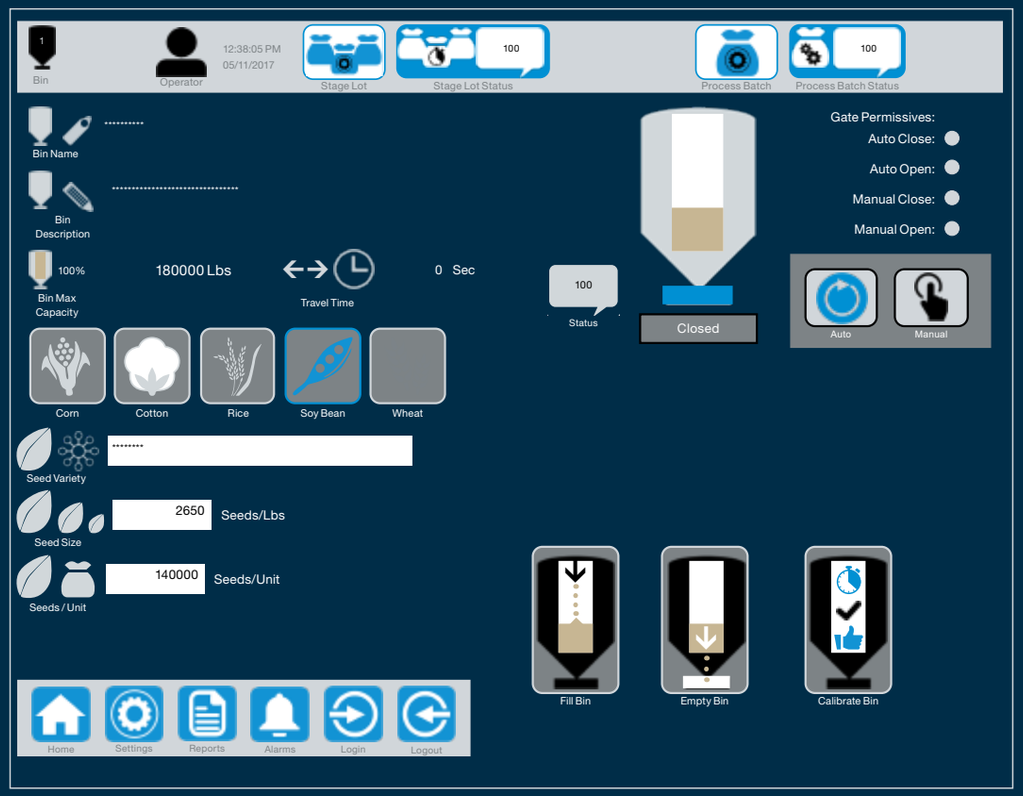
USER MANUAL

BULK SITE TOUCHSCREENS REFERENCE GUIDE



MENU

This is an interactive PDF. Click on an icon tile and navigate to a chapter of interest.

Legal & Safety

Main Screen

Settings

Bin Functions

Staged Lot

Process Batch

Pictograms

Users can advance or go back single pages by using quick navigation links shown below, right.

Users can navigate to the Menu by clicking on the Menu icon shown below, left.

LEGAL & SAFETY

This manual contains technical information regarding Bayer SeedGrowth™ Equipment. Please read and understand these instructions completely before proceeding to install and operate the equipment. Bayer reserves the right to change specifications, models, components, or materials at any time without notice. For additional equipment information contact us at 1.800.634.6738. Please have this manual available when contacting Bayer.

Always use caution and common sense when working with any chemical. Read the product label and SDS carefully and follow their instructions exactly as described.

Optimal operating conditions for this piece of equipment requires an ambient temperature 32° F to +104° F (0° C to +40° C), relative humidity less than 90% (minimum condensation). Make necessary provisions to protect this piece of equipment against excessive dust, particles containing iron, moisture and against corrosive and explosive gases.

Our technical information is based on extensive testing and is, to the best of our current knowledge, true and accurate but given without warranty as the conditions of use and storage are beyond our control. Variables, such as humidity, temperature, change in seed size or variety and viscosity of chemical products can all affect the accuracy of the chemical application and seed coverage. To ensure the desired application rate and optimum seed coverage, check the calibration periodically throughout the day, and make adjustments as needed.

Any person who is involved in the installation or periodic maintenance of this equipment should be suitably skilled or instructed and supervised using a safe system of work. Isolate the treater before removing guards for maintenance.

EXPOSURE CONTROL

Always use caution and common sense when working with chemicals. Read the product label and SDS carefully and follow their instructions exactly as described. The following Personal Protective Equipment (PPE) recommendations and best practices help promote safe use in seed treatment.

Note: Exposure Control signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.

Wear protective clothing

Wear disposable or reusable coveralls with long sleeves.

Hand protection required

Wear chemical-resistant gloves.

Wear rubber boots

Wear chemical resistant rubber boots.

Labels

Label recommendations and directions for handling must be followed, including treatment procedure (use of sticker) as well as the safety requirements.

Treatment products

Keep products in a locked room that has been approved for crop protection products.

Wear a mask

Wear respiratory protection.

Eye protection required

Wear protective eyewear.

Calibration

Seed treatment equipment must be checked and calibrated regularly to ensure accurate and safe application.

Clean seed

Use well cleaned seed to avoid creation of polluted dust that will contaminate the machine, treating facility, workers, farmers and the environment during sowing.

Cleaning

Use a vacuum to clean machines. Avoid using compressed air for cleaning.

Laundry

Wash soiled reusable clothing separately. Workers must take a shower after each shift.

Empty containers

Non-returnable empty containers must be triple rinsed before they can be disposed. For others the recommendation of the producer must be followed.

Spillage

Spillage must be avoided; it must be thoroughly cleaned up to avoid contaminating the environment and waterways.

Maintenance

Keep machinery clean between treating sessions.

REFERENCE SYMBOLS

Symbols and signal words are used to identify the level of hazard and help avoid personal injury.

Note: Safety signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.

Shock Hazard

Alerts that dangerous voltage may be present.

Warning

Alerts that a hazard may cause serious injury or death.

Caution

Alerts that a hazard may cause minor or moderate injury.

Hand crush - moving parts

Alerts crushing is possible.

Pinch point

Keep hands away from pinch points.

Rotating shaft

Do not wear loose clothing around turning parts.

Disconnect

Disconnect to de-energize before opening.

Tools

Required tools for installation and maintenance.

Use guards

Keep guards in place. Do not remove during operation.

Parts

Required parts for installation and maintenance.

Lifting

Requires two people to safely lift an item.

Tip

Calls attention to special information.

Lift points

Requires the use of proper rigging and lifting techniques based on the lift plan.

Note

Emphasizes general information worthy of attention.

Center of gravity

Indicates the center of gravity of the machine to help assist when rigging and lifting.

Example

Provides a problem or exercise that illustrates a method or principle.

PICTOGRAMS

Each Signifier displayed here is specific to this User Manual.

Hand
User
Status
Setup
Staging Bin
Outfeed
Seed
Check
Source
USB Thumbdrive
Seed Lot
Number
Running
Back
Control Valve
Start
Reports
Diverter
Corn
Variety
Touchscreens
Summary
File Transfer
Like
Overload
Save
Forward
Total
Pause
Alarms
Inlet Hopper
Cotton
Accept
Direct Dump
Customers
OKAY
Stage Lot
Pulse
Weight
Login
Maintenance
Clock
RH Treater
Conveyor
Rice
Auto Mode
Slidegate Open
Customer New
Home
Process Batch
Reset
Note
Logout
Contactor
Settings
Bulk Bin
Transfer
Soybeans
Cancel
Slidegate closed
Account #
Diagnostics
Name
Reset Time
Tip
Layers
Batch
Configuration
Weigh Scale
Infeed
Wheat
Manual Mode
Control
Files - multiple
Time
Pen
Ramp
Example
VFD
Cleanout
Close Round
Delete
Energise
File Open
Limit
Locate
Locked
Greater Than
Nav Arrow Dbl
Nav Arrow Sgl
Menu

MAIN SCREEN

Home Screen

When the treater control panel is turned on, the PLC will boot up the application programme and initially display the **Home** Touchcreen (shown right) on the HMI touch panel user interface.

The **Home** screen is the main run screen from which all enabled devices will be viewed during bulk site operation. When the system first boots, none of the devices are displayed on the **Home** screen (shown right). They must first be allocated (selected for use) on the **Settings** screen and then enabled (made ready to operate) on the **Configuration** screen. After devices have been allocated and enabled, their icons will populate on the **Home** screen.

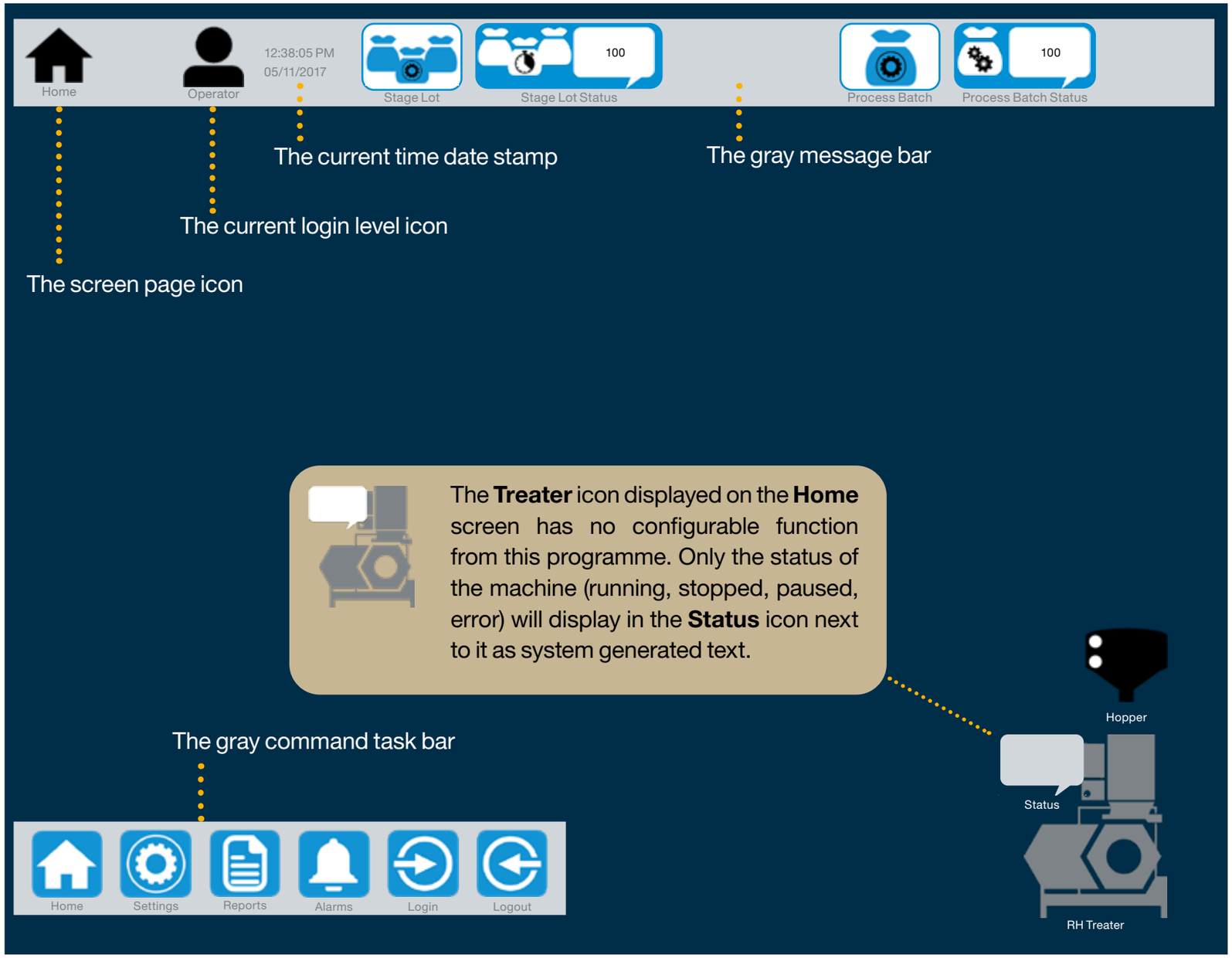
Once the system has been configured, upon subsequent start-ups, the **Home** screen will display the last system configuration (which then can be changed, if needed).

Message Bar

The message bar, located at the top of all screens as shown above, visually indicates the following functions (left to right): the screen icon, current login level icon, time date stamp, stage lot icon, stage lot status indicator icon, process batch icon, process batch status indicator icon, staged lot setup button icon, staged lot start button icon (toggles to pause), process batch setup button icon and the process batch start button icon (toggles to pause).

Command Task Bar

The gray command task bar, located at the bottom of every screen as shown left, allows users to navigate between screens by touching the icon buttons.

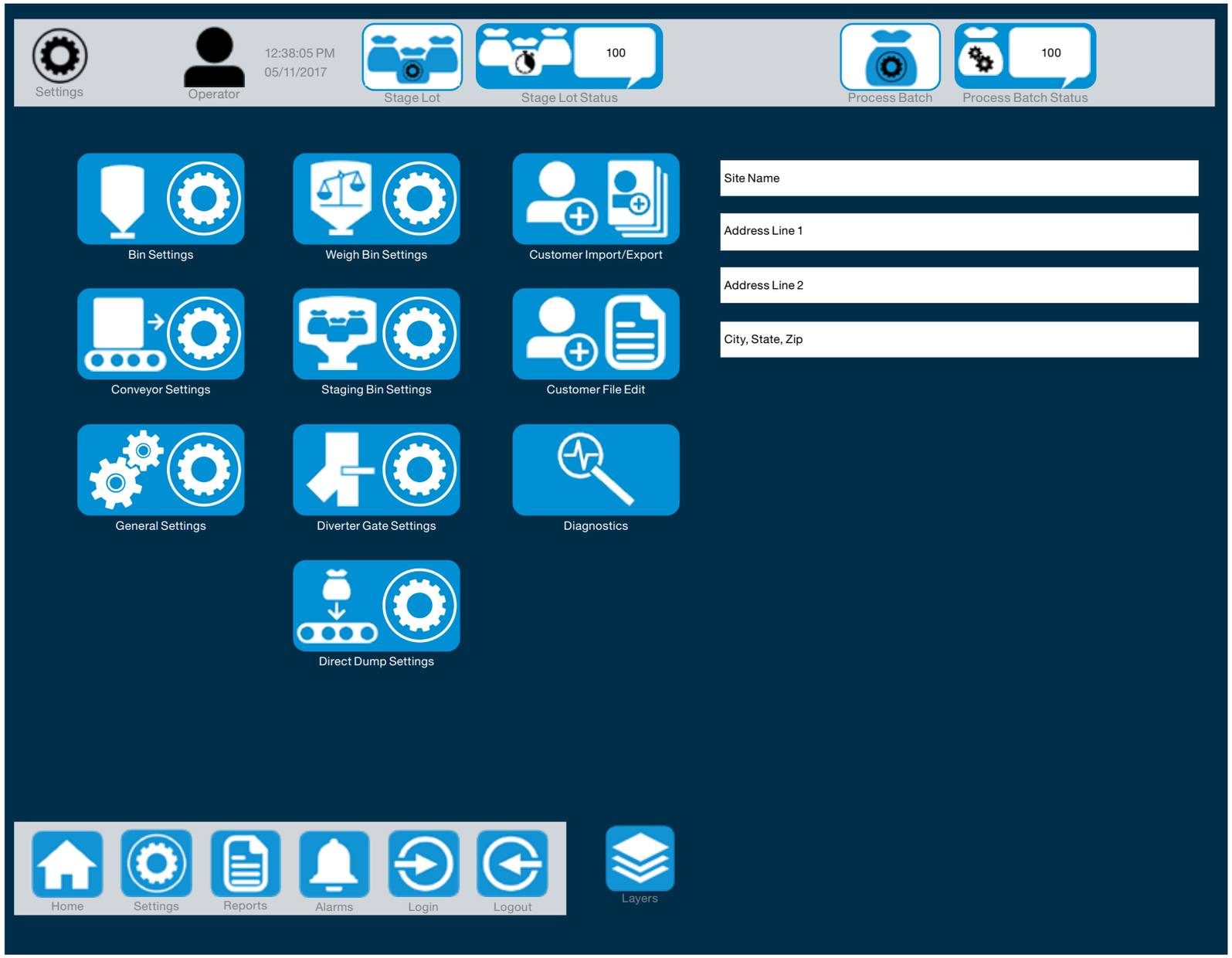


Settings Screen

Site information can be entered

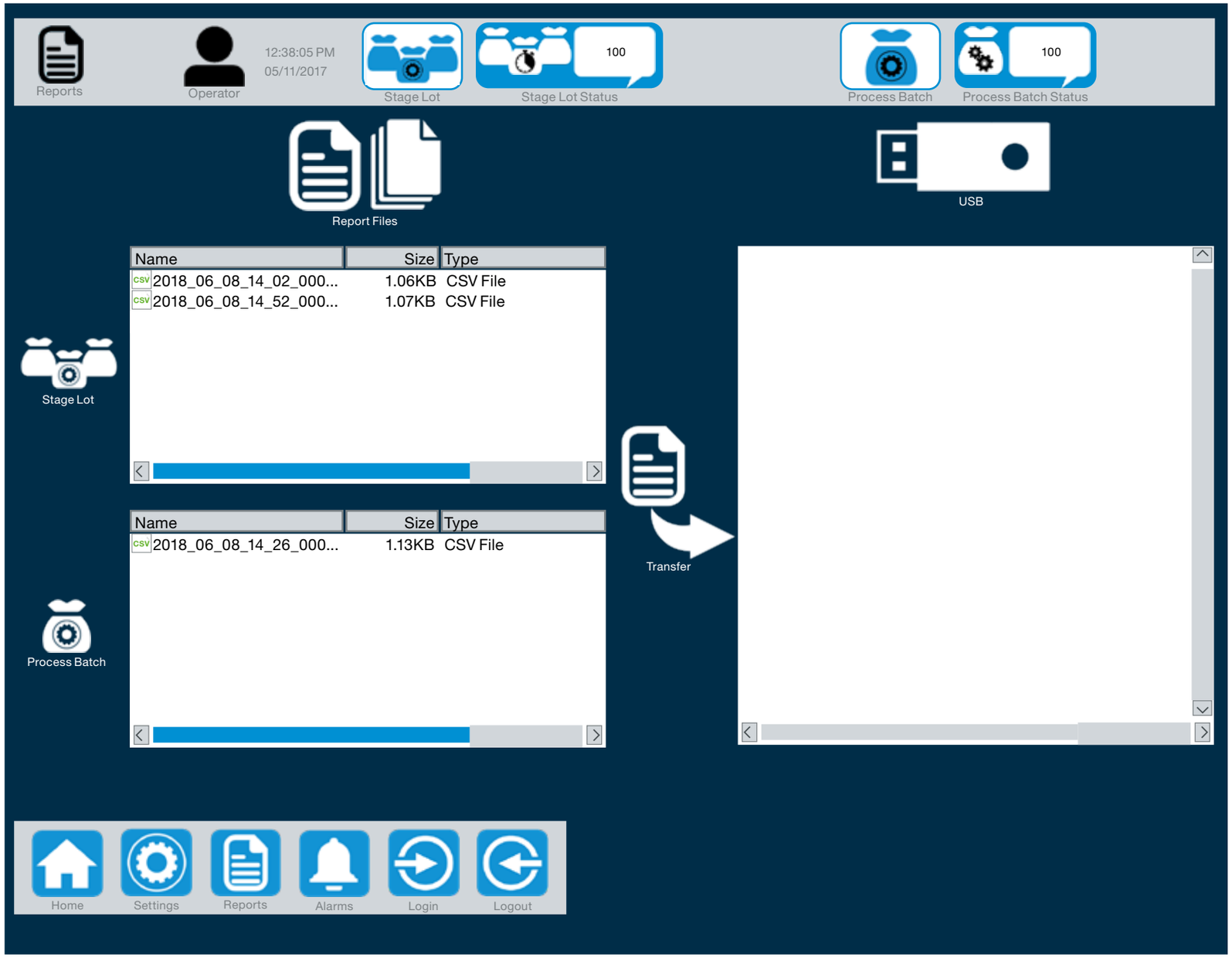
General Navigation to different setting screens

Turn Off the icon helper text



Reports Screen

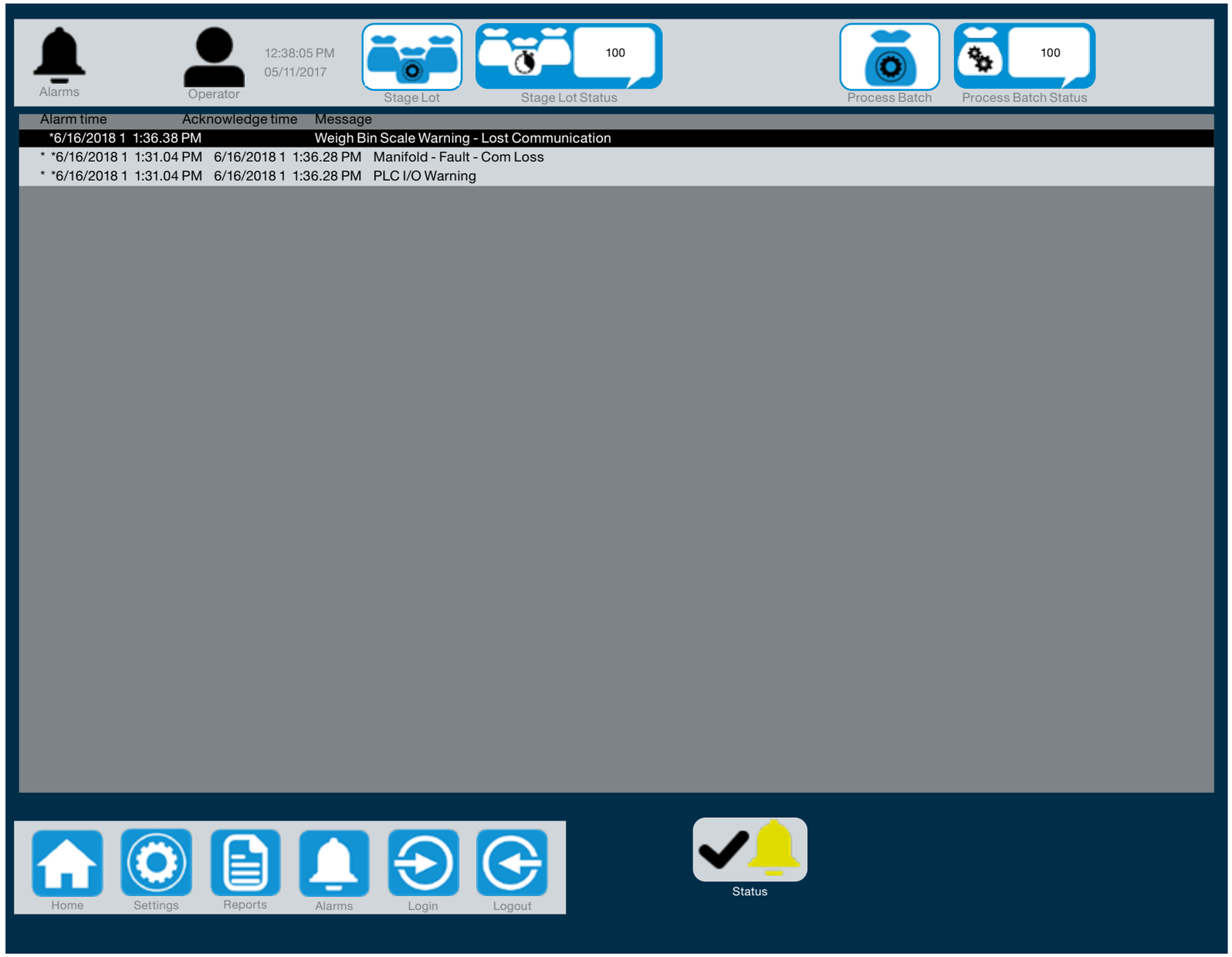
Exporting Reports to USB



Alarms Screen

Displays Alarms

Allows user to acknowledge alarms



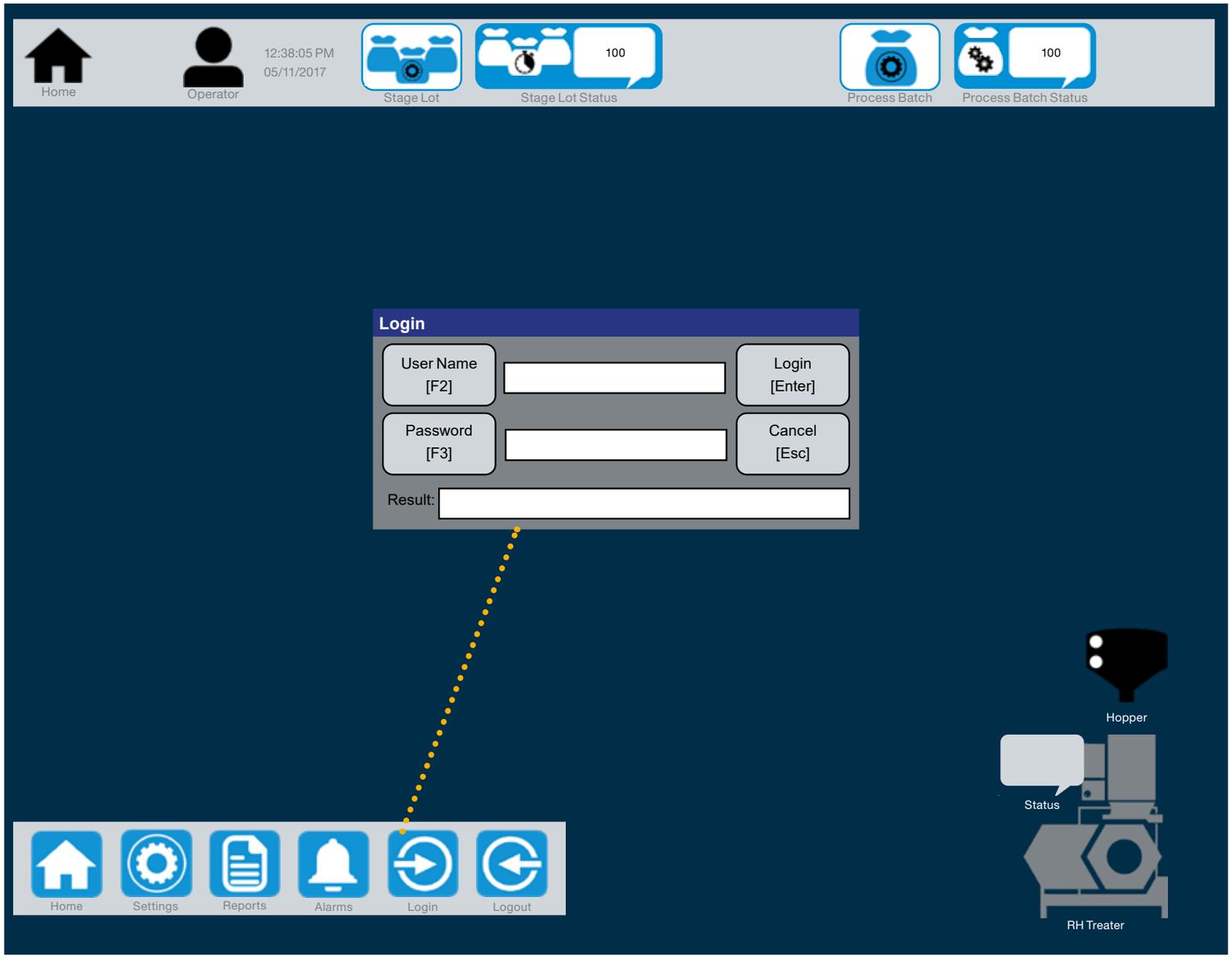
Login Pop-up

When the treater control panel is turned on, the PLC will boot up the application programme and Users are automatically logged into the system at the default level: **Operator**.

No matter which screen is displayed, users can touch the **Login** button icon on the gray command task bar, located at the bottom of every screen: the **Login** pop-up displays as a layer on top of the current touchscreen, as shown right.

Enter a protected User Name and Password for Administrator, Supervisor, Engineer or Technician levels. Touch the **Login [Enter]** button: **Login** pop-up closes and the new login level icon will display at the top of every screen in the gray message bar.

To log out from the current login level, touch the **Logout** button icon on the gray command task bar: System then defaults back to the **Operator** level and the Operator level icon displays at the top of every screen in the gray message bar. Login/Logout function can be executed from any touch screen.



SETTINGS

Bin #1 Detail Screen

Displays Bin Details

Setup Seed Information

Allows manual operation of bin gate

Bin Processes:

- Fill Bin
- Empty Bin
- Calibrate Bin

Allow Bin Functions:

- **Fill Bin:**

  Allows to enter in current bin seed level or fill seed amount

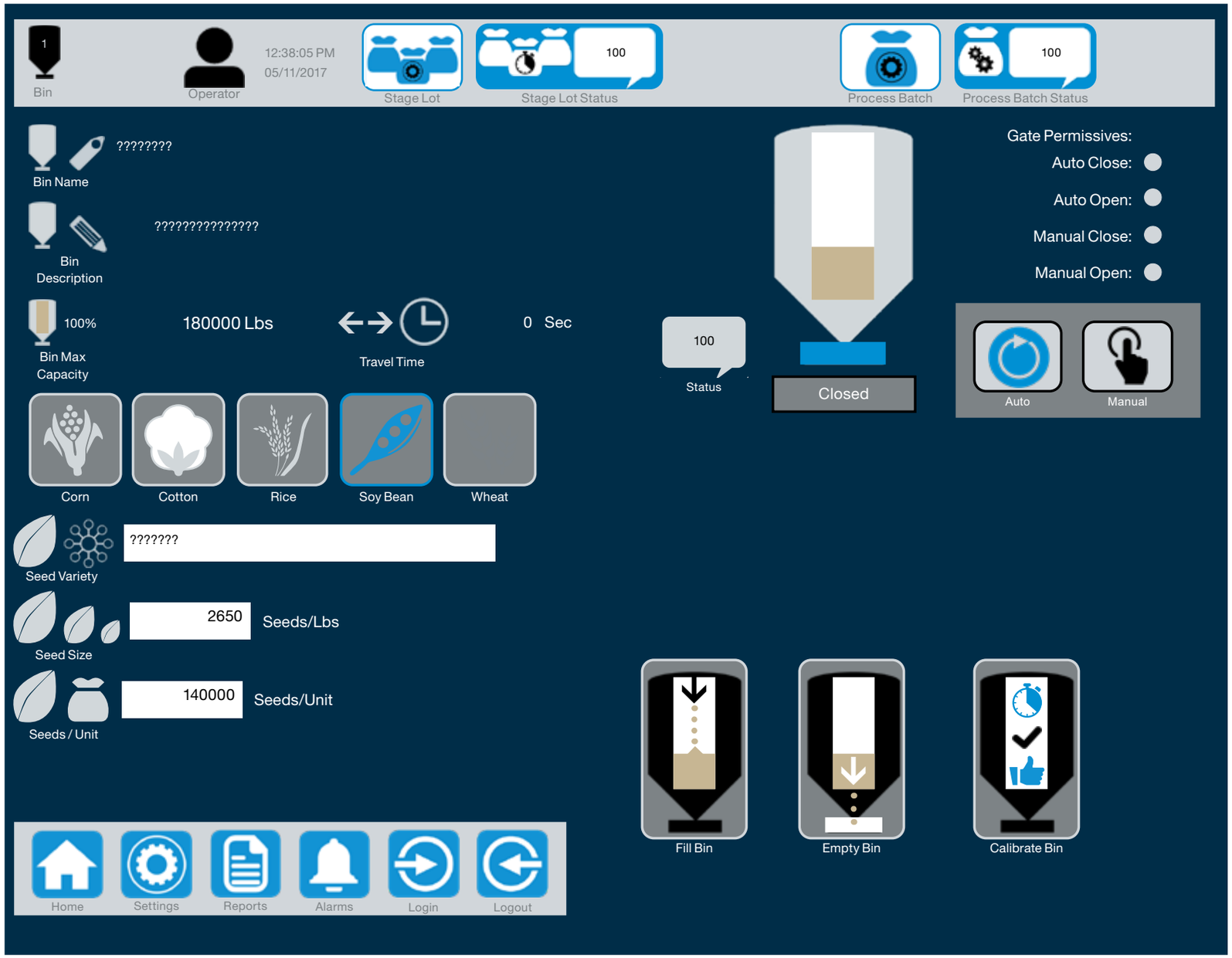
- **Empty Bin:**

  Allow the bin amount to be zeroed

  Runs the under bin conveyor in reverse

- **Calibrate Bin:**

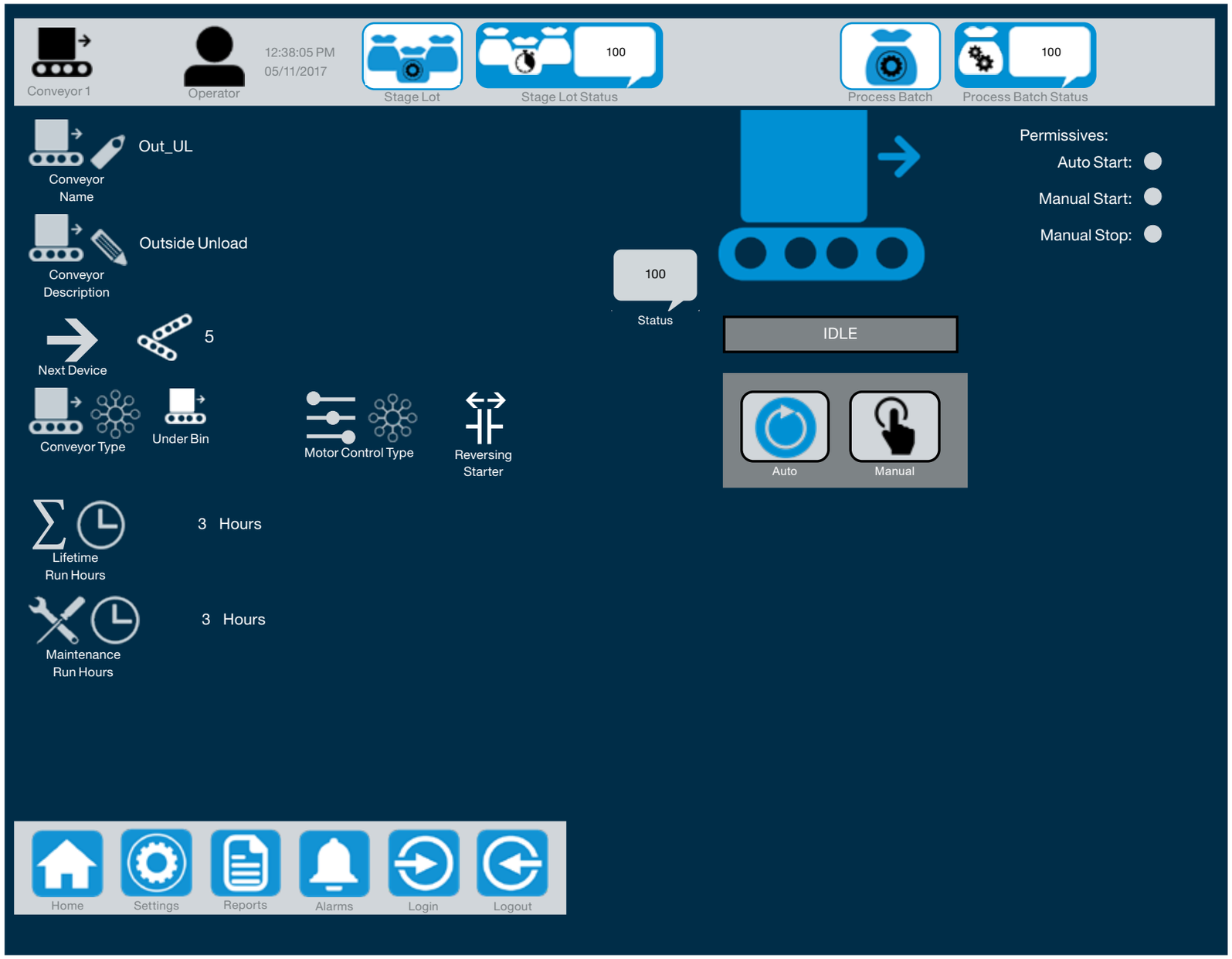
  Calibrates the seed flow rate



Conveyor #1 Detail Under Bin Screen

Displays Conveyor Details

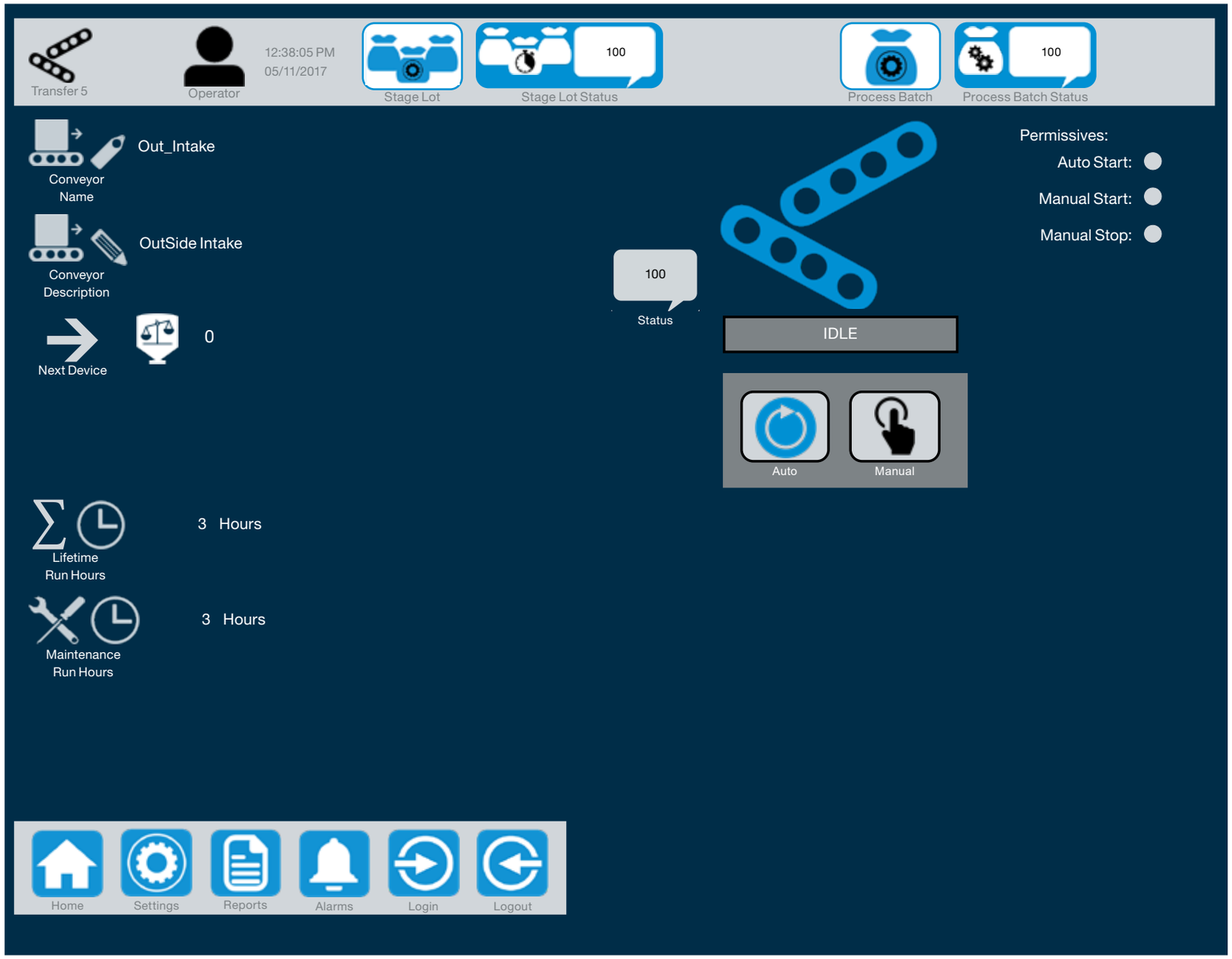
Allows manual operation of the conveyor



Transfer Conveyor #5 Detail Screen

Displays Conveyor Details

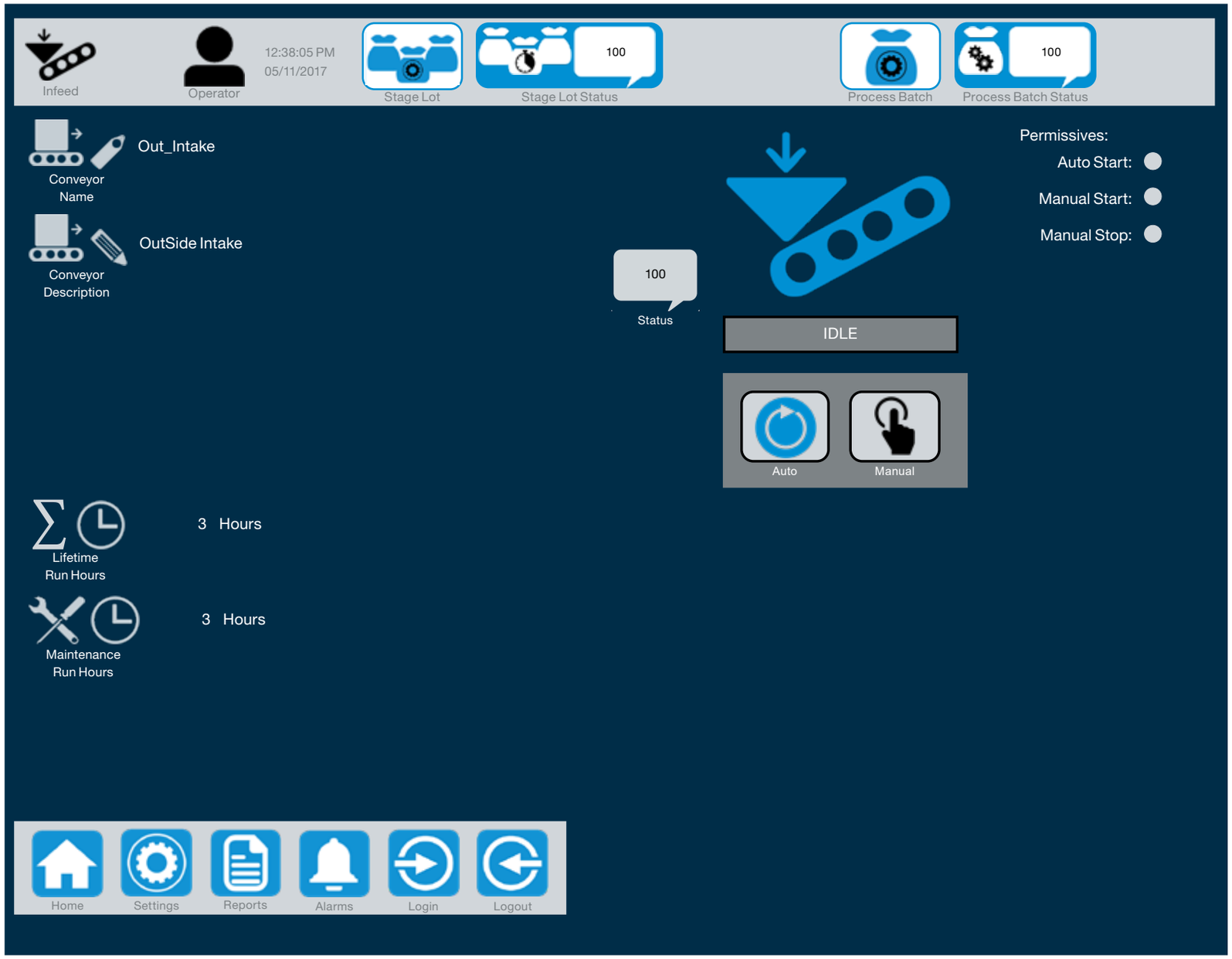
Allows manual operation of the conveyor



Conveyor Infeed Detail Screen

Displays Conveyor Details

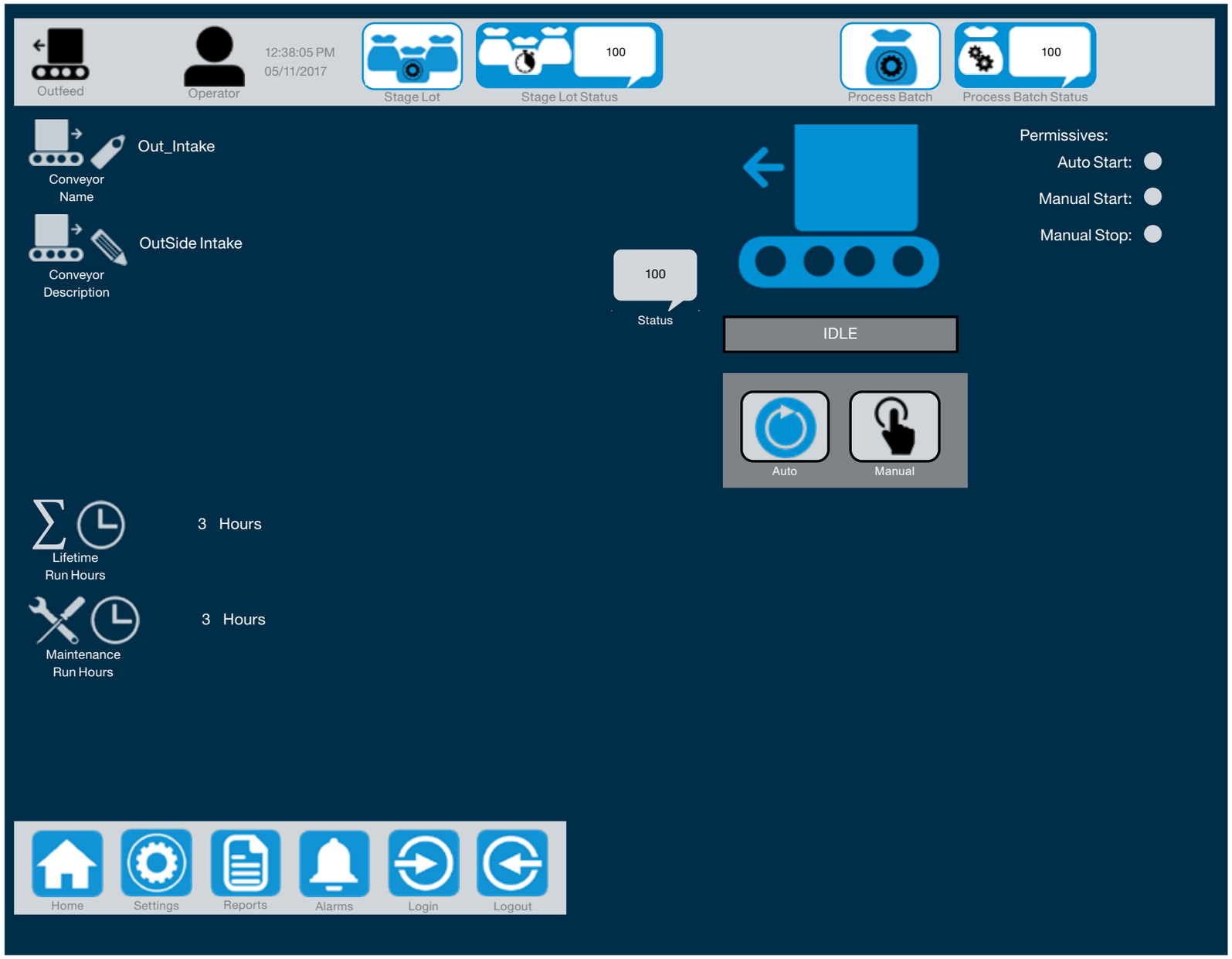
Allows manual operation of the conveyor



Conveyor Outfeed Detail Screen

Displays Conveyor Details

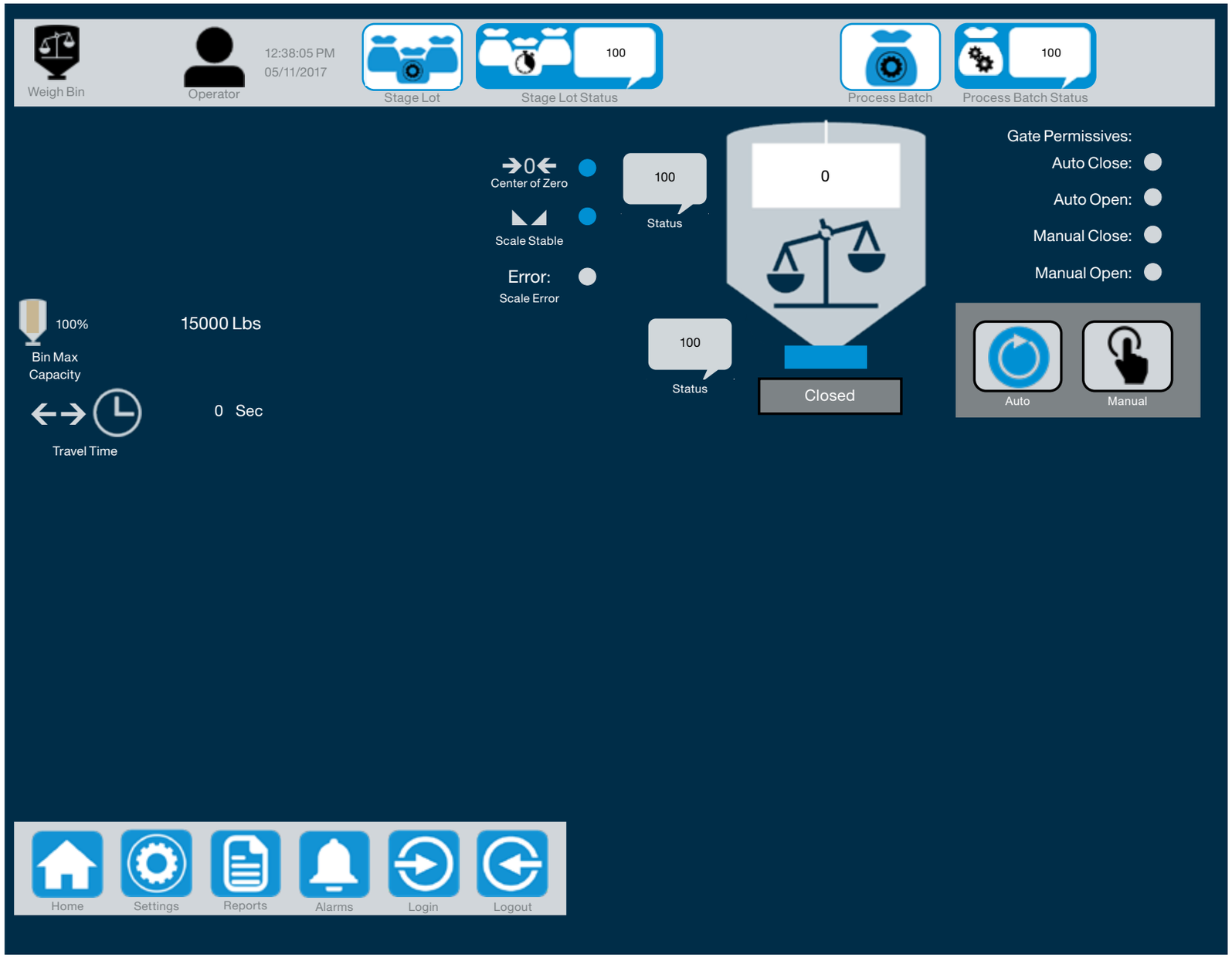
Allows manual operation of the conveyor



Weigh Bin Screen

Displays Conveyor Details

Allows manual operation of the lide gate

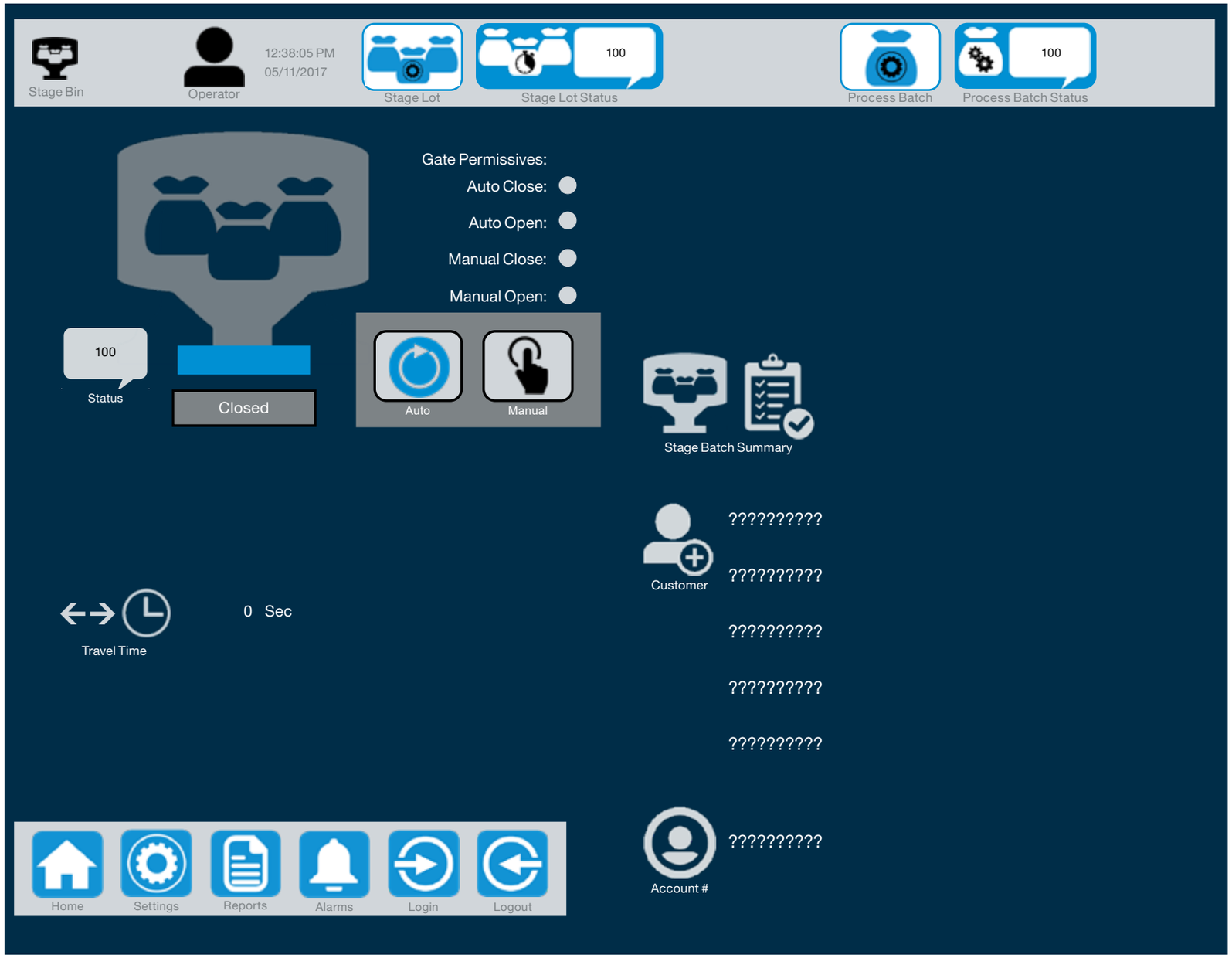


Stage Bin Screen

Displays Bin Details

Display Current Seed in the Bin

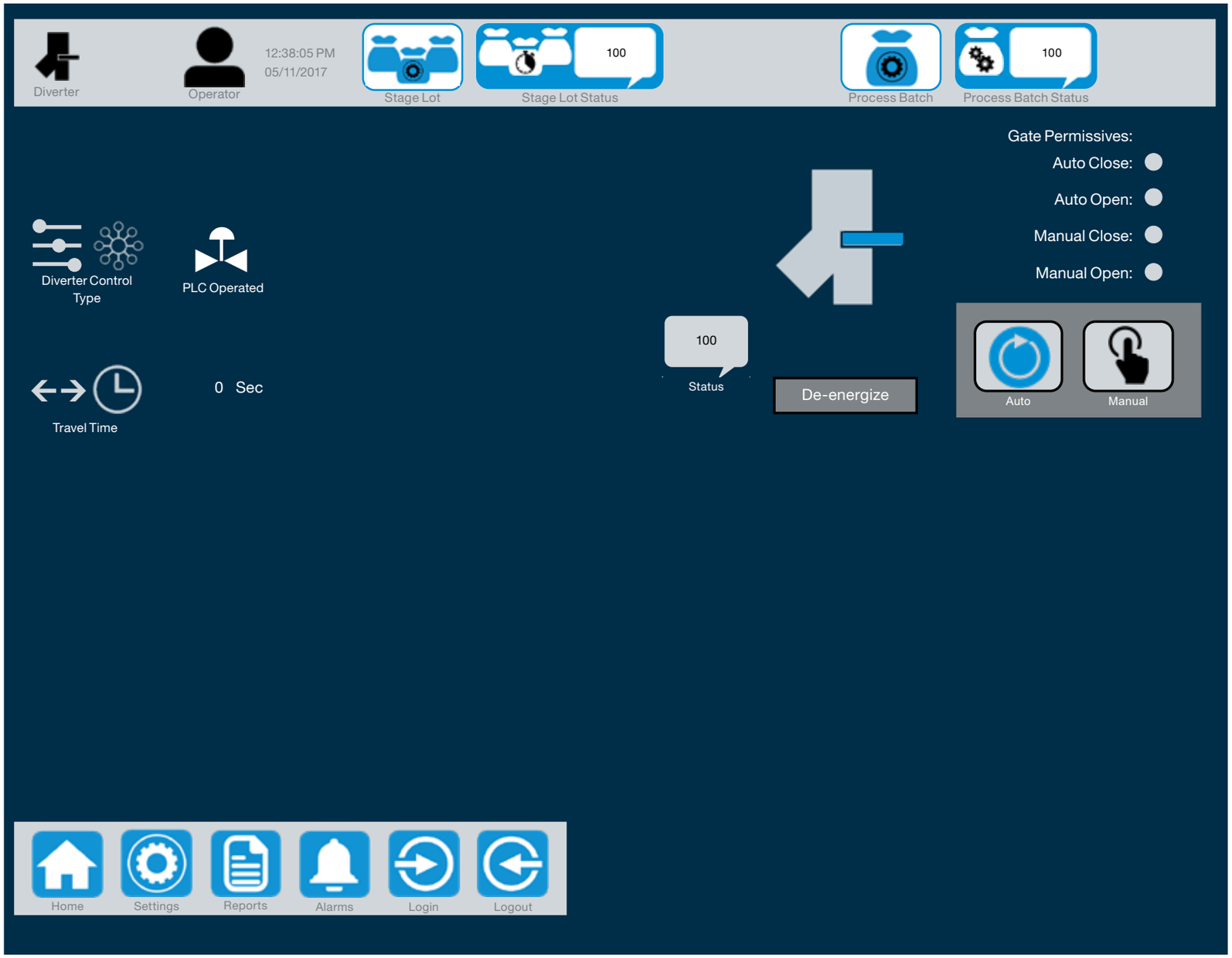
Allows manual operation of the Bin Gate



Diverter Detail Screen

Displays Diverter Details

Allows manual operation of diverter gate



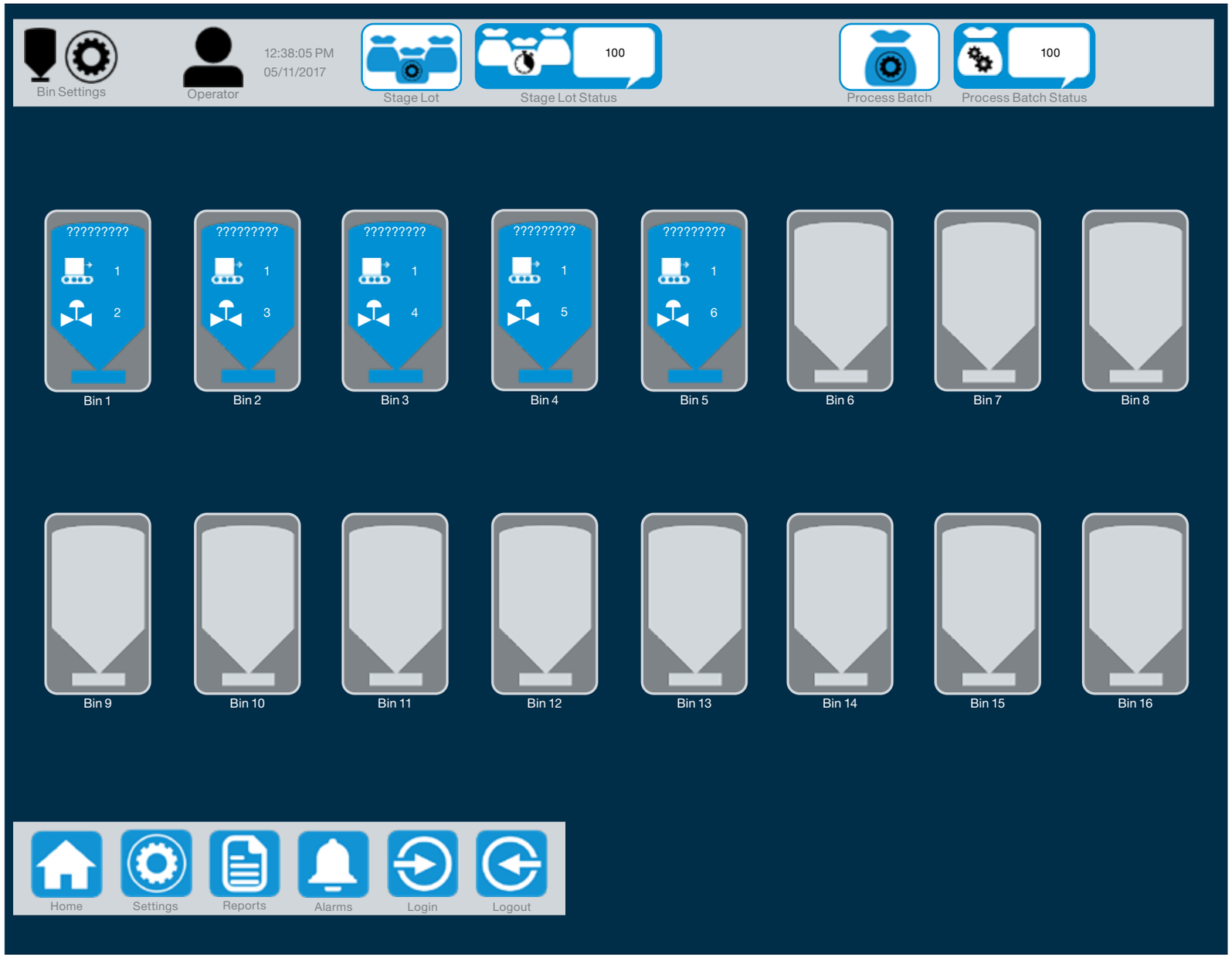
Bin Settings Screen

Bin Configuration Navigation

Displays following information:

- Active Bin
- Bin Name
- What Under Bin Conveyor is used
- What pneumatic valve is used

Choose a bin for more information



Bin Settings Screen

Enable Bin

Name the Bin:

- Is displayed on the Bin on Main screen

Bin Description

Set Max Capacity

Gate Travel Time:

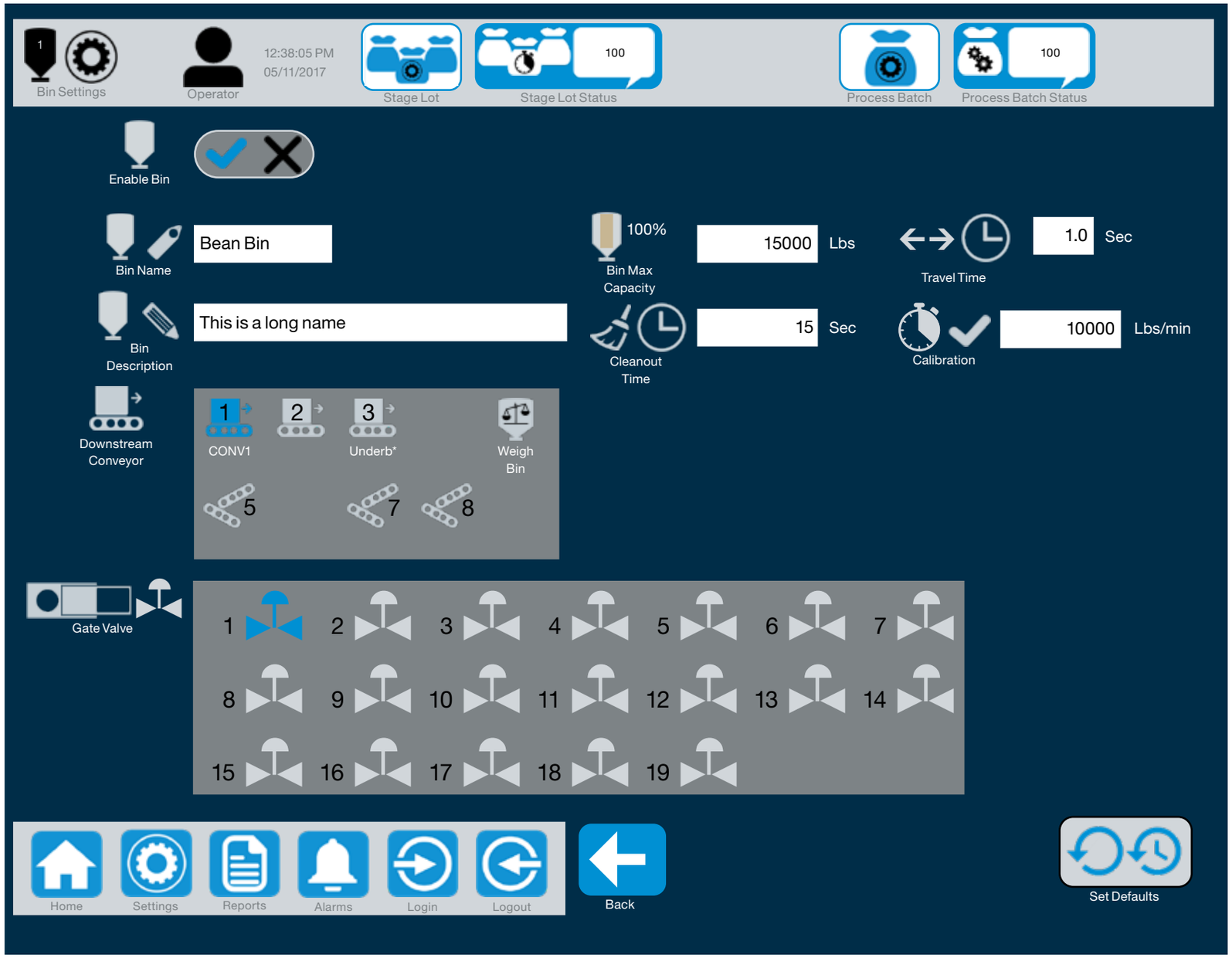
- How long it takes for gate to close

Conveyor Clean out time

Calibration Flow Rate

Choose the next device in the seed flow

Set gate valve output

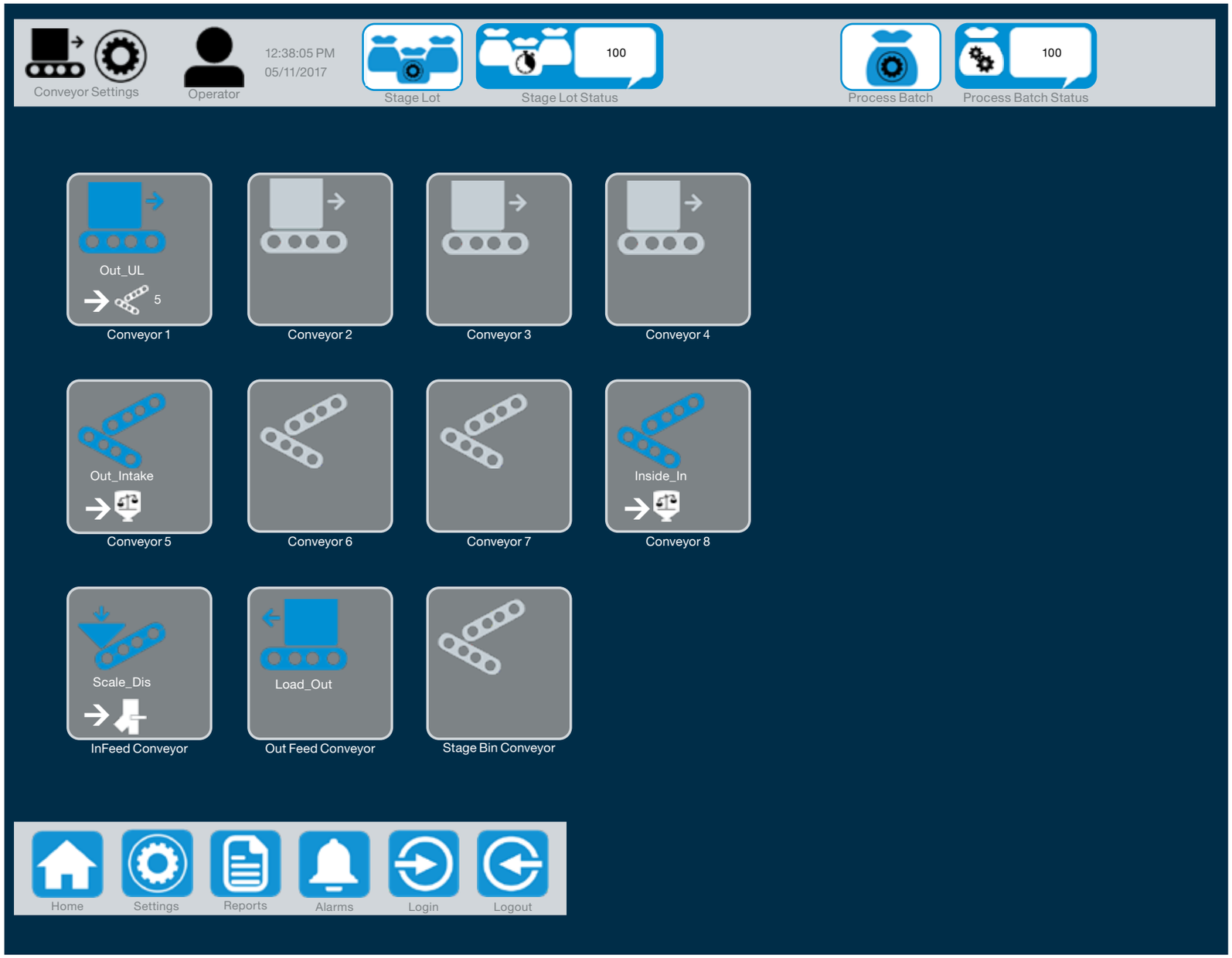


Conveyor Settings Screen

Conveyor Configuration Navigation

Displays following information:

- Active Conveyor
- Conveyor Name
- Which Device is used next



Conveyor Configuration - Under Bin Screen

Enable Conveyor

Name the Conveyor:

- Is displayed on the Conveyor on Main screen

Conveyor Description

Set Conveyor Type:

- If Under Bin is selected operator has the following options:

  Motor Starter:

  > Forward Only

  > Forward and Reversing

  Ethernet VFD

Choose the next device in the seed flow

Mask out Feedback:

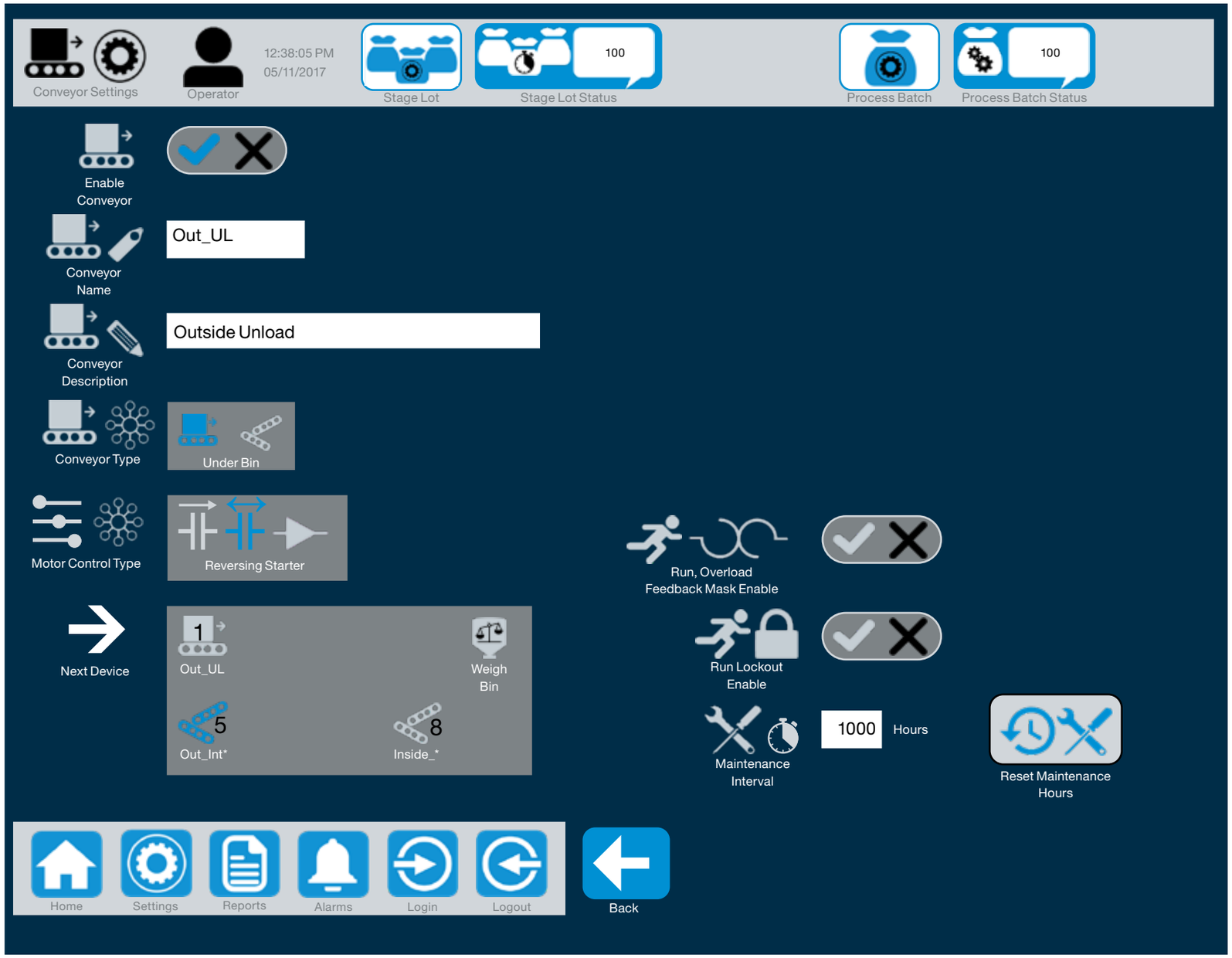
- Will ignore feedback from the starter or VFD

Run Lockout enable:

- Creates a software lockout for the conveyor

Maintenance Interval:

- Operator determines the amount of time before the system will prompt the operator to do maintenance
- The message only occurs during PLC start-up



Conveyor Configuration - Transfer #5 Screen

Enable Conveyor

Name the Conveyor:

- Is displayed on the Conveyor on Main screen

Conveyor Description

Choose the next device in the seed flow

Mask out Feedback:

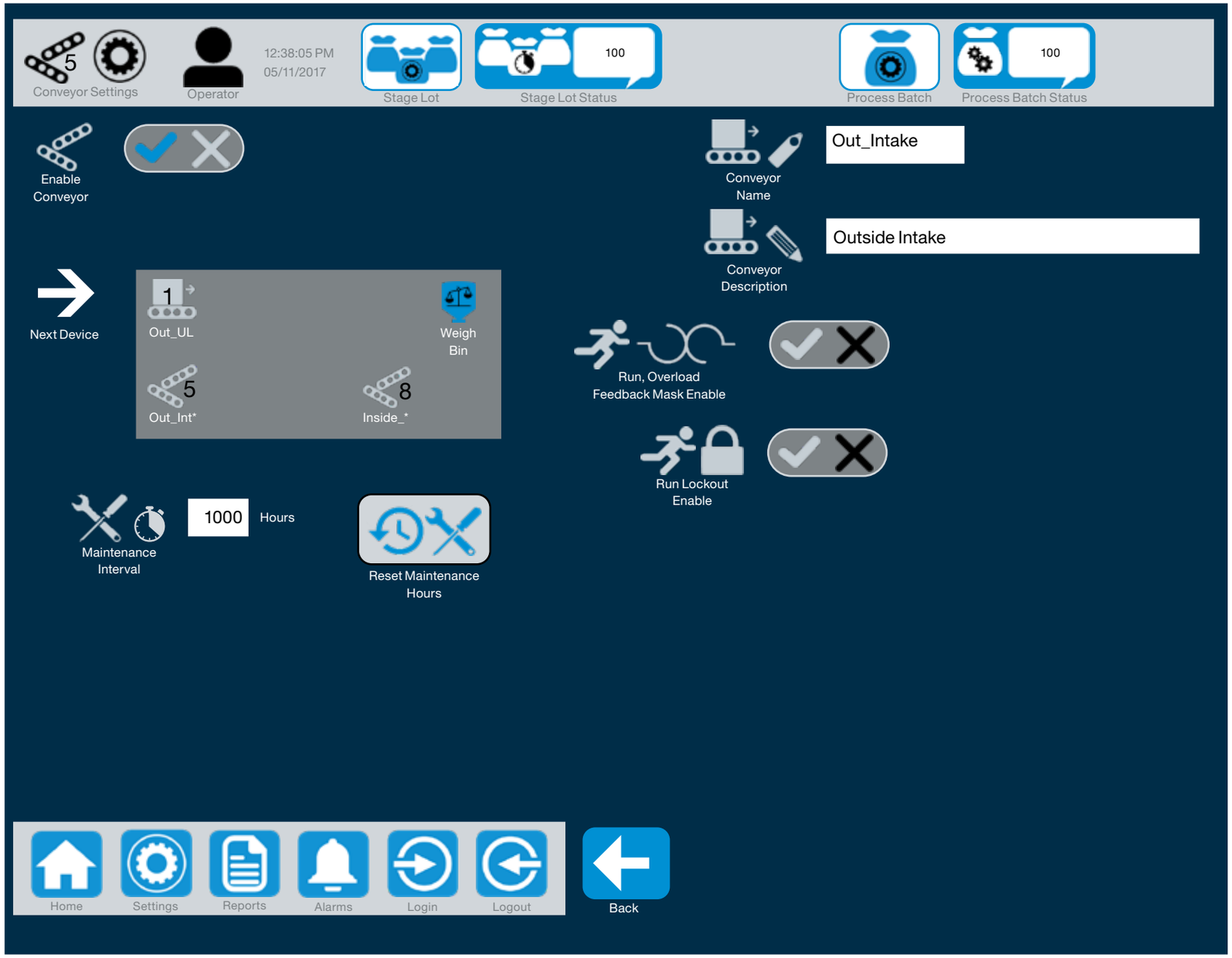
- Will ignore feedback from the starter or VFD

Run Lockout enable:

- Creates a software lockout for the conveyor

Maintenance Interval:

- Operator determines the amount of time before the system will prompt the operator to do maintenance
- The message only occurs during PLC start-up



Conveyor Configuration - Infeed Screen

Enable Conveyor

Name the Conveyor:

- Is displayed on the Conveyor on Main screen

Conveyor Description

Mask out Feedback:

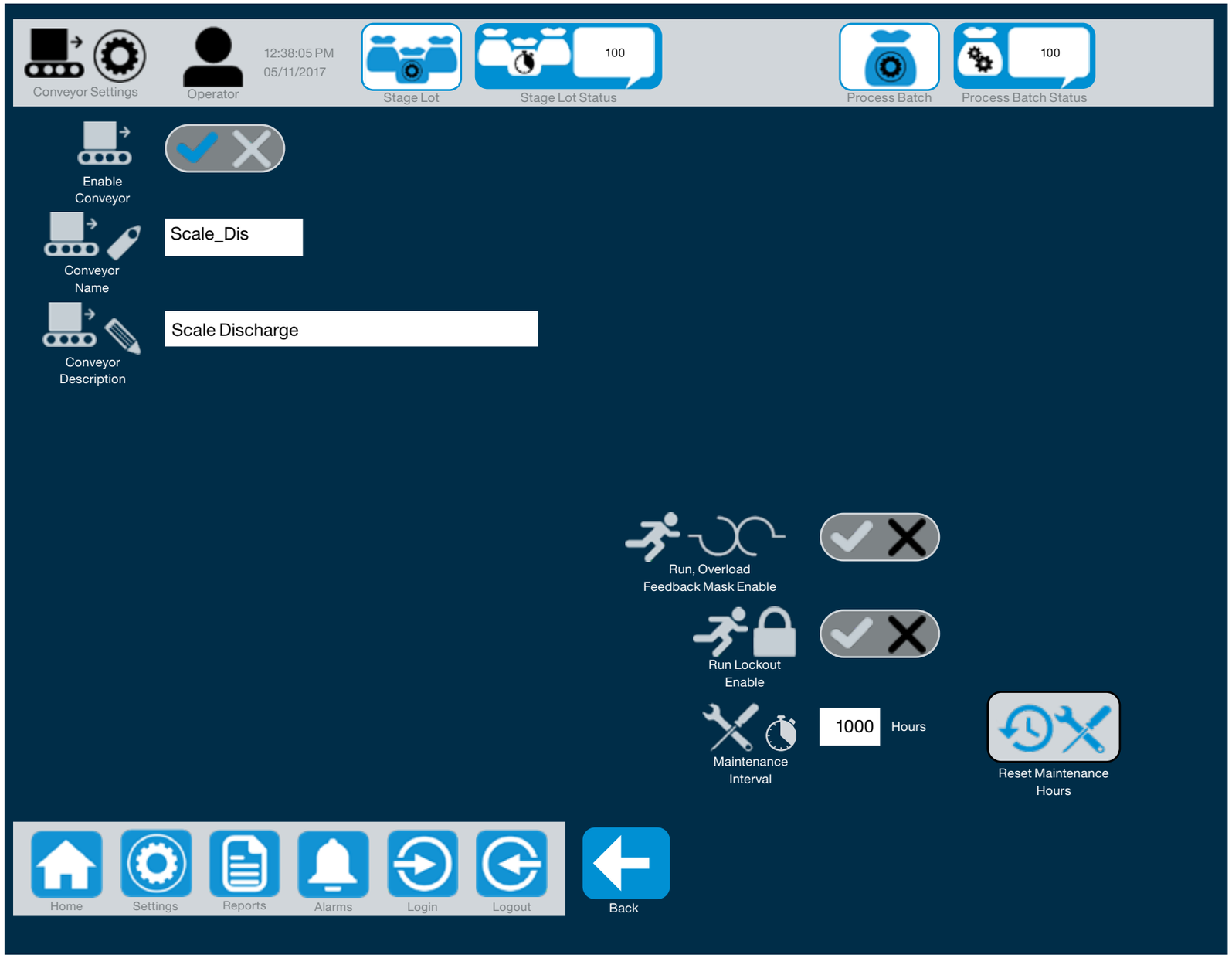
- Will ignore feedback from the starter or VFD

Run Lockout enable:

- Creates a software lockout for the conveyor

Maintenance Interval:

- Operator determines the amount of time before the system will prompt the operator to do maintenance
- The message only occurs during PLC start-up



Conveyor Configuration - Outfeed Screen

Enable Conveyor

Name the Conveyor:

- Is displayed on the Conveyor on Main screen

Conveyor Description

Mask out Feedback:

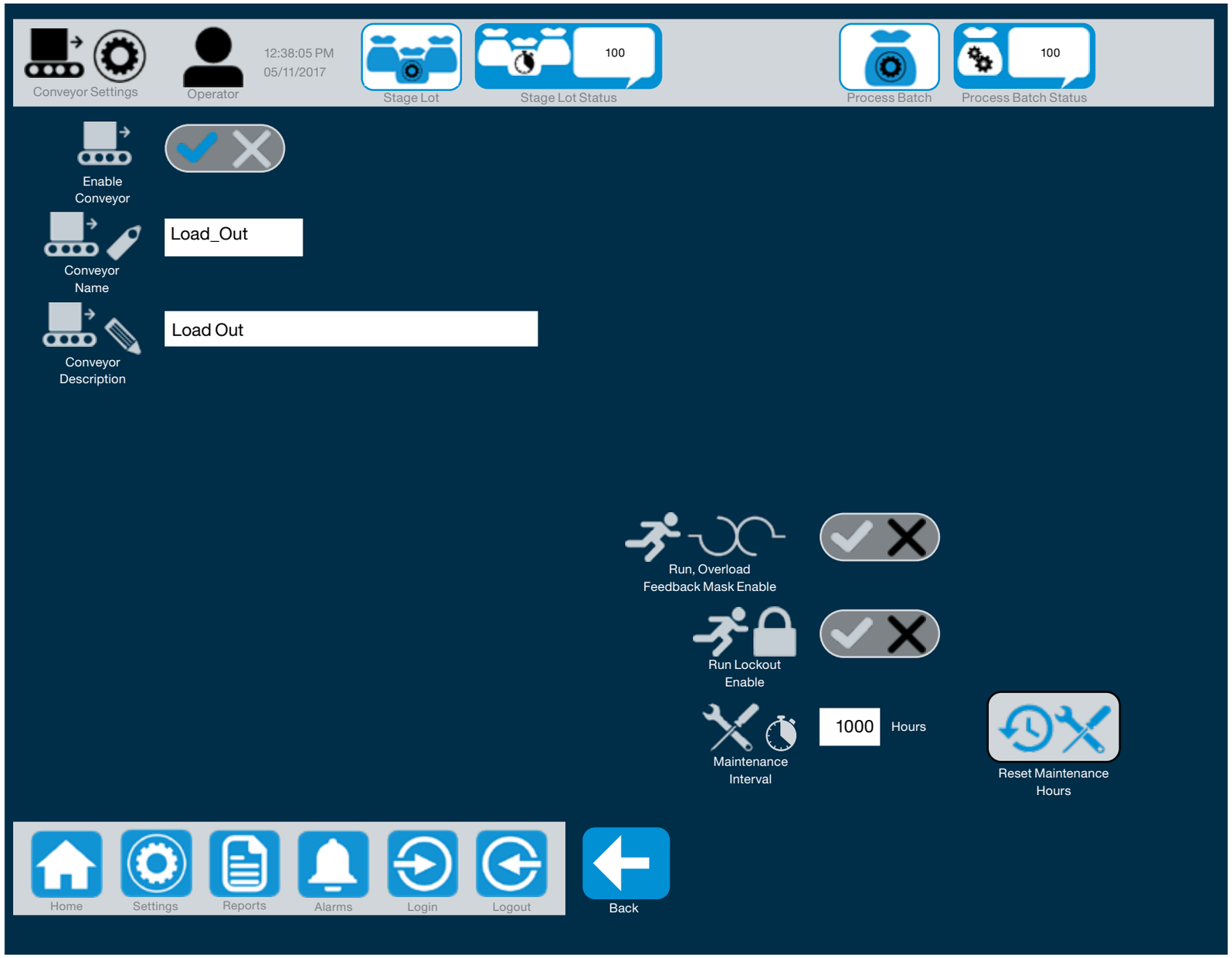
- Will ignore feedback from the starter or VFD

Run Lockout enable:

- Creates a software lockout for the conveyor

Maintenance Interval:

- Operator determines the amount of time before the system will prompt the operator to do maintenance
- The message only occurs during PLC start-up



General Screen

Calibration Change Limit

- If the new calibration is greater than the limit then the operator has an option to accept or reject.
- If the new calibration is below then the change is made automatic

Seed Units

Sets system display units:

- Lbs
- Units

Lot Acceptable Range

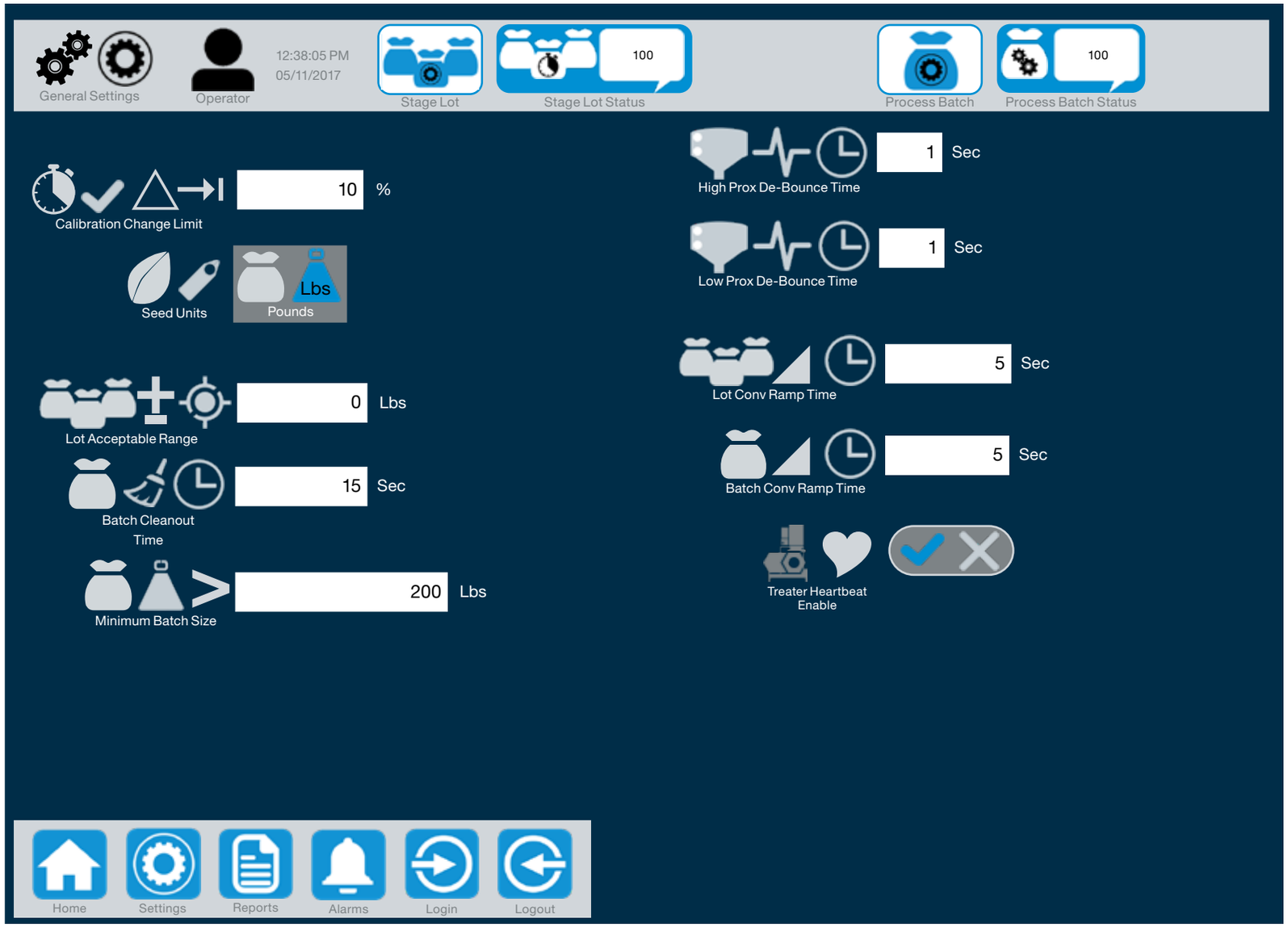
- If the Lot amount is less than the limit then the batch will continue
- If the Lot amount is greater than the limit then the operator has the option to accept or reject

Batch Cleanout Time

- Once the treater drum stops, this is the cleanout time for the outfeed conveyor

Minimum Batch Size

- Minimum batch size before the system will split the remain seed in the scale
- (Min Batch Size x 2) >= normal batch size
- (Min Batch Size x 2) <= Scale Weight/2



High Prox. De-Bounce Time

- Amount of time after the sensor changes state before it is sent to the PLC

Low Prox. De-Bounce Time

- Amount of time after the sensor changes state before it is sent to the PLC

Lot Conv Ramp Time

- Ramp Time for each conveyor in the Stage Lot Process

Batch Conv Ramp Time

- Ramp Time for each conveyor in the Process Batch Process

Treater Heartbeat Enable

- Bulk Site PLC is check the presents of the OnDemand Treater

Weigh Bin Configuration Screen

Enable Bin

Bin Max Capacity

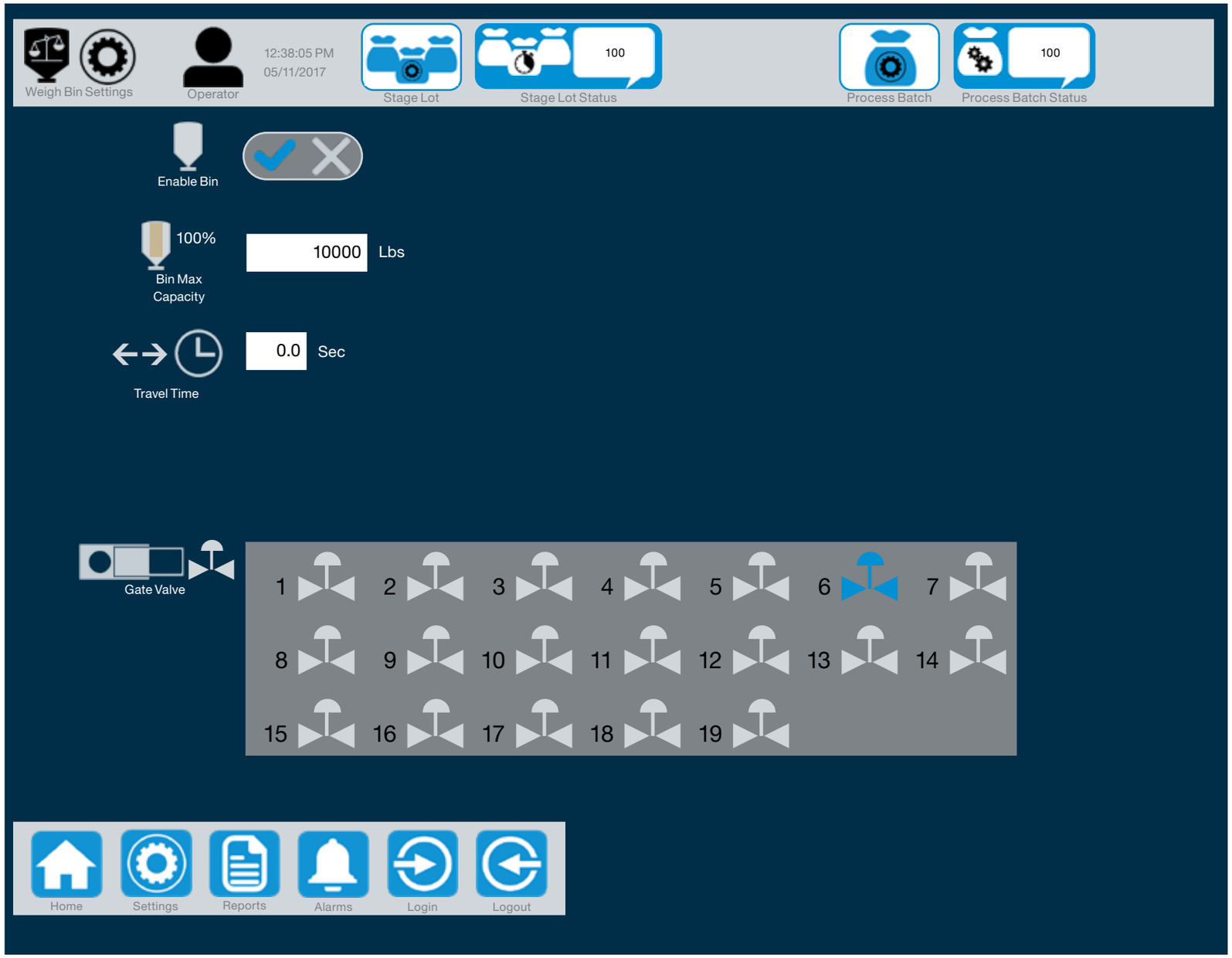
- Should match the scale name plate

Travel Time:

- Amount of time for the pneumatic gate to close or open

Gate Valve

- Valve selection on the pneumatic manifold



Stage Bin & Conveyor Configuration Screen

Enable Bin

Enable Conveyor

Travel Time:

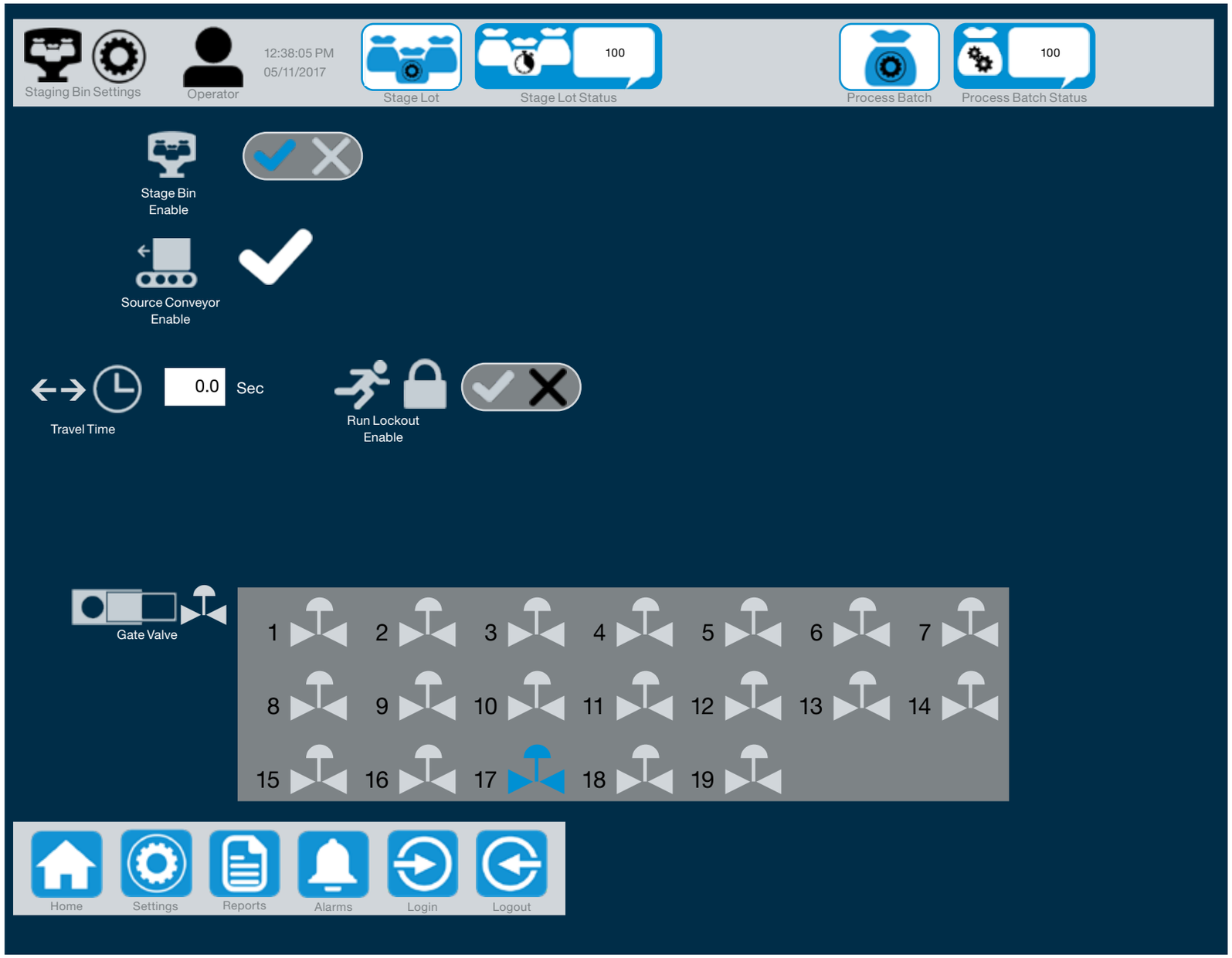
- Amount of time for the pneumatic gate to close or open

Run Lockout enable

- Creates a software lockout for the conveyor

G**ate Valve**

- Valve selection on the pneumatic manifold



Diverter Configuration Screen

Diverter Enable

Diverter Control Type:

- Manual Operated
- PLC Controlled

Travel Time

- Amount of time for the pneumatic gate to close or open

Run Lockout enable

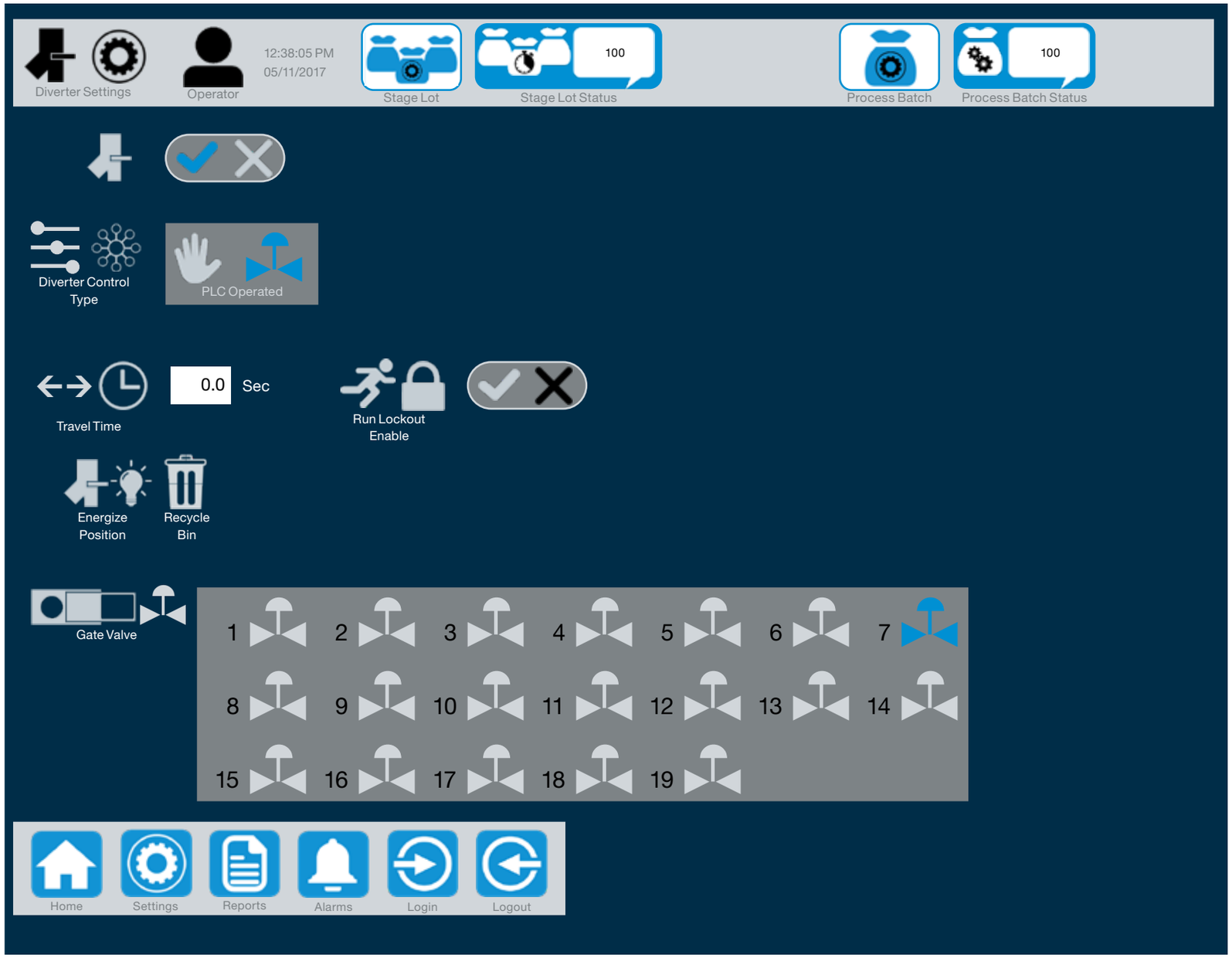
- Creates a software lockout for the conveyor

Energize Position

- Choose what position the diverter when the valve is energized

Gate Valve

- Valve selection on the pneumatic manifold



Diverter Configuration Screen

Enable Conveyor Dump

- Process is dump seed into a conveyor and then into the scale

Enable Direct Dump

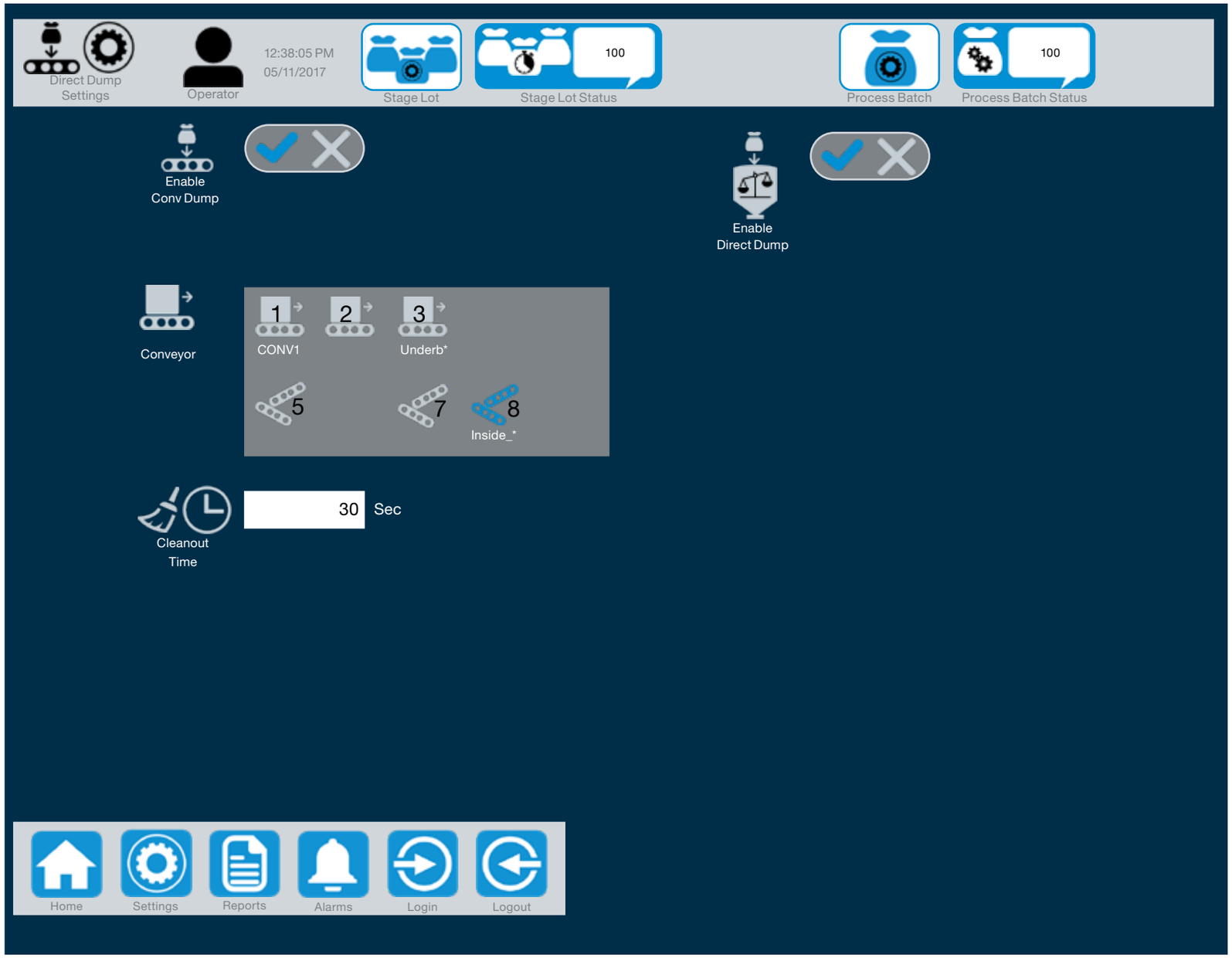
- Process is dump seed into the scale

Conveyor

- Choose the conveyor to use in the Conveyor Dump process

Cleanout Time

- Amount of time to clean out the conveyor



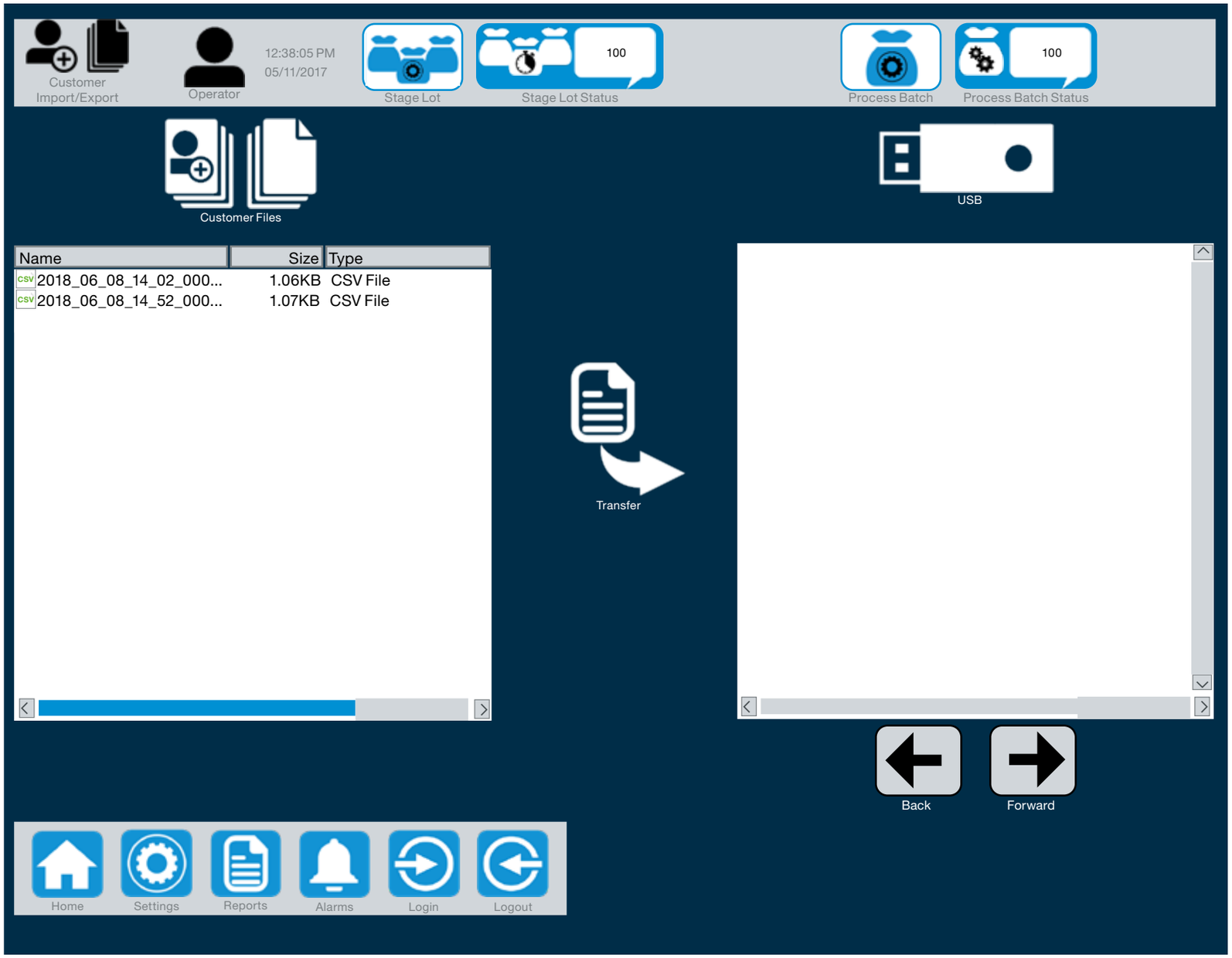
Customer Import/Export Screen

Importing Customer into the PLC

- Select the customer files on the USB
- Select files and drag across screen to copy

Export Customer into the USB

- Back and Forward arrows are for navigation of file structure on USB drive.
- Then select the forward arrow to move the files to the USB



Customer Manage Screen

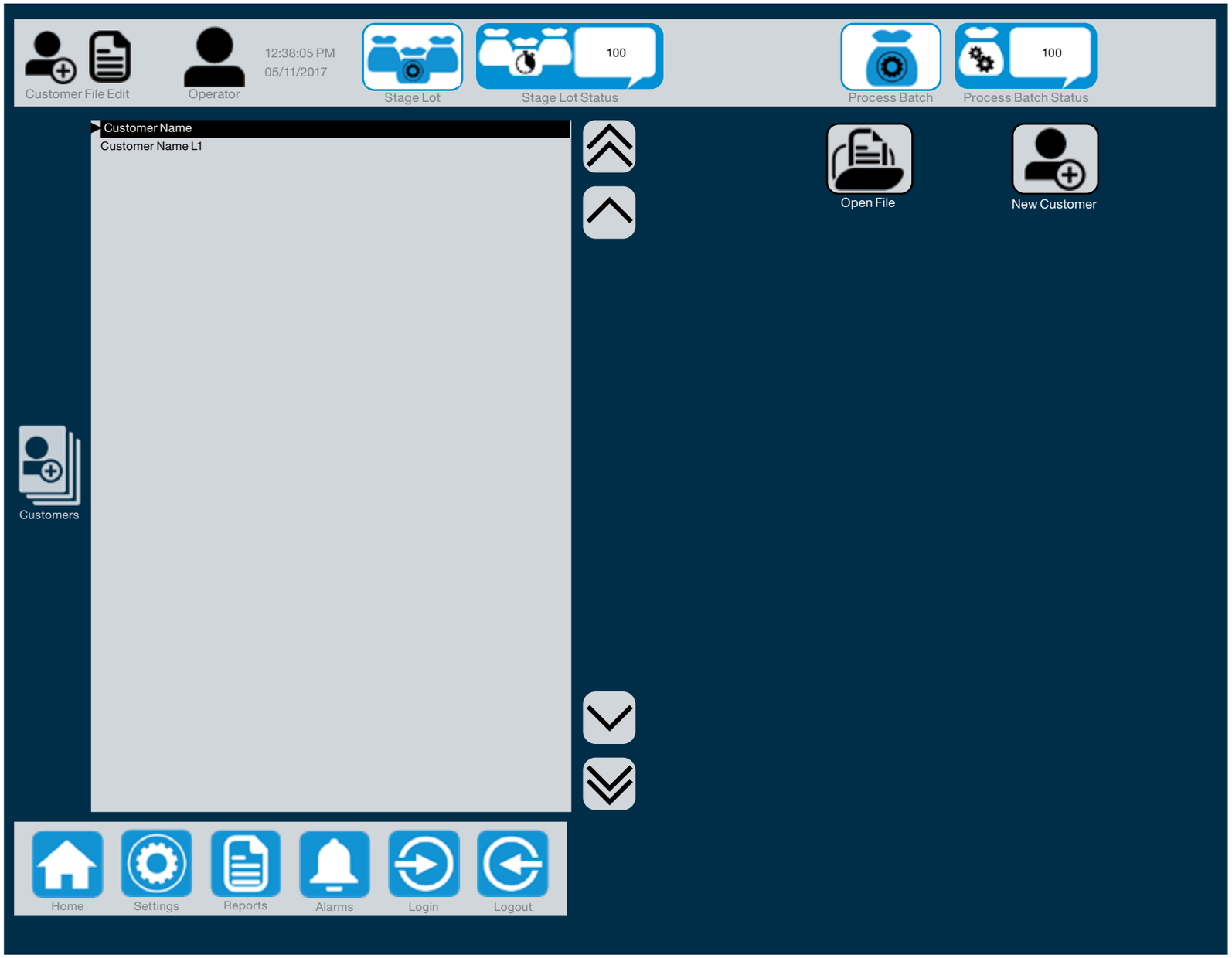
Edit customer information

- Select Customer name using the scrolling arrows
- Select Open File:

  >You must select open file in order to edit the file
- Once edit is complete select save file
- Then close file

New Customer

- Enter in the customer information
- Select save file
- Then close file



Customer Manage Opened Screen

Shows the information when you select:

- Open a customer file
- New customer

Diagnostics Screen

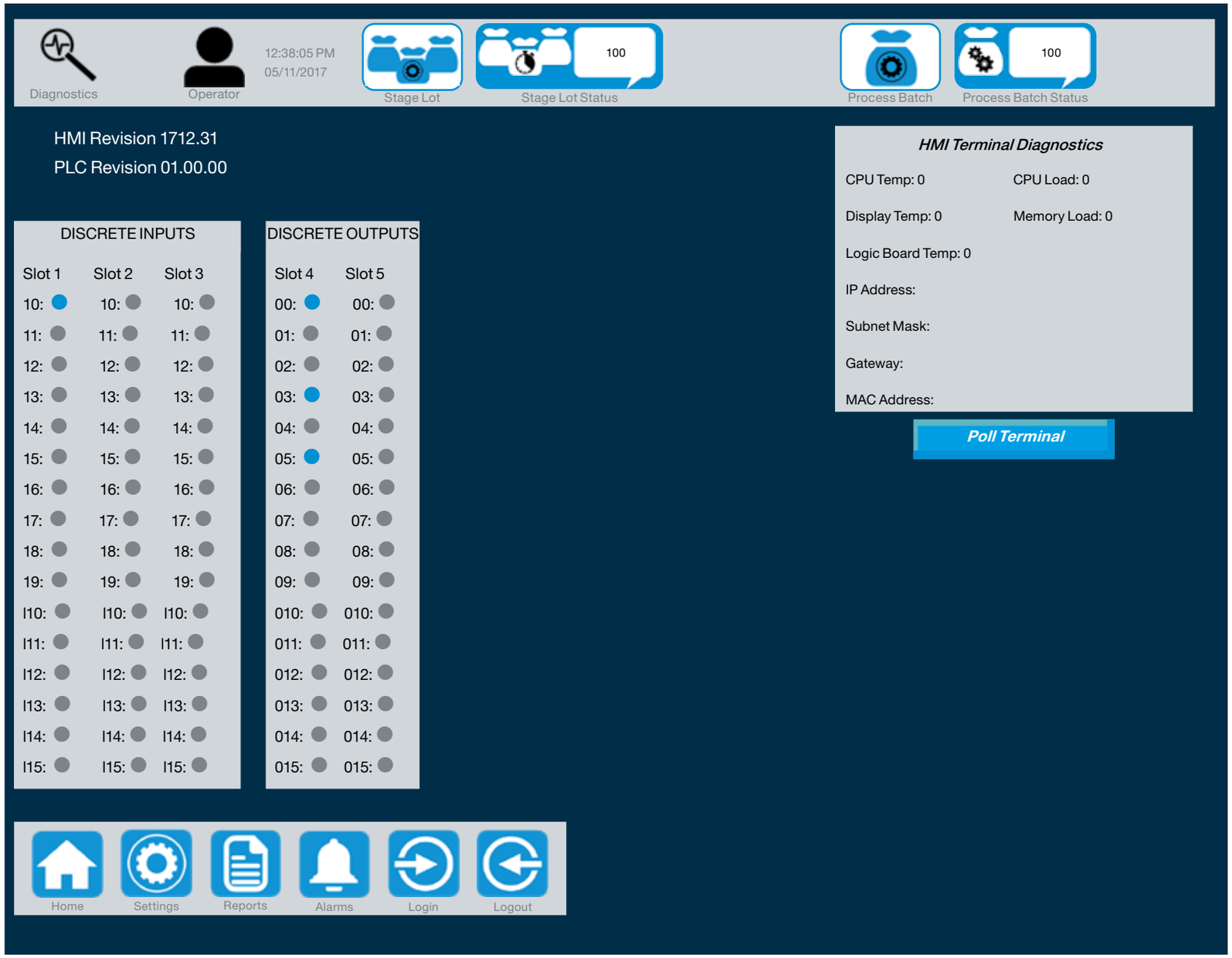
Current HMI and PLC Revisions

Displace current states of PLC

- Inputs
- Outputs

Displays HMI information

- Press poll terminal button to populate information in terminal diagnostics



BIN FUNCTIONS

Bin #1 Detail Screen

Displays the Bin Name

- Is displayed on the Bin on Main screen

Displays Bin Description

Displays Max Capacity

Displays Gate Travel Time

- How long it takes for gate to close

Set Crop Type

Set Seed Variety

Set Seed Size

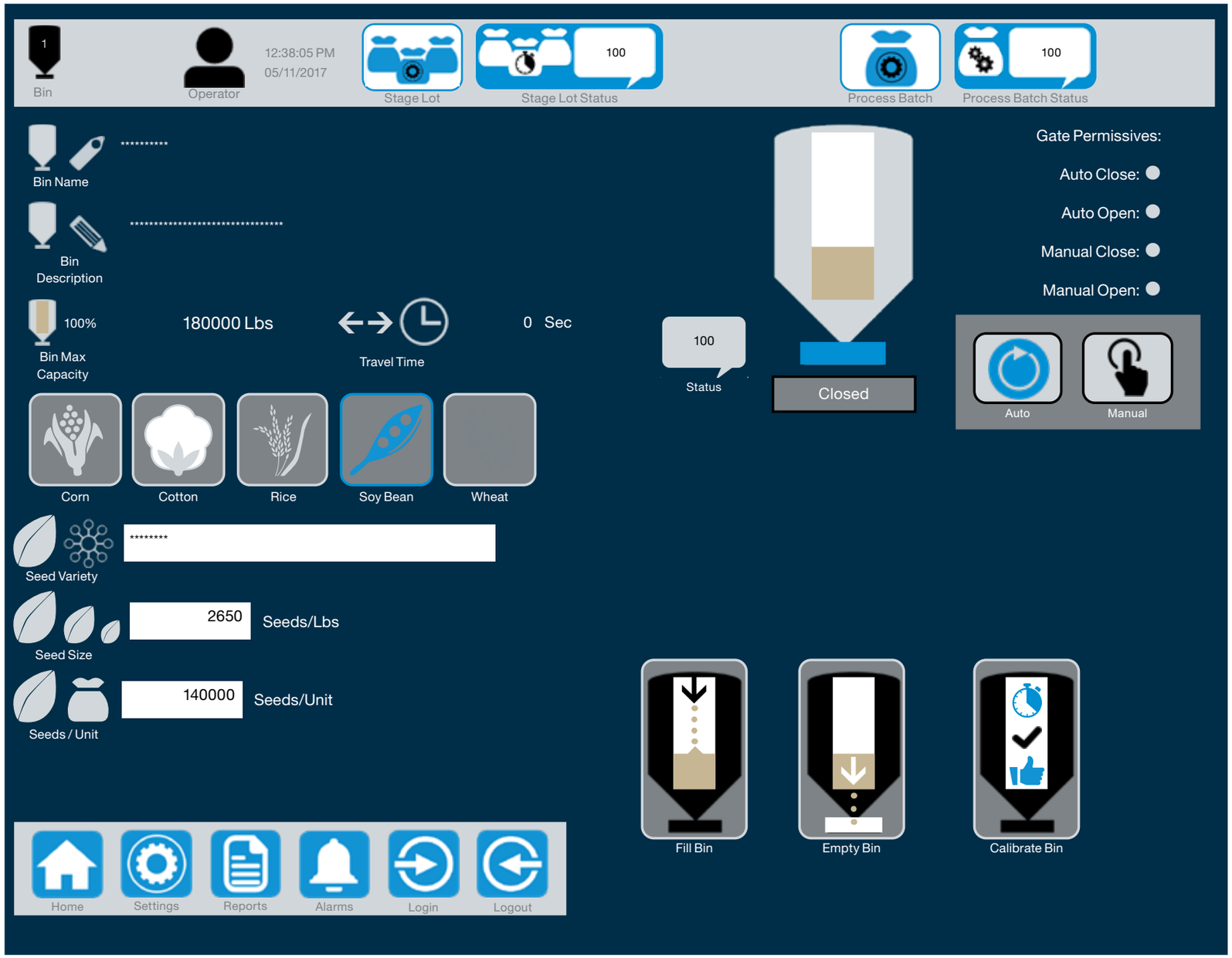
Set Seed/Unit

Displays Bin Status

Allows manual operation of the pneumatic gate

Run Following Processes

- Fill Bin
- Empty Bin
- Calibrate Bin



Fill Bin Pop-up

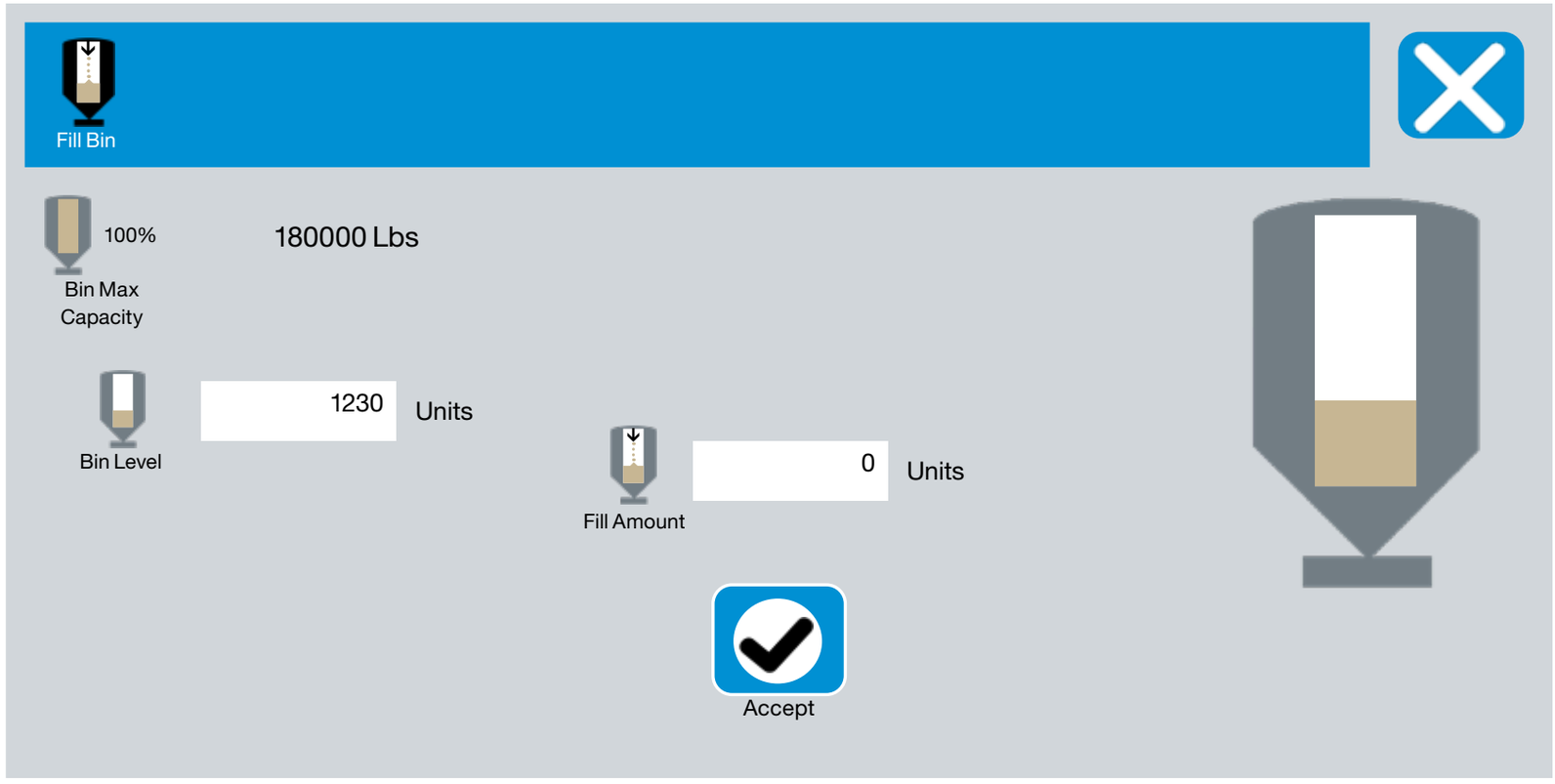
Fill Bin Process

Bin Level

- Sets the absolute seed level

Fill Amount

- Add entered amount of seed to total seed amount
- Every time the Accept button is pressed



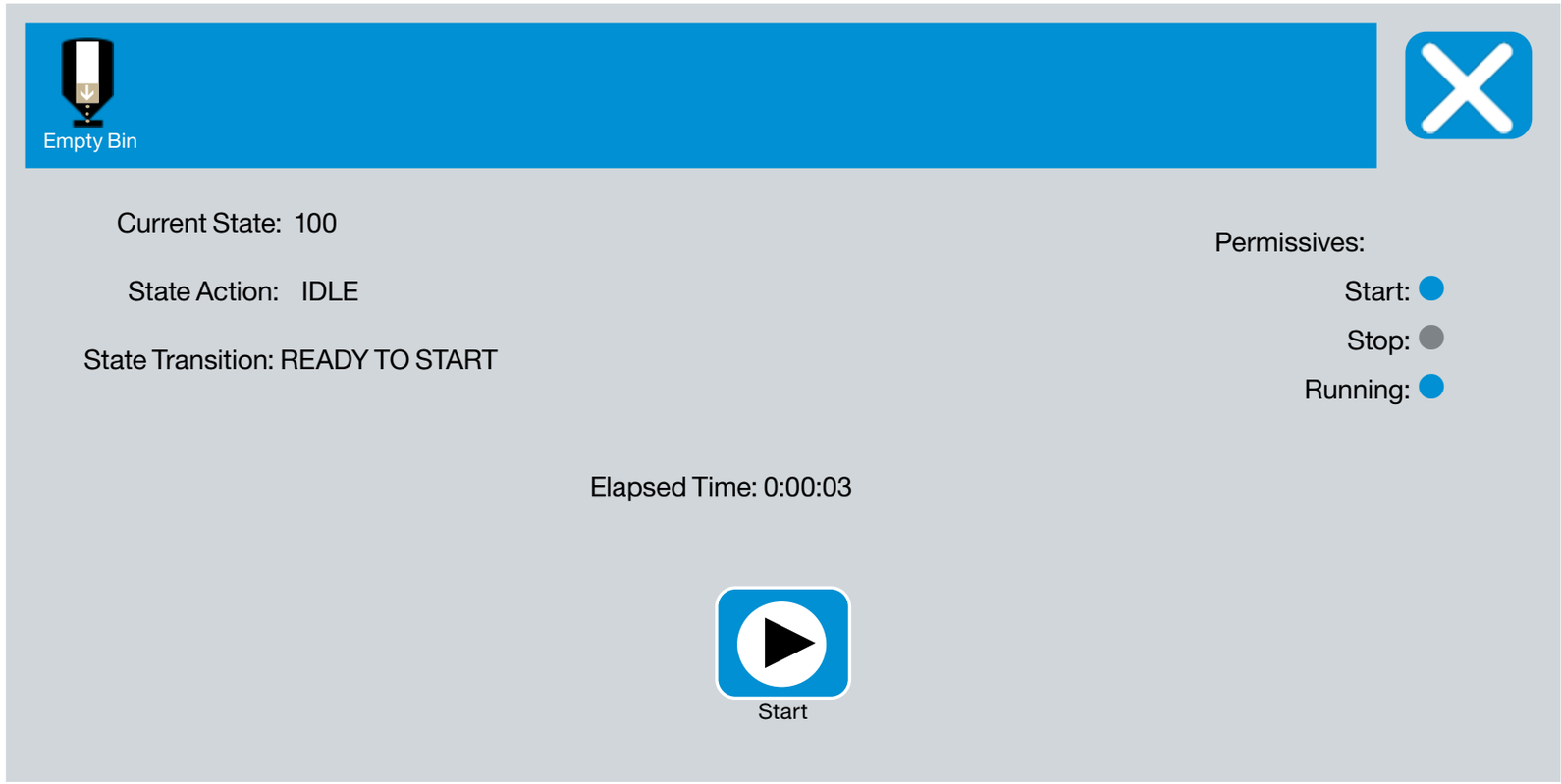
Empty Bin Pop-up

Empty Bin Process

- User Presses the Start Button
- The conveyor associated to the bin will start in verse

>If the conveyor is configured to be reversing or VFD

- The pneumatic valve will open
- The System will continue to run until the user presses the stop button
- Once stop is pressed, the gate will close and the conveyor will enter into a clean out process
- When clean out is completed the conveyor will stop
- The system will zero out the seed fill level



Calibrate Bin Pop-up

Calibration Size

- Amount of seed for the calibration

Calibration Runs

- Number of Calibration runs

Runs Completed

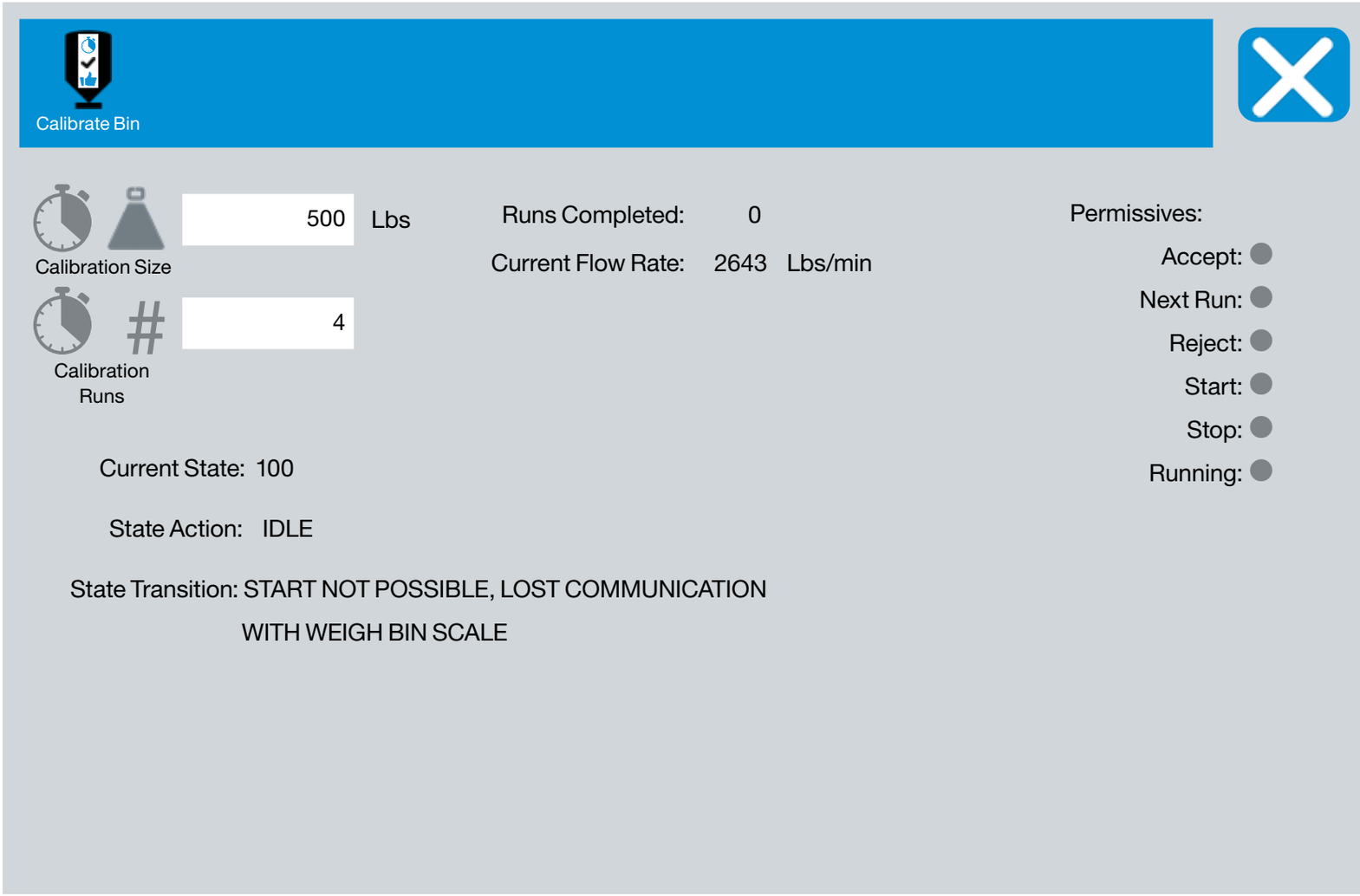
Current Flow Rate for the bin

Process:

- System Performs a conveyor clean out

  >If there is no weight in the scale the system will continue automatically

  > If there is weight in the scale the user as option of continue the calibration or cancel the calibration process



STAGE LOT

Stage Lot Screen

Set-up Stage Lot

Require information

- Seed Source
- Lot Size
- Customer

If seed source is not from Bulk Bin:

- Then seed information is required

Stage Lot - Direct Dump Selected Screen

Set-up Stage Lot

Require information

- Seed Source
- Lot Size
- Customer

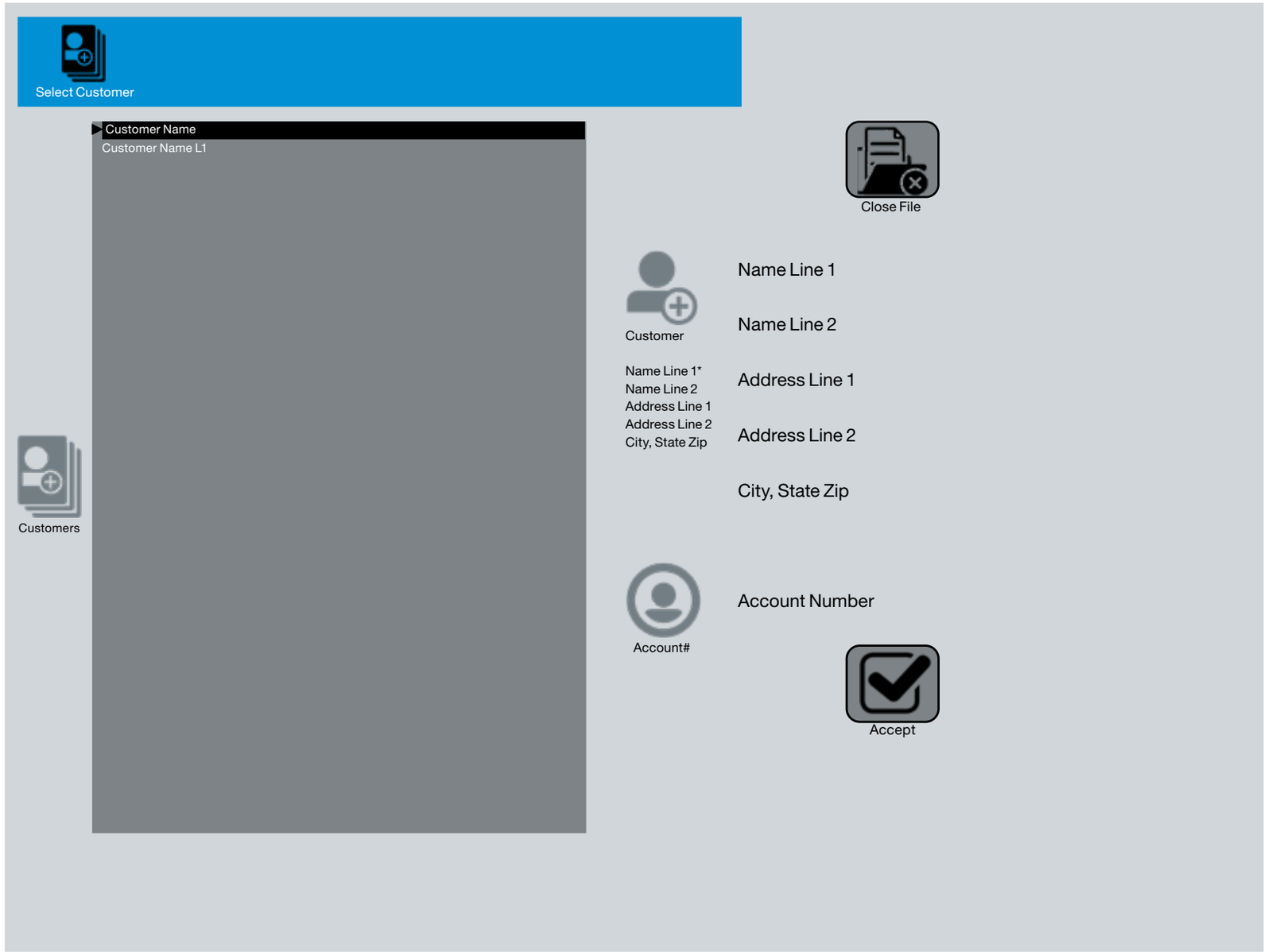
Seed information is required

Stage Lot - Customer Selection Pop-up

Select Customer

Process:

- Select Customer
- Open File
- Accept

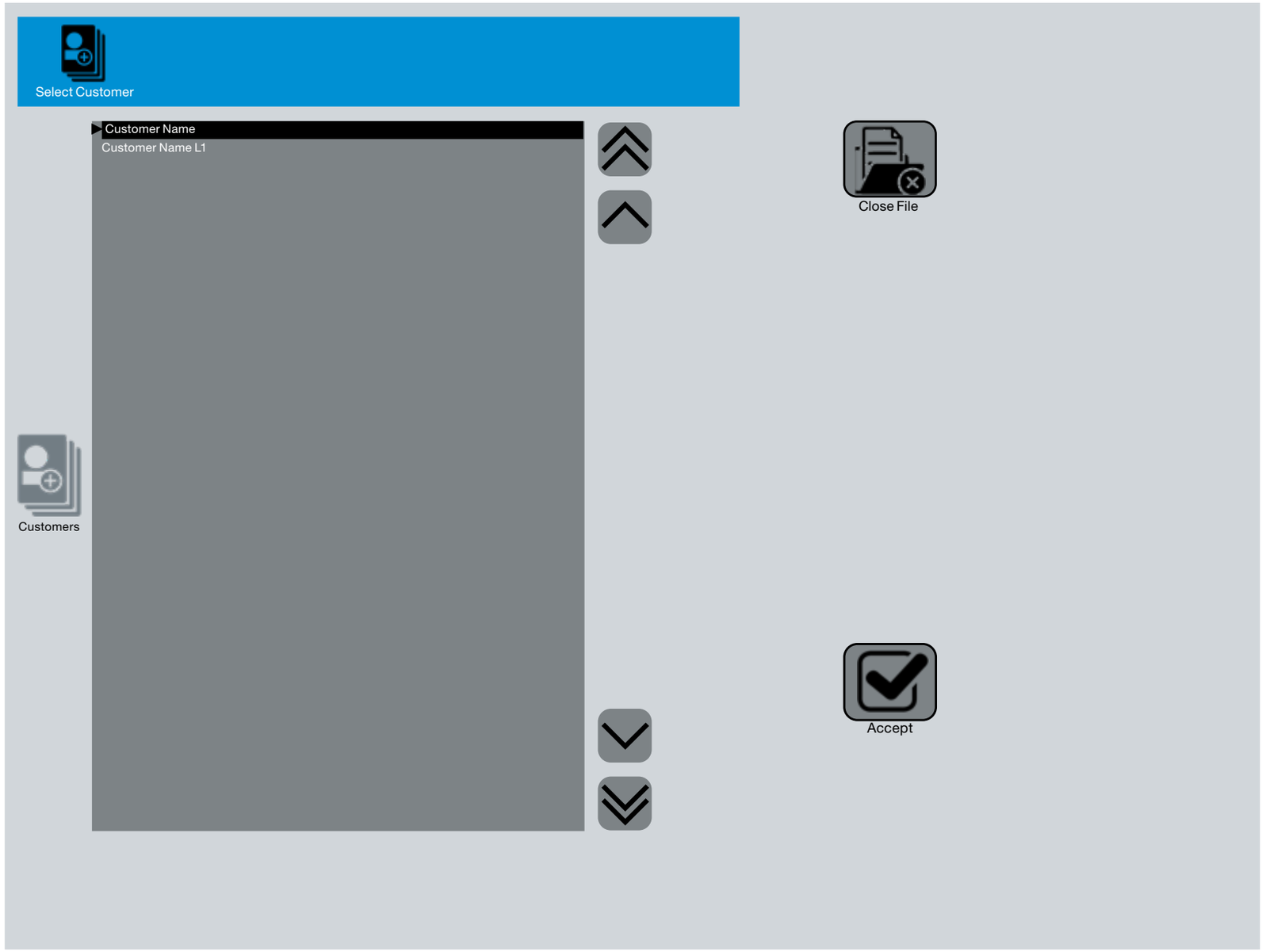


Stage Lot - Customer No Selection Pop-up

Select Customer

Process:

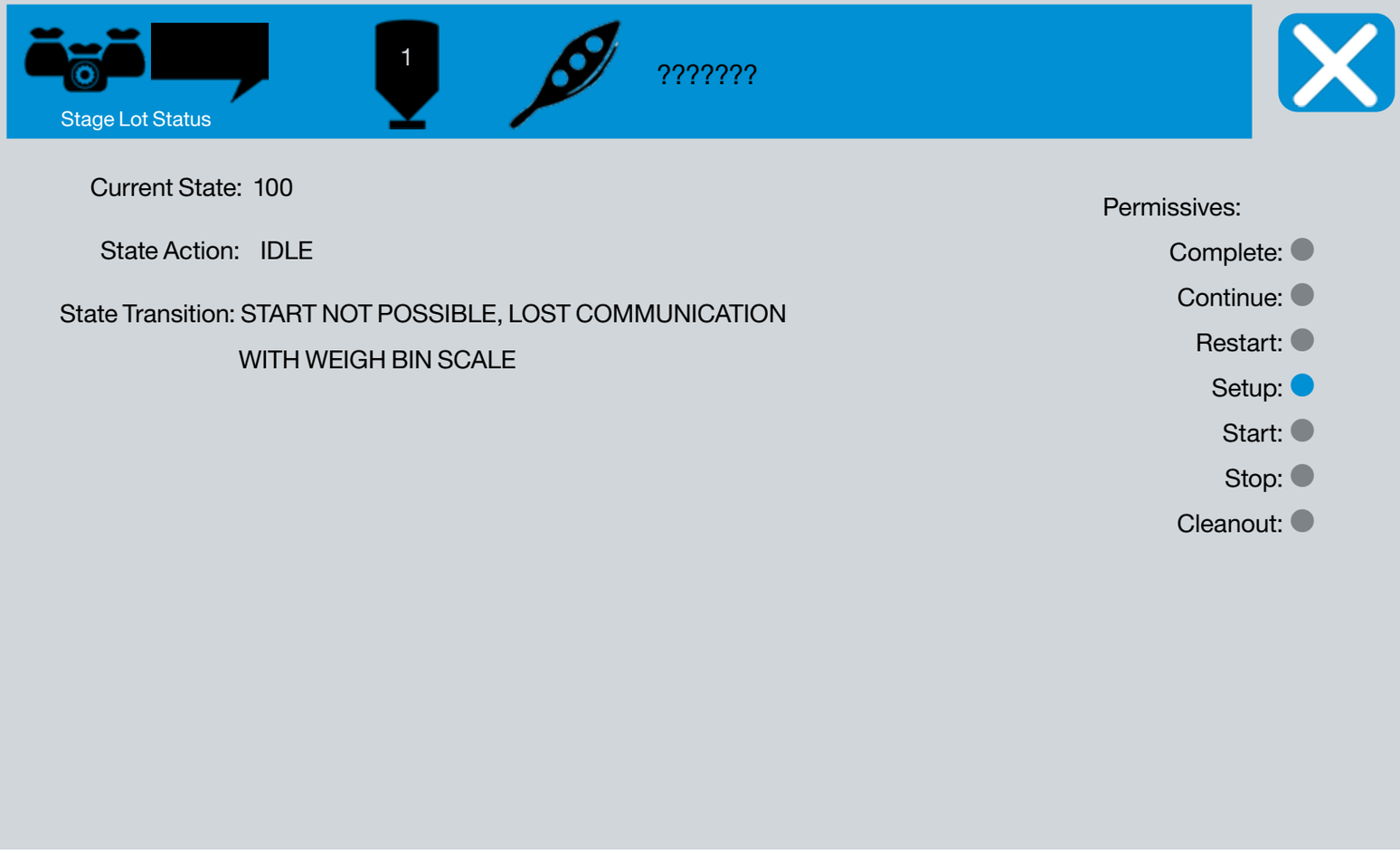
- Select Customer
- Open File
- Accept



Stage Lot - Status Pop-up

Stage Lot Status Pop-up

- Different buttons will be displayed depending on what step the operator is on



PROCESS BATCH

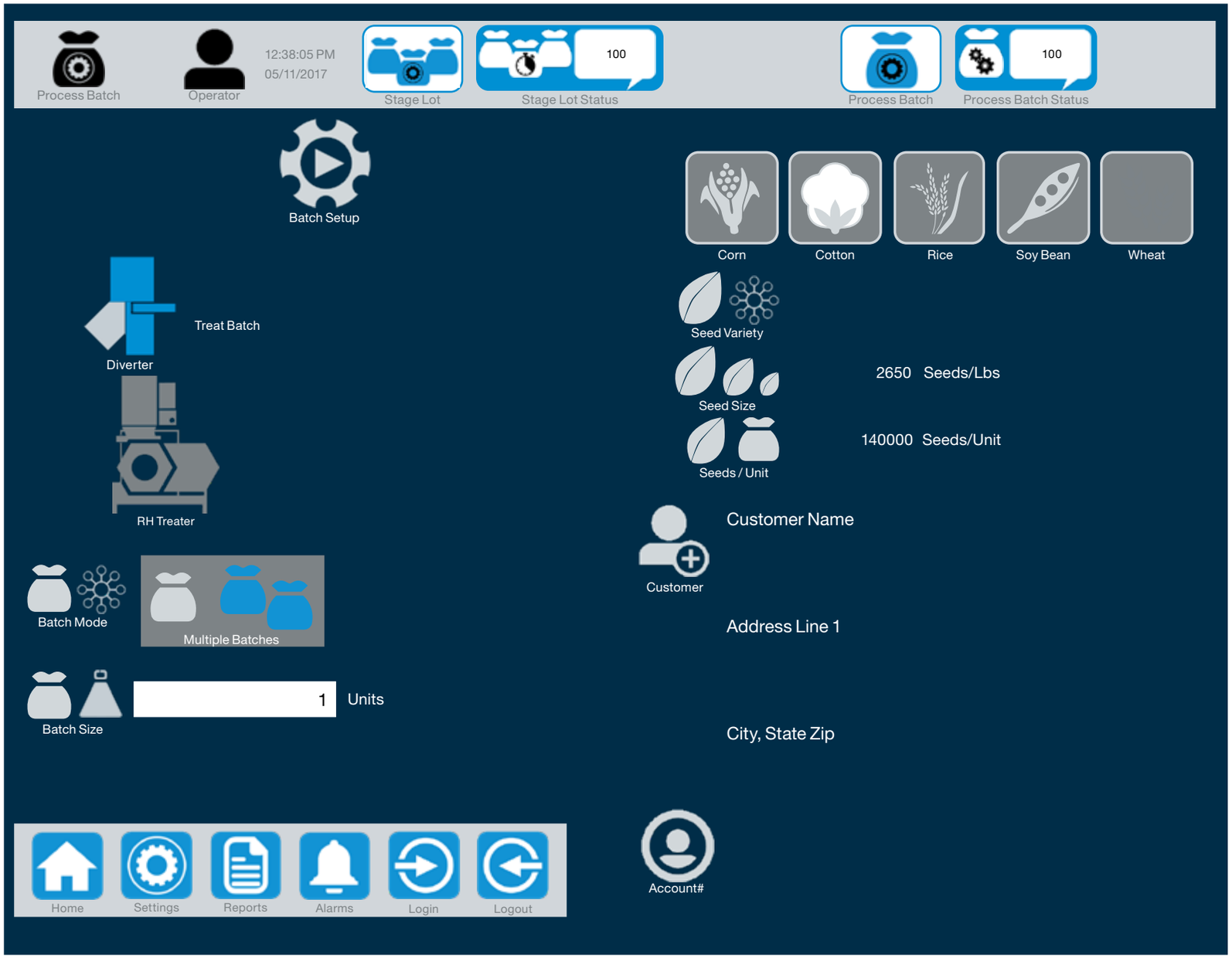
Process Batch Screen

Set-up Process Batch

Seed information is transferred from Stage Lot

Process:

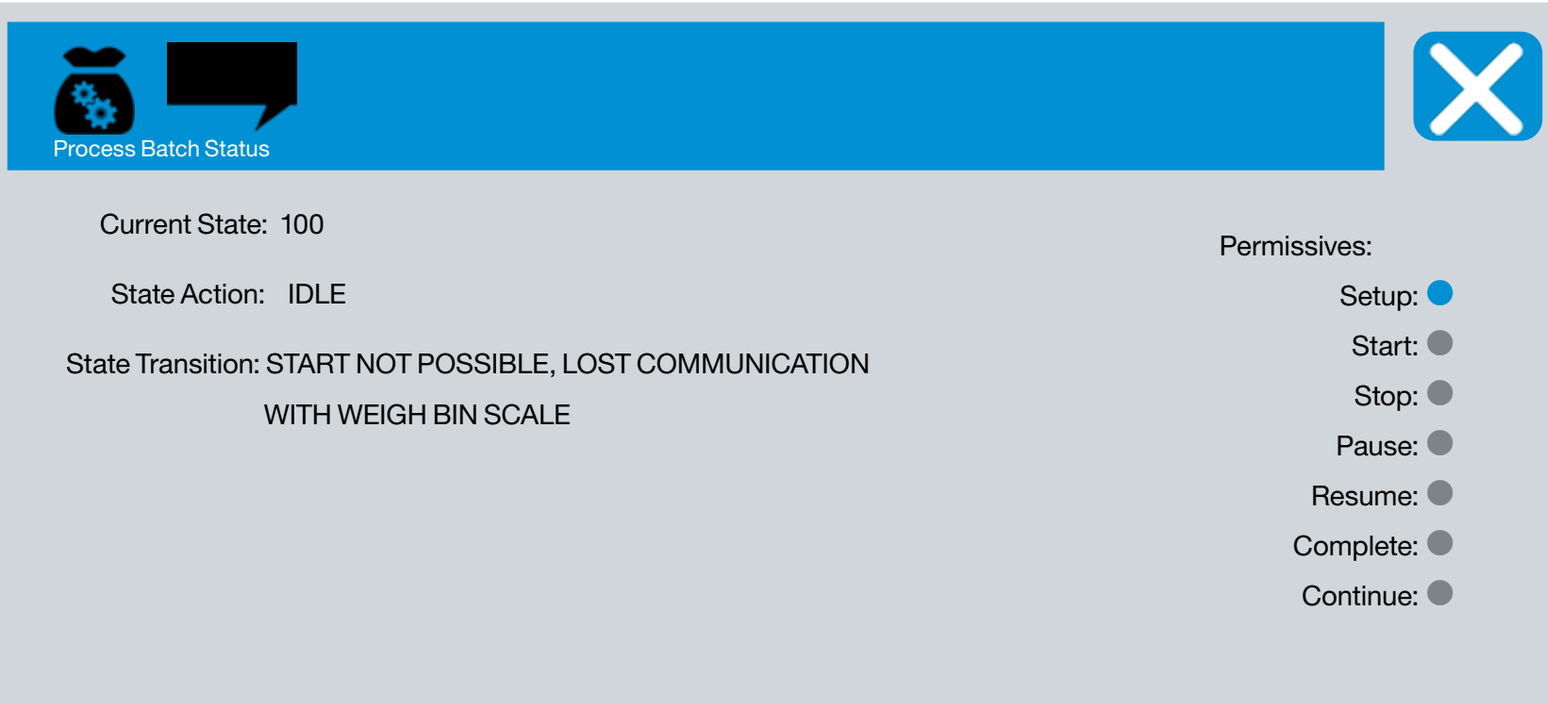
- Choose Diverter Direction
  - >Treat Batch
  - >Bypass
- Choose Batch Mode
- Set Batch Size



Process Batch - Status Pop-up

Process Status Pop-up

- Different buttons will be displayed depending on what step the operator is on



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