E.HMI CONNECT

PARTICLE FOAM HMI BY ERLENBACH

PARTICLE FOAM PROCESSING

EQUIPMENT & BRAND CONTEXT

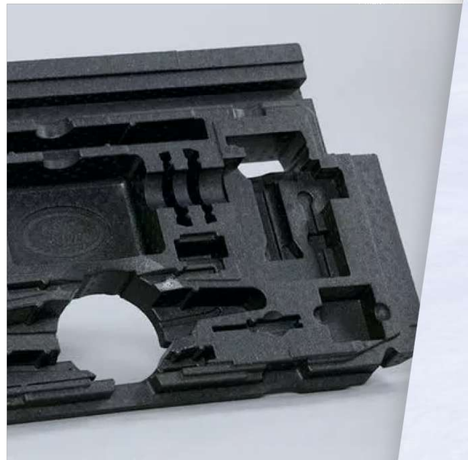
Erlenbach GmbH is an internationally active manufacturer of particle foam processing systems and has gained a worldwide reputation for complex special solutions in this field.

The goal of the project was to develop a modular, scalable HMI standard for the shape molding machines that can be adapted to the clients complete machine portfolio. Based on a user-centric approach all requirements were identified through detailed context analyses. The resulting concept was validated and optimized through prototyping and user testing.

Erlenbach Maschinen

PRODUKTE

Materials & product examples



Shape molding machine

OPTIMISED USABILITY

BY SIMPLE BUT PROVEN SOLUTIONS

The user interface is characterized by a contemporary dark look. Based on a flexible column and grid system, a comprehensive and ergonomic design system was developed. It can be operated intuitively through various swipe and multi-touch gestures.

By reducing the complexity a fast start for new operators is guaranteed. This reduces teaching time, operation errors, downtime and leads to an increased effectiveness and efficiency. And last but not least more joy of use.

MULTITOUCH GESTURES
FOR EASY & MODERN OPERATION

RESPONSIVE DESIGN SYSTEM
FOR MULTIPLE SCENARIOS & DEVICES

PRODUCTION OPTIMISATION
SUPPORTED BY ARTIFICIAL INTELLIGENCE

PERFECT ACCESSIBILITY
BY OPTIMISED DESIGN & HIGH CONTRASTS

ERGONOMIC & INTUITIVE
FOR SAFE & ACCURATE OPERATION

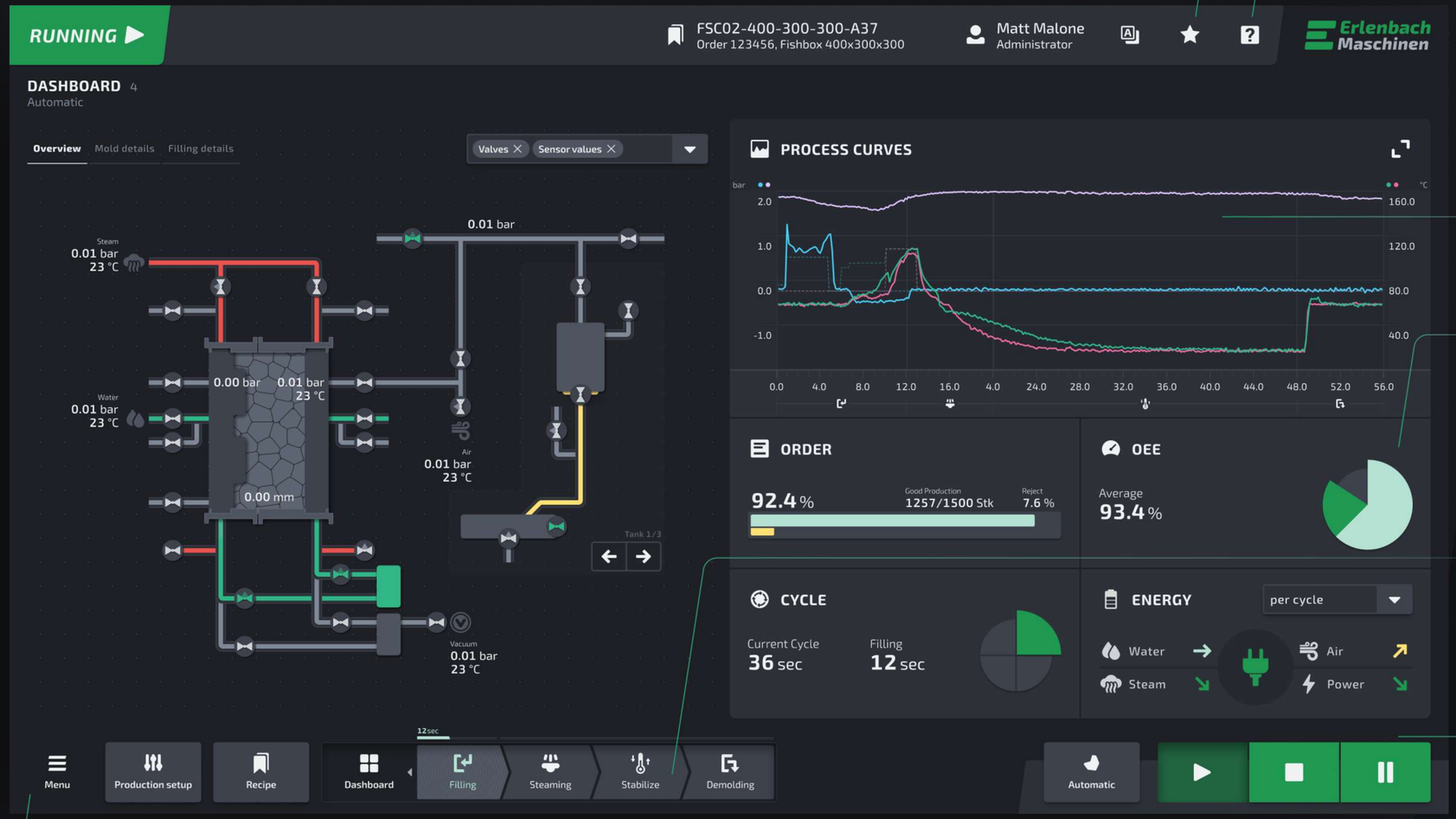
MULTIPLE USER ROLES
WITH DEPENDENT SCOPE OF FUNCTIONS

QUICK OVERVIEW OF MOST IMPORTANT
PRODUCTION DATA & FUNCTIONALITIES

OPTIMISED FOR VARIOUS
MACHINES & PRODUCTION SCENARIOS

EXCELLENT USER EXPERIENCE

PROVIDED BY TAILOR MADE FEATURE SETS



CUSTOMIZABLE BY USER
Access to favorite parameters, settings or pages via an individual sidebar

FULLY INTEGRATED AND ELABORATE CONTEXT HELP
Available at any time / overlaid as a sidebar / with content that matches the current displayed situation

QUICK- & EASY-TO-READ INFOGRAPHICS
Integrated perfectly into the interface / with an easy-to-understand shape and color system

DASHBOARDS & WIDGETS FOR ENERGY, EFFICIENCY & OPTIMIZATION
Thematically bundled display of the most important information and settings / elaborated responsively for various display situations

PROCESS BASED FOOTER NAVIGATION
Simplified abstract visual representation of the process flow / highlight on current cycle step and remaining time for best control

MACHINE & OPERATING MODE CONTROLS
Always accessible in the application footer for full production control at all times

GLOBAL MAIN MENU
Available at any time / offering the user access to all available navigation options

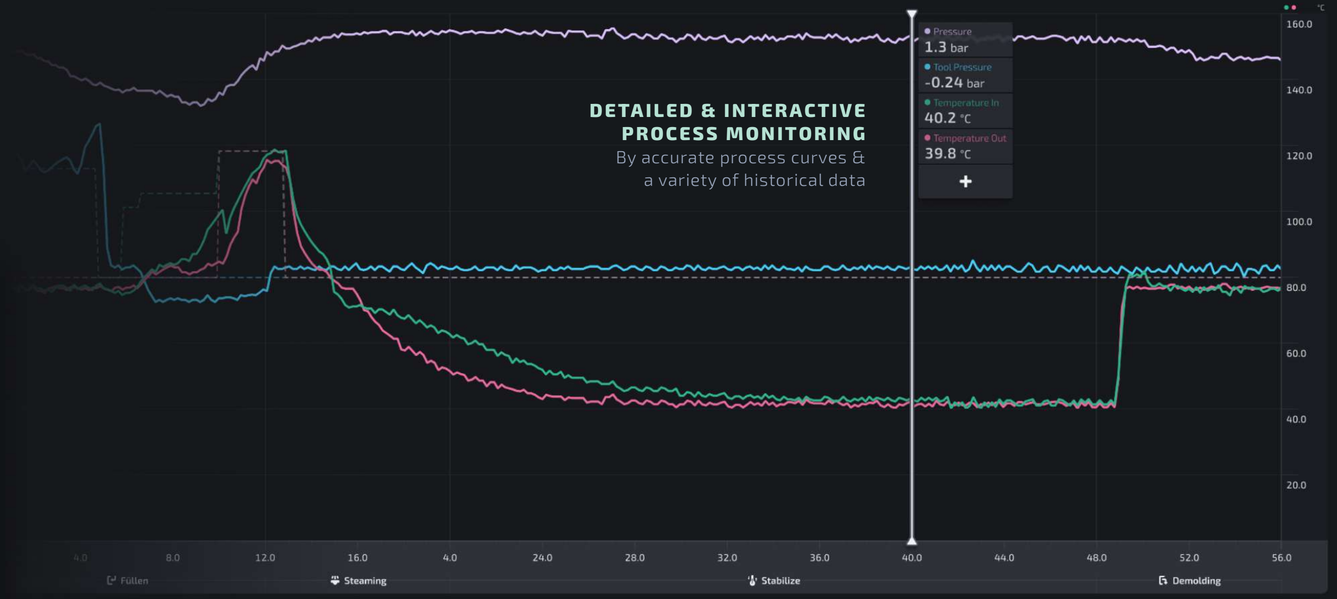
SUSTAINABILITY BY DESIGN

SMART WIDGETS & EASY-TO-READ DATA

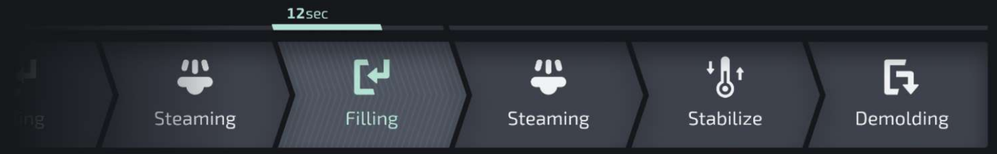
Various infographics help to display the complex production and machine data. A clear and simple graphic design integrates the visualization seamlessly into the design system. Strong contrasts support a low-barrier design which also takes red-green blindness into consideration. Each state is obviously displayed with the help of icon-text combinations and specific area extensions.

SIMPLE VISUALIZED STATUS INFORMATION
With an easy-to-understand icon language and an intuitive color system

FLEXIBLE & RESPONSIVE WIDGET SYSTEM
Designed for different display situations, production scenarios & user levels



DETAILED & INTERACTIVE PROCESS MONITORING
By accurate process curves & a variety of historical data

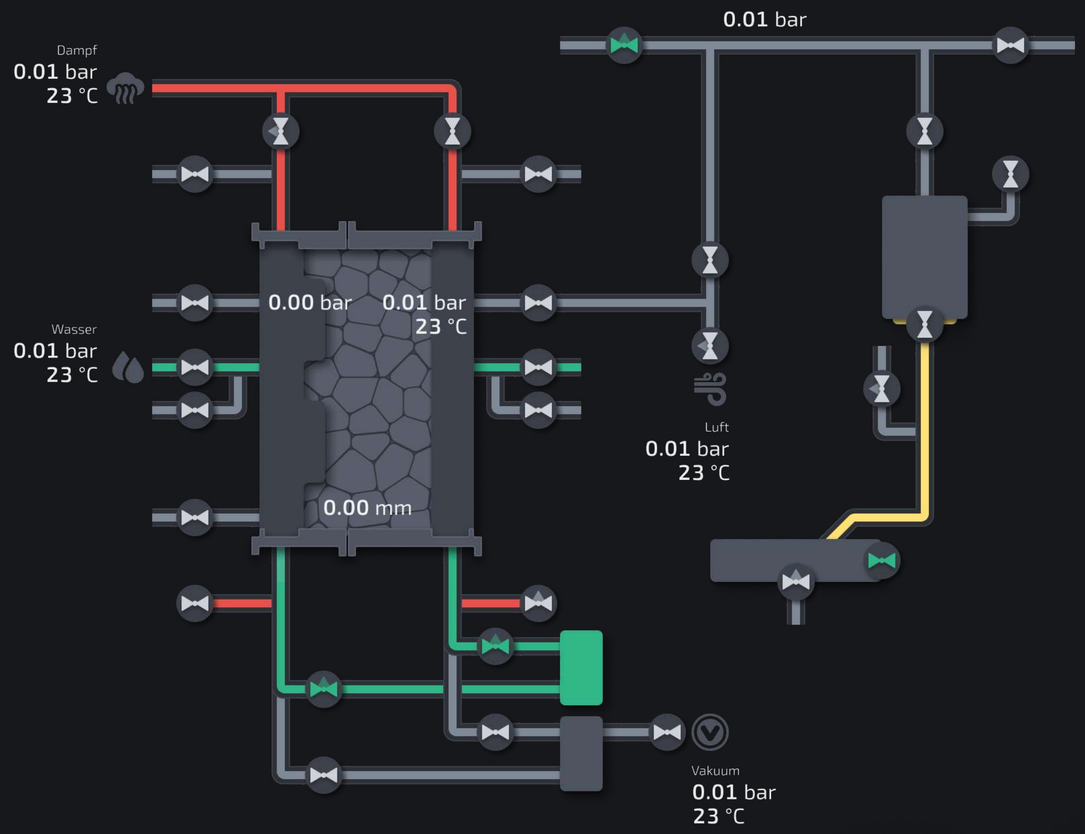


ALWAYS INFORMED ABOUT CURRENT CYCLE STEP
Through process based structure, visual highlighting & an animated progress bar

INTERACTIVE ILLUSTRATIONS

AUTO-GENERATED BY A MODULAR COMPONENT SYSTEM

Experienced users work with an interactive machine illustration (e.g. valve switching) and real-time parameter displays that help the user to monitor the production process and adjust the plant. The colors of the pipes are matching the physical machine, for an easy and fast orientation during mechanical work. Switching between several more or less detailed views enables an ideal user experience in each use case.



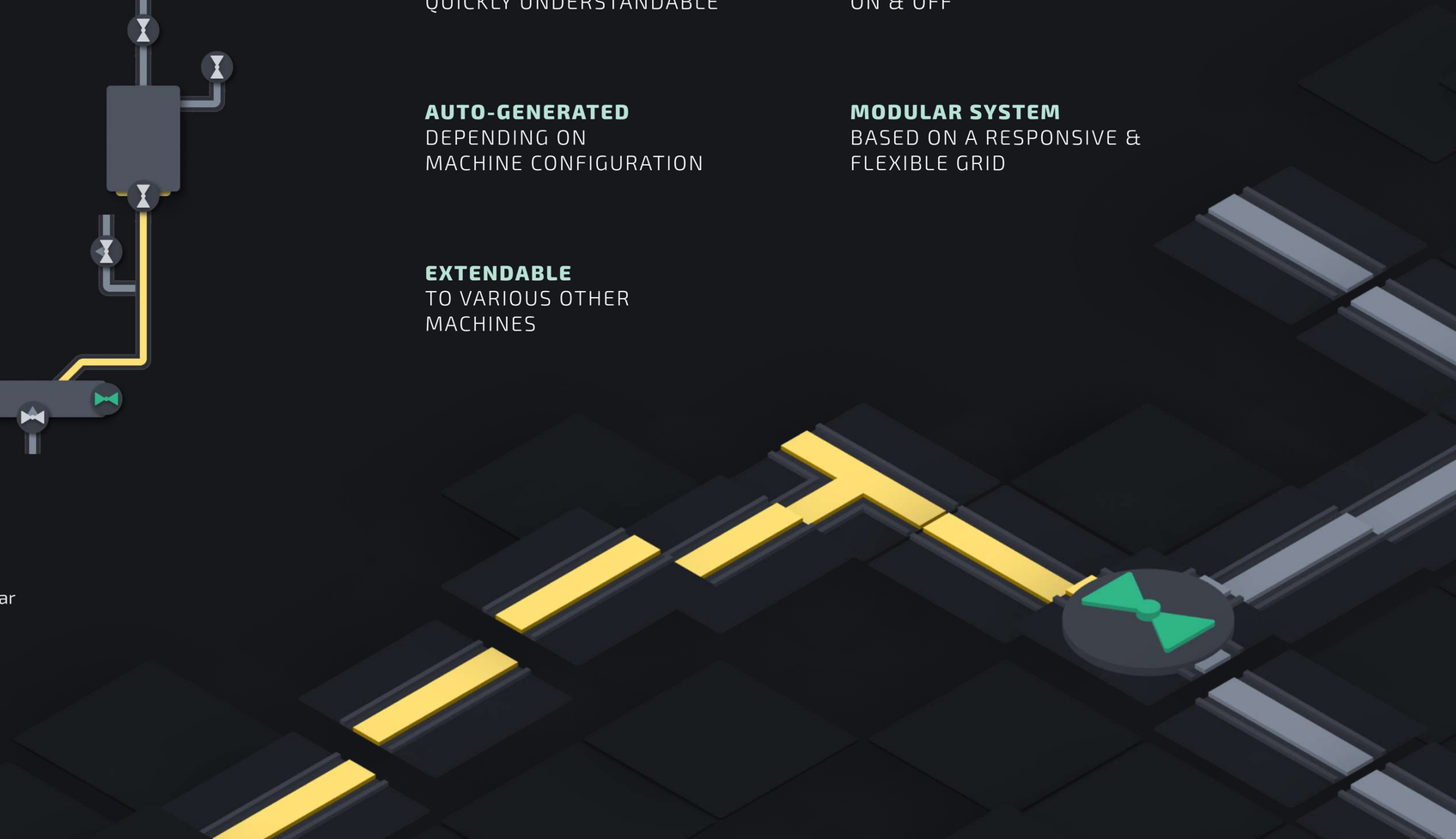
INTERACTIVE PLANT PICTURE
VISUALIZED SIMPLE & QUICKLY UNDERSTANDABLE

LOW COMPLEXITY
BY SWITCHING INFORMATION ON & OFF

AUTO-GENERATED
DEPENDING ON MACHINE CONFIGURATION

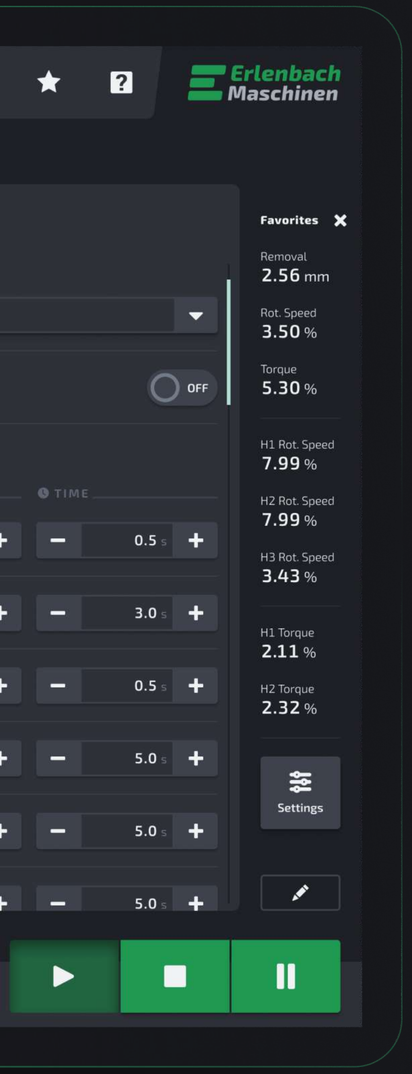
MODULAR SYSTEM
BASED ON A RESPONSIVE & FLEXIBLE GRID

EXTENDABLE
TO VARIOUS OTHER MACHINES



MAXIMUM CUSTOMIZABILITY

NEED & PROCESS BASED DISPLAYS AND FUNCTIONS

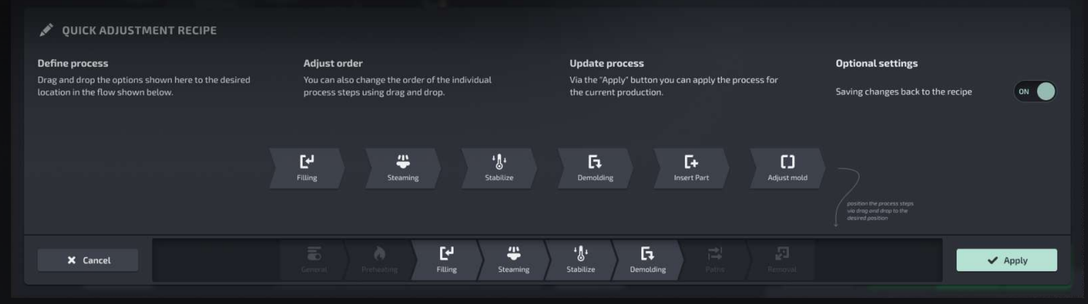


EXPERT OPERATION

Extensive options for manual machine setups / Supported by clear and simple machine part visualizations

INTUITIVE DRAG&DROP EDITOR

For easy customisation of process flows / based on preconfigured process steps

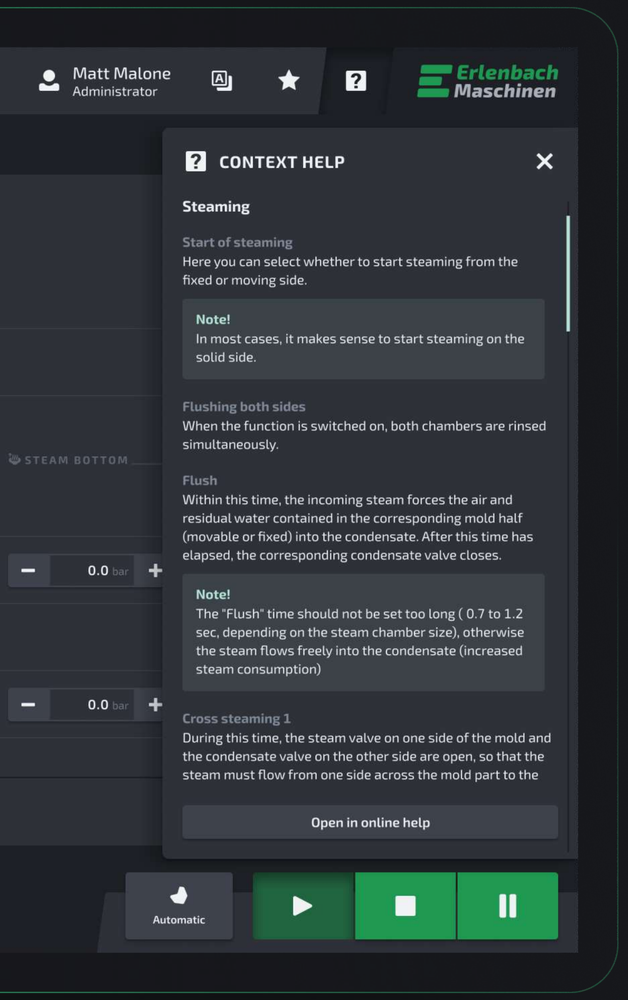


FREQUENTLY USED PARAMETERS AND FUNCTIONS

Can be saved in the favourites sidebar to be accessed from anywhere at any time / Individually customisable by each user according to their needs

SAFETY INCREASE & ERROR REDUCTION

BY SMART ASSISTANCE AND MESSAGING SYSTEMS



CONTEXT HELP – AVAILABLE AT ANY TIME

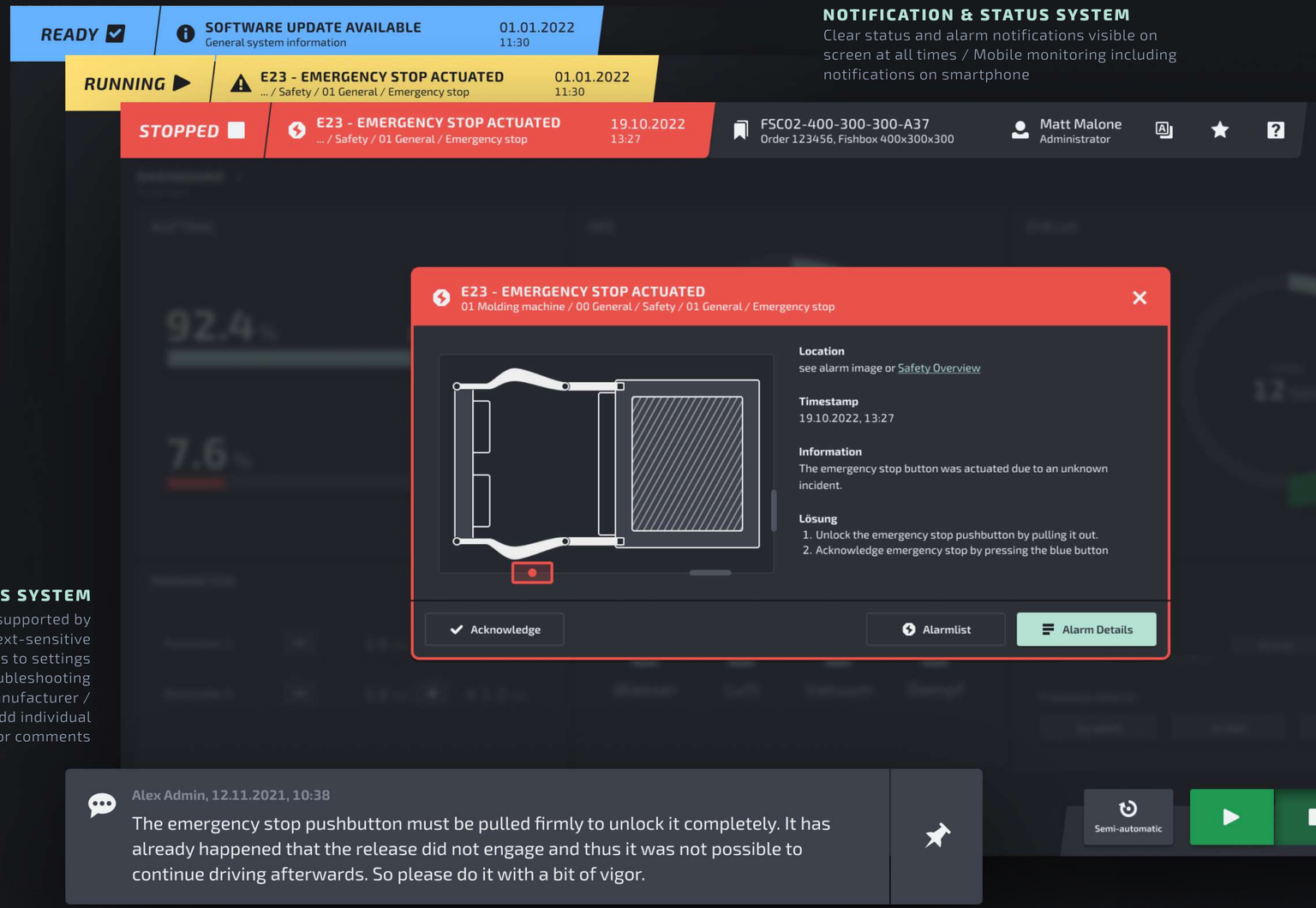
Digital documentation on the HMI / With index and search option / Easily accessible via tooltips, a collapsible sidebar or a full screen help page

MESSAGES SYSTEM

Error messages are supported by clear descriptions, context-sensitive illustrations, crosslinks to settings pages, suggested troubleshooting solutions from the manufacturer / And the ability to add individual operator comments

NOTIFICATION & STATUS SYSTEM

Clear status and alarm notifications visible on screen at all times / Mobile monitoring including notifications on smartphone



PREPARED FOR THE FUTURE

INTELLIGENT ENERGY MONITORING & MACHINE LEARNING FEATURES

HIGHEST QUALITY
WITH SHORT CYLCE TIMES
AND LONG
MACHINE LIFETIMES

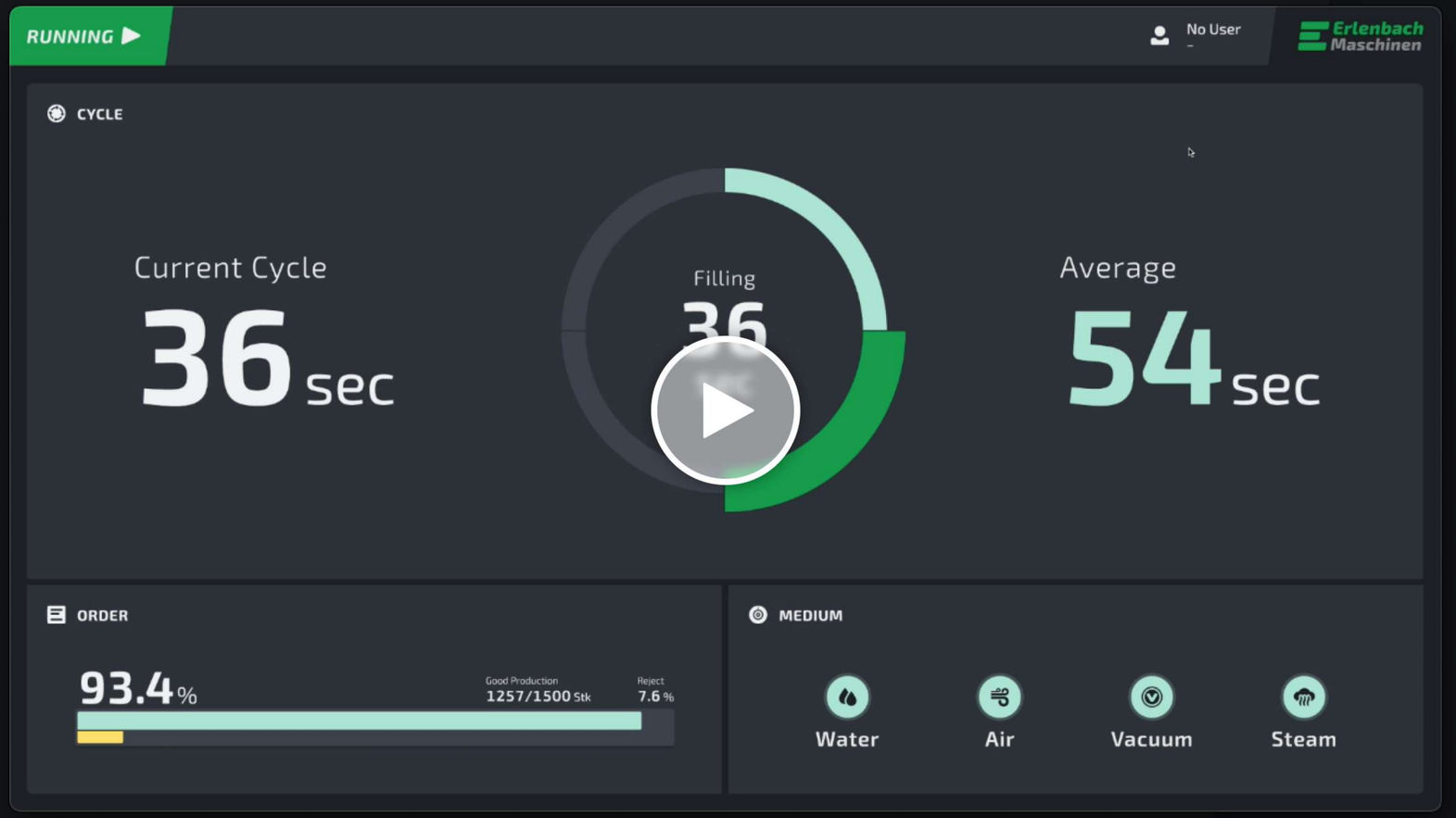
ENERGY OPTIMIZED
PRODUCTION
WITH REAL TIME MONITORING
OF ALL THE SENSORS

MACHINE LEARNING &
AI SUPPORT
FOR AUTOMATED OPTIMIZATIONS
OF PRODUCTION PARAMETERS

ANIMATION ENHANCED EXPERIENCE

DISPLAYING ALL CHANGES WITH VISUAL FEEDBACK

Page transitions and (micro) animations additionally contribute to a unique user experience and support a general understanding of the software behavior. During the design phase all animations were prototyped and tested. A selection of animation patterns can be experienced in this screencast video.



VIDEO ON VIMEO

HMI Project

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