

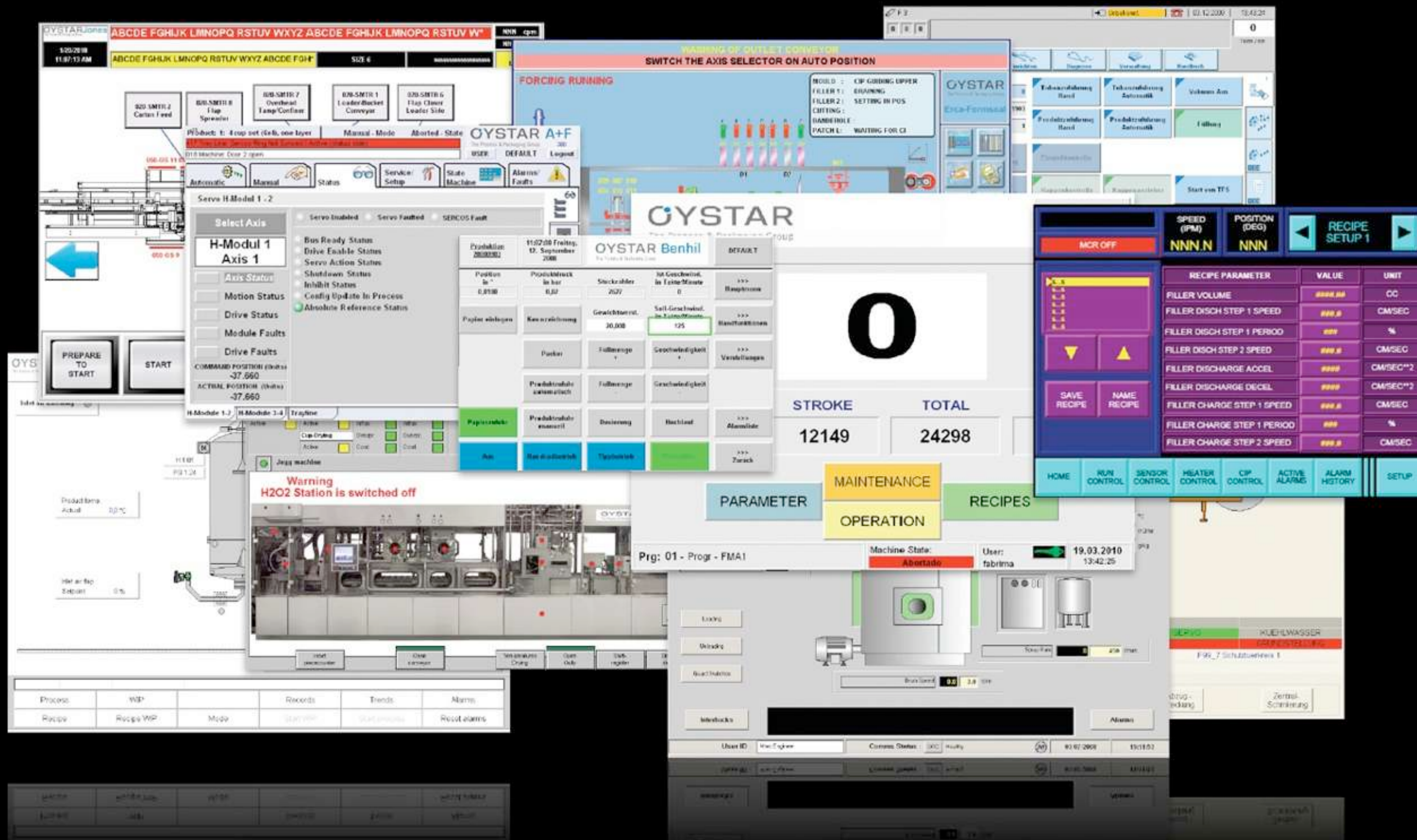
TEOS / Einheitliches Human Machine Interface für die OYSTAR Gruppe



Starting Point



Example of Different Packaging Machines controlled by Touchpanels



Heterogeneous Software of 36 Machine Types in 12 different Technologies

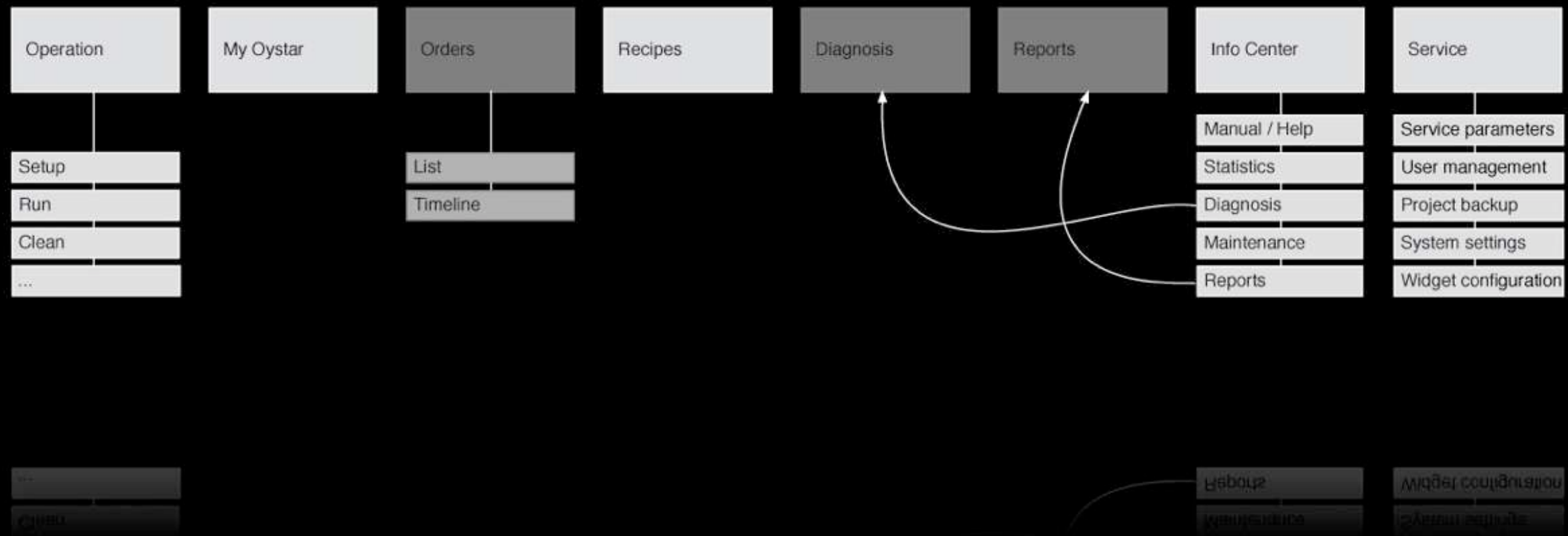
One Concise Control Concept



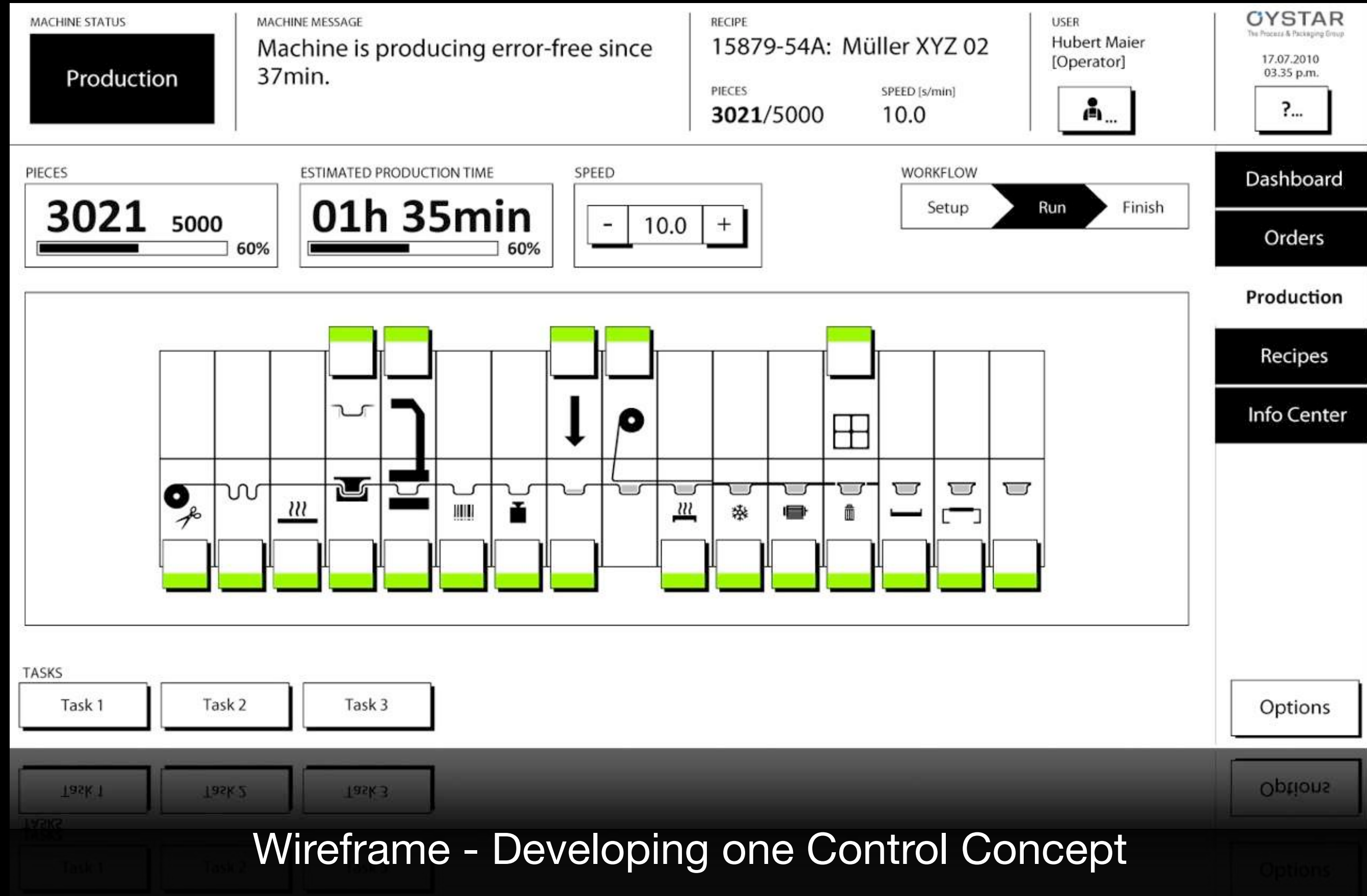
Analysis - Evaluating the Functional Groups of all Software Manifestations



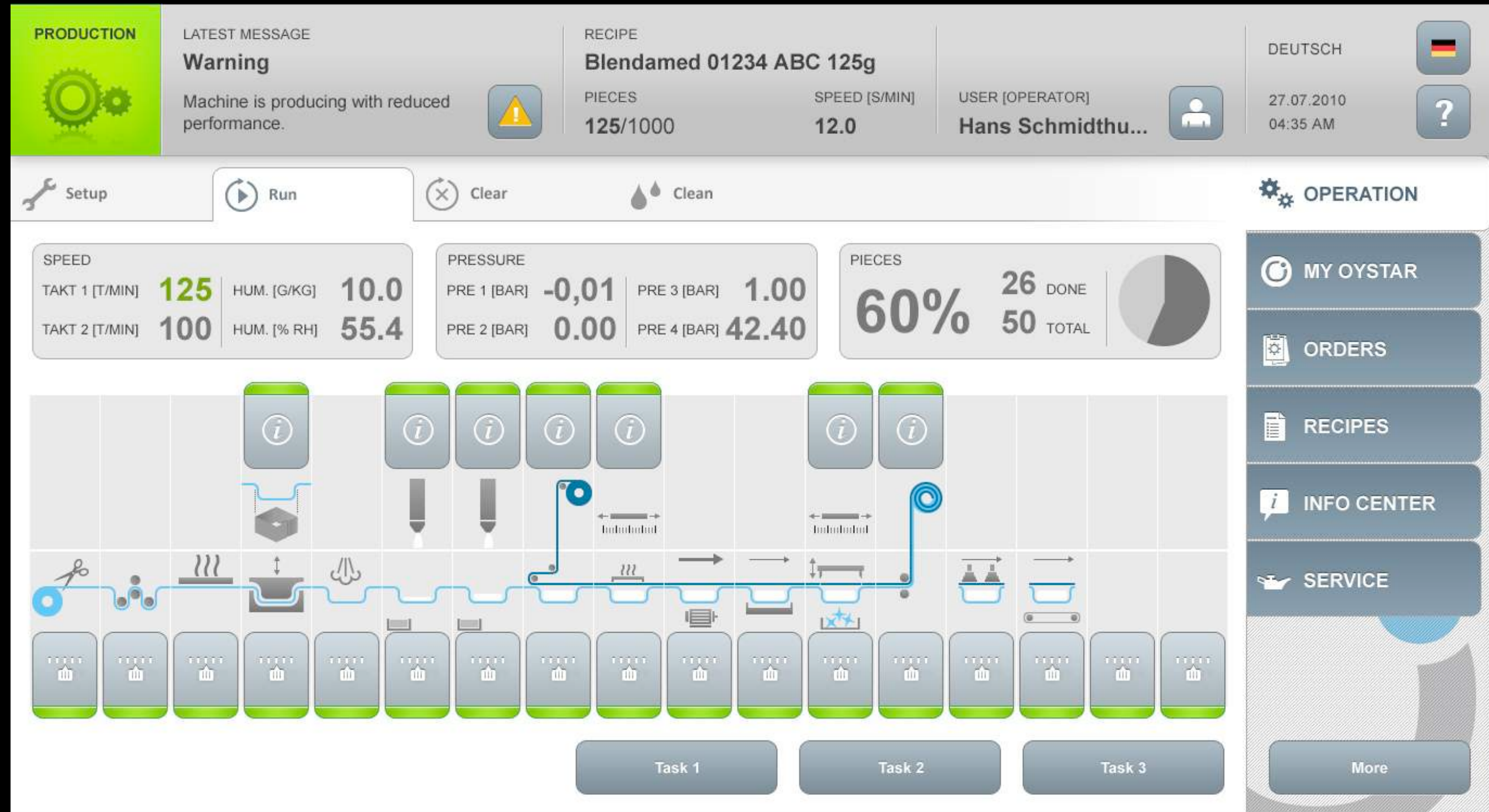
Layout - Developing one Uniform Screen Structure



Flowchart - Developing one Common Navigation Structure



Wireframe - Developing one Control Concept

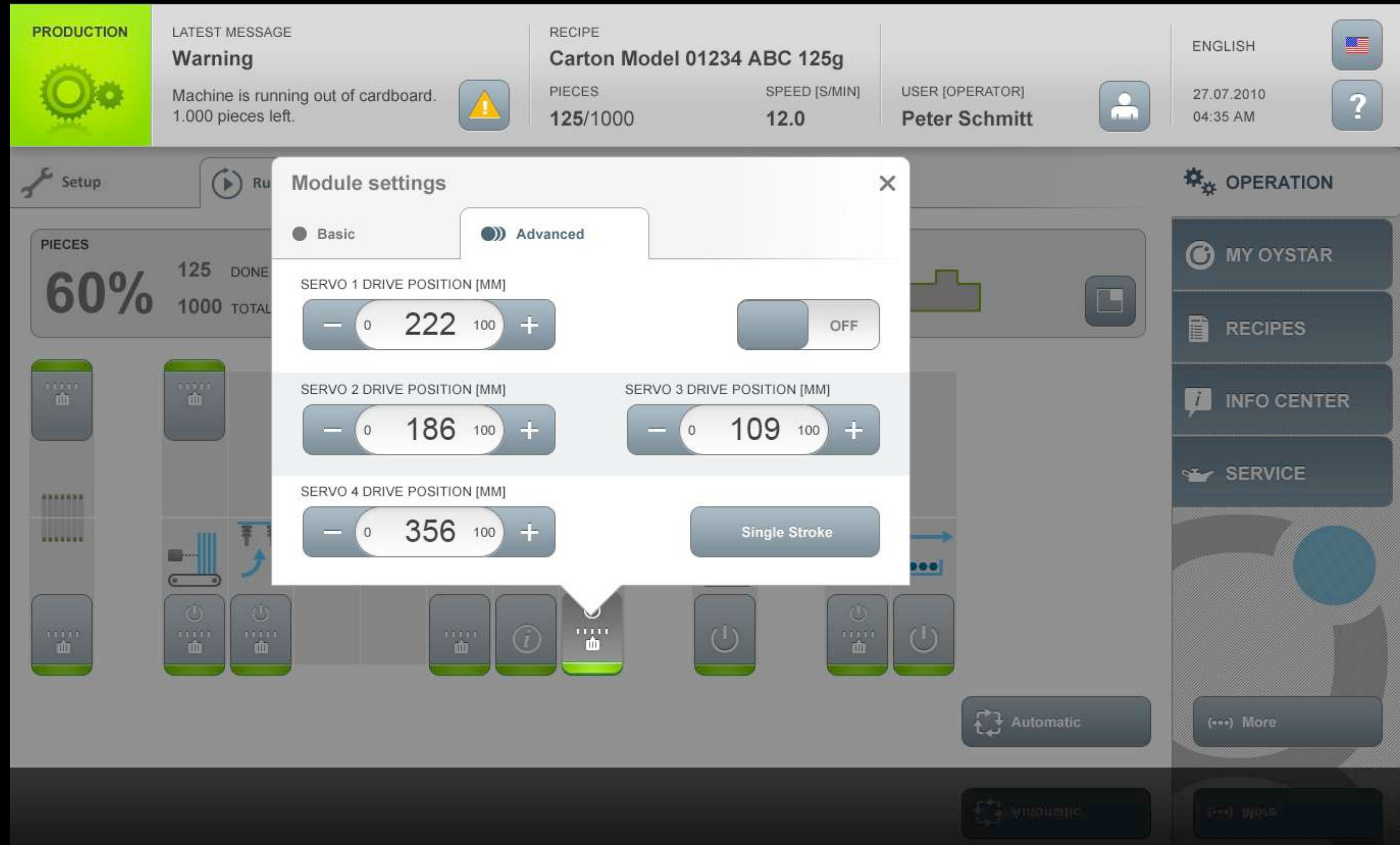


Final Interface - Operation of a Form Fill Seal Machine



Final Interface embedded in a Customized 15inch Panel

Principles



Focusing the Low Level User - Additional Functions only for Advanced User Groups

LOADING...


LATEST MESSAGE
Machine is not ready



RECIPE
not loaded

PIECES
125/1000

SPEED [S/MIN]
12.0

USER 1
none

USER 2
none



DEUTSCH
27.07.2010
04:35 AM



Login

Please enter your username and password.

USERNAME

PASSWORD

Cancel

Login

MY OYSTAR

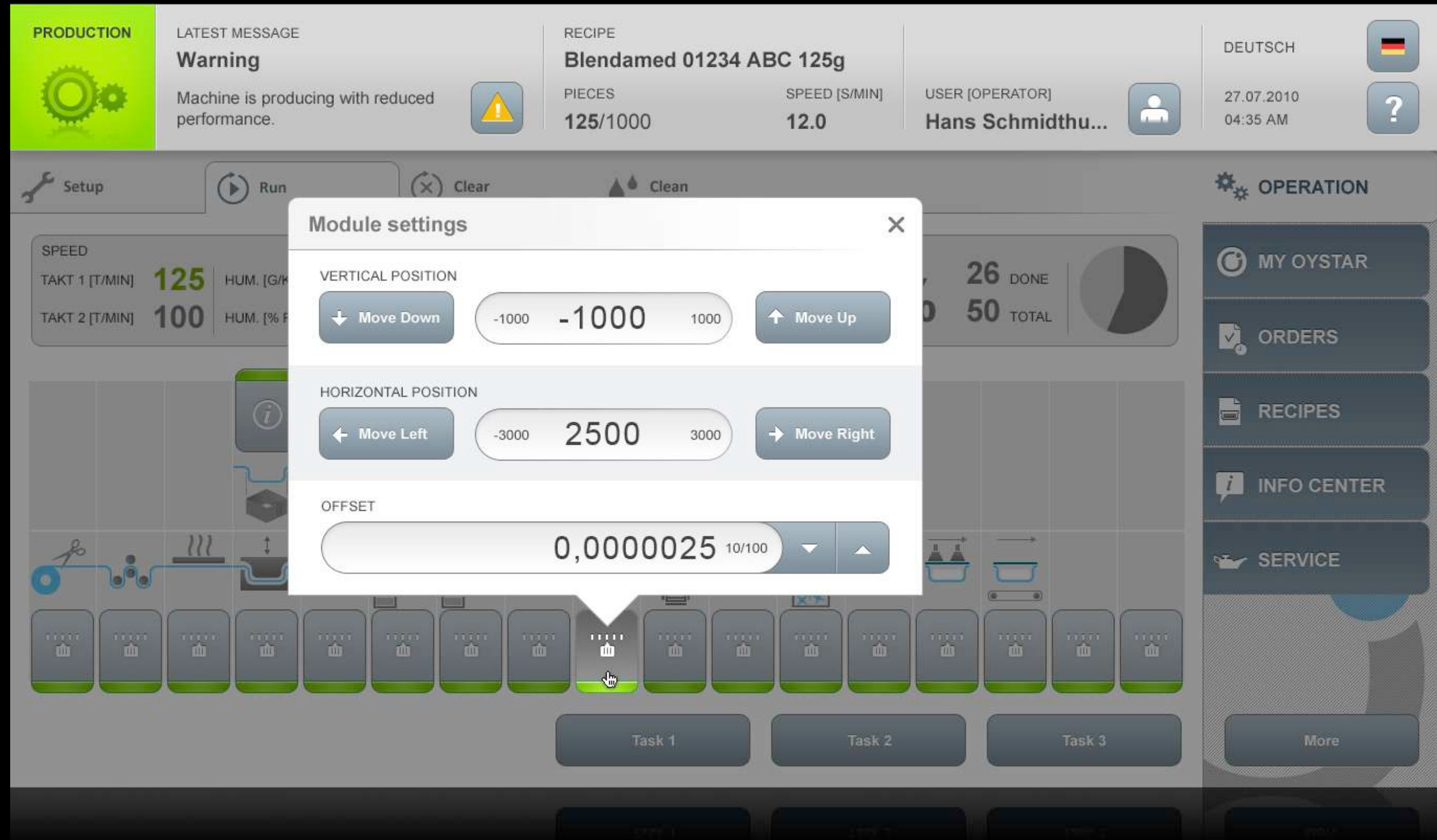
 RECIPES

 PRODUCTION

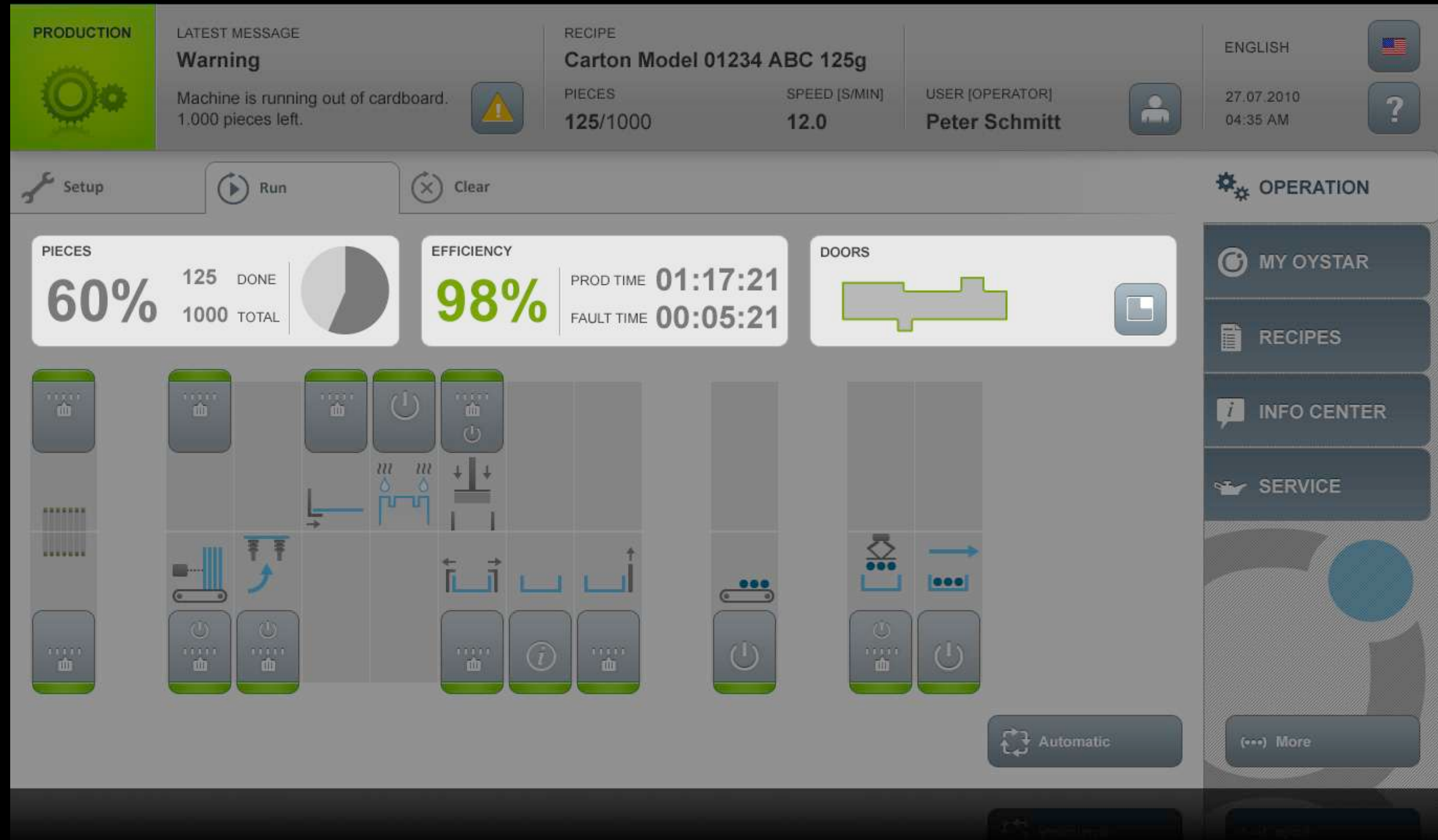
 CLEANING

 Options

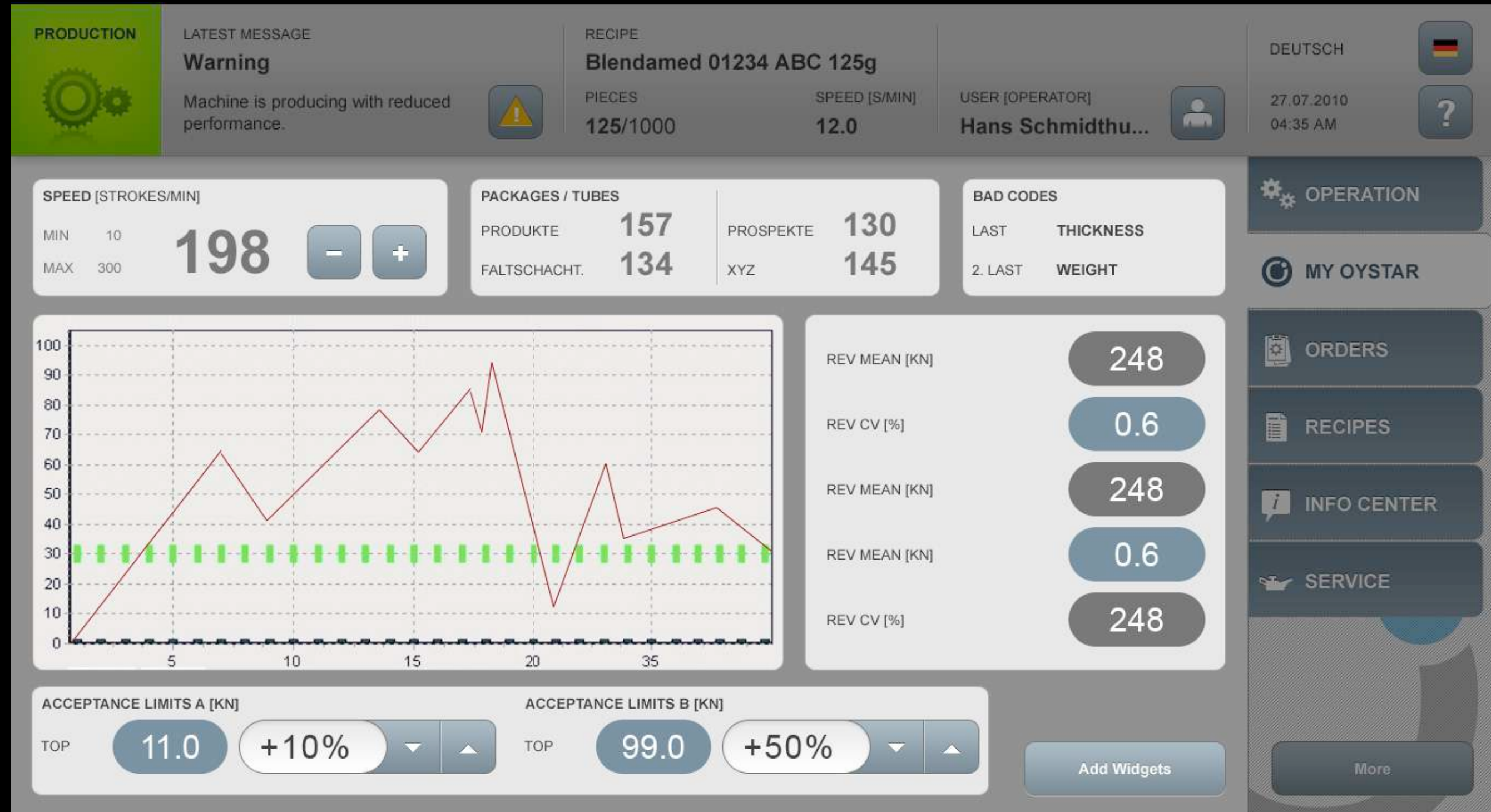
Differentiated Dialogue System - Machine Dialog: Login



Differentiated Dialogue System - User Dialog: Parameter Change



Easy to Customise - Widgets: supporting Production



Easy to Customise - My Oystar: individual Collection of Widgets



An Intelligent Machine Assistance System - Support in Case of a Fault

PRODUCTION



LATEST MESSAGE

Warning

Machine is producing with reduced performance.



RECIPE

Blendamed 01234 ABC 125g

PIECES	SPEED [S/MIN]	REM.TIME (MIN)
125/1000	12.0	10

USER [ADMINISTRATOR]

Hans Schmidhuber



DEUTSCH



27.07.2010 04:35 AM



Setup

Run

Clear

Clean

OPERATION

MY OYSTAR

ORDERS

RECIPES

INFO CENTER

SERVICE

Setup for Cleaning

Cleaning Recipe Name 004

1/10 Step Name Description

Confirmatio artificii rebus accomodet non est. Hoc loco potest. Ad spectatores. Hoc textus est textus caecus. Si spe mercedis adducti officia.

A) STEP

Confirmatio artificii rebus accomodet non est. Hoc loco potest. Ad spectatores. Hoc textus est textus caecus. Si spe mercedis adducti officia. Non omnia possumus omnes. Utinam in tempore opportuno ad nos veniatis esse profiteamur.

B) STEP

Confirmatio artificii rebus accomodet non est. Hoc loco potest. Ad spectatores. Hoc textus est textus caecus. Si spe mercedis adducti officia. Non omnia possumus omnes. Utinam in tempore opportuno ad nos veniatis esse profiteamur.





Add Order

Jog Mode

Automatic

More

An Intelligent Machine Assistance System - Assistant during Setup and Maintenance

PRODUCTION

LATEST MESSAGE
Warning
Machine is producing with reduced performance.

RECIPE
Blendamed 01234 ABC 125g

PIECES
125/1000

SPEED [S/MIN]
12.0

USER [OPERATOR]
Hans Schmidthu...

DEUTSCH
27.07.2010
04:35 AM

Setup

Run

SPEED

TAKT 1 [T/MIN] **125**

TAKT 2 [T/MIN] **100**

HUM. [G/K] **100**

HUM. [% F] **100**

26 DONE

50 TOTAL

OPERATION

MY OYSTAR

ORDERS

RECIPES

INFO CENTER

SERVICE

More

Task 1

Task 2

Task 3

Task 1

Task 2

Task 3

Visuals for Data Input - Parameter Visualisation

NR. ▲	NAME ▲	ID ▲	VER. ▲	STATUS ▲	QUANTITY ▲
19	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
20	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000
21	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
22	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000
23	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
24	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000
25	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
26	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000

Module settings

BasicAdvanced

SERVO 1 DRIVE POSITION [MM]

0222100

+

OFF

SERVO 2 DRIVE POSITION [MM]

018100

+

Copy

Paste

SERVO 3 DRIVE POSITION [MM]

0109100

+

SERVO 4 DRIVE POSITION [MM]

0356100

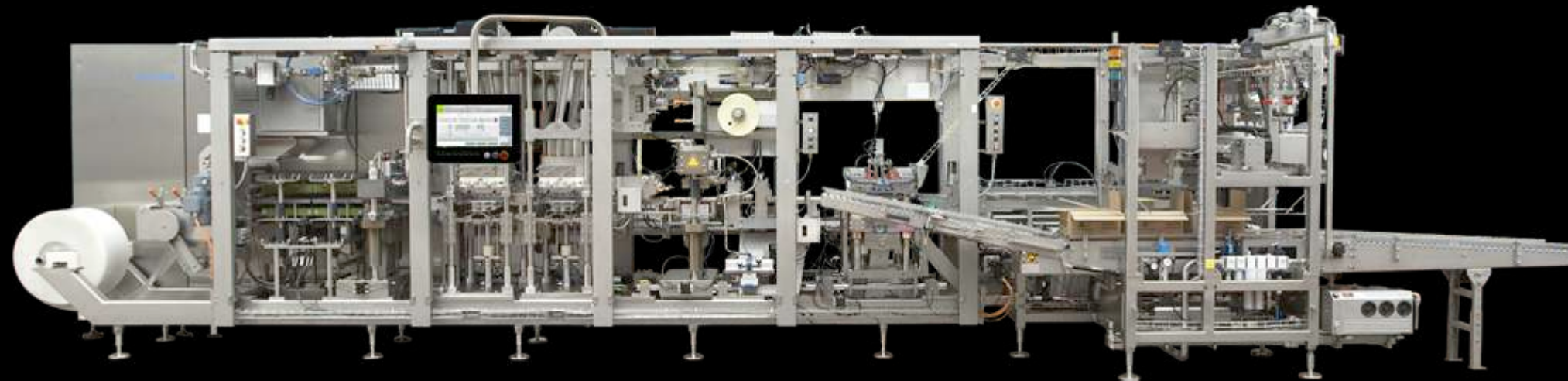
+

Help

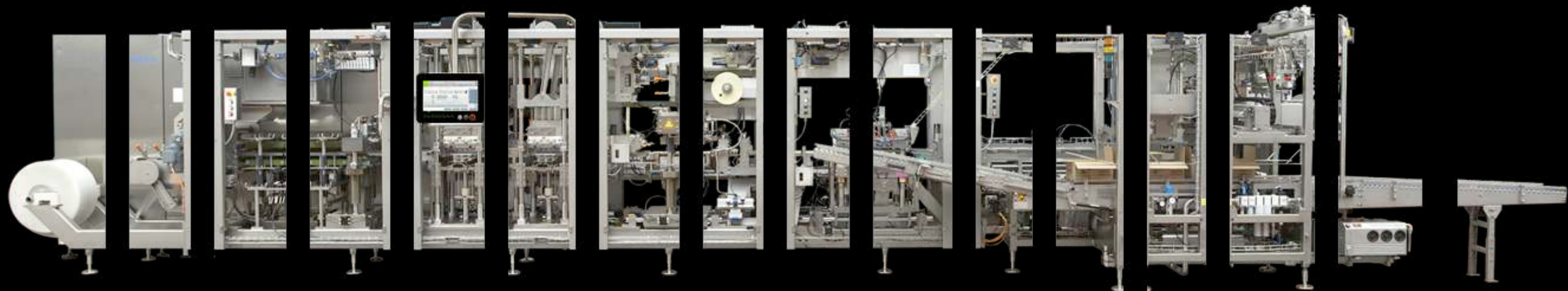
Single Stroke

20	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000
21	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
22	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000
23	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
24	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000
25	Cleaning Recipe Name 002	1056	1.1.0	✓ released	150.000
26	Cleaning Recipe Name 003	1287	1.0.1	✓ released	6.000

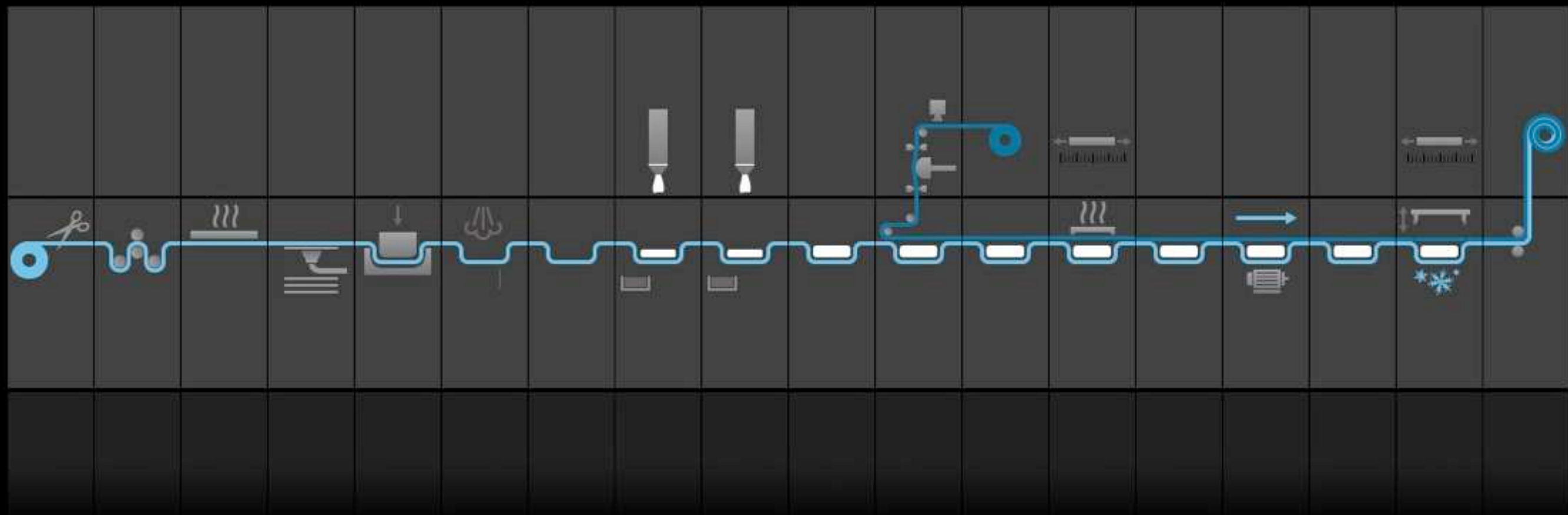
Increasing Functions using Multi-touch - Scrolling, Pinching, Opening Context Menus



Machine Linearisation - Transformation of a Real Machine to the Linear Machine Image

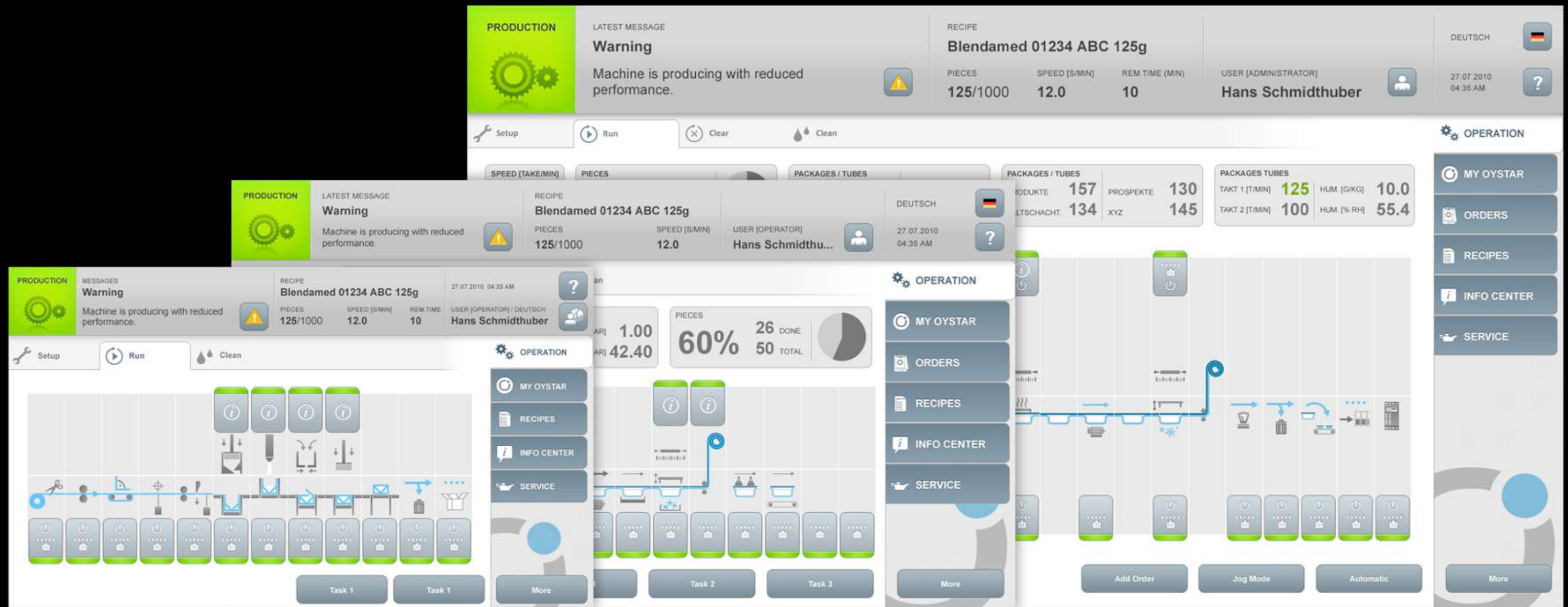


Machine Linearisation - Transformation of a Real Machine to the Linear Machine Image

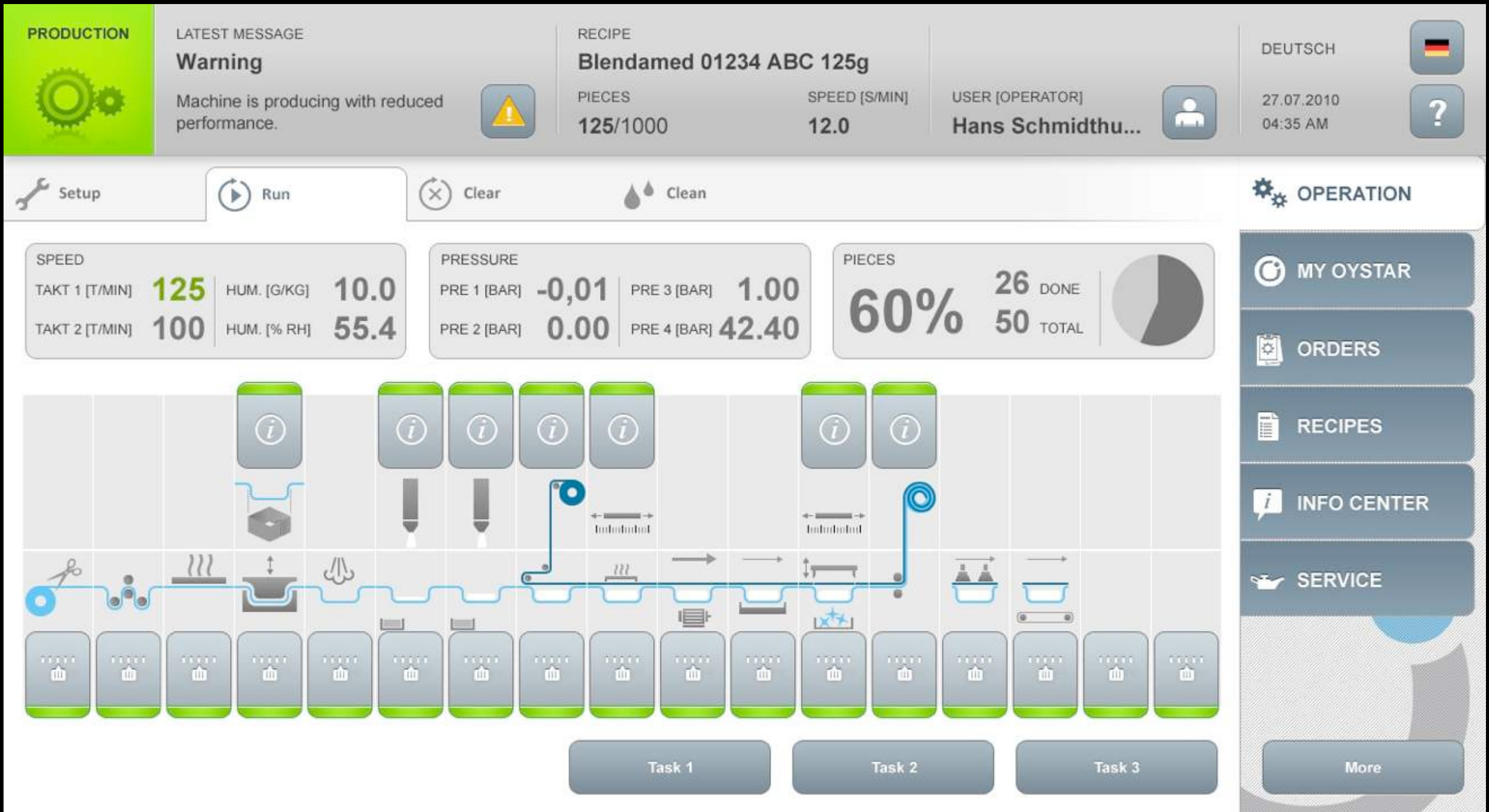


Machine Linearisation - Transformation of a Real Machine to the Linear Machine Image

Ergonomical Interface Design



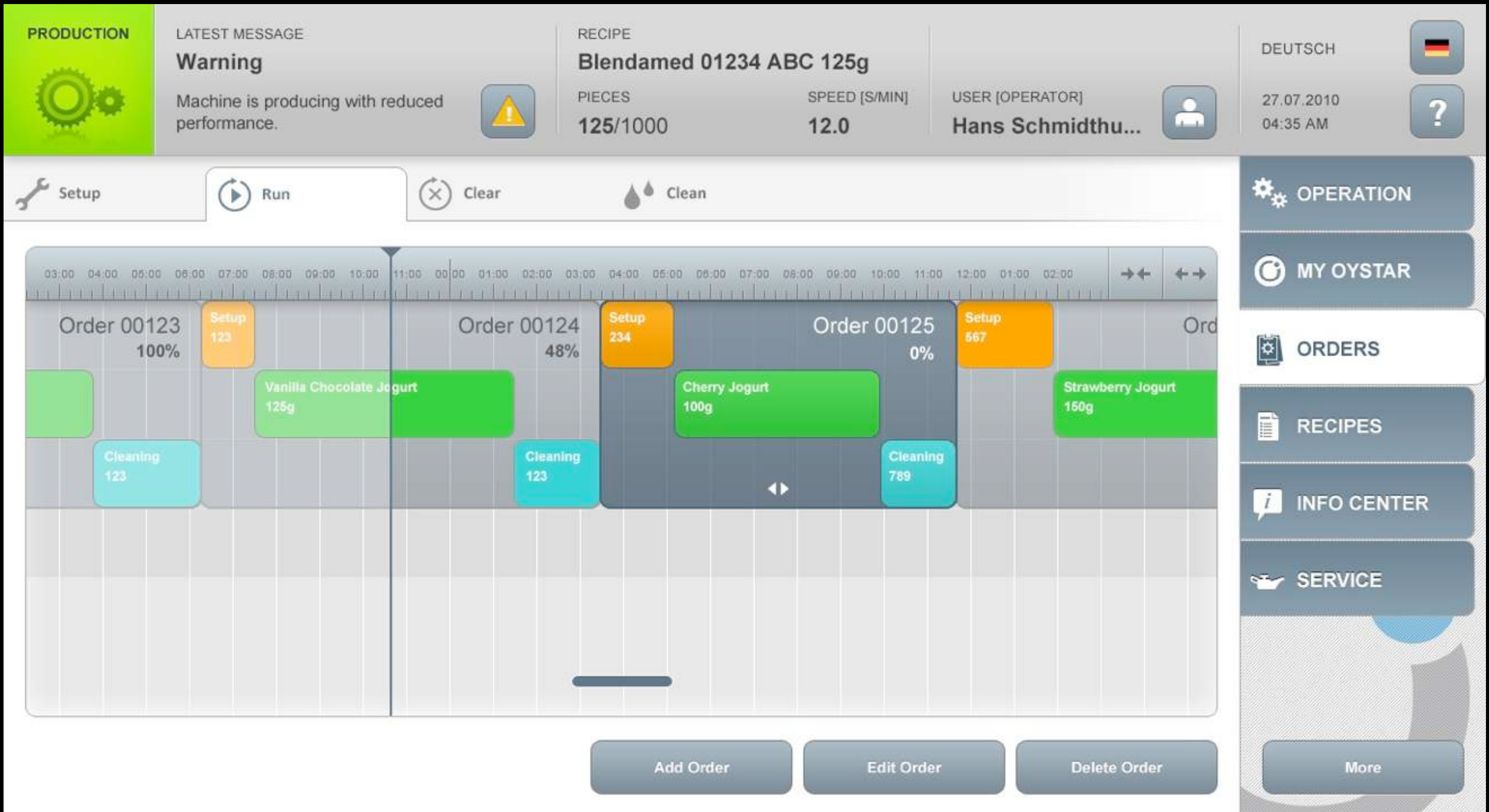
Adaption for 3 different Monitor Sizes - 10", 15" and 21".



Operation - Machine Overview and Parameter Control



My Oystar - Parameter Observation using Modular Widgets



Orders - Order Handling using the Timeline View

PRODUCTION



LATEST MESSAGE
Warning
Machine is producing with reduced performance.



RECIPE
Blendamed 01234 ABC 125g
PIECES **125/1000** SPEED [S/MIN] **12.0**
USER [OPERATOR] **Hans Schmidthu...** 

DEUTSCH 
27.07.2010
04:35 AM 

Setup

Production

Clean

NR. ▲	NAME ▲	ID ▲	VER. ▲	STATUS ▲	QUANTITY ▲
1	Cleaning Recipe Name 001	1562	1.0.0	 released	25.000
2	Cleaning Recipe Name 002	1056	1.1.0	 released	150.000
3	Cleaning Recipe Name 003	1287	1.0.1	 released	6.000
4	Cleaning Recipe Name 004	1562	1.0.0	 released	25.000
5	Cleaning Recipe Name 005	1056	1.1.0	 released	150.000
6	Cleaning Recipe Name 006	1287	1.0.1	 released	6.000
7	Cleaning Recipe Name 007	1562	1.0.0	 released	25.000
8	Cleaning Recipe Name 008	1056	1.1.0	 draft	150.000

Run Recipe

Edit Recipe

Delete Recipe

 OPERATION

 MY OYSTAR

 ORDERS

 RECIPES

 INFO CENTER

 SERVICE



More

Recipes - Order and Edit Recipes using a List View

PRODUCTION



LATEST MESSAGE

Warning

Machine is producing with reduced performance.



RECIPE

Blendamed 01234 ABC 125g

PIECES

125/1000

SPEED [S/MIN]

12.0

USER [OPERATOR]

Hans Schmidthu...



DEUTSCH

27.07.2010

04:35 AM





Manual

Statistics

Diagnosis

Maintenance

Reports

Manual and Documentation

+ Willkommen

+ Hilfe

+ Erste Schritte

+ Beschreibung der Masken

+ Maschine in Betrieb nehmen

- Funktions und Baugruppen

Füller

Antriebe

Transportbänder

+ Reinigung

+ Wartung

Searchterm

X

Home









Hauptantrieb

Confirmatio artificii rebus accomodet non est. Hoc loco potest. Ad spectatores. Hoc textus est textus caecus. Si spe mercedis adducti officia.

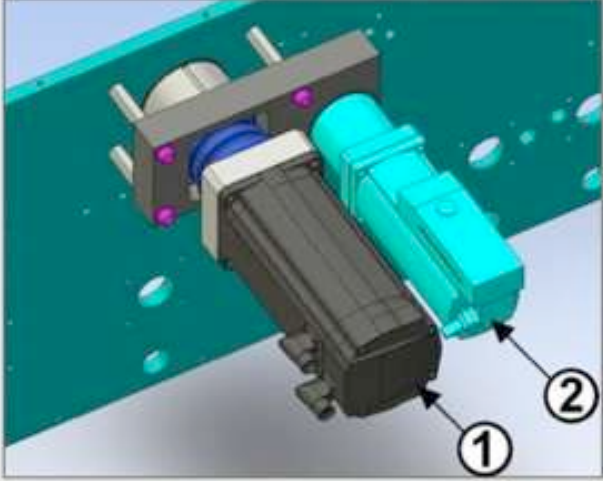
1. First Headline

Confirmatio artificii rebus accomodet non est. Hoc loco potest.

NAME	FUNCTION	GROUP
Module name 1	Module function1	Module group 1
Module name 2	Module function 2	Module group 2

2. Second Headline

Confirmatio artificii rebus accomodet non est. Hoc loco potest. Ad spectatores. Hoc textus est textus caecus. Si spe mercedis adducti officia. Non omnia possumus omnes. Utinam in tempore opportuno ad nos veniatis esse profiteamur.



Tip

Ad spectatores. Hoc textus est textus caecus. Confirmatio artificii rebus accomodata non est. Hoc loco potest, ut textus elegans de assula duorum hominum quorundam tantis ingeniis affectorum nomine rogge et pott compositus.

OPERATION

MY OYSTAR

ORDERS

RECIPES

INFO CENTER

SERVICE

More

PRODUCTION



LATEST MESSAGE
Warning
Machine is producing with reduced performance.



RECIPE
Blendamed 01234 ABC 125g
PIECES 125/1000 SPEED [S/MIN] 12.0
USER [OPERATOR] **Hans Schmidthu...**

DEUTSCH
27.07.2010 04:35 AM



Service Parameter

User Management

Project Backup

System Settings

Widget Configuration

User Management

NR. ▲	GROUPS
1	Administrator
2	User
3	Setup
4	Maintenance
5	Service
6	Operator

NR. ▲	USER NAME ▲	GROUP ▲	DESCRIPTION ▲
1	User Name 001	Administrator	Multum spatii in pagina superest...
2	User Name 002	User	Nihil tam difficile est, quin quaerendo...
3	User Name 003	Administrator	Rem tene, verba sequentur.
4	User Name 004	User	Non est vobis causa, quam ob rem sollicitetis.
5	User Name 005	User	Non omnia possumus omnes. Utinam in...
6	User Name 006	Setup	Qui nos problemata vestra soluturos esse ...
7	User Name 007	User	Brevi tempore spatia vacua verbis

User Settings

Group Settings

Global Settings

Delete User

Edit User

Add User

OPERATION

MY OYSTAR

ORDERS

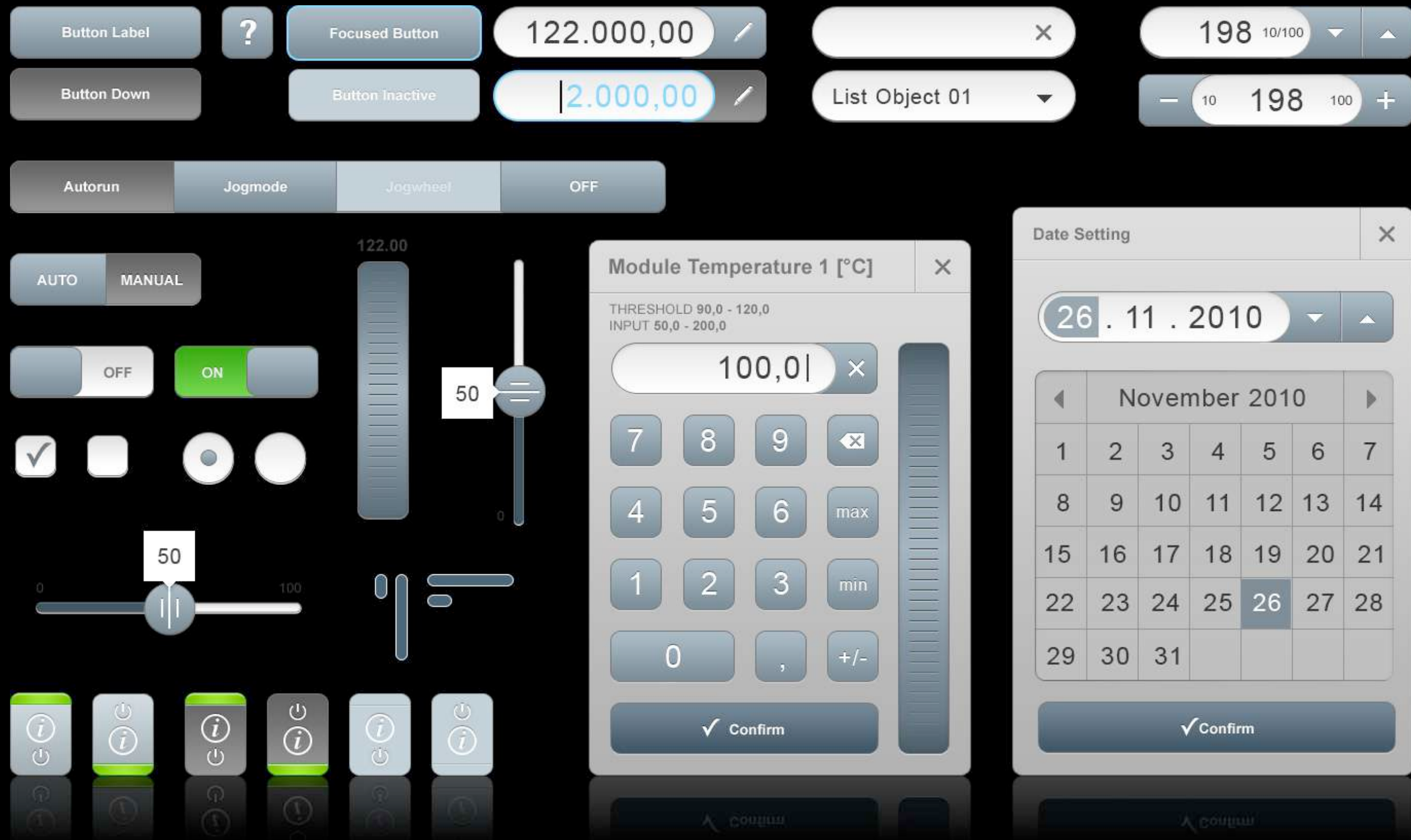
RECIPES

INFO CENTER

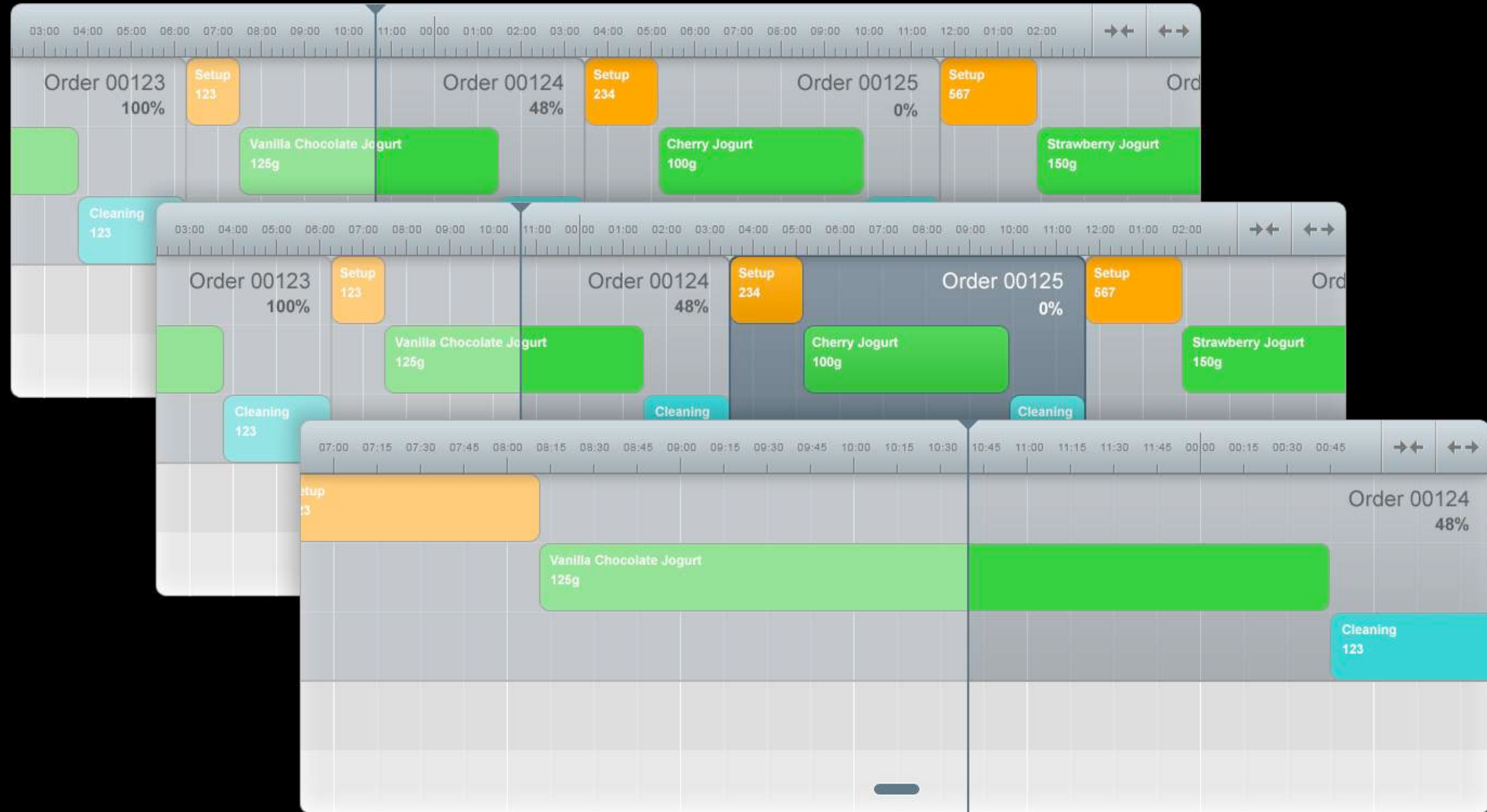
SERVICE

More

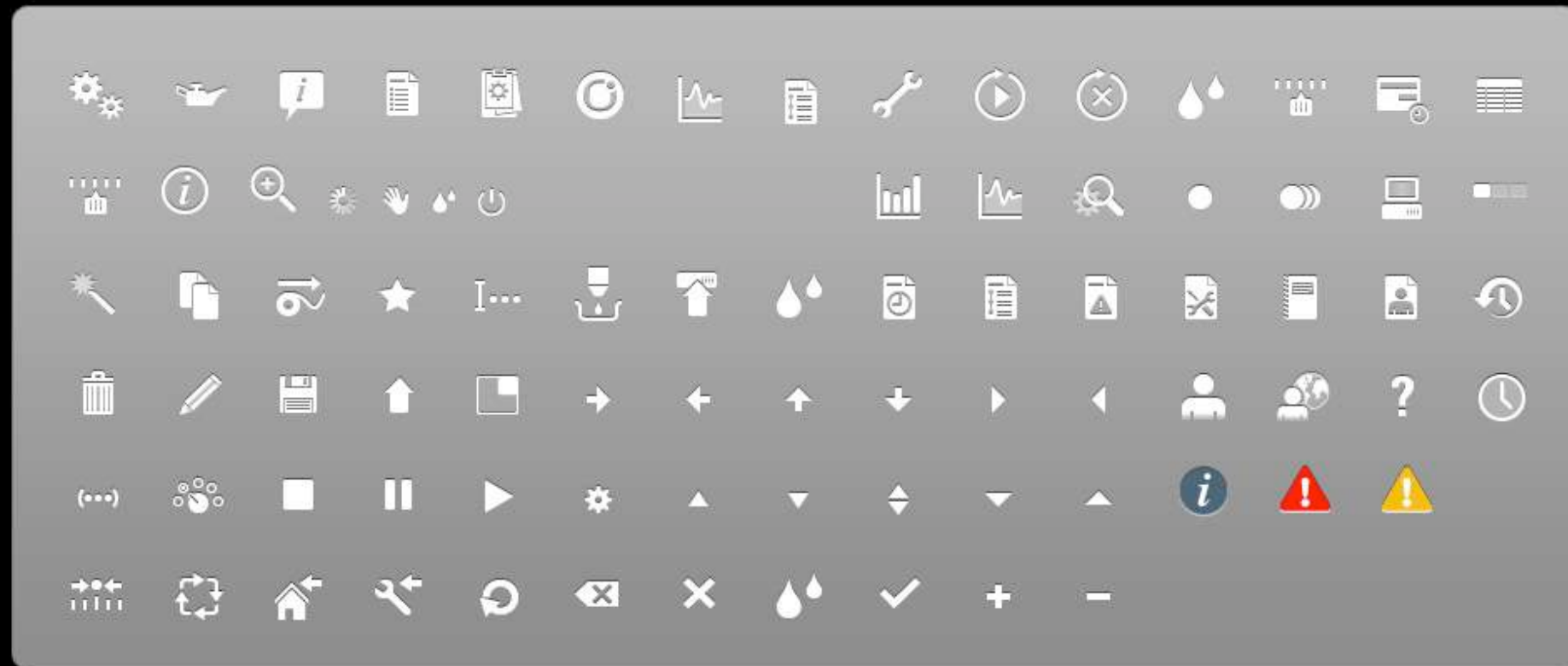
Service - User Management



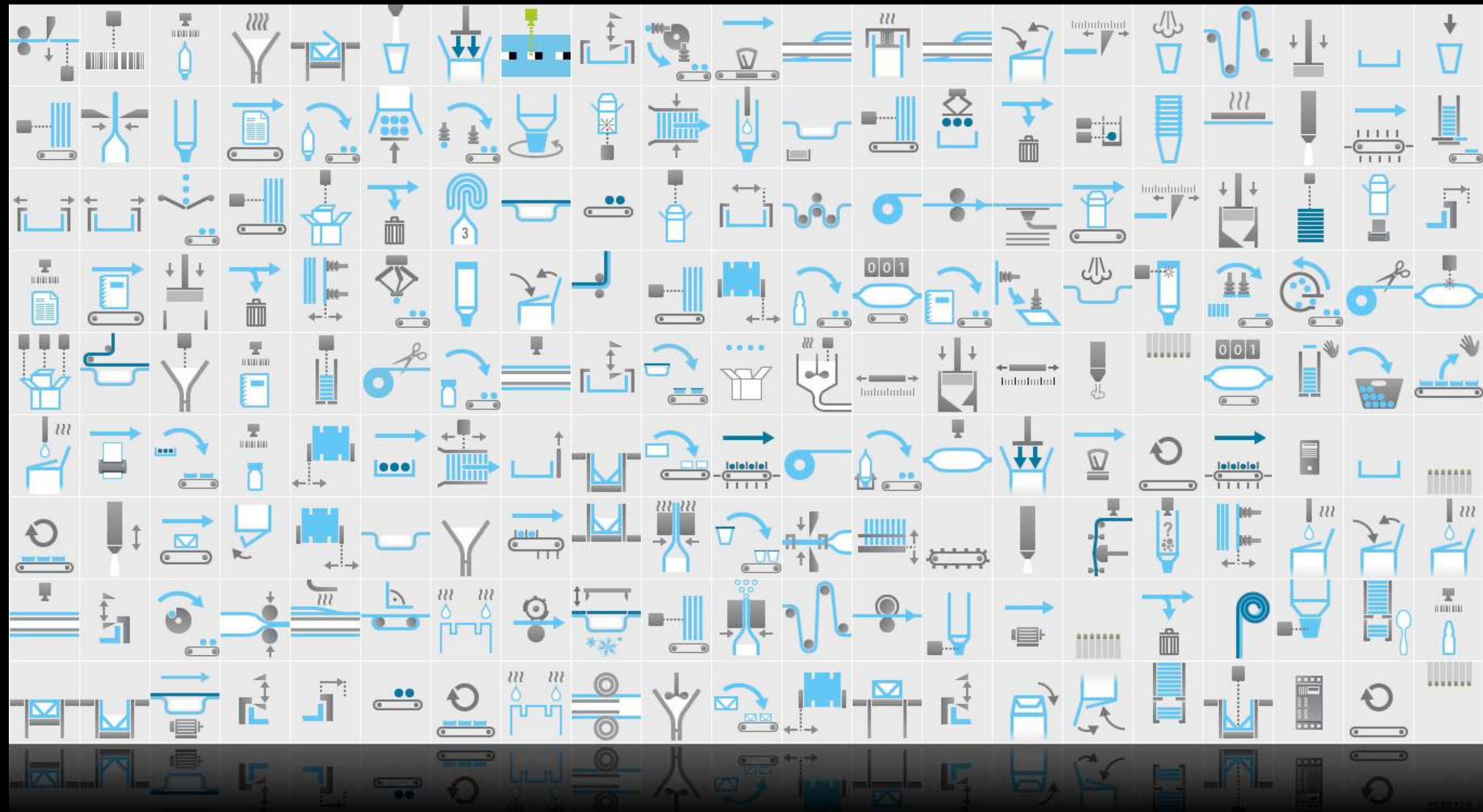
Touch-sensitive Controls - Overview of Selection- and Input-Controls



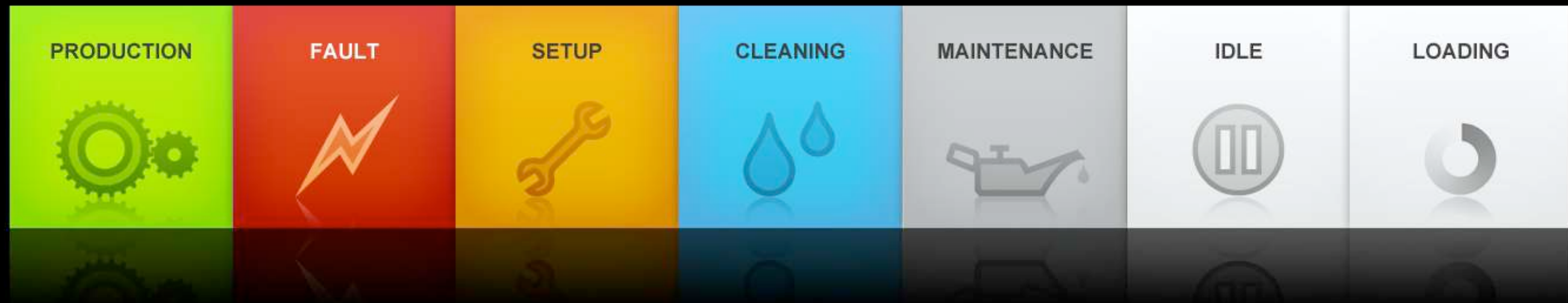
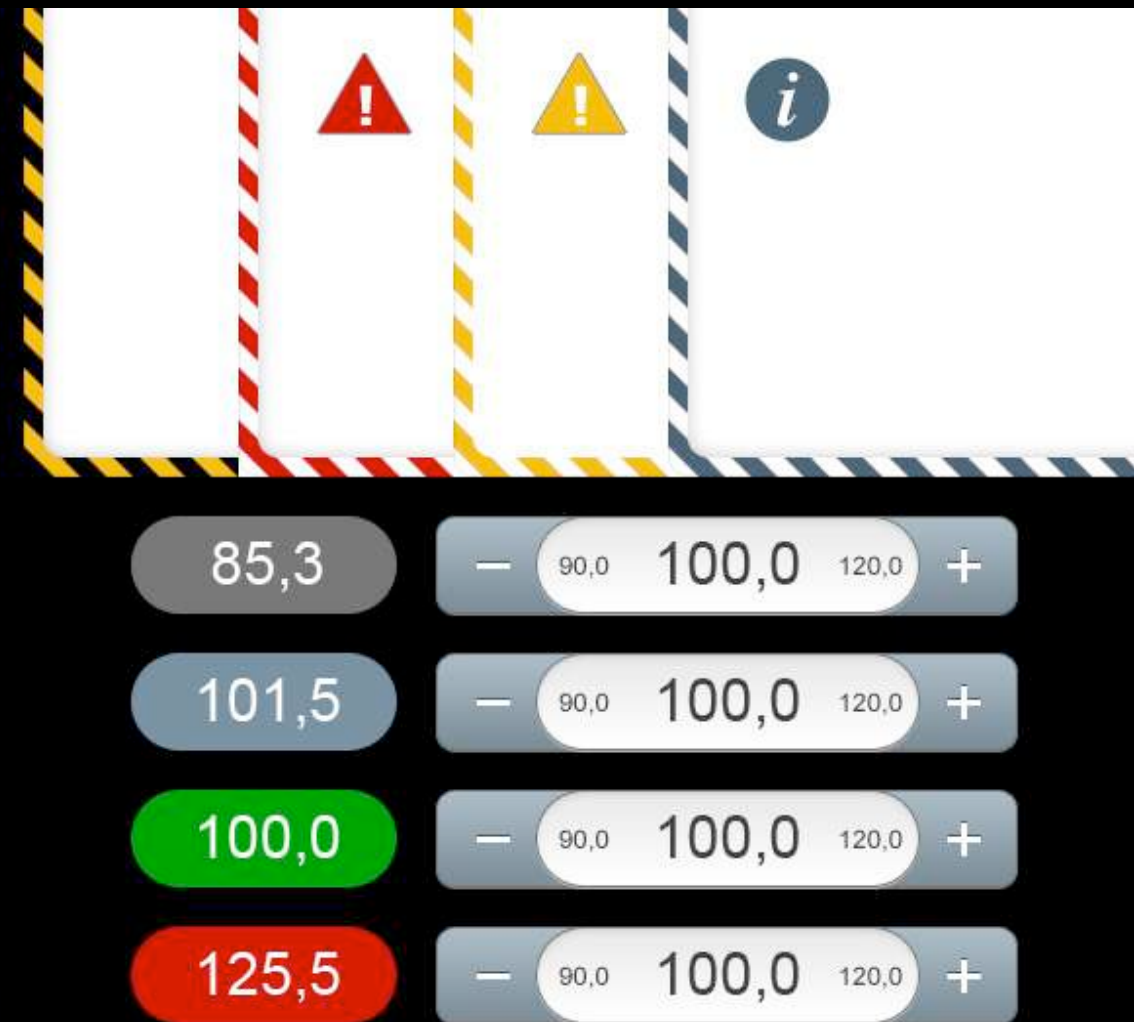
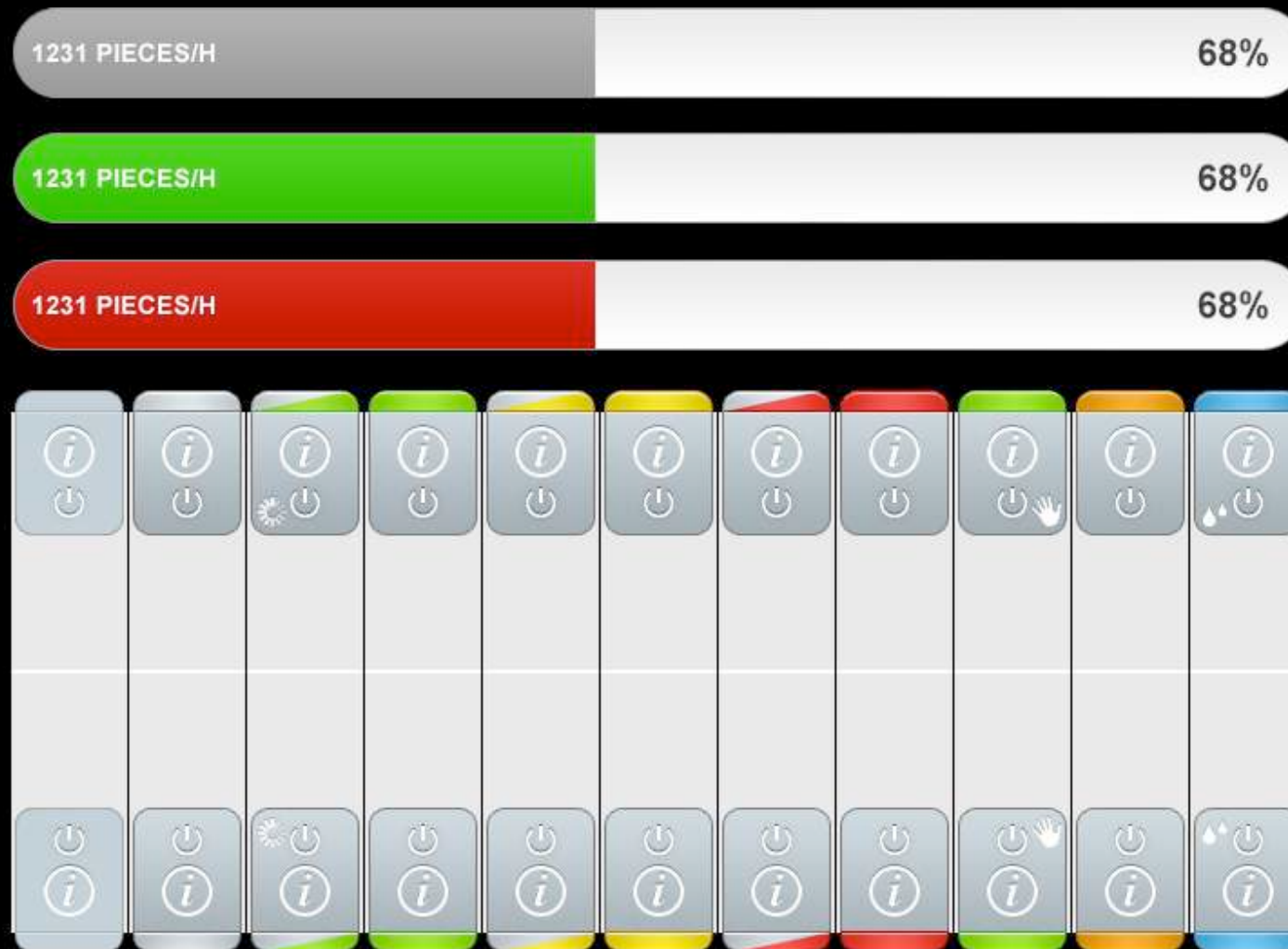
Intuitive Controlling - Selection and Zooming into the Order-Timeline



Self-explanatory Icons - Benefits Multilingual Adaption

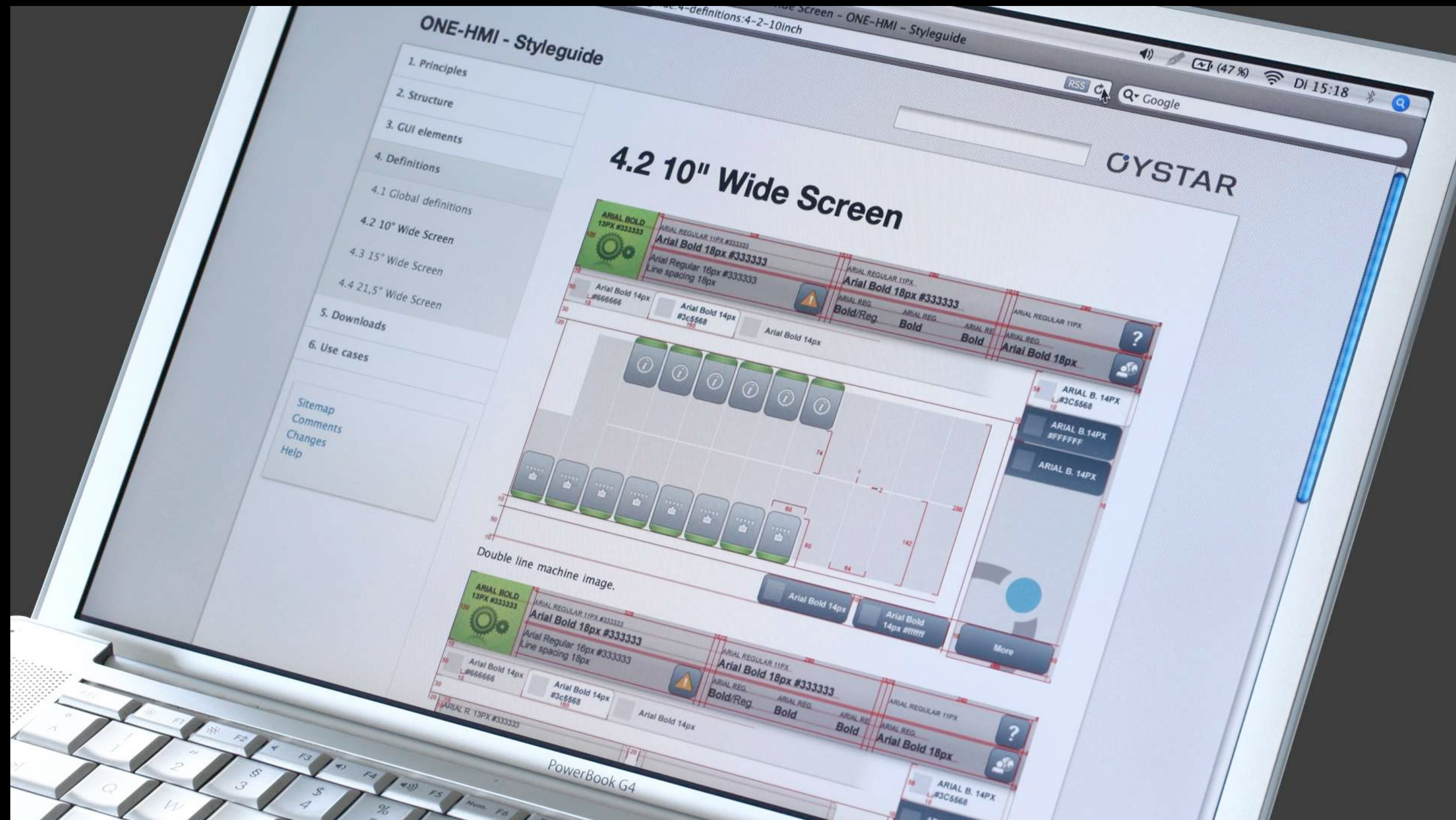


Logical Pictograms - Individual Representation of each single Machine Modul



Harmonious Colour Concept - User Guidance through Alerts and Warnings

Effective Implementation



Online DokuWiki Styleguide - Easy Access, Up-to-date Information

1. Principles

2. Structure

3. GUI elements

4. Definitions

5. Downloads

6. Use cases

6.1 Add Order

6.2 Edit Recipe

6.3 Setup assistant

6.4 Jog mode

6.5 Batch widget

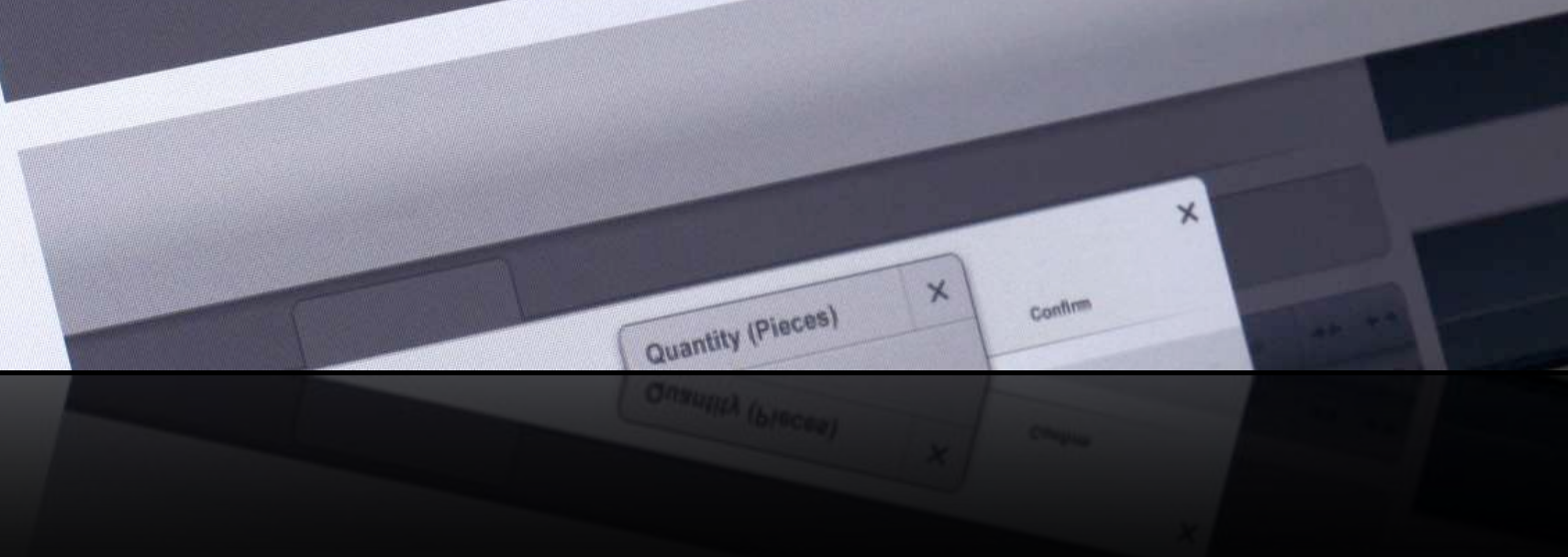
6.6 Task groups (proposal)

6.7 Machine sections (proposal)

6.8 Task toggle menu

6.9 Controls

6.1 Add Order



Growing Library of Use Cases

framework-15inch-bmp.zip
framework-21inch-png.zip
framework-21inch-bmp.zip
framework-21inch-vector.zip *coming soon*

GUI elements

(3101-standardbutton, 3102-togglebutton, ... - 3506-widgets)

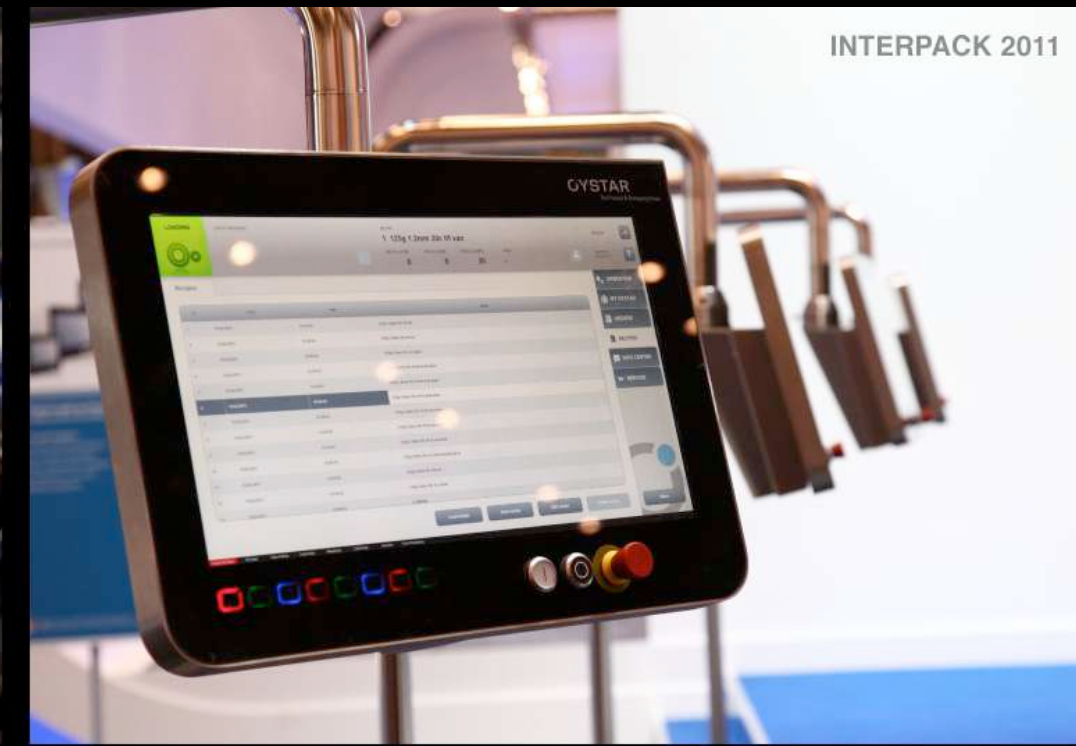
gui-elements-v096-png.zip
gui-elements-v095-bmp.zip

GUI icons

(a-statusbar, b-main...

Shared Files and Software Components

Reality Check



Exhibition Stand at Interpack Düsseldorf, 12. - 18. Mai 2011



Operation of a Tube Filling Machine, 24. August 2011

HMI Project GmbH / Frankfurter Straße 92 / 97082 Würzburg

T +49 931 453297-70 / hmi-project.com