flexMetrics

Flex Equipment Andon Display

Configuration & Overview

PROPRIETARY STATEMENT

Equipment Andon Page URLs

The Equipment Andon URL is loaded from the server using the following format:

http://GatewayName/FlexMetrics/AndonPortal/EquipmentAndon?EquipmentPK=PK

Gateway name = Hostname or IP Address for the Gateway hosting the Andon websites
PK = the equipment PK to display

Area Andon Page URLs

The Area Andon display will auto rotate unless you choose a display number to set the URL to. This Area Andon uses the following format:

http://GatewayName/FlexMetrics/AndonPortal/AreaAndon

or

http://GatewayName/FlexMetrics/AndonPortal/AreaAndon?AreaPK=PK

or

http://GatewayName/FlexMetrics/AndonPortal/AreaAndon?Display=#

or

http://GatewayName/FlexMetrics/AndonPortal/AreaAndon?AreaPK=PK& Display=#

Gateway name = Hostname or IP Address for the Gateway hosting the Andon websites
PK = the area PK to display
# = the Display to hold the Area view on

Steps to load Andon Display:

1. Open your web browser on your internet capable device.
2. In the address bar of your browser, enter the Andon URL address using the proper format shown above.
3. Andon Display will load for the selected equipment.

Equipment Andon Display Overview
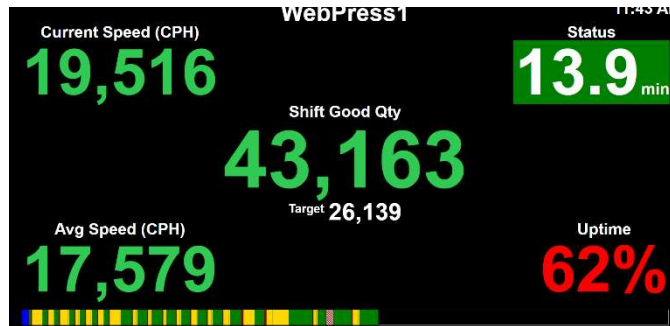
Title: Equipment Name

Current Speed: Speed of the Equipment in counts per hour or minute
- Green when at or above the Green Speed Goal
- Yellow when between the Green and the Yellow Speed Goals
- Red when below the Yellow Speed Goal

Status: Activity and Activity duration for the Equipment
- Yellow = MR
- Green = RUN
- Red = D1
- Blue = D2

Shift Good Qty: Total Good Counts during the shift
- Green Good Qty when at or above the Green Tput Good Exp pace
- Yellow when between the Green and the Yellow Tput Good Exp pace
- Red when below the Yellow Tput Good Exp pace
- **Target:** The Good Expected for the shift thus far

Avg Speed: Average speed for the entire shift on the Equipment
- Green when at or above the Green Speed Goal
- Yellow when between the Green and the Yellow Speed Goals
- Red when below the Yellow Speed Goal

Uptime: Ratio of actual RUN time versus total available time to run
- Green % when at or above the Green Uptime Goal
- Yellow % when between the Green and the Yellow Uptime Goals
- Red % when below the Yellow Uptime Goal

Strip Chart of Activities: Strip chart showing Equipment Activities from throughout the current shift

Andon Alerts

The Flex Andon system has three distinct Alert Pages to help you gain better visibility into the Equipment status

1. **D1 Alert**
2. **Setup Alert (Under Job Target and Above Job Target)**
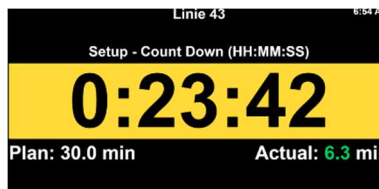3. **Job Low Speed Alert**

D1 Alert

- Displayed when D1 reason code required time for the Equipment attribute time is met
- Shows the reason code if entered
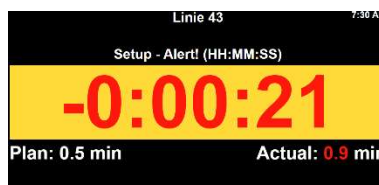- Is hidden once the state changes from D1

Setup Alert Under Job Target

- Displayed when Job enters setup
- Displays count down time during the setup phase

Setup Alert Above Job Target

- Displays Alert if the target has been exceeded for Setup
- The countdown turns red and shows the difference of Actual versus Plan Setup Time


Job Low-Speed Alert

- When a Low-Speed Andon Alert is configured for the Equipment, displayed when job falls below set speed
- Follows Job Low-Speed Andon Alert logic from its assigned Equipment Alert:
  - Raise Alert if Actual Job Speed drops below X% of Target Job Speed for Y seconds in RUN.

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Configuring Andon Display Metric Positioning

Metrics can be configured to be displayed in five separate positions across both the Equipment and Area Andon display. Please see below for the possible positions and metrics that can be configured for each equipment. Flex can configure your Andon to use each position or just the single position of your choosing. Please contact Flex support for configuring assistance.

Equipment Andon Page Positions:
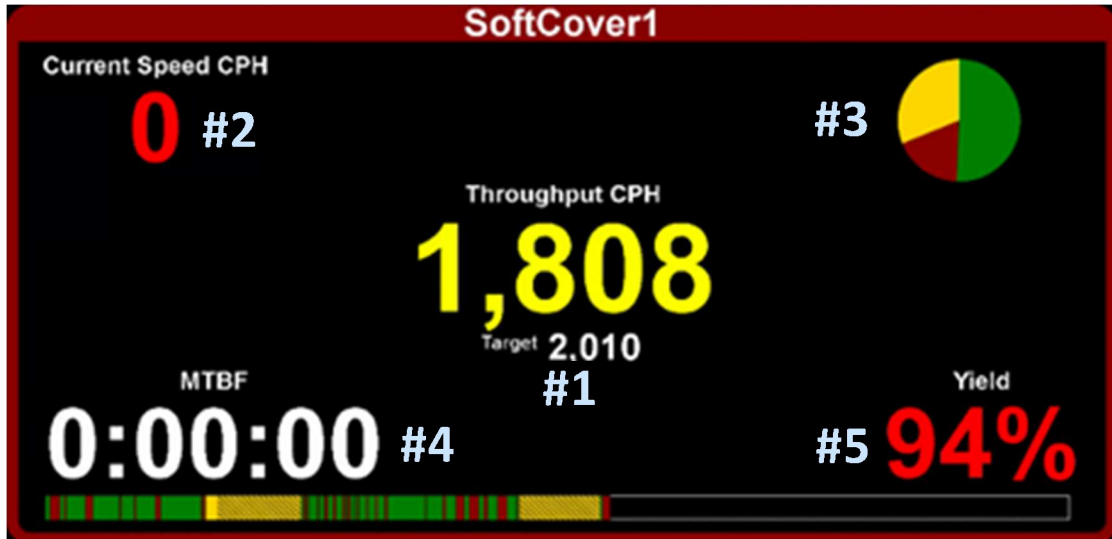
Area Andon Page Positions
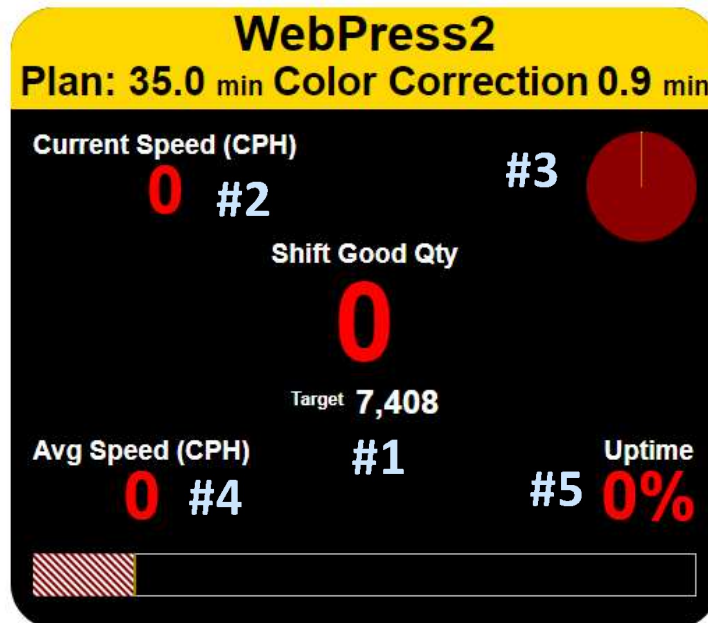
Available Metrics

Drop Down Value	Metric: Definition
Equipment.CurrentRUNSpeed	**Run Speed Actual:** The current speed of the equipment. This will be in CPM or CPH depending on configuration.
Equipment.CurrentStatus	**Current Activity State**: The current state the machine is in and how long it has been in it.
Equipment.CurrentJobPass.FlexScore	**Flex Score**: A rating of how well a job is sticking to its scheduled time. (Scheduled time for a job)/(Actual time spent on a job)
Equipment.Metrics.GoodQuantity	**Good Quantity Actual**: The count of units recorded by the Good Counter.
Equipment.Metrics.GoodQuantityExpected	**Good Quantity Expected Green**: The amount of time so far crewed on the shift multiplied by the green throughput goal of that equipment. Throughput goal is determined using the Green thresholds for OEE Goals, Uptime, Speed and Yield.
Equipment.Metrics.MeanTimeBetweenFailures	**Mean Time Between Failure**: Average time between D1 activities longer than their equipment's reason code required threshold.
Equipment.Metrics.OEE	**OEE Actual**: Performance score based on the capacity of the machine. The ratio of a machines actual output to its capacity.
Equipment.Metrics.ProcessReliability	**Process Reliability Percentage**: Percentage of how much good quantity was produced versus the amount possible to produce if a job was run at the target speed for the entire job.
Equipment.Metrics.RUNSpeed	**Run Speed Average**: The average run speed of the shift.
Equipment.Metrics.RunSpeedPercent	**Run Speed Percent:** The rate of counts relative to the goal for that equipment.
Equipment.Metrics.RunUptime	**Run Uptime**: % of RUN during the Run Phase of the Job. The calculation is (Time in RUN)/(Time in RUN or D1)
Equipment.Metrics.Throughput	**Throughput Actual:** This metric describes the speed of the good counts. This, unlike speed, is an average by default. Calculated Speed * Yield
Equipment.Metrics.TotalQuantity	**Total Quantity Actual**: The count of raw material
Equipment.Metrics.TotalWasteQuantity	**Total Waste Quantity Actual**: The count of raw material that did not become Good units. This includes all setup, run, D1 and D2 waste
Equipment.Metrics.Uptime	**RUN%:** % of RUN of available time. Calculated (Time in RUN)/(Time in RUN+D1+MR)
Equipment.Metrics.UptimeDifferential	**Differential (+/-)**: The resulting time gain based between the target and actual Uptime (how far ahead you are)
Equipment.Metrics.Yield	**Yield**: The percent of counts that ended up being useful good counts.
Equipment.Metrics.JobTimePie	Pie chart of different times spent in each state throughout the shift thus far.