCP/IP communications
- EtherNet/IP and PROFINET capable
- Resident support of 2D, QR and GS1 codes
- Additional axis control (rotary, Z axis, linear stages) via optional integrated driver board

FEATURES

- Fully self-contained – no PC required
- Easy-to-use menu design for pattern design and access
- Ethernet port for TCP/IP communications
- EtherNet/IP and PROFINET capable
- Durable membrane keyboard
- Pattern backup via USB port
- Can store up to 400 marking patterns locally
- One RS232/485 and one RS232 serial port and discrete I/O capabilities with spare I/O available for customer-specific needs
- Optional internal board to control third and fourth axis (Z and rotary) – no separate driver required
- Optional panel-mount kit for panel mounting in NEMA/IP rated enclosures
- Conforms to all European Community (CE) norms



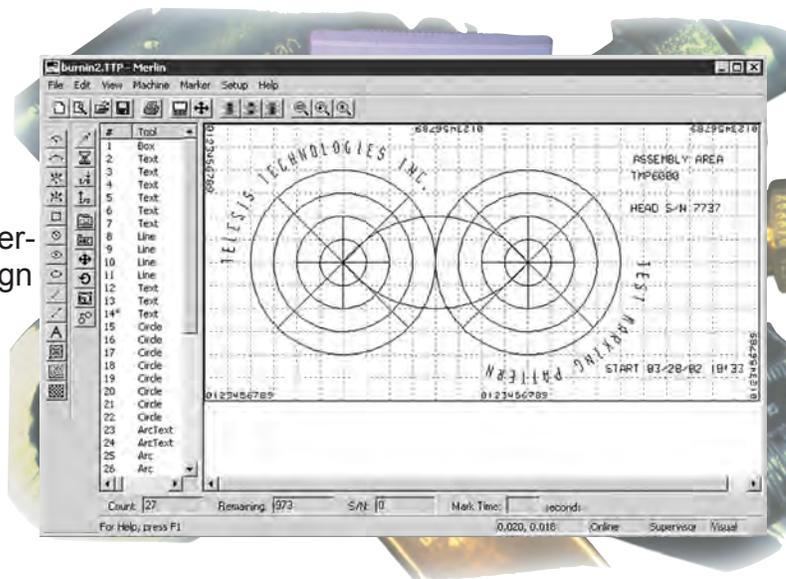
- Operates on 100 – 130 VAC or 200 – 250 VAC, 50 – 60 Hz power



Merlin[®] III VISUAL DESIGN SOFTWARE

Offered as an optional accessory to a number of TMC470- based **Pinstamp[®]** Marking Systems, TELESIS' powerful **Merlin[®] III** 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.

TMP7000/470 PINSTAMP® Single Pin Marking System

The **PINSTAMP®** TMP7000/470 is a robust single pin marker targeted at applications requiring extremely deep penetration marking. Its 4" x 6" (100mm x 150mm) marking window is ample for a wide range of applications and its TMC470 controller allows it to be easily integrated into most automated applications.



"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

- Great for marking large characters and/or rough surfaces
- Large 4" x 6" (100mm x 150mm) marking window
- Marks up to 0.025" (0.63mm) deep in mild steel
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Automatically generates serial numbers, date, time and shift codes
- Marks a wide range of materials from soft plastics up to hardened steel
- Stores up to 400 marking patterns

OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated controller options
- 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 for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com



Compact Self-Contained
TMC470 Controller — no PC required.



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

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" (152mm 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.

"The TELESIS Model 6100/470 is a top quality product. They run 6 days a week, 10 hours a day, all day long, and they are 'bullet-proof'. I'd recommend the TELESIS dot pen (Pinstamp) to anybody who needs that type of product marker. It is one of the best machines that we have."

Bud Nelson, Secondary Manager,
Acutec Precision Machining



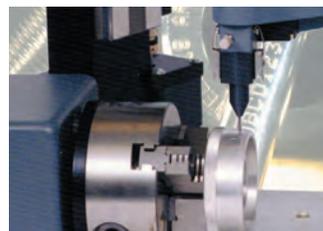
Compact Self-Contained
TMC470 Controller

FEATURES

- Large 6" x 12" (152mm 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 dots-per-centimeter)
- Choice of interchangeable marking pin types for depths from 0.001" – 0.018" (0.02mm – 0.45mm)
- Pin travel accommodates surface irregularities to 0.25" (6mm)
- Compact, self-contained TMC470 Controller with integral display and keyboard – no PC required (see page 31)
- RS232 or TCP/IP 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)
- Pattern backup via USB port
- Stores up to 400 marking patterns (files)

OPTIONS AND 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
- Powerful Windows-based **Merlin® III** software (see page 31)
- **Electric Pin Version Available**



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The **PINSTAMP®** TMP3200/470 Single Pin Marking System features a large 4" x 6" (100mm 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.



OPTIONAL ACCESSORIES

- Rotary fixtures for marking circumferences of cylindrical parts
- Marking head mounting post including programmable Z-axis version
- Panel-mount and IP/NEMA-Rated Controllers
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- Powerful Windows based **Merlin® III** software available (see page 31)

Compact Self-Contained TMC470 Controller — no PC required.



FEATURES

- 4" x 6" (100mm 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 0.25" (6mm)
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Choice of pin sizes for marking depths from 0.001" - 0.018" (0.03 mm - 0.45 mm)
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB port and Ethernet port (see page 31)
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Dot density up to 200 dots-per-inch (79 dots-per-centimeter)



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



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

TMP1700/470 PINSTAMP® Single Pin Marking System

The TMP1700/470 is the lowest cost **PINSTAMP®** marking system. The rugged TMP1700 marking head features a compact, 1-1/2" x 2-1/2" (38.1mm 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.



FEATURES

- 1-1/2" x 2-1/2" (38.1mm x 63.5mm) marking window
- Rugged, low-maintenance X/Y platform
- Compact Marking Head — approximately 6.6" x 6.2" x 4.7" (168mm x 158mm 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
- Self-Contained, state-of-the-art TMC470 controller features two serial ports, USB port and Ethernet port. (see page 31)
- Dot density up to 200 dots-per-inch (79 dots-per-centimeter)
- Choice of interchangeable marking pin types for depths from 0.001" - 0.018" (0.03mm - 0.45mm)
- Pin travel accommodates surface irregularities to 0.25" (6mm)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers

OPTIONS AND ACCESSORIES

- Rotary fixtures for marking circumferences of cylindrical parts
- Marking head mounting post, including programmable Z-axis version
- Panel-mount and IP/NEMA Rated Controllers
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- Powerful Windows based **Merlin® III** software (see page 31)
- **Electric Pin Version Available**

Compact Self-Contained
TMC470 Controller



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



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The TMP6100EAS is a special electric pin configuration of the versatile TMP6100 **PINSTAMP®** marking head, specifically developed for 2-D code applications. It is easily integrated into either on or off-line applications and includes an electromagnetic marking pin and an **AUTOSENSE** motorized Z-Axis mounting post that ensures a consistent pin stroke for highly repeatable 2-D cell sizes. No operator intervention is required – pattern specific standoff setting ensures that the

critical standoff distance is consistently repeated -- A great tool for multiple plane marking. Since the marking pin can be positioned anywhere in the generous 6" x 12" (152mm x 304mm) marking window, the TMP6100EAS 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.



OPTIONS AND ACCESSORIES

- Rotary fixtures for marking circumferences of cylindrical parts
- Logo/Font design Software Package for design of custom fonts or simple logos
- Powerful Windows based **Merlin® III** software (see page 31)



Compact Self-Contained
TMC470 Controller — no PC required.

FEATURES

- Large 6" x 12" (152mm 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 dots-per-centimeter)
- Self-Contained, state-of-the-art TMC470 controller features two serial ports, USB port and Ethernet port. (see page 31)
- RS232 or TCP/IP 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)
- Pattern backup via USB port
- Stores up to 400 marking patterns (files)



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The TMP3200EAS is a special electromechanical pin configuration of the versatile TMP3200 **PINSTAMP®** marking head, specifically developed for 2-D code applications. It is easily integrated into either on or off-line applications and includes an electromagnetic marking pin and an **AUTOSENSE** motorized Z-Axis mounting post that ensures a consistent pin stroke for highly repeatable 2-D cell sizes. No operator intervention is required -- pattern specific standoff setting ensures that the critical standoff distance is consistently repeated -- A great tool for multiple plane marking. The TMP3200/470EAS Single Pin Marking System features a large 4" x 6" (100mm x 150mm) marking window, and marking speeds up to 2.5 characters-per-second. Well suited for both bench top and factory-automated applications, its robust dual stepper motor X/Y platform yields high quality characters and low maintenance operation.



Compact Self-Contained
TMC470 Controller — no
PC required.

FEATURES

- 4" x 6" (100 mm x 150 mm) Marking Window
- Dual stepper motor driven X/Y mechanism with superior wear characteristics
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Can produce characters as small as .030" (0.76 mm) and dot densities of 10-200 DPI (4-79 dots per cm)
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB port and Ethernet port.
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers

OPTIONAL ACCESSORIES

- Rotary fixtures for marking circumferences of cylindrical parts
- Panel-mount and IP/NEMA-Rated Controllers
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- Powerful Windows based **Merlin® III** software (see page 31)



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The TMP1700EAS is a special electromechanical pin configuration of the versatile TMP1700 **PINSTAMP®** marking head, specifically developed for 2-D code applications. It is easily integrated into either on or off-line applications and includes an electromagnetic marking pin and an **AUTOSENSE** motorized Z-Axis mounting post that ensures a consistent pin stroke for highly repeatable 2-D cell sizes. No operator intervention is required – pattern specific standoff setting ensures that the critical standoff distance is consistently repeated -- A great tool for multiple plane marking. The TMP1700/470EAS is the lowest cost electromechanical **PINSTAMP®** marking

system. The rugged TMP1700EAS marking head features a compact, 1-1/2" x 2-1/2" (38.1mm 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.



FEATURES

- 1-1/2" x 2-1/2" (38.1mm x 63.5mm) Marking Window
- Rugged, low-maintenance X/Y platform
- Compact Marking Head — approximately 6.6" x 6.2" x 4.7" (168mm x 158mm 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
- Self-Contained, state-of-the-art TMC470 controller features two serial ports, USB port and Ethernet port.
- Dot density up to 200 dots-per-inch (79 dots-per-centimeter)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers

OPTIONS AND ACCESSORIES

- Rotary fixtures for marking circumferences of cylindrical parts
- Panel-mount and IP/NEMA Rated Controllers
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- Powerful Windows based **Merlin® III** software (see page 31)



Compact Self-Contained
TMC470 Controller



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

Mark up to .018 inches (0.46mm) deep in mild steel with the extremely robust yet highly portable **PINSTAMP®** Model TMP4500/470E hand held marking system. With an electromechanical pin that eliminates the need for any air supply, the TMP4500/470E is the perfect choice for applications requiring both portability and deep penetration marking.



FEATURES

- Ergonomic dual handle design
- Large 1" x 4" (25mm x 100mm) marking window
- Extremely robust design featuring rugged X-Y platform and all metal enclosure
- Powerful pin drive design for marking depths of up to 0.018" (0.46mm) in mild steel
- Weighs less than 6.6 pounds (3.0kg) - less electronic cables
- Marks at speeds up to 3 characters-per-second
- Self-contained, state-of-the-art TMC470 controller with USB, Ethernet, and 2 serial ports (see page 31)
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 400 marking patterns

OPTIONAL ACCESSORIES

- Bar code scanner for automatic data entry
- Quick disconnect toolposts for use in benchtop applications
- Cable balancer attachment kit
- V-block kit for marking cylindrical parts
- Logo-Font Design software package for the design of custom fonts and logos
- Battery operated carrying case mounted version



Compact Self-Contained
TMC470 Controller — no PC
required.



QR Code Web Page Product Link
DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The **PINSTAMP®** TMP4210/470 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 4.4 pounds (2.0kg)
- Available with 25S or 150SA marking pin
- 2" x 0.5" (50mm x 13mm) marking window
- Economically priced
- Marks 1/8" (3mm) tall characters at up to 3.5 characters-per-second
- Utilizes same rugged rack-and-pinion X/Y platform as field-proven TMM4200
- Detachable electronics cable for improved serviceability
- Self-contained state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Also available without handle and stand-off for fixtured applications

OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA rated controller options
- Debris Shield Kit protects from solid contaminants
- Cable Balancer Attachment Bracket
- Marking Head Standoff V-Block kit for marking the circumference of cylindrical parts
- Quick disconnect tool post
- 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 for easy software upgrade
- PC-Based Pattern (marking file) Back-up Utility available FREE from www.telesis.com



Compact Self-Contained
TMC470 Controller — no PC required.



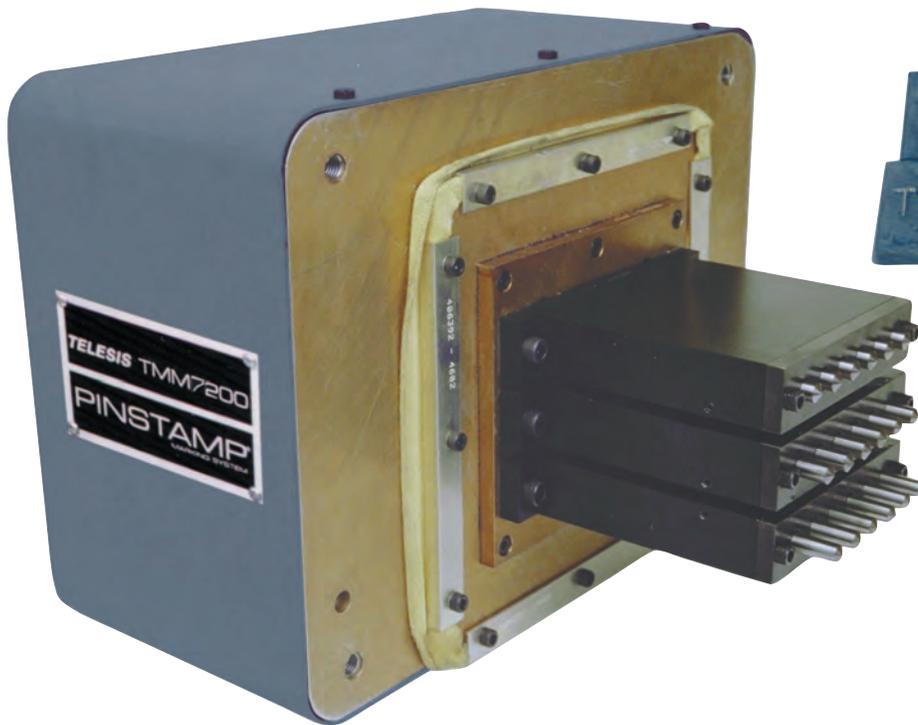
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DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

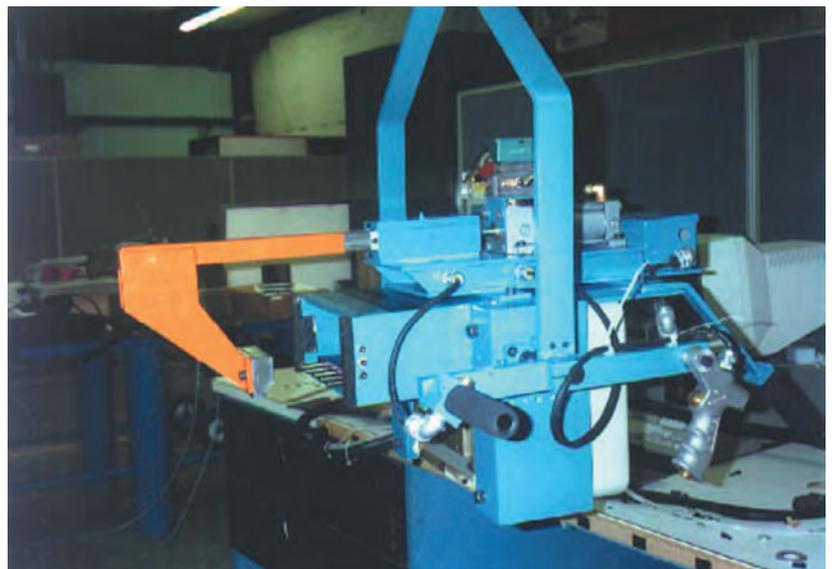


TMM7200/470 PINSTAMP® Multiple Pin Marking System

The **PINSTAMP®** TMM7200/470 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 0.25” (6mm) to 1.75” (44.5mm) to provide a wide range of very large marking windows.



Compact Self-Contained
TMC470 Controller — no PC required.

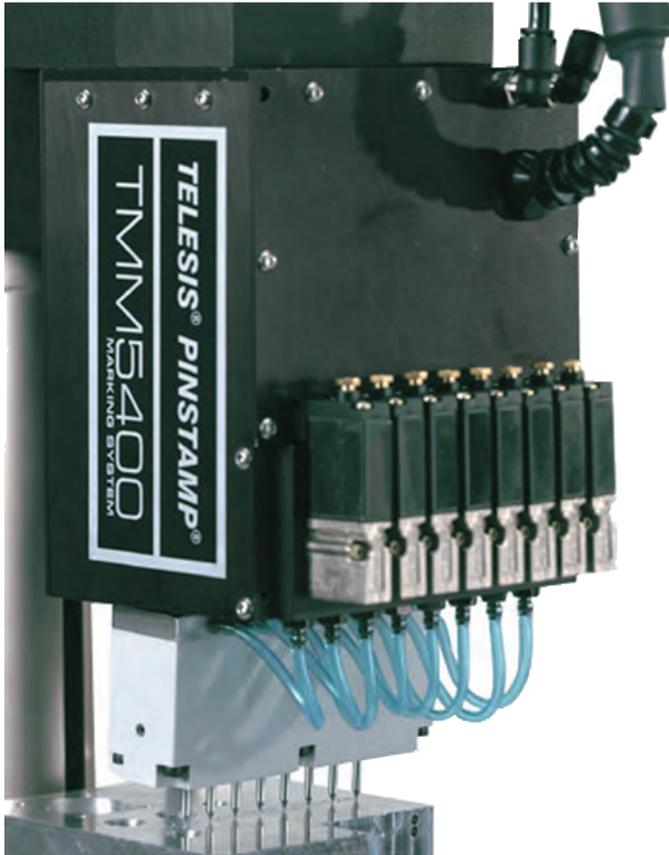


The TMM7200 is easily adapted to custom
designs and fixturing options.



QR Code Web Page Product Link
DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

Equipped with eight marking pins, the **PINSTAMP®** TMM5400/470 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 0.5" x 3.78" (13mm 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 0.25" (6mm)
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Stores up to 400 marking patterns

OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated controller options
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com



Compact Self-Contained
TMC470 Controller — no PC
required.



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

Mark up to six characters-per-second with the **PINSTAMP®** TMM5100/470 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" (1mm - 16mm) on a wide range of materials.



FEATURES

- High speed — up to six pins marking simultaneously
- Marking windows up to 0.625" x 4.5" (16mm 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 the 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
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Pin travel accommodates surface irregularities to 0.25" (6mm)

OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated controller options
- 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 for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com



Compact Self-Contained
TMC470 Controller — no PC required.



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The **PINSTAMP®** TMM4250/470 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" (13mm 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 0.125" (3mm) high characters-per-second
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Stores up to 400 marking patterns
- Marking windows up to 0.5" x 2" (13mm x 50mm)
- Depths up to 0.013" (0.33 mm) in mild steel
- Rugged rack-and-pinion X/Y platform for low maintenance operation
- Detachable electronics cable for improved serviceability
- RS232 or TCP/IP Host interface to download text to individual fields or call up entire patterns
- 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
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com



Compact Self-Contained
TMC470 Controller — no
PC required.

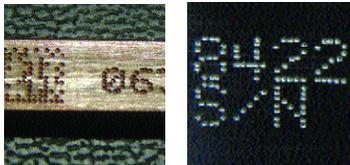


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DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The innovative **PINSTAMP®** dual-pin TMM4215 provides a 4" x 0.5" (100mm x 13mm) marking window, twice as large as that of the TMM4200. This lightweight, compact marker is available in both fixtured and hand-held configurations.



Shown with optional debris shield



OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA rated controller options
- Cable balancer attachment kit
- Marking head standoff V-Block Kit for marking on the circumference of cylindrical parts
- Quick-disconnect tool post
- 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 for easy software upgrade
- PC-based Pattern (marking file) Back-up utility available FREE from www.telesis.com

FEATURES

- Compact, ergonomic design
- Weighs 4.5 pounds (2.0kg)
- Marks up to four 0.125" (3mm) high characters-per-second
- Available with the high-speed 25S marking pin or the deep marking 150SA pin
- Marking depths up to 0.013" (0.33mm) in mild steel
- Rugged rack and pinion X/Y platform for low maintenance operation
- Also available without handle and standoff for fixtured applications
- Detachable electronics cable for improved serviceability
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Automatically generates serial number, time, date and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLC's (Programmable Logic Controllers) and host computers

Compact Self-Contained
TMC470 Controller — no
PC required.



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DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The unique **PINSTAMP®** 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 0.125" (3mm) high Characters-Per-second
- Marking windows up to 0.5" x 2" (13mm x 50mm)
- Depths up to 0.013" (0.33mm) 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
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- Also available without handle and stand-off for fixtured applications
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 400 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and host computers



OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA-Rated controller options
- Quick disconnect tool post
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com

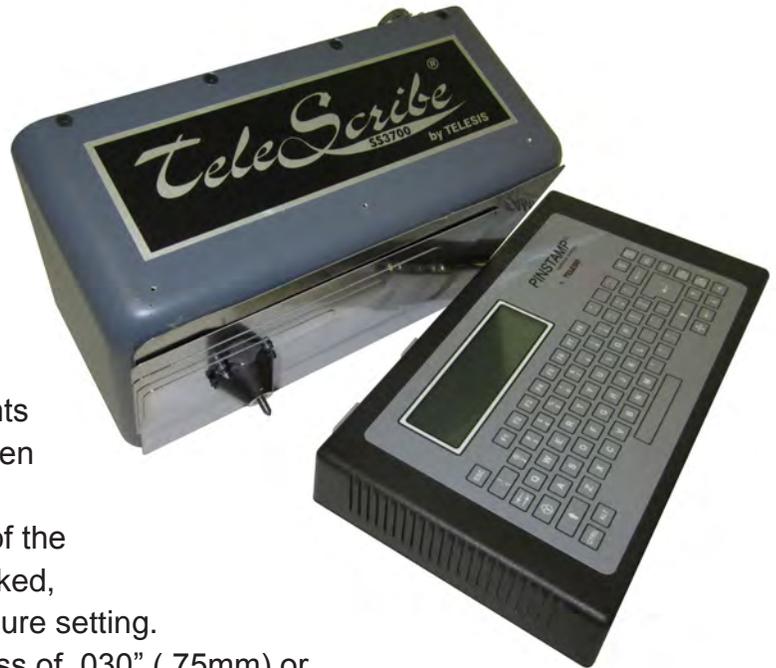
Compact Self-Contained
TMC470 Controller — no
PC required.



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DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The state-of-the-art servo-driven SS3700/470 **TeleScribe**[®] Marking System provides permanent low-noise marking at speed/depth combinations not previously attainable. Virtually silent, the SS3700's robust X/Y platform provides an ample 6" x 2" (152mm x 51mm) marking window, making it the optimum choice for many both manual and automated VIN marking applications, especially those with speed/depth requirements beyond those of traditional stepper motor-driven designs. Marker performance characteristics vary significantly depending on the specifics of the applications, including the material being marked, the thickness of the material and the air pressure setting.

When marking cold rolled steel with a thickness of .030" (.75mm) or more, marking depths of at least .004" (0.1mm) can be expected and when marking thinner, softer materials marking depths of up to .008" (0.2mm) can frequently be achieved, even at marking speeds of up to 2 characters-per-second for .276" (7mm) characters. The system's stand-alone TSC470 Controller is equipped with an integral keyboard and LCD display and provides a simple user friendly operator interface with no PC required. In addition, the TSC470's discrete I/O, serial and Ethernet ports provide the communications capabilities required for factory automated applications.



FEATURES

- Provides performance far beyond conventional step per motor-driven scribe markers.
- Permanent, virtually silent marking in a wide range of materials. (Maximum noise level approximately 72dba.)
- High speed marking of 2mm tall high quality characters at up to 2 characters-per-second.
- Marks at depths up to 0.1mm (.004") in cold rolled steel.
- Large 6" x 2" (152mm x 50.8mm) marking window
- Easily integrated into a wide range of automated on-line and manual applications.
- The perfect choice for many VIN marking applications.
- TSC470 controller based on field proven TMC470.

OPTIONAL ACCESSORIES

- Marking head mounting post with base
- Panel-mount and IP/NEMA-Rated Controllers (see page 55)
- 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 for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The powerful, extremely heavy-duty **Telescribe**[®] SC5000/470 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
- 2.5" x 7.5" (63.5mm x 190.5mm) marking window
- Especially well suited for VIN (Vehicle Identification Number) applications
- Self Contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- 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 400 marking patterns

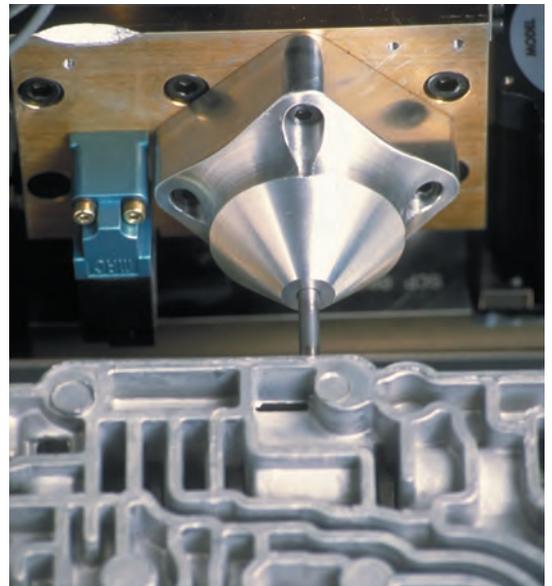


OPTIONAL ACCESSORIES

- Marking head support tooling and balancers
- Panel-mount and IP/NEMA-Rated controller options
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com
- Optional SS5500/470 Servo Motor Driven Versions Available For High Speed Applications



Compact Self-Contained
TMC470 Controller — no PC required.



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

Virtually silent, the economical **TeleScribe**[®] SC3500/470 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" (100mm x 150mm) marking window
- Economically priced Scribe Marker, well suited for a wide range of automated on-line and stand-alone Bench Top applications
- Self contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 31)
- 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 400 marking patterns

OPTIONAL ACCESSORIES

- Marking head mounting post with base
- Panel-mount and IP/NEMA-Rated Controllers (see page 55)
- 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 for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com



Compact Self-Contained
TMC470 Controller — no PC required.



QR Code Web Page Product Link

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The SC2500/470 and SC2000/470 **Telescribe**[®] Marking Systems provide permanent low-noise marking in a more compact footprint. The robust X/Y stepper motor driven platform provides an ample 3.94" x 1.57" (100mm x 40mm) for the SC2500/470 or a 2.95" x 1.57" (75mm x 40mm) marking window for the SC2000/470. Both are offered with a wide selection of marking pins and make it an excellent choice for many manual and automated marking applications, especially those with speed/depth requirements beyond those of traditional stepper motor-driven designs. This marker is not for marking 2D data matrix codes but for the continuous marking of human readable characters and symbols. Marker performance characteristics vary significantly depending on the specifics of the applications, including the material being marked, the thickness of the material and the air pressure setting. When marking cold rolled steel with a thickness of .030" (.75mm) or more, marking depths of at least .002" inches (0.05mm) can be expected and when marking thinner, softer materials marking depths of up to .003" (0.075mm) can frequently be achieved, even at marking speeds of up to 2 characters-per-second for .125" (.3mm) characters. The system's stand-alone TMC470 Controller is equipped with an integral keyboard and LCD display and provides a simple user friendly operator interface with no PC required. In addition, the TMC470's discrete I/O, serial and Ethernet ports provide the communications capabilities required for factory automated applications.



FEATURES

- Compact scribe marker head that weighs approximately 13.2lbs(6 kg).
- Provides performance far beyond conventional step per motor-driven scribe markers.
- Permanent, virtually silent marking in a wide range of materials. (Maximum noise level approximately 72dBA.)
- High speed marking of .118" (3mm) tall high quality characters at up to 2 characters-per-second.
- Marks at depths up to .002" (0.05mm) in cold rolled steel.
- 3.94" x 1.57" (75mm x 40mm) marking window (SC2500/470) or 2.95" x 1.57" (75mm x 40mm) marking window (SC2000/470)
- Easily integrated into a wide range of automated on-line and manual applications for use with continuous characters or symbols.

OPTIONAL ACCESSORIES

- Marking head mounting post with base
- Panel-mount and IP/NEMA-Rated Controllers
- 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 for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com
- Powerful Windows based **Merlin**[®] III software available



Compact Self-Contained
TMC470 Controller — no PC required.

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 1" x 4" (25mm x 100mm) 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 3.75 pounds (1.7kg)
- Generous 1" x 4" (25mm x 100mm) 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 for easy software upgrade
- PC-Based Pattern (marking file) Back-up Utility available FREE from www.telesis.com
- **Benchmark® 460+** version with enhanced communications capabilities



Compact Self Contained
BenchMark® 470
Controller - no PC
required

Fully programmable
Battery Operated
BenchMark® 460
with charger fully
packaged in a rugged,
convenient carrying case



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DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The **BenchMark® 320** is an extremely versatile yet economically priced benchtop marking system. It offers a generous 4" x 6" (100mm x 150mm) marking window large enough to satisfy almost any application. And its unique marking arm design is extremely convenient for parts loading and unloading as well as marking pattern design. The system is self-contained with compact controller and rugged extruded aluminum mounting post and base.



"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

- High quality, permanent, programmable marking on a wide range of materials — from soft plastics to hard metals up to Rc60
- Large 4" x 6" (100mm x 150mm) marking window
- Marking arm 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 membrane keyboard and LCD display — no PC required



OPTIONAL ACCESSORIES

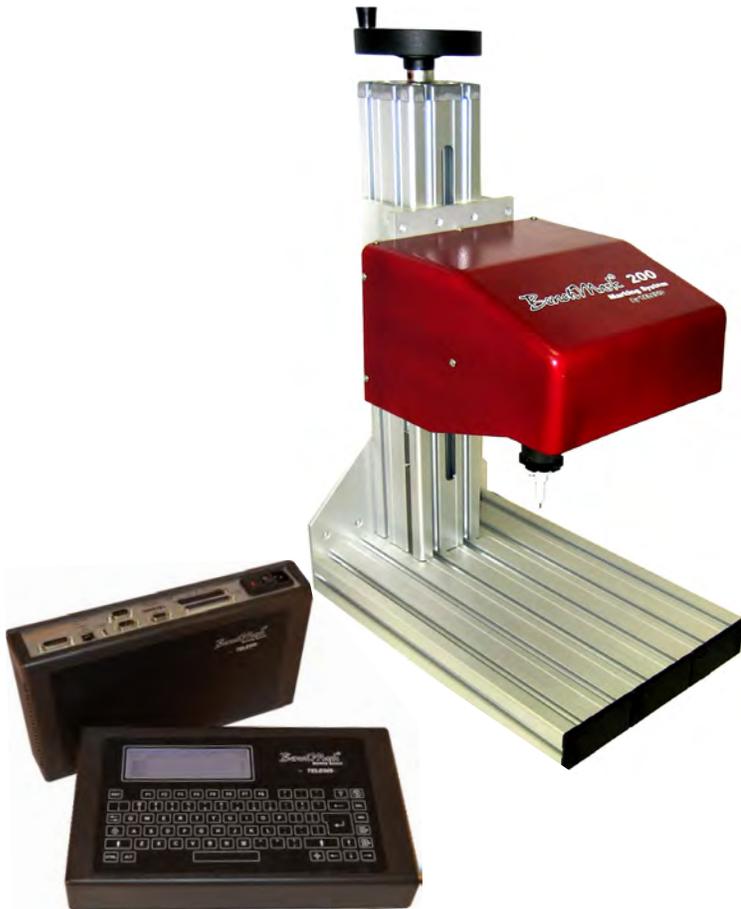
- Rotary fixture for marking circumferences of cylindrical parts
- Bar Code Scanner for automatic data entry
- Start-Print footswitch and pushbutton station
- Logo/Font design software package for design of custom fonts or logos
- PC-Based Upgrade Utility available FREE from www.telesis.com for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com
- **Benchmark® 320+** version with enhanced communications capabilities
- **Benchmark® 320M** system with Windows based **Merlin® III** software available (see page 31)



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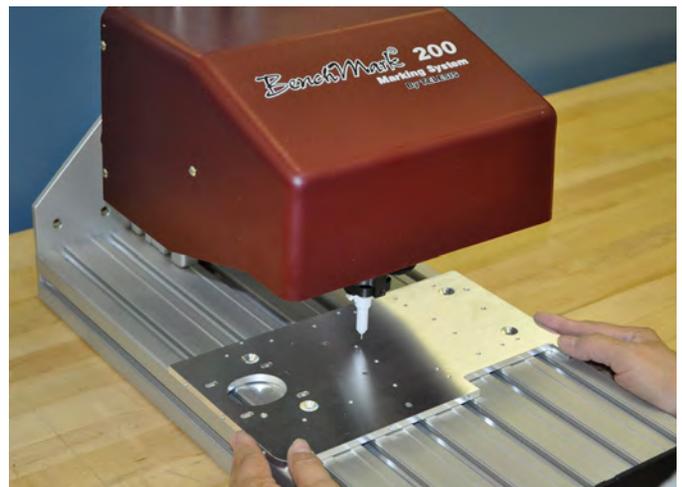
DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

The **BenchMark® 200** is an extremely 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® 200** from one work area to another.



FEATURES

- Extremely affordable
- High quality, permanent, programmable marking on a wide range of materials — from soft plastics to hard metals up to Rc60
- Ample 4" x 4" (100mm x 100mm) marking window
- 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 membrane keyboard and 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 for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from www.telesis.com
- **Benchmark® 200+** version with enhanced communications capabilities



QR Code Web Page Product Link

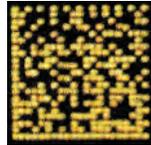
DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
and other industry standards

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 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 QR and other 2-D code applications, where accurately marked codes are the key to readability. TELESIS' Laser Marking Systems 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 lasers the perfect choice for applications requiring extremely high throughput or very small QR or other 2-D codes.



COMPLIANCE

All TELESIS Laser Marking Systems 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) | • NASA-STD-6002 |
| • AIAG B-4 | • NASA-STD-HDBK-6003 |
| • AIAG B-17 | • Department of Defense Guide to Uniquely Identifying Items (UID) |
| • AIM DPM-1-2006 | • MIL-STD-130N |
| | • ATA SPEC-2000 |

Pin Marker Product Accessories and System Integration

Choose from a variety of accessories to enhance your TELESIS Pin 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



Marking Head Gimbals, Stand-offs and Cable Balancers

For flexible, virtually weightless, hand-held marking



Bar Code Scanners and Wands

Eliminate 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



Four Wheeled Carts

For portable applications

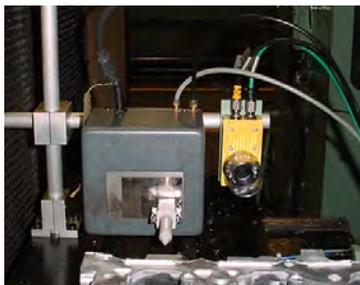


Marking Head Mounting Posts

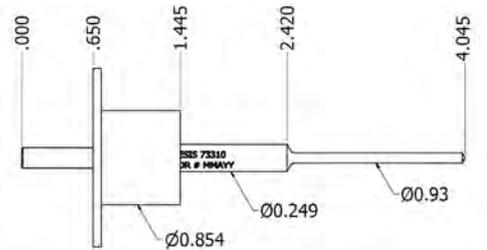
With manual, pneumatic or stepper motor-driven head positioning mechanisms



TELESIS offers expert integration of our entire range of pin marking systems, including software, hardware and control system design services. Whether it's a stand-alone manual marking station or a fully automated on-line factory-integrated application, TELESIS can provide a complete solution to your marking system requirements.

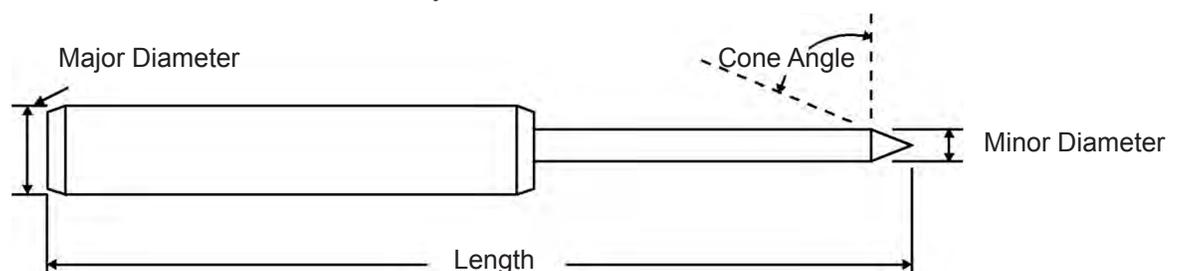


PIN STYLE	CONE ANGLES	MATERIALS*	LENGTH	MAJOR DIAMETER	MINOR DIAMETER
10MP	30° 45°	Carbide	0.62" 16mm	0.09" 2.3mm	0.04" 1.0mm
25S	22° 30° 45° 60°	Carbide, Powdered Metal	1.8" 45mm	0.19" 4.8mm	0.09" 2.4mm
25L	22.5° 30° 45° 60°	Carbide, Powdered Metal	2.2" 55mm	0.19" 4.7mm	0.09" 2.4mm
25XL	22.5° 30° 45° 60°	Carbide, Powdered Metal	2.5" 64mm	0.19" 4.7mm	0.09" 2.4mm
25XLE	30° 45°	Carbide	1.8" 46mm	0.16" 4.0mm	0.09" 2.4mm
101	30° 45° 60°	Carbide, Powdered Metal	3.9" 99mm	0.31" 7.9mm	0.15" 3.9mm
150S	30° 45° 60°	Powdered Metal, Carbide-Tipped	2.75" 70mm	0.62" 15.7mm	0.37" 9.5mm
150SA	30° 45°	Carbide-Tipped	2.75" 70mm	0.62" 15.7mm	0.37" 9.5mm
150 150	30° 45°	Powdered Metal, Carbide-Tipped	5.25" 133.4mm	0.62" 15.7mm	0.37" 9.5mm
4500E	30° 45°	Steel Armature with Carbide Marking Pin			



*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.

MARKERS	APPLICATIONS	NOMINAL STROKE LENGTH	TYPICAL MAX DEPTH OF MARK**
TMP1700, TMM4200, TMM5400	Great for high resolution graphics and 2-D codes with multi-pixel cells. Pneumatically driven. Light marking in plastic or soft metals. Extremely fast marking, especially in multi-pin markers.	0.14" 3.5mm	0.001 – 0.003" 0.02mm
TMP4210, TMM5400, TMP3200, TMM4200, TMM4215, TMM4250	Very 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
TMP1700, TMP3200, TMP6100, Benchmark® 200, Benchmark® 320, Benchmark® 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	Similar to 101. High speed marking. Pneumatically driven.	0.25" 6.35mm	0.006 – 0.022" 0.15 – 0.56mm
TMP6100, TMP3200, TMM4200, TMM4215, 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	TMP7000	TMP6100	TMP3200	TMP1700
	Heavy Duty Large Character Deep Penetration Marking	Versatile Tabletop Marker for Batch Processing/Job Lots or On-Line Processes	Cost Effective On-Line High Speed Marking	Extremely Cost Effective On-Line High Speed Marking
Controller	TMC600 / TMC470	TMC600/TMC470	TMC600/TMC470	TMC600 / TMC470
Hand-Held Applications	Consult Factory	No	Consult Factory	Consult Factory
Mark Depth (Based on Rb53 Material Hardness)	0.001-0.022 in (0.03-0.56mm)	0.001-0.013 in (0.03-0.33mm)	0.001-0.013 in (0.03-0.33mm)	0.001-0.013 in (0.03-0.33mm)
Noise Level	Moderate	Moderate	Moderate	Moderate
Computer Host Interface	Yes	Yes	Yes	Yes
Computer Required	No	No	No	No
Marking Speed - MAX	Up to 2 Char/Sec	Up to 3 Char/Sec	Up to 6 Char/Sec	Up to 6 Char/Sec
Maximum Marking Window Size	4.0 x 6.0 in. (101.6 x 152.4mm)	6.0 x 12.0 in. (152.4 x 304.8mm)	4.0 x 6.0 in. (101.6 x 152.4mm)	1.5 x 2.5 in. (38.1 x 63.5mm)
Maximum Character Height	4.0 in. (101.6mm)	6.0 in. (152.4mm)	4.0 in. (101.6mm)	1.5 in. (38.1mm)
Programmable "Z" Axis	Consult Factory	Optional	Optional	Optional
Maximum No. of Pins	1	1	1	1
Multiple Line Marking	Yes	Yes	Yes	Yes
Arc Text	Yes	Yes	Yes	Yes
Continuous Characters	Yes	Yes	Yes	Yes
Logos	Optional Software	Optional Software	Optional Software	Optional Software
2-D Codes	Yes	Yes	Yes	Yes
Serialization	Yes	Yes	Yes	Yes
Date Codes	Yes	Yes	Yes	Yes
Surface Irregularities	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)
Number of Std. Fonts	3	3	3	3
User Defined Custom Fonts	Optional Software	Optional Software	Optional Software	Optional Software
Cumferal Marking	No	Optional	Optional	Optional
Resolution	Up to 200dpi (79d/cm)	Up to 200dpi (79d/cm)	Up to 200dpi (79d/cm)	Up to 200dpi (79d/cm)
Power	115 or 220VAC	115 or 220VAC	115 or 220VAC	115 or 220VAC
Air Supply	60-100 PSIG (4.1-9.9 Bars)	60-100 PSIG (4.1-9.9 Bars)	60-100 PSIG (4.1-9.9 Bars)	60-100 PSIG (4.1-9.9 Bars)
Electric Versions Available	No	Yes	Yes	Yes

FEATURES	TMP4500E	TMP4210	TMM7200	TMM5400
	Portable Hand-Held Deep Penetration Electric Pin Marking	Hand-Held Marking or Fixtured Applications with Severe Spatial Constraints	Heavy Duty, Large Character, Deep Penetration Marking	8-Pin Marking Head for Extremely High Speed On-Line Applications
Controller	TMC600/TMC470	TMC600*/TMC470	TMC470	TMC600*/TMC470
Hand-Held Applications	Consult Factory	Yes	No	Consult Factory
Mark Depth (Based on Rb53 Material Hardness)	0.001-0.018 in. (0.03-0.46mm)	0.001-0.013 in. (0.03-0.33mm)	0.001-0.022 in. (0.03-0.56mm)	0.001-0.010 in. (0.03-0.25mm)
Noise Level	Moderate	Moderate	Moderate	Moderate
Computer Host Interface	Yes	Yes	Yes	Yes
Computer Required	No	No	No	No
Marking Speed - MAX	Up to 4 Char/Sec	Up to 8 Char/Sec	Up to 21 Char/1.5 Sec	Up to 32 Char/1.5 Sec
Maximum Marking Window Size	1.0 x 4.0 in. (25.4 x 101.6mm)	0.5 x 2.0 in. (12.7 x 50.8mm)	64.0 sq. in. (413.0 sq. mm)	0.5 x 3.78 in. (12.7 x 96.0mm)
Maximum Character Height	1.0 in. (25.4mm)	0.5 in. (12.7mm)	1.75 in. (44.5mm)	0.5 in. (12.7mm)
Programmable "Z" Axis	No	No	No	No
Maximum No. of Pins	1	1	21	8
Multiple Line Marking	Yes	Yes	Yes	Yes
Arc Text	Yes	No	No	No
Continuous Characters	Yes	Yes	Yes	Yes
Logos	Optional Software	Optional Software	Optional Software	Optional Software
2-D Codes	Yes	Yes	Yes	Yes
Serialization	Yes	Yes	Yes	Yes
Date Codes	Yes	Yes	Yes	Yes
Surface Irregularities	Up to 0.1 in. (2.5mm)	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)
Number of Std. Fonts	3	3	3	3
User Defined Custom Fonts	Optional Software	Optional Software	Optional Software	Optional Software
Circumferential Marking	No	No	No	No
Resolution	Up to 80dpi (31 d/cm)	Up to 200dpi (79 d/cm)	Up to 200dpi (79 d/cm)	Up to 200dpi (79 d/cm)
Power	115 or 220VAC	115 or 220VAC	115 or 220VAC	115 or 220VAC
Air Supply	None	60-100 PSIG (4.1- 6.9 Bars)	60-100 PSIG (4.1- 6.9 Bars)	60-100 PSIG (4.1- 6.9 Bars)
Electric Versions Available	Yes	No	No	No

* Availability Pending

FEATURES	TMM5100	TMM4250	TMM4215/TMM4200	SS3700
	Rapid, On-Line, Hand-Held, or Automated Marking, VIN Numbers	Fixed Applications in Wet or Dry Environments	High Speed Lightweight Hand-Held Marking or Fixtured Applications with Severe Spatial Constraints	High Speed Heavy Duty Large Character Deep Penetration Scribe Marking
Controller	TMC470	TMC470	TMC470	TMC470
Hand-Held Applications	Consult Factory	No	Yes	Consult Factory
Mark Depth (Based on Rb53 Material Hardness)	0.001-0.013 in (0.03-0.33mm)	0.001-0.013 in (0.03-0.33mm)	0.001-0.013 in (0.03-0.33mm)	Varies
Noise Level	Moderate	Moderate	Moderate	Very Low
Computer Host Interface	Yes	Yes	Yes	Yes
Computer Required	No	No	No	No
Marking Speed - MAX	Up to 6 Char/Sec	Up to 8 Char/Sec	4200 - Up to 8 Char/Sec 4215 - Up to 4 Char/Sec	Varies with character size
Maximum Marking Window Size	0.625 x 4.5 in. (16.0 x 114.0mm)	0.5 x 2.0 in. (12.5 x 50.8mm)	0.5 x 4.0 in. (13.0 x 100.0mm)	6.0 x 2.0 in. (152.4 x 50.8mm)
Maximum Character Height	0.63 in. (16.0mm)	0.5 in. (12.7mm)	0.5 in. (12.7mm)	6.0 in. (152.4mm)
Programmable "Z" Axis	No	No	No	Consult Factory
Maximum No. of Pins	6	4	4200 - 4 Pins 4215 - 2 Pins	1
Multiple Line Marking	Yes	Yes	Yes	Yes
Arc Text	No	No	No	Yes
Continuous Characters	Yes	Yes	Yes	Yes
Logos	Optional Software	Optional Software	Optional Software	Optional Software
2-D Codes	No	Yes	Yes	No
Serialization	Yes	Yes	Yes	Yes
Date Codes	Yes	Yes	Yes	Yes
Surface Irregularities	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)	Up to 0.25 in. (6.0mm)	Up to 0.30 in. (7.0mm)
Number of Std. Fonts	2	3	3	2
User Defined Custom Fonts	Optional Software	Optional Software	Optional Software	Optional Software
Circumferential Marking	No	No	No	No
Resolution	Up to 200 dpi (79d/cm)	Up to 200 dpi (79d/cm)	Up to 200 dpi (79d/cm)	Continuous
Power	115 or 20VAC	115 or 220VAC	115 or 220VAC	115 or 220VAC
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)
Electric Versions Available	No	No	No	No

* Availability Pending

FEATURES	SC5000	SC3500	S2500/SC2000
	Nearly Silent Deep Penetration Scribe Marking	Nearly Silent Moderate Penetration Scribe Marking	Nearly Silent Moderate Penetration Scribe Marking
Controller	TMC600*/TMC470	TMC600*/TMC470	TMC600*/TMC470
Hand-Held Applications	Consult Factory	Consult Factory	Consult Factory
Mark Depth (Based on Rb53 Material Hardness)	Varies	Varies	Varies
Noise Level	Very Low	Very Low	Very Low
Computer Host Interface	Yes	Yes	Yes
Computer Required	No	No	No
Marking Speed - MAX	Varies with character size	Varies with character size	Varies with character size
Maximum Marking Window Size	7.5 x 2.5 in. (190.5 x 63.5mm)	6.0 x 4.0 in. (152.4 x 101.6mm)	SC2500 - 3.9 x 1.6 in. (100mm x 40mm) SC2000 - 3.0 x 1.6 in. (75mm x 40mm)
Maximum Character Height	7.5 in. (190.5mm)	6.0 in. (152.4mm)	Any characters at any angle within the marking window
Programmable *Z* Axis	Consult Factory	Consult Factory	Consult Factory
Maximum No. of Pins	1	1	1
Multiple Line Marking	Yes	Yes	Yes
Arc Text	Yes	Yes	Yes
Continuous Characters	Yes	Yes	Yes
Logos	Optional Software	Optional Software	Optional Software
2-D Codes	No	No	No
Serialization	Yes	Yes	Yes
Date Codes	Yes	Yes	Yes
Surface Irregularities	Up to 0.50 in. (12.5mm)	Up to 0.30 in. (7.0mm)	Up to 0.30 in. (7.0mm)
Number of Std. Fonts	2	2	2
User Defined Custom Fonts	Optional Software	Optional Software	Optional Software
Circumferential Marking	No	No	No
Resolution	Continuous	Continuous	Continuous
Power	115 or 220VAC	115 or 220VAC	115 or 220VAC
Air Supply	60-100 PSIG (4.1-6.9 Bars)	60-100 PSIG (4.1-6.9 Bars)	60-120 PSIG (4.1-8.3 Bars)
Electric Versions Available	No	No	No

* Availability Pending

FEATURES	BenchMark® 460	BenchMark® 200	BenchMark® 200
	Stand-Alone Hand-Held Applications	Stand-Alone Benchtop Applications	Stand-Alone Benchtop Applications
Controller	BM470	BM470	BM470
Hand-Held Applications	Yes	Yes	Yes
Mark Depth (Based on Rb53 Material Hardness)	0.001-0.010 in. (0.03-0.25mm)	0.001-0.010 in. (0.03-0.25mm)	0.001-0.010 in. (0.03-0.25mm)
Noise Level	Moderate	Moderate	Moderate
Computer Host Interface	Optional	Optional	Optional
Computer Required	No	No	No
Marking Speed - MAX	Up to 5 Char/Sec	Up to 5 Char/Sec	Up to 5 Char/Sec
Maximum Marking Window Size	1.0 x 4.0 in. (25.4 x 101.6mm)	4.0 x 6.0 in. (101.6 x 152.4mm)	4.0 x 6.0 in. (101.6 x 152.4mm)
Maximum Character Height	1.0 in. (25.4mm)	4.0 in. (101.6mm)	4.0 in. (101.6mm)
Programmable "Z" Axis	No	No	No
Maximum No. of Pins	1	1	1
Multiple Line Marking	Yes	Yes	Yes
Arc Text	Yes	Yes	Yes
Continuous Characters	Yes	Yes	Yes
Logos	Optional Software	Optional Software	Optional Software
2-D Codes	Yes	Yes	Yes
Serialization	Yes	Yes	Yes
Date Codes	Yes	Yes	Yes
Surface Irregularities	Up to 0.1 in. (2.5mm)	Up to 0.1 in. (2.5mm)	Up to 0.1 in. (2.5mm)
Number of Std. Fonts	3	3	3
User Defined Custom Fonts	Optional Software	Optional Software	Optional Software
Circumferential Marking	No	Optional	Optional
Resolution	Up to 80 dpi (31 d/cm)	Up to 80 dpi (31 d/cm)	Up to 80 dpi (31 d/cm)
Power	115 or 220VAC	115 or 220VAC	115 or 220VAC
Air Supply	None	None	None
Electric Versions Available	Yes	Yes	Yes



Notes



Notes



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For more information on the entire line of flexible and programmable permanent marking systems please call 1-800-654-5696 or visit www.telesis.com

