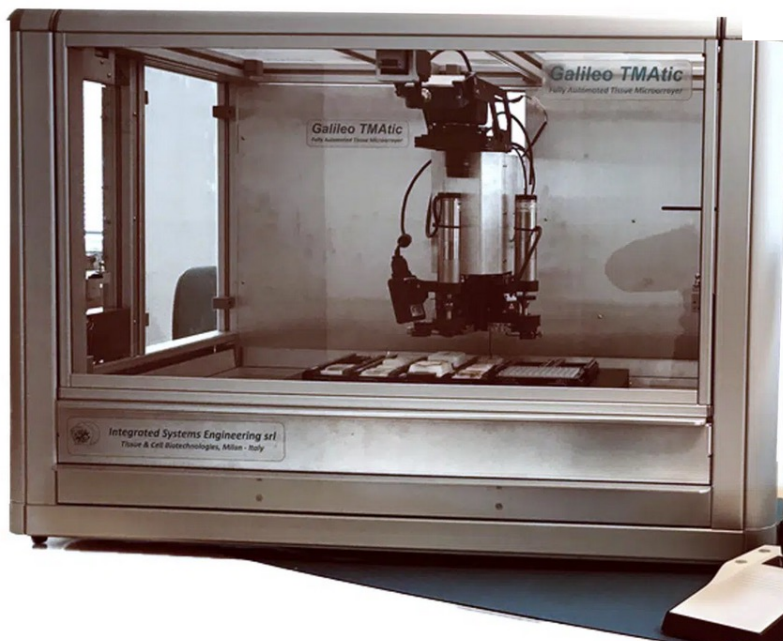
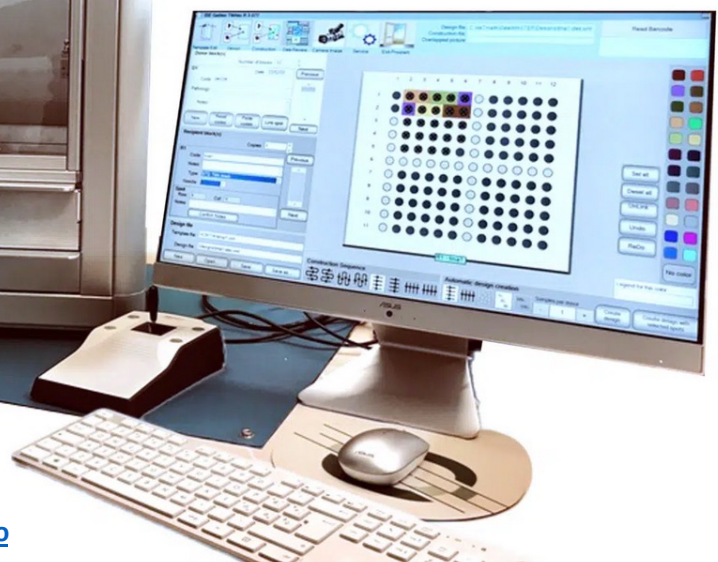


Galileo TMAtic 5000 Fully Automated Tissue Microarrayer

Tissue Analysis made with Precision and Efficiency



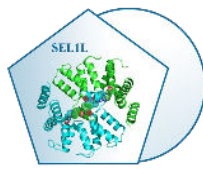
***Galileo TMAtic 5000
Fully Automated Tissue Arrayer***



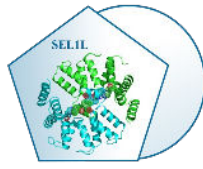
www.isenet.it

Video. <https://www.youtube.com/watch?v=PjryrVjMRgo>

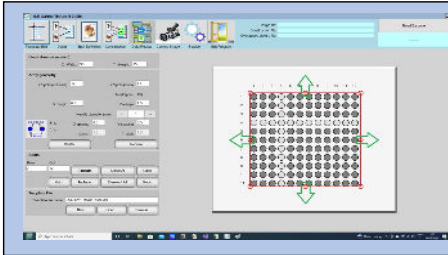
***Automation for
High-Throughput Tissue Micro-arraying
Streamlining workflow of tissue analysis by
advanced automation.***



Feature	Technical Specifications																										
Automation Level	Fully Automated																										
Max Standard Tissue Block capacity:	35 standard Blocks + 1 cleaning been <ul style="list-style-type: none"> • 1 TMA block and 34 donor blocks • 1 Donor Block and 34 TMA blocks • Any combination 																										
Core diameter Option	0,6 mm, 1.0 mm, 1.5 mm, 2.0 mm																										
Max Cores per Array Block	<table border="1"> <thead> <tr> <th>Needle size</th> <th>Standard Cassette (28x42 mm)</th> <th>Row & Column</th> <th>Macro Cassette (52x72 mm)</th> <th>Row & Column</th> </tr> </thead> <tbody> <tr> <td>* 0.6 mm/Dia.</td> <td>640 cores max.</td> <td>20x32</td> <td>1.672 cores max.</td> <td>38x44</td> </tr> <tr> <td>* 1.0 mm/Dia.</td> <td>300 cores max.</td> <td>15x20</td> <td>780 cores max.</td> <td>26x30</td> </tr> <tr> <td>* 1.5 mm/Dia.</td> <td>140 cores max.</td> <td>10x40</td> <td>378 cores max.</td> <td>18x21</td> </tr> <tr> <td>* 2.0 mm/Dia.</td> <td>80 cores max.</td> <td>8x10</td> <td>168 cores max.</td> <td>12x4</td> </tr> </tbody> </table>	Needle size	Standard Cassette (28x42 mm)	Row & Column	Macro Cassette (52x72 mm)	Row & Column	* 0.6 mm/Dia.	640 cores max.	20x32	1.672 cores max.	38x44	* 1.0 mm/Dia.	300 cores max.	15x20	780 cores max.	26x30	* 1.5 mm/Dia.	140 cores max.	10x40	378 cores max.	18x21	* 2.0 mm/Dia.	80 cores max.	8x10	168 cores max.	12x4	
Needle size	Standard Cassette (28x42 mm)	Row & Column	Macro Cassette (52x72 mm)	Row & Column																							
* 0.6 mm/Dia.	640 cores max.	20x32	1.672 cores max.	38x44																							
* 1.0 mm/Dia.	300 cores max.	15x20	780 cores max.	26x30																							
* 1.5 mm/Dia.	140 cores max.	10x40	378 cores max.	18x21																							
* 2.0 mm/Dia.	80 cores max.	8x10	168 cores max.	12x4																							
Possible use of tissue blocks of different dimension and in any combination	<ul style="list-style-type: none"> • Standard block (up to 35) • Macro Block (up to 6) • 96/384 microplate format (up to 3) 																										
Bar Code reader	Automatic <ul style="list-style-type: none"> • For table configuration • For each tissue block 																										
Needle integrity check	At each run for: <ul style="list-style-type: none"> • Bending needle • Broken needle 																										
Tissue Block Height check	5 measurements for all tissue blocks included in the design																										
Core extraction control	3 times before failing signal (with possibility to redo the punching at the end of the job)																										
Needle replacement	Easy and quick																										
Cleaning Punching Needles	At each cycle																										
Productivity	120-130 cores/hour w/cleaning cycle 200-220 cores/hour without cleaning cycle																										
Complete data storage in one Computer with HD 27" Monitor	Windows 11 operating system or higher																										
Proprietary User Interface	Simple and Intuitive with the following Modules: Geometry, Design, Construction & Digital reporting.																										
Remote Software	Allows the remote preparation of a TMA Geometry and Design for different projects. Increase in productivity																										

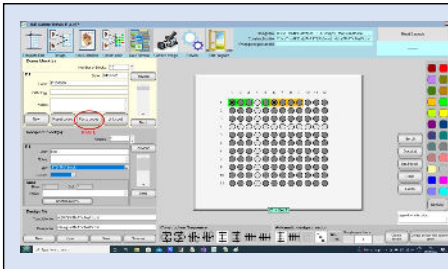


TMA workflow



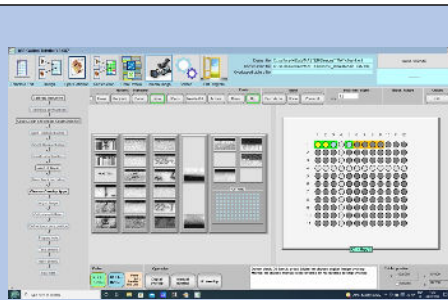
TEMPLATE EDIT

Easy preparation of the TMA geometry: definition of TMA block size; selection of needle size and space between cores; stretch function by mouse operation to increase the number of rows and columns; possibility to exclude rows and columns; save templates geometries for future use.



DESIGN

Selection of tissue core position on the TMA block (recipient); possibility to import the Excel File with all Bar-codes and annotation for each donor block as part of the design; manual or automatic positioning of the cores with possibility of sequential or randomly; use of different colours to indicate different tissue types. **Up to 34 replicas**



CONSTRUCTION

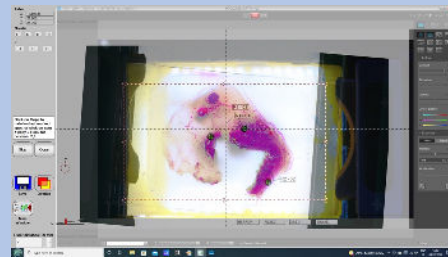
Table configuration and tissue block position check (displayed on the screen). Bar-code readings and check if tissue blocks mounted are part of the design file.

Import of High-Definition glass slide image; manual selection of the "area of interest" (with Aperio ScanScope); Snapshot (JPEG) image saved into the construction folder used for glass slide overlay.

Precise core selection by choosing:

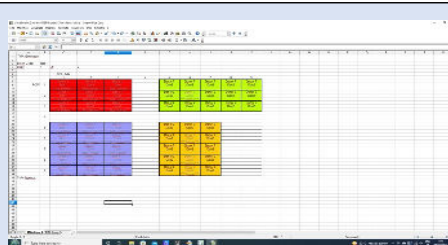
- **"digital glass slide image overlay"** (select from the "image folder" the marked slide which will be overlaid automatically using the 3P matching function).
- **No Overlay**, select core position directly on tissue block image,
- If not satisfied, it is possible to use the stretch, Oops or Redo function.

At the end of core selection, start the "Automatic Coring Process".



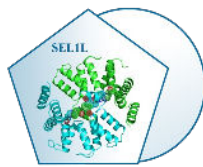
DIGITAL REPORT (DATA REVIEW)

- **Create the final report in Open Office format** (Excel compatible) or XML file (to interface with digital scanners)
- **The Excel file contains:** Bar-code number and image of the tissue cassette (if bar-codes are not used); annotation (if included); **image of the glass slide with the indication of where the cores were extracted.**



REMOTE SOFTWARE

Allows multiple user groups to work simultaneously from individual PC to define the TEMPLATE and DESIGN, increasing operator productivity.



Why use Tissue Microarray (TMA) technology

• High Throughput	Analyse up to 500 tissue samples simultaneously, significantly increase of productivity
• Resource Efficiency:	TMA uses small tissue cores allowing for the preservation of precious specimens and minimal use of reagents
• Consistency and Reproducibility:	TMA enables uniform sample handling and dential conditions, ensuring reliable and reproducible results.
• Cost-Effectiveness:	Reduces the number of slides, reagents, and technician time, lowering operational costs.
• Scalability:	Ideal for large-scale studies, such as biomarker research or pharmaceutical testing, where multiple tissues need to be analysed quickly.

Why choose Galileo TMAtic 5000

• Precision Engineering	Achieve core placement accuracy of ± 0.1 mm for exact reproducibility and high-quality arrays.
• Fully Automated Workflow:	Reduce manual intervention with Galileo TMAtic's fully automated core punching, placement, and array duplication.
• High Throughput Efficiency:	Create arrays with up to 640 cores per standard block or 1.640 with Macro Block (with 0,6 mm punch needle) streamlining tissue sample analysis for high-demanding labs.
• Flexible Core Sizes:	Choose from various core diameters (0.6 mm to 3.0 mm), allowing you to meet the specific needs of different research and clinical applications.
• User-Friendly Interface:	A 27-inch all in one PC allows operators to easily plan and construct Tissue Arrays.
• Integrated Barcode System:	The built-in barcode scanner helps track samples and organize data seamlessly, ensuring efficiency and minimizing errors.

CONTACT INFORMATION:

email: info@isenet.it

Phone Number: +39 389.685.1496 (Europe)

Phone Number: +1 267.957.4959 (USA)

web: www.isenet.it