DOT PEEN & SCRIBING EQUIPMENT FOR TRACEABILITY

INTEGRABLE RANGE
**EXPERTS IN PERMANENT MARKING**

Gravotech helps you meet all traceability requirements

With their exceptionally long working life and durability, Technifor marking systems from Gravotech, are capable of marking directly onto all components and industrial parts.

Gravotech invented dot-peen marking technology over 30 years ago and remains the foremost expert in direct part marking (DPM) with a wide range of equipment for all applications.

**BENEFITS**

- Permanent markings that will last as long as the part
- Equipment easily adapted to specific production requirements
- Enhanced productivity, speed, simplicity and reliability
- Preserve the integrity of the parts
- Prevent counterfeiting
- Protect your reputation

Gravotech's marking solutions guarantee a clear and consistent mark on each part throughout the production line. 2D codes are read and analyzed throughout each stage of the manufacturing process using cameras integrated onto the marking head.

The Technifor product line combines marking and vision systems as a complete, fully integrated traceability solution.
IMPLEMENTATION SIMPLICITY
Marking systems designed for integration

Our extensive range of equipment can be easily integrated within any production configuration (line, indexed table, articulated arm, robot, etc).

Our marking machines are designed to be mounted in any direction and deliver consistent results.

Built-in communication ports enable easy connection to networks and PLCs.

“Manufacturers and integrators choose Technifor equipment for their speed, reliability and ease of integration on production lines.”

INNOVATION
Our Innovation and Technology Center is constantly improving our systems ability to adapt to changing industrial requirements:
- To reduce time and costs of integration
- To facilitate communication with automated equipment
- To automatically mark parts of any size or shape

Operating with minimal requirements for regular maintenance even in the most demanding environments, Technifor systems provide you with permanent, error-free reliability.

INTEGRATOR SUPPORT PORTAL

A dedicated web portal, available 24/7 provides integrators with practical information online, including integration guides, control instructions, PLC programming examples, manuals, etc.

Request access today!
The ideal solution for restricted spaces. Whether on the line or on a robotic arm, integrating the XF510p is simple, in any position, considerably reducing the time and costs of installation.

The 5th generation XF510p machines are the fastest on the market with the ability to achieve speeds up to 5 characters per second with consistent marking quality on most materials. High precision carriages and our patented single-belt technology enable the XF510p range to achieve exceptional marking speeds without an impact on quality.

Reliability and longevity of the XF510p range is widely recognized with thousands of units installed worldwide. The XF510p is the industry’s choice for high-volume and high-speed marking requirements.
### PNEUMATIC DOT-PEEN

<table>
<thead>
<tr>
<th></th>
<th>XF510CP</th>
<th>XF510Sp</th>
<th>XF510DP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions (in)</strong></td>
<td>5.39” x 3.42” x 5.39”</td>
<td>8.62” x 9.33” x 6.69”</td>
<td>12.55” x 9.33” x 6.69”</td>
</tr>
<tr>
<td><strong>Weight (lbs)</strong></td>
<td>5.07</td>
<td>17.19</td>
<td>21.38</td>
</tr>
<tr>
<td><em><em>Marking area</em> (in)</em>*</td>
<td>1.96” x 0.78”</td>
<td>3.93” x 3.14”</td>
<td>7.87” x 3.14”</td>
</tr>
<tr>
<td><strong>Character height</strong></td>
<td>From 0.019” (by stages of 0.0003”) to 1.807”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marking possibilities</strong></td>
<td>Fixed/variable text - Dates - Counters - 2D Codes (DataMatrix™, QR, µQR, iQR, GM) - Logos ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electrical power supply / power</strong></td>
<td>110-230 V AC / 120 VA</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compressed air supply</strong></td>
<td>Normal operating pressure 6 Bar (87.023 PSI) nominal, 6.5 Bar (94.275 PSI) maximum</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fonts</strong></td>
<td>Continuous stroke or Dot by dot Unicode font (over 1,400 characters available)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Material hardness</strong></td>
<td>≤ 62 HRC</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Ethernet TCP/IP - 8E / 4S - RS232 - USB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Custom marking areas available

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### A LITTLE MORE ABOUT... 3D STYLUS

The 3D stylus is a very high amplitude marking tip able to continuously mark parts with up to 0.62" of height variation. No mechanical adjustment is required, which eliminates the need and cost for an automated height sensor and marking head movement - making integration simpler.

The 3D stylus marks high quality 2D DataMatrix™. Code reading is made easier thanks to the uniformity and perfect alignment of the dots.

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### TECHNOLOGICAL FOCUS

- Dot-peen marking creates rapid and durable marks without stressing the part
- Patented single-belt technology increases stylus acceleration and reduces marking time
- Quick reaction solenoid valves
- High-rigidity guide-rails
- Light and sturdy aluminium frame
Designed to meet the most stringent industrial standards, the XF510m range engraves parts with the highest level of precision and quality. Its unique engineering and high quality components ensures the perfect alignment of dots and allows perfect repeatability.

All engraving parameters such as marking force, accuracy and speed can be precisely adjusted, enabling the XF510m range to be used on materials ranging from soft to hard.

The high performance solenoid, developed for the XF510m range, makes these machines ideal for marking high precision 2D codes (DataMatrix™, UID, UDI, QR...) for demanding applications such as aerospace, defence, medical, nuclear and more.
**ELECTROMAGNETIC DOT-PEEN**

<table>
<thead>
<tr>
<th></th>
<th>XF510Cm</th>
<th>XF510Sm</th>
<th>XF510Dm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (in)</td>
<td>6.22&quot; x 4.01&quot; x 10.82&quot;</td>
<td>9.09&quot; x 7.67&quot; x 12.16&quot;</td>
<td>13.03&quot; x 7.67&quot; x 12.16&quot;</td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>10.36</td>
<td>19.04</td>
<td>22.48</td>
</tr>
<tr>
<td>Marking area* (in)</td>
<td>1.96&quot; x 0.78&quot;</td>
<td>3.93&quot; x 3.14&quot;</td>
<td>7.87&quot; x 3.14&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Marking possibilities</td>
<td>Fixed/variable text - Dates - Counters - 2D Codes (DataMatrix™, QR, UDI, iQR, GM) - Logos ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical power supply / power</td>
<td>110-230 V AC / 240 VA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fonts</td>
<td>Dot by dot Unicode fonts (over 14,000 characters available) - OCR fonts - 5x7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material hardness</td>
<td>≤ 62 HRC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
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* Custom marking areas available

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**A LITTLE MORE ABOUT... AUTOMATED Z-AXIS**

The motorized Z-axis is programmable to adjust the marking head to the required position. Automatic height adjustment is also possible thanks to a sensor fitted on the machine.

In addition, the automated marking head can be mounted in any vertical or horizontal orientation, greatly simplifying the integration process.

The motorized Z-axis option reduces machine set-up time and guarantees marking consistency.

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**TECHNOLOGICAL FOCUS**

The electromagnetic technology enables dot-by-dot/indent marking without the need for compressed air.

Quality engineering and components define the XF510m range:
- Precision ball screws,
- High-accuracy guide-rails,
- Lightweight yet rigid aluminium frame.
High quality engraving with limited noise level. Ideal for marking applications on high resonance parts such as hollow metal structures and metal sheets.

High precision linear guide rails and overall robust engineering enable quality engraving with excellent repeatability. Proven reliability with thousands of units installed worldwide operating in challenging environments.

The XF510r range achieves superb engraving depth and visual quality. Marking parameters are adjustable for the optimal result: speed, resolution, force and positioning. Light marking on plastic or deep engraving into stainless steel are easily achieved without impacting the part’s integrity. Coatings on metals such as painting, sandblasting, galvanizing and more can be performed with the engraving remaining visible.
PNEUMATIC SCRIBING

Scribing is a quiet, direct part marking process that does not require any consumables.

XF510r range key points:
- High performance anti-burr stylus with optional diamond tips
- Precision ball screws
- High rigidity guide rails
- Reliable long life-span construction
- Economical with low air consumption

The XF510r range provides unmatched marking speed, quality and reliability both for low and high volume production.

With the optional DataMatrix™ pack, code and characters are perfectly marked in a single operation and in record time.

A LITTLE MORE ABOUT... TEXT AND DATAMATRIX MARKING

<table>
<thead>
<tr>
<th></th>
<th>XF510Cr</th>
<th>XF510Sr</th>
<th>XF510Dr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (in)</td>
<td>7.16” x 6.57” x 8.81”</td>
<td>8.74” x 6.57” x 8.81”</td>
<td>11.88” x 6.57” x 8.81”</td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>19.84</td>
<td>22.04</td>
<td>25.35</td>
</tr>
<tr>
<td>Marking area* (in)</td>
<td>1.57” x 1.96”</td>
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<td>6.29” x 1.96”</td>
</tr>
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</tr>
<tr>
<td>Electrical power supply / power</td>
<td>110-230 V AC / 150 VA</td>
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<td>110-230 V AC / 150 VA</td>
</tr>
<tr>
<td>Compressed air supply</td>
<td>Normal operating pressure of 6 Bar (87.023 PSI) standard</td>
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TECHNOLOGICAL FOCUS

Scribing is a quiet, direct part marking process that does not require any consumables.

XF510r range key points:
- High performance anti-burr stylus with optional diamond tips
- Precision ball screws
- High rigidity guide rails
- Reliable long life-span construction
- Economical with low air consumption
DEEP ENGRAVING
An extremely powerful stylus produces a wide and deep engraving, making these machines ideal for metal marking, prior or post treatment (painting, sandblasting, anodizing, galvanizing...).

INCREASED READABILITY
The engraving depth achieved guarantees long term readability. From very small to large characters, the identification is truly permanent. Ideal for anti-counterfeiting, traceability, VIN marking and more.

ADAPTABLE
These marking machines can adapt to specific requirements; integrating onto special purpose equipment, mounted on a column for benchtop applications or fitted with handles and positioning feet to become a portable system. Customize these machines and create a total marking solution.
Vehicle Identification Number (VIN) is a unique 17 character identifier marked on several parts of the same vehicle.

The SV510 engraver is particularly suited for this application: easy to install either as standalone or integrated unit achieving silent, deep and permanent marks.

The WriteLine option automatically creates a historic log file checking and preventing data duplication.

**FOCUS ON... V.I.N. MARKING**

For marking large size parts, non-detachable parts, fixed position or moving parts on a production line, our systems will easily adapt to all requirements:

- Efficient positioning of the marking head with automated clamping and part detection sensors
- Marking head mounted on a PLC controlled robotic arm or moving bridge
- Connection to automated systems, barcode readers, cameras, etc...

Any part can be marked!
ADVANCED COMMUNICATION: CONTROL UNIT UC500

Totally connected with your environment, the UC500 control unit is the best communicator on the market: its advanced connectivity ensures easy integration into all production lines.

TIME SAVING
Used throughout the world, plug and play modules (no PC, no communication adapter required) and pre-programmed commands for the majority of automated systems: installation times are considerably reduced.

COST REDUCTION
“Ready to install” solutions, which require no additional connection equipment. The rugged design is protected against electromagnetic disturbances, requiring no filtration or any additional enclosures.
INTELLIGENCE MANAGEMENT - T05

Improving and simplifying traceability is what the T05 program does best:
- Pre-loaded and optimized marking fonts for reducing cycle times
- One-click programming of dates, counters, serial numbering, logos, symbols...
- Automatic creation of 2D codes: DataMatrix™, UID, UID, QR, etc.

T05 is fully customizable with supervisor and operator modes with advanced functions such as: data import, I/O management, variable data, historic log and more.
MACHINE ACCESSORIES

From robotic cable to automatic Z-axis, Gravotech offers a wide range of optional accessories.

FOR INTEGRATION
Motorized Z-axis, pneumatic positioning unit, elbow connector, height adjustment plate, robotic cables...

FOR INCREASED PRODUCTIVITY
Electronic rotary device, automatic plate-feeder, wide range of marking tools, docking stations...

CODE-READING
1D and 2D cameras, readers and verifiers - stand alone or integrated

PROTECTION AND SAFETY
Protective boots, metallic shutters, remote control button box, oil and dust separator filters,...

FOCUS ON
STYLMUS AND MARKING TOOLS
The widest range available on the market
- Range of stylus options for different forces
- Long reach stylus for difficult access
- High speed oscillation stylus for faster speeds
- Unique 3D stylus to mark uneven parts with up to 0.629" of level variation

PC SOFTWARE: GRAVOTRACETM

With the Windows™ based software, Gravotrace™ you can create marking files on your PC.

- Create job templates with visualization of the engraving directly on the part
- Import data from a network database
- One-click functions: variables, counters, shifts, date and time, 2D code and more.
A GLOBAL WORLDWIDE PARTNER

OUR SERVICES

Feasibility study, sample marking and expert advice: Gravotech works in partnership with all our customers thanks to a worldwide network of subsidiaries.

Dedicated application centers are equipped with the latest marking systems to run tests on the most demanding marking applications.

CUSTOMIZED SOLUTIONS

Our engineering team develops marking solutions customized to specific requirements. One-off, turn-key solutions with hardware and software customization leave our factory on a daily basis.

INSTALLATION AND TECHNICAL SUPPORT

Highly experienced teams on five continents provide on-site training and assistance.

Technical documentation and software are available in more than 20 languages, 24 hours a day, 7 days a week on our dedicated customer support Web portal.

MAINTENANCE CONTRACT AND WARRANTY

Extended warranty and maintenance service plans are available in addition to the factory warranty coming with all new equipment.

The Gravotech warranty fully covers parts and labor - no surprises.
Since 1981 when we invented the dot-peen marking technology, Gravotech has designed and manufactured high-speed, high-reliability marking equipment. The Technifor brand of products and technologies are consistently expanding and are widely used by the largest industrial corporations.

Technifor’s technologies include dot-peen, scribing and laser marking and engraving.

A brand of the Gravotech Group, Technifor benefits from a global network established in over 100 countries.

A leader in the fields of engraving and permanent marking, Gravotech integrates the complexity of your needs into simple solutions.

“We are committed to offering the highest level of technology to help you increase your productivity.”

Gérard Guyard - President

CONTACT US

**Leading Marks**

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Web: leadingmarks.com

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