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.

Our E–Series diode-pumped, air-cooled lasers can operate in the harshest environments while maintaining peak performance for many thousands of hours of maintenance free operation. 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, a broad family including eight different systems, features the powerful infrared EV40, capable of high speed, high quality, deep engraving of virtually any non-organic material, including the EV4GDS green laser, the choice for many electronic components, medical applications, precious metals, as well as 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 F-Series includes three different models, with the FQ30 for applications in which faster process speeds are required.

The CO-Series of CO2 lasers are ideal for making organic materials such as glass, plexiglass, plastics and acrylcs, 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.

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®, and Windows® 7 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 – virtually mistake free.

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 — even 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.

CUSTOM ENGINEERED SOLUTIONS

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

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

To learn more – or discuss a Custom Engineered Marking System, call (800)654-5696 TODAY – or visit us at www.telesis.com.


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® dot peen 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 turn-key systems through its in-house engineering team to serve your every marking and trace-ability 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 UII 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 200,000 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.
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 WYSIWIG (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

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 onsite 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.
MEDICAL (CONTINUED)

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.

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, -- static or dynamic at rates of over 1,000 feet per minute, 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.
LASER MARKING SYSTEMS

EV40 Diode-Pumped Solid State Lasers ........................................................................................................ Page 12
Outstanding pulse energies makes this laser ideally suited to high throughput deep marking and engraving applications in a completely air cooled system package.

EV25DS Diode-Pumped Solid State Lasers ..................................................................................................... Page 13
This industrial grade vanadate laser provides higher powers and superior beam quality, resulting in smaller spot sizes and longer working distances for your laser applications.

EV10SDS and EV15DS Diode-Pumped Solid State Lasers ............................................................................. Page 14
Excellent beam quality makes these lasers uniquely capable among near IR lasers for marking of high resolution graphics, fine text, or 2-D codes.

EVC Diode-Pumped Solid State Lasers ........................................................................................................ Page 15
These compact diode pumped lasers set a new benchmark in reliability, low cost of ownership and produce efficient short laser pulses.

EVCDS Diode-Pumped Solid State Lasers ...................................................................................................... Page 16
The EVCDS extends the capabilites and features of the EVC with the addition of the Telesis Dual Shutter Sensor and the advanced E10 Series laser controller.

EY6DS Diode-Pumped YAG Solid State Lasers ............................................................................................. Page 17
These compact Diode-Pumped, Solid State Laser Marking Systems are extremely reliable, low cost alternatives to other laser designs.

EV4GDS Green Laser ................................................................................................................................ Page 18
This fiber-coupled, diode-pumped, solid state, green wavelength laser marking system provides laser beam and Q-switched pulse characteristics optimized for applications that require high beam quality and stability.

F-SERIES FIBER LASERS — FQ10, FQ20,FQ20DH and FQ30 ................................................................. Pages 19-20
Select the F-SERIES FQ10 for low to medium speed applications and the F-SERIES FQ20/FQ30 when higher power or faster process speeds are required. The FQ30 features upgraded power, and all lasers offer the long-term safeguard of a built-in, optical isolator. The FQ20DH is a dual head version for extremely high throughput applications.

CO-SERIES CO₂ Lasers .............................................................................................................................. Pages 21-22
Available in 10, 30, and 60 watt configurations, CO-Series CO₂ Lasers are the choice for marking substrates like wood, glass, ceramics and fabrics.

MERLIN® II LS Laser Software .................................................................................................................. Page 23
Designed to drive all core Telesis Laser Products. Simply highlight, click and mark!

LASER MARKING SYSTEM SELECTION GUIDE ....................................................................................... Pages 24-26

LASER MARKER ENCLOSURES, ACCESSORIES AND SYSTEM INTEGRATION ........................................ Page 27
Telesis offers a wide range of laser mark enclosures and other system accessories.
PINSTAMP® and TeleScribe® MARKING SYSTEMS

TMC470 Marking System Controller ................................................................. Page 28
The TMC470 is a truly state-of-the-art, compact, self-contained controller. Available with all Telesis PINSTAMP® and TeleScribe® marking heads.

MERLIN® III Visual Design Software ............................................................... Page 28
Telesis’ new WIN 32 Merlin® III Visual Design Software makes pattern design quick and intuitive. “WYSIWYG” (what you see is what you get) displays a to-scale image of the pattern as it’s created. Just “click & drag” for immediate adjustments to field size, location or orientation.

TMP6100/470 PINSTAMP® Marking System .................................................. Page 29
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.

TMP1700/470 PINSTAMP® Marking System .................................................. Page 30
The TMP1700/470 is the lowest cost PINSTAMP® Marking System. The rugged Single Pin TMP1700 marking head features a compact, 1-1/2” x 2-1/2” (38.1 x 63.5mm) window, and marking speeds up to six characters per second. It’s an excellent choice for many factory-automated or on-line processes. When combined with optional mounting post and base, the TMP1700 is cost-effective in off-line marking applications, too.

TMP4210/470 PINSTAMP® Marking System .................................................. Page 31
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.

TMP3200/470 PINSTAMP® Marking System .................................................. Page 32
The TMP3200/470 is a rugged, cost effective utility marker for on-line and off-line high speed marking applications. Its low-maintenance design features a 4” x 6” (100 x 150mm) marking window for multi-line text, and marking speeds up to six characters per second.

TMP4500/470E Marking System ................................................................. Page 33
The TMP4500/470E is a hand-held electric pin marker perfect for portable applications requiring deep marking.

TMM5400/470 PINSTAMP® Marking System ................................................. Page 34
With eight pins marking simultaneously, the TMM5400 is the fastest dot peen marker available. It can mark up to 16 characters per second in soft plastics or hardened steel. Choose from a variety of marking pins and cartridges to optimize window size and cycle time combinations.

TMM4200/470 PINSTAMP® Marking System ................................................. Page 35
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.
Based on the TMM4200/470 design, the TMM4215/470 provides a marking window twice the size of the TMM4200/470.

The TMM4250/470 Multiple Pin Marking System can mark up to eight characters per second. A NEMA 12 (IP55) enclosure with industrial grade, protective rubber “boot” makes it highly resistant to both solid and liquid contaminants. The TMM4250 features an extremely compact envelope. It can be integrated easily within a wide range of manufacturing settings.

With up to six pins marking simultaneously, the TMM5100/470 Multiple Pin Marking system can mark up to six characters per second. Its lightweight, compact design and minimal footprint make it ideal for either automated or hand-held operations. A variety of pin cartridges are available for optimal character size/depth, cycle times and marking window areas.

The TMP7000/470 is a powerful, heavy duty marking system for deep marking applications. This single pin marker is capable of marking characters up to .025” (.63mm) deep on mild steel.

The TMM7200 is an extremely heavy duty marking system. It is the right choice for deep penetration marking of large characters. The flexible TMM7200 can be configured with up to 21 marking pins to print 21 characters in 1.5 seconds.

For virtually silent marking, the economically priced SC3500/470 features a 4” x 6”(100 x 150mm) marking window. The powerful, heavy duty SC5000/470, with a 2.5” x 7.5” (63.5 x 190.5mm) marking window is particularly well suited for VIN marking applications.

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.

These are extremely affordable benchtop markers equipped with an electromechanical marking pin.

2-D and UID Code applications, where accurately marked codes are the key to readability.

Choose from a variety of options and customized solutions to enhance your Telesis Marking System.

Choose from a variety of options and customized solutions to enhance your Telesis Marking System.

Pin Marker Product Accessories and System Integration

PNEUMATIC IMPACT PIN SELECTION GUIDE

PIN MARKING SYSTEM SELECTION GUIDE
All of our systems — standard and custom — are designed and built to your specifications at our 46,000 square foot (4087 square meter) facility located in Circleville, Ohio. We maintain state-of-the-art manufacturing tools for all of the mechanical, electrical and software functions needed to support your marking system. Telesis also maintains Sales and Distribution Offices in The Netherlands, Germany, England, and China.

Customer Service
At Telesis, Customers come First. Our Order Entry 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!

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 a Telesis Service Technician at: technical_services@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. On-site customized 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 ship replacement parts, free of charge, overnight in the continental United States. Plus, component exchange programs for reconditioned equipment can reduce downtime.

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

At Telesis, we’re dedicated to support you for the life of your Marking System. We’re with you 100% of the way.
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 Merlin® II LS 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. The small footprint allows for easy integration into manual offline and automated on-line configurations, making it ideal for a wide range of industrial marking applications.

**LASER MARKER SPECIFICATIONS**

Compliance.................................................................CDRH
Wavelength................................................................1,064 nm
Laser Type..........................................................Fiber-coupled diode end-pumped,
Q-switched Nd:YVO₄ laser
Laser Beam Mode..................................................TEM₀₀
Positioning.....................................................Visible Red Diode Light
Optical Fiber Length...................................1.75 meters (5.74 feet) standard
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
Mounting Weight........................................approx. 20.0 kg (44.2 lbs.)
Marking head dimensions........................................23.4(W) x 23.0(H) x 74.3 cm(L)
                                             (8.8” x 9.1” x 29.2”)
Controller dimensions.................................43.8(W) x 21.1(H) x 44.0 cm(L)
                                             (17.3” x 8.3” x 17.3”)
Controller Weight........................................17.3 kg (38.0 lbs.)
Input Power.......................................................115/230 VAC 50/60 Hz
System Power Consumption..........................< 900 W

* MOTF Version and embedded PC versions available at additional charge

**STANDARD LENS CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FOCAL LENGTH</th>
<th>MARKING FIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mm</td>
<td>65 mm X 65 mm (2.56” X 2.56”)</td>
</tr>
<tr>
<td>160 mm</td>
<td>110 mm X 110 mm (4.33” X 4.33”)</td>
</tr>
<tr>
<td>254 mm</td>
<td>175 mm X 175 mm (6.88” X 6.88”)</td>
</tr>
<tr>
<td>330 mm</td>
<td>230 mm X 230 mm (9.06” X 9.06”)</td>
</tr>
<tr>
<td>350 mm</td>
<td>250 mm X 250 mm (9.84” X 9.84”)</td>
</tr>
<tr>
<td>420 mm</td>
<td>290 mm X 290 mm (11.42” X 11.42”)</td>
</tr>
</tbody>
</table>

**SOFTWARE**

Software..........................................................MERLIN® II LS (see page 23)
Operating System..........................Windows® 2000, Windows XP,
                                     Windows Vista™ or Windows® 7
                                     with Desktop PC (Std), Optional Laptop
Communication Interface..........................Serial, TCP/IP, I/O

![Engraved approximately 4mm deep in aluminum](QR Code Web Page Product Link)

Engraved approximately 4mm deep in aluminum

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements
At the heart of the EV25DS marking system is our air cooled, high power, industrial grade 25W, diode-pumped, solid-state vanadate laser. It is designed to operate in the harshest of environments while maintaining peak performance for many thousands of hours of maintenance-free operation. The EV25DS offers a broad range of laser performance that allows the user to tailor its operation for maximum results in the final mark. The EV25DS offers distinct advantages over fiber lasers and other solid state lasers due to its superior beam quality, resulting in smaller focused spot sizes and a longer working depth of field than other lasers can offer. The key features of the EV25 provide 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 provides the fine detail to do 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 even produce unique color marks on various metals.

**LASER MARKER SPECIFICATIONS**

- **Compliance**: CDRH, CE
- **Wavelength**: 1,064 nm
- **Laser Type**: Fiber-coupled diode end-pumped, Q-switched Nd:YVO4 laser
- **Laser beam mode**: TEM
- **CW Power**: 25 W
- **Positioning**: Visible Red Diode Light
- **Optical Fiber Length**: Standard 1.75 meters (5.74 feet) optional 4.75 meters (15.58 feet)
- **Input Power**: 115/230 VAC 50/60 Hz
- **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
- **Mounting Weight**: Approx. 24 kg (53 lbs.)
- **Marking Head Dimensions**: 70.6 (L) x 23.7 (W) x 22.5 (H) cm
- **Controller Dimensions**: 42.6 (W) x 14.1 (H) x 48.8 (L) cm

**STANDARD LENS CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FOCAL LENGTH</th>
<th>MARKING FIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mm</td>
<td>65 mm X 65 mm (2.56” X 2.56”)</td>
</tr>
<tr>
<td>160 mm</td>
<td>90 mm X 90 mm (3.54” X 3.54”)</td>
</tr>
<tr>
<td>254 mm</td>
<td>175 mm X 175 mm (6.88” X 6.88”)</td>
</tr>
<tr>
<td>330 mm</td>
<td>230 mm X 230 mm (9.06” X 9.06”)</td>
</tr>
<tr>
<td>350 mm</td>
<td>250 mm X 250 mm (9.84” X 9.84”)</td>
</tr>
<tr>
<td>420 mm</td>
<td>290 mm X 290 mm (11.42” X 11.42”)</td>
</tr>
</tbody>
</table>

**SOFTWARE**

- **Software**: MERLIN® II LS (see page 23)
- **Operating System**: Windows® 2000, Windows XP, Windows Vista™ or Windows® 7 with Desktop PC (Std), Optional Laptop
- **Communication Interface**: Serial, TCP/IP, I/O
E-SERIES - EV10SDS, EV15DS
Diode-Pumped Solid State Laser

The Telesis EV10SDS and EV15DS 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 expected pump diode lifetimes of over 100,000 hours for the EV15DS and 200,000 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.................................................................1,064 nm
Laser Type...............................................................Fiber-coupled diode end-pumped, Q-switched Nd:YVO4 laser
Laser beam mode...........................................................TEM\textsubscript{00}
CW Power..............................................................EV10SDS -- 10 W, EV15DS -- 15 W
Positioning...............................................................Visible Red Diode Light
Optical Fiber Length...................................................1.75 meters (5.74 feet) standard
4.75 meters (15.58 feet) optional
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
Mounting Weight......................................................Approx. 20 kg (45 lbs.)
EV10SDS Marketing Head Dimensions
79.5(L) x 16.6(W) x 17.6 cm(H)
(31.3” x 6.6” x 6.9”)
EV15DS Marketing Head Dimensions
68.0(L) x 16.2 (W) x 19.1 cm(H)
(26.8” x 6.4” x 7.5”)
Controller Dimensions..................................................42(W) x 14(H) x 50 cm(L)
(16.8” x 5.5” x 19.2”)
Input Power ..............................................................115/230 VAC 50/60 Hz
Max. Power Consumption..............................................Less than 500 W

STANDARD LENS CONFIGURATIONS

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

SOFTWARE

Software...........................................................MERLIN\textsuperscript{®} II LS (see page 23)
Operating System.........................Windows\textsuperscript{®} 2000, Windows XP, Windows Vista\textsuperscript{™}, or Windows\textsuperscript{®} 7 with Desktop PC (Std), Optional Laptop
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 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 lifetime for the pump diode of over 200,000 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: 1,064 nm
- Laser Type: Fiber-coupled diode end-pumped, Q-switched Nd:YVO4 laser
- Laser Beam Mode: TEM00
- Average Power: 8 W
- Positioning: Visible Red Diode Light
- Optical Fiber Length: 1.75 meters (5.74 feet) standard
- 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
- Mounting Weight: Approx. 14.5 kg (32 lbs.)
- Marking Head Dimensions: 15.4(W) x 18.8 (H) x 61.1 cm(L) (6.1˝ x 7.4˝ x 24.1˝)
- Controller Dimensions: 41.9(W) x 14.0(H) x 49.5 cm(L) (16.5˝ x 5.5˝ x 19.5˝)
- Controller Weight: 10 kg (22 lbs.)
- Input Power: 115/230 VAC 50/60 Hz
- System Power Consumption: < 400 W

**STANDARD LENS CONFIGURATIONS**

- **FOCAL LENGTH**
  - 100 mm: 110 mm X 110 mm (4.33” X 4.33”)
  - 160 mm: 160 mm X 160 mm (6.3” X 6.3”)

**SOFTWARE**

- Software: **MERLIN® II LS** (see page 23)
- Operating System: Windows® 2000, Windows XP, Windows Vista™, or Windows® 7 with Desktop PC (Std), Optional Laptop
- Communication Interface: Serial, TCP/IP, I/O

*MOTF Version available at additional charge
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 200,000 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**: 1,064 nm
- **Laser Type**: Fiber-coupled diode end-pumped, Q-switched Nd:YVO₄ laser
- **Laser Beam Mode**: TEM₀₀
- **Average Power**: 9 W
- **Positioning**: Visible Red Diode Light
- **Optical Fiber Length**: 1.75 meters (5.74 feet) standard
- **Cooling**: Air Cooled, active thermo-electric (no water cooling required)
- **Operating Temperature Range**: 16° to 40°C (61° to 104°F)
- **Humidity**: 10% to 85% Non-condensing
- **Mounting Weight**: Approx. 14.5 kg (32 lbs.)
- **Marking Head Dimensions**: 15.4(W) x 18.8(H) x 61.1 cm(L) (6.1” X 7.4” X 24.1”)
- **Controller Dimensions**: 42.5(W) x 14.0(H) x 48.8 cm(L) (16.8” x 5.5” x 19.2”)
- **Controller Weight**: 15 kg (33 lbs.)
- **Input Power**: 95-250 VAC, 6A, 50/60 Hz
- **System Power Consumption**: < 400 W

**STANDARD LENS CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FOCAL LENGTH</th>
<th>MARKING FIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mm</td>
<td>65 mm x 65 mm (2.56” X 2.56”)</td>
</tr>
<tr>
<td>160 mm</td>
<td>110 mm x 110 mm (4.33” X 4.33”)</td>
</tr>
<tr>
<td>254 mm</td>
<td>175 mm x 175 mm (6.89” X 6.89”)</td>
</tr>
</tbody>
</table>

Other lens configurations are available

**SOFTWARE**

- **Software**: MERLIN® II LS (see page 23)
- **Operating System**: Windows® 2000, Windows XP, Windows Vista™, or Windows® 7 with Desktop PC (Std), Optional Laptop
- **Communication Interface**: Serial, TCP/IP, I/O

* MOTF Version and embedded PC controller versions available at additional charge
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 100,000 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**: 1,064 nm
- **Laser Type**: Fiber-coupled diode end-pumped, Q-switched Nd:YAG Laser
- **Mode**: TEM<sub>00</sub>
- **CW Power**: 6 W
- **Positioning**: Visible Red Diode Light
- **Optical Fiber Length**: 1.75 meters (5.74 feet) standard, 4.75 meters (15.58 feet) optional
- **Cooling**: Air Cooled, active thermo-electric (no water cooling required)
- **Max. Power Consumption**: Less than 500 W
- **Operating Temperature Range**: 18° to 35°C (65° to 95°F)
- **Humidity**: 10% to 85% Non-condensing
- **Mounting Weight**: approx. 13.6 kg (30 lb.)
- **Marking Head Dimensions**: 30.4(W) x 13.8(H) x 48.2 cm(L) (12.0” x 5.4” x 19.0”)
- **XP1 Controller Dimensions**: 43.0(W) x 14.0(H) x 64.0 cm(L) (19.5” x 8.0” x 25.2”)
- **Input Power**: 115/230 VAC, 50/60 Hz
- **Max. Power Consumption**: Less than 500 W

**STANDARD LENS CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FOCAL LENGTH</th>
<th>MARKING FIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mm</td>
<td>65 mm x 65 mm (2.56” x 2.56”)</td>
</tr>
<tr>
<td>160 mm</td>
<td>110 mm x 110 mm (4.33” x 4.33”)</td>
</tr>
</tbody>
</table>

Other lens configurations are available

**SOFTWARE**

- **Software**: MERLIN® II LS (see page 23)
- **Operating System**: Windows® 2000, Windows XP, Windows Vista™, or Windows® 7 with Desktop PC (Std), Optional Laptop
- **Communication Interface**: Serial, I/O and Host Capable

**DATA MATRIX™ 2-D Code Marking Capability**

Meets all Department of Defense UID Requirements
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 100,000 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.

**LASER MARKER SPECIFICATIONS**

Compliance.......................................................... CDRH, CE  
Wavelength.......................................................... 532 nm  
Laser Type............................. Fiber-coupled diode end-pumped, Q-switched Nd:YAG Laser  
Average Power (at 20KHZ).................................................. 4 W  
Positioning.......................... Visible Red Diode Light  
Optical Fiber Length .......... 1.75 meters (5.74 feet) standard  
.................................................. 4.75 meters (15.58 feet) optional  
Cooling .................................................. Air Cooled, active thermo-electric (no water cooling required)  
Maximum Power Consumption........................... Less than 600 W  
Mounting Weight............................... approx. 25 kg (55 lbs.)  
Operating Temperature Range ........... 18° to 30°C (65° to 86°F)  
Humidity........................................... 10% to 85% Non-condensing  
Marking Head Dimensions .................................................. 80.6(L) x 24.9(W) x 19.7 cm(H)  
.................................................. 31.7” x 9.8” x 7.7”  
Temperature Controller Dimensions................................. 21.3(W) x 9.6(H) x 21.2 cm(D)  
.................................................. 8.4” x 3.7” x 8.3”  
Controller Dimensions.................................................. 43(W) x 14(H) x 50 cm(L)  
.................................................. 16.8” x 5.5” x 19.2”  
Input Power .......................................................... 115/230 VAC 50/60 Hz  

**STANDARD LENS CONFIGURATIONS**

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

**SOFTWARE**

Software............................................. **MERLIN® II LS** (see page 23)  
Operating System..................... Windows® 2000, Windows XP, Windows Vista™ , or Windows® 7  
with Desktop PC (Std), Optional Laptop  
Communication Interface......................... Serial, TCP/IP, I/O
The Telesis FQ30 is the latest laser in a family of maintenance free Q-switched Ytterbium fiber lasers specifically designed for marking applications with power levels from 10-30W. 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 reliability, with no water-cooling requirements, and single phase 110/230VAC power requirements.

**LASER MARKER SPECIFICATIONS**

- **Compliance**: CDRH, CE, CSA, UL
- **Wavelength**: 1,060 nm
- **Laser Type**: Q-Switched Ytterbium Fiber Laser
- **Average Power FQ10/20/30**: 10/20/30 W
- **Peak Power FQ10**: >4kW
- **Peak Power FQ20**: >8kW
- **Peak Power FQ30**: >10kW
- **Beam Quality**: FQ10/20/30 M² < 2
- **Fiber Length FQ10**: 5 meters (16 ft) Std.
- **Fiber Length FQ20/30**: 3 meters (9.8 ft) Std.
- **Long Term Power Drift**: < +/- 5%
- **Optical Isolator**: Standard
- **Positioning**: Visible Red Diode Light
- **Input Power (Selectable)**: 95-250 VAC, 50/60 Hz
- **Cooling**: Air Cooled, Fan/Filter (no water cooling required)
- **Operating Temperature Range**: 18° to 35°C (65°F to 90°F) Non Condensing
- **Marking Head Dimensions**: 51.0(L) x 12.7(W) x 14.0 cm(H) (20.1 x 5.0 x 5.5 in.)
- **Dimension with Selected Lens (H)**:
  - 100 mm: 14.4 cm (5.7 in)
  - 160 mm: 14.2 cm (5.6 in)
  - 163 mm: 15.8 cm (6.2 in)
  - 254 mm: 17.2 cm (6.8 in)
  - 330 mm: 17.8 cm (7.0 in)
  - 350 mm: 15.9 cm (6.3 in)
  - 420 mm: 17.8 cm (7.0 in)
- **Mounting Weight**: 6.8 kg (15 lbs)
- **Model 6 Controller Dimensions**: 42.5(W) x 13.7(H) x 50.8 cm(D) (16.7 x 5.4 x 20.0 in.)
- **Laser Marking Head Cable**: 5 m (16.4 ft.), detachable
- **Laser Extension Cable**: 3 m (10.0 ft.), detachable
Innovative, compact and flexible F-SERIES Fiber Lasers are perfectly suited for marking applications that require 24/7 "set and forget", unattended operation.

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

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

Example — Laser marking on Coated Label Stock

STANDARD LENS CONFIGURATIONS

<table>
<thead>
<tr>
<th>FOCAL LENGTH</th>
<th>MARKING FIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mm</td>
<td>65 mm X 65 mm (2.56” X 2.56&quot;)</td>
</tr>
<tr>
<td>160 mm</td>
<td>90 mm X 90 mm (3.54” X 3.54&quot;)</td>
</tr>
<tr>
<td>163 mm</td>
<td>110 mm X 110 mm (4.33” X 4.33&quot;)</td>
</tr>
<tr>
<td>254 mm</td>
<td>175 mm X 175 mm (6.89” X 6.89&quot;)</td>
</tr>
<tr>
<td>330 mm</td>
<td>230 mm X 230 mm (9.06” X 9.06&quot;)</td>
</tr>
<tr>
<td>350 mm</td>
<td>250 mm X 250 mm (9.84” X 9.84&quot;)</td>
</tr>
<tr>
<td>420 mm</td>
<td>290 mm X 290 mm (11.42” X 11.42&quot;)</td>
</tr>
</tbody>
</table>

SOFTWARE

Software ........................................... MERLIN® II LS (see page 23)
Operating System .................. Windows® 2000, Windows XP, Windows Vista™, or Windows® 7 with Desktop PC (Std), Optional Laptop Communication Interface ................ Serial, TCP/IP, I/O

The FQ20DH features an advanced, dual-scan marking head that is based on our successful Pulsed-Fiber Laser platform. Capable of extremely high-speed, high quality, simultaneous, duplicate marking on two surfaces, it offers lower operation costs along with increased production and handling efficiencies. In addition to marking, the FQ20DH is an excellent choice for scribing, trimming and a variety of material processing applications.
The Telesis CO-Series Laser Markers, available in two different power levels, the 10W Model CO10A, and the 60W Model CO60, 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.

**LASER MARKER SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Compliance</th>
<th>CDRH, CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength</td>
<td>10.6um</td>
</tr>
<tr>
<td>Laser Type</td>
<td>CO2</td>
</tr>
<tr>
<td>Head Weight</td>
<td>19.1 kg (42.0 lbs.) (10W)</td>
</tr>
<tr>
<td></td>
<td>30.0 kg (66 lbs.) (60W)</td>
</tr>
<tr>
<td>Controller Weight</td>
<td>8.0 kg (18.0 lbs.)</td>
</tr>
<tr>
<td>CW Power CO10A</td>
<td>10 W</td>
</tr>
<tr>
<td>CW Power CO60</td>
<td>60 W</td>
</tr>
</tbody>
</table>
| CO10A                       | 85.7(L) x 16.5(W) x 22.1 cm(H) 
|                             | (33.7” x 6.5” x 8.7”) |
| CO60                        | 97.1(L) x 21.0(W) x 22.1 cm(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 |
| Cooling                     | Air Cooled, Fan/Filter (no water cooling required) |
| Operating Temperature Range | 16 – 35°C (61-95°F) Non-Condensing |

**STANDARD LENS CONFIGURATIONS**

<table>
<thead>
<tr>
<th>FOCAL LENGTH</th>
<th>MARKING FIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 mm</td>
<td>50 mm X 50 mm (1.97” X 1.97”)</td>
</tr>
<tr>
<td>100 mm</td>
<td>70 mm X 70 mm (2.76” X 2.76”)</td>
</tr>
<tr>
<td>150 mm</td>
<td>100 mm X 100 mm (3.94” X 3.94”)</td>
</tr>
<tr>
<td>200 mm</td>
<td>140 mm X 140 mm (5.51” X 5.51”)</td>
</tr>
</tbody>
</table>

Other lens configurations are available

**MARKING SPEED**

- Up to 152 m/minute (500 ft./minute) line speed for “Mark-on-the-fly” applications
- 900 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 23)  
Operating System…………….Windows® 2000, Windows XP, Windows Vista™, or Windows® 7 with Desktop PC (Std), Optional Laptop  
Communication Interface…………..Serial, TCP/IP, I/O
The Telesis CO-Series AP Laser Markers, available in two different power levels, the 10W Model CP10AP 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” LCD touch screen controller is available for embedded applications. The unique 4 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 markers can go almost any place they are needed on the plant floor.

**CO-SERIES CO2 AP Lasers**

**STANDARD LENS CONFIGURATIONS**

<table>
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<tr>
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</tr>
</tbody>
</table>

Other lens configurations are available

**MARKING SPEED**

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

**SOFTWARE**

Software....................................MERLIN® II LS (see page 23)

Optional AMI Operator Interface

Operating System......................Windows® 2000, Windows XP, Windows Vista™, or Windows® 7

with Desktop PC (Std), Optional Laptop

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

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.
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.

TELESIS LASER SOFTWARE FEATURES:

• 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 (XYZ & Rotary)
• Highlight, click and mark!

COMPUTER REQUIREMENTS:

• Pentium® III 128 Mb RAM (minimum)
• Multi-gigabyte Hard Disk Drive
• Video, Sound Card
• CD-ROM and available USB port
• SVGA Monitor, Mouse and Keyboard

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.
<table>
<thead>
<tr>
<th>LASER SYSTEMS/APPLICATIONS</th>
<th>EV40</th>
<th>EV25DS</th>
<th>EV15DS/ EV10SDS</th>
<th>EVC/EVCDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking metals</td>
<td>Best choice for high speed surface and deep marking of almost every type of metal.</td>
<td>Excellent choice for high speed surface and deep marking of almost every type of metal.</td>
<td>Good choice for high speed surface and deep marking of almost every type of metal.</td>
<td>Good choice for surface marking of almost every type of metal with very small heat effected zone.</td>
</tr>
<tr>
<td>Marking plastics and label materials (3M, Tesa, etc.)</td>
<td>Best choice for high speed marking of plastics and label materials.</td>
<td>Excellent choice for high speed marking of plastics and label materials.</td>
<td>Excellent choice for high speed marking of plastics and label materials.</td>
<td>Good choice for marking plastics and label materials.</td>
</tr>
<tr>
<td>Marking high quality graphics</td>
<td>Best choice for high speed marking high resolution graphics due to small spot size.</td>
<td>Excellent choice for marking high resolution graphics due to small spot size.</td>
<td>Excellent choice for marking high resolution graphics due to small spot size.</td>
<td>Excellent choice for marking high resolution graphics due to small spot size.</td>
</tr>
<tr>
<td>Workstation</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**Laser systems/applications**
- **EV25DS**: 1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, 25 Watt Nd:YVO4 laser marker.
- **EV15DS/EV10SDS**: 1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, 10 and 15 Watt Nd:YVO4 laser marker.
- **EV40**: 1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, High pulse energy Nd:YVO4 laser marker.
- **EVC/EVCDS**: 1064nm wavelength, air-cooled, single phase, diode end-pumped, Q-switched, 8 and 9 Watt compact high reliability Nd:YVO4 laser marker.

**Applications**
- **Marking metals**
- **Marking plastics and label materials**
- **Marking silicon**
- **Marking organic materials**
- **Chemical marking**
- **Marking high quality graphics**

**Options**
- Optional
## LASER MARKING SYSTEM SELECTION GUIDE

<table>
<thead>
<tr>
<th>LASER SYSTEMS/APPLICATIONS</th>
<th>FQ10</th>
<th>FQ20</th>
<th>FQ30</th>
<th>EY6DS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking metals</td>
<td>Good choice for surface and deep marking of some metals. (Sensitive to back reflection. Not recommended for copper, brass or any other highly reflective or polished metals.)</td>
<td>Better choice for surface and deep marking of some metals. (Sensitive to back reflection. Not recommended for copper, brass or any other highly reflective or polished metals.)</td>
<td>Best choice for surface and deep marking of some metals. (Sensitive to back reflection. Not recommended for copper, brass or any other highly reflective or polished metals.)</td>
<td>Good choice for surface and deep marking of all metals.</td>
</tr>
<tr>
<td>Marking plastics and label materials (3M, Tesa, etc.)</td>
<td>Good choice for marking many plastics and label materials. (Some surface melting can occur due to long pulse width.)</td>
<td>Better choice for marking many plastics and label materials. (Some surface melting can occur due to long pulse width.)</td>
<td>Best choice for marking many plastics and label materials. (Some surface melting can occur due to long pulse width.)</td>
<td>Good choice for marking plastics and label materials.</td>
</tr>
<tr>
<td>Marking high quality graphics</td>
<td>Can mark high quality graphics on some metals.</td>
<td>Can mark high quality graphics on some metals.</td>
<td>Can mark high quality graphics on some metals.</td>
<td>Excellent choice for marking high resolution graphics due to small spot size.</td>
</tr>
<tr>
<td>Workstation</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

FQ20 1070 nm wavelength, air-cooled, single phase, Q-switched, 20 Watt Yb fiber laser marker (Will provide shorter cycle times than FQ10.)

Better choice for surface and deep marking of some metals. (Sensitive to back reflection. Not recommended for copper, brass or any other highly reflective or polished metals.)

Best choice for surface and deep marking of some metals. (Sensitive to back reflection. Not recommended for copper, brass or any other highly reflective or polished metals.)

Good choice for surface and deep marking of all metals.
**TELESIS**

**MARK OF CONFIDENCE**

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<table>
<thead>
<tr>
<th>LASER SYSTEMS/APPLICATIONS</th>
<th>EV4GDS</th>
<th>CO10A/CO10AP</th>
<th>CO30AP</th>
<th>CO60</th>
</tr>
</thead>
<tbody>
<tr>
<td>532 nm wavelength; air-cooled; single phase; diode end-pumped, Q-switched, 4 Watt green laser marker</td>
<td>Excellent choice for high speed surface marking all-metals with very small heat effected zone produced.</td>
<td>Can mark some anodized metal surfaces.</td>
<td>Can mark anodized metal surfaces. With short focal length lenses, can mark some non-plated metal surfaces.</td>
<td>Can mark anodized metal surfaces. With short focal length lenses, can mark some non-plated metal surfaces.</td>
</tr>
<tr>
<td>Marking metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.6 um wavelength, air-cooled, single phase, RF excited, 10W CO2 laser marker</td>
<td>Excellent choice for high speed marking of plastics and some label materials.</td>
<td>Excellent choice for high speed marking of plastics and some label materials.</td>
<td>Excellent choice for high speed marking plastics and some label materials.</td>
<td>Excellent choice for high speed marking plastics and some label materials.</td>
</tr>
<tr>
<td>Marking plastics and label materials (3M, Tesa, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.6 um wavelength, air-cooled, single phase, RF excited, 30W CO2 laser marker (provides shorter cycle times than CO10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marking silicon</td>
<td>Excellent choice for surface marking of silicon.</td>
<td>Not recommended</td>
<td>Not recommended</td>
<td>Not recommended</td>
</tr>
<tr>
<td>Chemical marking</td>
<td>Not recommended</td>
<td>Good choice for marking metals, glass and other materials using chemical marking</td>
<td>Excellent choice for marking metals, glass and other materials using chemical marking</td>
<td>Excellent choice for marking metals, glass and other materials using chemical marking.</td>
</tr>
<tr>
<td>Marking high quality graphics</td>
<td>Excellent choice for marking high resolution graphics due to small spot size. Highest resolution capability.</td>
<td>Can mark high quality graphics on plastics and on some anodized metal surfaces.</td>
<td>Can mark high quality graphics on plastics and on some anodized metal surfaces.</td>
<td>Can mark high quality graphics on plastics and on some anodized metal surfaces.</td>
</tr>
<tr>
<td>Workstation</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

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For all applications, it is highly recommended that samples be sent to Telesis for qualification and testing purposes.
Telesis offers a wide variety of standard 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-axes.
TMC470 MARKING SYSTEM CONTROLLER

FEATURES

• Fully self-contained – no PC required
• Easy-to-use menu design for pattern design and access
• Ethernet port for TCP/IP communications
• Durable membrane keyboard
• Pattern backup via USB port
• Stores up to 200 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 WIN 32 Merlin® III Visual Design Software with its state-of-the art graphical user interface, makes marking pattern design quick and easy.

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

Marking “tools” available include text (at any angle), arc text, rectangles, circles, ellipses and lines. Multiple fields can be grouped and saved as a block to form a logo, or import logos via DXF CAD files. Non-printable fields clearly show the graphical representation of the part being marked. Use the convenient, “GO TO” command to avoid obstacles within the marking window.
The 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 mm x 304 mm) 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 peen (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

**FEATURES**
- Large 6” x 12” (152 mm x 304 mm) 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” (0.02 mm – 0.45 mm)
- Pin travel accommodates surface irregularities to 0.25” (6 mm)
- Compact, self-contained TMC470 Controller with integral display and keyboard – no PC required (see page 23)
- RS232 or TCPIP Host interface to download text to individual fields or call up entire patterns
- Automatically generates serial numbers, time, date and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers)
- Pattern backup via USB port
- Stores up to 200 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 28)
- Electric Pin Version Available

**DATA MATRIX™ 2-D Code Marking Capability**

Meets all Department of Defense UID Requirements and other industry standards

“QR Code Web Page Product Link”

“DATA MATRIX™ 2-D Code Marking Capability”
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” (38.1 mm x 63.5 mm) 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” (38.1 mm x 63.5 mm) Marking Window
- Rugged, low-maintenance X/Y platform
- Compact Marking Head — approximately 6.6” x 6.2” x 4.7” (168 mm x 158 mm x 120 mm)
- 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 23)
- 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” (0.03 mm - 0.45 mm)
- Pin travel accommodates surface irregularities to 0.25” (6 mm)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 200 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 28)
- Electric Pin Version Available
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.

**FEATURES**

- Simple, Easy to Use Single Pin Design
- Compact and Ergonomic; Weighs about 2.0 kg (4.4 pounds)
- Available with 25S or 150SA Marking Pin
- 2” x 0.5” (50 mm x 13 mm) Marking Window
- Economically Priced
- Marks 1/8” (3 mm) 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 23)
- 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](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern (marking file) Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)

Compact Self-Contained TMC470 Controller — no PC required.

**DATA MATRIX™ 2-D Code Marking Capability**

Meets all Department of Defense UID Requirements and other industry standards
The TMP3200/470 Single Pin Marking System features a large 4” x 6” (100 mm x 150 mm) 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.

**FEATURES**

- 4” x 6” (100 mm x 150 mm) 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” (6 mm)
- 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 23)
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 200 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Dot density up to 200 dots per inch (79 dots per centimeter)

**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 28)

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

TMP4500E/470
PINSTAMP® SINGLE PIN MARKING SYSTEM

Mark up to .018 inches (0.46 mm) 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" (25 mm x 100 mm) 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" (0.46 mm) in mild steel
- Weighs less than 6.6 pounds (3.0 kg) - 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 28)
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 200 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
Equipped with eight marking pins, the 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” (13 mm x 96 mm)
- 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” (6 mm)
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 28)
- Automatically generates serial numbers, date, time and shift codes
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Stores up to 200 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

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

FEATURES

- Compact, Ergonomic Design
- Weighs 4.5 pounds (2.0 kg)
- Available with four 25S or two 150SA Marking Pins
- Marks up to eight 0.125˝ (3 mm) high Characters per Second
- Marking Windows up to 0.5” x 2” (13 mm x 50 mm)
- Depths up to 0.013” (0.33 mm) 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 28)
- Also Available Without Handle and Stand-Off for Fixtured Applications
- Automatically generates serial numbers, date, time and shift codes
- Stores up to 200 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.

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements and other industry standards
The innovative dual-pin TMM4215 provides a 4” x 0.5” (100 mm x 13 mm) marking window, twice as large as that of the TMM4200. This lightweight, compact marker is available in both fixtured and hand-held configurations.

FEATURES

- Compact, ergonomic design
- Weighs 4.5 pounds (2.0 kg)
- Marks up to four 0.125” (3 mm) high characters per second
- Available with the high-speed 25S marking pin or the deep marking 150SA pin
- Marking depths up to 0.013” (0.33 mm) in Mild Steel
- Rugged Rack and Pinion X/Y Platform for low maintenance operation
- Also available without handle and standof for 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 28)
- Automatically generates serial number, time, date and shift codes
- Stores up to 200 marking patterns
- Easily interfaced to PLC’s (Programmable Logic Controllers) and host computers

OPTIONAL ACCESSORIES

- Panel-mount and IP/NEMA rated controller options
- Cable balancer attachment kit
- Marking head standof 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

Compact Self-Contained TMC470 Controller — no PC required.

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements and other industry standards
The 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” (13 mm x 50 mm). 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” (3 mm) high Characters per Second
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 28)
- Stores up to 200 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 TCPIP 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

**DATA MATRIX™ 2-D Code Marking Capability**

Meets all Department of Defense UID Requirements and other industry standards
Mark up to six characters/second with the TMM5100/470 Multiple Pin Marking System. Its light-weight, compact design and minimal footprint are ideal for hand-held, stand-alone or completely integrated, factory automated operations. A variety of pin sizes/ configurations are available to mark character heights from .04” - .63” (1 mm - 16 mm) on a wide range of materials.

**FEATURES**

- High speed — up to six pins marking simultaneously
- Marking windows up to 0.625” x 4.5” (16 mm x 114 mm)
- Marks a wide range of materials from soft plastics to hardened steel — up to Rc60
- Available with a variety of marking pin cartridge configurations for optimal combination of character size, marking depth, marking window size and cycle time
- Compact, rugged X/Y positioning mechanism
- The right choice for many VIN (Vehicle Identification Number) Marking Applications
- Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 28)
- Automatically generates serial numbers, time, date and shift codes
- Stores up to 200 marking patterns
- Easily interfaced to PLCs (Programmable Logic Controllers) and Host Computers
- Pin travel accommodates surface irregularities to 0.25” (6 mm)

**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](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)

Compact Self-Contained TMC470 Controller — no PC required.

**DATA MATRIX™ 2-D Code Marking Capability**

Meets all Department of Defense UID Requirements and other industry standards
The TMP7000/470 is a robust single pin marker targeted at applications requiring extremely deep penetration marking. Its 4” x 6” (100 mm x 150 mm) 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” (100 mm x 150 mm) marking window
• Marks up to 0.025” (0.63 mm) deep in mild steel
• Self-contained, state-of-the-art TMC470 controller features two serial ports, USB and Ethernet ports (see page 28)
• 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 200 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.
The TMM7200 is an extremely heavy duty multiple pin marking system configured on a “per project” basis to provide optimum solutions for individual applications. The TMM7200 is the right choice for the deep penetration marking required for large character sizes, or when marking especially rough surfaces. The flexible TMM7200 can be equipped with up to 21 marking pins, allowing it to print 21 characters in 1.5 seconds. In addition, marking pins can be located on varying horizontal and vertical center distances from 0.25” (6 mm) to 1.75” (44.5 mm) to provide a wide range of very large marking windows.

The TMM7200 is easily adapted to custom designs and fixturing options.
Virtually silent, the economical SC3500/470 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˝ (100 mm x 150 mm) 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 28)
• 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 200 marking patterns

OPTIONAL ACCESSORIES

• Marking head mounting post with base
• Panel-mount and IP/NEMA-Rated Controllers (see page 47)
• 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.

DATA MATRIX™ 2-D Code Marking Capability
Meets all Department of Defense UID Requirements and other industry standards
The powerful, extremely heavy-duty 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” (63.5 mm x 190.5 mm) 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 28)
- 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 200 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
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” (25 mm x 100 mm) marking window. An electromechanical marking pin eliminates the need for any air supply, making the BenchMark® 460 truly portable.

**FEATURES**

- Compact, ergonomic marking head weighs only 1.7 kg (3.75 pounds)
- Generous 1” x 4” (25 mm x 100 mm) 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

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

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

Compact Self Contained
BenchMark® 470
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 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” (100 mm x 100 mm) 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

**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” (100 mm x 150 mm) 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.

**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” (100 mm x 150 mm) 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](http://www.telesis.com) for easy software upgrade
- PC-Based Pattern Back-up Utility available FREE from [www.telesis.com](http://www.telesis.com)
- BenchMark® 320+ version with enhanced communications capabilities
- BenchMark® 320M system with Windows based Merlin® III software available (see page 28)

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“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

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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 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 2-D codes.
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.

In addition, 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.
# PNEUMATIC IMPACT PIN SELECTION GUIDE

<table>
<thead>
<tr>
<th>PIN STYLE</th>
<th>CONE ANGLES</th>
<th>MATERIALS*</th>
<th>LENGTH</th>
<th>MAJOR DIAMETER</th>
<th>MINOR DIAMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td>10MP</td>
<td>30°, 45°</td>
<td>Carbide</td>
<td>0.62”</td>
<td>0.09”</td>
<td>0.04”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 mm</td>
<td>2.3 mm</td>
<td>1.0 mm</td>
</tr>
<tr>
<td>25S</td>
<td>22°, 30°, 45°, 60°</td>
<td>Carbide, Powdered Metal</td>
<td>1.8”</td>
<td>0.19”</td>
<td>0.09”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45 mm</td>
<td>4.8 mm</td>
<td>2.4 mm</td>
</tr>
<tr>
<td>25L</td>
<td>22.5°, 30°, 45°, 60°</td>
<td>Carbide, Powdered Metal</td>
<td>2.2”</td>
<td>0.19”</td>
<td>0.09”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>55 mm</td>
<td>4.7 mm</td>
<td>2.4 mm</td>
</tr>
<tr>
<td>25XL</td>
<td>22.5°, 30°, 45°, 60°</td>
<td>Carbide, Powdered Metal</td>
<td>2.5”</td>
<td>0.19”</td>
<td>0.09”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64 mm</td>
<td>4.7 mm</td>
<td>2.4 mm</td>
</tr>
<tr>
<td>25XLE</td>
<td>30°, 45°</td>
<td>Carbide</td>
<td>1.8”</td>
<td>0.16”</td>
<td>0.09”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>46 mm</td>
<td>4.0 mm</td>
<td>2.4 mm</td>
</tr>
<tr>
<td>101</td>
<td>30°, 45°, 60°</td>
<td>Carbide, Powdered Metal</td>
<td>3.9”</td>
<td>0.31”</td>
<td>0.15”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99 mm</td>
<td>7.9 mm</td>
<td>3.9 mm</td>
</tr>
<tr>
<td>150S</td>
<td>30°, 45°, 60°</td>
<td>Powdered Metal, Carbide-Tipped</td>
<td>2.75”</td>
<td>0.62”</td>
<td>0.37”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>70 mm</td>
<td>15.7 mm</td>
<td>9.5 mm</td>
</tr>
<tr>
<td>150SA</td>
<td>30°, 45°</td>
<td>Carbide-Tipped</td>
<td>2.75”</td>
<td>0.62”</td>
<td>0.37”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>70 mm</td>
<td>15.7 mm</td>
<td>9.5 mm</td>
</tr>
<tr>
<td>150</td>
<td>30°, 45°</td>
<td>Powdered Metal</td>
<td>5.25”</td>
<td>0.62”</td>
<td>0.37”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>133.4 mm</td>
<td>15.7 mm</td>
<td>9.5 mm</td>
</tr>
</tbody>
</table>

*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.
## Pneumatic Impact Pin Selection Guide

<table>
<thead>
<tr>
<th>Markers</th>
<th>Applications</th>
<th>Nominal Stroke Length</th>
<th>Typical Max Depth of Mark**</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMP1700, TMM4200, TMM5400</td>
<td>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.</td>
<td>0.14” 3.5 mm</td>
<td>0.001 – 0.003” 0.02 mm</td>
</tr>
<tr>
<td>TMP4210, TMM5400, TMP3200, TMM4200, TMM4215, TMM4250</td>
<td>Very fast, limited penetration marking. For marking small characters on relatively smooth surfaces. Pneumatically driven.</td>
<td>0.38” 9.6 mm</td>
<td>0.0025 – 0.011” 0.06 – 0.28 mm</td>
</tr>
<tr>
<td>TMP6100, TMM5100, TMP1700, TMM3200, TMM7200</td>
<td>Fast, limited penetration marking. For marking small characters on relatively smooth surfaces. Pneumatically driven.</td>
<td>0.50” 12.7 mm</td>
<td>0.0025 – 0.016” 0.06 – 0.40 mm</td>
</tr>
<tr>
<td>TMP6100, TMM5100, TMM7200, TMP1700, TMM3200, DPP2000</td>
<td>Similar to 25L. Extra length for recessed or hard to reach marking surfaces. Pneumatically driven.</td>
<td>0.50” 12.7 mm</td>
<td>0.0025 – 0.016” 0.06 – 0.40 mm</td>
</tr>
<tr>
<td>TMP1700, TMM3200, TMP6100, Benchmark® 200, Benchmark® 320 Benchmark® 460</td>
<td>Fast, limited penetration marking. For marking small characters on relatively smooth surfaces. Electrically driven.</td>
<td>0.15” 3.8 mm</td>
<td>0.0025 – 0.011” 0.06 – 0.28 mm</td>
</tr>
<tr>
<td>TMM5100, TMM7200</td>
<td>For deep marks, large dots and characters, and/or rough surfaces. Pneumatically driven.</td>
<td>0.75” 19 mm</td>
<td>0.006 – 0.022” 0.15 – 0.56 mm</td>
</tr>
<tr>
<td>TMP6100, TMM5100, TMM7200, TMP1700</td>
<td>Similar to 101. High speed marking. Pneumatically driven.</td>
<td>0.25” 6.35 mm</td>
<td>0.006 – 0.022” 0.15 – 0.56 mm</td>
</tr>
<tr>
<td>TMP6100, TMM3200, TMM4200, TMM4215, TMM4250, TMM7200, TMP1700</td>
<td>Similar to 150S.</td>
<td>0.75” 19 mm</td>
<td>0.006 – 0.022” 0.15 – 0.56 mm</td>
</tr>
<tr>
<td>TMM7200, TMP7000</td>
<td>Very heavy duty, deep penetration, large character marking; and/or very rough surfaces such as castings and mill surfaces. Pneumatically driven.</td>
<td>1.00” 25.4 mm</td>
<td>0.020 – 0.030” 0.51 – 0.76 mm</td>
</tr>
</tbody>
</table>
## Pin Marking System Selection Guide

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>TMP6100</th>
<th>TMM5100</th>
<th>TMP3200</th>
<th>TMP7000</th>
<th>TMM7200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controller</td>
<td>TMC470</td>
<td>TMC470</td>
<td>TMC470</td>
<td>TMC470</td>
<td>TMC470</td>
</tr>
<tr>
<td>Hand-Held Applications</td>
<td>No</td>
<td>No</td>
<td>Consult Factory</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Mark Depth (Based on RB53 Material Hardness)</td>
<td>0.001-0.013 in. (0.03-0.33 mm)</td>
<td>0.001-0.013 in. (0.03-0.33 mm)</td>
<td>0.001-0.013 in. (0.03-0.33 mm)</td>
<td>0.001-0.022 in. (0.03-0.56 mm)</td>
<td>0.001-0.022 in. (0.03-0.56 mm)</td>
</tr>
<tr>
<td>Noise Level</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Computer Host Interface</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Computer Required</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Marking Speed - MAX</td>
<td>Up to 3 Char./Sec.</td>
<td>Up to 6 Char./Sec.</td>
<td>Up to 6 Char./Sec.</td>
<td>Up to 2 Char./Sec.</td>
<td>Up to 21 Char./ 1.5 sec.</td>
</tr>
<tr>
<td>Maximum Marking Window Size</td>
<td>6.0 x 12.0 in. (152.0 x 304.0 mm)</td>
<td>0.625 x 4.5 in. (16.0 x 114.0 mm)</td>
<td>4.0 x 6.0 in. (100.0 x 150.0 mm)</td>
<td>4.0 x 6.0 in. (100.0 x 150.0 mm)</td>
<td>64.0 sq. in. (413.0 sq. mm)</td>
</tr>
<tr>
<td>Maximum Character Height</td>
<td>6.0 in. (152.0 mm)</td>
<td>0.63 in. (16.0 mm)</td>
<td>4.0 in. (100.0 mm)</td>
<td>4.0 in. (100.0 mm)</td>
<td>1.75 in. (44.5 mm)</td>
</tr>
<tr>
<td>Programmable “Z” Axis</td>
<td>Optional</td>
<td>No</td>
<td>Optional</td>
<td>Consult Factory</td>
<td>No</td>
</tr>
<tr>
<td>Maximum No. of Pins</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Multiple Line Marking</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Arc Text</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Continuous Characters</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Logos</td>
<td>Optional Software</td>
<td>Optional Software</td>
<td>Optional Software</td>
<td>Optional Software</td>
<td>Optional Software</td>
</tr>
<tr>
<td>2-D Codes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Serialization</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Date Codes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Surface Irregularities</td>
<td>Up to 0.25 in. (6.0 mm)</td>
<td>Up to 0.25 in. (6.0 mm)</td>
<td>Up to 0.25 in. (6.0 mm)</td>
<td>Up to 0.25 in. (6.0 mm)</td>
<td>Up to 0.25 in. (6.0 mm)</td>
</tr>
<tr>
<td>Number of Std. Fonts</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>User Defined Custom Fonts</td>
<td>Optional Software</td>
<td>Optional Software</td>
<td>Optional Software</td>
<td>Optional Software</td>
<td>Optional Software</td>
</tr>
<tr>
<td>Circumferal Marking</td>
<td>Optional</td>
<td>No</td>
<td>Optional</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Resolution</td>
<td>Up to 200 dpi (79 d/cm)</td>
<td>Up to 200 dpi (79 d/cm)</td>
<td>Up to 200 dpi (79 d/cm)</td>
<td>Up to 200 dpi (79 d/cm)</td>
<td>Up to 200 dpi (79 d/cm)</td>
</tr>
<tr>
<td>Power</td>
<td>115 or 220 VAC</td>
<td>115 or 220 VAC</td>
<td>115 or 220 VAC</td>
<td>115 or 220 VAC</td>
<td>115 or 220 VAC</td>
</tr>
<tr>
<td>Air Supply</td>
<td>60-100 PSIG (4.1-6.9 Bars)</td>
<td>60-100 PSIG (4.1-6.9 Bars)</td>
<td>60-100 PSIG (4.1-6.9 Bars)</td>
<td>60-100 PSIG (4.1-6.9 Bars)</td>
<td>60-100 PSIG (4.1-6.9 Bars)</td>
</tr>
<tr>
<td>FEATURES</td>
<td>SC3500</td>
<td>SC5000</td>
<td>BenchMark®200</td>
<td>BenchMark®320</td>
<td>BenchMark®460</td>
</tr>
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<td>-------------------------------</td>
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<td>-------------------------------</td>
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<tr>
<td>Controller</td>
<td>TMC470</td>
<td>TMC470</td>
<td>BM-470</td>
<td>BM470</td>
<td>BM-470</td>
</tr>
<tr>
<td>Hand-Held Applications</td>
<td>Consult Factory</td>
<td>Consult Factory</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Mark Depth</td>
<td>Varies</td>
<td>Varies</td>
<td>0.001-0.010 in. (0.03-0.25 mm)</td>
<td>0.001-0.010 in. (0.03-0.25 mm)</td>
<td>0.001-0.010 in. (0.03-0.25 mm)</td>
</tr>
<tr>
<td>Noise Level</td>
<td>Very Low</td>
<td>Very Low</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Computer Host Interface</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Computer Required</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Marking Speed - MAX</td>
<td>Up to 2 Char/Sec.</td>
<td>Up to 2 Char/Sec.</td>
<td>Up to 5 Char/Sec.</td>
<td>Up to 5 Char/Sec.</td>
<td>Up to 5 Char/Sec.</td>
</tr>
<tr>
<td>Maximum Marking Window Size</td>
<td>4.0 x 6.0 in. (100.0 x 150.0 mm)</td>
<td>2.5 x 7.5 in. (63.5 x 190.5 mm)</td>
<td>4.0 x 4.0 in. (100.0 x 100.0 mm)</td>
<td>4.0 x 6.0 in. (100.0 x 150.0 mm)</td>
<td>1.00 in. (25.0 mm)</td>
</tr>
<tr>
<td>Maximum Character Height</td>
<td>4.0 in. (100.0 mm)</td>
<td>2.5 in. (63.5 mm)</td>
<td>4.0 in. (100.0 mm)</td>
<td>4.0 in. (100.0 mm)</td>
<td>1.00 in. (25.0 mm)</td>
</tr>
<tr>
<td>Programmable &quot;Z&quot; Axis</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Maximum No. of Pins</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Multiple Line Marking</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Arc Text</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Continuous Characters</td>
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<td>Yes</td>
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# Pin Marking System Selection Guide

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<th>TMP4210</th>
<th>TMP4500E</th>
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<td>High Speed Lightweight Hand-Held Marking or Figured Applications with with Severe Spatial Constraints</td>
<td>Hand Held Marking or Figured Applications with Severe Spatial Constraints</td>
<td>Portable Hand-Held Deep Marking</td>
<td>Figured Applications in Wet or Dry Environments</td>
<td>Extremely Cost Effective On-Line High Speed Marking</td>
<td>8-Pin Marking Head for Extremely High Speed On-Line Applications</td>
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</table>
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