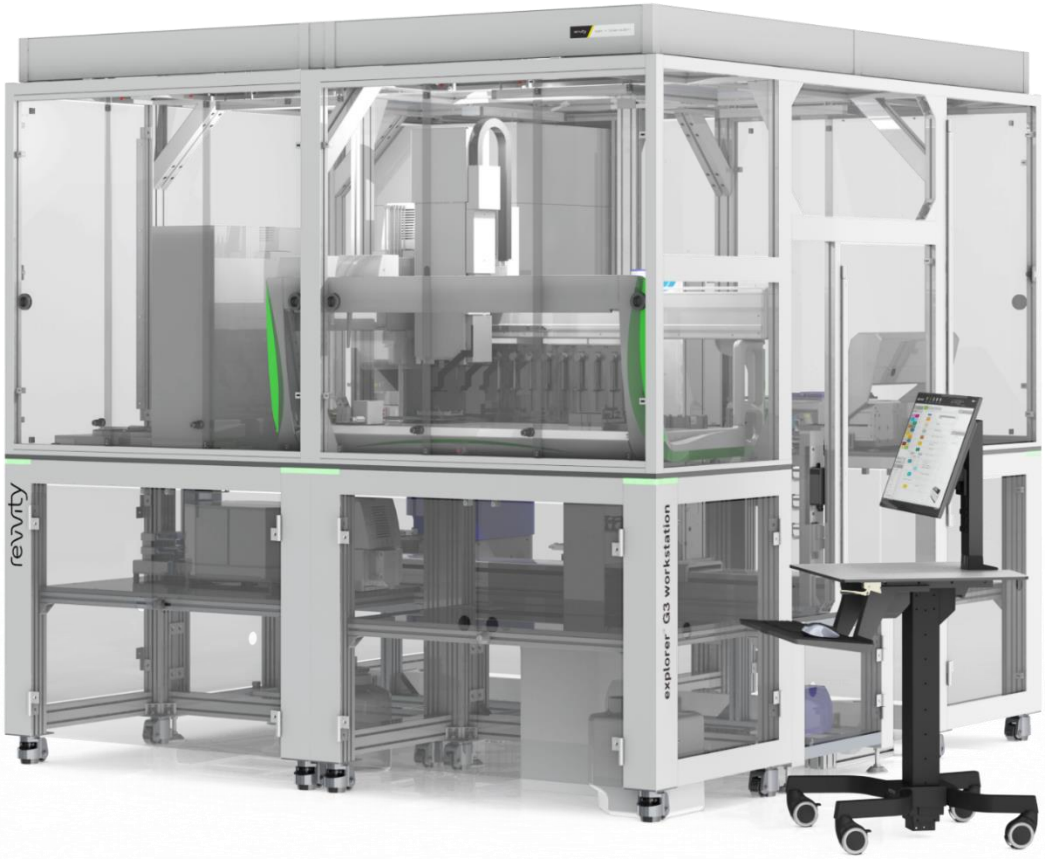
explorer™ G3 workstation

Brochure

CUSTOM, MODULAR AUTOMATION SOLUTIONS

Automation will be key to increase lab efficiency and to drive scientific advancement. explorer™ G3 workstation comprises a hardware and software platform which can be freely configured to create modular, bespoken automation solutions which provide turnkey automation solutions for virtually all scientific workflows.



WHY AUTOMATE YOUR SCIENCE?

- IMPROVE EFFICIENCY
- INCREASE PRODUCTIVITY
- REDUCE HANDS-ON TIME
- DYNAMIC, REAL-TIME DECISION MAKING
- EQUAL SAMPLE/PLATE TREATMENT
- MODULARITY & SCALABILITY

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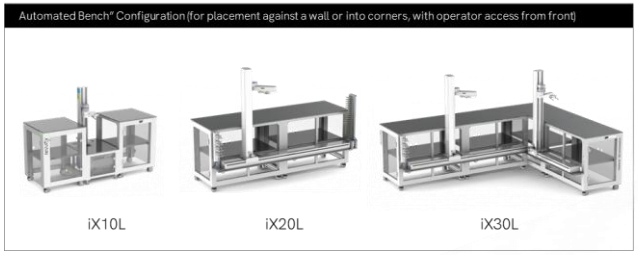
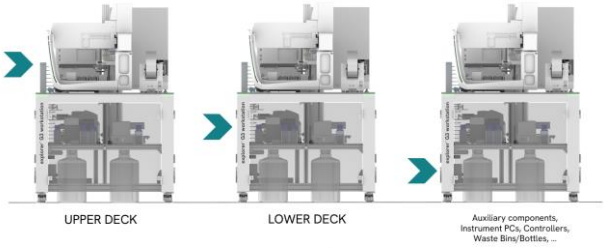
PLATFORM

Center piece of explorer™ G3 workstation workstation platform are a range of standardized Instrument and Robot Tables which can be assembled to create modular, easy-to-upgrade workstations of different shapes and sizes.



SPACE SAVING VERTICAL INTEGRATION CONCEPT



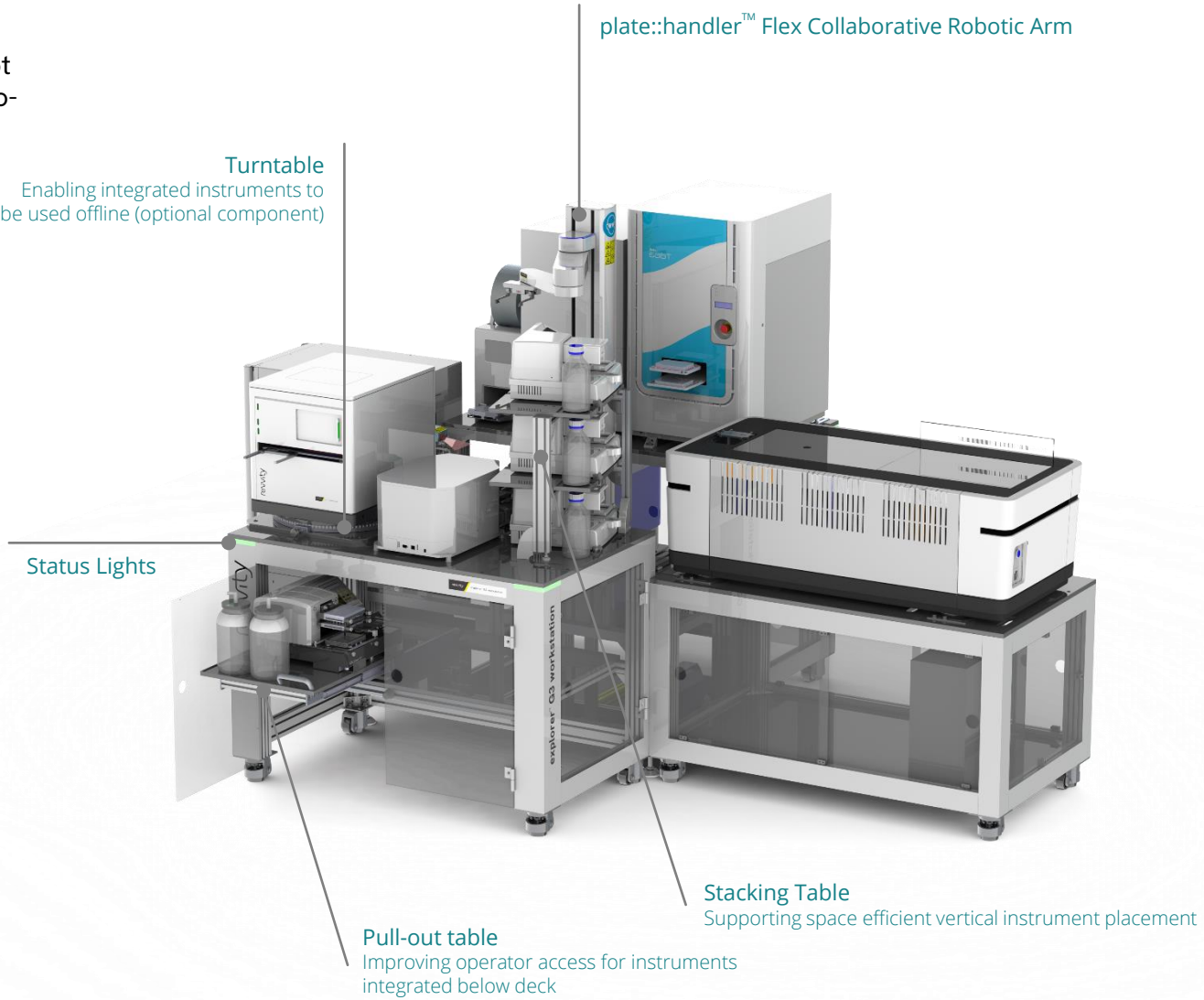


plate::handler™ Flex ROBOT

- Collaborative, four-axis SCARA robot with built-in safety features enabling side-by-side human-robot cooperation; no safety shielding needed
- Full metal casing, space saving design with motion controllers build into the structure of the robot
- Fast, fluid and quite movements
- Build-in Servo gripper enabling robot to grip plates on either long or short side
- Hand guided teaching
- Robot available in 3 different heights (400, 750 and 1160mm), and two different arm length with option to increase lateral reach by placing robot on a linear track (1m, 1.5m, 2m)

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plate::works™
SCHEDULING & CONTROL SOFTWARE

BUILDING ON 20+ YEARS OF EXPERIENCE

Launched in 1997 to support industrial high-throughput screening applications, plate::works™ scheduling software supports parallel execution of processes within one workcell as well as over multiple connected workcells. With plate::works™ to plan and to continuously optimize labware movements. With full sample tracking and an unlimited number of transportation devices (robotic arms, turntables, grippers, conveyor belts,...) working in parallel and in a coordinated way to increase throughput and efficiency.

FLEXIBLE

plate::works'™ event-based scheduling concept, while fundamentally dynamic and hence able to adapt schedule to changes with execution times, instrument errors, in response to results, user changes, ... will empower operators to take fully control of method execution. With check points, branches and the option to fix timings for critical steps, adding a level of control needed to accommodate even the most challenging workflows. With plate::works™ scheduling software to increase operational efficiency by supporting an unlimited number of workflows processed in parallel.

EASY-TO-USE

To create a new method, operators can drag-and-drop instrument icons to create a workflow. With plate::works™ scheduling software to guide users through the steps to set-up and parametrize automated processes. All labware movements to be planned, optimized and coordinated automatically by the scheduler. With all transportation devices to use speed settings and gripping positions stored in a central labware database. No need for operators to teach-in new plates and/or to plan and program labware movements.

RELIABLE

Originally developed to support 24x7 automation in an industrial screening environment, plate::works™ will make every attempt to recover from an error situation. Making a failed or to be aborted run an exceptional event. Advanced error handling routines will guide operators through the steps and options to get the system quickly back into operation.

explorer™ G3 workstation

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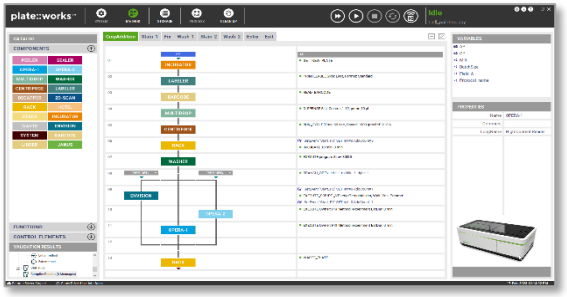
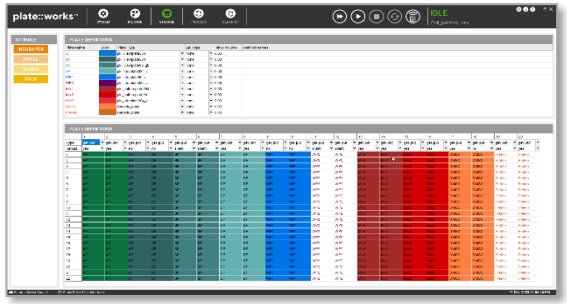
plate::works™
SCHEDULING & CONTROL SOFTWARE

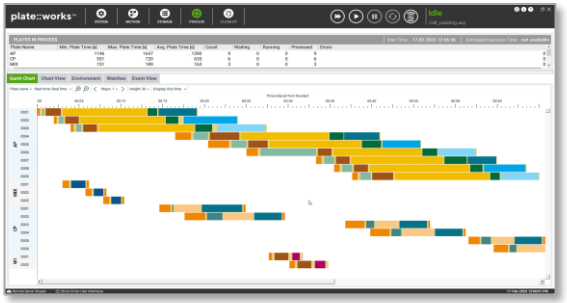
METHODS EDITOR



STORAGE EDITOR



GANTT CHART



KEY FEATURES	
Event Driven Scheduling	plate::works™ scheduling software to combine advantages of dynamic and static scheduling enabling operators to control and fine-tune scheduling by adding constraints and/or controlling elements
Real Time Decision Making & Re-Scheduling	Scheduler to support on-the-fly re-scheduling allowing critical parameters to be updated at any time during a run and plate processing to respond to external data or events (results, conditions, LIMS, scripts, ...)
Parallel Methods	Scheduler to support multiple independent methods being executed in parallel
Support For Multiple Robots	Scheduler to support an unlimited number of robots and other plate handling devices (conveyor belts, turntable, shuttle stations, ...) to move simultaneously and in coordination. With scheduler to automatically plan, optimize and coordinate plate transportation between instruments
Continuous / On-Demand Processing	Scheduler to support continuous plate processing allowing new plates and labware to be added to an already running process as well as on-demand plate processing with system to process plates when they become available
Pooling	Multiple identical instruments to be treated as one logical instrument (for easier programming and added redundancy)
Simulations	To quickly optimize workflows (test different process variants and conditions) and to check for correct execution prior to committing time and reagents
21CFR11 Support	plate::works™ scheduling software to support setting-up regulated processes by providing user rights management and by logging changes being made to methods
Worklist Support	Plate/sample specific parameters or conditions (incubation times, dispense volumes, ...) can be read from worklists. Support for cherry picking, normalization and other tasks relaying on external information
Scripting Support	Enabling operators to add own functionality to scheduling process
Offline Use	plate::works™ scheduling software to support operators taking critical detection instruments off-line and to use manually up till the point where instrument is been needed to support the automated process.

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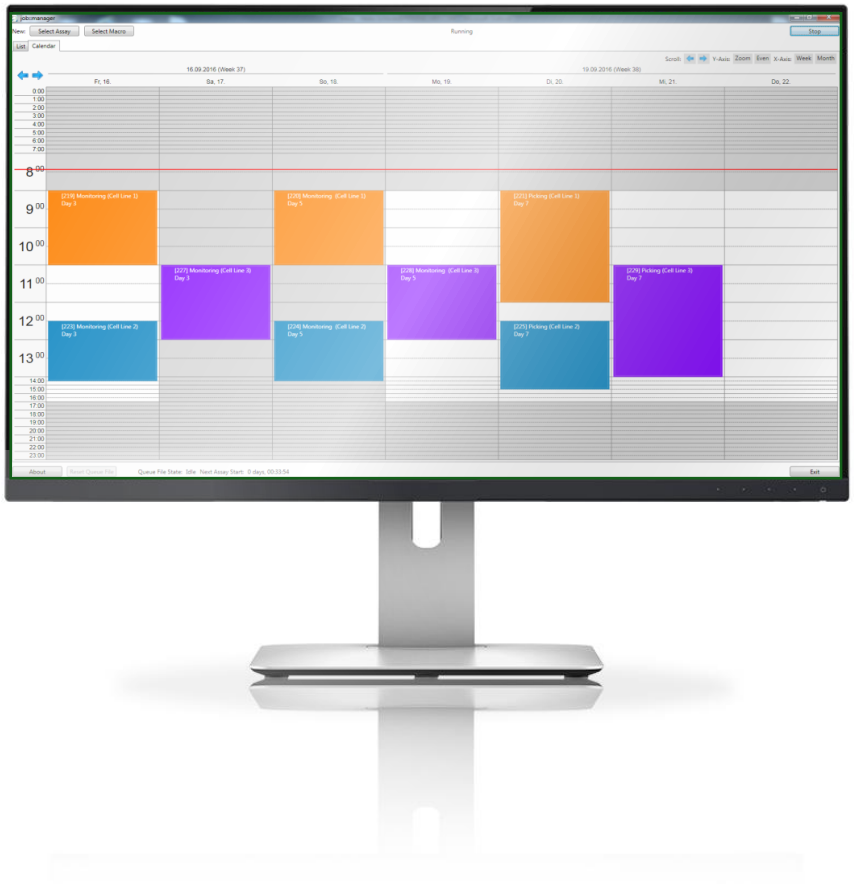
job::manager
WORKFLOW PLANNING

As part of plate::works, job::manager will allow (multiple) users to plan method execution over longer periods of time, with job::manager to automatically start methods at the scheduled time. Featuring a calendar view, job::manager provides an easy overview about workstation availability enabling operators to interleave multiple runs and/or to break down longer experiments (spanning over days or weeks) into smaller processes and routines which can be re-used.



KEY FEATURES	
Improve equipment utilization	Plan & execute long-term processes while retaining flexibility to use system for other tasks
Simplify method programming	Break down long-term processes (running over days/weeks) into more manageable modules
Quickly set-up multi-day schedules and sequences	Macros to automatically add reoccurring tasks (e.g. daily media exchange) to schedule
Outlook style “Calendar View”	Software to warn users when a scheduled run is approaching
Support multi-user environments	Inventory management functionality to show operators which positions e.g. in an incubator are already allocated and which are free to add new plates

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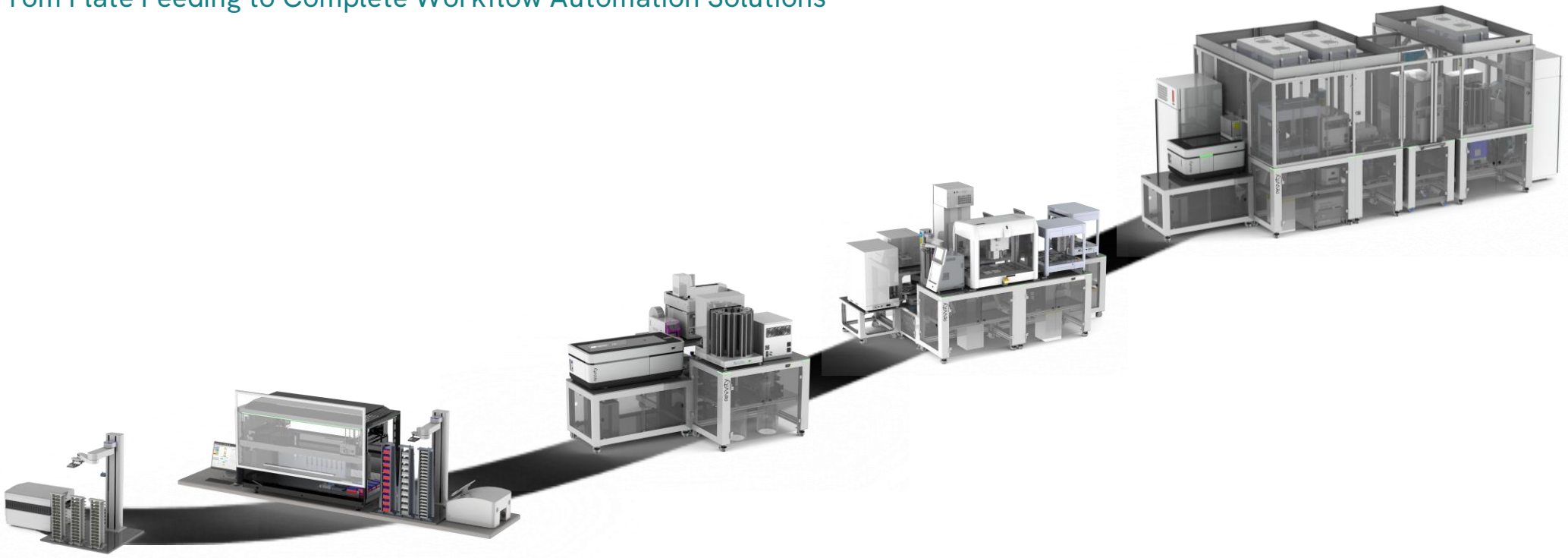
From Plate Feeding to Complete Workflow Automation Solutions



INSTRUMENTS & AUTOMATION OUT-OF-ONE HAND

20+ YEARS EXPERTISE IN BOTH INSTRUMENTS & AUTOMATION

ALL WORKSTATIONS USING SAME HARD-/SOFTWARE COMPONENTS