ShopFloor
CONNECT
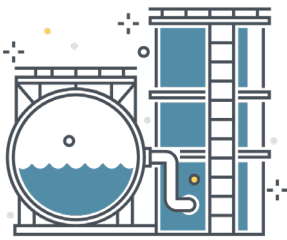
☰ Equipment Summary	▦ Performance Tracker	▣ Displays	🔧 Tool Tracker
▤ Reporting	🕐 Scheduler	🔔 Alerts	👥 Maintenance Tracker

Real-Time Production Tracking Software

Contents
(Interactive direct links)

ShopFloor
CONNECT

Sites/Areas

The following procedure describes how to create and manage the work sites and areas in SFC 6.0 from the Machine Administration sub-menu. You can use the filter line to quickly search the Sites/areas list for desired site names.

Navigation

1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges)
3. Click Sites/Areas.

Sites/Areas Master List

This page allows you to view, edit, and delete Sites and Areas you have added to SFC 6.0. To edit a site record, click on the ✏ icon to make changes and click save to record those changes.

To delete a site record, click on the 🗑 icon and click confirm on the pop-up window to confirm the deletion of the record.

Figure 1.1 – Sites/Areas Master List

> **NOTE**
>
> If a record is not able to be deleted, or returns after being deleted, it may be caused by existing data dependencies in the system. Contact ShopFloorConnect technical support for further assistance.

Adding Sites

1. Click the **+ New Site** in the upper left corner of the screen.
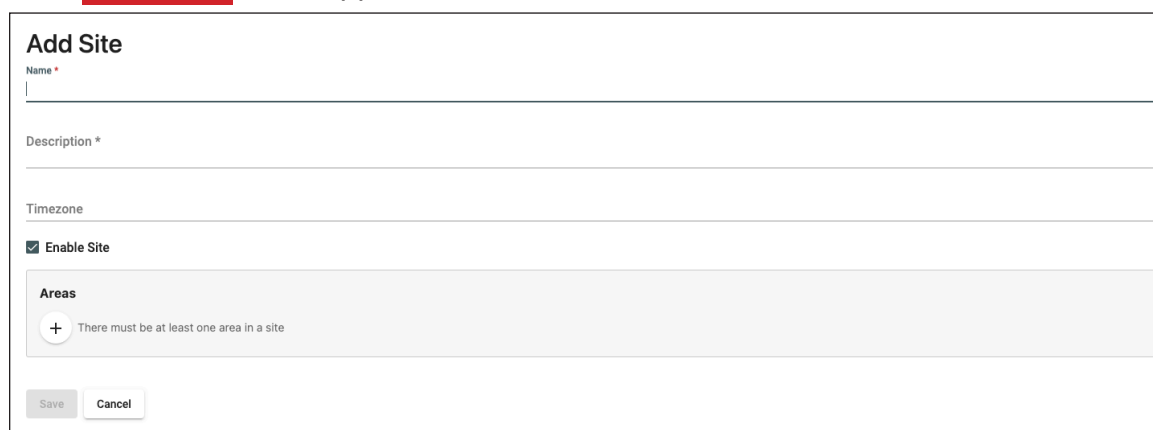
Figure 1.2 – Adding Sites to Master List

2. Add the Name for the new site.

3. Add the Description for the new site.

4. Select the Time Zone from the drop-down menu.

5. Use checkbox to enable or disable a site/area.

   - If enabled, create the Name/Description for an area in that site.

6. Click the plus (+) to add an Area(required).

   - Add Name/Description.

7. Repeat step 6 if you require additional areas.

8. Then, click **Save** to create the new site profile.

Editing Sites/Areas

1. Click the ✏ for the site you would like to edit.

2. Modify the name for the site, if required.

3. Modify the description for the site, if required.

4. Edit the time zone from the drop-down menu, if needed.

5. Use checkbox to enable or disable the Site.

   - If enabled, add the name/description for an Area in the site.

6. Click **Save** to record the changes to the site profile.

Figure 1.3 – Editing Sites on the Master List

Machine Types

This section describes how to manage machine names and other machine specific data in SFC 6.0 from the Machine Administration drop down menu. You can use the filter line to quickly search the machine name for desired machine information.
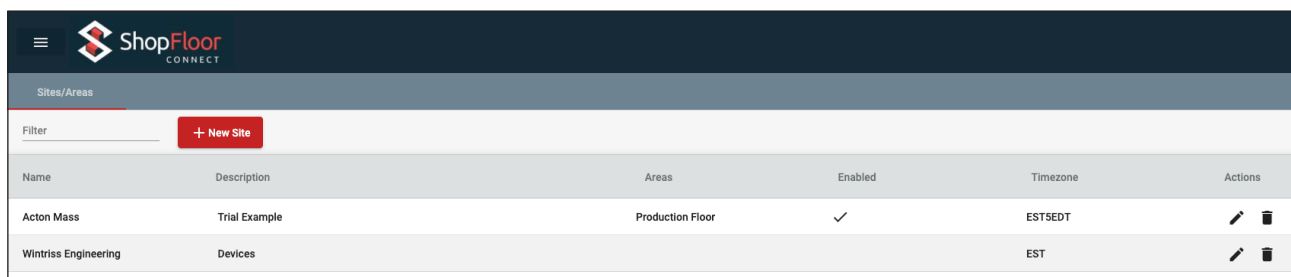
Navigation

1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges)
3. Click Machine Types.

Machine Type/Name Master List

View all the machines you have added to your SFC 6.0 monitoring and their name, type, and other specific data on this page. To edit a machine record, click on the 🖊 icon to make changes and click **Save** to record those changes. To delete a machine record, click on the 🗑 icon.
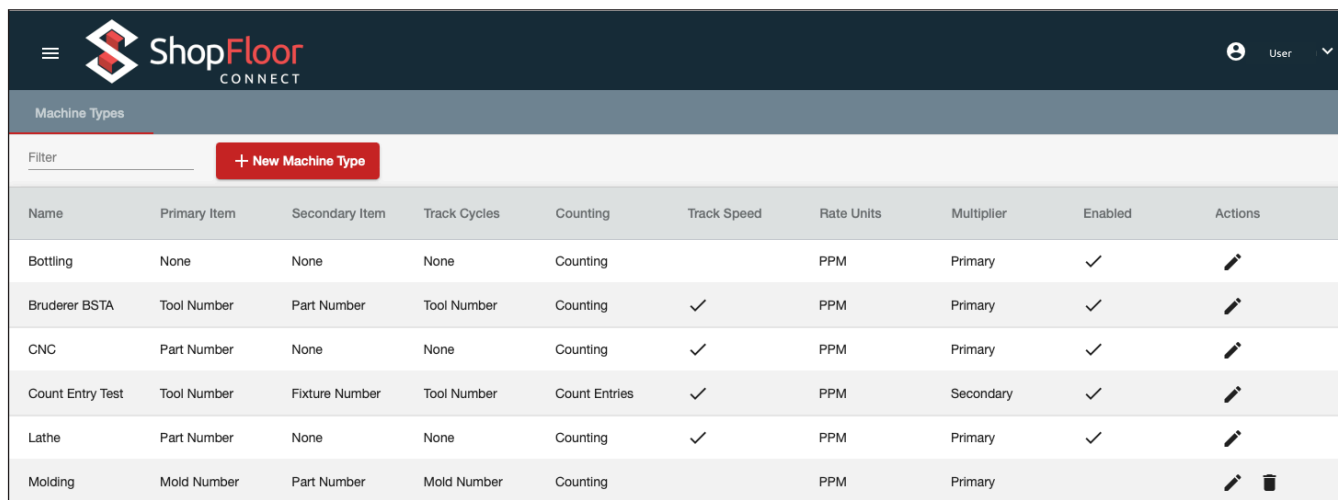
Name	Primary Item	Secondary Item	Track Cycles	Counting	Track Speed	Rate Units	Multiplier	Enabled	Actions
Bottling	None	None	None	Counting		PPM	Primary	✓	🖊
Bruderer BSTA	Tool Number	Part Number	Tool Number	Counting	✓	PPM	Primary	✓	🖊
CNC	Part Number	None	None	Counting	✓	PPM	Primary	✓	🖊
Count Entry Test	Tool Number	Fixture Number	Tool Number	Count Entries	✓	PPM	Secondary	✓	🖊
Lathe	Part Number	None	None	Counting	✓	PPM	Primary	✓	🖊
Molding	Mold Number	Part Number	Mold Number	Counting		PPM	Primary		🖊 🗑

Figure 1.4 – Machine Type Master List

The machine specific information is as follows:

- Primary Item – Configurable from a list of possible Primary Items like; Tool Number, Fixture Number, Mold Number, Part Number, SKU, Material, Item Number, and Tool AlphaNum.
- Secondary Item – An affiliated number with the Primary item to have another searchable field. Should be used only if you wish to apply tracking to an item other than the Primary Item.
- Track Cycles – A feature within the Tool Tracker that allows you to track cycles on Primary items such as a tool, mold, or fixture.
- Counting – Allows you to configure automated counting, manual count entry, or no counting for strictly uptime/downtime data on the Machine Type.
- Track Speed – Determines whether strokes or cycles per minute are being recorded, and speed data is stored.
- Multiplier – Determines which field, primary or secondary item, is multiplied by the multiplier field.
- Enabled – Enables or disables machine data collection in SFC.

How to Add Machine Type

1. Click **+ New Machine Type** to open the below window (Figure 1.2).

Add Machine Type

Name *
_____

Icon *   ▾

☑ Enabled

Primary Item *   ▾

Secondary Item *   ▾

Track Cycles *   ▾

Counting *   ▾

☐ Track Speed

Multiplier *   ▾

◯ Use Primary Rate   ◯ Use Machine Rate

Save   Cancel

Figure 1.5 – Adding Machine to Master List

2. Add the Name of the new Machine Type.

3. Select an icon from the drop-down list or select "None" for no icon.

4. If this Machine Type will be tracked by SFC, then check the "Enabled" checkbox to allow tracking. Uncheck to Disable tracking.

5. Select the Primary item from the drop-down menu.

6. Select the Secondary item from the drop-down menu.

7. Track Cycles based on Primary/Secondary preference.
   • Example: Tool number, mold number, fixture number

8. Select "Counting" to enable automatic count recording, select "Count Entries" to allow counts to be manually entered or edited, or select "None" to disable counting.

9. Use the check box to Track speed data in SFC; leave blank to not record speed data.

10. Select either the Primary or Secondary Item to be affected by the multiplier field from the drop-down list.
   • If Primary Items will be changing, select "Use Primary Rate"; otherwise, select "Use Machine Rate".

11. Click one of the radio buttons for either "Use Primary Rate" or "Use Machine Rate".

Figure 1.6 – Adding Machine to Master List (cont.)

12. Select the "Metric for Comfortable Display" to show in Comfortable Display.

- Uptime Efficiency % – Basic metric of machine uptime.

- OEE – Critically evaluates how effectively a manufacturing operation is utilized.

- Job Completion % – The proportion of work completed on a job verses total job preset.

- Runtime Efficiency % – The proportion of Run time verses total production time.

- Event History – Historical graph that displays the different state changes that occurred during a range of time.

13. Select the "Metric for Expanded Display" to show in Expanded display.

- Primary Item, Job #, and good parts count.

- OEE

- Job Completion %

- Runtime Efficiency %

- Event History

14. Click "Displayed Items" to select the items to display on a custom display. Checked items will be displayed, and unchecked items will not be displayed.

15. Click **Save** when the new Machine Type form is completed.

Dialog Reasons

This section describes how to manage the Master List of Downtime Reasons in SFC 6.0 under "Dialog Reasons" from the Machine Administration drop-down menu. You can use the filter line to quickly search the Downtime List for the desired Downtime Reason.

Navigation

1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges).
3. Click Dialog Reasons.

Downtime Reason Master List

The first step in configuring ShopFloorConnect's downtime reporting capability is to create a master list of all the available Downtime Reasons for your entire installation.

The Master List is the repository from which reason codes will be selected for specific machines. Assigning reasons to specific machines is done separately.

> **IMPORTANT**
>
> Avoid editing or deleting any downtime reasons after ShopFloorConnect has begun collecting data, as this will cause "Unknown Reason" to be substituted for the removed reason in all the corresponding reports and screen displays. To stop using a downtime reason, leave it in the Master List, and remove it from the downtime menus at the machine level. You cannot remove items from the Master List due to past instances of use.

Figure 1.7 – Downtime Reason Master List

1. Select **+ New Reason** to add a new Downtime Reason.
2. Name – type the reason name. This name will be the Downtime Reason as it appears in the downtime menus at machine level, on ShopFloorConnect's reports, and on Factory Viewer screens.

> **IMPORTANT**
>
> The Downtime Reason names should be as descriptive as possible, but there are limitations:
>
> - SmartPAC 1 or 2: 12 characters or fewer
> - SmartPAC PRO: 20 characters or fewer
> - SMI/SMI 2: 30 characters or fewer

Add Reason

Name *

State *

Category

Machine Type *
All

Save   Cancel

Figure 1.8 – Adding Downtime Reasons

3. State – the "State" selection determines whether the downtime attributed to the reason will be logged as Planned downtime, Unplanned downtime, or Changeover (setup) time.

- "Planned" downtime will not reduce the machine efficiency calculations, nor will it reduce the availability portion of the OEE calculation. Planned downtime should be used only for reasons that indicate when the machine was not supposed to be running, such as lunchtime, breaks, and when there is no work or operator available for the machine.

- "Unplanned" downtime will reduce the uptime efficiency percentages as well as the Availability percentage in the OEE calculation. Most downtime during work hours is Unplanned.

- "Changeover" time can be included as either Unplanned or Planned downtime in your OEE reports, according to a parameter that you will set when you configure the report. In addition, the time attributed to changeover is included in the "Average Changeover By Primary" report. Reasons associated to setup-related activity should use "Changeover" as the associated state.

4. Category – This feature is not necessary but is to help organize your Dialog Reasons. If you have a group of Dialog reasons that are for Maintenance, enter Maintenance in the category. Now when you can click on Category on the main page, it reorganizes the dialog reasons and brings them all to the top of the list.

5. Machine Type – The "Machine Type" setting determines whether the downtime reason will be available to all machine types or only a specific machine type.

- The Machine Type list is a single-select menu. You can only make one selection. So, if a downtime reason is to be accessible to more than one machine type, select "All".

6. Then, click **Save** to create the new downtime reason.

NOTE

You can duplicate a downtime reason, but it may cause confusion. If you create a reason named "Clean up" associated to Planned downtime and another reason named "Clean up" associated to Unplanned downtime, the operator would be unable to distinguish between "Unplanned Clean up" vs. "Planned Clean up" at machine level, unless you specifically used Planned or Unplanned after the reason code, e.g., Clean up Unplanned or Clean up Planned.

Machine Configuration

This page explains how to add a new machine to ShopFloorConnect. For this procedure, we are making the following assumptions:

1. You can log on to ShopFloorConnect with administrative privileges.
2. The SFC Dialog Reason Master List has already been configured.
3. The new machine will be placed into an existing site and area.
4. The new machine will be added as an existing Machine Type or you will need to add a new one.
5. The device installed on the machine (SmartPAC or SMI) is connected to the network and is communicating with ShopFloorConnect.

Navigation

1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges).
3. Click Machine Configuration.

Setting up the Machine Configuration

Figure 1.9 – Machine Configuration Settings

1. Select **+New Machine Configuration** .
   - Machine Name – This will be the name used for the machine throughout ShopFloorCon- nect.
   - Machine IP - This is a placeholder for the static IP address assigned to the machine.
     - Note: Final machine connection must be made on the SFC server.
   - Machine Type – Select the machine type for the new machine from the pre-existing list.
   - Device Type – Select the data collection device.
   - Area Name – Select the area where the machine is located.
   - Machine Ideal Rate – The Machine Ideal Rate is the maximum rate at which the machine is capable of running (Cycles/Minute).
   - Default Standard Rate – This is the Standard Rate (parts/minute) that will be used when a new Primary Item is discovered. This "placeholder" value will be used by SFC until a specific Standard rate is set for the newly discovered Primary Item.
   - Default Ideal Rate – This is the Production Ideal Rate (parts/minute) that will be used to calculate OEE. This "placeholder" value will be used by SFC until a specific Production Ideal Rate is set for the newly detected Primary Item.
   - Standard Uptime Efficiency – This is the "normal" percentage of the overall time that you expect the machine to run. For example, if a machine – on average – normally runs 45 minutes out of every hour, the standard uptime efficiency should be set to 75%. Industry average is 65%.
   - Standard Setup Time – The amount of time you expect that is needed to changeover/set- up a job.
2. Click **Save** when the new machine form is completed.
3. Reach out to SFC Support (1-800-586-8324 Option 3) to activate the new machine.

Machine Configuration - Dialog Reasons

The following procedure describes how to create the Dialog (downtime reason) menu for the LMI, SMI-1, SMI-2, SmartPAC 2, and SmartPAC Pro with the "Custom 32" downtime mode enabled.

Click here for instructions on how to set up the downtime menu for the SmartPAC 1 or SmartPAC 2 with the "16/16" downtime mode selected.
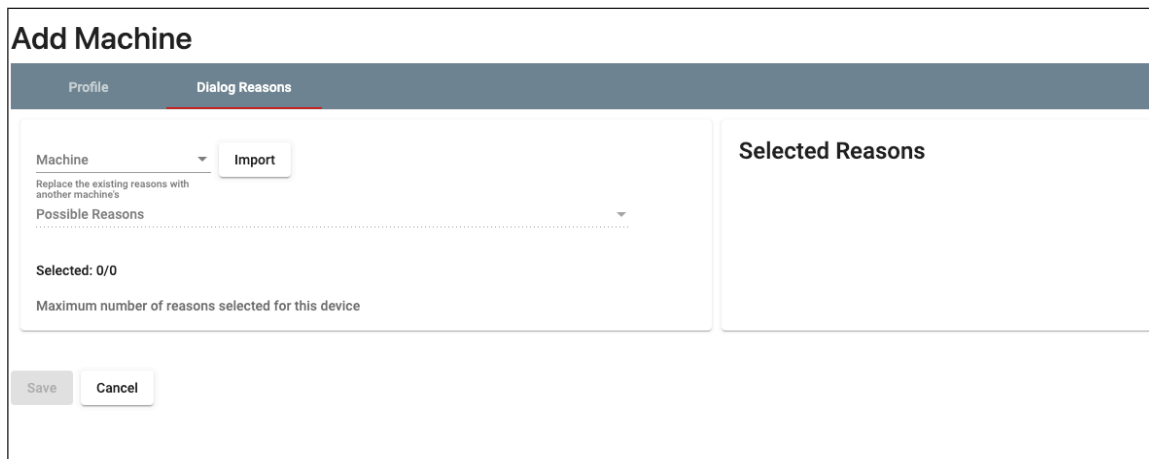
Navigation

1. Log in to ShopFloorConnect and Select "Equipment Summary" and verify that your newly added machine is on the network and communicating with ShopFloorConnect.

    - Your device must remain online with the machine stopped (not running) throughout this procedure for the device to receive the downtime reason menu from ShopFloorConnect.

2. Click into main menu ☰.

3. Click into Machine Administration Menu (Requires administrative privileges).

4. Click Machine Configuration.

Downtime Reasons List

This page allows you to view all downtime reasons added to the master list as well as edit and delete them from the list.

1. Select the ✏ icon under the Action Column next to your newly configured machine.

2. Select the "Dialog Reasons" tab to the right of Profile.

Figure 1.10 – A blank downtime reason menu for a new machine

3. If you want to start by copying the downtime menu from another machine, then do the following:

    - Select a machine from the "Machine" field.
    - Select Import .
    - Select Save .

4. If you are not copying the downtime reasons from another machine, then the possible reasons will appear on the right. Select a reason from the drop-down menu "Possible Reasons". You should select what you anticipate will be the most frequently used reasons first and leave any less relevant reasons for the end of the list.

NOTICE

The possible reasons are populated by the Master Dialog Reason List, which should already be configured. If not, or if you wish to add a new reason to the list, refer to the instructions for setting up the downtime Reason Master List.

Figure 1.11 – Selecting downtime reasons from the drop-down list

5. The device on the machine must be online, able to receive data from SFC, and the machine **must be in a non-running state** to complete this step.

6. Lastly, click the Save button.

Lists

This section describes how to manage Primary (tools, parts, SKU, etc…) Lists in SFC 6.0 from the Machine Administration drop-down menu. You can use the Machine type drop-down menu to select the to display the list of a particular machine type.
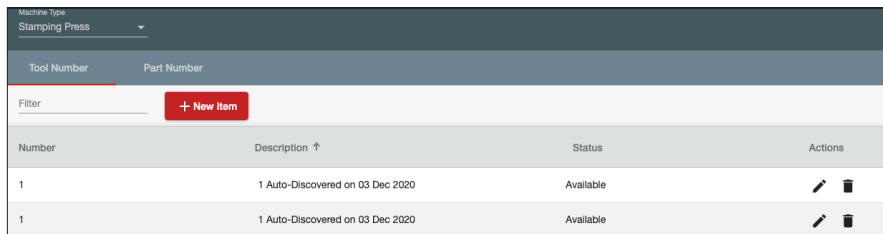
Navigation

1. Click into main menu ≡.
2. Click into Machine Administration Menu (Requires administrative privileges).
3. Click Lists.

Managing Lists

This page allows you to view all available machine type lists of primary items added to SFC 6.0 as well as edit and delete them from the list. To edit a Primary on a list, click on the ✏ icon to make changes and click **Save** to record those changes. To delete a Primary record, click on the 🗑 icon and click confirm on the pop-up window to confirm the deletion of the record.

> **NOTE**
>
> If a record is not able to be deleted, or returns after being deleted, it may be caused by existing data dependencies in the system. Contact ShopFloorConnect technical support for further assistance at 1-800-586-8324.

Figure 1.12 – Lists

Adding Primary Items to Lists

1. Select either the Tool Number or Part Number tabs to add a Primary Item.
2. Click the **+ New Item** in the upper left corner of the screen.

Figure 1.13 – Adding Machines to Lists

3. Add the Number for the new Primary.
4. Add the Description for the new Primary.
5. Select the desired status from the drop-down menu.

6. For machines with the SMI 2, enter a time in seconds for the Forced Dialog timer and Production Idle timer. This step is optional if the SMI 2 Production Parameter Download feature is not being used. See SMI 2 User Manual for more information.

7. Enter a quantity of parts made per cycle.

8. Enter the number of operations needed per cycle.

9. Then, click **Save** to create the new Primary record

Adding Secondary Items

1. Add the Number for the new Secondary.

2. Add the Description for the new Secondary.

3. Select the desired status from the drop-down menu.

Add Part Number

Details

Number *

Description *

Status *

Property Data not associated with this item

Save   Cancel

Figure 1.14 - Secondary Items

Editing Primary Items and Creating Secondary Affiliations

1. Click the **Details** or **Affiliations** tab in the banner at the top of the screen.

2. Add the Description for the Primary or Secondary.

3. Select the desired status from the drop-down descriptions.

4. Go through and make any changes to the details or affiliations settings needed (see below).

5. Then, click **Save** to record the changes made.

Add Tool Number

Details	Affiliations	Machine Rates

Part Number	Affiliated	Current Configuration	Quantity per Cycle	Operations per Cycle
DWN-9613-BRK ☐		☐	1	⊕ 1 ⊖
CZ452-17HMR ☐		☐	1	⊕ 1 ⊖
D111-1963X ☐		☐	1	⊕ 1 ⊖
ACOG-4141-A ☐		☐	1	⊕ 1 ⊖
VX-11009-BC ☐		☐	1	⊕ 1 ⊖
SW4506-45ACP ☐		☐	1	⊕ 1 ⊖
P62 ☐		☐	1	⊕ 1 ⊖
321HH ☐		☐	1	⊕ 1 ⊖
P56 ☐		☐	1	⊕ 1 ⊖
SDFFF ☐		☐	1	⊕ 1 ⊖
P1234 ☐		☐	1	⊕ 1 ⊖
PTEST56 ☐		☐	1	⊕ 1 ⊖

Figure 1.15 – Editing Primary Items Details and Affiliations

Master Lists

The Primary and Secondary Items for your machines are put into lists called a "Master Lists". This saves you from re-entering the same items when multiple machines use the same Primary or Secondary Items.

Along with the Master Lists comes a concept called "affiliation". Master Lists contain all the items that are available to all the machines. Unless all your machines can run all the items in each list, you will need to specify which items from the lists can be applied to each individual machine. This is called "affiliation".

There are two associations that can be made in ShopFloorConnect: Primary Items can be associated to specific machines (individual machines, not types), and Secondary Items can be affiliated to Primary Items.

The Primary-to-machine association is needed to simplify setting up the Standard and Ideal Rates for each machine. The association settings allow ShopFloorConnect to display only the Primary Items that have been associated with each machine, so that you're not forced to set ratings for a Primary Item that can never be run in a given machine (see Figure 1.16 below).

The Primary-to-Machine association also simplifies the report filters by allowing ShopFloorConnect to only display the Primary Items associated with the selected machine(s) when setting up reports. This minimizes the chance of generating a blank report; for example, setting up a bogus production summary for a group of machines producing a series of parts that cannot be made by the machines.

Navigation

1. Click into main menu ≡.
2. Click into Machine Administration Menu (Requires administrative privileges).
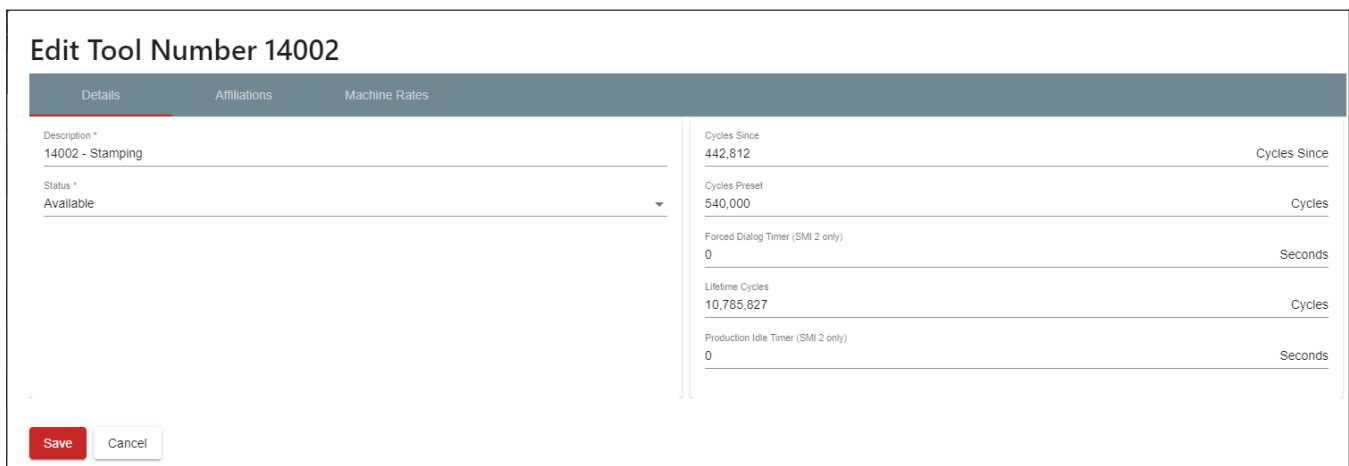3. Click Lists.

Figure 1.16 – The List Page, showing only the affiliated secondary items for tool number 18

The Primary-to-Secondary affiliations allow you to specify which Primary Item or Items are associated with each Secondary Item (or Items). Secondary items cannot stand alone. They must be associated with one or more Primary Items.

Machine Rates

The following procedure describes how to manage the list of Machine Rates in SFC 6.0 from the Machine Administration drop down menu. You can use the filter line to quickly search the machine rate list for the desired machine data.

Navigation

1. Click into main menu ☰.

2. Click into Machine Administration Menu (Requires administrative privileges).

3. Click Machine Rates.

Machine Rates

The Machine Rates consist of Ideal and Standard Rates for each Primary when the Primary is assigned to a Machine. This rate is set once for each machine in the ShopFloorConnect Machine Administrator under Machine Configurations.

This page allows you to view all Machine rates added to the list of Machine Ideal Rates as well as edit and delete them from the list. To edit a Machine rate, click on the ✏ icon to make changes and click **Save** to record those changes. To delete a Machine rate, click on the 🗑 icon and click confirm on the pop-up window to confirm the deletion of the record.

> **NOTE**
>
> If a record is not able to be deleted or returns after being deleted, it may be caused by existing data dependencies in the system. Contact ShopFloorConnect technical support for further assistance.

Figure 1.17 – The Machine Rates Page - Showing the Production Ideal, Standard, and Average Measured Rates for all primaries that can be run in the machine.

Adding Machine Rates

1. Click **+ New Rate**.

2. Select the Machine name from the drop-down menu.

3. Select the Tool number from the drop-down menu.

4. Enter the Standard Rate using the Up/Down arrows on the right side of the screen or use your arrow keys.

5. Enter the Ideal Rate using the Up/Down arrows on the right side of the screen or use your arrow keys.

6. Then, click **Save** to create the new Machine rate

Add Rate

Machine Name ▾

Tool Number ▾

Standard Rate *

Ideal Rate *

Save   Cancel

Figure 1.18 – Machine Configurations page, the Machine rate settings

The Standard Rate

The Standard Rate is the expected "normal" production rate for a primary item (e.g. Part #, Mold #, Tool #) in a particular machine. Some users refer to this as the "quoted rate". The Standard Rate is the rate at which you would normally expect the machine/primary combination to run. It is the historical, expected AVERAGE number of parts per minute that the machine will run when it runs normally. Like the Production Ideal Rate, the Standard Rate is set under the "Machine Rates" page. This Machine Rates page has a table with all the primary items that can run in the machine and provides places where you can enter and/or edit the Standard Rates for each primary.

Ideal Rate

The Ideal Rate is a user-specified value that indicates the fastest possible production rate for each primary item (e.g. Part #, Mold #, Tool #) that can run in each machine. It differs from the Ideal rate because it is set for each individual primary. The Production Ideal Rate is set under the "Machine Rates" page. This Machine Rates page has a table with all the primary items that can run under that machine type and provides fields where you can enter and/or edit the Production Ideal Rates for each primary. Set this value equal to the maximum possible production rate for the primary in the machine. Keep in mind that this is a theoretical maximum; the machine should not be capable of producing parts at a higher rate than the Production Ideal Rate.

Average Measured Rate

The Average Measured Rate is a value that is calculated by ShopFloorConnect. It is an average – in parts/minute – of the actual production rate over the last "5" jobs that ran in the machine. The Average Measured Rate is displayed under the "Machine Rates" page as a reference for users to compare to their Standard Rates – the idea being that the Standard Rate should reflect the actual production rate. By displaying both, users can see which Standard Rates need to be updated when productivity improvement efforts yield positive results.

Calendars

The calendars are used when generating reports by day, shift, week, month, etc. Calendars can be set at the site, area, and machine level. Machine level takes priority over the area level, and area level takes priority over the site level.

> **NOTE**
>
> This section assumes you have already pre-configured at least one site or area that will be populated in the drop-down menu.

Navigation

1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges).
3. Click Calendars.

Interval tab

- Select the "Interval" tab to choose any of the preconfigured interval types, e.g., 1st Shift, 2nd Shift, Off Shift etc.
- To edit an existing shift interval, click the ✏ icons next to the shift you want to edit.

> **NOTE**
>
> If there is no interval that represents your shift, then add the shift name to "Intervals". Select the "Interval" tab → **+ New Interval** → Type name → Select the appropriate Operational Status (Running/Not Running), Select a color from the drop-down menu → Select **Save** .

Adding a Calendar

1. Define the Shift Intervals
    - Select color and operational status.
2. Select the **+ New** ▾ button in the upper right corner of the screen.
3. Select ➕ Add Schedule.
4. Add Schedule from the drop-down.
    - If a shift template has already been created, select an existing template.
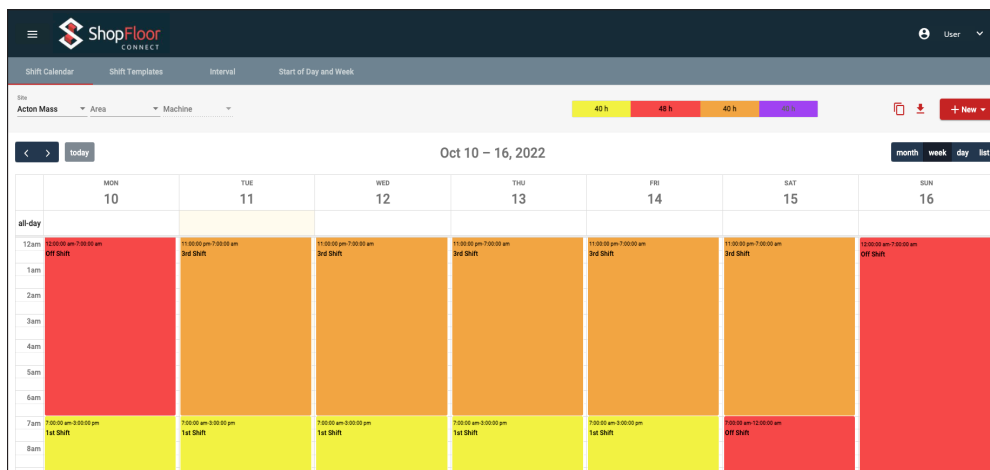

Figure 1.19 – Adding a Shift

NOTE

Add an Off Shift interval for periods of time where the machine or production are not scheduled to run, so the Off Shifts do not affect your efficiency calculations.

Schedules must consist of 168 hours total(one week).

Figure 1.20 – Adding a Schedule

5. Enter in a name and description for the schedule template you want to create. If your schedule will cover more than one week, click the ⊕ icon to add an additional week to the schedule.

6. Select the shift and days of the week the schedule will cover from the drop-down lists.

7. Enter the start and finish times for this shift schedule and check the "Next day" box, if the shift carries over to the next day. Click the **Save** button.

Shift Templates tab

The steps above are the same for creating a new shift template. Alternately, you can create a new schedule template by clicking the **+ New Schedule**. To edit an existing template, click the ✏ icons.

Start of Day and Week tab

1. Select "Start of Day and Week" to define the Work Day and Work Week starting times and day of week).

Figure 1.21 – Edit Start of Day and Week

2. To edit a preconfigured Workday start time or work week start day, select the ✏ icon.

3. Make your changes.

4. Select the 💾 to save any changes.

Figure 1.22 - Schedule Ranges

Add Calendar

1. Go to Calendars

2. Click the **+ New ▾** button

3. Select which Calendar Template you want to add.

4. Choose a Start Date & End date or Never End. (This can be changed at any time)

5. Select **Save** . Go to Calendars.

Figure 1.23 – Adding a Shift to an Existing Shift Schedule

Removing Existing Calendar Templates

1. We recommend doing this in the Week or Month tab

2. Click each shift and select: This, past, and future shifts. Hit delete and confirm.

Figure 1.24 - Removing Existing Calendar Templates

3. Do this for each shift until they are all deleted using the method shown above.

4. Add in a new Calendar Template.

Manage Operators

The following procedure describes how to manage the list of operators in SFC 6.0 from the Machine Administration drop down menu. You can use the filter line to quickly search the operator list for desired operator numbers/names.

Navigation
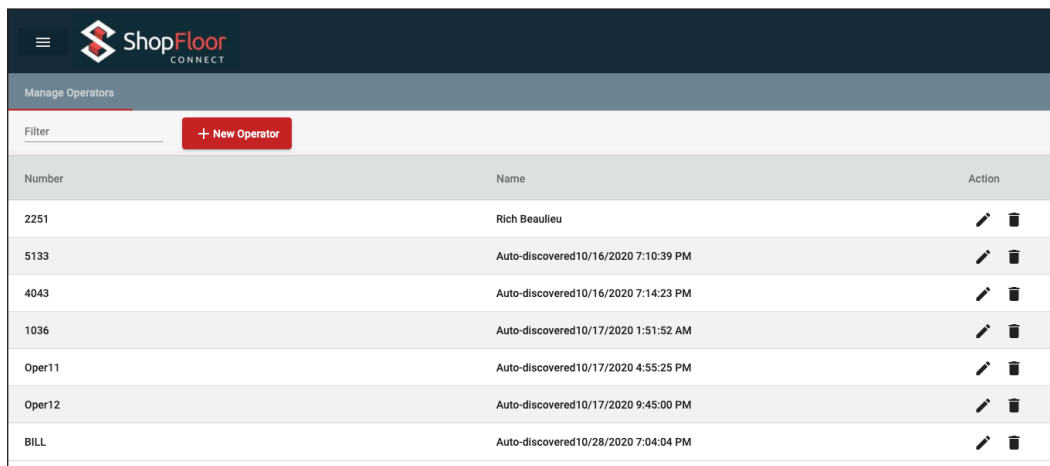
1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges).
3. Select "Manage Operators".

Operators Master List

This page allows you to view all operators and their numbers in the master list as well as edit and delete them from the list. To edit an operator record, click on the ✏ icon to make changes and click **Save** to record those changes. To delete an operator record, click on the 🗑 icon and click confirm on the pop-up window to confirm the deletion of the record.

> ### NOTICE
>
> If a record is not able to be deleted, or returns after being deleted, it may be caused by existing data dependencies in the system. Contact ShopFloorConnect technical support for further assistance.

Figure 1.25 – Operators Master List

The Global setting "Show Operator Name" determines whether the name or the operator number is shown throughout SFC 6.0 (Machine Administration ➜ Global Settings).

Adding Operators

1. Click the **+ New Operator** in the upper left corner of the screen.

Add Operator

Number *

_____

Name

_____

Save   **Cancel**

Figure 1.26 – Adding Operators to Master List

2. Add the operator ID number.

    • If the operator does not have a number, use 0 as a temporary ID number.

3. Add the Name for the new operator.

4. Then, click **Save** to create the new operator profile.

User Management

ShopFloorConnect requires each user to log-in. Once logged in, users will have privileges according to the settings in their security profiles. The following procedure describes how to manage the list of Users in SFC 6.0 from the Machine Administration drop down menu. You can use the filter line to quickly search the user list for desired user numbers/names.
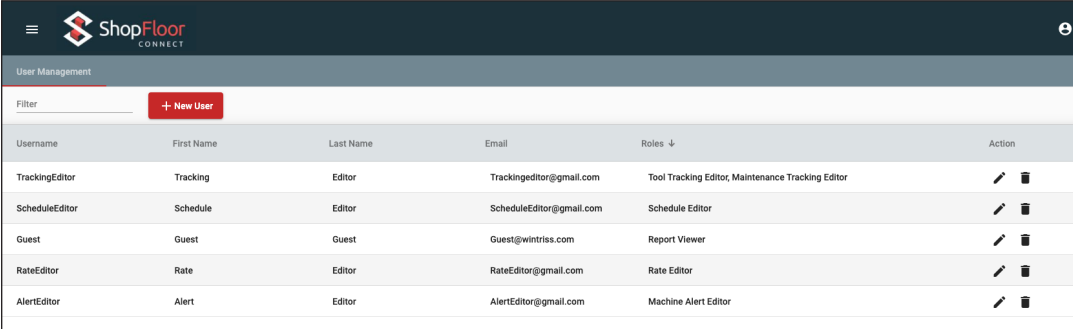
Navigation

1. Click into main menu ☰.

2. Click into Machine Administration Menu (Requires administrative privileges).

3. Select "User Management".

Users and Security Authorizations

This page allows you to view all users, their email addresses and roles on the master list, as well as edit and delete them from the list. To edit the user record, click on the ✏ icon to make changes and click **Save** to record those changes. To delete the user record, click on the 🗑 icon and click confirm on the pop-up window to confirm the deletion of the record.

> NOTICE
>
> If a record is not able to be deleted, or returns after being deleted, it may be caused by existing data dependencies in the system. Contact ShopFloorConnect technical support for further assistance.

Username	First Name	Last Name	Email	Roles ↓	Action
TrackingEditor	Tracking	Editor	Trackingeditor@gmail.com	Tool Tracking Editor, Maintenance Tracking Editor	✏ 🗑
ScheduleEditor	Schedule	Editor	ScheduleEditor@gmail.com	Schedule Editor	✏ 🗑
Guest	Guest	Guest	Guest@wintriss.com	Report Viewer	✏ 🗑
RateEditor	Rate	Editor	RateEditor@gmail.com	Rate Editor	✏ 🗑
AlertEditor	Alert	Editor	AlertEditor@gmail.com	Machine Alert Editor	✏ 🗑

Figure 1.27 – User management Page

Adding a New User

1. Click the **+ New User** in the upper left corner of the screen.

2. Enter the fields displayed in Figure 1.28 below:

Figure 1.28 - Adding a New User

3. Check the boxes under "Roles" that you wish to provide to the new user.

    - Each user's security profile consists of up to 21 "Roles".

    - Each Role authorizes the user to edit or change specific items within ShopFloorConnect.

    - Restrict Sites allows you to choose whether or not you want the user to be restricted from viewing or accessing other sites.

4. When finished, click **Save** to record the new User profile.

Security Authorizations/Roles

Security authorizations are mostly non-overlapping. For example, instead of Administrators (which are typically IT personnel) being able to change everything, they will only have editing permissions for the SFC Administrator, with read-only access to the Factory Viewer (unless they also have the various Factory Viewer privileges). The exceptions to this are the three Reporting authorizations (where anyone with Report Manager authorization inherits the privileges of the Report Edit and Report Viewer authorizations, while the Report Editors inherit Report Viewer privileges), and Administrators where anyone with Administrator Security or Administrator Data Import permission inherits Administrator access.

- **Tool Work History Admin** - Can add/edit reasons and names within the Tool Work History Module.

- **Tool Work History** - Edit Tool Work History

- **Tool Tracking Editor** - Make changes in the Tracking View.

- **Schedule Editor** - Make changes in the Schedule View.

- **Report Viewer** - Run ad-hoc reports, but not save filters. Access to the Stored Reports view for existing reports.

- **Report Manager** - Full access to the Reporting view including the Report Manager View.

- **Report Editor** - Run ad-hoc reports and save filter settings; allowed to modify the delivery settings; no access to the Report Manager View.
- **Rate Editor** - Edit the Measured and Ideal Rates under the Administrator Rates View.
- **Maintenance Tracking Editor** - Make changes in the Maintenance Tracking View
- **Machine Alert Editor** - Make changes on the Administration Alert View.
- **Job Editor** - Add/change the Scrap Count values on both the Machine Detail and Job List views.
- **Good Parts Editor** - Allows the editing of Good Parts Count regardless of machine type
- **Event Editor** - Reallocate Time in the Event Log.
- **Event Commenting** - Add or Edit Comments in the Event Log (but not reallocate time).
- **Display Only** - Can run Display Only Views
- **Current State Editor** - Able to modify the current state of the machine.
- **Administrator Security** - Full access to the Administrator, including the Security. No Privileges for Factory Viewer.
- **Administrator Password Configuration** - Make changes to the Password Configuration settings for all users
- **Administrator Item Lists Only** - Limited to Administrator Item Lists only without import and export.
- **Administrator Data Import** - Access to the SFC Administrator Data Import and Export view. No Privileges for Factory Viewer.
- **Administrator** - Access to all of the SFC Administrator except for Security. No Privileges for Factory Viewer.

Changing Privileges, Resetting Passwords, and Deleting Users

1. To reset a password or edit a user's security privileges, click the ✎ icon to the right of the user. The user profile will open and allow you to make changes. To delete a user, click on the 🗑 icon, then select "confirm".

2. When you are done, click **Save** .

Figure 1.29 – Clicking the "Pencil" icon will allow you to make changes to the user's security profile.

Contacts

The following procedure describes how to manage contacts and people who need to receive notifications or reports but do not need a user account in SFC 6.0. You can use the filter line to quickly search the contact list for desired names and contact info.

Navigation

1. Click into main menu ☰.

2. Click into Machine Administration Menu (Requires administrative privileges).

3. Select "Contacts".

Contact Master List

This page allows you to view all contacts, and their emails, added to the master list as well as edit and delete them from the list. To edit an operator record, click on the ✏ icon to make changes and click save to record those changes. To delete a contact record, click on the 🗑 icon and click confirm on the pop-up window to confirm the deletion of the record.

NOTICE

If a record is not able to be deleted, or returns after being deleted, it may be caused by existing data dependencies in the system. Contact ShopFloorConnect technical support for further assistance.

Figure 1.30 — Contacts Master List

Adding Contacts

1. Click the **+ New Contact** in the upper left corner of the screen.

2. Add the email or SMS/Second Email for the new contact.

Figure 1.31 — Adding Contacts to Master List

3. Add the description for the new contact.

4. If the contact is a member of a group, then add them to the group by checking off the appropriate group(s) checkbox(es).

5. Use the Enabled checkbox to allow the contact to be listed; disabled contacts will not show up when setting up Alerts.

6. Click **Save** to create the new contact

7. Click the **How to send text** in the upper left corner of the screen.

8. To have a phone number, in addition to an email, as a contact to receive texts, a second contact must be created.

9. Format the email address as shown in Figure 1.32.

Add

To send a text message enter the phone number followed by the following for the provider

Provider Format

Sprint   ##########@messaging.sprintpcs.com
Verizon ##########@vtext.com
T-Mobile ##########@tmomail.com
AT&T   ##########@txt.att.net
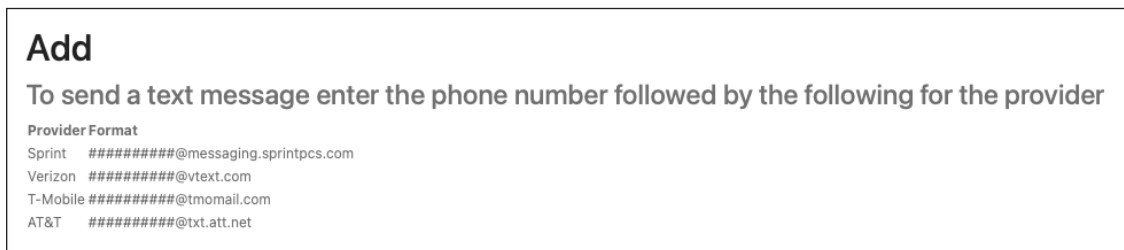
Figure 1.32 – Formatting for Sending a Text

Adding Groups

1. Click the **Groups** tab in the upper left of the screen.

2. Click the **+ New Group** in the upper left corner of the screen.

3. Add the name for the new group you would like to create.

4. Click the box to enable or disable the group.

5. If a contact is a member of a group, then click the check box on the right side of the screen to add the contact to this group.

6. Then, click **Save** to create the new group.

Name	Enabled	Action
Wintriss Support Engineers	✓	✏ 🗑
Wintriss Engineering	✓	✏ 🗑

Figure 1.33 – Adding Groups to the Master List

Global Settings

The following describes managing the global settings in SFC 6.0 from the Machine Administration drop down menu. You can use the filter line to quickly search the global setting you are looking to modify.

Navigation

1. Click into main menu ☰.
2. Click into Machine Administration Menu (Requires administrative privileges).
3. Select "Global Settings".

Settings

The Global Configs tab allows you to view all current Global settings, edit them, and view the calculations tab to see the formulas used by SFC. To edit a setting, click on the ✏ icon to make changes on the provided drop-down menu and click **Save** to record those changes.

Figure 1.34 – Global Settings

Global Settings Customization

1. Click the ✏ after the global setting that you want to customize.
2. A pop-up window will open with a drop-down menu selection.
3. Choose the setting you would like.
4. Then, click **Save** to record your new global setting.

Edit End Job is an Unplanned Downtime State

Name
End Job is an Unplanned Downtime State

Option *
False

Save   Cancel

Figure 1.35 – Making Global Settings Changes

Definitions

- **End Job is an Unplanned Downtime State:** End job is a built-in function/dialog reason utilized by SFC to close the job segment. Unplanned downtime affects your availability in OEE negatively and Planned downtime does not.

- **Suppress One-Second Idle in Event Log:** Allows you to hide all instances of one second Idle occurrences to reduce the size of the event log page. Idle time is still accumulated on the job history.

- **Enable Report Server Notification:** Displays a message to users when SFC report server application is not running. (Note: Not currently implemented.)

- **Show Tool Tracker Tab:** Allows users to hide Tool tracker page functionality.

- **Show Schedule Tab:** Allows users to hide Scheduler page functionality.

- **Indicate Cycle Preset Alert On Equipment Summary:** Shows a wrench at 90% of preset and a red dot when over 100% of preset when this setting is enabled (True), and no indication if disabled (False).

- **Allow LifeTime Cycle Editing On Tracking Summary:** Allows users with adequate security authorization to edit lifetime cycles on tools in the tool tracker.

- **Total Number of Cycle Tracking Counters:** Controls how many columns of Counters are displayed, up to three maximum.

- **Parent Child Machines:** Controls whether the Parent/Child function is displayed on the machine configuration page during set up.

- **Percent Before Est to Complete Uses Current Rate:** Percentage setting to better approximate the job completion by using current rate over average measured rate. For example, with the default setting of 15, the software uses the "Average rate" until 15% of the good parts counter is reached for the job, and then provides the estimation to complete based on the "Current measure rate".

- **Customer Logo:** Allows customer to input custom logo (220x80 pixel, RGB - .JPEG, .BMP or .PNG).

- **Show Operator Name:** Allows the users to display the operator's name instead of the operator number input at the device. Operator names must be setup in advance within SFC on the "Manage Operators" page.

- **Logo Route:** Controls whether clicking on the SFC (or custom) logo directs the user to the Home page or to the Equipment Summary.

- **Week Start for Templates:** Defines which day of the week is the start of the work week. (Note: This setting is currently disabled.)

Calculations

This page allows you to view the calculations ShopFloorConnect uses to calculate OEE, Performance, Runtime, Measured Rate, and Mean Time Between Failures. You can click on the ⚙ Settings button beneath each formula to control how various parameters are treated in the calculations and set thresholds on the results of each formula.
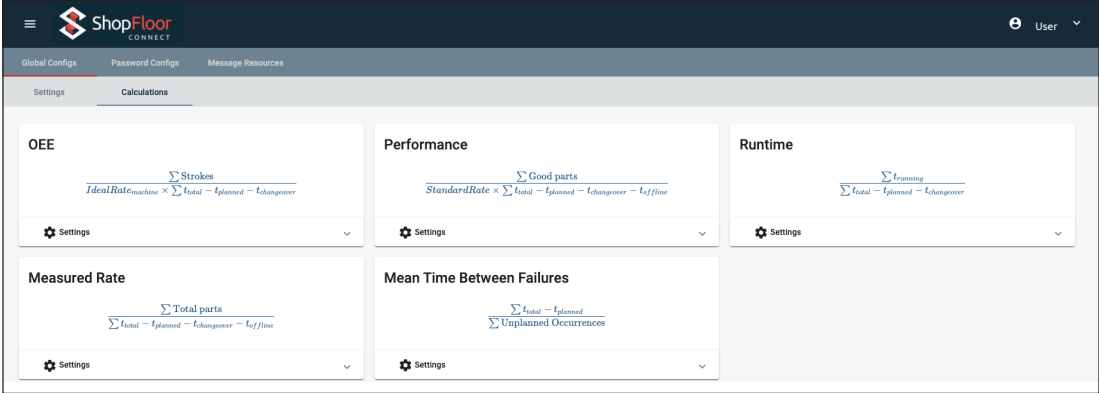
Figure 1.36 – Calculations Page

NOTICE

The symbol ∑ (sigma) shown above indicates summation.

Password Configs

This page allows you to customize the password parameters you want to require for users. You can set minimum and maximum password lengths as well as what is required in the password, such as capital letters, lowercase letters, numbers, and symbols.

By default, passwords do not expire. You may set when/if a password expires and whether users can reuse passwords, and how far back this history tracks. Lastly, you can decide whether a user can change their own password; once these customizations have been set, click **Save** to record your settings.
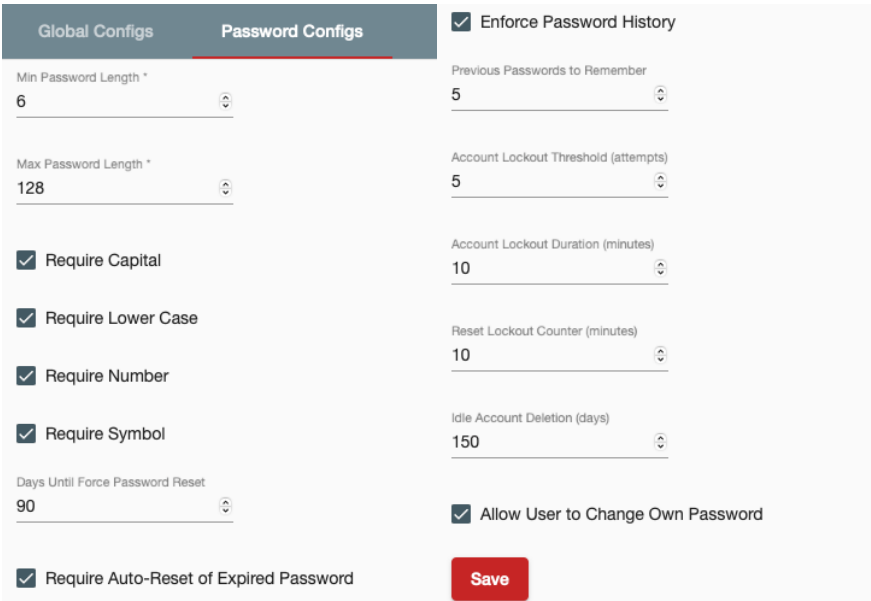
Figure 1.37 - Password Configs Screen

Equipment Summary

This section describes the function of the Equipment Summary page elements and describes how to configure the user-selectable fields on the page. The Equipment Summary shows a real-time overview of all machines connected to ShopFloorConnect.

Navigation - SFC Equipment Summary

There are three ways to navigate to the Equipment summary:

• Select the Equipment Summary button on the dashboard (Figure 2.1).

• Select the ShopFloorConnect or Customer logo (if global setting is set for this).

• Select Equipment Summary from the main menu ☰.

Figure 2.1 – ShopFloorConnect Dashboard

The Extended, Comfort, and Compact View

The Equipment Summary can be displayed in three different ways:

The Extended View

- The Extended View (shown in Figure 2.2) uses a card layout and displays a colored icon for each machine, the current machine status, and the period of time that the machine has been in the current status. There are also three user configurable KPI's that can be used to display information about the machine as well as one or two graphical options.
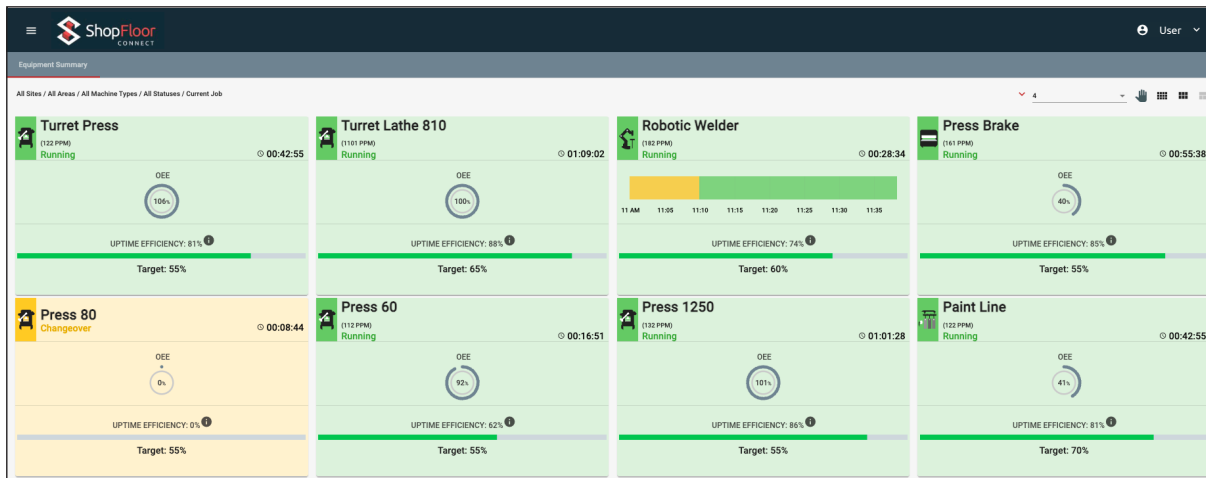
Figure 2.2 – Equipment Summary Extended View

The Comfort View

- The Comfort View (shown in Figure 2.3) uses a smaller card layout and displays a colored icon for each machine, the current machine status, period of time that the machine has been in the current status, and as one graphical option.
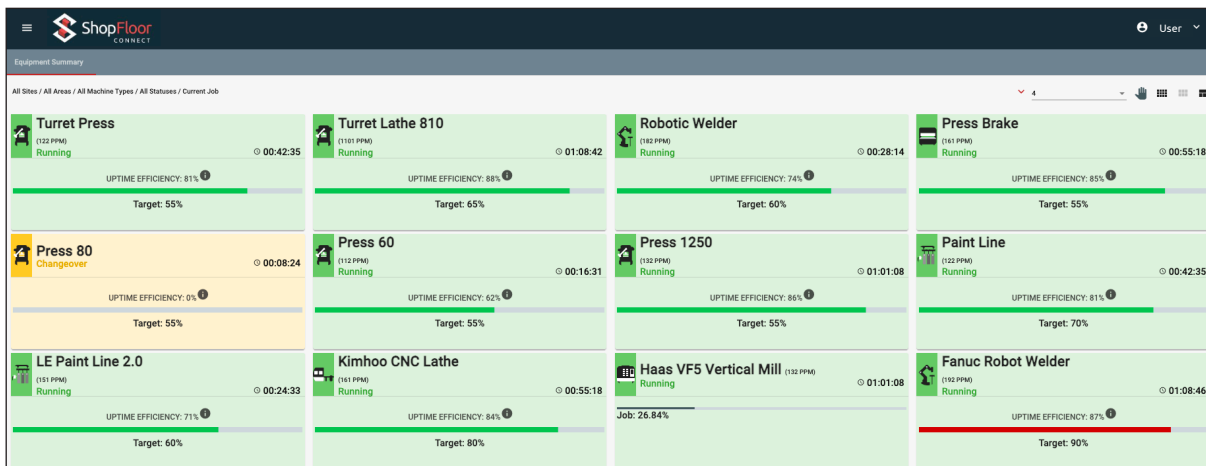
Figure 2.3 – Equipment Summary Comfort View

The Compact View

- The Compact View (shown in Figure 2.4) displays a colored icon for each machine, the current machine status, and the period of time that the machine has been in the current status. The compact view will only display your primary item. This view is ideal to display a large number of machines on one screen.

Figure 2.4 – Equipment Summary Compact View

Navigation - SFC Equipment Summary

"Site" Drop-Down Filter

ShopFloorConnect supports multi-plant installations. If you have machines at more than one location and have opted to use this feature, each location will have its own site tab.

"Areas" Drop-Down Filter

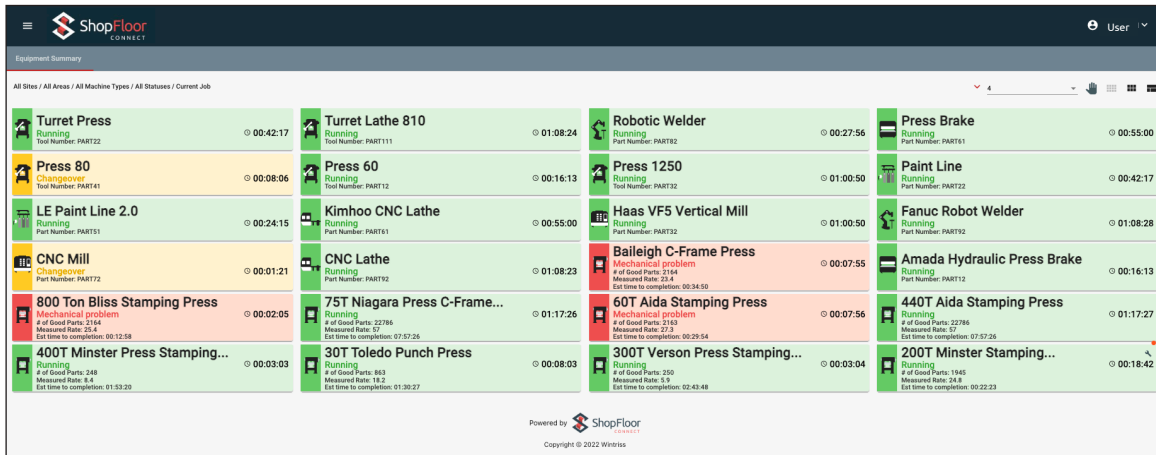"Areas" allows you to group your machines for display by area. This feature allows you to set the Equipment Summary to show only the machines assigned to the selected area. It is useful for large installations to minimize the scrolling that would be required to view only a certain group of machines.

"Machine Types" Drop-Down Filter

Every machine connected to ShopFloorConnect is assigned to a specific machine type. The "Machine Types" drop-down filter allows you to display only specific machine types in the Equipment Summary.

> **NOTE**
>
> The "Site", "Areas", and the "Machine Types" filters determine which machines are displayed on the Equipment Summary screen. If you load a blank page, that means that no machines match the filters selected.

"Status, Time Range, and Sort" Drop-Down Filters

- The "Status" drop-down filter allows you to display only the machines in a specific state. The sortable states are Running, Unplanned Downtime, Planned downtime, Change Over, Idle, and Offline.

- The "Time Range" drop-down filters the selected relative range on the Equipment Summary Page. The data displayed on the Equipment Summary Page can be **one** of the following: Current Job, Current Shift, Current Day, or Current Week.

- The "Sort" drop-down filter allows you to sort the machines displayed by **one** of the following: Name, Area, Type, or Status.

- The "Row Selector" drop-down filter allows you to change the number of machine rows across the page, i.e., 2, 3, or 4. The interface will auto-adjust row sizes.

Alerts

The Alert feature enables ShopFloorConnect to automatically send notifications via email or text whenever a machine in a downtime state stops for longer than a specified period or whenever a maintenance item preset is reached.

Alerts can be conditional. For example, you can set them up to be sent to different recipients by shift, and/or to be sent only when certain downtime reasons are selected. To create or modify Alerts, "Machine Alert Editor" must be added to the user's Security profile.

Navigation - Accessing the Alerts Function

• Select the Alerts button on the dashboard (Figure 3.1).

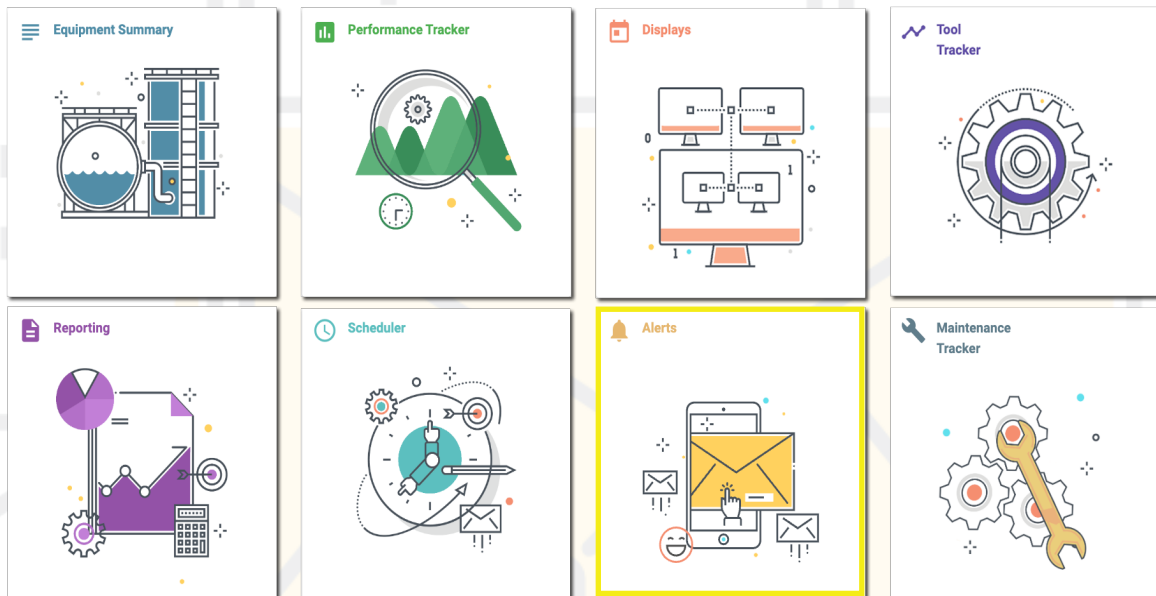• Select Alerts from the main menu ☰.

Figure 3.1 – ShopFloorConnect Home Screen
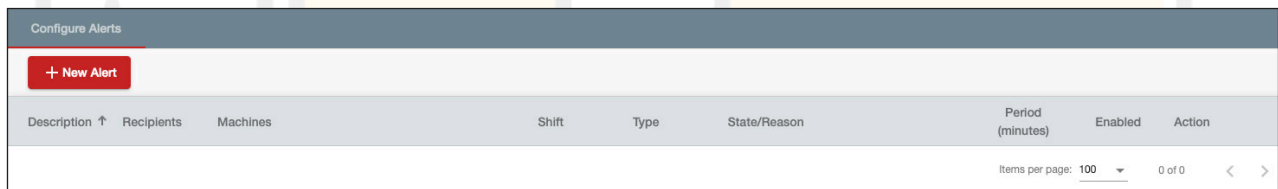
Adding an Alert

Figure 3.2 – Alerts Screen

1. Click the **+ New Alerts** in the upper left corner of the screen.

    • Description - Used as part of the subject line of alert message. This is a required field.

    • Enabled - When checked, the alert is scheduled and ready to be sent as programmed. When the check box is unchecked, the alert will be suspended.

    • Type - This setting specifies whether the alert will occur at the end of a job (End Job), when an item reaches one of its cycle presets (Cycle/Maintenance Tracking), when a specific downtime reason occurs (State Duration), or Control Faults.

- Period (Minutes) - This applies only to State Duration alerts and is the time (in minutes) for which the machine must be stopped for the alert to be triggered. When a machine is down for one of the selected reasons for longer than this period, an alert will be sent to the specified recipient/group. Setting this value to "0" will cause the alert to be sent the instant a reason code occurs. The alert period countdown will reset as soon as the machine changes state or reason.

- Recipient Group(s) - The group(s) that will be receiving the alert.

- Individual Recipient - The person that will be receiving the alert – is selected from a drop-down menu that is pre-populated with entries created in the "Contacts" page. You can select multiple individuals per alert.

- Machines - Select the machines you wish to set this alert for.

- Shift - The "shift" selection comes from the ShopFloorConnect "Shift Calendar" page. This selection allows you to limit when a recipient is eligible to get an alert. If a recipient always wants the alert, select "All".

- State/Reason - The State/Reason drop-down menu applies only to State Duration alerts. It lists all the pre-programmed downtime reasons, as well as "Offline", "Idle", "Changeover", "Segment Change", and "Running". This is a multi-select drop-down – you may check as many (or as few) applicable reasons as you wish.

Figure 3.3 – Adding a New Alert

2. Then, click **Save** to create the new Alert.

Figure 3.4 - Bell Icon in Equipment Summary

NOTICE

A Bell icon will appear on the Equipment Summary at the top right-hand corner of the banner signifying an alert has been sent out.
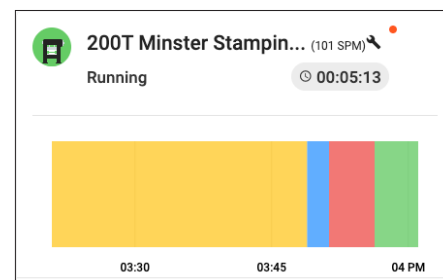

Figure 3.5 – Alert Icon in Equipment Summary

NOTICE

A wrench icon indicates the machine has a tool within the tool tracker that has a preset that the tool has reached within 90% of the preset. A wrench with a red dot means that a tool has met or exceeded the preset.

Tool Tracker

If any of your machines employ reusable tooling (e.g. metal stamping dies or extrusion dies), molds (for die casting or injection molding) or fixtures (for welding or assembly), you may have maintenance schedules based on cycles. It can be exceptionally difficult to maintain an accurate cycle count on any of these maintainable items if they can be used by multiple machines or processes, especially when the maintenance interval is longer than the average job run.

ShopFloorConnect can automatically track your maintenance schedule. To enable tracking, the item must be set up to "Track Cycles" on either the primary or secondary item for the machine type that uses it with tracking enabled. This is done in the Machine Types page.

Navigation - Accessing the Tool Tracker

• Select the Tool Tracker button on the dashboard (Figure 4.1).
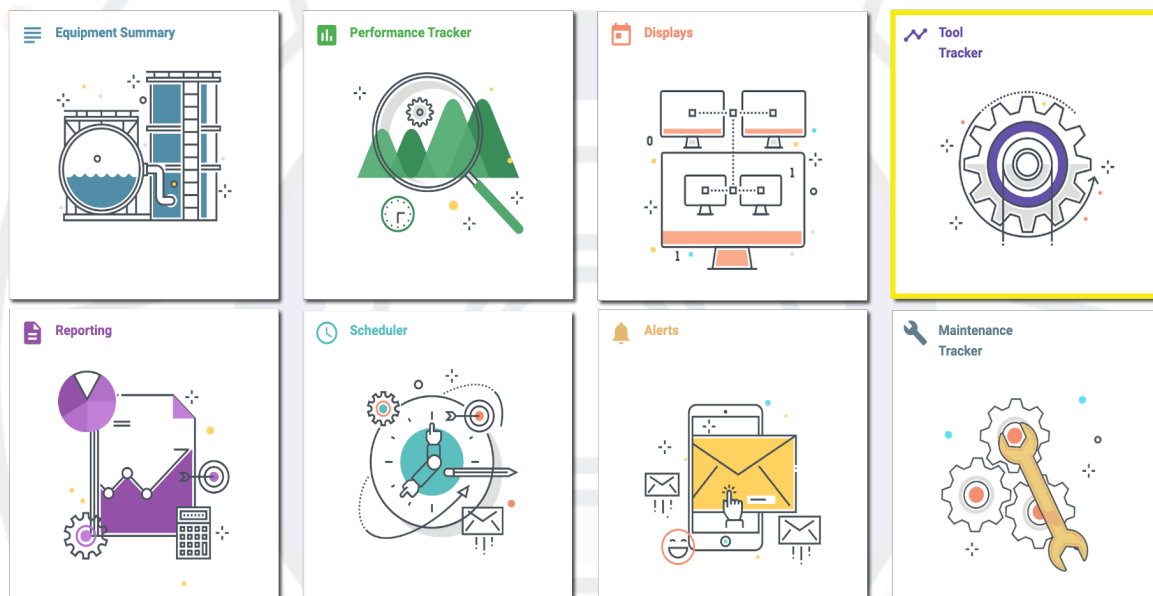
• Select Tool Tracker from the main menu ☰.

Figure 4.1 – ShopFloorConnect Dashboard

NOTE

If tracking has not been set up for the machine type, click on the ✎ icon for the machine type, ensure that the Track Cycles field contains the item you wish to track (see Figure 4.2).

Figure 4.2 – Enabling the Tracking Feature

Once tracking is enabled, you will need to specify cycle preset values for the tracked items. To make these changes, you will need to be logged in with "Tracking Editor" security privilege.

Managing Tool Tracker

Use the Machine Type drop-down to select the machine type that runs the item you are tracking cycles on.

The Tool Tracker displays a table with rows for each traceable item. As set in Figure 4.2, the example in Figure 4.3 has "Stamping Press" as the selected machine type and "Tool Number" as the item being tracked.

Figure 4.3 - Tool Tracker Main Page

Editing Tool

Figure 4.4 - Editing a Preset on the Tracking Summary Screen

1. Click ✏ to edit an item. In addition to the item number, there are fields in each row for Item Description, Item Status (Available, In Use, Down, etc.), Total Cycles, Cycles Preset, and Percent of Preset.

    • There is also a separate "Lifetime Cycles" counter that can be reset only if the "Allow Lifetime Cycle Editing on Tracking Summary" is set to 1 on the Global Settings page. To change/set any of the values, click the ✏ under the Action column (Figure 4.4).

2. Once tracking has been set up, ShopFloorConnect will increment the Total Cycles (and Lifetime Cycles) values whenever a machine makes a cycle while the tracked item is in the machine (as either the Primary or Secondary Item).

    • As an "early warning" feature, SFC will add a wrench when the Total Cycles reaches 90% of the Cycles preset. If the Total Cycles value exceeds the Cycles Preset, SFC will add a wrench with a red circle to the right of tool on the tool tracker main page as well as the Equipment Summary page.

Figure 4.5 shows an example of a cycle tracking summary for tools in a stamping press. The list has been sorted by Percent of Preset to place the items that are over or approaching the preset at the top of the list. The sorting can be filtered by clicking on any of the column headings.

Figure 4.5 - The Tracking Summary Screen Sorted by Percent of Preset

Adding Counters

Each tool can have up to 3 counters. Typically, tools have different presets for different types of maintenance (i.e. spring change, sharpen tool etc.). To add counters to your tool tracking page please do the following:

1. Click into the main menu ☰. Select "Global Settings".

2. Locate "Total Number of Cycle Tracking Counters".

Figure 4.6 – Changing the number of counters on the Tool Tracker Page

3. Select the ✏ icon under Actions column.

4. Change the value to the number of counters you would like on the Tool Tracker Page (see Figure 4.6).

Affiliations, Primary Items, and Secondary Items

ShopFloorConnect tracks uptime, downtime, and production counts by machine. It enables you to run downtime reports by machine and by downtime reason, as well as OEE reports. During configuration, there are several other optional parameters that you can enable for any machine type that will greatly expand the capabilities of ShopFloorConnect. They are described below:

Primary Item

Collecting uptime, downtime, and production counts by machine can yield valuable and eye-opening information about utilization. However, it may not tell the whole story and may not give you enough information to enable you to best focus your improvement efforts.

Consider the following example:

Two identical machines run for a shift with equal amounts of downtime. At the end of the shift, Machine A had produced 48 parts, while Machine B made 96. According to traditional OEE, Machine B ran at twice the efficiency of Machine A. Given only this information, you would probably decide to focus your improvement resources on Machine A. That could be a mistake.

Let's go a little further: Say that the part being produced by Machine A can be made at a rate of 7 parts per hour under ideal circumstances, while the much simpler part being produced by Machine B can be made at a rate of 30 parts per hour. Given this information, we can now calculate that Machine A ran at 86% efficiency during our sample shift while Machine B ran at only 40% efficiency. You can see how one additional piece of information – in this case the part that each machine was making – allows us to get the whole story.

The additional piece of information – the "part" in the example above – is called the Primary Item. By tracking downtime and counts against both the machine and the Primary Item, ShopFloorConnect allows you to evaluate machine performance according to the task that is being performed by the machine at any given time.

When a Primary Item is enabled in the "Machine Type" settings for a machine type, you will gain the ability to enter a separate Ideal Rate (for OEE purposes) and Standard Rate (for quoting purposes or to judge performance relative to "normal") for each Primary Item on each machine of that type.

The Primary Item can vary with different machine types. For example, injection molding machines might use 'mold number' as the Primary Item; allowing you to set an OEE Ideal Rate for each mold number in each machine. For Press Brakes, the Primary Item might be "Part Number", and you can set different throughput expectations for parts that require many bends than for parts that need only one or two. For shears or flatbed lasers, it might make the most sense to use "Material Number" as the Primary Item, which will allow you to report downtime according to the raw material being used in the machine.

In the Downtime report, the Primary Items appear in a pull-down menu called a "filter". Using the filter, you can select one or more Primary Items to include in the report. The resulting reports will show the
downtime only when the machine is running the selected Primary Items. For the OEE reports, ShopFloorConnect considers the Ideal Rate for each Primary Item when it calculates the performance percentage.

To use the Primary Item, ShopFloorConnect must 'know' what the Primary Item is for each machine. The Primary Item can be entered into the ShopFloorConnect Machine Interface (SMI) by the machine operator at run time, or it can be sent to the SMI by the ShopFloorConnect Scheduling Interface.

Figure 4.7 – ShopFloorConnect Tracking Cycles by Tool Number for Stamping Press Machine Type

Tool Tracking

Tracking is an optional feature in ShopFloorConnect that enables you to track the number of cycles on maintainable items that run in a machine but not necessarily with a 1:1 relationship with any one machine. Here is an example of where tracking can be usefully applied:

A ShopFloorConnect user is collecting data from several injection molding machines. The Primary Item for these machines is "Mold Number". The Mold Number is a number that has been assigned to each of the molds that can run in the machines. Each machine runs one Mold at any given time, and there are dozens of different molds available to run, depending on what parts are needed. Every one of the molds can run in one or more of the injection molding machines.

It is important to track the number of cycles on each mold for maintenance purposes, which can be difficult to accomplish because the molds can be moved from machine-to-machine. In other words, Mold Number 76 may run 10,000 cycles in Machine 1 on Monday, 12,000 in Machine 4 on Thursday, and 5,000 more in Machine 5 on Saturday.

If ShopFloorConnect's Tracking feature is enabled for "Mold Number' on the "Injection Molding" machine type, it will create a table under the "Tracking" tab for all the Mold Numbers, allow you to set a preset for each Mold Number, and track the cycles on each mold Number regardless of which machine happens to be running it (See Figure 1 above).

In addition to the molding example above, Tracking is useful for counting the number of hits on a metal stamping die, parts made on a welding fixture, or any other removable maintainable item that runs in a machine.

What happens when you want to track an item that is not the Primary Item? For example, let us say that in the example above, you were using "Part Number" as the Primary Item but also wanted to track cycles on your molds. This is where the Secondary Item is used.

Secondary Items

In ShopFloorConnect, the Secondary Item is another list of items that can be used by each machine type. The Secondary Item should be used when you need to apply the Tracking feature (described above) to an item other than the Primary Item.

Going back to the injection molding example above, let us say that instead of Mold Number, the Primary Item for this machine type is "Part Number". Let us also say that you have several molds that can make each part, and you want to track the number of cycles on each mold. With the Primary Item set to "Part Number", you would enable the Secondary Item for the Injection Molding machine type, set the Secondary Item to "Mold Number", and set the tracking feature to track cycles on the secondary item (Mold Number).

Master Lists and Affiliations

The Primary and Secondary Items for your machines are put into lists called a "Master List". This saves you from re-entering the same items when multiple machine types use the same Primary or Secondary Items. The items from any Master List can be used as the Primary or Secondary Items by any number of machine types. For example, if you have a Master List of Part Numbers, any machine type that uses Part Number as its Primary or Secondary Item can draw from this list.

Along with the Master Lists comes a concept called "affiliation". Master Lists contain all the items that are available to all the machines. Unless all your machines can run all the items in each list, you will need to specify which items from the lists can be applied to each individual machine. This is called "affiliation".

There are two associations that can be made in ShopFloorConnect: Primary Items can be associated to specific machines (individual machines, not types), and Secondary Items can be affiliated to Primary Items.

The Primary-to-Machine association is needed to simplify setting up the Standard and Ideal Rates for each machine. The association settings allow ShopFloorConnect to display only the Primary Items that have been associated with each machine, so that you're not forced to set ratings for a Primary Item that can never be run in a given machine (see Figure 4.8 below).

The Primary-to-Machine association also simplifies the report filters by allowing ShopFloorConnect to only display the Primary Items associated with the selected machine(s) when setting up reports. This minimizes the chance of generating a blank report; for example, setting up a bogus production summary for a group of machines producing a series of parts that cannot be made by the machines.

The Primary-to-Secondary affiliations allow you to specify which Primary Item or Items are associated with each Secondary Item (or Items). Secondary items cannot stand alone. They must be associated with one or more Primary Items.

Current Configuration

When loading jobs through the scheduler the secondary item will be set as the current configuration automatically. The secondary item is affiliated with the primary item that was loaded. If you are loading jobs manually at the device, make sure to set the current configurations in the Tool Tracker. This will make it pull in the secondary item when the primary item is loaded. Otherwise it will only be tracking the primary item and not the secondary item.

Figure 4.8 – The List Page, showing only the affiliated secondary items and the current configuration

Reporting

The following procedure describes how to setup report delivery schedules for individual reports in SFC 6.0 from the Reporting menu selection in the Main menu. Contact ShopFloorConnect technical support for further assistance.

Navigation - Reporting

- Select the Reporting button on the dashboard (Figure 5.1) or Reporting from the main menu ☰.

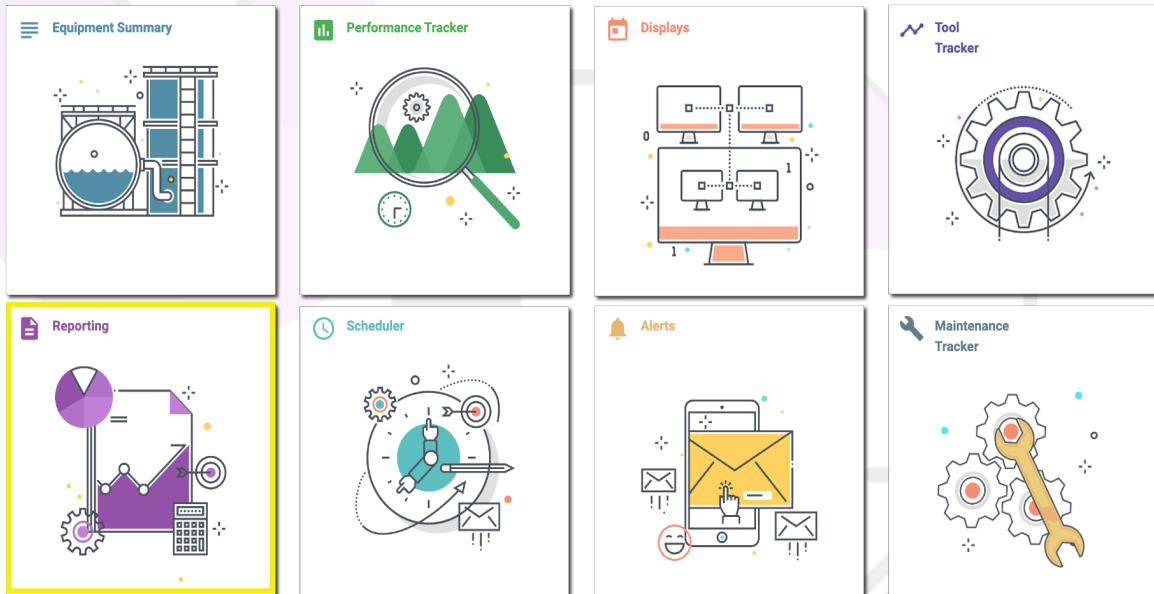- Select "Delivery Configuration" tab, then select "Delivery Schedules".

Figure 5.1 – ShopFloorConnect Dashboard

Configuring a Report Delivery Schedule

Rather than setting up a separate report delivery schedule for each linked report, SFC allows you to create report delivery schedules that can then be used by multiple reports.

1. To create a new schedule, click into the Delivery Configurations tab and use the Delivery Schedule drop-down menu and select "New".

2. Enter the name for the new delivery schedule in the "Enter New Schedule Name" field.

Figure 5.2 – New Delivery Schedule

3. Ensure that the drop-down menu selection next to the schedule name field is set to "Enabled". If you want to suspend the schedule without deleting it, select "Disabled".

4. Select the date and time when you want report delivery to start using the "Delivery Starts" field. The time in this field is important – In the future, the report will be delivered at whatever time of the day you specify in this field.

   • If you enter a start date and time of (Monday) September 21, 2020 at 12:00AM and set the delivery to recur weekly, that report will be delivered every Monday at 12:00 AM.

5. If you want the report to be automatically delivered more frequently than monthly, click on the button "Recurring", and use the "Every x Seconds/Minutes/Hours" field to set the frequency at which the report will be delivered - for reference, there are 168 hours in a week.

6. Click either "**Immediately**" to have the report sent out as soon as you click save and each increment in seconds/minutes/hours after that or click the "**Relative to Start**" to have it sent out only after the selected increment of time based on the "Delivery Starts" specified date and time.

7. You can select days of the week to skip delivery of reports by selecting that day's check box after "Skip Delivery On:".

8. If the report is to be delivered monthly, click on the "Monthly" button, and specify the day of the month on which you want the report delivered.

9. If you want the report to continue to be delivered indefinitely, click the "Never" button next to the "Delivery Ends" label, or you can click the "At the Following Time" button and specify an end time/date for report delivery.

10. When you're finished creating the schedule, click the **Save** button at the bottom of the screen.

Creating Linked Reports

The filter settings in the standard reports allow you to specify the period of time, machines, primary items, operators, and other parameters to be contained in the report. These filter settings can be saved so that you can run the same report in the future. However, if you intend to save report filters for future use or have them delivered, automatically, you need to create a linked report. Think of the standard reports as templates that you can use to run "one-time" ad hoc reports and for data analysis, while the linked reports are tagged for automatic delivery.

Navigation - Accessing the Alerts Function

- Login to SFC with "Report Manager" privileges.
- Select the Reporting button on the dashboard (Figure 5.1) or Reporting from the main menu ☰.
- Select the "Report Manager" link, then select "Launch Report Manager" button.

STEP 1 – Create and Name the Linked Report

1. Log in with domain user credentials (Same credentials that you use to log in when you boot up your computer).
2. Select your desired folder or create a new folder (See Figure 5.3).
    - If creating folder: name folder, click "Create".
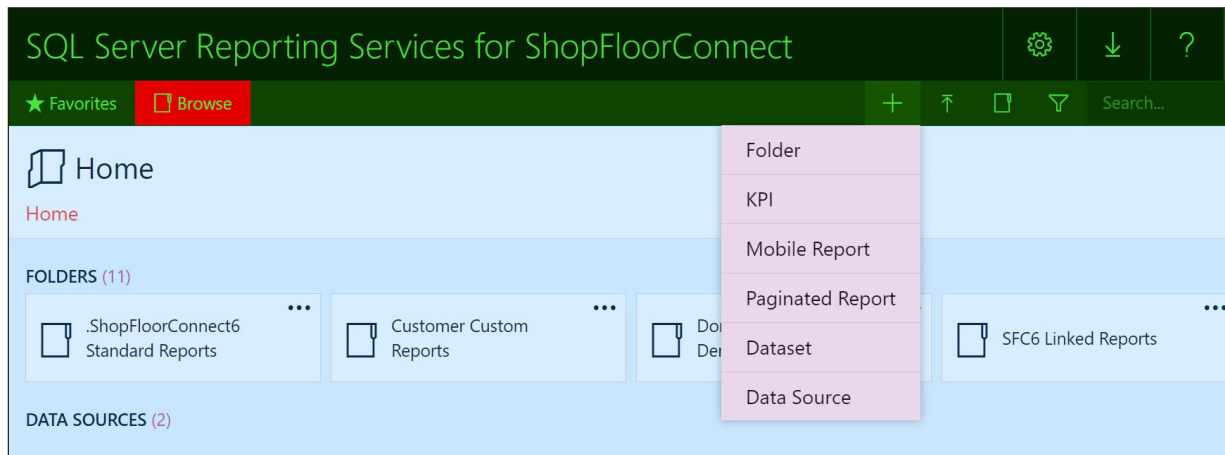
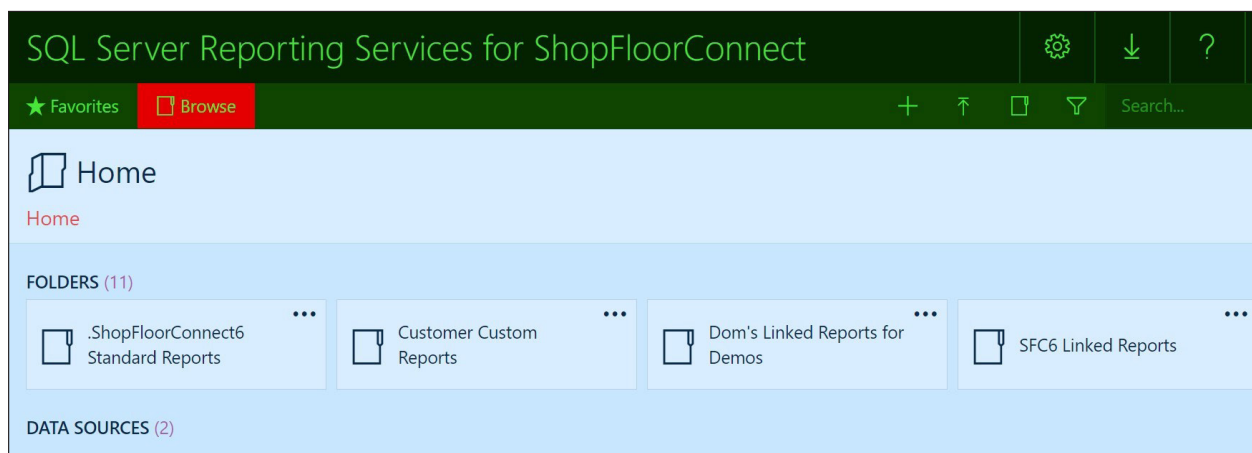Figure 5.3 - New Folder– Create new custom folder for automatic delivery.

Figure 5.4 - Report Manager – Selecting the source for the linked report

3. Once the new folder is created, click into "ShopFloorConnect6 Standard Reports" Folder (See Figure 5.4) to source your reports.

4. Find the report from which you want to create your linked report. In this example, we'll click into "Downtime and Uptime Reporting" and use the Downtime Summary (See Figure 5.5).
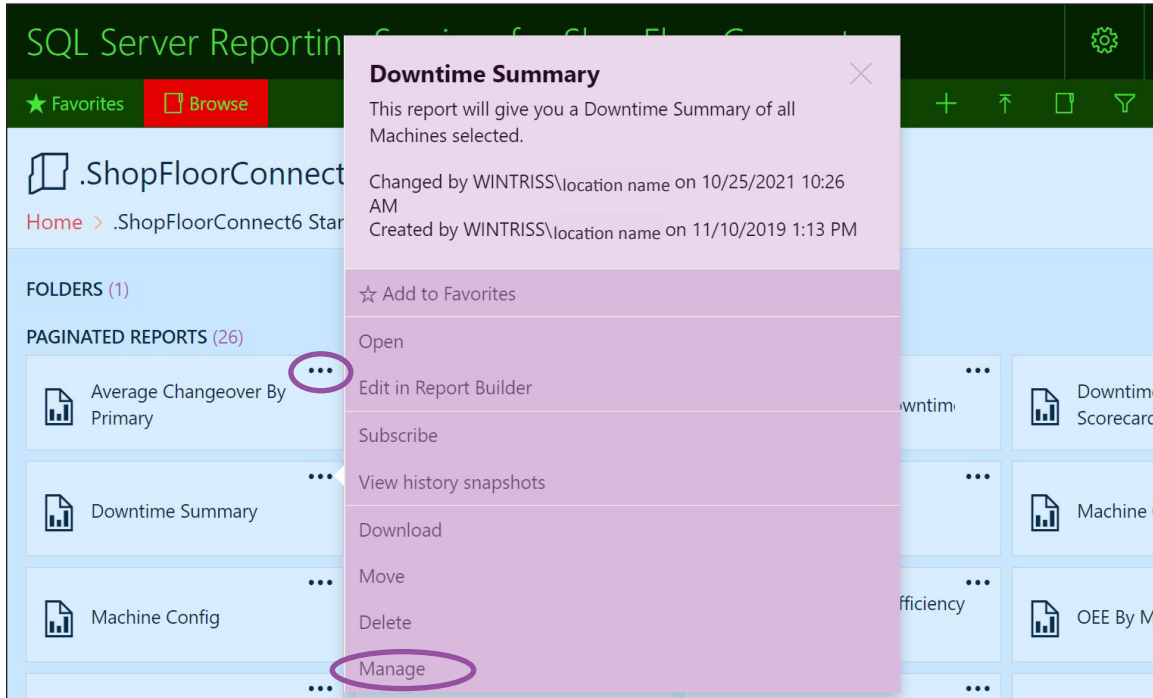

Figure 5.5 - Drop-down menu for the Downtime Summary report

5. Select the 3 dots in the upper right-hand corner of the report and select "Manage" from the side menu (See Figure 5.5).

6. Select "Create Linked Report" (See Figure 5.6).
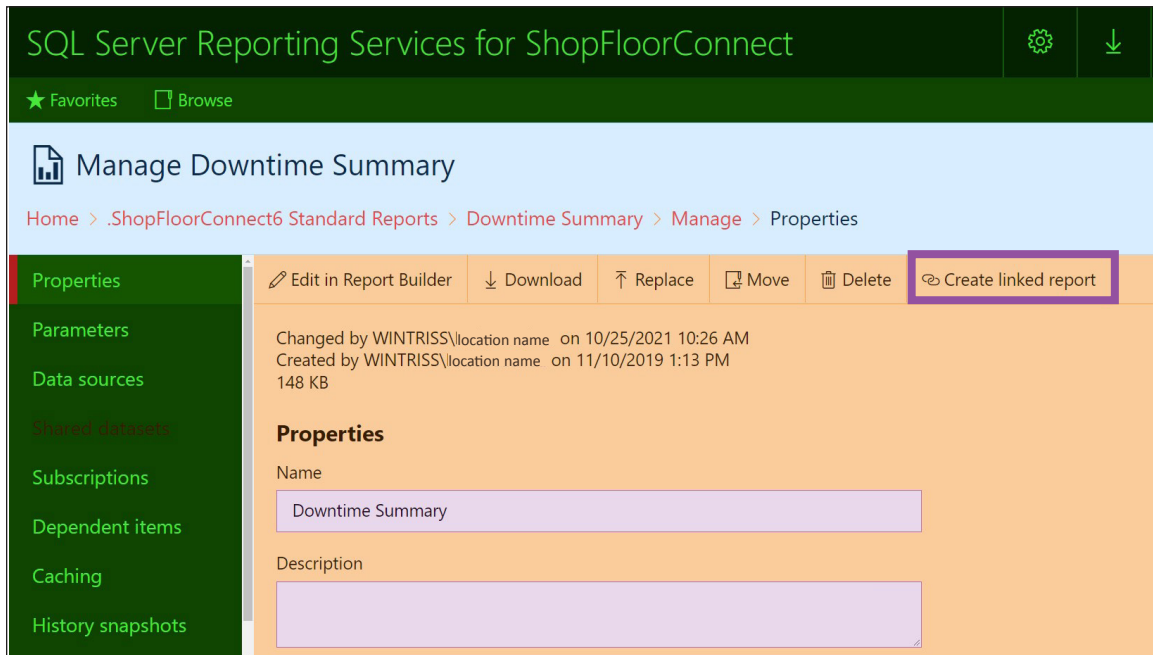
Figure 5.6 – Select "Create Linked Report"

7. Name your new linked report (required). Do **NOT** add a description, if you do then your report won't render. DO NOT CLICK "APPLY"!

8. Click the "Change Location" button ➜ Select "Home" ➜ Select the folder you want to copy the report to (See 3 dots in Figure 5.8 to change folder location).

Figure 5.7 – Naming your Linked Report

9. Once the folder and linked report are created, navigate back to the reports page in ShopFloorConnect.

STEP 2 – Modify the Filter Settings

1. Select the new linked report.

STEP 3 – Run the Report and Save the Filter Settings

1. Fill in the filter fields.

2. To run the report, click the "View Report" button on the right of the filter page. The report will open in a new tab. Verify that the filters settings are correct.

3. Close the report window, then scroll to the bottom of the filter window, and click the "Save Filters" button.

Figure 5.8 - The new linked report in the NAME-OF-FOLDER-IN-IMAGE Reports directory.

Figure 5.9 - Linked reports labeled L

Scheduler

The following document describes the function of the Scheduler page elements and describes how to configure the user-selectable fields on the page. The Scheduler shows a real-time, sortable, overview of all machine job schedules configured within ShopFloorConnect.

Navigation - Scheduler

- Select the Scheduler button on the dashboard (Figure 6.1)
- Select Scheduler from the main menu ☰.
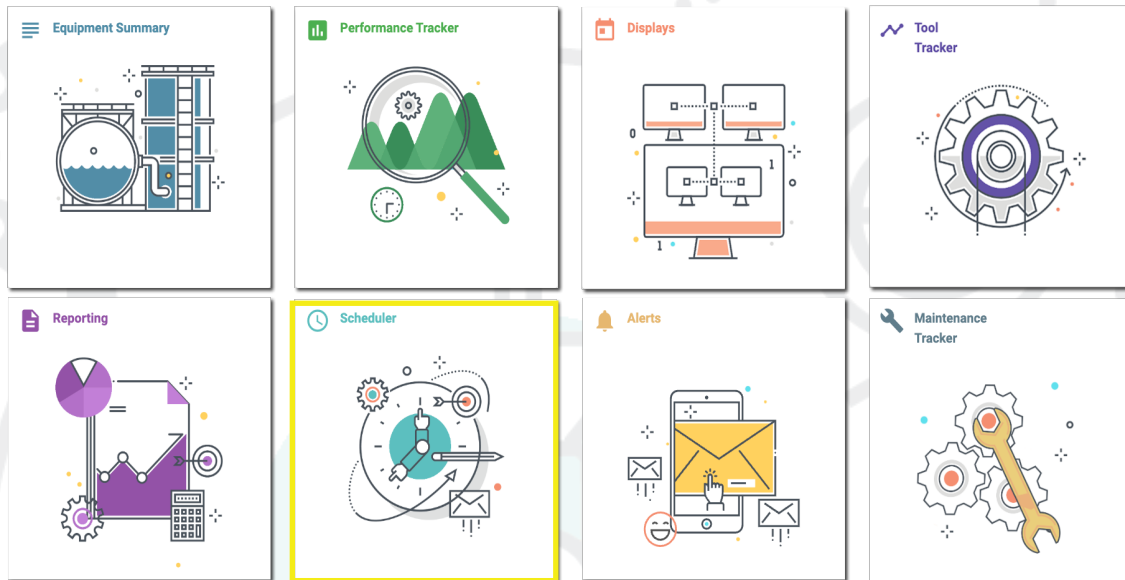
Figure 6.1 – ShopFloorConnect Dashboard

The Scheduler main page can be filtered and/or sorted using the drop-down menus in the top left of the screen. You can filter the machine schedules shown by Site, Area, Machine Type, and Status. They can then be sorted by Area, Type, and Status via the arrows to the right of the "Sort" field.

"Site" Drop-Down Filter

ShopFloorConnect supports multi-plant installations. If you have machines at more than one location and have opted to use this feature, each location will have its own site tab.

"Areas" Drop-Down Filter

"Areas" allows you to group your machines for display by area. This feature allows you to set the Scheduler to show only the machines assigned to the selected area. It is useful for large installations to minimize the scrolling that would be required to view only a certain group of machines.

"Machine Types" Drop-Down Filter

Every machine connected to ShopFloorConnect is assigned to a specific machine type. The "Machine Types" drop-down filter allows you to display only specific machine types in the Scheduler.

The "Machine Types" filter, "Areas" filter, and the "Site" filter determine which machines are displayed on the Scheduler screen. If you load a blank page, that means that no machines match the filters selected.

"Status, Time Range, and Sort" Drop-Down Filters

The "Status" drop-down filter allows you to display only the machines in a specific state. The sortable states are Running, Unplanned Downtime, Planned downtime, Change Over, Idle, and Offline. The data displayed on the Scheduler Page can be one of the following: Current Job, Current Shift, Current Day, or Current Week.

The "Sort" drop-down filter allows you to sort the machines displayed by one of the following: Name, Area, Type, or Status.
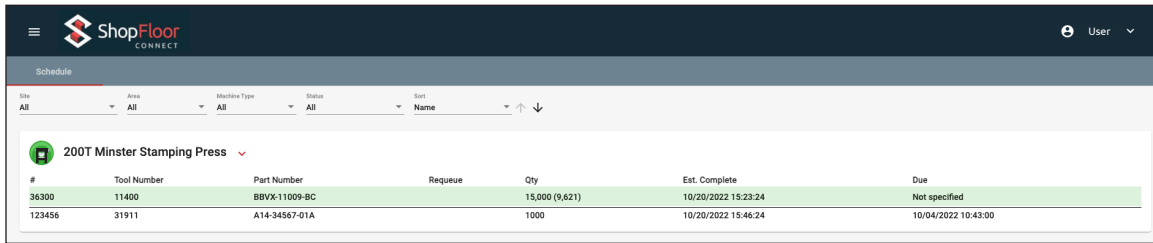
Figure 6.2 – Scheduler Main Page Showing Drop-down Menu Options
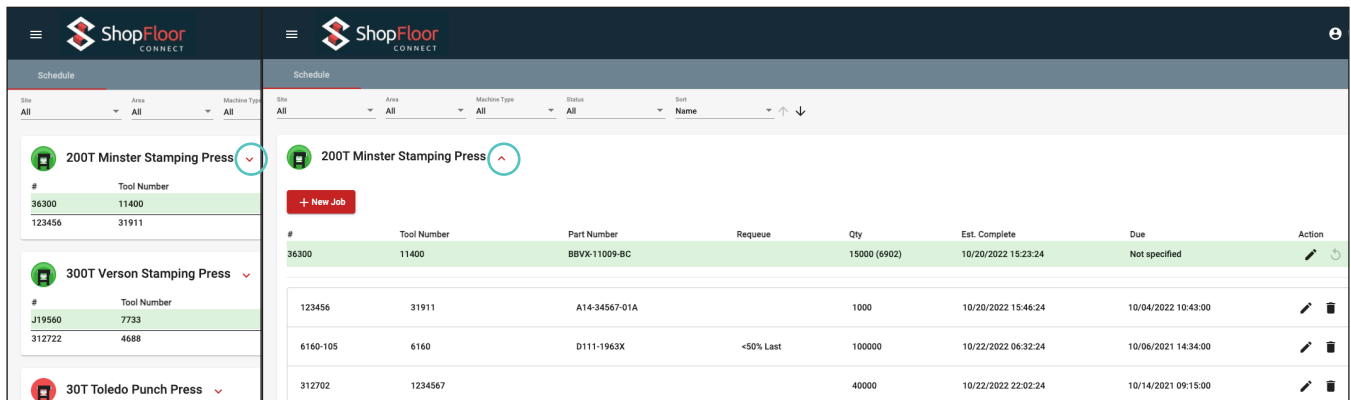
Figure 6.3 – Viewing Existing Jobs in the Machine Job Queue

Clicking the red drop-down arrow (circled in Figure 6.3 above) after the Machine name, will open the list of jobs in the queue for that machine. This extended list allows you to open and edit the jobs in the queue.

- To add a job: click on **+ New Job**
- To edit a job: click on the icon ✏ to make changes and click **Save** to record those changes.
- To delete a job: click on the 🗑 icon and click confirm on the pop-up window to delete the record.

Adding a New Job
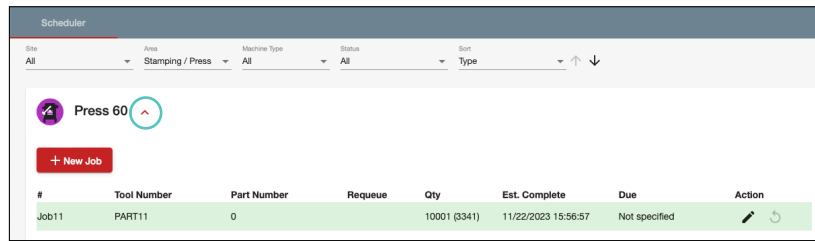
Figure 6.4 - Tool Drop-Down List

1. Click the Tool to Open Job Drop-Down list.

Figure 6.5 - Adding a New Job

2. Click **+ New Job**

3. Enter in a Job # or use the auto assign Job #.

4. Select Schedule by Tool Number or Schedule by Part Number

5. Enter in the Quantity needed to complete the Job.

6. Decide if there is a due date for the job, if needed.

7. Choose whether to requeue the job or not.

    •   If you requeue, choose to requeue the job to the first or last of the current jobs in the schedule for that machine.
    •   Fill out what percentage of the quantity needed to allow it to requeue.
    •   Example: If set to 100% the Job will always requeue unless you reach the total amount of the quantity set. If set to 50% the Job will only requeue if under 50% of the quantity is met. If you surpass the percentage, it will not requeue and complete the Job.

8. Feel free to enter in a comment for the Operator to see when loading the job down at the device

Editing Job

1. Click on the icon ✏ to make changes.

2. Click **Save**

Displays

This section describes how to create and manage read-only Displays that do not require security authentication and can be used throughout a factory floor for several viewing purposes in SFC 6.0 from the Display Main Menu item. You can use the filter line to quickly search the list for the desired preprogrammed Display URL.

This page allows you to view all configured displays. The URL created can be used on Smart displays or any other display with access to the Internet to access the custom display settings. To edit a saved display record, click on the icon ✏ to make changes and click save to record those changes. To delete a saved display record, click on the icon 🗑 and click confirm on the pop-up window to confirm the deletion of the record.

> **NOTE**
>
> If a record is not able to be deleted, or returns after being deleted, it may be caused by existing data dependencies in the system.
>
> Contact ShopFloorConnect technical support for further assistance (1-800-586-8324).

Navigation - Display

- Select the Displays button on the dashboard.
- Select Displays from the main menu ☰.
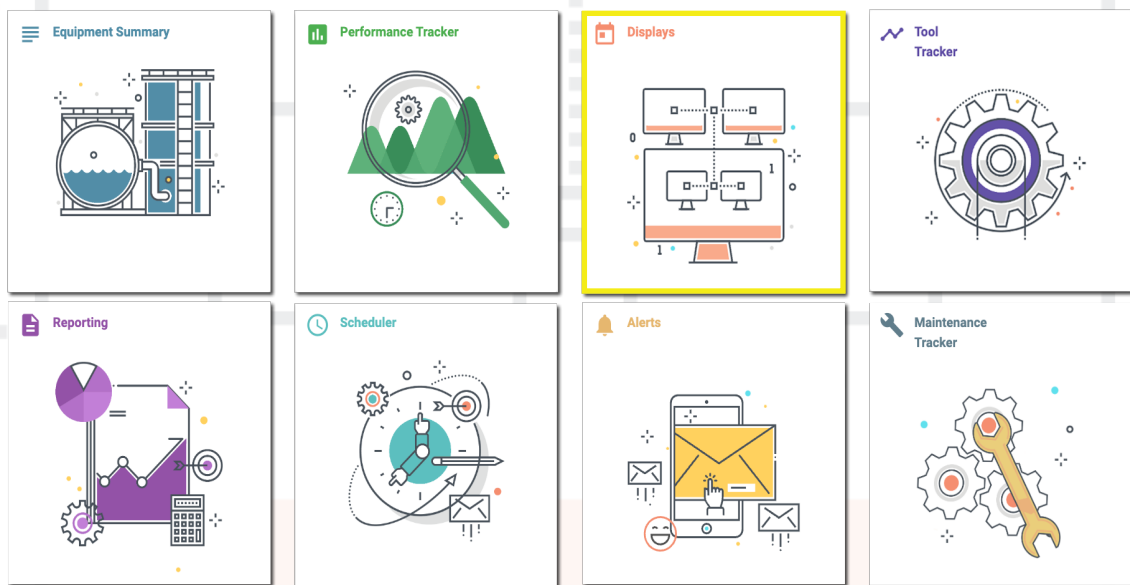
Figure 7.1 – ShopFloorConnect Dashboard

Figure 7.2 - Displays List

Adding a Display to the Display List

1. Click the **+ New Display** in the upper left corner of the screen.

Figure 7.3 - Adding Display to the Display List

2. Select the screen you would like displayed from the page drop-down menu.

3. If Dark Mode is preferred, move the slider to the Dark Mode setting.

4. For any displays other than Equipment Summary, step through each drop-down menu and select each setting for your customized display (Description, Site, Area, Machine type, etc…).

5. Click **Save** to create the display.

Adding an Equipment Summary Display to the Display List

1. Click **+ New Display** in the upper left corner of the screen.

2. Select the Equipment Summary from the drop-down menu.

3. If Dark Mode is preferred, move the slider to the Dark Mode setting.

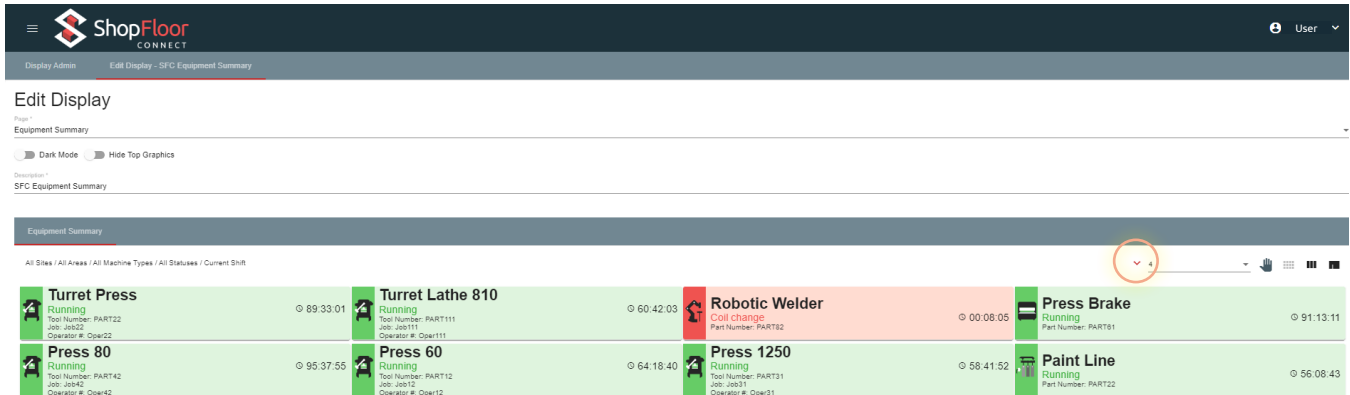4. Enter a description for the Equipment summary display you would like to create.

Figure 7.4 - Equipment Summary Creation Screen

5. Click the red drop-down arrow (circled above) to display the customization selection drop-down menus.

6. Step through each drop-down menu and select each setting for your customized display (Site, Area, Machine type, etc...).

    - For additional help, refer to the Equipment summary help screen.

7. Click **Save** to create the Equipment summary display record.

    > **NOTE**
    >
    > To add a custom display to a kiosk display, click the "Copy Url" button ☐ and paste the "Url" into the browser link that will be displayed on the screen.

Performance Tracker

The following describes the function of the Performance Tracker page elements and describes how to configure the user-selectable metrics displayed on the page. The Performance Tracker shows a real-time, customizable, graphical overview of the performance metrics within ShopFloorConnect.

Navigation - Performance Tracker

- Select the Performance Tracker button on the dashboard.

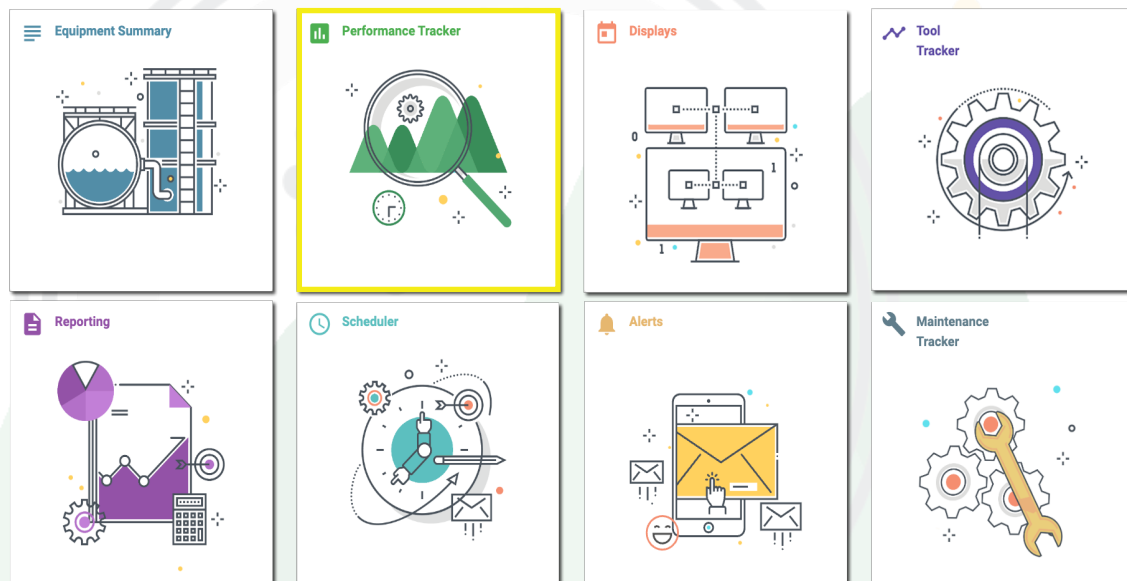- Select Performance Tracker from the main menu ≡.

Figure 8.1 – ShopFloorConnect Home Screen

NOTE

This section assumes you have already pre-configured at least one machine that will be populated on the Performance Tracker main page. If no machines have been configured, then the Performance Tracker screen will not display any machines until they have been set-up in the system.

Click a Machine name on the Performance Tracker to open the Machine Details page for that machine. The main page can be filtered and/or sorted using the drop-down menus in the top left of the screen. You can filter the machine shown by Site, Area, Machine Type, and Status. They can then be sorted by low to high, or high to low percentages via the arrows to the right of each metric.
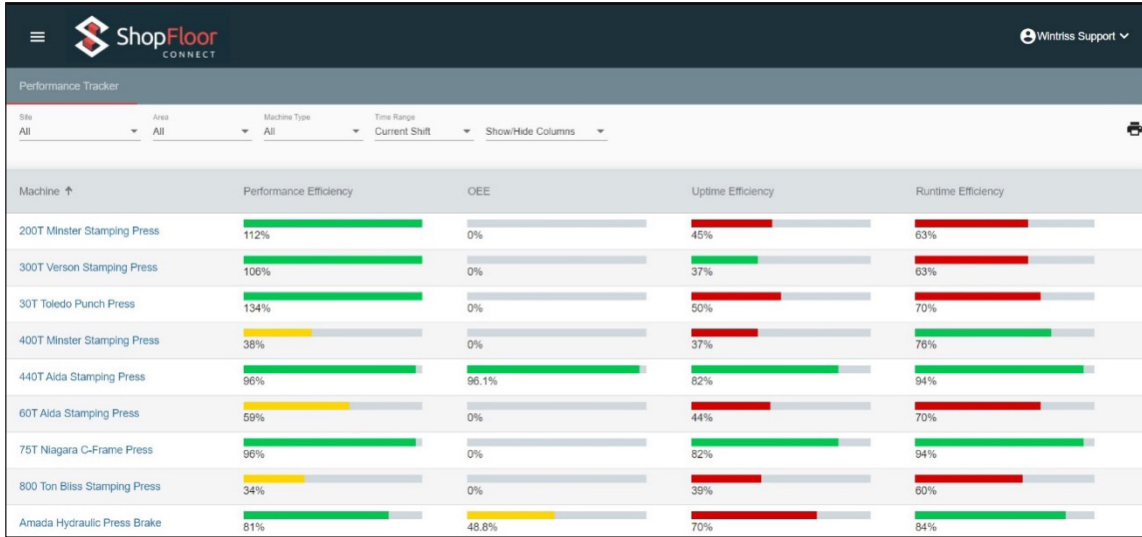
Figure 8.2 – Performance Tracker Main Page Showing Drop-down Menu Options

Bar Graph thresholds for Low performance and Warning performance control when your bar graphs will turn red, yellow, and green . These can be set in the Global Settings under the "Calculations" tab (see Figure 8.3).

"Site" Drop-Down Filter

ShopFloorConnect supports multi-plant installations. If you have machines at more than one location, have opted to use this feature, and have configured additional sites in the system, then each location will have its own site tab.
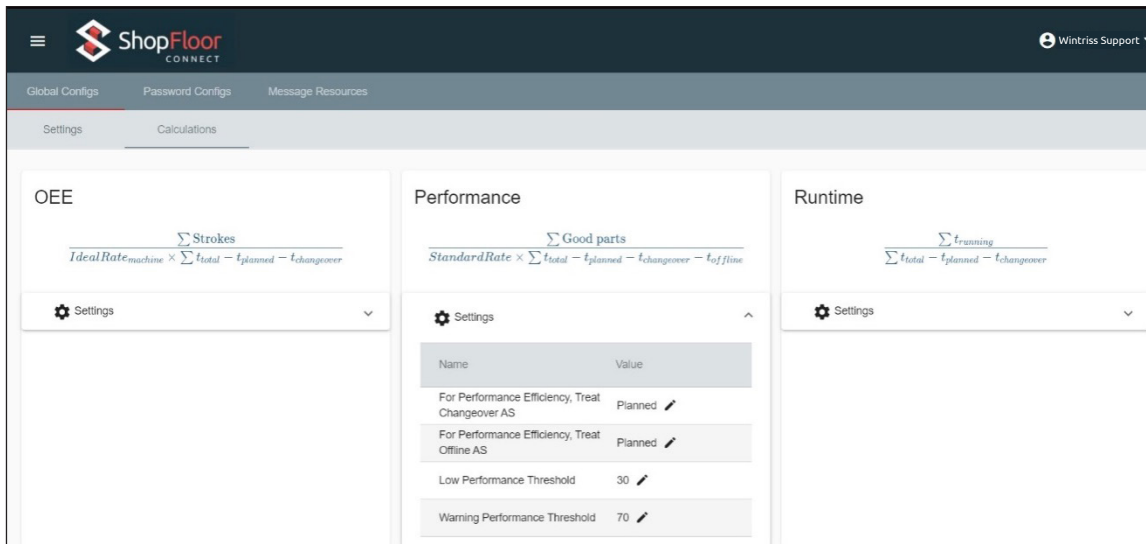

Figure 8.3 – Performance Settings Showing Drop-down Menu Options

"Area" Drop-Down Filter

"Areas" allows you to group your machines for display by area. This feature allows you to set the Performance Tracker to show only the machines assigned to the selected area. It is useful for large installations to minimize the scrolling that would be required to view only a certain group of machines.

"Machine Types" Drop-Down Filter

Every machine connected to ShopFloorConnect is assigned to a specific machine type. The "Machine Types" drop-down filter allows you to display only the metrics for specific machine types on the Performance Tracker display.

> **NOTE**
>
> The "Machine Types" filter, "Areas" filter, and the "Sites" filter determine which machines are displayed on the Performance Tracker screen. If you select a combination that does not exist, the Performance Tracker will display a blank page.

"Time Range, and Show/Hide Columns" Drop-Down Filters

The "Time Range" drop-down filters items to the selected relative range on the Performance Tracker page. The metrics displayed on the Performance Tracker page can be one of the following: Current Job, Current Shift, Current Day, or Current Week.

The "Show/Hide Columns" drop-down filter allows you to select the columns of metrics that will be displayed on the Performance Tracker display; the metric columns available are Machine name, Performance Efficiency, OEE, Uptime Efficiency, Runtime Efficiency, Duration, and Current Operator.

Maintenance Tracker

The following describes the function of the Maintenance Tracker page elements and describes how to configure the selectable filters displayed on the page. The Maintenance Tracker is a Preventative Maintenance tool that can be used to track machine maintenance items by Run Hours, Cycles, and/ or Calendar days on a specific machine and inform customers when to perform regular maintenance and provide Alerts/Reminders when the machines are due for maintenance.

Navigation - Maintenance Tracker

• Select the Maintenance Tracker button on the dashboard.

• Select Maintenance Tracker from the main menu ≡.
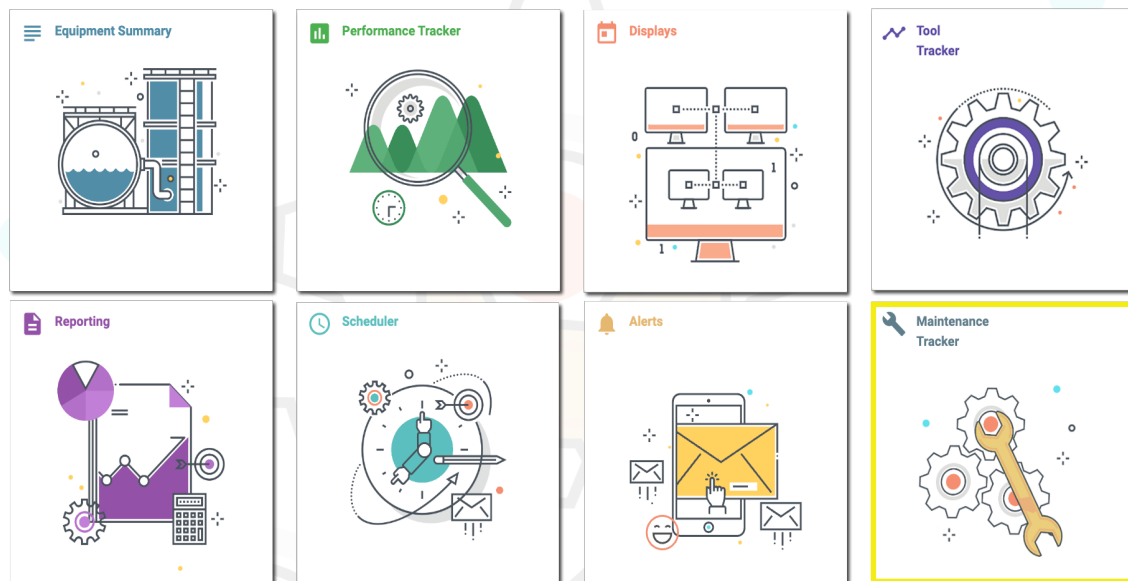
Figure 9.1 – ShopFloorConnect Home Screen

NOTICE

This section assumes you have already pre-configured at least one machine that will be populated on the Maintenance Tracker main page. If no machines have been configured, then the Maintenance Tracker screen will not display any machines until they have been setup in the system.

Figure 9.2 – Maintenance Tracker Main Page Showing Drop-down Menu Options

The main page can be filtered and/or sorted using the drop-down menus in the top left of the screen. You can filter the machine maintenance items by Site, Area, Machine Type, and by specific machine. The maintenance items can be sorted alphabetically by Description and Machine name or by low to high/high to low percentages via the arrows to the right of each column name.

Creating New Maintenance Item

1. Click the **+ New Item** on the Maintenance Tracker Main page to open the new item creation page (Figure 9.3).

2. Create new machine specific maintenance event records.

   - This page has fields to enter for the description, what will be tracked (Run hours, Cycles, Calendar Days), a preset limit, and a current value.

3. Once this information has been added, open the checklist and select the machines to add this maintenance item to.

4. Click **Save** to record the event settings.
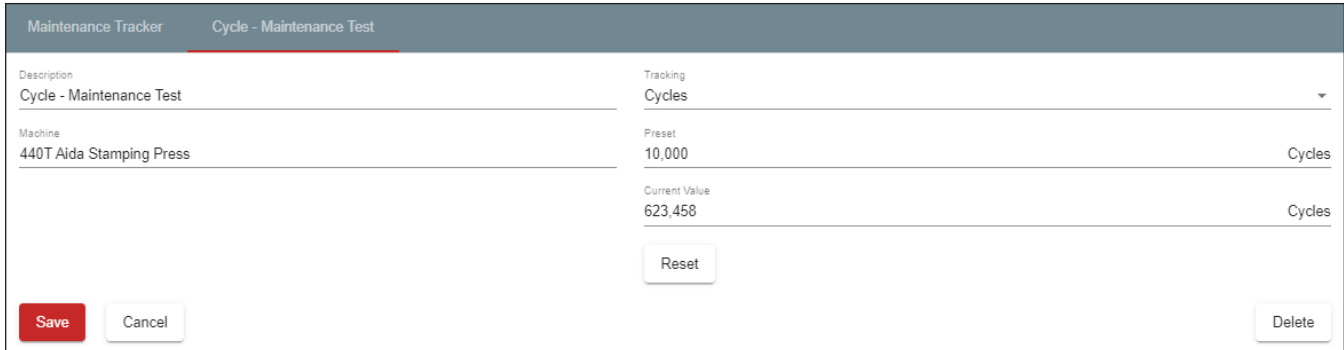

Figure 9.3 – Machine Maintenance New Item Creation Page

Editing a Maintenance Item

1. Click the ✏ icon to open the Maintenance page for that specific Machine maintenance item (see Figure 4). This will allow the user to edit the maintenance item specific information including the Name of the Maintenance person, preset point, and a Comment with instructions to perform for this maintenance item.

2. If you need to reset the current value of the preset, select reset and save.

3. Once you have completed your changes, click the **Save** button to record any changes or new item records.
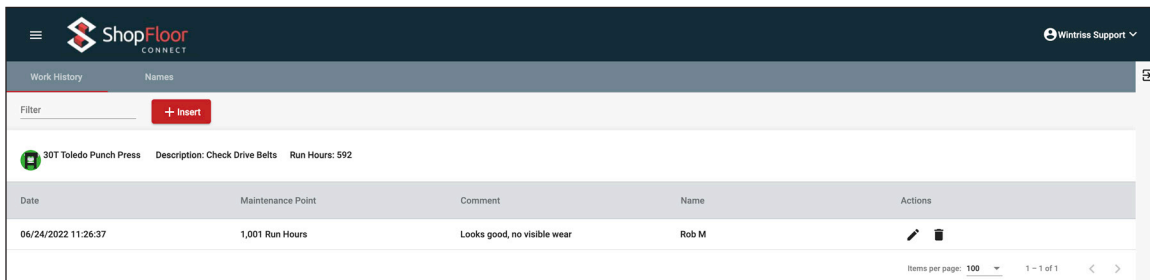
Figure 9.4 – Machine Specific Maintenance Editing Page

Maintenance Work History

Clicking a Description on the Maintenance Tracker page will open the maintenance summary page for that machine showing the description and number of hours/cycles/days the machine is currently showing (Figure 9.5).

Figure 9.5 – Specific Maintenance Item Editing Page

Maintenance Work History

1. When in the Work History for an item, select the ✏ Pencil icon to make any change.

2. From here, the user can edit machine specific maintenance event records. Fill in the fields for the description, Machine name, what will be tracked (Run hours, Cycles, Calendar Days), a preset limit, and a current value.

3. Click **Save** to record the event changes.

Figure 9.6 – Maintenance Event Editing Page

> **NOTE**
>
> The "Site", "Areas", and the "Machine Type" filters determine which machines are displayed on the Maintenance Tracker screen. If you load a blank page, that means that no machines match the filters selected.

"Site" Drop-Down Filter

ShopFloorConnect supports multi-plant installations. If you have machines at more than one location, have opted to use this feature, and have configured additional sites in the system, each location will have its own site tab.

"Area" Drop-Down Filter

"Areas" allows you to group your machines for display by area. This feature allows you to set the Maintenance Tracker to show only the machines assigned to the selected area. It is useful for large installations to minimize the scrolling that would be required to view only a certain group of machines.

"Machine Type" Drop-Down Filter

Every machine connected to ShopFloorConnect is assigned to a specific machine type. The "Machine Types" drop-down filter allows you to display only the maintenance files for specific machine types on the Maintenance Tracker display.

About ShopFloorConnect

ShopFloorConnect is a leading manufacturer of turnkey data collection systems for discrete manufacturing. As a division of Wintriss Controls Group we bring 60 years of experience providing automation control systems in some of the toughest factory environments. You can expect performance and dependability. ShopFloorConnect customers receive attentive service, and access to a toll free hotline to connect you to technical experts for product information and applications assistance.