Taawon

CHOICE OF EXCELLENCE

PRODUCT CATALOG

IVF LABS & LIFE SCIENCES

CHOICE OF EXCELLENCE

www.taawon.com

ABOUT TAAWON GROUP

Welcome to Taawon Group – Your Premier Partner in Laboratory Solutions!

At Taawon Group, we specialize in providing an unparalleled range of high-end laboratory and industrial equipment, disposables, and chemical products. Our commitment revolves around delivering excellence, compatibility, and exceptional value and support.

Discover a world of reliable solutions tailored to elevate your laboratory experience. Taawon Group is here to redefine standards and exceed expectations in the pursuit of scientific excellence.

OUR VISION

To be the leading partner in advancing laboratory and industrial technologies across the region, recognized for empowering innovation with a comprehensive range of reliable, cutting-edge systems and solutions.

OUR MISSION

Our mission is to empower our customers' success by delivering superior-quality laboratory and industrial equipment, with high customer satisfaction rate, enabling measurable improvements in their operational performance each year

TAAWON GROUP JOURNEY

Since its establishment, Taawon Group has grown from a local supplier into a trusted regional leader in laboratory and scientific equipment. Over the years, we have expanded our portfolio, forged global partnerships, and introduced pioneering technologies to the Middle East market. Today, our legacy is built on decades of expertise, innovation, and unwavering commitment to customer success.

2008

Taawon Founded in Jordan

2009

Diamond Spectrum Founded in Saudi Arabia

2013

Altayf Althahabi (TTSL) Founded in UAE

2019

Companies incorporated under Taawon Group

2021

Diamond Spectrum Founded in Bahrain

ASSOCIATION & GROUP COMPANIES

Taawon
Jordan

Diamond Spectrum - DS
Saudi Arabia

Altayf Althahabi - TTSL
United Arab Emirates

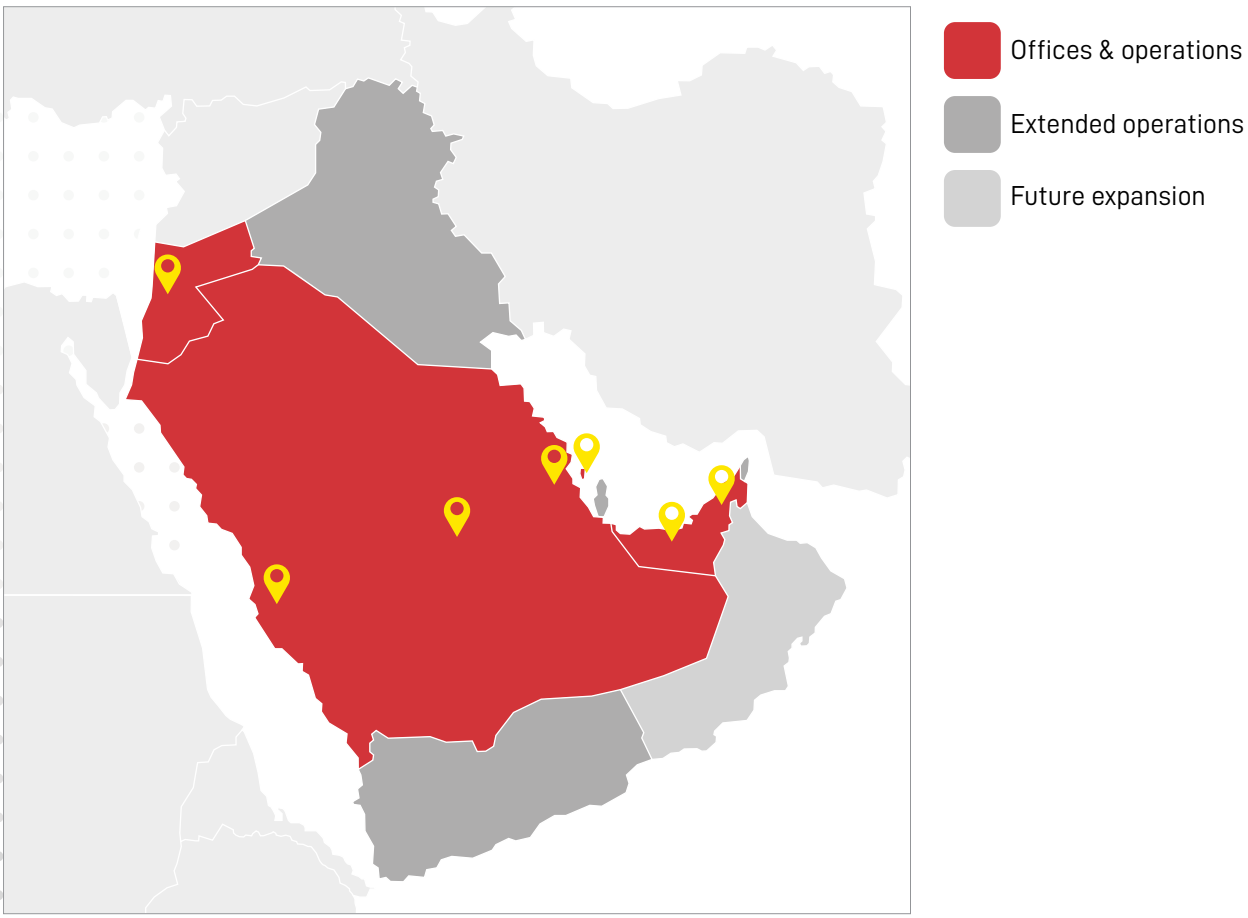
Diamond Spectrum - DS
Bahrain

4000 + customers

100 + employees

4 countries

7 offices



APPLICATIONS & INDUSTRIES

Taawon Group offers a comprehensive portfolio of laboratory, industrial, and scientific solutions designed to meet the highest industry standards and regulations in a wide variety of sectors.

Pharmaceuticals

Energy & Petrochemicals

Chemicals

Food, Beverage &Feed

Academia & Research

Nano technology

Material Testing

IVF and Life Science

Warehouse Monitoring

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ESCO® MEDICAL

IVF Lab Equipment

IVF Lab Equipment

Sample Handling

Multi-Zone ART Workstation

- Multiple heating zones provide precise temperature control across the work surface to prevent thermal shock.
- Integrated MIRI® chambers and microscope provisions centralize the workflow within a sterile vertical laminar flow.

MIRI® Laminar Flow Cabinet

- Electronically Commuted Motor (ECM) technology ensures energy-efficient, stable vertical laminar airflow for sample protection.
- Specialized design maintains a controlled environment for handling embryos and gametes outside the incubator.

AVT Anti-Vibration Table (MIRI® AVT)

- Specialized work surface isolates high-precision microscopes and balances from external mechanical vibrations.
- Eliminates disruptions to sensitive laboratory equipment to ensure accuracy during high-magnification tasks.

Versati™ Tabletop Ventilated Centrifuge

- High-speed rotation with various rotor types enables efficient separation of milliliter-scale heterogeneous mixtures.
- Ventilated design prevents heat buildup during centrifugation, protecting temperature-sensitive samples from degradation.

IVF Lab Equipment

Embryo Culture

MIRI® M Multiroom IVF Incubator

- Modular 18-chamber system allows for independent sample management without affecting neighboring environments.
- Movable chambers maintain environmental stability during transport, ensuring continuous protection for embryos.

MIRI® Multiroom Incubator

- Six independent chambers prevent cross-contamination and eliminate environmental fluctuations when access is required.
- Individual lid operation ensures that opening one chamber does not disturb the temperature or gas levels of others.

MIRI® Humidity Multiroom Incubator

- Robust heating and gas systems enable rapid recovery to maintain optimal embryo culture conditions.
- Technical design provides a humidified environment while actively preventing vapor condensation on surfaces.

MIRI® II-12 Multiroom Incubator

- Provides a stable culture environment at body temperature with precise CO2 and N2 regulation for gamete development.
- Multi-chamber isolation ensures a secure, dedicated workspace for high-volume IVF laboratory requirements.

IVF Lab Equipment

Embryo Culture

Mini MIRI® Incubators

- Delivers consistent culture performance using the MIRI® architecture in a reduced, space-saving footprint.
- Provides a dependable benchtop solution for laboratories requiring high-level environmental control in limited space.

Mini MIRI® Dry Incubator

- Two-chamber benchtop design offers the performance of larger MIRI® units in an affordable, compact format.
- Optimized for laboratories that prioritize footprint efficiency without sacrificing environmental stability.

Mini MIRI® Humidity Incubator

- Direct heat regulation prevents vapor condensation and facilitates faster temperature and gas recovery times.
- Compact humidified system ensures stable physiological conditions for embryos in a small benchtop unit.

CelCulture® CO_2 Incubator

- ISOCIDE™ antimicrobial coating and ISO Class 5 cleanliness minimize the risk of microbial and particulate contamination.
- Rapid temperature and gas recovery systems with an inner door kit replicate natural growth environments.

IVF Lab Equipment

Time-Lapse

MIRI® Time-Lapse Incubator

- Independent Multi-Chamber Architecture: Available in 6 (TL6) or 12 (TL12) independent chambers, allowing for isolated patient-specific environments that prevent cross-contamination and thermal fluctuations in neighboring zones.
- Rapid Environmental Kinetics: Engineered for high-speed recovery, achieving temperature stabilization in less than 1 minute and CO_2 concentration recovery in approximately 3 minutes following chamber access.
- Integrated Morphokinetic Imaging: Features a built-in microscope and camera system for continuous, non-invasive observation, eliminating the physiological stress associated with removing embryos for manual microscopy.
- Active Thermal Lid Heating: Employs heated lids to actively prevent vapor condensation and ensure superior temperature uniformity across the top and bottom of each culture chamber.
- Precision Gas Regulation: Includes a built-in tri-gas mixer and advanced regulation system that allows for customized CO_2 and O_2 levels without the need for pre-mixed gas cylinders.
- Advanced Gas Purification: Utilizes a recirculating gas loop equipped with both VOC/HEPA filtration and integrated UV-sterilization to maintain high biological safety and air purity standards.
- Independent Sensory Monitoring: Each chamber is equipped with its own PT-1000 sensor and gas sampling port, enabling independent, high-precision validation of the internal environment.
- Optimized Dish Capacity: Specifically designed for the CultureCoin®, which utilizes a specialized well-format to accommodate 14 embryos per chamber, totaling 84 (TL6) or 168 (TL12) embryos per unit.
- Dedicated Data Architecture: Features a built-in computer with 256 GB of local storage and a dedicated MIRI® TL Server to ensure continuous data logging and fail-safe image archiving.
- Advanced Analytics Software: The MIRI® TL Viewer software provides specialized tools for morphokinetic annotation, side-by-side embryo comparison, and graphical summary data for viability assessment.



IVF Lab Equipment

Consumables

CultureCoin® - Embryo Culture Dish for the MIRI® TL

- Specifically engineered for the MIRI® TL to enable high-quality, real-time image capture of developing embryos.
- Specialized dish design allows for continuous time-lapse monitoring without removing embryos from the stable incubator environment.

Quality Control

MIRI® GA Gas and Temperature Validation Unit

- Tabletop device performs continuous external validation of gas and temperature for multiple incubator types simultaneously.
- Ensures quality control compliance by providing easy, accurate verification of the internal environment of IVF incubators.

Traceability Tool

MIRI® Evidence RFID Witnessing and Traceability System

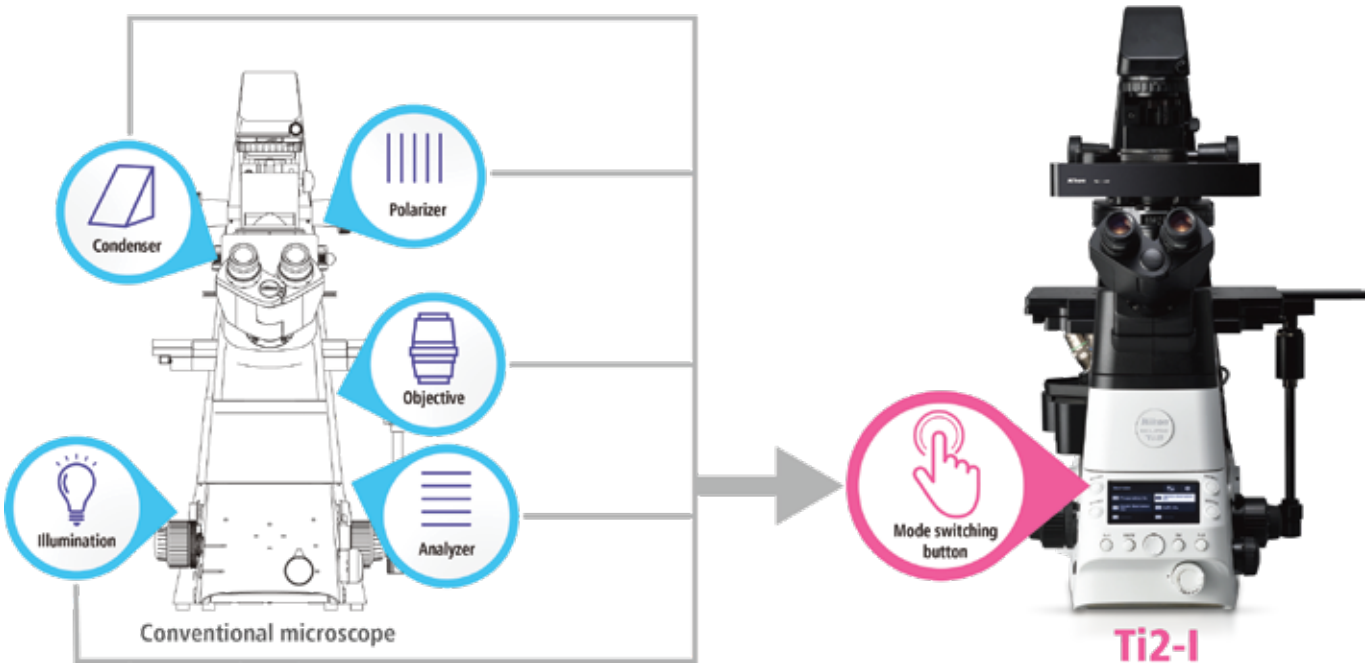
- RFID technology eliminates human error and prevents sample mix-ups during complex laboratory procedures.
- Automated data management ensures full traceability and helps clinics comply with strict regulatory documentation standards.

Optical Imaging in IVF labs

Optical Imaging in IVF labs

Inverted Microscopes - ECLIPSE Ti2-I

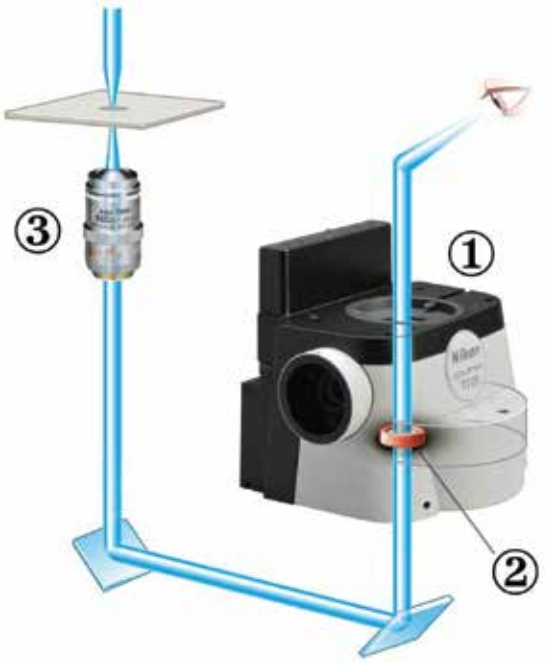
- Real-Time Focus Stabilization: Employs the Perfect Focus System (PFS), which uses a linear sensor and infrared laser to counteract focus drift caused by thermal changes or mechanical vibrations during long-term embryo observation.
- Large-Format Imaging Throughput: Features an ultra-wide 25mm Field of View (FOV) that maximizes the capture area of modern large-format CMOS sensors, reducing the time required to scan multiple wells in a culture dish.
- Plastic Dish Compatibility: Utilizes Nikon Advanced Modulation Contrast (NAMC) optics to provide high-contrast, 3-dimensional imaging of transparent oocytes and embryos through standard plastic culture ware.
- Mechanical Rigidity for Micromanipulation: The chassis is engineered with a high-stability, reinforced structure to minimize flex and vibration, providing a rock-solid platform for ICSI and biopsy micromanipulators.
- Long Working Distance (LWD) Optics: Designed with CFI60 LWD objectives that allow for high-resolution imaging through thick-bottomed plastic dishes and heated stages used in IVF workflows.
- Intelligent Component Tracking: Integrated sensors automatically detect and record the objective magnification and optical path settings, ensuring metadata integrity and reducing manual documentation errors.
- Automated Optical Path Alignment: Includes the Ti2 Assist Guide, which provides real-time feedback and digital troubleshooting via on-board sensors to ensure the microscope is always optimally aligned for imaging.



Optical Imaging in IVF labs

Inverted Microscopes - ECLIPSE Ti2

- Ultra-Wide Field of View: Provides an unprecedented 25mm Field of View (FOV), which maximizes the imaging area of modern large-format CMOS sensors to reduce tile-scanning time and increase data throughput for multi-well plates.
- Hardware Autofocus Stability: Integrates the Perfect Focus System (PFS), utilizing a dedicated infrared laser to detect the coverslip interface and automatically compensate for focus drift caused by thermal fluctuations or mechanical movement.
- Intelligent Assist Guide: Employs an internal sensor network that monitors the status of every optical component; it alerts users to setting errors (such as incorrect DIC prisms or filter cubes) via a digital display to prevent compromised experiments.
- Vibration-Damping Design: Engineered with a highly rigid, symmetrical chassis that minimizes mechanical flex and thermal expansion, providing a stable platform essential for delicate micromanipulation (ICSI) and high-resolution imaging.
- Uniform Illumination: Incorporates a fly-eye lens in the light path to ensure perfectly even light distribution across the entire 25mm FOV, eliminating the "vignetting" or dark corners typically found in large-format imaging.
- Advanced Phase/Contrast Optics: Optimized for Nikon Advanced Modulation Contrast (NAMC), enabling high-resolution, 3D-like imaging of transparent specimens through standard plastic culture dishes that are usually incompatible with traditional DIC.
- Ergonomic Status Management: Features a front-mounted LCD Status Display and streamlined control layout, allowing operators to verify magnification, optical path settings, and system status at a glance without looking away from the specimen.



Optical Imaging in IVF labs

Stereo Microscopes - SMZ25 / SMZ18

- Unprecedented Zoom Range: Features a world-leading 25:1 zoom ratio (on the SMZ25), allowing users to transition seamlessly from a macro-view of an entire 35mm dish to high-magnification imaging of individual cells without the need to switch objectives.
- Auto Link Zoom (ALZ): Automatically adjusts the zoom factor when switching between objectives to maintain a constant field of view, solving the problem of losing the specimen's location or context during magnification changes.
- Superior Fluorescence Signal-to-Noise Ratio: Utilizes an improved optical path and a Fly-eye lens on the epi-fluorescence attachment to provide exceptionally bright and uniform illumination, even at low magnifications where uneven lighting typically occurs.
- High-Resolution Imaging (CFI60 Optics): Employs apochromatic optics with high Numerical Aperture (NA) to deliver diffraction-limited resolution, eliminating the blurriness and chromatic aberrations often found in traditional stereo microscopes at high zoom levels.
- Integrated Digital Metadata: Features internal sensors that automatically detect and communicate the current zoom level and magnification to imaging software, ensuring automated scale bar accuracy and eliminating manual documentation errors.
- Motorized Precision and Stability: The motorized focus and zoom modules allow for operation via a remote controller or PC, which minimizes mechanical vibration transfer to the sample—a critical requirement for delicate micro-dissection or manipulation.
- Enhanced Sample Safety: High-efficiency optical coatings and bright-field technologies allow for lower excitation light intensity, reducing the risk of phototoxicity and photobleaching when observing sensitive live biological samples for extended periods.

Optical Imaging in IVF labs

Upright Microscopes - ECLIPSE Ci-L plus

- Integrated Specimen Status Display: Features an LCD screen at the base of the microscope that displays magnification and light intensity, allowing the operator to verify data at a glance without having to check the objective nosepiece.
- Automatic Intensity Reproduction: Utilizes the Light Intensity Manager (LIM) to remember and automatically restore specific brightness levels for each objective, eliminating the need for manual adjustment when switching magnifications.
- Ergonomic Height Customization: Equipped with an Ergo Binocular Tube that can be extended and tilted, solving the pain of neck and back strain during long hours of clinical screening.
- High-Durability Eco-Illumination: Employs a high-luminescence LED system with a 60,000-hour lifespan, providing consistent "fly-eye" uniform lighting while removing the maintenance burden of frequent halogen bulb changes.
- Intelligent Digital Integration: Features a dedicated "Capture" button on the microscope base that syncs with Nikon's Digital Sight cameras, enabling the user to acquire images seamlessly without taking their eyes off the eyepieces.
- Eco-Friendly Power Management: Includes an ECO mode that automatically turns off the illumination after a period of inactivity, extending the life of the optical components and reducing laboratory energy consumption.
- High-Contrast Pathological Imaging: Optimized for use with CFI60 Plan Apochromat objectives, which provide superior chromatic aberration correction and flat-field clarity for accurate diagnosis of complex tissue samples.

Optical Imaging in IVF labs

Micromanipulators

- Integrated Thermal Stability: The Ci-L plus utilizes a low-heat Eco-illumination LED system, which prevents the localized stage heating common with halogen bulbs, ensuring that micromanipulators and sensitive gametes remain at a stable, regulated temperature.
- Vibration-Isolated Architecture: The microscope is engineered with a highly rigid, reinforced chassis that provides a solid foundation for mounting manipulators, effectively dampening environmental micro-vibrations that can cause pipette tip drift.
- Tactile Ergonomic Control: Features a Hanging Joystick design that allows the operator to rest their arms comfortably on the table surface, providing precise, 3D oil-hydraulic fine movement without the muscle fatigue associated with upright controls.
- Streamlined "Resume" Mechanism: Incorporates a pipette position memory function that allows the operator to quickly raise the pipette for dish exchange and return it precisely to the original focal plane, significantly reducing workflow downtime.
- Hybrid Coarse/Fine Drive: Combines a 3D motor-driven coarse manipulator for rapid initial positioning with a 3D oil-hydraulic fine manipulator, enabling ultra-smooth, micron-level control during delicate ICSI procedures.
- Universal Angle Adjustment: Equipped with a universal joint that allows for accurate pipette holder angle calibration, ensuring the approach angle can be optimized for different dish heights and specimen types without affecting mechanical stability.

Optical Imaging in IVF labs

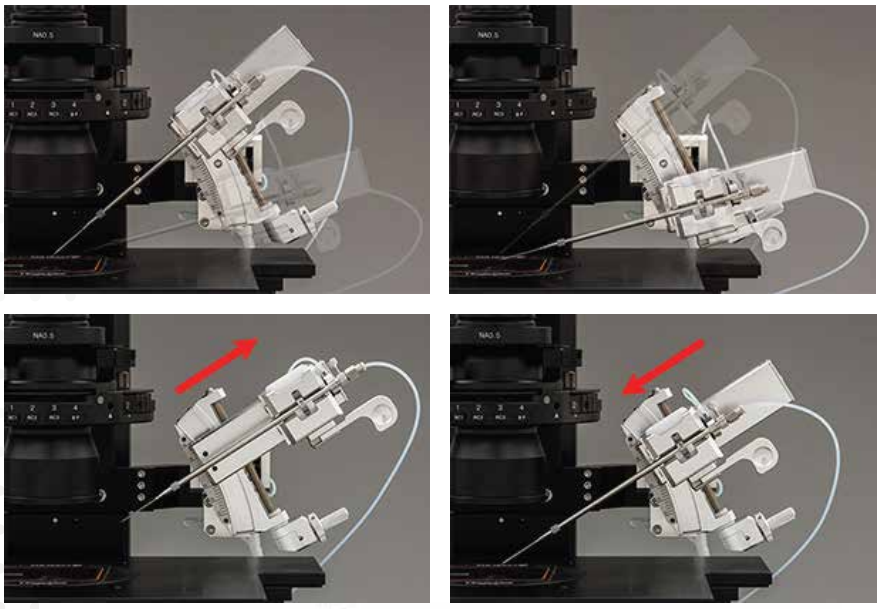
Tokai Hit Microscope Original Top Heater

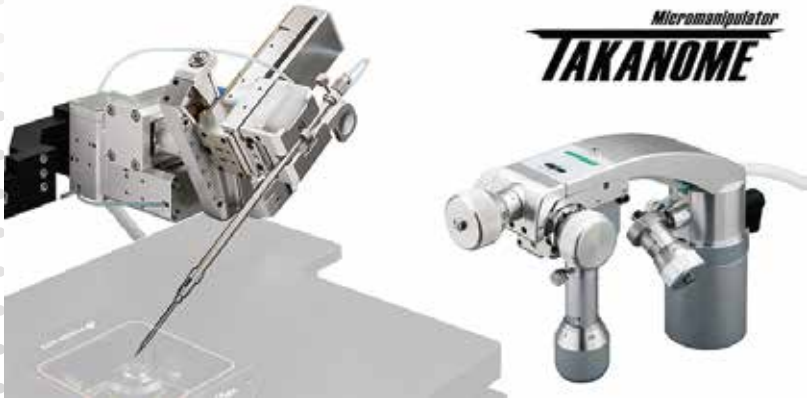
- Based on the technical specifications of the Tokai Hit Thermo Plate (Nikon edition), here are 7 technical points regarding its design and performance:
- Continuous Current Control: Employs specialized regulation to minimize focus drift caused by thermal expansion and prevents light intensity changes, providing superior stability over conventional ON/OFF controllers.
- Original Clear Glass Heater: Features a high-strength glass surface that maintains stable, uniform temperature distribution across the observation area, supporting clear visibility for various vessel types.
- Real-time Sample Feedback: Includes a sterilized sensor that measures the actual temperature of the culture media, allowing the controller to accurately regulate the heater based on direct sample signals.
- Integrated Condition Monitoring: Features a "Plate LED Indicator" on the heater surface that visualizes the status of the plate (e.g., green when ready) so the operator can confirm conditions without checking the controller.
- One-Touch Calibration: Built-in intelligent software allows for quick calibration to set the optimal PID (Proportional-Integral-Derivative) values based on the specific laboratory environment with a single touch.
- High-Durability Warranty: The system is constructed using strengthened or hard glass, backed by a 10-year free-repair service for glass breakage to ensure long-term laboratory reliability.
- Compact Controller Architecture: The miniaturized controller is roughly the size of a smartphone and features a versatile mounting hook for flat, upright, or wall-hanging placement to save space in clean benches.

Optical Imaging in IVF labs

Narishige Micromanipulator

- Integrated 4-Axis Mechanical-Hydraulic Hybrid: Combines 3D oil hydraulic fine movement with a dedicated 1D motorized or manual coarse linear axis, allowing for rapid initial approach and sub-micron final positioning within the same integrated drive unit.
- Synchronous 1:1 Movement Ratio: Engineered with a precision-bored master-slave cylinder system that ensures the pipette tip replicates the joystick's displacement with zero lag and high-fidelity haptic feedback, critical for delicate zona pellucida penetration.
- Virtual Axis "Home" Calibration: Incorporates a mechanical return-to-origin mechanism that allows the operator to lift the pipette for dish exchange and return it precisely to the pre-set focal plane without recalibrating the XYZ coordinates.
- Volumetric Expansion Compensation: The hydraulic circuit is constructed with low-thermal-expansion materials and high-viscosity oil to minimize "drift" caused by ambient laboratory temperature fluctuations, maintaining pipette tip stability over long procedures.
- Universal Angle-Adjustable Mounting: Features a high-rigidity universal joint interface that allows for the independent adjustment of the pipette's approach angle (from 0° to 40°) without introducing mechanical play or compromising the coaxiality of the hydraulic drive.





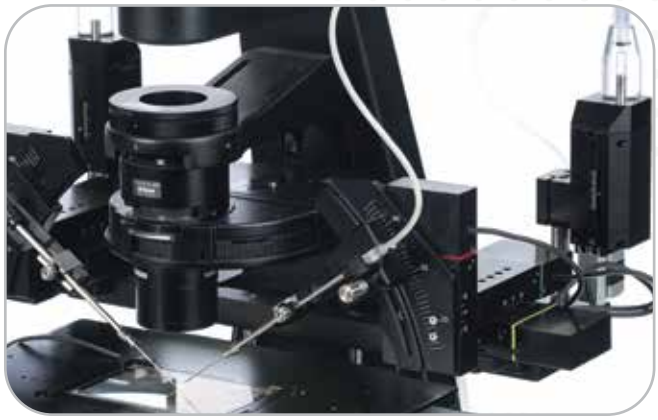
Motorized Micromanipulation System for ICSI

Motorized Micromanipulation System for ICSI

Joystick-Controlled Precision for ICSI

This fully motorized ICSI micromanipulation system integrates an in-house developed joystick with stepper-motor technology to provide precise, stepless pipette control. It enables one-handed operation of XYZ axes, aspiration, injection, and immobilization, ensuring efficiency and repeatability. The system's swing-out pipette holder maintains focus during angle adjustment and allows fast, accurate pipette exchange.

Built with robust aluminum mechanics and real-time closed-loop pressure control, it eliminates variables such as air compression, leakage, or tubing elasticity, delivering consistent performance in advanced ICSI workflows.



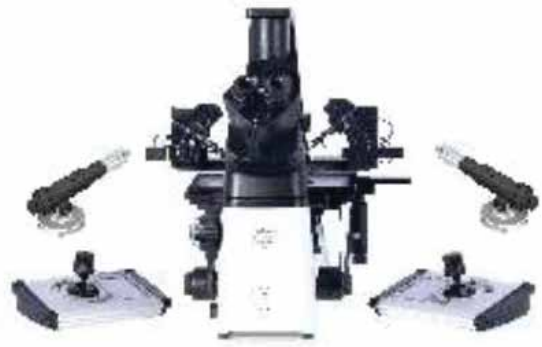
Motorized Micromanipulation System for ICSI

Joystick-Controlled Precision for ICSI

- Stepper-Motor Precision Control
  - Ultrastepless, leakage-free pipette movement through patented motorized technology.
- One-Hand Joystick Interface
  - Single-hand operation of XYZ movement, pressure control, aspiration, injection, and automated demobilization.
- Automated Specimen Demobilization
  - Joystick-activated demobilization function instantly immobilizes the specimen upon command.
- Pipette Angle & Swing-Out System
  - Adjustable pipette angle (20°–45°) maintained in focus; swing-out adapter enables fast, precise pipette exchange.
- Real-Time Closed-Loop Pressure Control
  - Integrated pressure system (air-and-oil hybrid) with sensors eliminates inconsistencies from air compression, leaking, or tubing elasticity.

ICSI System fully motorized

ICSI System with manual Oil



ICSI System with manual Air

ICSI System with manual Air/ Oil

nilotech

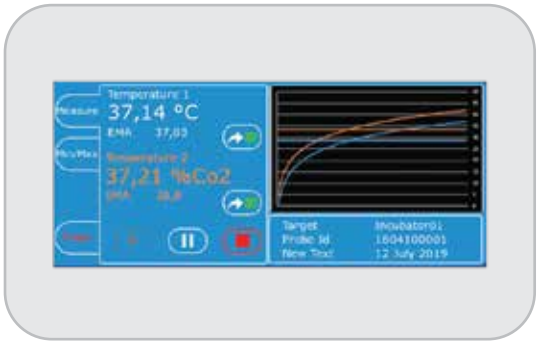
Monitoring, Control, and Calibration of IVF lab equipment

Monitor, Control, & Calibrate your IVF equipment

All-in-one reference instrument

The NiloChecker is an all-digital, multi-probe reference instrument engineered for laboratory quality control, capable of executing up to five simultaneous environmental measurements. It features an intuitive 7-inch touchscreen interface that guides users through compliance-based measurement protocols with "target-select" functionality for streamlined data organization. The instrument requires no calibration or maintenance—the probes themselves contain calibration data and can be serviced independently—while the high-capacity battery supports extended, mobile QC usage.

- **Multi-Probe Capability**
  - Supports up to five simultaneous measurements for comprehensive environmental monitoring
    - Temperature Measurements
    - Gas Measurements
    - Other Measurements
- **Touchscreen Interface**
  - 7-inch glove-compatible display with intuitive software and guided protocols
- **Target-Select Function**
  - Simplifies data structuring and reporting through standardized workflows
- **Maintenance-Free Operation**
  - Fully digital design; calibration stored in probes for independent servicing
- **Extended Battery Life**
  - High-capacity battery enabling long measurement sessions without interruption



MIMFERTILITY.

AI Assistant for Embryo Selection

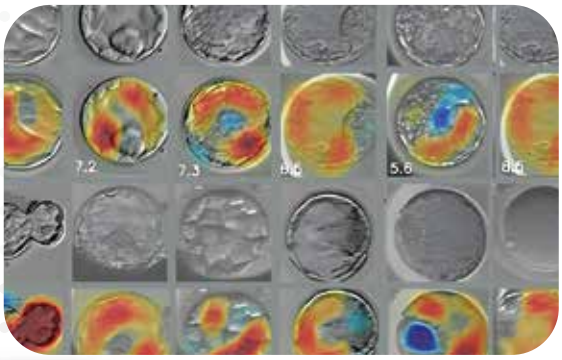
AI assistant for embryo selection

AI-Powered 5-Day Embryo Assessment Tool

EMBRYOAID

EMBRYOAID is a CE-marked, AI-powered software platform developed by MIM Fertility for evaluating Day-5 embryos. Trained on thousands of embryo images, it provides embryo rankings that correlate approximately 80 % with senior embryologist assessments. The platform enhances standardization by minimizing subjectivity and reducing variability. Its scores have been shown to correlate with key markers such as embryo morphology, developmental velocity, ploidy status, and clinical outcomes.

- **AI-Driven Training Data**
  - Developed using thousands of embryo images to train deep learning models aimed at supporting embryo selection.
- **Performance Correlation**
  - Embryo rankings produced by EMBRYOAID show an approximately 80 % correlation with assessments made by senior embryologists.
- **Standardization & Objectivity**
  - Designed to reduce subjectivity in embryo evaluation by applying the same objective criteria consistently across labs and evaluators.
- **Correlation with Biological & Clinical Metrics**
  - EMBRYOAID's scores correlate with embryo morphology, developmental velocity (kinetics), ploidy (genetic status), and clinical outcomes including implantation potential.



GYNEMED

IVF Lab Consumables

IVF Lab Consumables

Cell Culture Media for Oocyte Handling

GM501 Flush

- Designed for flushing ovarian follicles during aspiration and oocyte pick-up in extracorporeal fertilization.
- Ready-to-use, HEPES-buffered medium that contains 2.5 IU/ml Heparin to prevent clotting during collection.

GM501 Hyaluronidase

- Used to facilitate the mechanical removal of cumulus cells by digesting the extracellular matrix of the cumulus-oocyte complex.
- Contains 80 IU/ml pharmaceutical-grade bovine hyaluronidase in a HEPES-buffered medium.

GM501 Wash with Phenolred and Gentamicin

- Intended for washing human oocytes and embryos and for short-term handling procedures outside the incubator (e.g., ICSI or biopsy).
- Includes Phenol Red as a pH indicator and Gentamicin as an antibiotic to maintain a sterile handling environment.

GM501 Wash

- A basic ready-to-use medium for washing procedures and brief handling of gametes and embryos outside of a CO_2 incubator.
- HEPES-buffered to provide stable pH levels during procedures like denudation or embryo transfer.

IVF Lab Consumables

Cell Culture Media for Embryo Culture

GM501 Cult

- A bicarbonate-buffered medium designed for the fertilization and culture of human embryos from Day 1 to the blastocyst stage.`
- Suitable for use in both open culture systems and under oil overlays.

GM501 Cult with Gentamicin

- Used for human embryo culture and transfer, providing a stable environment for development up to the blastocyst stage.
- Supplemented with Gentamicin to provide antimicrobial protection during the extended culture period.

GM501 Cult with Gentamicin and Phenolred

- Designed for the complete culture of embryos from fertilization to Day 5/6, including embryo transfer.
- Contains both an antibiotic for safety and Phenol Red to allow for easy visual monitoring of pH stability.

GM501 Mineral Oil

- A pharmaceutical-grade paraffin oil used to overlay culture media to prevent evaporation and maintain stable pH and temperature.
- Pre-washed twice with ultra-pure water to ensure high purity and low toxicity for embryo culture.

IVF Lab Consumables

Cell Culture Media for Sperm Processing

GM501 Gradient

- A silane-coated silica-based system used for the separation and purification of motile spermatozoa from semen samples.
- Consists of two different concentrations to create a density gradient for IUI, IVF, and ICSI preparations.

GM501 SpermAir

- A HEPES-buffered medium designed for sperm processing and handling procedures performed in ambient air.
- Ideal for washing, swimming-up, or maintaining sperm motility outside of a CO_2 incubator.

GM501 SpermActive

- A bicarbonate-buffered medium specifically designed for sperm preparation and "swim-up" techniques.
- Requires equilibration in a CO_2 incubator to maintain the optimal pH for active sperm selection.

GM501 PVP

- A 10% polyvinylpyrrolidone solution used to increase the viscosity of the medium, making it easier to capture individual sperm for ICSI.
- Designed to reduce sperm motility temporarily without causing permanent damage to the cell.

GM501 Collagenase

- Used for the enzymatic digestion of human testicular tissue obtained through TESE (Testicular Sperm Extraction).
- Facilitates the release of sperm cells from tissue biopsies to assist in finding viable sperm for microinjection.

IVF Lab Consumables

Cell Culture Media for Cryopreservation

GM501 VitriStore

- A set of DMSO and ethylene glycol-based media for the vitrification (ultra-rapid freezing) and thawing of human embryos.
- Designed to protect the cellular structure of embryos at various stages through the use of cryoprotectants and sucrose.

GM501 GentleVit

- An HTF-based vitrification and warming kit developed for a more gradual and "gentle" freezing process of oocytes and embryos.
- Allows for the vitrification of all stages from oocyte to blastocyst within the same media system.

GM501 SpermStore

- A HEPES-buffered cryopreservation medium used for the long-term freezing of human sperm, including epididymal or testicular sperm.
- Contains glycerol and sucrose as cryoprotectants to prevent cellular damage during the freezing and thawing process.

IVF Lab Consumables

Pipettes

Micropipettes

- Handmade from high-quality borosilicate glass and sterilized by gamma radiation to meet international standards.
- Available in various configurations, including ICSI pipettes with or without a spike and holding pipettes with polished openings to ensure gentle cell handling.

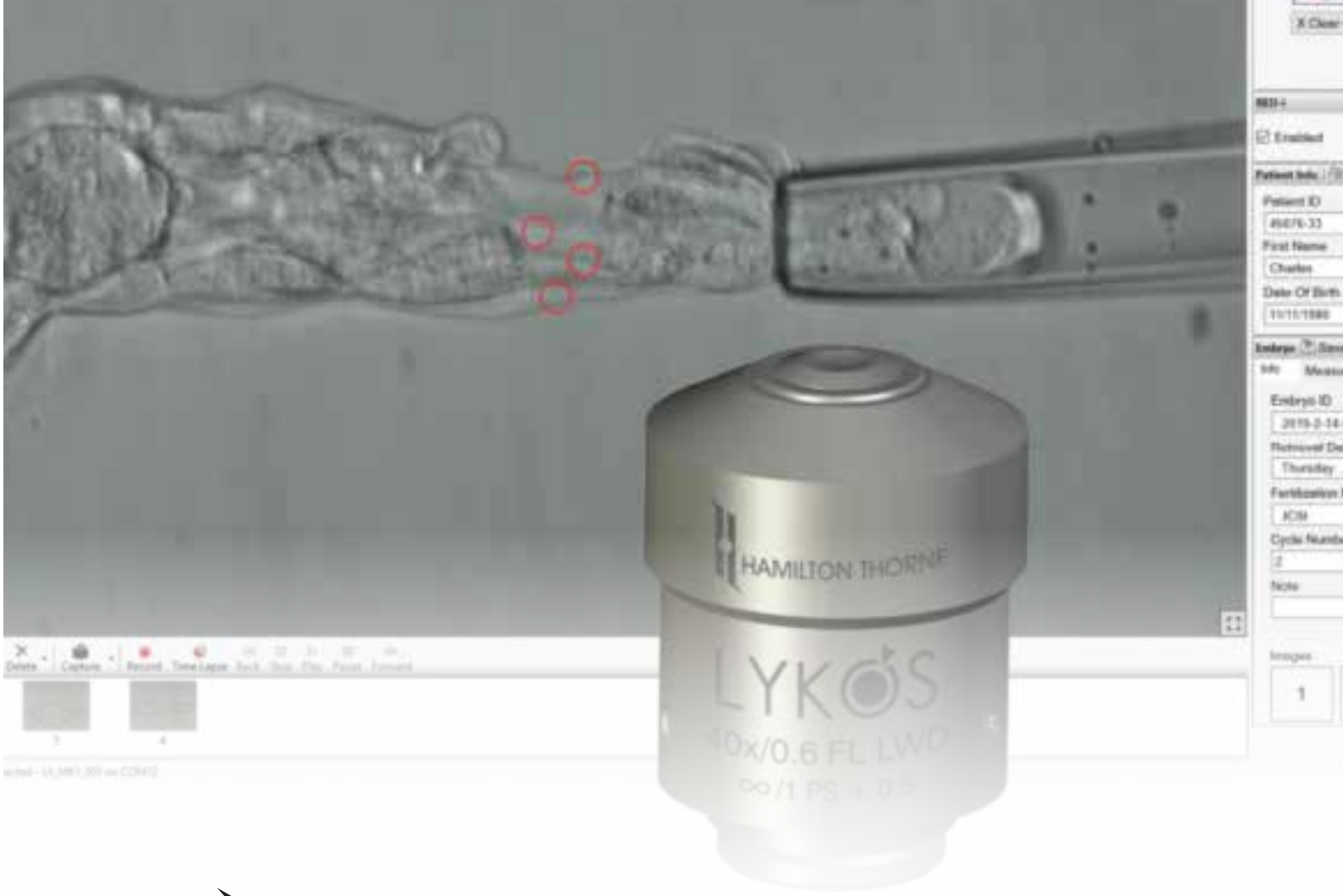
Handling of Oocytes

- Includes specialized tools such as "DENU-Tips" and handling pipettes designed for the safe transfer of oocytes and embryos between culture dishes.
- These tools are made from flexible, unbreakable materials that will not scratch plastic dishes and are MEA (Mouse Embryo Assay) tested for safety.

Harvesting of Oocytes

Oocyte Aspiration Needle

- Available in single or double lumen configurations, with options for integrated flushing to optimize oocyte recovery during pick-up.
- Features diamond laser ultrasound markings on the tip for excellent visibility under ultrasound and a handle design that facilitates precise rotation and control.



HAMILTON THORNE

Lasers & Oosight Imaging

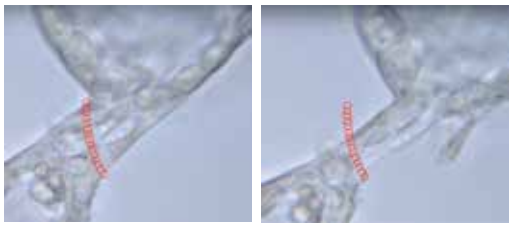
Lasers & Oosight Imaging

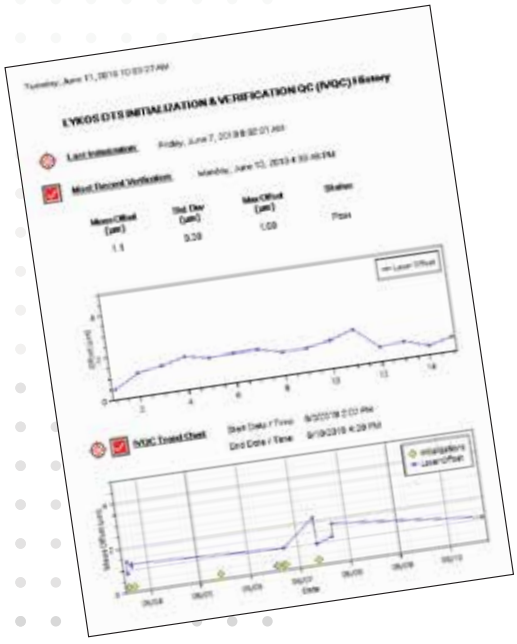
HT Laser Systems

LYKOS®

- Multiple heating zones provide precise temperature control across the work surface to prevent thermal shock.
- Integrated MIRI® chambers and microscope provisions centralize the workflow within a sterile vertical laminar flow.

- Single Shot: Click any single point on the screen and a single laser pulse will be applied to that exact point.
- Line / Curve: Draw a straight line of any length and then select and drag to create a curve.
- Freehand: Any freeform path may be drawn by clicking and dragging the mouse pointer.
- Multipoint: Click up to 10 non-connected locations to apply laser. Each point may have a different laser setting.
- Rectangle: Click and drag to draw a rectangle of any proportion.
- Built-in Quality Control Reporting: With the built-in quality control reporting, you can view the results of the daily verification in both numerical and graphical form. In addition, a Trend Chart lets you see the results over a selected period of time.





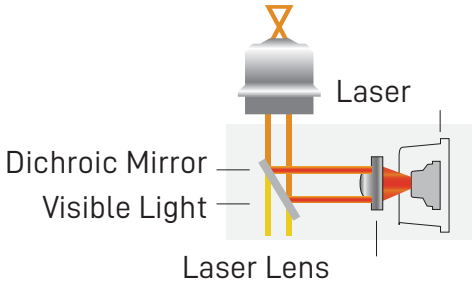
Lasers & Oosight Imaging

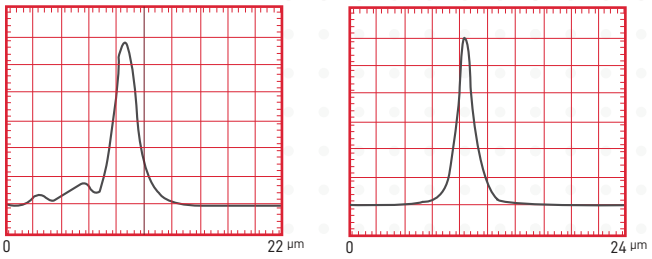
HT Laser Systems

- c.

ZILOS-tk

- Hamilton Thorne designs, manufactures and distributes precision laser devices and advanced image analysis systems for the fertility, stem cell and development biology research markets
- ZILOS-tk laser is integrated into the objective which is attached directly to the turret of the inverted microscope, leaving both the fluorescent and filter cube ports open for normal use.





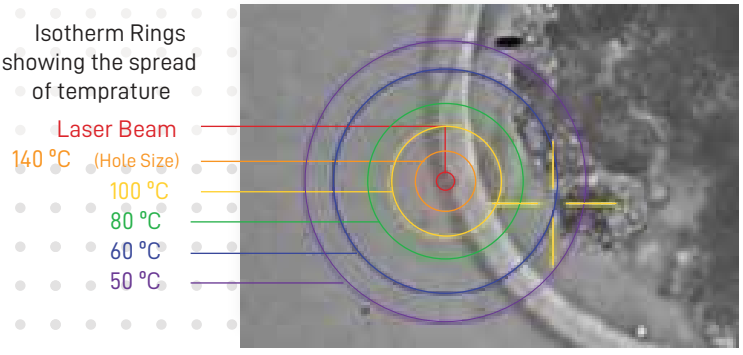
- The laser is integrated as part of the objective to guarantee optical alignment, to provide protection against dust and to sustain the alignment for the life time of the laser.

- The Laser beam should be aligned perfectly with the visible light with all laser components built into the objective, this way, safety can be guaranteed and maintained.

Power 140 mw

Power 300 mw

Isotherm Rings showing the spread of temprature



- The laser is designed with the specimen safety utilizing high power laser and factory aligned laser optics integrated into the laser objective
- The patented isothermal rings is a validated algorithm that calculates how far the heat resulting from the laser shots will spread deep into the specimen.

BINDER

Operational Environment Control Systems

Microbiology Lab Solutions

Incubation and Plant Growth

CO2 incubators

- Temperature range: from ambient +4 °C (or +6 °C) up to +50 °C; humidity up to ~90-95 % RH; CO_2 control range 0–20 vol. % with IR sensor technology.
- Features hot-air sterilisation up to +180 °C, seamless stainless-steel deep-drawn inner chamber, double-pan humidification with condensation-protection, and USB/ethernet data logging.

Cooling incubators

- Temperature range: from +4 °C (or 0 °C) up to +100 °C (or higher) using compressor or Peltier cooling; APT.line™ pre-heating chamber technology ensures uniformity (e.g., 0.3 K at 37 °C).
- Additional features: adjustable fan speed, inner door made of safety-glass, class 3.1 independent temperature safety device (DIN 12880) with visual/ acoustic alarm, USB data interface.

Standard incubators

- Temperature range from ambient +5 °C up to +100 °C (or specific models +30 °C to +70 °C) with convection type options.
- Convection and control features: adjustable exhaust-air flap, controller with timer functions, inner door of tempered safety glass, class 3.1 independent temperature safety device per DIN 12880.

Drying and heating chambers

- Situated in gravity convection or forced convection configurations (Series ED, FD, FED etc.), offering temperature ranges from ambient +5 °C (or +7 °C above) up to +250–300 °C, with homogeneous temperature distribution via APT.line™.
- Equipped with USB or Ethernet connectivity for data logging, intuitive controllers (LCD display) and energy-efficient design.

slee solutions for pathology

Medical Labs

Medical Labs

Sample Preparation

Tissue processors

- Automate tissue dehydration, clearing, and paraffin infiltration with closed, reagent-optimized processing systems.
- Support high-throughput workflows with programmable protocols and continuous reagent monitoring.
- Designed for consistent histology quality using controlled temperature, agitation, and vacuum/pressure cycles.

Embedding Centers

- Provide precise temperature control for paraffin dispensing, cold plates, and work surfaces.
- Enable ergonomic, high-throughput embedding with heated forceps holders and adjustable paraffin flow.
- Built for stable, contamination-free workflow with separate heating/cooling zones.

Microtomes

- Deliver high-precision sectioning of paraffin and resin blocks with smooth mechanical or semi-motorized cutting systems.
- Support section thickness down to micron-level resolution for histopathology.
- Feature stable clamping, ergonomic operation, and low-vibration mechanics for reproducible section quality.

Medical Labs

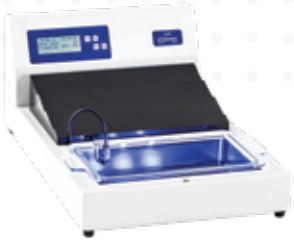
Sample Preparation

Cryostats

- Integrate rapid cooling chambers for frozen tissue sectioning with stable temperature regulation.
- Provide accurate microtomy at sub-zero conditions, ensuring artifact-free cryosections.
- Include UV-C disinfection and antimicrobial surfaces for contamination-reduced operation (per product line features).

Water bath & Slide Warmer

- Water baths maintain stable, homogenous temperatures for gentle section stretching without deformation.
- Slide warmers ensure uniform heating for drying and fixation prior to staining.
- Designed with easy-clean, chemical-resistant surfaces for routine histology workflows.



Staining Systems

- Automate slide staining with programmable protocols, ensuring reproducible histochemical and special stains.
- Use controlled reagent dipping, agitation, and timing for consistent staining intensity.
- Built for high-throughput labs with multiple reagent stations and optimized workflow paths.

Coverslippers

- Provide automated coverslip application using precise dispensing and positioning mechanisms.
- Ensure bubble-free, uniform mounting for high-quality microscopy.
- Compatible with standard slide dimensions and integrate seamlessly with staining systems.

RAININ

Pipetting 360+

Liquid Handling Solutions

Liquid Handling Solutions

Pipettes

Single Channel Pipettes

- Available in both manual and electronic formats with Universal-fit or LTS tip compatibility, designed for ergonomic and durable daily use.
- Deliver precise micro- to milliliter volume transfer, with optimized mechanics for smooth operation and reduced user fatigue.

Multichannel Pipettes

- Provide consistency across 8 or 12 channels, ensuring synchronized volume delivery in plate workflows
- Offered in manual, electronic, and adjustable spacer variants to adapt to varying lab format needs.

High-throughput platforms

- Instruments like the 96-channel semi-automated systems streamline 96-/384-well plate workflows with improved speed and accuracy.
- Designed to combine efficiency and ease of use for repetitive plate-based pipetting without full robotic complexity.

Repeater pipettes

- Manual versions (AutoRep) support dosing ranges from 2 µL up to 5 mL and allow multiple aliquots per aspiration cycle.
- Electronic types (NanoRep) enable precise, repeat non-contact dispensing down to sub-microliter volumes.

Electronic multichannel adjustable spacer pipettes

- The E4 XLS Adjustable Spacer models support three volume ranges (5-50 µL, 20-300 µL, 100-1200 µL).
- They allow continuous nozzle spacing adjustment to transition between tubes and plate formats efficiently.

Liquid Handling Solutions

Pipette Tips

- Pipette tips are disposable, form-fitting polypropylene tips used to ensure accurate and consistent micro-volume transfers in research workflows.
- They are autoclavable and chemically stable, preserving integrity in diverse solvent and buffer environments.
- Filtered tips are certified free of RNase, DNase, DNA, and pyrogens, and sterilized post packaging to prevent contamination.
- Low-retention tips incorporate superhydrophobic surfaces to reduce sample adherence and improve recovery of viscous or low surface tension liquids.
- Wide-orifice tips minimize shear stress and reduce flow resistance when handling delicate or viscous samples.
- Extended-length tips are designed to reach into deep, narrow vessels, enabling access in tall or narrow labware.
- Large-volume tips (10 mL – 20 mL) with macro FinePoint geometry provide accurate dispensing of bulk liquids.
- Positive displacement syringe or capillary tips suit viscous, volatile, or high-density liquids by eliminating air gap effects.
- ShaftGard 10 µL tips wrap the pipette's ejector and shaft to guard against cross-contamination in critical applications.
- Rainin tips undergo continuous quality control testing to meet rigorous cleanliness and physical specification standards.

Liquid Handling Solutions

Semi-Automated Pipetting Systems

- The high-throughput platform line comprises semi-automated 96-channel pipetting systems tailored for 96- and 384-well workflows.
- The BenchSmart 96 system supports three quick-change pipetting heads covering volumes from 0.5 µL to 1 mL.
- The MicroPro 96-channel system features "Pipetting Depth Recall" to maintain consistent tip immersion levels across wells.
- BenchSmart's interface offers touchscreen control of aspiration, dispensing, tip loading, and ejection.
- BenchSmart supports multiple pipetting modes including basic, dilute, multi-dispense, reverse, volume sequencing, mixing, and cycle count.
- Its four-plate layout is designed to minimize tip or reservoir swaps, streamlining multi-step protocols.
- The BenchSmart software allows user accounts, password protection, mode presets, and protocol memory for reproducible workflows.
- MicroPro is among the smallest 96-channel pipettors on the market, optimizing use of bench or biosafety cabinet space.
- MicroPro's precision specs include a volume range of 2–20 µL, with accuracy and precision designed to stay within low percentage error tolerances.
- Pipette tips designed for these systems use Rainin BioClean LTS technology, compatible with semi-automated pipetting performance requirements.

Liquid Handling Solutions

Pipette Management

- Pipette Management includes SmartCheck™, a tool that verifies pipette performance in less than 60 seconds.
- SmartCheck measures dispensed volume with three repeats and provides a pass/fail result against pipette tolerances.
- It works with any pipette brand dispensing between 10 µL and 1,000 µL, including individual channels of multichannel pipettes.
- PipetteX™ software automates pipette tracking, usage monitoring, and data collection for asset management.
- PipetteX is brand-agnostic, supporting pipettes from different manufacturers.
- SmartStand serves as a docking and charging station, keeping pipettes organized and ready.
- The system ensures audit readiness by maintaining detailed logs of usage, verification, and calibration.
- Regular SmartCheck use helps identify out-of-tolerance pipettes before critical experiments.
- PipetteX allows scheduling of service, calibration, and maintenance across large pipette fleets.
- Together, SmartCheck, PipetteX, and SmartStand provide a complete life-cycle management solution for pipettes.

METTLER TOLEDO

Laboratory Balances

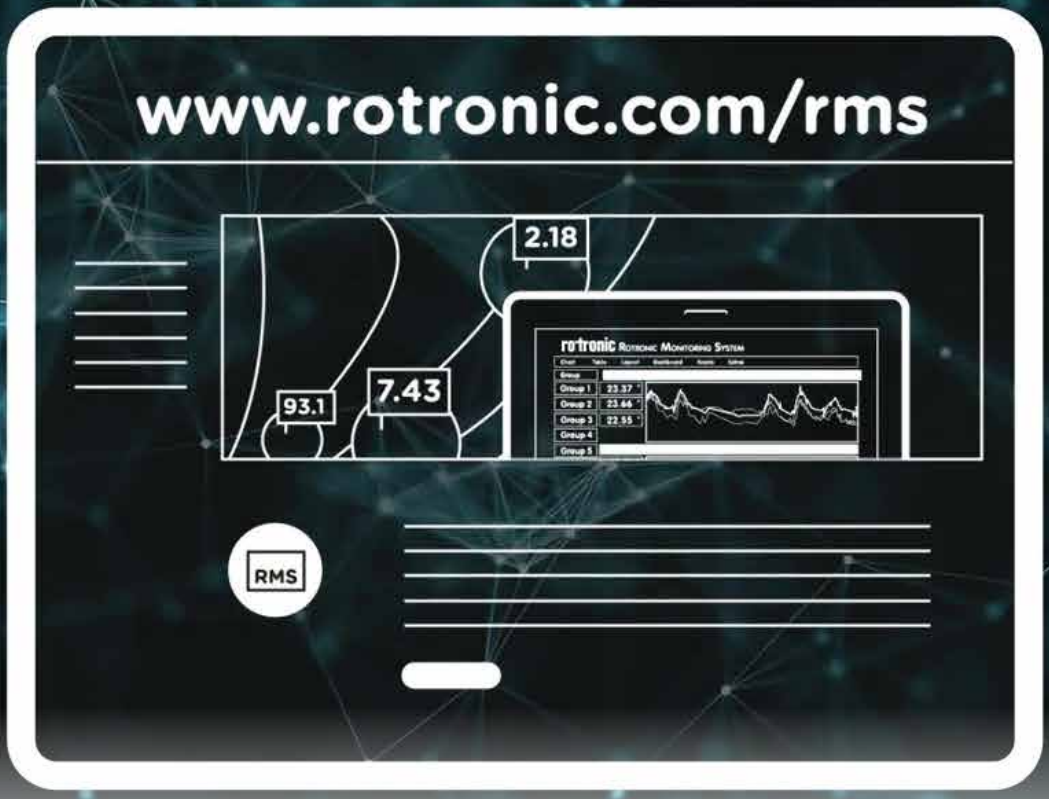
Laboratory Balances

Analytical Balances

- MonoBloc Weighing Cell: A monolithic, micromachined load cell that eliminates mechanical hysteresis and thermal drift to maintain linearity at 0.1 mg or 0.01 mg resolutions.
- FACT Calibration: Employs internal motorized weights to trigger automatic sensitivity adjustments based on real-time temperature deltas and elapsed time intervals.
- StaticDetect Technology: Detects non-gravitational forces caused by electrostatic charges on samples and activates integrated ionizers to neutralize drift before data recording.
- SmartPan Geometry: A specialized grid-style weighing pan that minimizes air turbulence impact, reducing stabilization times and improving repeatability in laminar flow hoods.
- LabX Data Integrity: Supports ALCOA+ standards via bi-directional MT-SICS communication, ensuring automated metadata capture and compliance with FDA 21 CFR Part 11.

Precision Balances and Scales

- EMFC MonoBloc Load Cell: A monolithic, single-piece electromagnetic force compensation cell that supports high capacities (up to 64 kg) with precision down to 1 mg.
- SmartPan Technology: A specialized weighing pan that reduces air turbulence, providing up to 2x faster stabilization and improved repeatability in fume hoods.
- FACT Internal Adjustment: Automatically adjusts balance sensitivity using internal weights triggered by ambient temperature deltas or pre-defined time intervals.
- Electronic LevelControl: Built-in sensors continuously monitor the balance's physical orientation and issue visual/acoustic alerts if the unit requires leveling.
- Metrological Connectivity: Utilizes MT-SICS commands for bi-directional data flow to LabX software, ensuring ALCOA+ compliance and digital audit trails.



rotronic

MEASUREMENT SOLUTIONS

A PST BRAND

Operational Environment Monitoring Systems

Operational Environment Monitoring Systems

Rotronic Monitoring System (RMS)

- The RMS is modular hardware plus web-based software: data loggers record values from both Rotronic and third-party sensors and send to a secure database accessible via PC, Mac, tablet or smartphone.
- Supports multiple deployment modes: on-premise installation, public cloud (SaaS) and exclusive cloud versions with validated environments for regulated use.
- Designed for regulatory environments: compliant with GAMP5 (software category 4, hardware category 1), supports FDA 21 CFR Part 11, EU Annex 11 and EU Annex 15 requirements.
- Provides integration of third-party devices via analog input, MODBUS TCP, JSON API and can export data via CSV, PDF, OPC UA and MS SQL.
- Offers real-time notifications: alarms and alerts can be sent via e-mail, SMS, telephone calls; user configurable for warning vs alarm, delay, hysteresis.
- Built-in audit trail and full data integrity: system logs actions, changes, hardware replacements, calibration data; read/write access only, no delete rights in cloud-hosted mode.
- Scalable from single measurement point installations up to systems with several thousand measurement points across multiple locations.
- Supports measurement of many parameters: temperature, relative humidity, carbon dioxide, oxygen, differential pressure, analog voltages/currents and digital inputs.
- Data loggers available with PoE, 24 V supply and backup battery; wireless versions also offered to reduce cabling and risk of data loss.
- Automated and customizable reporting: functionality includes batch-release reports, deviation reports, calibration/validation reports and mapping reports (e.g., DIN 12880, NF X 15-140, USP 1079, WHO Supplement 8).

BMS and EMS	**Environmental Storage**	**Pharmacy & Drugstore**
Warehouse Monitoring	**Incubators Monitoring**	**Cold Chains Temperature**
Food and Tobacco	**Cleanrooms**	**Cold Storage Temperature**
Data Center Monitoring	**Compressed Air Systems**	**IVF Labs**

Taawon

CHOICE OF EXCELLENCE

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