

# Schenck ONE

## NEXT LEVEL ROTOR BALANCING

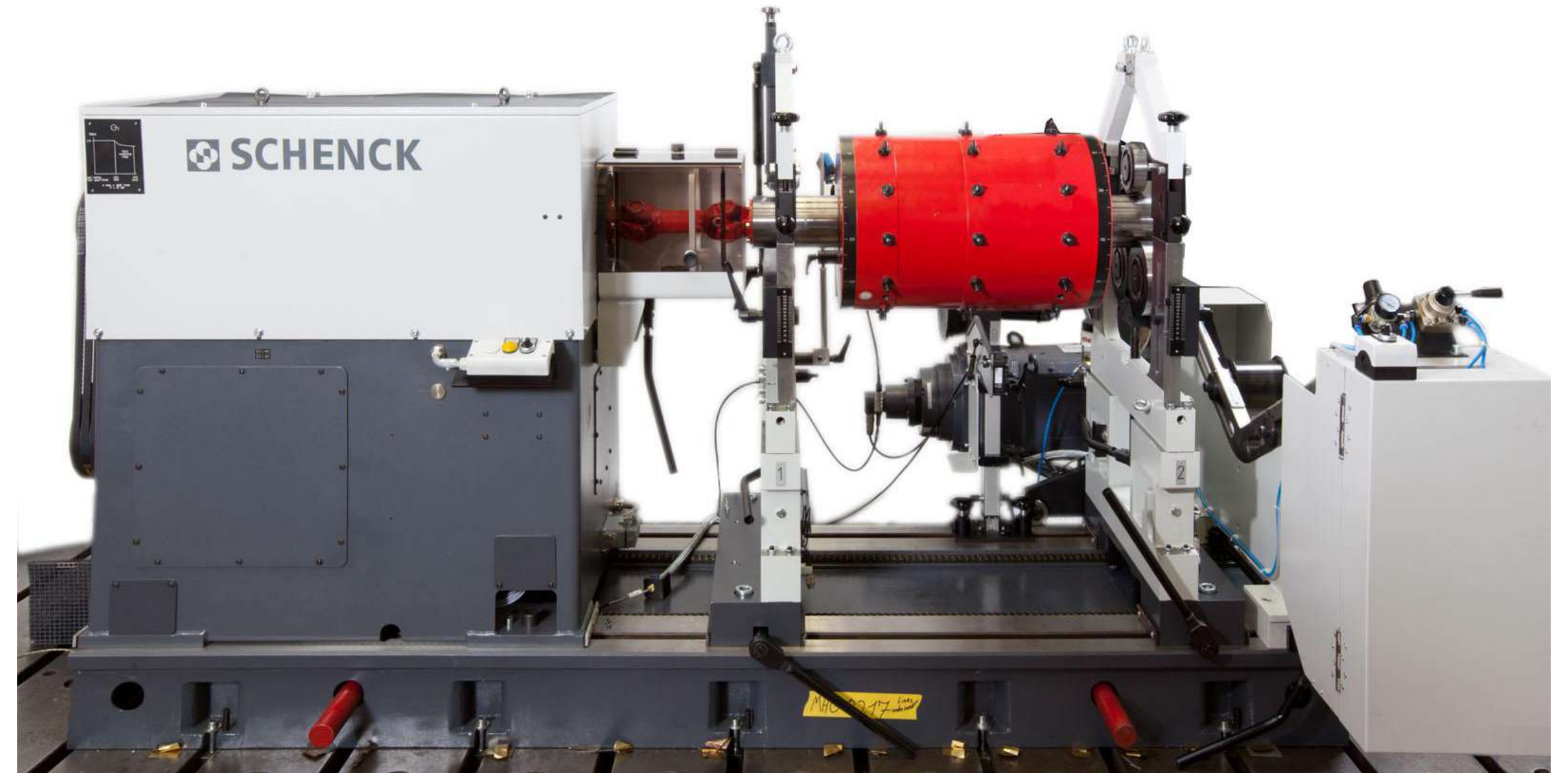
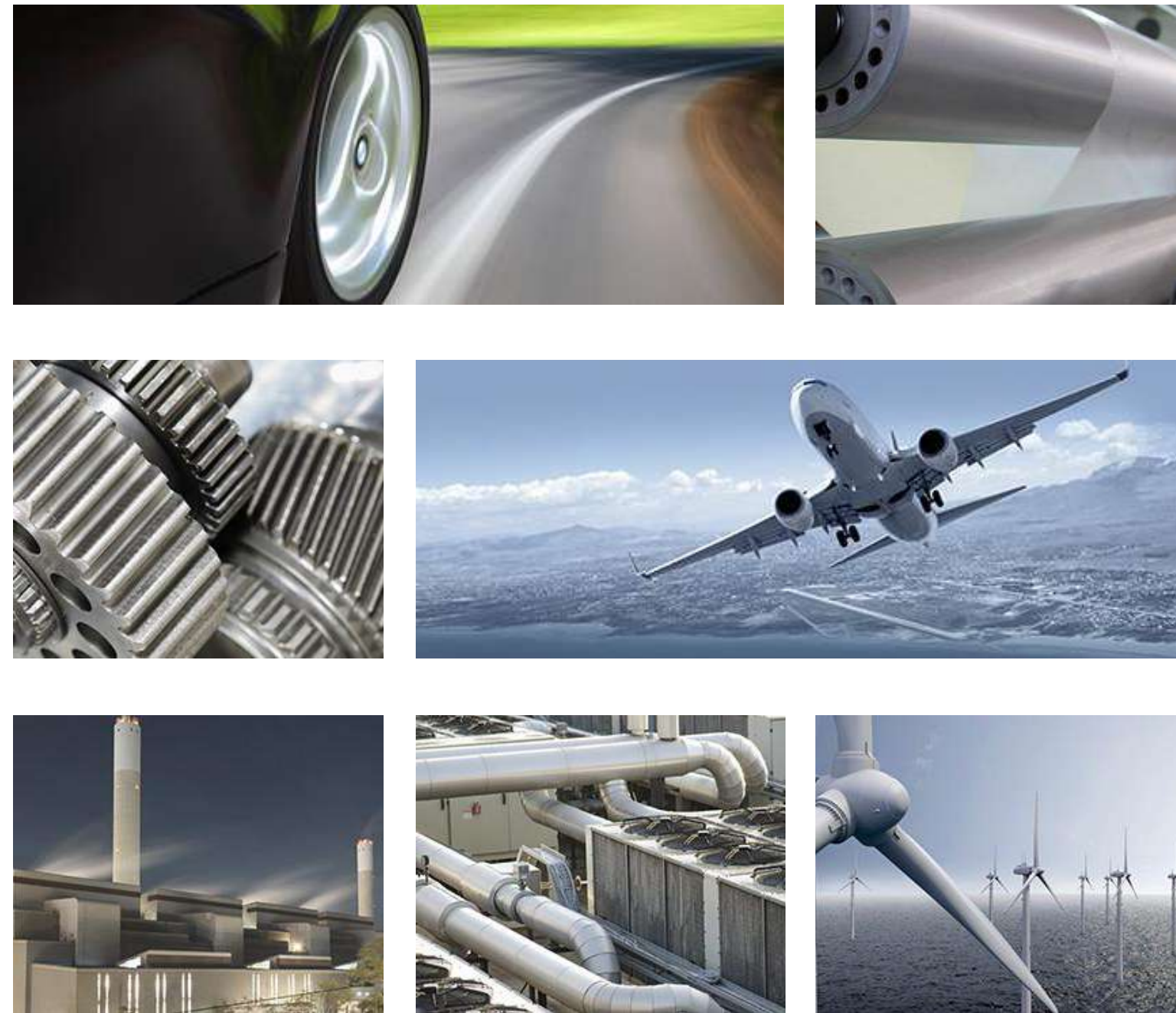
### DESIGN CHALLENGES

- Simplify and reduce a complex human machine interface for balancing machines
- Create a sustainable and flexible system that can be used in a modular way to balance all kinds of rotors
- Unite several requirements for different balancing machines for all kinds of industries



# USAGE & ENVIRONMENT

PRECISION IN OUR EVERYDAY LIFE



## APPLICATION AREA

The demand for balancing machines is significant in all mechanical engineering industries and particularly high in:

- Automobile and Transportation
- Aerospace
- Power generation

## CHALLENGE

When dealing with fast rotating objects, there is always the problem of vibrations caused by even the smallest unbalances.

To avoid this physical property, there is a simple solution. The balancing method.

Rotating objects are measured to detect unbalance and misbehaviour.

Additive and subtractive processes can be used to ensure high quality in rotating systems.

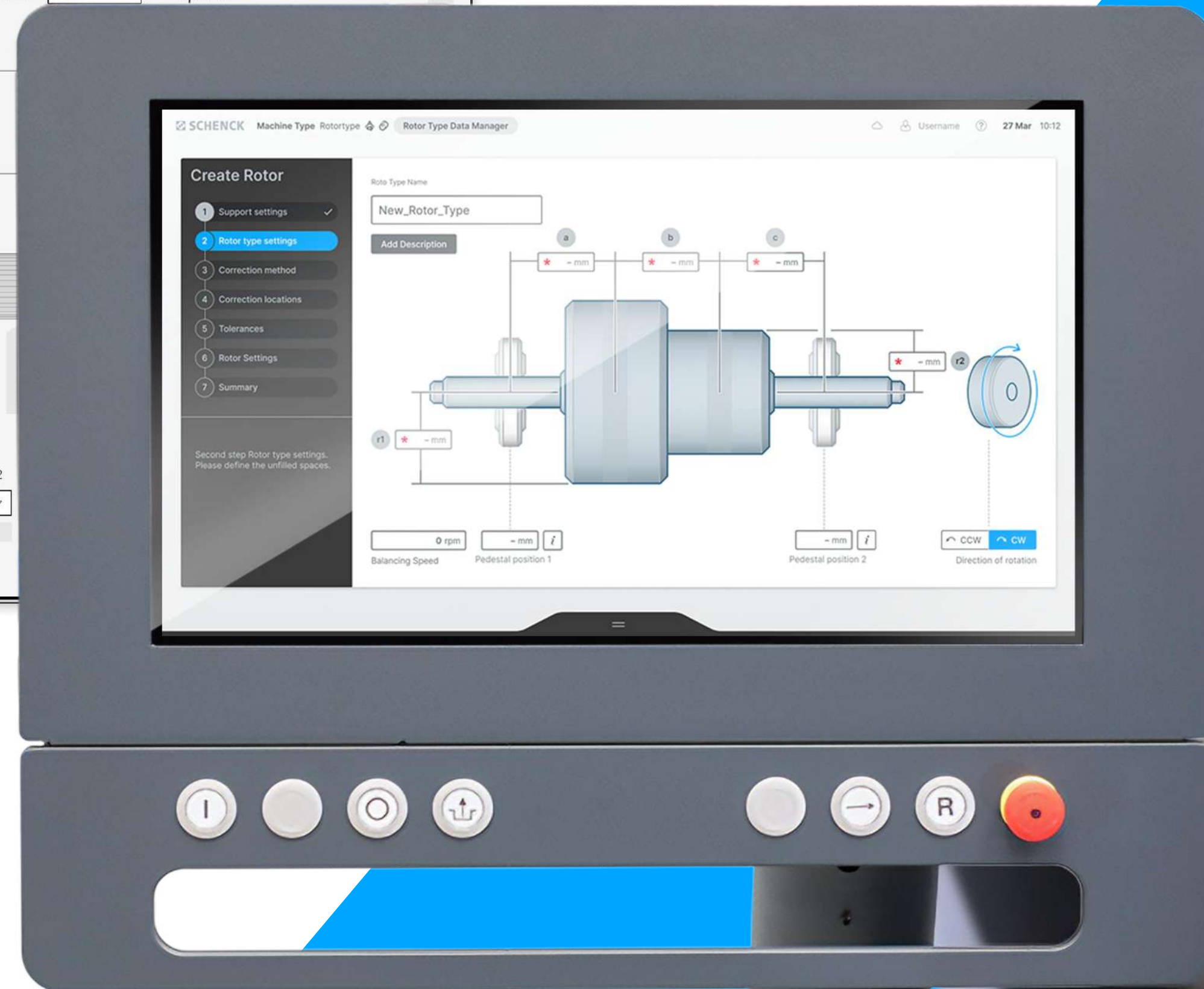
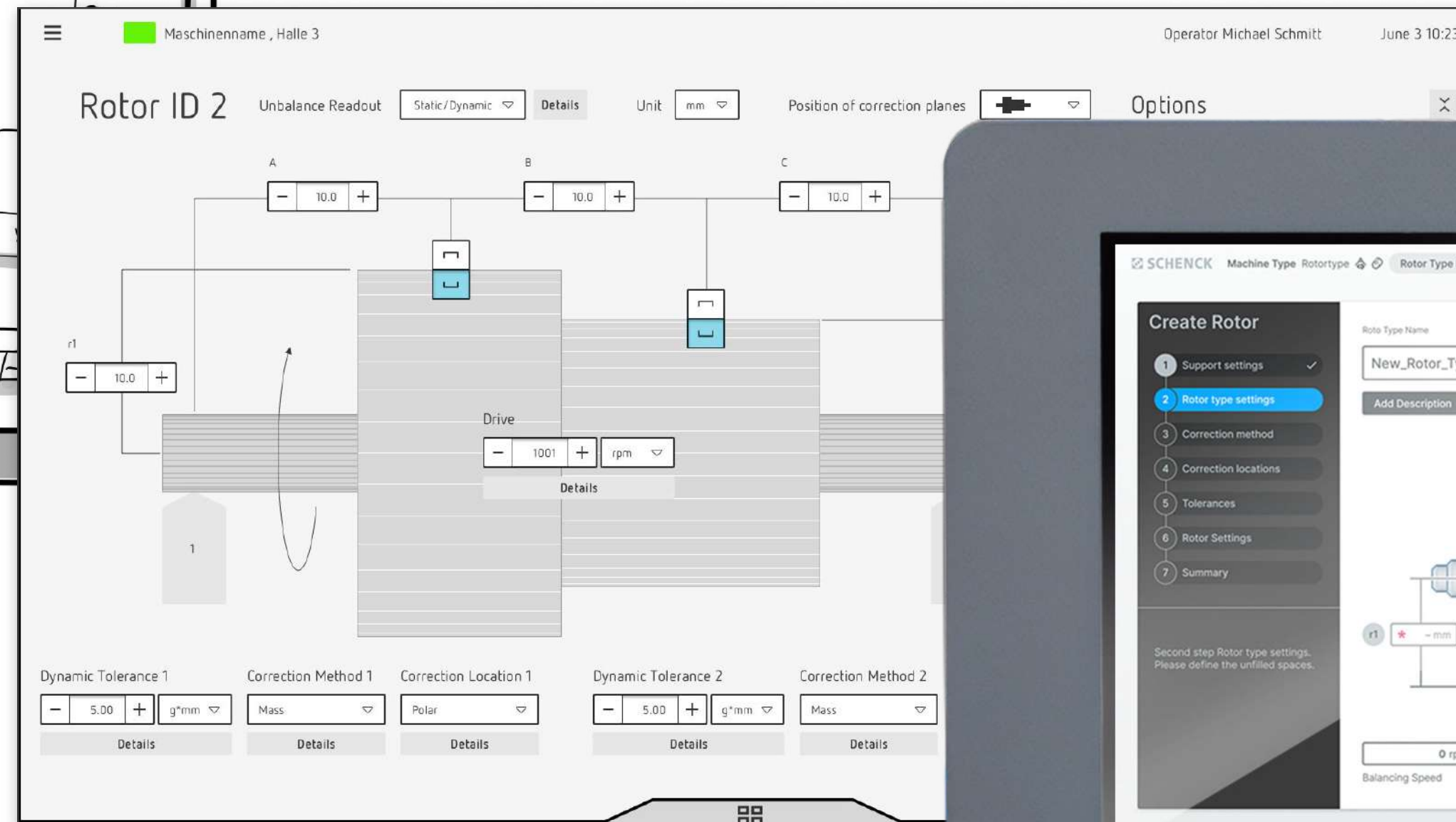
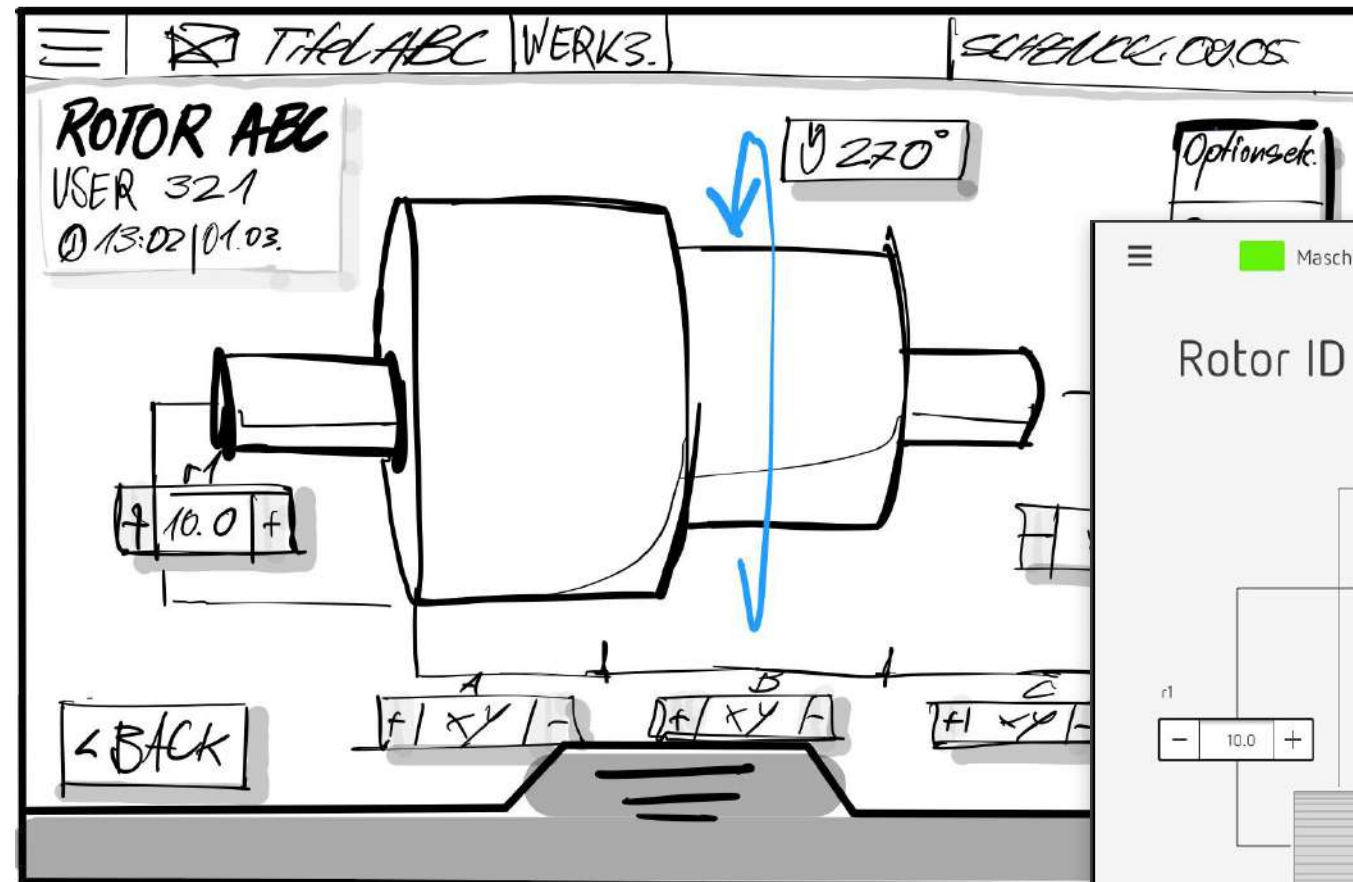
As a guarantee for safety in everyday life, Schenck's machines and software have created an optimized solution for balancing all types of rotors, whether it is an aircraft turbine or the tiny rotor of a drill in the dentist's office.

# DESIGN PROCESS

A NEW BALANCING UI

The development is based on a human-centred design process. A profound analysis was carried out in close co-operation with operators and experts. It shows that the balancing machine sector is represented by technical interfaces that go hand in hand with a very strong technical appearance.

The design process started with sketches, which were then continued and detailed through wireframes and user tests with real users before the concepts were incorporated into the design. In the next step, the design was transferred and customized to fit the different machine types.



# INCREASED USABILITY

OPTIMIZED HMI FOR BALANCING OPERATIONS

## USER GUIDANCE

STEP BY STEP GUIDELINE THROUGH THE BALANCING PROGRESS

## STEP OVERVIEW

STAY IN TOUCH WITH THE PROGRESS AND KEEP THE OVERVIEW

## NAVIGATION

EASY GUIDANCE THROUGH THE APPLICATION



## VECTORMETERS

ILLUSTRATION OF THE BALANCING PROCESS AS A GRAPHIC REPRESENTATION

## CORRECTION

UNDERSTANDABLE AND USER FRIENDLY DISPLAY OF CURRENT VALUES

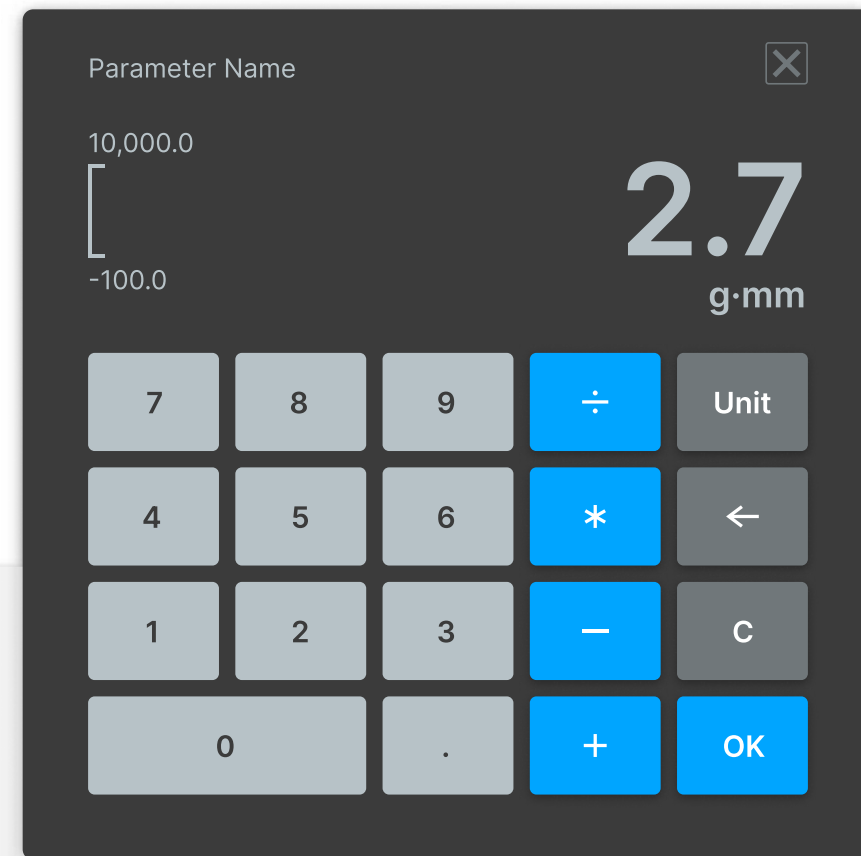
## SCREEN DESIGN

MODERN AND REDUCED INTERFACE FOR COMPLEX BALANCING MEASUREMENTS

# DESIGN SYSTEM

CUSTOMIZED UI ELEMENTS

**MODE**  
DARK AND LIGHT  
MODE FOR  
DIFFERENT  
CONTEXT



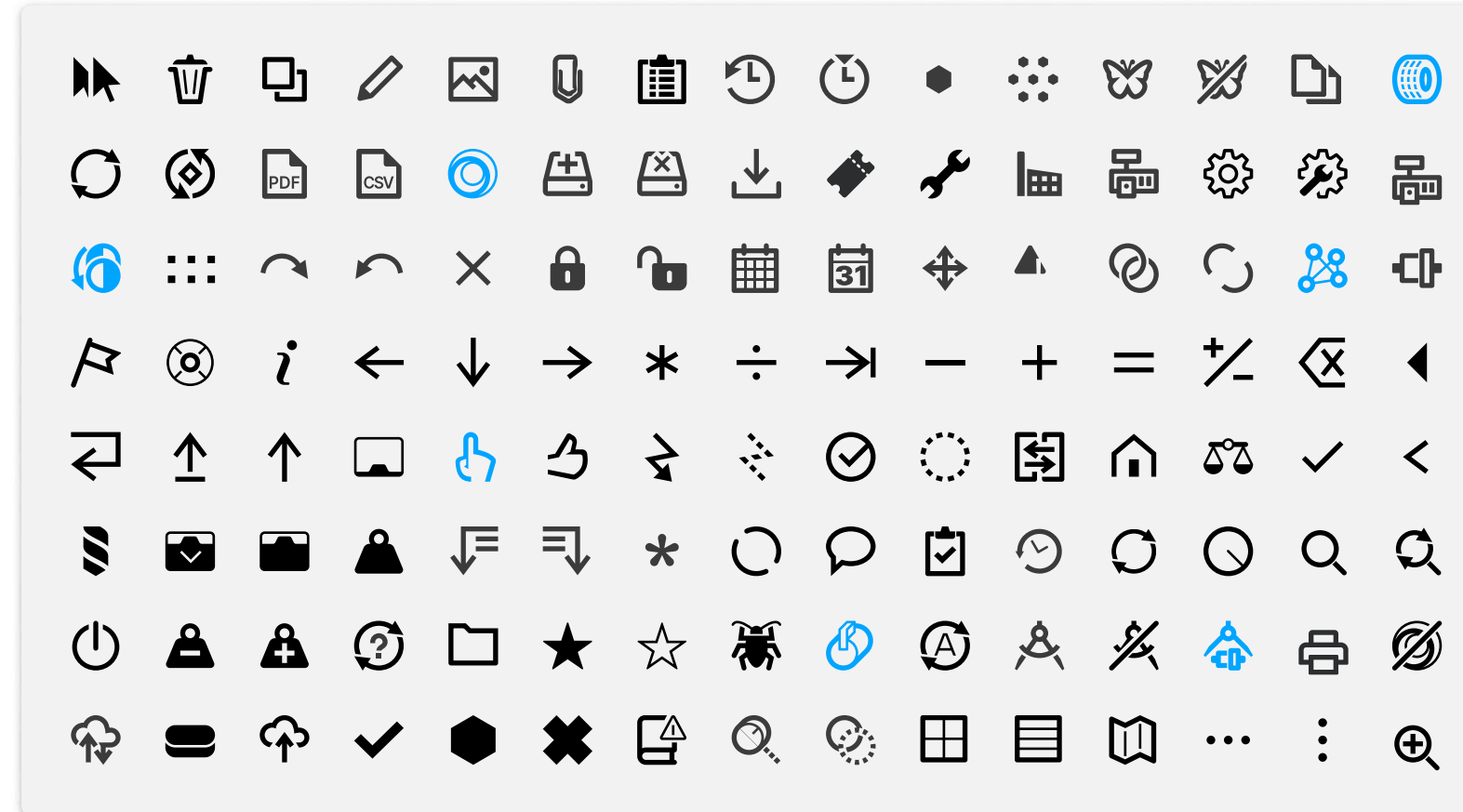
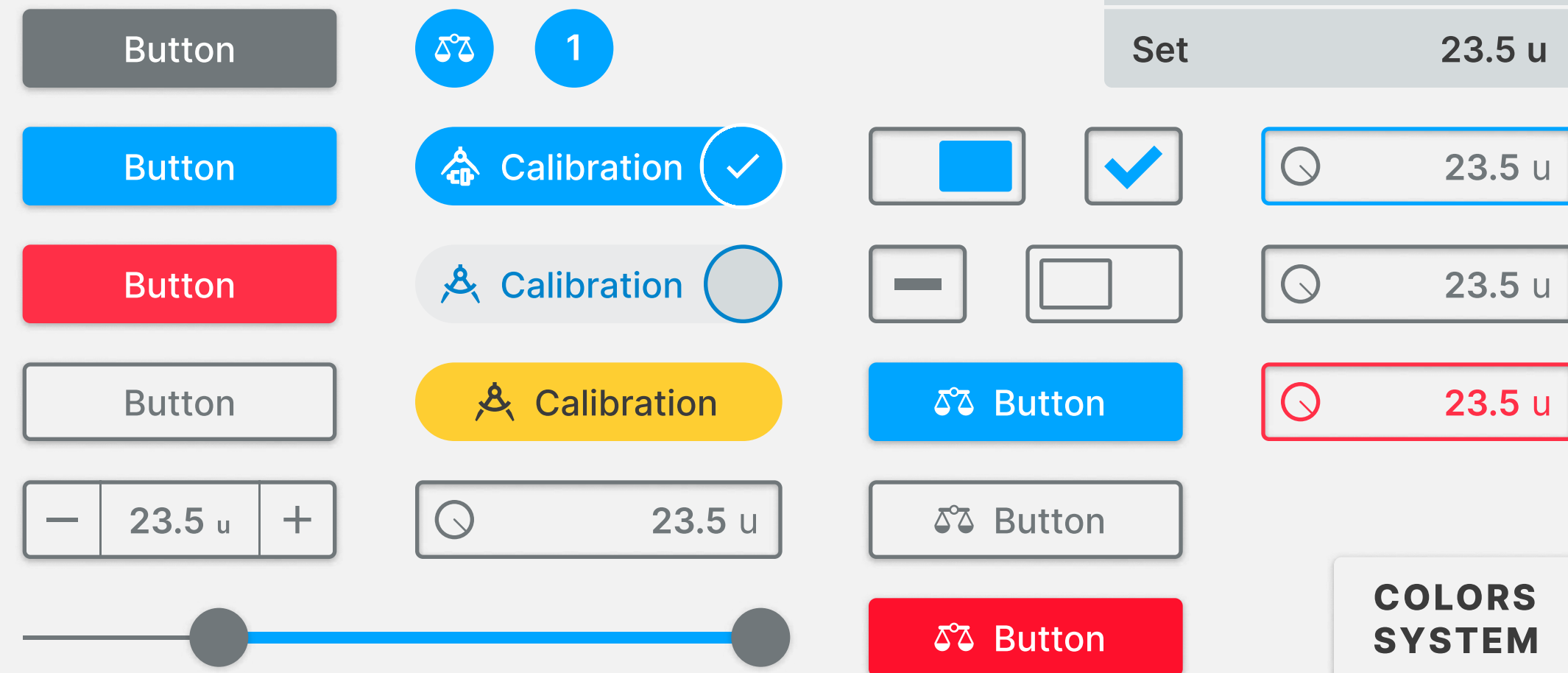
## Workflow

- 1 Step 1 ✓
- 2 Step 2
- 3 Step 3
- 4 Step 4

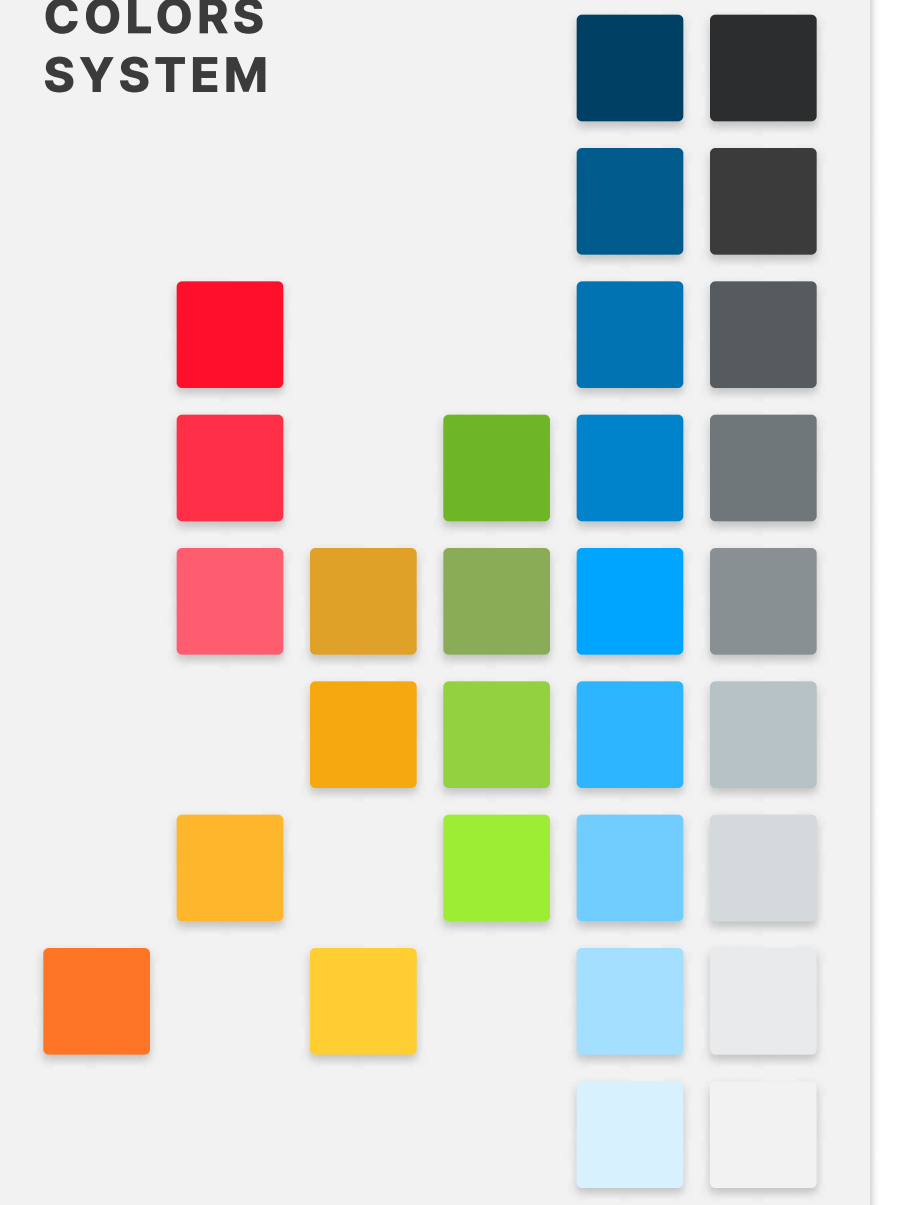
To ensure an optimised workflow during the balancing process, the design is adapted to an industrial working environment and predefined process steps. To increase the absorption of important information during the workflow, the interface convinces with bright colours and a clear visual expression.

## BUTTONS AND CONTROLS

FOR EASY & MODERN OPERATION

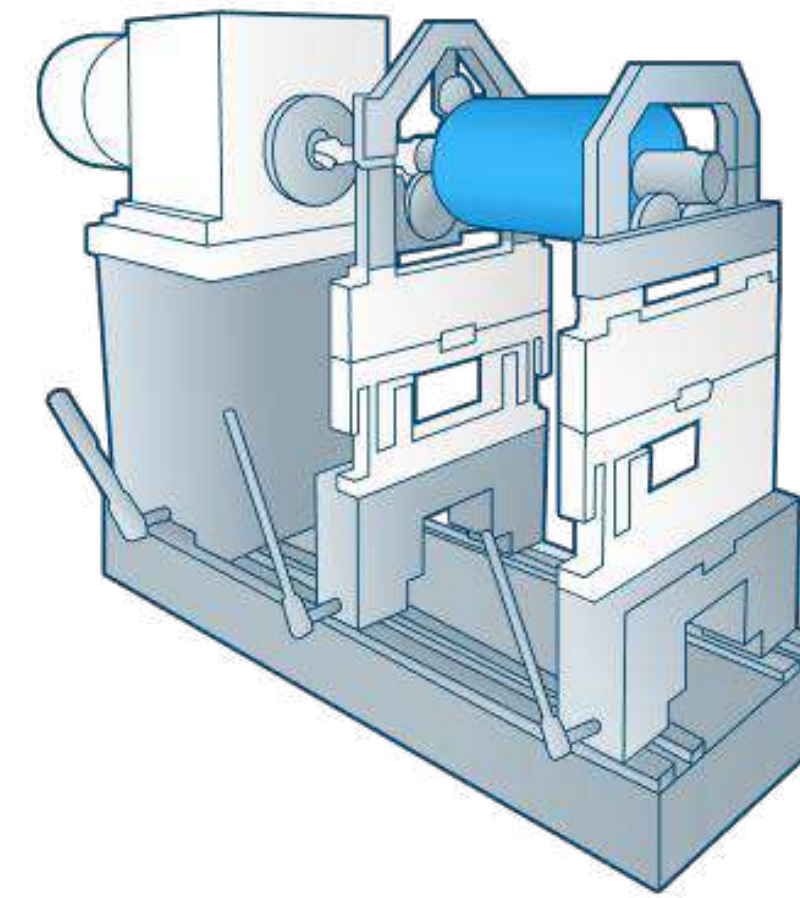


## COLORS SYSTEM



# ILLUSTRATIONS

WORKFLOW SUPPORT WITH GRAPHICAL CONTENT



SCHENCK Pasio 15 Rotortype Rotor Type Data Manager Username 27 Mar 10:12

### Reference Sensor Position Calibration

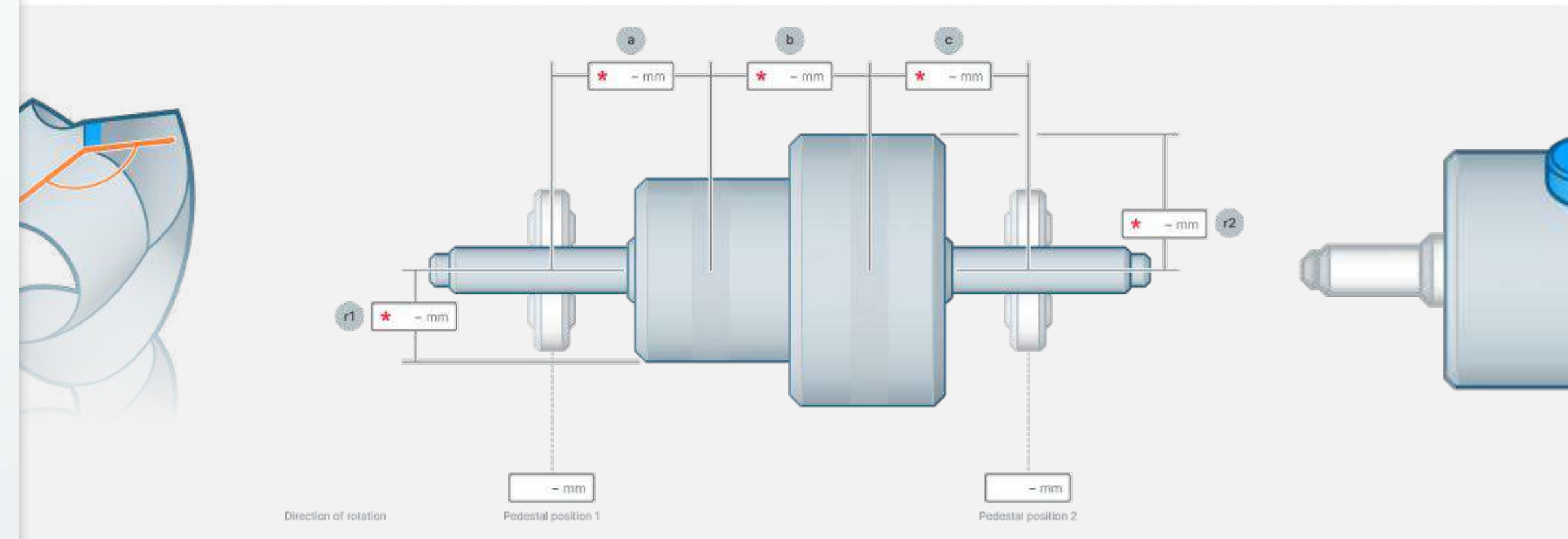
- 1 Parameter ✓
- 2 Direction of Rotation ✓
- 3 Custom reference mark position
- 4 Turn Rotor
- 5 Rotor back to 0° position
- 6 Finish

Third step custom reference mark position. Please press next for turn rotor.

Legend:  
■ 0° position at rotor  
■ reference mark position

Special location at rotor: 21°

Home Next



Illustrations are an elementary component of the user interface. Complex work processes and operating steps are simplified through the use of graphic elements and illustrations.

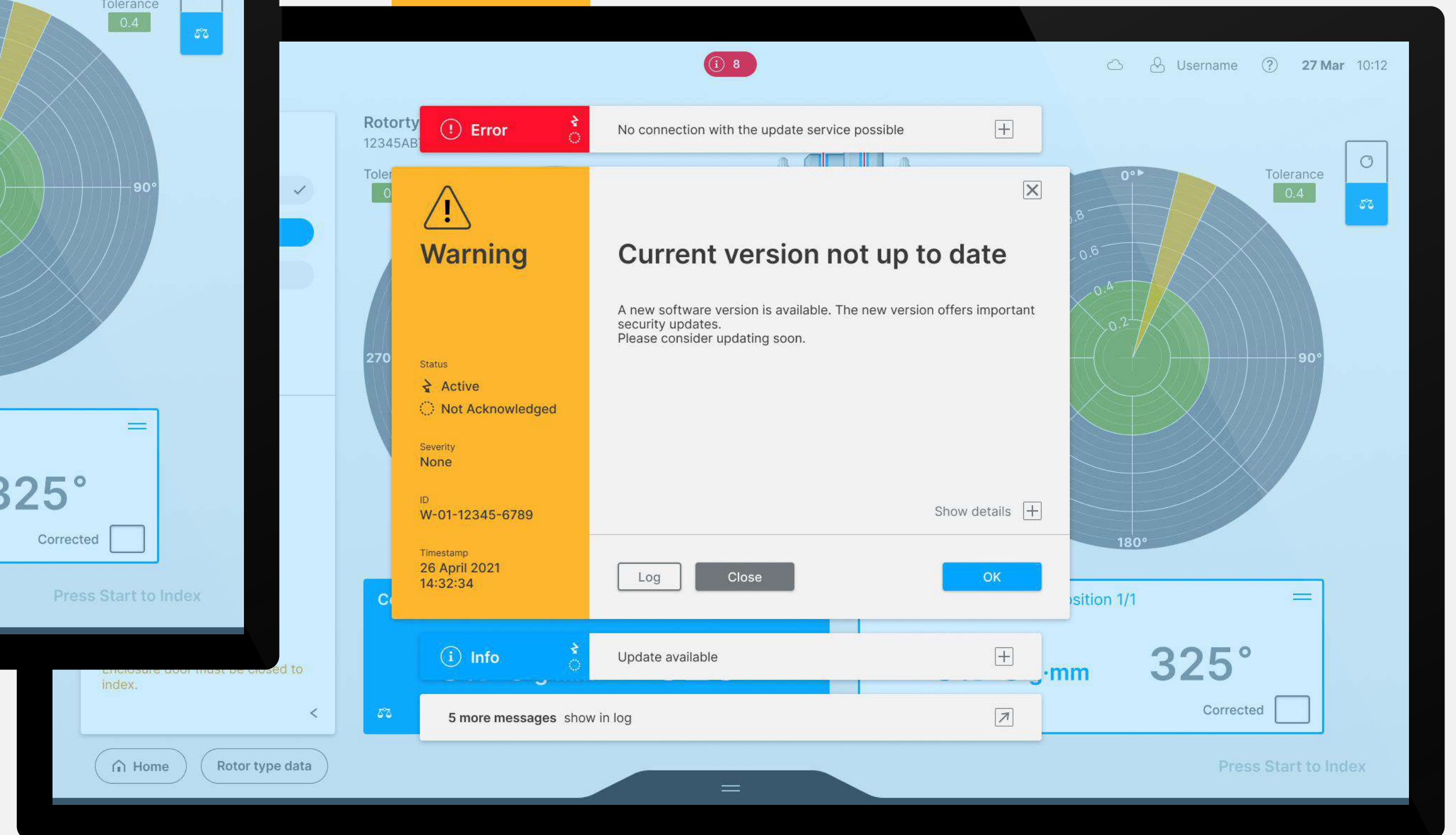
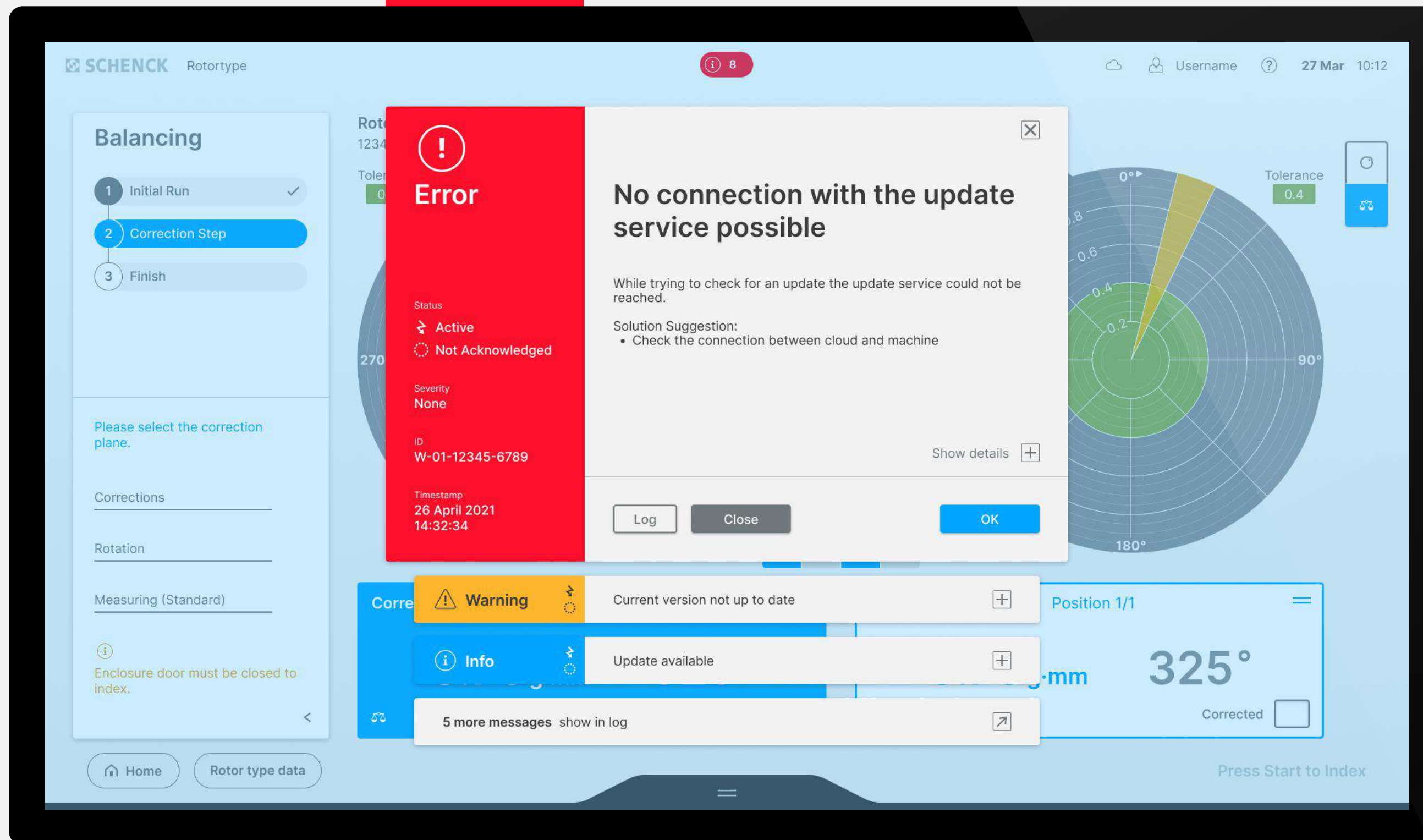
To increase the understanding of technical processes, the illustrations are a helpful guide to assist the worker in his work.

# DIALOGS

## CLEAR GUIDANCE IN CRITICAL SITUATIONS

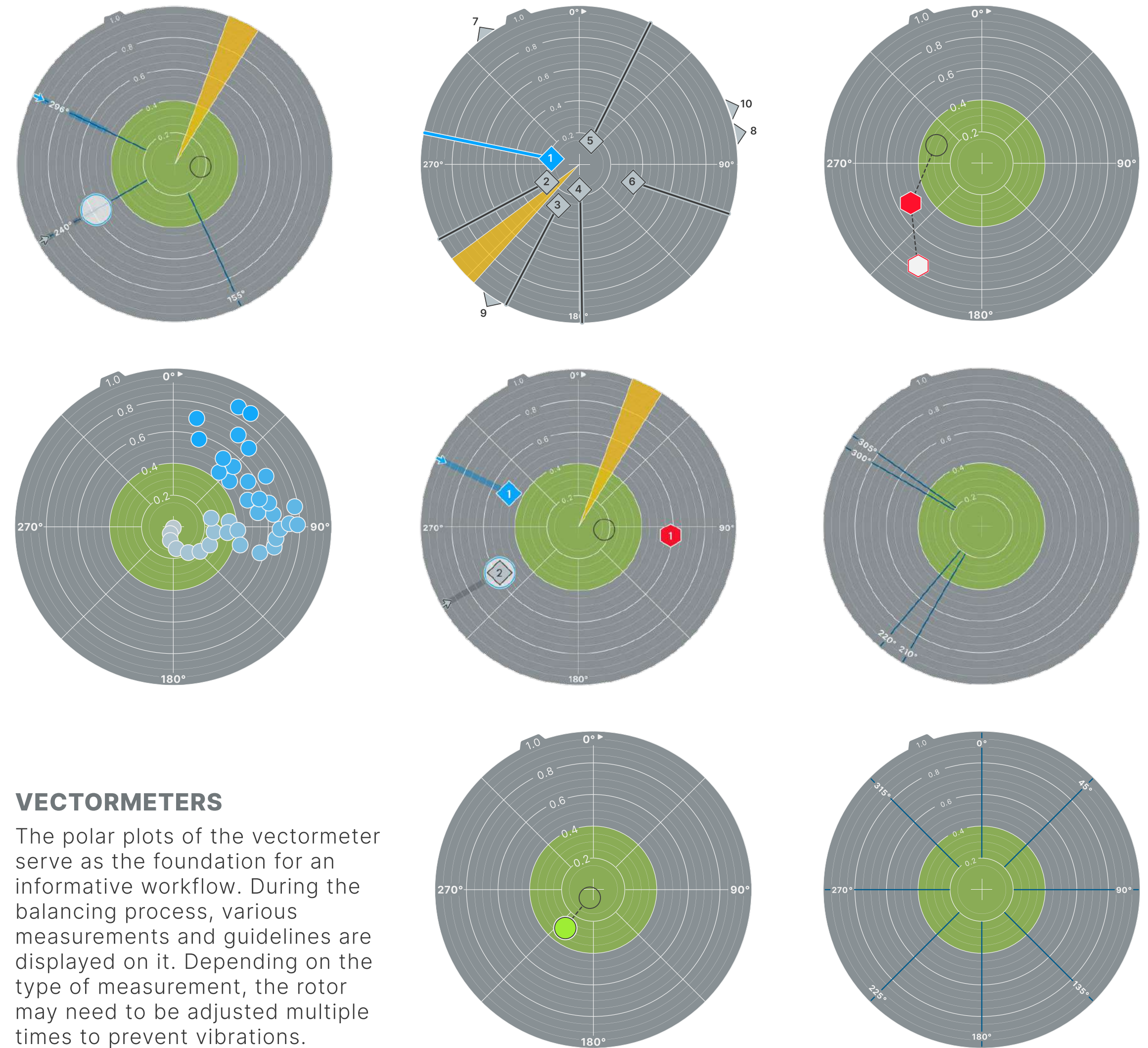
Dialogues form the basis of an information system for the user. Important information is presented in bright and meaningful colours and stands out against the darkened background.

The alerting has several escalation levels and goes from simple information to warnings to alarms. Especially in critical situations, the dialogues ensure an overview of complex issues.



# VECTORMETERS

MAKE BALANCING VISIBLE



## VECTORMETERS

The polar plots of the vectormeter serve as the foundation for an informative workflow. During the balancing process, various measurements and guidelines are displayed on it. Depending on the type of measurement, the rotor may need to be adjusted multiple times to prevent vibrations.

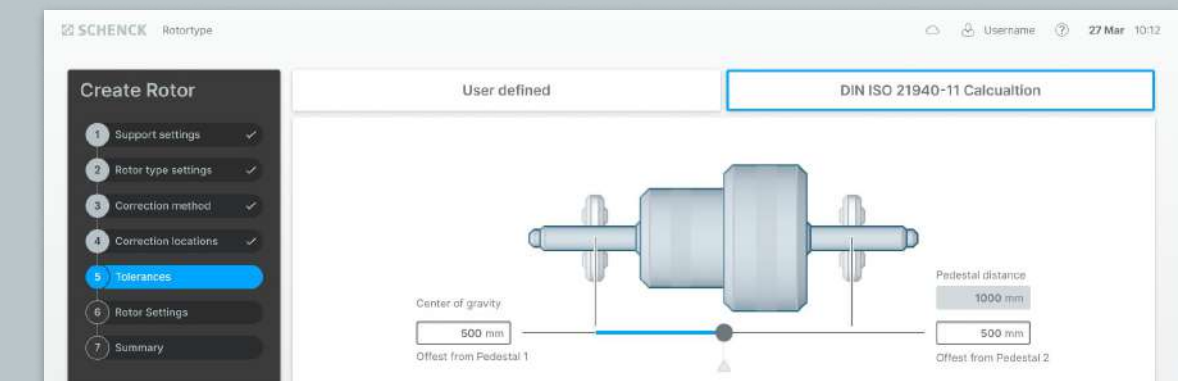
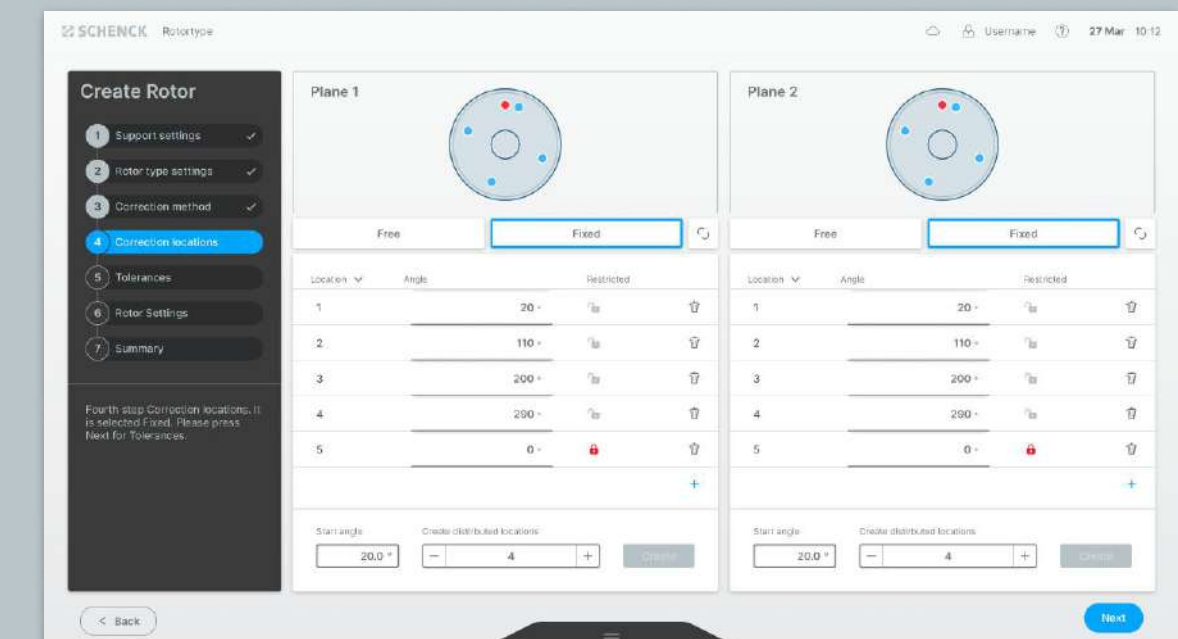
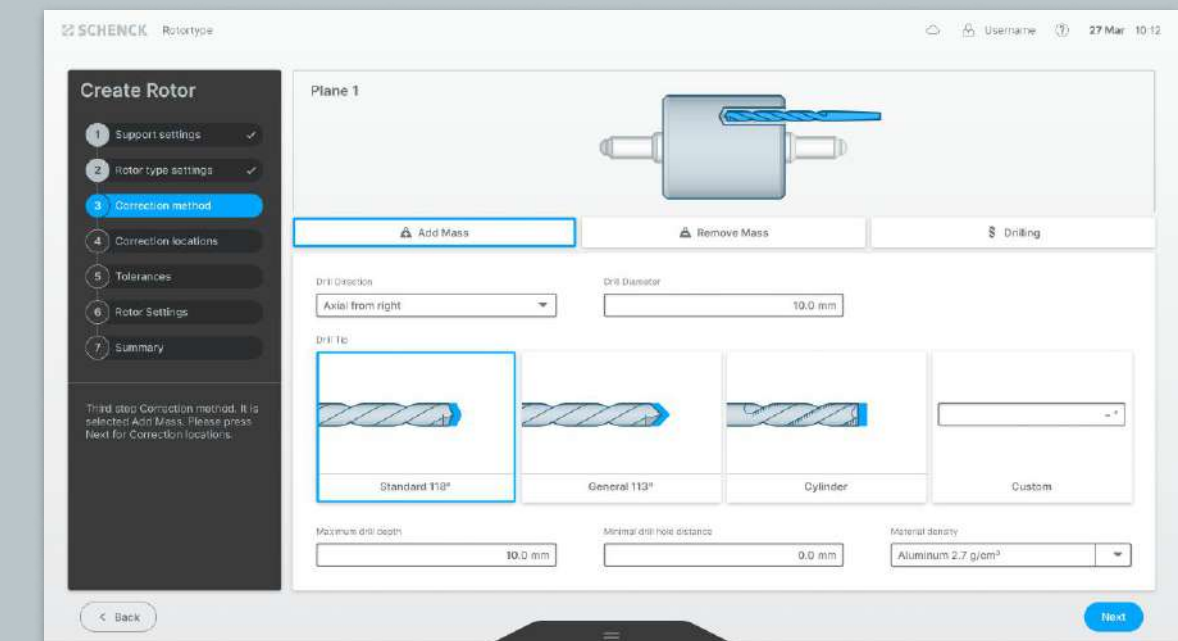
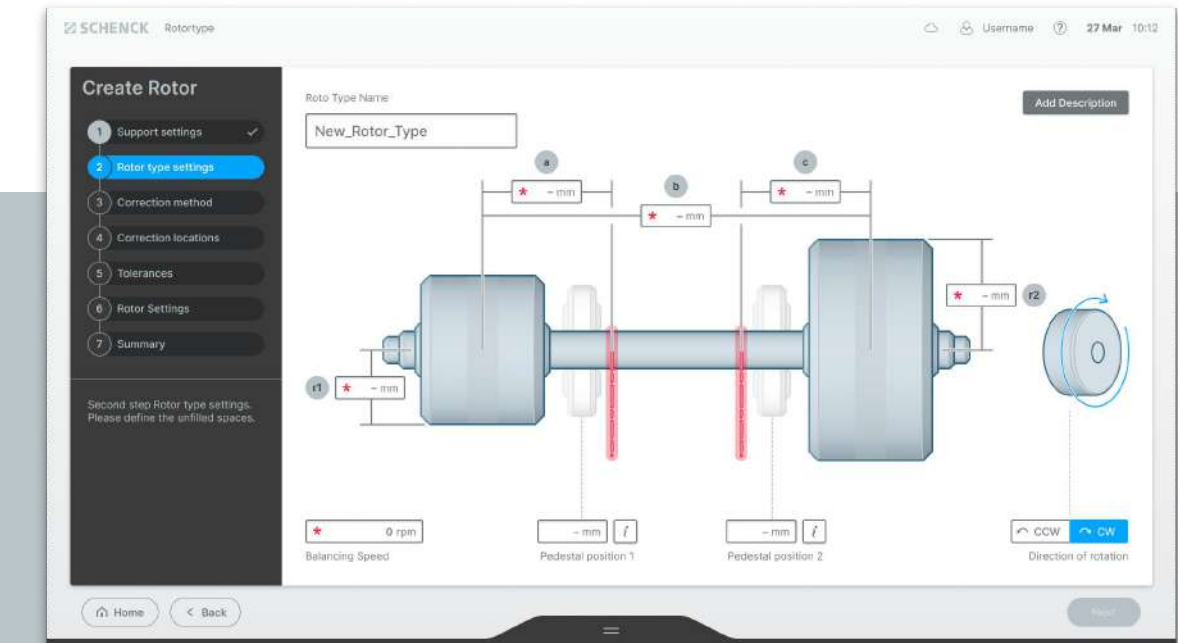
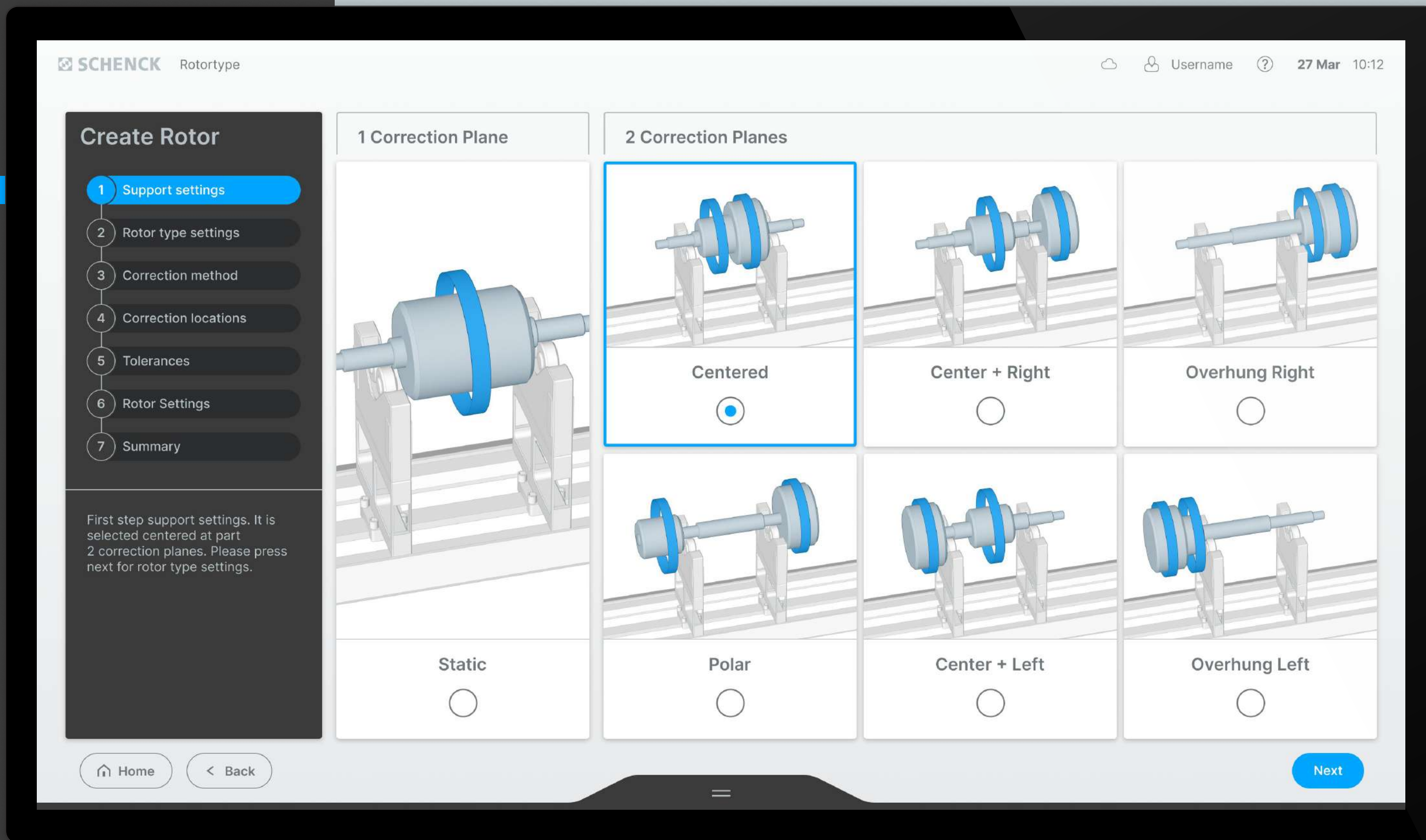


# USER GUIDANCE

KEEP THE PERFECT OVERVIEW

All important work processes are mapped with the help of assistants and guided workflows. Step by step with clear graphics, which in turn greatly simplify the work. This applies to the creation of

a rotor as well as to the measurement or manual correction of the unbalance on the rotor itself. The result is fewer operating errors and faster, more pleasant work.



# APPLICATION MANAGER

KEEP APPLICATIONS ORGANIZED

## PRIMARY APPS

STEP THROUGH THE MAIN TASKS OF THE APPLICATION

## SYSTEM ADMINISTRATION

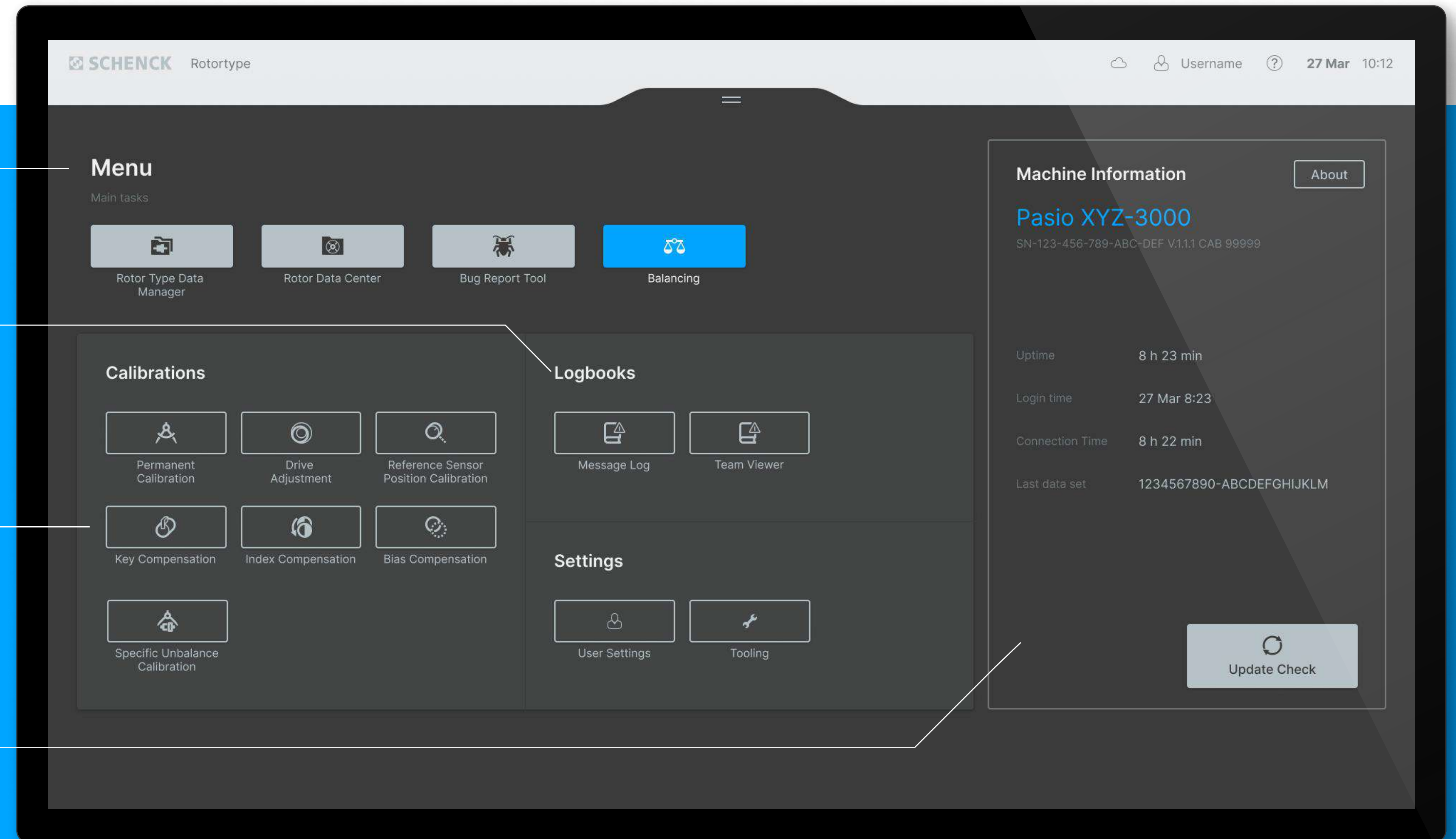
PROVIDE EASY ACCESS TO THE SYSTEM FOR SETTINGS AND ORGANISATION

## ADVANCED TOOLS

EASY SELECTION FOR ALL BALANCING FEATURES

## MACHINE INFORMATION & UPDATE CENTER

FOCUS ON HARDWARE AND SOFTWARE SERVICES



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