

... Pizza Line 3

Change Line ☐ Alerts Mode

Manufacturing Orders

Order 2125164

Product 170 FNR SIGN 7" OR

Customer 0070020504 ACME Corporation

CRH-Line-3-Mixer

CRH_Line_3_Mixer1

WARN

CRH-Line-3-Mixer

CRH_Line_3_Mixer2

OK

CRH-Line-3-Mixer

CRH_Line_3_Mixer3

OK

CRH-Line-3-Sheeting-Table

CRH_Line_3_Sheeting_Table

SPEC

CRH-Line-3-Mixer

CRH_Line_3_Mixer4

OK

CRH-Line-3-Mixer

CRH_Line_3_Mixer1

Temperature

CRH_Line_3_Mixer1

CRH-9800-Temp-Dough

Temperature of dough

69.9 °F

Time

CRH_Line_3_Mixer1

CRH-9701-Mix-Time-Total

Calculated total mix time

9.00 min +3

CRH-Line-3-Sheeting-Table

CRH_Line_3_Sheeting_Table

CRH-3000-Thickness-Extruder

Thickness at the extruder

3.67 in +0.6666667

Average

CRH_Line_3_Sheeting_Table

CRH-4003-Weight-Pre-Proof

Weight, pre-proof

48.03 /g

Average

VS CRH-9800-Temp-Dough

Temperature of dough

Facility Crest

Operation CRH-Line-3-Mixer

Workcenter CRH_Line_3_Mixer1

Product 170

FNR SIGN 7" OR

Business Partner 0070020504

ACME Corporation

76.0

2056103

2092140

2102003

2112643

2125164

74.0

72.0

70.0

68.0

66.0

64.0

62.0

73.99

72.0

68.62

68.0

63.25

Maximum Samples 100

☐ View Only the Most Recent Order

☒ Show Startup Samples

Previous

Next

Show

Manufacturing Order	Sample Date/Time	Sample Number	Unit	Sequence	Position	Shift	Tested By
2125164	4/12/2019 3:34 PM	2125164-E4BF406D-OCE	2125164-190412103422			A	lcrh

Sample Location

Value 69.0

Rule Violations

N	Average	+1σ	+2σ	+3σ	Target	Upper Spec Limit	Upper Warning Limit	Cp	Pp
96	68.62	70.41	72.20	73.99	None	72.0	None	0.52	0.37
σ		-1σ	-2σ	-3σ		Lower Spec Limit	Lower Warning Limit	Cpk	Ppk
	1.79	66.83	65.04	63.25		68.0	None	0.16	0.12

30

25

20

15

10

5

0

63.00

64.00

65.00

66.00

67.00

68.00

69.00

70.00

71.00

72.00

73.00

63.25

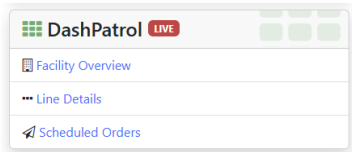
68.62

68.0

72.0

73.99

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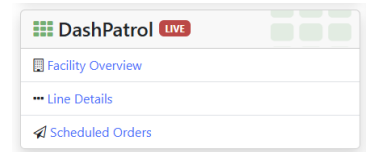
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Introduction

- (i) Monitor the process conditions and product test results via a color-coded dashboard; and
- (ii) Quickly access SPC charts when a problem arises.


The screenshot displays the DashPatrol dashboard with the following components:

- Facility Overview:** A map showing four facilities: Arlington, Brownsville, Brunswick, and Buffalo. Red arrows point from these facilities to the Line Details section.
- Line Details:** A section showing manufacturing orders for Line 1. It includes a table with columns for Order ID, Order Name, Order Type, and Order Status. The table shows several orders, including 190702, 190703, 190704, 190705, 190706, 190707, 190708, 190709, 190710, 190711, 190712, 190713, 190714, 190715, 190716, 190717, 190718, 190719, 190720, 190721, 190722, 190723, 190724, 190725, 190726, 190727, 190728, 190729, 190730, 190731, 190732, 190733, 190734, 190735, 190736, 190737, 190738, 190739, 190740, 190741, 190742, 190743, 190744, 190745, 190746, 190747, 190748, 190749, 190750, 190751, 190752, 190753, 190754, 190755, 190756, 190757, 190758, 190759, 190760, 190761, 190762, 190763, 190764, 190765, 190766, 190767, 190768, 190769, 190770, 190771, 190772, 190773, 190774, 190775, 190776, 190777, 190778, 190779, 190780, 190781, 190782, 190783, 190784, 190785, 190786, 190787, 190788, 190789, 190790, 190791, 190792, 190793, 190794, 190795, 190796, 190797, 190798, 190799, 190800.
- SPC Chart:** A line chart showing the process capability index (Cpk) over time. The x-axis represents time (Date) and the y-axis represents Cpk. The chart shows a trend of Cpk values fluctuating around a target of 1.33.
- Manufacturing Orders:** A table showing manufacturing orders for Line 1. It includes columns for Order ID, Order Name, Order Type, and Order Status. The table shows several orders, including 190702, 190703, 190704, 190705, 190706, 190707, 190708, 190709, 190710, 190711, 190712, 190713, 190714, 190715, 190716, 190717, 190718, 190719, 190720, 190721, 190722, 190723, 190724, 190725, 190726, 190727, 190728, 190729, 190730, 190731, 190732, 190733, 190734, 190735, 190736, 190737, 190738, 190739, 190740, 190741, 190742, 190743, 190744, 190745, 190746, 190747, 190748, 190749, 190750, 190751, 190752, 190753, 190754, 190755, 190756, 190757, 190758, 190759, 190760, 190761, 190762, 190763, 190764, 190765, 190766, 190767, 190768, 190769, 190770, 190771, 190772, 190773, 190774, 190775, 190776, 190777, 190778, 190779, 190780, 190781, 190782, 190783, 190784, 190785, 190786, 190787, 190788, 190789, 190790, 190791, 190792, 190793, 190794, 190795, 190796, 190797, 190798, 190799, 190800.



Access

DashPatrol is accessed from the PatrolSuite™ homepage. To access the PatrolSuite homepage, obtain the URL and login credentials from your IT department.




 PatrolSuite module access is governed by both PatrolSuite and Active Directory security protocols. Therefore, users will see different homepage content and will have different access levels based on assigned roles. For assistance with security or permissions, contact your IT department.

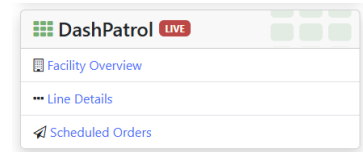
Browser

PatrolSuite is accessed through a web browser. The platform and all its applications, including DashPatrol, are certified for use with Google Chrome, Microsoft Edge, and Safari. To ensure full functionality and the best user experience, MAP strongly recommends using one of these supported browsers.

Symbol Key

Different symbols are used throughout this manual to direct the reader to on-screen information and cell paths. The table below details the meaning of the symbols used in this user guide.

Typeface	Description
	Indicates a “required” data entry field within a UI.
	Indicates a new feature or new information regarding existing functionality.
	Indicates rules regarding access permissions.



Chapter 2: Definitions

NEW General Definitions

Business Partner – Customers and Suppliers.

Business Unit – Grouping of manufacturing facilities according to the market to which their products are sold.

Cost of Quality (CoQ) – The total cost of ensuring and maintaining product quality. It includes all costs involved in preventing defects, appraising product quality, and dealing with failures. CoQ is divided into four categories:

1. **Prevention Costs** (Quality Assurance) – Costs to prevent defects before they happen such as training, process design, quality planning, policy and procedure documentation, preventive maintenance
2. **Appraisal Costs** (Quality Control) – Costs of measuring and monitoring product quality such as product inspection and testing, audits, calibration of instruments, statistical process control (SPC)
3. **Internal Failure Costs** (Nonconforming Product) – Costs from defects **found before** the product reaches the customer such as scrap, rework, downtime, re-inspection
4. **External Failure Costs** (Customer Complaints) – Costs from defects **found after** the product is delivered to the customer such as customer complaints, warranty claims, returns, product recalls, loss of reputation

Cost of Poor Quality (CoPQ) – $\text{CoPQ} = \text{Internal Failure Costs} + \text{External Failure Costs}$. Accordingly, CoPQ is a subset of the CoQ often referred to as “the cost incurred when things go wrong.” These are avoidable costs that result from delivering a substandard product or service.

Currency – A system of money in common use within a particular country or economic region, used as a medium of exchange, store of value, and unit of account in financial transactions.

Defect – Flaws, faults, or deviations in a manufactured item that prevent it from meeting design specifications, quality standards, or customer expectations.

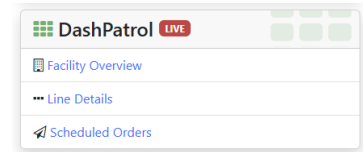
Defect Category – Grouping of defects to help identify, analyze, and correct issues systematically. Common defect categories include:

- Aesthetic or Cosmetic Defects - Visual imperfections that do not affect the product’s functionality but can impact customer perception and marketability.
- Design Defects - Flaws inherent in the product's design that make it unsafe, ineffective, or prone to failure, even if manufactured perfectly.
- Documentation/Labeling Defects - Inaccurate or missing product information, which may lead to misuse, safety issues, or regulatory non-compliance.
- Functional Defects - The product does not perform as intended or fails under specific conditions.
- Manufacturing Defects - Flaws introduced during the production or assembly process, even when the

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design is correct.

- Material Defects - Deficiencies in raw materials or components that affect product performance, safety, or durability.
- Packaging Defects - Issues related to how the product is packaged for shipping, storage, or display.
- Process Defects - Defects caused by errors in the manufacturing process settings, procedures, or conditions.

Department – An organized unit within a company that is responsible for managing a specific set of functions, processes, or activities that contribute to the organization’s overall goals and operations.

Facility – A physical location where raw materials are converted into finished or semi-finished products through various production processes, machinery, labor, and technology.

Market (“Customer Market”) – Groups of consumers that a company targets to sell its products or services, based on shared needs, characteristics, or behaviors. These markets help companies focus their marketing, product development, and sales strategies by understanding who their customers are and what they need.

Operation – Location where a sample originates for which testing is performed.

Order – A unique number (typically originating from the MES or ERP) that identifies a:

- Inbound Receiving order (often a “purchase order”) for raw materials
- Manufacturing order and its related product and customer
- Outbound Shipping order for finished goods being shipped to customers

Product – A tangible output or item that is created through a controlled process involving raw materials, labor, machinery, and other inputs, intended for use, sale, or further processing. Types of products include:

- Finished Goods: Ready for sale to end users (e.g. computers, bicycles, paper).
- Semi-Finished Goods: Used as components in other products (e.g. engine parts, circuit boards).
- Raw Materials: Basic inputs for production (e.g., glue, steel, plastic pellets, lumber).

Product Group – A collection of related products that share common characteristics, functions, markets, manufacturing processes, or branding, and are managed together for strategic, operational, or marketing purposes.

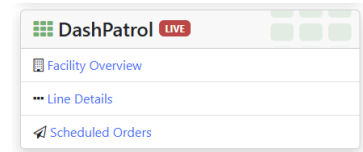
Quality Assurance (QA) – A proactive process that focuses on preventing defects by ensuring that the processes used to manage and create deliverables are effective and followed correctly.

- Focus: Process-oriented
- Goal: Prevent defects before they happen
- When: Throughout the product development and prior to the manufacturing process
- Methods: Process audits, training, standard operating procedures (SOPs), continuous improvement
- Responsibility: Business management, quality management, and process engineers

Quality Control (QC) – A reactive process that focuses on identifying defects in the finished product through inspection and testing.

- Focus: Product-oriented
- Goal: Detect and fix defects after they occur
- When: After production or at specific checkpoints during production
- Methods: Inspections, measurements, product testing, sampling, statistical process control (SPC)
- Responsibility: Laboratory technicians, quality inspectors, or testing personnel

Raw Material – A basic, unprocessed, or minimally processed substance that is used as the starting input in



the production or manufacturing of goods and products.

Sample Location – A physical location on a single sample from which tests are performed for X-bar testing.

Test Location – A physical location within the Facility where tests are completed.

Unit – The smallest measurable or sellable quantity of a product. Units are typically used for production, inventory, pricing, sales, and distribution purposes.

Unit of Measure – A standard quantitative unit used to specify, track, and manage the amount of a product, material, or resource in the manufacturing, inventory, sales, or procurement processes.

Workcenter – A sub-division of an Operation. An Operation can have one or more Workcenters. Often, a workcenter reflects a unique manufacturing machine or asset.

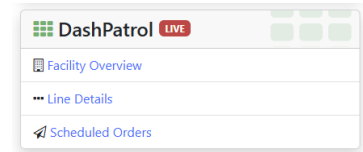
NEW Capability & Performance Definitions

Cp – Process Capability. Numerical indicator of the ability of a process to produce product within specifications (e.g. USL and LSL). Cp answers the question, “Is the process *capable* of making product that meets specification?”

- Use:** Existing process under statistical control. Cp is a predictive analysis used to predict what the process is capable of doing in the near future (short term) assuming the process remains in a state of statistical control.
- Calculation:** Cp is calculated as the ratio of the specification spread (the voice of the customer) divided by the 6-sigma spread of the process (the voice of the process).
- Standard Deviation:** Cp uses sampling to calculate an estimated standard deviation of the sample ($R\bar{Bar}/d2$).
- Centering:** Cp does not take into account whether the process is centered between the specifications.
- Interpretation:** Higher Cp values indicate a process that is more capable.
- Comparison:** Cp values are typically more liberal (larger) than the more conservative (smaller) Pp values.
- Prerequisites:** The Cp index is meaningless if the process is not in control.

Cpk – Process Capability index that takes into account where the process is centered. Numerical indicator of the ability of a process to produce product within specifications. Cpk answers the question, “Is the process likely to make product that meets specification?” Accordingly, this index is sometimes named the “Process Acceptability” index.

- Use:** Existing process under statistical control. Cpk is a predictive analysis used to predict what the process is capable of doing in the near future (short term) assuming the process remains in a state of statistical control.
- Calculation:** The Cpk index uses the Cp index as a starting point, but then applies a penalty if the process is not centered between the specifications.
- Standard Deviation:** Cpk uses sampling to calculate an estimated standard deviation of the sample



($R\bar{Bar}/d2$).

- d. **Centering:** Cpk takes centering into account. Accordingly, Cpk can be used to determine if a process is *acceptable*.
- e. **Interpretation:** Higher Cpk values indicate a process that is more capable. If the Cp value is equal to the Cpk value, then the process is perfectly centered. The Cpk value can be negative, which means that the process average is outside of specifications.
- f. **Comparison:** Cpk values are typically more liberal (larger) than the more conservative (smaller) Ppk values.
- g. **Prerequisites:** The Cpk index is based on the assumption that the data is normally distributed, and is meaningless if the process is not in control.
- h. **One-sided Specs:** If a test method has one-sided specs (i.e. only an upper or only a lower spec), then PatrolSuite will calculate and display Cpk reflective of the Cpu (Cp upper) or Cpl (Cp lower).

Pp – Process Performance. Numerical indicator of how a process performed in the past relative to specifications.

- a. **Use:** New processes or existing processes that are not yet under statistical control. Pp is a historical analysis to determine how the process actually performed. Pp should not be used to predict future process capability.
- b. **Calculation:** Pp is calculated as the ratio of the specification spread (the voice of the customer) divided by the 6-sigma spread of the process (the voice of the process).
- c. **Standard Deviation:** Pp calculates the standard deviation using all the data in the sample.
- d. **Centering:** Pp does not take into account whether the process is centered between the specifications.
- e. **Interpretation:** Higher Pp values indicate a process that performed better.

Ppk - Process Performance Index. Numerical indicator of how a process performed in the past, relative to specifications, that takes into account where the process is centered.

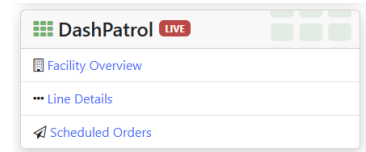
- a. **Use:** New processes or existing processes that are not yet under statistical control. Ppk is a historical analysis to determine how the process actually performed. Ppk should not be used to predict future process capability.
- b. **Calculation:** The Ppk index uses the Pp index as a starting point, but then applies a penalty if the process is not perfectly centered between the specifications.
- c. **Standard Deviation:** Pp calculates the standard deviation using all the data in the sample.
- d. **Centering:** Ppk takes centering into account. Accordingly, Ppk can be used to determine if the process performance was acceptable.
- e. **Interpretation:** Higher Ppk values indicate a process that performed better. If the Pp value is equal to the Ppk value, then the process is perfectly centered. The Ppk value can be negative, which means that the process average is outside of specifications.
- f. **One-sided Specs:** If a test method has one-sided specs (i.e. only an upper or only a lower spec), then PatrolSuite will calculate and display Ppk reflective of the Ppu (Pp upper) or Ppl (Pp lower).

Statistical Control – As noted above, Cpk and Ppk have no meaning if the process is not in statistical

DashPatrol

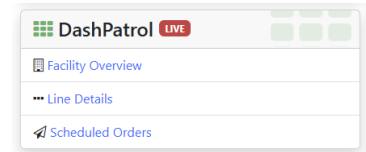
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control. However, one can (and should) use the capability and performance indexes as an indicator of whether the process is in statistical control:

- a. If C_{pk} is approximately equal to P_{pk} , then the process is in control.
- b. If C_{pk} is not approximately equal to P_{pk} , then the process is not in control, and C_{pk} and P_{pk} should not be used to assess past performance and to predict future capability.

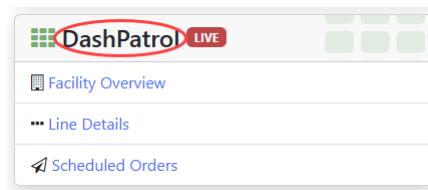


Chapter 3: Navigation

NEW Navigation Page

The navigation page contains links that enable a user to navigate to the Facility Overview and Line Details pages for a desired manufacturing plant.

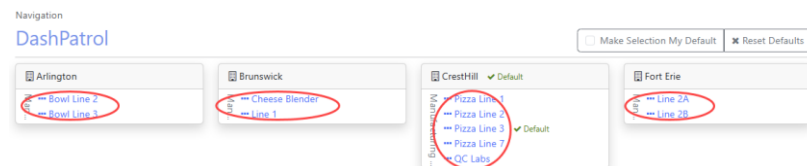
1. To open the DashPatrol navigation page, click on the “DashPatrol” hyperlink in the DashPatrol card on the PatrolSuite homepage.



2. To navigate a Facility Overview page, click the desired facility name.



3. To navigate a Line Details page, click the desired manufacturing line name.



NEW Default Facility & Line

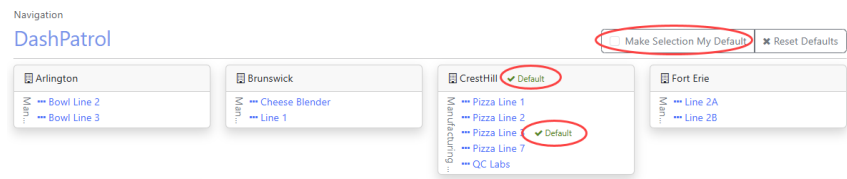
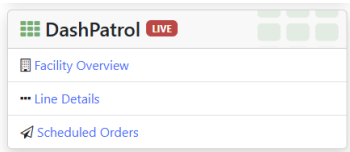
4. To set or change your default Facility and Line settings, check the ‘Make Selection My Default’ checkbox and then click on a Facility or a Line.

Note: The current default facility and line will be identified with a green default icon.

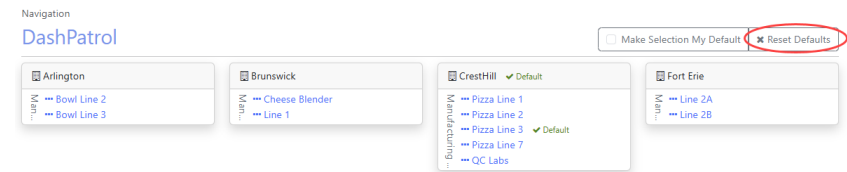
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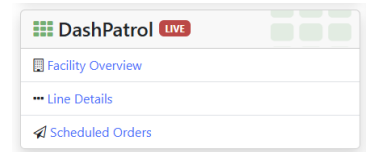
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5. To clear the current defaults, click the 'Reset Defaults' button.





Chapter 4: Alarm Buttons

Alarm Button Colors

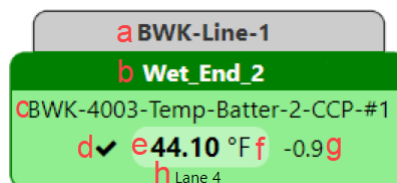
Alarm buttons displayed throughout DashPatrol change color in near real-time to reflect the “quality state” of the *most recent* test result entered into QDMS Console.

Note: DashPatrol displays alarm buttons for all data types except alphanumeric test methods.

- Green:** The most recent test result is within specifications and warning limits and does not violate a pattern rule.
- Red:** The most recent test result exceeds a specification limit.
- Yellow:** The most recent test result is within specifications, but exceeds a warning limit.
- Blue:** The most recent test result is within specifications and warning limits, but violates a pattern rule.

Alarm Button Layout

Alarm buttons contain the following information.



- a. **Operation.** Name of the operation.

Note: The display of the Operation name can be turned on/off via the PatrolSuite/Admin/Configuration setting.

Configuration

▼ DashPatrol Edit

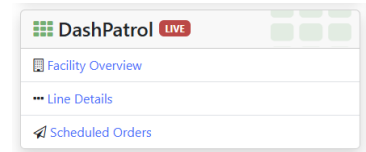
Chart Page Refresh Interval	60
Dashboard Cache Refresh Interval	90
Dashboard Refresh Interval	30
<input checked="" type="checkbox"/> Show Operations?	

- b. **Workcenter.**
c. **Test Method** number.

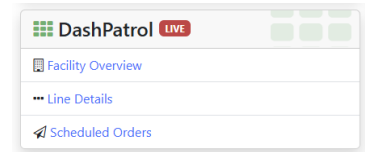
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- d. **Button Color Icon.** To accommodate color-blind users, this icon indicates the button color:
 - Check = Green
 - Circle = Red
 - Triangle = Yellow
 - Flag = Blue
 - e. **Value.** The value of the most recent test result
 - f. **UoM.** The applicable units of measure.
 - g. **Delta from Target.** If a target has been defined in the specifications, this value indicates how far from target the most recent data point is. Note that this value is also directional: “+” means that the result is above the target, and “-” means that the result is below the target.
 - h. **Sample location.** If the test result has a related sample location, it will be displayed here.
6. Click on an alarm button to launch the corresponding SPC chart.
- Note:** Alarm buttons for attribute test methods do not have a corresponding SPC chart.



Chapter 5: Facility Overview

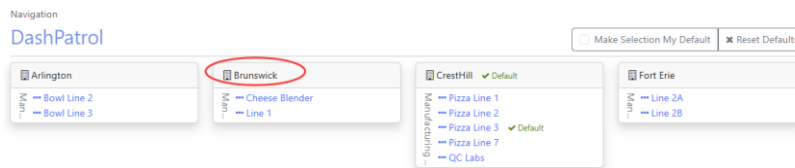
NEW Introduction

Purpose. The purpose of the Facility Overview page is to provide real-time visibility into the *current* manufacturing activities within a plant. This is not a historical view; only the current manufacturing order(s) on each line are displayed.

Intended Audience. The intended audience of the Facility Overview page is engineers and managers responsible for manufacturing and product quality who need to see the status of **only the most important test results**. The intended audience of this page is NOT the shop floor operators.

NEW Navigation

7. To open a Facility Overview page, open the DashPatrol navigation page and click the desired facility name.



The facility overview page will open (see the image below).

Note: The alarm buttons are grouped by Manufacturing Line. Manufacturing lines are defined in PatrolSuite/Ecosystem/Facilities.

Note: The alarm buttons are further grouped by Test Property.

Note: The “Cheese Blender” line is not currently running a manufacturing order.

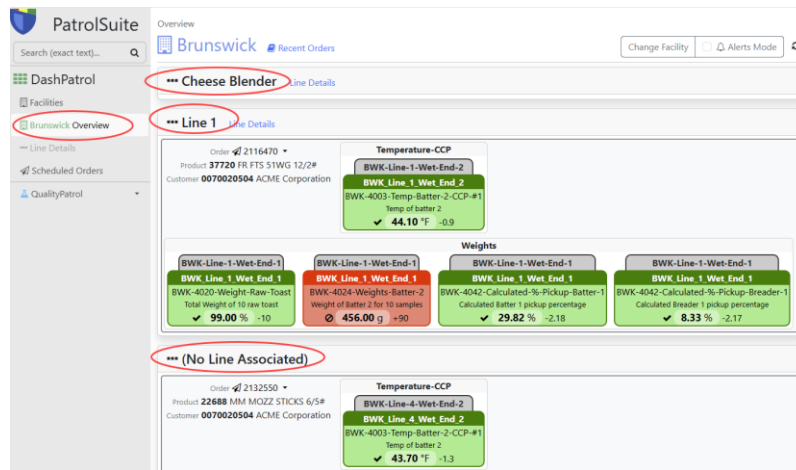
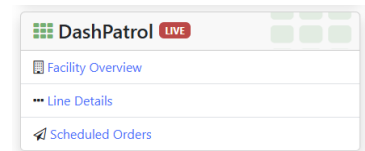
Note: Line 1 is currently running order 2116470, and the state of the most critical to quality tests are displayed, grouped by the test properties “Temperature-CCP” and “Weights.”

Note: Order 2132550 is currently running, but PatrolSuite does not record of the manufacturing line on which it is running.

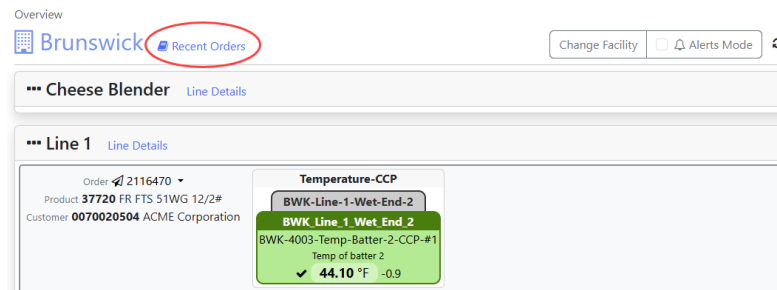
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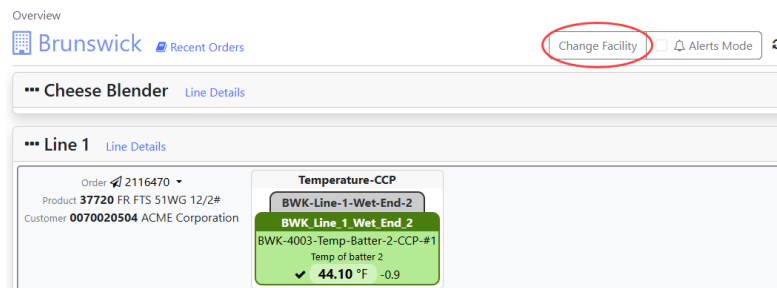
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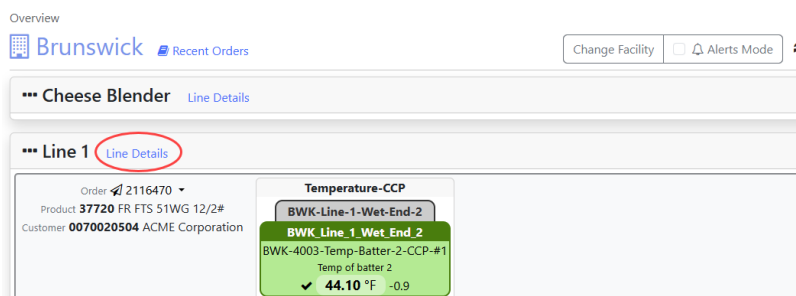
8. To view the recent orders for the facility, click on the “Recent Orders” hyperlink.



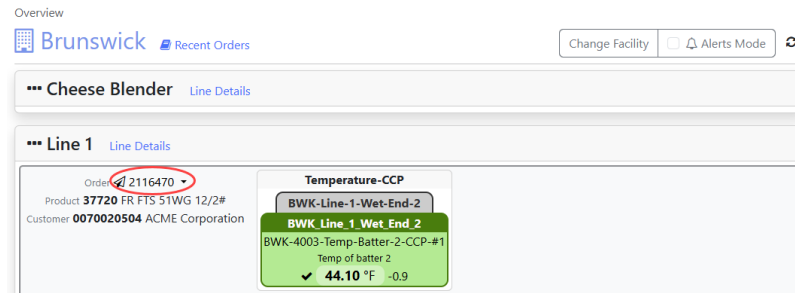
9. To view the Facility Overview page for a different facility, click on the ‘Change Facility’ button and select the desired facility.



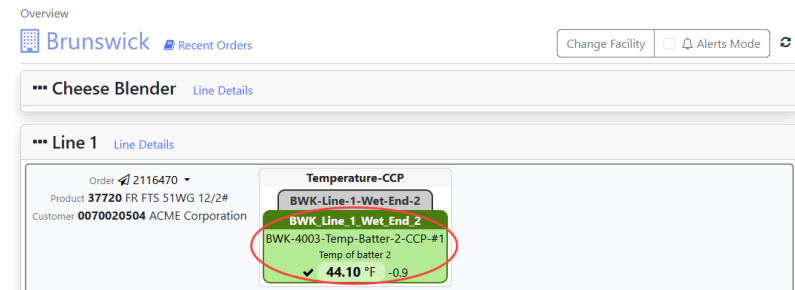
10. To view the DashPatrol Line Details page, click on the desired “Line Details” hyperlink.



- To view detailed information related to the manufacturing order, click the Order dropdown and select the desired topic from the submenu.



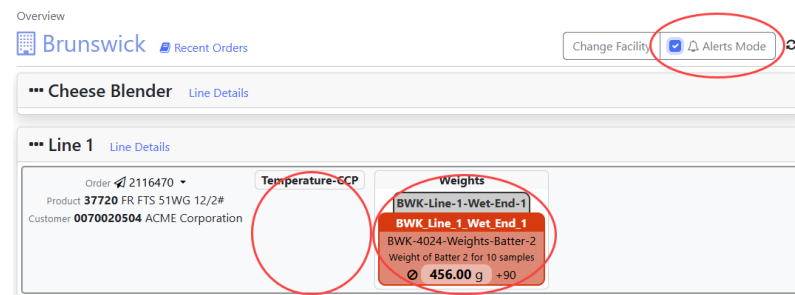
- To see the corresponding SPC chart page, click on an alarm button.



Facility Overview Alerts Mode

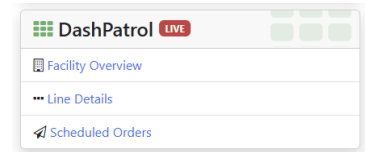
- To turn on Alerts Mode, click the 'Alerts Mode' button.

Note: Alerts Mode displays only those alarm buttons for test methods with a most recent result that exceeds a warning limit, spec limit, or is a pattern rule violation. If no alerts exist, then only the current manufacturing order information will be displayed.

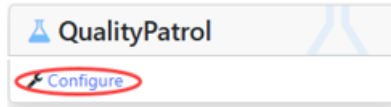


NEW Add/Remove Alarm Buttons

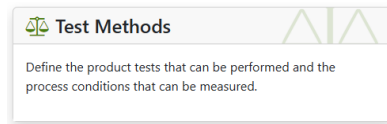
Each alarm button reflects a test method in the product's quality plan. Managing which alarm buttons appear in the Facility Overview page is done in QualityPatrol/Configure/Test Methods. See the "QualityPatrol – Configure" user guide for detailed information.



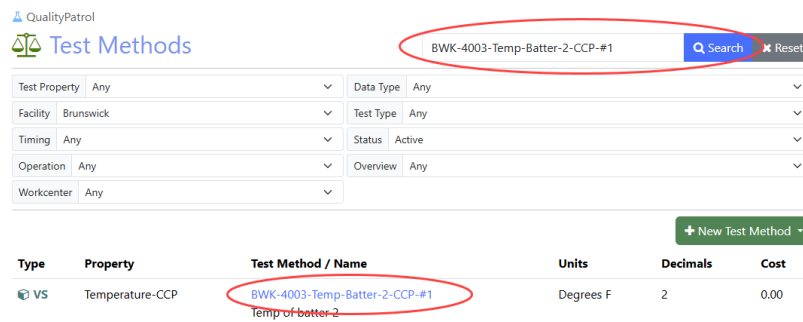
14. To add or remove alarm buttons from the Facility Overview page, click on Configure in the QualityPatrol card on the PatrolSuite homepage.



- a. Click on the Test Methods card.



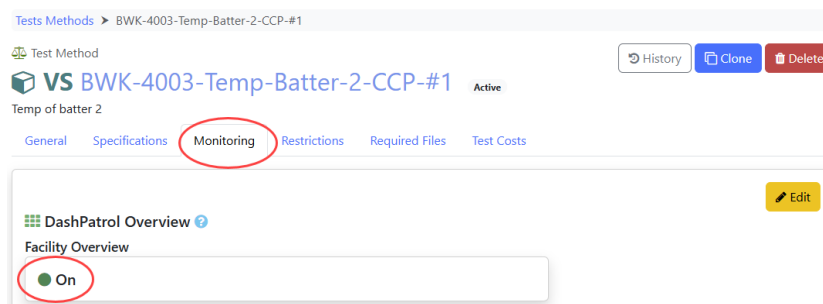
- b. Use the filters to find the desired test method and click on the test method number.



- c. Click on the Monitoring tab.

Note: The Facility Overview status of the test method is displayed. “On” means the test method will appear on the Facility Overview page if two conditions are met:

- The test method is contained in the quality plan for the product being manufactured.
- The test method is also selected for “Line Details” in the applicable quality plan. See the “QualityPatrol – Configure” user guide for detailed information about managing quality plan Line Details settings.

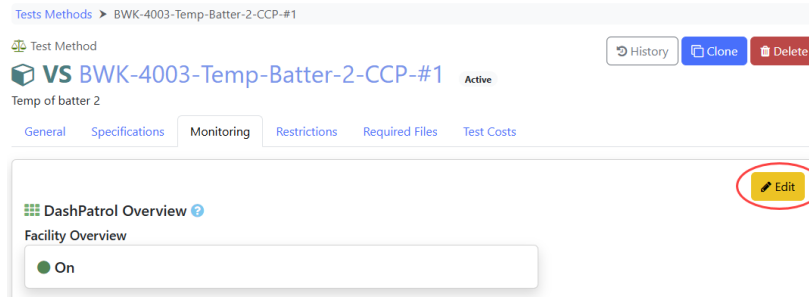
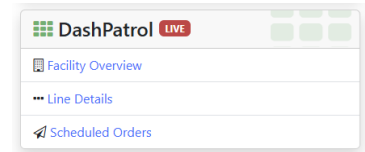


- d. Click the ‘Edit’ button.

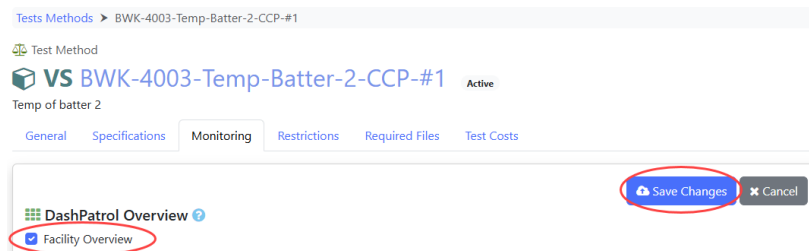
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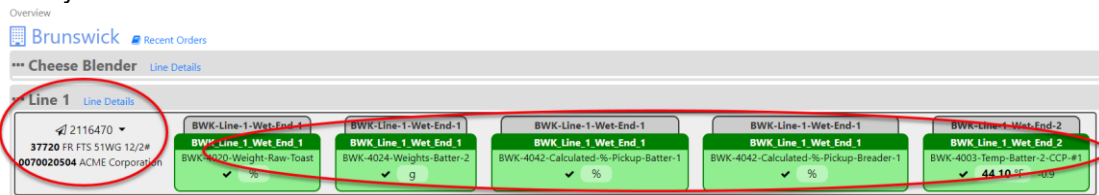
- e. Check (or uncheck) the Facility Overview checkbox and click the 'Save Changes' button.



- f. Open the desired quality plans and mark the test method for inclusion in the DashPatrol "Line Details" page. See the "QualityPatrol – Configure" user guide for detailed information about managing quality plan Line Details settings.

NEW Correct Configuration

If a manufacturing line is defined at the applicable facility, and a manufacturing order is currently being processed on that line, and overview test methods have been defined and are consumed in the applicable test plan, then then the line will appear with the applicable order information and the overview alarm buttons. The colors of these buttons will update in near real time as new test results are entered into QDMS/QualityPatrol.



NEW No Manufacturing Order

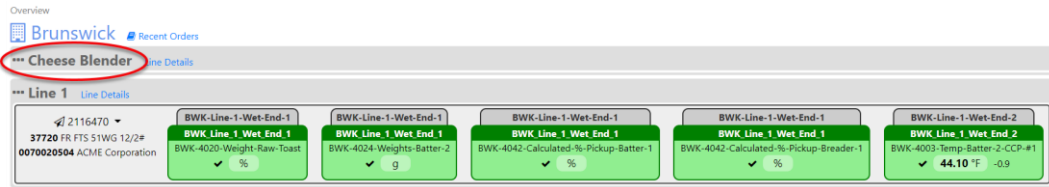
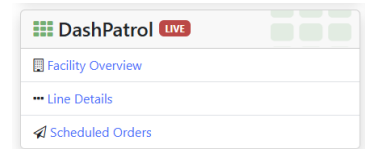
If a manufacturing line is defined at the applicable facility, but no manufacturing order information appears (see 'Cheese Blender' below), this means that:

- No QDMS/PatrolSuite samples have been created for the most recent manufacturing order in the past 30 days; or
- No workcenters have been associated with the manufacturing line.

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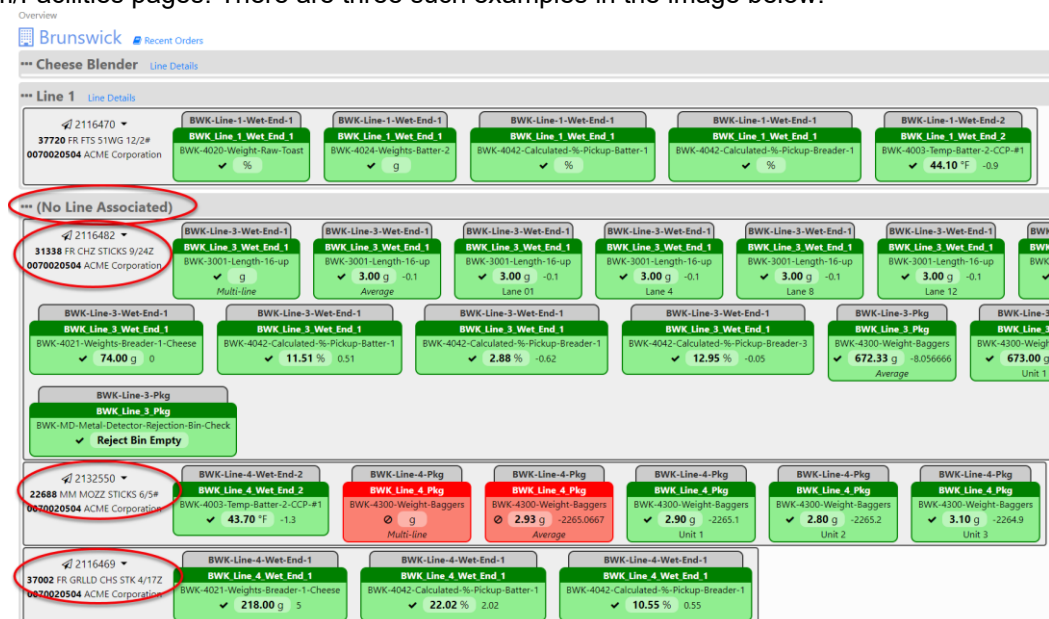
NEW No Alarm Buttons

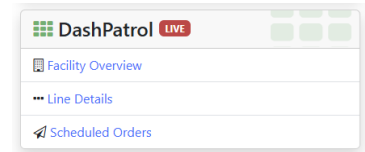
If a manufacturing line is defined at the applicable facility, and a manufacturing order is currently being processed, but the applicable test plan does not contain any overview test methods, then the manufacturing order information will appear, but no alarm buttons will be associated with it.



NEW No Manufacturing Line

If manufacturing order is currently being processed, but there is no manufacturing line defined in PatrolSuite, then such orders will appear under “No Line Associated.” Manufacturing lines are defined on the Ecosystem/Facilities pages. There are three such examples in the image below.





Chapter 6: Line Details

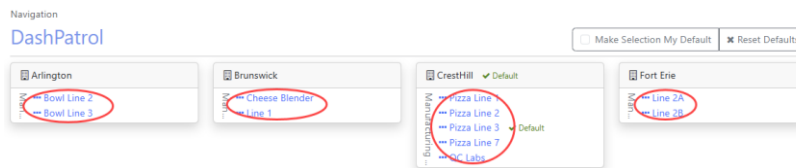
NEW Introduction

Purpose. The purpose of the Line Details page is to enable shop-floor operators to monitor the status of a broader set of Critical to Quality (CTQ) test results for the purpose of maintaining process control and ensuring product quality. Line Details test methods are defined in the applicable product quality plan. The Line Details page is not a historical view; only the current manufacturing order(s) on each line are displayed.

Intended Audience. The intended audience of the Line Details page is shop-floor operators who need to monitor the status of the manufacturing process and to make decisions regarding process adjustments.

NEW Navigation

15. To open a Line Details page, open the DashPatrol navigation page and click the desired manufacturing line name.

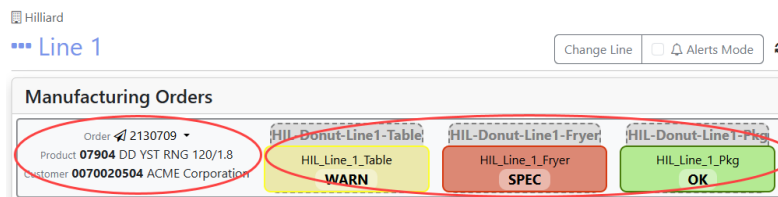


The line overview page will open (see the image below). This page is organized into two sections:

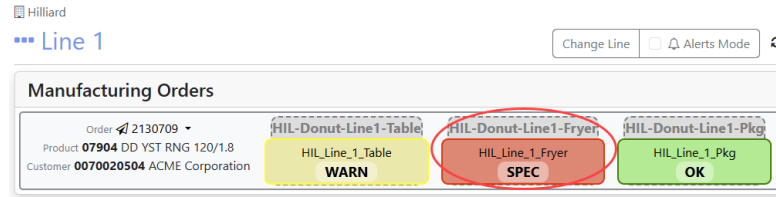
- i) The information for the manufacturing order currently running on the line.
- ii) The status button for each operation/workcenter on the line.

Note: The operation/workcenter buttons are displayed in the sequential order (left to right) as defined for the manufacturing line.

Note: The button color reflects the worst quality state of any CTQ alarm buttons for that operation/workcenter. For example, in the image above, the operation "Wet End 1" is red because it has one or more test methods with an out of specification result.



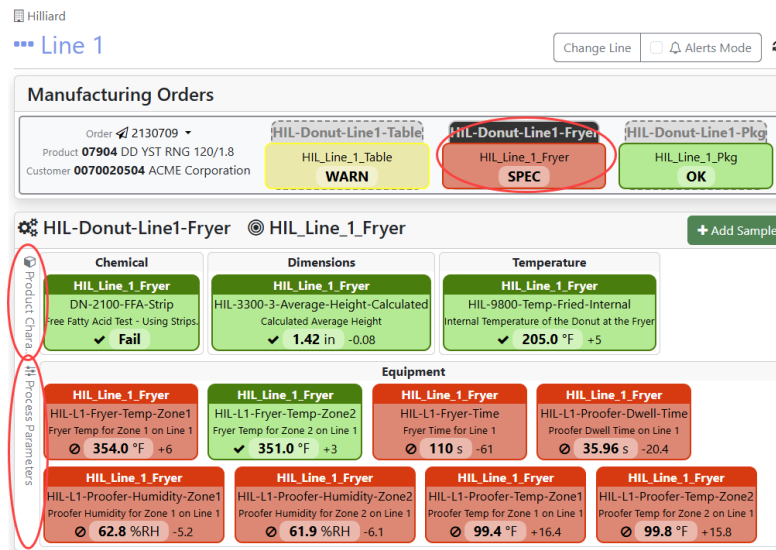
16. To view the status buttons for the CTQ test methods at an operation/workcenter (the “Line Details”), click on the desired operation/workcenter status button.



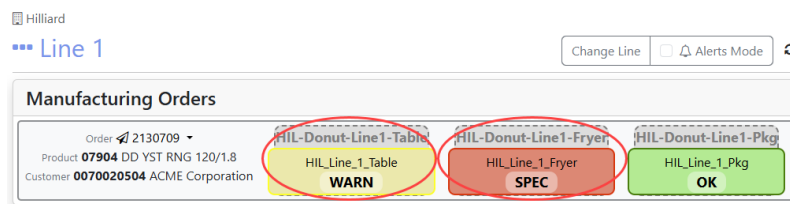
The Line Details for the “Fryer” operation/workcenter will be displayed.

Note: The selected operation/workcenter will change from a dashed outline to a solid outline.

Note: The line details test methods are organized into Product Characteristics and Process Parameters.



17. To view the status buttons for an additional operation/workcenter, click on the desired operation/workcenter status button.



Note: The Line Details for the “Table” and the “Fryer” operations/workcenters will be displayed.

Use Case: If manufacturing Line 1 were run by two operators (one controlling the Table and Fryer operations, and one controlling the Packaging operation), then one operator would open the Table and Fryer details in his/her browser, and the other operator would open the Packaging details in his/her browser.

Hilliard

Line 1

Change Line

Alerts Mode

Manufacturing Orders

Order 2130709
Product 07904 DD YST RING 120/1.8
Customer 0070020504 ACME Corporation

HIL-Donut-Line1-Table
HIL_Line_1_Table
WARN

HIL-Donut-Line1-Fryer
HIL_Line_1_Fryer
SPEC

HIL-Donut-Line1-Pkg
HIL_Line_1_Pkg
OK

HIL-Donut-Line1-Table

HIL_Line_1_Table

Add Sample

Temperature

HIL_Line_1_Table
HIL-9800-L1-Temp-Dough
Dough Temperature for Line 1 immediately after the mixer
80.0 °F -2

Weights

HIL_Line_1_Table
HIL-4000-5/1/5-Cut-Weight
Weight of 5 donuts measured individually totaling 5 tests at the Table.
51.0 g +4
Average

HIL_Line_1_Table
HIL-4000-5/1/5-Cut-Weight
Weight of 5 donuts measured individually totaling 5 tests at the Table.
0.0 g
Range

Equipment

HIL_Line_1_Table
HIL-L1-Yeast-Slurry-Temp
Yeast Slurry Temp on Line 1
40 °F

HIL-Donut-Line1-Fryer

HIL_Line_1_Fryer

Add Sample

Chemical

HIL_Line_1_Fryer
DN-2100-FFA-Strip
Free Fatty Acid Test - Using Strips.
Fail

Dimensions

HIL_Line_1_Fryer
HIL-3300-3-Average-Height-Calculated
Calculated Average Height
1.42 in -0.08

Temperature

HIL_Line_1_Fryer
HIL-9800-Temp-Fried-Internal
Internal Temperature of the Donut at the Fryer
205.0 °F +5

Equipment

HIL_Line_1_Fryer
HIL-L1-Fryer-Temp-Zone1
Fryer Temp for Zone 1 on Line 1
354.0 °F +6

HIL_Line_1_Fryer
HIL-L1-Fryer-Temp-Zone2
Fryer Temp for Zone 2 on Line 1
351.0 °F +3

HIL_Line_1_Fryer
HIL-L1-Fryer-Time
Fryer Time for Line 1
110 s -61

HIL_Line_1_Fryer
HIL-L1-Proofer-Dwell-Time
Proofer Dwell Time on Line 1
35.96 s -20.4

Line Details Alerts Mode

18. To turn on Alerts Mode, click the 'Alerts Mode' button.

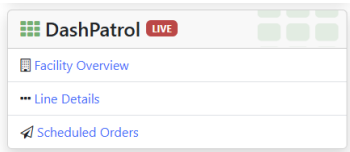
Note: Alerts Mode displays only those alarm buttons for test methods with a most recent result that exceeds a warning limit, spec limit, or is a pattern rule violation. If no alerts exist, then only the Test Properties will be displayed.

Line 1
Change Line Alerts Mode
Manufacturing Orders
HIL-Donut-Line1-Table HIL-Donut-Line1-Fryer HIL-Donut-Line1-Pkg
HIL_Line_1_Table HIL_Line_1_Fryer HIL_Line_1_Pkg
WARN SPEC OK
HIL-Donut-Line1-Table HIL_Line_1_Table
Weights
HIL_Line_1_Table
HIL-4000-5/1/5-Cut-Weight
Weight of 5 donuts measured individually totaling 5 tests at the Table.
51.0 g +4
Average
HIL-Donut-Line1-Fryer HIL_Line_1_Fryer
Add Sample
Chemical Dimensions Temperature
Equipment
HIL_Line_1_Fryer HIL_Line_1_Fryer HIL_Line_1_Fryer HIL_Line_1_Fryer
HIL-L1-Fryer-Temp-Zone1 Fryer Temp for Zone 1 on Line 1 354.0 °F +6
HIL-L1-Fryer-Time Fryer Time for Line 1 110 s -61
HIL-L1-Proofers-Dwell-Time Proofer Dwell Time on Line 1 35.96 s -20.4
HIL-L1-Proofers-Humidity-Zone1 Proofer Humidity for Zone 1 on Line 1 62.8 %RH -5.2
HIL_Line_1_Fryer HIL_Line_1_Fryer HIL_Line_1_Fryer
HIL-L1-Proofers-Humidity-Zone2 Proofer Humidity for Zone 2 on Line 1 61.9 %RH -6.1
HIL-L1-Proofers-Temp-Zone1 Proofer Temp for Zone 1 on Line 1 99.4 °F +16.4
HIL-L1-Proofers-Temp-Zone2 Proofer Temp for Zone 2 on Line 1 99.8 °F +15.8
HIL-Donut-Line1-Pkg HIL_Line_1_Pkg
Add Sample
Counts Defectives Dimensions Temperature Weights
Metal Detector

NEW Add Sample

19. To add a QualityPatrol sample, click on the desired 'Add Sample' button.

Line 1
Change Line Alerts Mode
Manufacturing Orders
HIL-Donut-Line1-Table HIL-Donut-Line1-Fryer HIL-Donut-Line1-Pkg
HIL_Line_1_Table HIL_Line_1_Fryer HIL_Line_1_Pkg
WARN SPEC OK
HIL-Donut-Line1-Table HIL_Line_1_Table
Add Sample
Temperature
HIL_Line_1_Table
HIL-9800-L1-Temp-Dough
Dough Temperature for Line 1 immediately after the mixer
80.0 °F -2

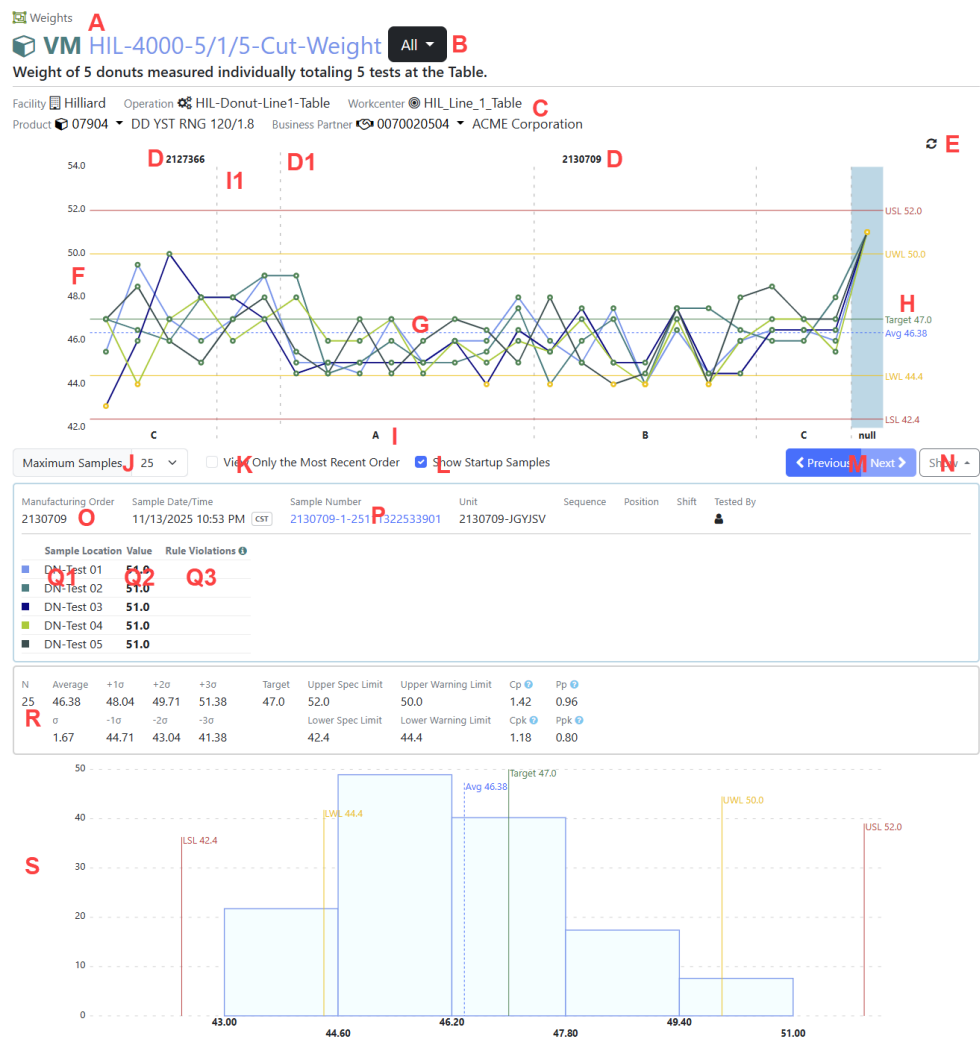


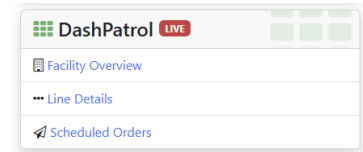
Chapter 7: SPC Chart

NEW Overview

20. To view a SPC chart, click on a desired Manufacturing Line and then click on a desired alarm button. Like the alarm buttons, the SPC chart will update in near real-time to reflect the most recent test result recorded in QualityPatrol. The SPC chart page contains the following information and functions.

Note: When a user changes the display settings on the SPC chart page, those settings are saved as a cookie and will persist as the user opens other SCP charts.





- A. **Test property and method** information.
- B. **NEW Multi-line chart selector.** If the test method is multi-input (x-bar), then this selector will appear. Click the dropdown to select the desired sample location from the submenu.
- C. **Manufacturing Order Information.** Facility, operation, workcenter, product, and business partner.
- D. **Manufacturing Orders.** Displays the manufacturing order number for the data points below it.
 - D1. **Manufacturing Order Vertical Divider.** Separates the manufacturing orders. Note how this line is taller than the vertical divider line for shifts.
- E. **Refresh Indicator.** This icon spins when the page is querying the database to update its contents with the latest available information.
- F. **Y-Axis Scale.** Reflects the scale of the test result values.
- G. **Sample Results.** Each data point reflects a test result recorded in QualityPatrol. The color of the data point reflects the quality state *at that moment in time*. Accordingly, keep in mind that a data point might be shown as a pattern rule violation (blue), but the 2 and 3 sigma limits can change three points later making the pattern rule data point appear as if it should not have been a pattern rule violation. Click on any datapoint to see detailed information about it in the sample information frame located below the control chart. Note: To un-select a datapoint, click on the same datapoint a second time.
- H. **Y-Axis Labels.** Displays the chosen Y-axis labels.
- I. **Shift.** Displays the shift that corresponds to the datapoints above. Note that to display shift information, PatrolSuite must be integrated with the local MES or ERP to obtain the applicable shift ID when a sample is initiated in QualityPatrol.
- J. **Maximum Samples.** Each data point on the control chart reflects a test result for the same product, made at the same workcenter, for the same customer (if applicable). Click on the Maximum Samples dropdown to change the number of test results displayed on the chart. Note that changing the number of samples also changes the “N” value used to calculate the summary statistics and also changes the histogram to reflect the chosen number of datapoints.
- K. **View Most Recent Order.** Depending on the Maximum Samples selection, data points from more than one manufacturing order may be displayed when a user first opens the page. To see data from *only the most recent manufacturing order*, check the “View Only the Most Recent Order” checkbox.
- L. **Startup Samples.** By default, startup samples are not displayed in the control chart or histogram. Check the “Show Startup Samples” checkbox to include startup samples in the SPC chart and histogram.
- M. **Previous/Next Buttons.** Click the Previous or the Next button to navigate to the desired data point in the chart.
- N. **Y-Axis Label Control.** Click on the Show dropdown to select the desired Y-axis labels.
- O. **Manufacturing Order.** Displays the manufacturing order of the chosen data point(s) (highlighted with a blue vertical bar on the SPC chart).
- P. **Sample Information.** Displays summary information about the specific datapoint chosen in the control chart.

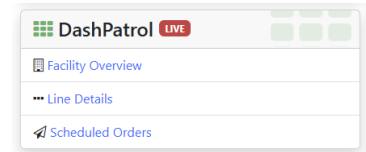
Note: Click on the Sample Number hyperlink to open the sample in QualityPatrol

NEW Note: Sequence and Position require integration with the local MES. Sequence is the order in which the unit was produced. Position is the location of a unit within a set of units produced at the same time.
- Q. **Sample Results.**
 - Q1. If the test method is multi-input (x-bar), then the sample locations will be displayed.
 - Q2. The test result recorded in QualityPatrol.
 - Q3. Displays the applicable rule violations (if any) associated with the chosen data point.

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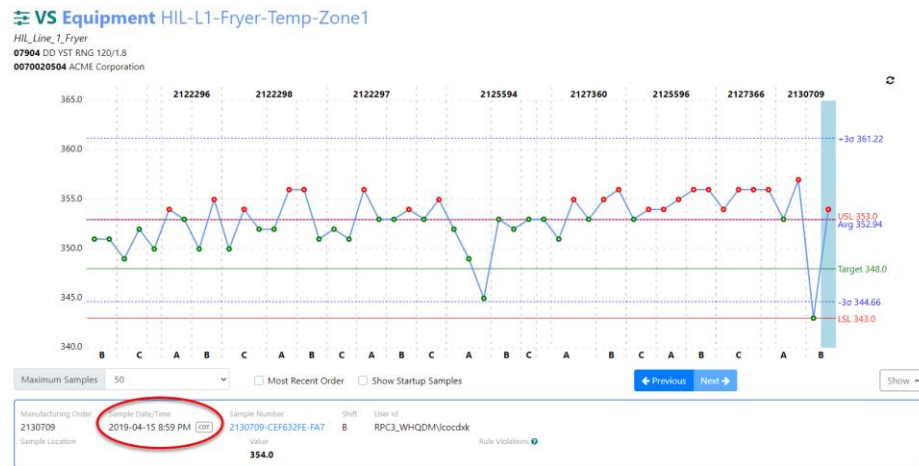
Note: Click the Rule Violations label to view the pattern rules that are turned “on” for the applicable Facility/Test Property/Test Method.

- R. **Summary Statistics.** Displays statistical information based *all* of the datapoints displayed in the control chart. Note that when a multi-line chart is selected, a color-key will appear to identify the line color used for each sample location.
- S. **Capability Histogram.** Displays a histogram based *all* of the datapoints displayed in the control chart.

Chapter 8: Time Zones

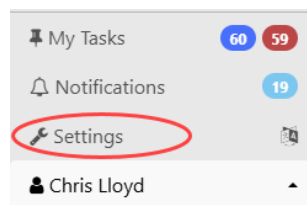
Introduction

As can be seen in the SPC chart Sample Information frame and on the Manufacturing Orders page, DashPatrol displays the date/time with a time zone stamp (e.g. EST, EDT, CST, CDT, etc.).



Time Zones

21. To change the time zone in which PatrolSuite displays data (this applies to all PatrolSuite webpages in all PatrolSuite apps, including DashPatrol), click on "Settings" in the main PatrolSuite menu.



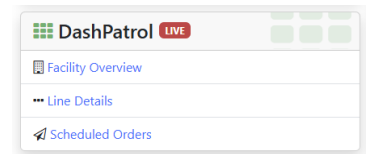
22. Click the radio button that reflects the desired date/time format. There are three options:

- Computer.** Automatically use my computer's local time zone. Patrol Suite captures the time zone from the user's browser.
- UTC.** This option will result in all data being displayed in Coordinated Universal Time, regardless of the user's local time zone.

DashPatrol

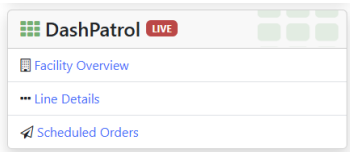
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- iii) **Use Specified Time Zone.** This option will result in all data being displayed in the chosen time zone, regardless of the user's local time zone. For example, users in New York can look at data from a plant in California and see the data in Pacific time.

A screenshot of the DashPatrol Settings page. The page is titled 'Settings' with a wrench icon. It is divided into several sections: 'Language', 'Time Zone', 'Downloads', 'Email', 'Theme', and 'Navigation Bar'. In the 'Time Zone' section, there are three radio button options: 'Use my computer's local time zone America/Chicago', 'Use Coordinated Universal Time UTC', and 'Use specified time zone'. The 'Use specified time zone' option is selected, and a dropdown menu below it shows 'America/Chicago' selected. A red circle highlights the 'Use specified time zone' option and the dropdown menu. The 'Downloads' section has a 'Select File Type' dropdown. The 'Email' section has an 'Email Settings' link. The 'Theme' section has a 'Use browser preferences' dropdown. The 'Navigation Bar' section has three dropdowns: 'Theme' (set to 'Light'), 'Side' (set to 'Left'), and 'Background' (set to 'Default').



Chapter 9: Scheduled Orders

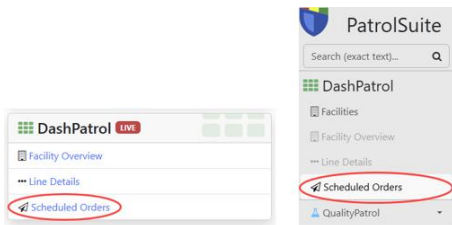
NEW Introduction

The Scheduled Orders page provides an efficient way for a user to add a QualityPatrol sample for a manufacturing order. This is especially helpful when a new manufacturing order has just started.

Note: This feature requires integration with your manufacturing order scheduling application to provide the order information by line to PatrolSuite. Please contact MAP if this functionality would benefit your organization.

NEW Access

23. To view the scheduled orders page, click the “Scheduled Orders” hyperlink on the DataPatrol card on the PatrolSuite homepage. Alternatively, click “Scheduled Orders” in the DashPatrol navigation menu.



NEW Add Sample

24. To add a QualityPatrol sample, click the ‘Add Sample’ button that corresponds to the desired order.

[Scheduled Orders](#) Search Reset

Facility / Line	Order	Product	Quantity	Scheduled	Started
Murfreesboro Bread	3001059 + Add Sample	17809 + ROUSES FRENCH BREAD DOUGH 24/19.5OZ	7178	a day ago	in 12 minutes
Union City Line C	3006491 + Add Sample	19860 + GLZ PERSH TP 8/4CT 3.5Z	1631	a day ago	17 hours ago
Union City Line B	3007962 + Add Sample	52061 + PERSHING DONUT 3.25 OZ	1807	a day ago	15 hours ago
Union City Line C	3007962 + Add Sample	52061 + PERSHING DONUT 3.25 OZ	1807	a day ago	15 hours ago