



Autoclave Scheduler

AI-powered scheduling solution that optimizes autoclave utilization, cuts energy consumption, and ensures on-time delivery

Overview

Autoclave Scheduler (patent pending) optimizes curing cycles, one of the most energy-intensive and costly steps in composites manufacturing. By leveraging AI-based algorithms, historical and real-time data, and advanced control strategies, the solution generates optimal autoclave schedules that reduce cycle runs, improve utilization, and maximize throughput.

Part of Plataine's TPO (Total Production Optimization) suite, Autoclave Scheduler connects planning and execution with the shop floor, predicting bottlenecks, adapting to unexpected changes, and driving significant improvements in operational efficiency, sustainability, and performance.



Save power & reduce autoclave operation costs



Increase autoclave efficiency & release bottlenecks



Increase overall factory throughput and efficiency

Key Features

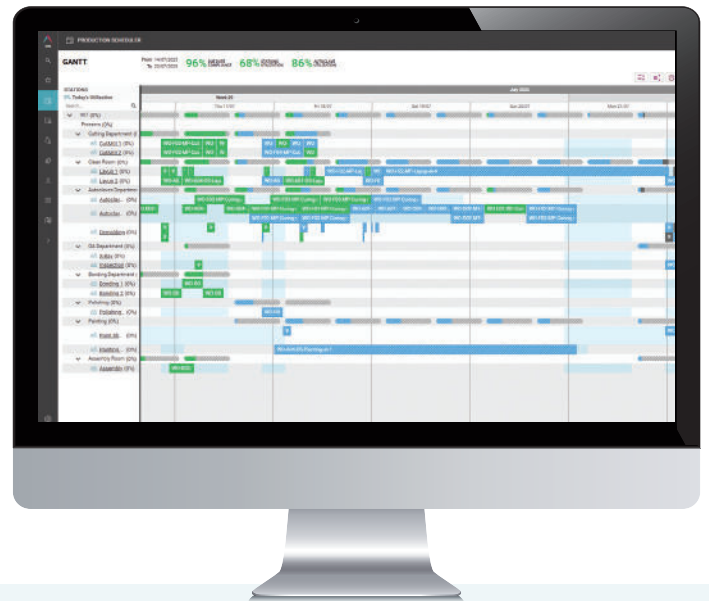
- **AI-driven optimization:** Generates optimal schedules that maximize autoclave load and improve throughput
- **Dynamic rescheduling:** Quickly adapts to delayed prep, missing tools, or urgent order changes
- **Multi-variable planning:** Considers cure cycles, temperatures, cool-down times, vacuum ports, daisy chains, part sizes, and tool allocation
- **Energy-aware scheduling:** Optimizes cycle timing to reduce energy use and align with regulation hours
- **Simulation capability:** Enables “what-if” scenario planning for ramp-up readiness and risk-free decision-making
- **Seamless integration:** Connects with ERP/MES for full production visibility and traceability
- **Intuitive user interface:** User-friendly design with fast adoption and minimal training requirements

Benefits

- **Reach operational excellence:** Transforms reliance on manual and spreadsheet-based scheduling into a fully automated optimization engine. Handles complex planning constraints including part recipes, tooling requirements, operator availability, and compliance standards. Schedule creation and updates drop from days to minutes, freeing planners to focus on strategic decision-making.
- **Dramatically improves** autoclaves utilization.
- **Cut energy costs:** Eliminates unnecessary runs.
- **Safeguard delivery timelines & reduce financial risks:** Optimized load balancing ensures on-time curing. Automated validity checks reduce errors, rework, and delays, protecting margins and ensuring compliance.
- **Enable scalable ramp-up:** Supports bulk scheduling, dynamic rescheduling, and enforcement of complex constraints. Independent operation after minimal training allows scalability without additional headcount or additional equipment.
- **Enhance visibility & collaboration:** Delivers 100% real-time visibility across production, enabling planners, operators, and managers to share live schedules. Task-level commenting supports cross-team traceability and alignment.
- **Drive sustainability & long-term value:** Reduces waste, improves labor efficiency, supports EU compliance goals, and provides a future-proof scheduling platform that scales with growth.

Meet Your Autoclaves Goals with Plataine

Autoclave Scheduler ensures efficient, sustainable, and predictable curing operations. By automating one of the most complex and energy-intensive steps in composites manufacturing, the solution empowers manufacturers to increase throughput, cut costs, and enhance quality while advancing sustainability targets and digital transformation journeys.



ABOUT PLATAINE: Plataine is the leading provider of Industrial IoT and AI-based optimization solutions for advanced manufacturing. Plataine's solutions provide intelligent, connected Digital Assistants for production floor management and staff, empowering manufacturers to make optimized decisions in real time. Our award-winning, patent-protected technologies are used by leading manufacturers worldwide including Airbus, IAI, Triumph, MRAS (an ST Engineering company), Alestis, Kineco-Aerospace, IFS, Kanfit, and Ethan Allen. Plataine partners with SAP, Microsoft, Siemens PLM, AMRC with Boeing, and CTC GmbH (an Airbus company), and is a member of the UK National Composites Centre (NCC).

Plataine has received Frost & Sullivan's Global Technology Innovation Leadership Award for AI-Based Digital Assistants for Manufacturing, as well as awards from JEC, SME, and Composites UK. Plataine is ISO 27001 certified for compliance with information security management. For more information, visit: www.plataine.com.