



Lean Factory Management (LFM)

Process Flow driven
User Guide

Version 7.0
April 2011

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User Guide for Lean Factory Management Module (LFM)

Base Functionality

LFM supports two primary shop floor functionality:

- Internal Material Management
- Shop Floor production scheduling

These can be used in conjunction or independent of each other. Also the material management functionality can be used as a standalone. Similarly Shop floor production scheduling can be used as standalone if MRP generates shop floor production schedules.

This document details how the downstream material consumption drives upstream production schedules for material replenishment in LFM. It shows how to manually create the work centers, add items, map items to production, define operations at upstream production work centers, release orders from downstream, sequence production at upstream, move schedules through operations, close production and ship items back downstream.

Creating work centers

Work centers in Ultriva are virtual work areas that represent a consuming location or a storage location or a production location or a combination of any of the three. For e.g. A work center could be Final Assembly Lines, Component production lines, Supermarkets, Warehouses or Stores.

To create a work center:

- Login as Plant Administrator
- Click on ADMIN menu on the top right corner
- Select "Work Centers" from the menu list
- The following screen displays where you can fill in the details of the work centers

Create New Workcenter How do I?

Workcenter Information

* Name: * Location:

* Code: * Label:

* Timezone:

Weekly Holiday: Sun Mon Tue Wed Thu Fri Sat

Separate Address:

Kanban Configuration

Auto Accept:

User Configuration

Grant yourself as workcenter administrator:

* Required field Save | » X | Cancel

TIP: Make sure to set the flag “Grant Yourself as work center administrator” to ON if you need access to managing the work center.

- Create at least two work centers.
- The first one shown above is a Consuming work center. i.e. it is the location where the parts are being used or consumed (like a Final Assembly consuming raw materials and components to make Finish Goods)
- Next one should be a Production (supplying) work center. i.e. component production line or machine shop or Paint Shop or supermarket.

Create New Workcenter ? How do I?

Workcenter Information

* Name: * Location:

* Code: * Label:

* Timezone: Separate Address:

Weekly Holiday: Sun Mon Tue Wed Thu Fri Sat

Kanban Configuration

Auto Accept: ON OFF

User Configuration

Grant yourself as workcenter administrator: ON OFF ?

* Required field

TIP: Set the “Auto Accept” flag to ON if you want the production order to flow directly in to the manufacturing operations.

Creating a material flow loop

In Ultriva you have to establish the material flow loop. The information flow in Ultriva goes from consuming location to producing or supplying location while the material flow is reverse.

Here are the steps:

- Select Admin button from the top
- Select “Work Centers” from the menu list
- A list of existing work centers will be displayed
- Select “Consuming WC” (which was created in the previous step)
- Click on “More options” button
- Click on “Associate Internal suppliers”

Assign Supply Workcenter List for Consuming WC How do I?

Filter By Select Operator Enter Value

Find Name

<input type="checkbox"/>	Name ▲	Location ▼	Code	Site Id	Label	Auto Receive	Auto Start First Operation	Ship Using Shipment Module	Print Using Ultriva Software	Adjust Calculated Reqd ShipDate to EOD
<input type="checkbox"/>	Dock	Lebanon	<input type="text"/>	<input type="text"/>	eBizKanban ▼	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Production WC	Local	PWC-100	<input type="text"/>	eBizKanban ▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Quality Assurance	Local	<input type="text"/>	<input type="text"/>	eBizKanban ▼	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sorted by: Name 1 to 3 of 3

Internet | Protected Mode:

- Check one or more work centers (if multiple work centers are supplying to the consuming location)
- Change the work center code if necessary
- Select the appropriate label type
- Check Auto Receive flag if you want the ship transaction from production work center to close the loop and move the material to ON Hand
- Check the Auto Start First Operation flag, if you want the signal to be queued at the first operation on ACCEPT (or Release if AUTO ACCEPT is turned ON)
- Click Assign

Ultriva Internal replenishment module was enhanced in 7.0 to support multi-operations sequencing and computation of OEE metrics. In order to take advantage of these features, the OEE flag for this business unit should be turned on. This is defined as an option because in instances where the work center is a just a consuming location or storage location (like supermarket or stores) there is no need for this functionality.

If you are the administrator for the work center here are the steps to turn on OEE function:

- Click on "My Account" menu from the top right hand corner
- Following screen will be displayed

My Account

 **Change Profile**
View and change personal details such as name, phone, and email

 **My Preference**
View and update preferences such as records per page

 **My Business Unit Configuration**
View and update businessunit preferences

 **Change Password**
Change login password

 **My Business Unit**
View and update businessunit details such as name, location and address

- Select "My Business Unit Configuration"
- Following screen is displayed.
- If the OEE feature is OFF click on that then it will switch to ON
- Press "Save".

Workcenter Configuration for: Production WC ? How do I?

General
Card
Integration
Print
Receive
Release
Scan
Ship

Configuration Settings

Name	Value
Call-Off for Forecast Items:	<input type="checkbox"/> OFF
Required Receive Date Calculation using Calendar Days:	<input type="checkbox"/> OFF
Buyer Reschedule should wait for Supplier Approval:	<input type="checkbox"/> OFF
Buyer Recall should wait for Supplier Approval:	<input type="checkbox"/> OFF
OEE Feature:	<input checked="" type="checkbox"/> ON
Allow operators to restart production for held jobs:	<input type="checkbox"/> OFF
Track Blanket PO Qty:	<input type="checkbox"/> OFF

* Required field

>
 Cancel

TIP: If the OEE function is not turned on there may be limitations on the use of production sequencing functions. So for a production work center please make sure that OEE is set to ON

Priming the work center for production

In order to manage and control production at a work center several additional parameters should be set up front. They are:

- Set schedule configuration for the work center (hours per day, custom fields to sort sequence on, screen configuration for the supervisor and operator)
- Define Machines on which the production will be done

- Define the Operations which will be performed on these machines
- Define users who will run the operations
- Define for each item what will be the operational flow (if item has to go through multiple operations)

In this section we will detail how the above parameters will be set.

The configuration schedule alone has to be defined by the plant administrator. Here are the steps:

- Login as plant admin (or the user with the rights to create the work centers)
- Select "Admin" button from the top right corner
- Select "Work Centers" from the menu list
- A list of existing work centers will be displayed
- Select "Production WC"
- Click on "More Options" button and select Schedule configuration

The following screen will show up with four tabs; Let us review each tab in detail:

Schedule

- This tab allows you to set the work hours per day, any offset in schedule date if desired, option to select grouping preferences, how many work intervals (like shift) you wish to set up with in each work hour days.
 - o Capacity per day – set the number of hours (8,16, 24)
 - o Schedule offset – Set the number of days by which the system should move the schedule up from the required ship date. i.e. if the require ship date is 4/30/2011 and you set the offset as 1, then the system will automatically schedule it to 4/29/2011
 - o Grouping preference: Within a single day, the production orders can be grouped by release time (FIFO) or through a set of fields (custom and system) in a sort order
 - o Buckets per Day: Each bucket is a time interval in Ultriva. For e.g. if you set 2 buckets on a 16 hour day then each bucket will be 8 hours

These configuration can be changed when ever the production status changes.

Production Sequence Configuration for Production WC How do I?

Reset current configuration

Schedule | Custom Field List | Sort Info | Screen Info

* Capacity Per Day: Hours

* Schedule Offset: Days

* Grouping Preference: By Release Time By Sort Condition

* Buckets Per Day:

* Required field **Save | >** **Clear** **<< | Back**

Custom Field List

If you selected the option “By Sort Condition” in the Grouping preference above, then you have the option to set the sort order in which the production orders should be sequenced for each day or each bucket. The sort order normally includes standard fields like Item Number, Required Ship Date, Business Name (Customer Name) and Hot order. However many businesses need to minimize the set up time by grouping parts based on their product parameters like color, size, rating etc. The Custom Field tab allows you to define for each work center what those parameters should be. The screen below shows how to do it.

- Select Custom Fields tab
- Click Add button
- Fill in the field name (No spaces allowed)
- Select the field type (String or Number)
- Click Save

Add new Field How do I?

* Field Name:

* Field Type:

* Required field **Save** | **X** | **Cancel**

All the custom fields you added will be displayed. Again this list could be added or deleted based on the production needs.

Custom Field List for Production WC How do I?

New Field added successfully!

Reset current configuration

Schedule Custom Field List Sort Info Screen Info

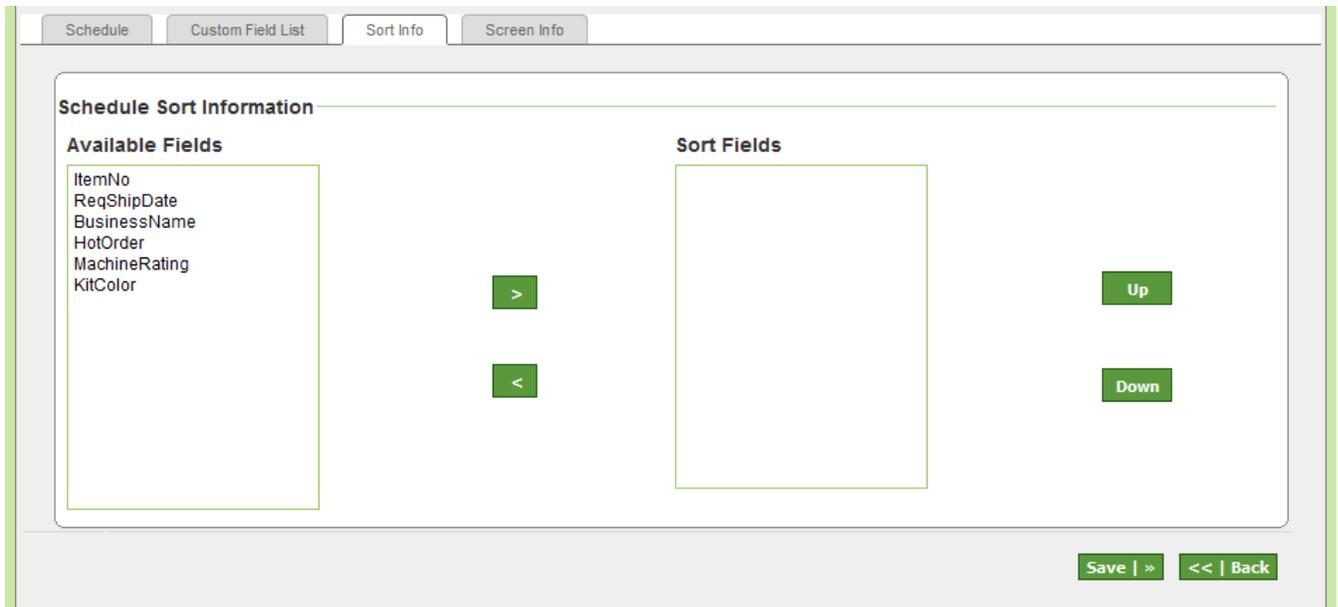
Add **Edit** **Delete** **Back**

Field Name	Field Type
MachineRating	DOUBLE
KitColor	STRING

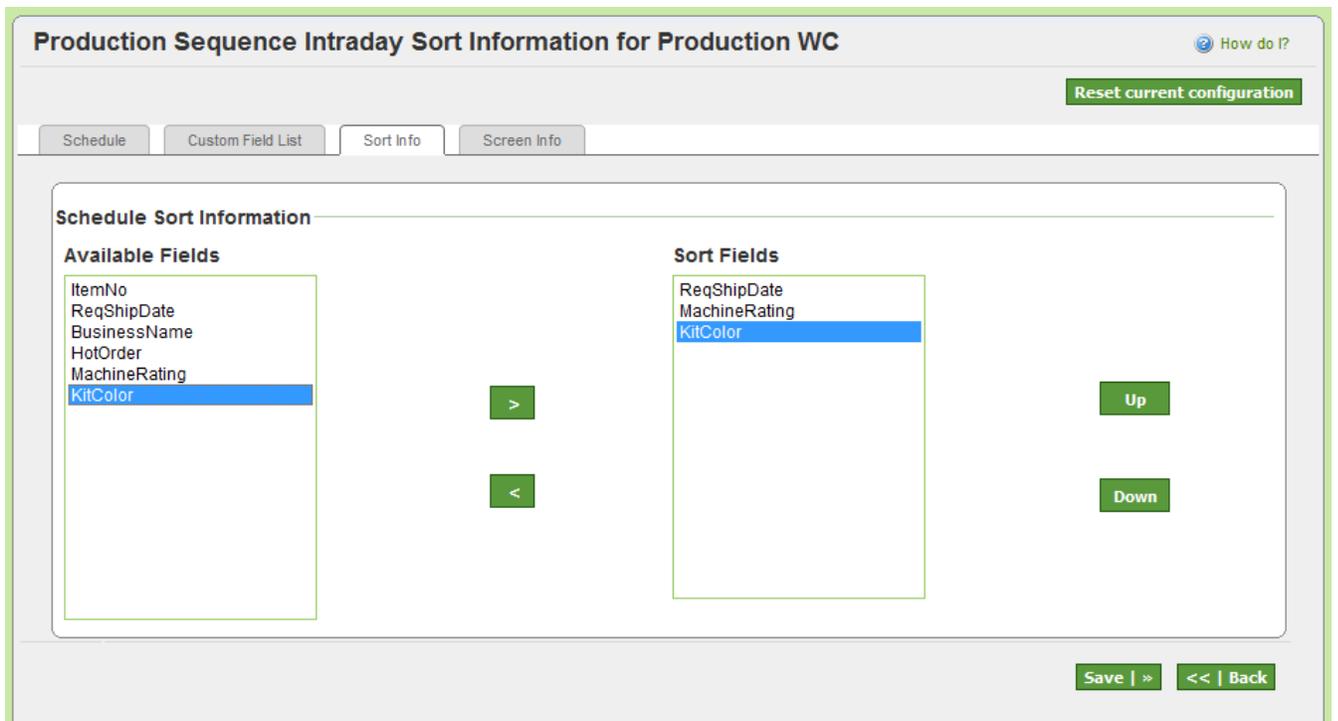
1 to 2 of 2

Sort Info

This tab will display all the system fields and custom fields as shown below.



Select the fields on the list and using the > button move it to Sort fields list. You will have an option of sequencing the sort order by using **UP** and **DOWN** buttons. The result is shown below:



This shows that the production orders will be first sorted by required ship date, then by Machine Rating and then grouped by Kit Color. Please note the sequence is applicable for the day (or bucket) only and not for all the open orders in the work center.

Screen Info

This tab lets users to set some preferences on the screen. Here is what they mean:

- **Supervisor**

- *Refresh Page: This is an ON/OFF switch. If set to ON then the page will be automatically refreshed at the interval defined*
- *Refresh Interval: This can be set in Minutes. If the Refresh Page is set to ON, then the screen will refresh in those minutes. Typically when the supervisor sets for refresh (for e.g. every 10 minutes) then he can continuously see which is the job that is currently in production or has the operator run in to trouble due to lack of materials or machine problems*
- *Rolling N days to show from today's date: This is for displaying in a single page all the orders that fits in to today + N days criteria. For e.g. If today is April 15 and you enter 10 in the box, then on a single page the supervisor will see all the orders from April 15 to April 24.*
- *Show orders from: This will allow the supervisor to switch between the above criteria and end of the week. i.e. If April 15 is Wednesday then the supervisor can either see orders for 15th, 16th and 17th or from 15th to 24th depending on what is set here.*

The screenshot displays a web interface with two main settings sections: **Supervisor Settings** and **Operator Settings**. At the top, there are navigation tabs: Schedule, Custom Field List, Sort Info, and Screen Info. The **Supervisor Settings** section contains a table with the following rows:

Name	Value
Refresh Page:	<input type="checkbox"/> OFF
Refresh Interval (in minutes):	<input type="range" value="10"/> 10
Rolling N days to show from today's date:	<input type="range" value="6"/> 6
Show Orders from:	Today to end of week

The **Operator Settings** section contains a similar table:

Name	Value
Refresh Page:	<input type="checkbox"/> OFF
Refresh Interval (in minutes):	<input type="range" value="10"/> 10
Allow multiple selection for orders:	<input type="checkbox"/> OFF
Number of days to show from today's date:	<input type="range" value="6"/> 6
Number of orders to show per page:	<input type="range" value="20"/> 20
Automatically print on close:	<input type="checkbox"/> OFF
Show Job Completion Message(s):	Errors Only
Operation completion flow:	Sequential

At the bottom right of the settings area, there are two buttons: **Save** and **<< Back**. The browser's address bar at the bottom shows "Internet | Protected Mode".

- **Operator**

- *Refresh Page: This is an ON/OFF switch. If set to ON then the page will be automatically refreshed at the interval defined*

- *Refresh Interval: This can be set in Minutes. If the Refresh Page is set to ON, then the screen will refresh in those minutes. Typically when the operator sets for refresh (for e.g. every 10 minutes) then he can continuously see new orders if the production is set to get new orders for current day. He will also be able to see the jobs which he put on hold, if the supervisor reset them.*
- *Rolling N days to show from today's date: This is for displaying in a single page all the orders that fits in to today + N days criteria. For e.g. If today is April 15 and you enter 10 in the box, then on a single page the supervisor will see all the orders from April 15 to April 24.*
- *Number of orders to show per page: This allows the operator to control how many orders he wishes to see before going to the next screen*
- *Automatically print in close: If the cell is well laid out to support complete operation, then this flag is set to ON. When the operator completes the production, a ticket or a label is automatically printed*
- *Show job completion message(s): This shows a drop down list that allows the operators to see either ERRORS only or SUCCESS and ERRORS. If it is a fast moving line, then showing success may be slowing down the process.*
- *Operations completion flow: The two options are SEQUENTIAL or ADHOC. If SEQUENTIAL is chosen then the only the next operation defined in ITEM flow is allowed to be produced. If ADHOC is chosen, then the system allows the operator to choose from any of the remaining operations.*

Setting up operations and OEE parameters

LFM module takes a well-established and organized approach to setting up the structure and all the necessary parameters for operating the shop floor. In addition, if the shop floor can enter the necessary data then the system will automatically compute Operational Equipment Effectiveness (OEE) on a machine by machine basis.

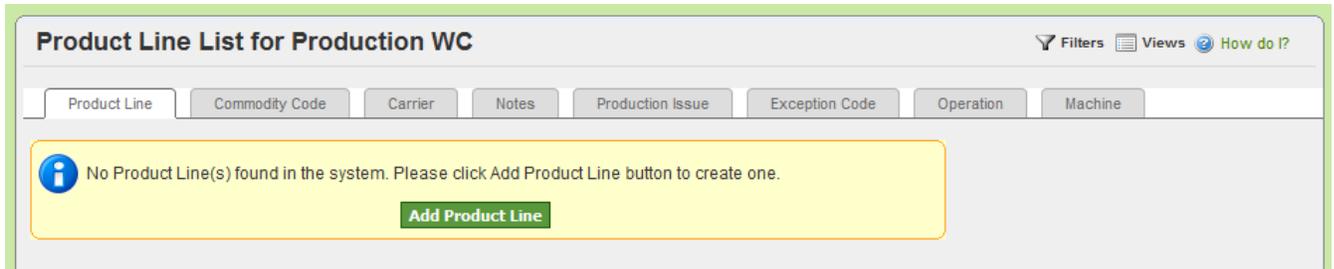
To recap we will walk through the following in this section:

- *Create Machine*
- *Create Operations*
- *Map Operations to Machine*
- *Map Operations to user*
- *Map Items to operations and sequence them*

To create a machine:

- *Login as the administrator for the production work center*
- *Click on ADMIN menu on the top right corner*
- *Click on ENTITIES*

The following screen will come up:



“Entities” includes several tabs:

- *Product Line – Define multiple groups (family, type etc.). Can be used to group items. Used during creating an Item*
- *Commodity Code – Define multiple commodity codes. Can be used to group items. Used during creating an Item*
- *Carrier – Define multiple Carriers (LTL, FEDEX, UPS etc.). The Carriers could be assigned as a default when mapping a supplier to the Item*
- *Notes – Define multiple Notes used during card actions like release, accept, reschedule, ship or receive). These notes can show up in the list for users to pick instead of forcing them to enter ad hoc information.*
- *Production Issue – Similar to notes you can create a list of production related issues (like Material not available, Machine down etc.) can be defined. Operator can pick from the list at the production floor while putting the job on hold.*
- *Exception Code – This is primarily for MRP Planned Orders for suppliers. Exception codes like Expedite, Cancel or postpone can be set and used by the planners or buyers in managing external supplier orders.*
- *Operations – Define all the operations*
- *Machines – Define one or more Machines in the work center*

We will be dealing with only Machines and Operations in this section.

Machines

- *Click on Machine Tab*
- *Click ADD button*
- *Following screen will show up.*
- *Enter the Machine code (no spaces allowed)*
- *Enter Machine description*
- *Enter Ideal Run Rate for the machine. This information is critical if you wish to calculate OEE accurately*
- *Click Save*

Create New Machine

How do I?

Machine Information

* Machine Code:

* Description:

* Ideal Run Rate (in pieces per minute): ?

* Required field

Save | » X | Cancel

Operations

- Click on Operations tab
- Click ADD button
- Following screens will show up
- Enter Operation Name
- Enter Setup time for that operations, in minutes or hours
- Enter Teardown Setup time. This is very uncommon. However for complex set ups there may be some time to bring down the set up as well
- Click Save

Create New Operation

How do I?

Operation Information

* Operation Name:

* Setup Time: Minutes

* Teardown Setup Time: Hours

* Required field

Save | » X | Cancel

Mapping operations to machine

- Select the operation from the list as shown below
- Click on "Assigned Machines" button

Operation List for Production WC Filters Views How do I?

Filter By Select Operator Enter Value

Find Name

Product Line Commodity Code Carrier Notes Production Issue Exception Code Operation Machine

Operation Name ▲	Setup Time	Tear down Setup time	Machine Setup? ▾	User Setup? ▾	Item Setup? ▾
Base Op	10 Minutes	0 Hours	<input type="button" value="✎"/>	<input type="button" value="✎"/>	<input type="button" value="✎"/>
Kitting	12 Minutes	0 Hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sorted by: Operation Name 1 to 2 of 2

- Click ADD button if no machines are assigned
- Following screen will show up
- Select the appropriate Machine
- Click Save

Add Machine for Operation:Packaging How do I?

Machine Information

* Machine:

Item Information

* Required field

TIP: if the machine is not assigned to the operations then the operational flow for the ITEM cannot be set

Item and Operational flow

In order for orders to be released in Ultriva, an Item has to be created at the consuming work center and a supplying work center has to be assigned. Then Kanban Cards should be created for releasing production orders upstream, on consumption.

Creating an Item

- Login as the admin (or user with rights to create an item) in the Consumption WC
- Click ADMIN menu on the top right corner
- Click on ITEM from the list
- Click ADD button from the Item list
- Following screen will show up
- Enter the key master information like Item No, Description, Dedicated location code (if one exist), Price per UOM, Item Coordinator (Planner), Purchase Coordinator (Buyer)

- Enter Kanban related parameters like Usage per day (Average daily consumption), Safety Time (in days) and quantity on card (lot size or bin size)
- On the supplier side select the supplying work center
- Select the lead time and transit time
- Click Save

Base Information	UOM Information	Notes	Custom Field List
Item Information			
* Item No:	G-2678909	* Description:	Sub Assy Kit 909
Revision No:		* Handling Time:	0 (in days)
Location Code:		ABC Code:	
* Price Per UOM:	200.10	* Category:	Kanban
* Re-order cards when:	Open Box (First unit consumed)	Lot Number Tracking:	None
Coordinator Information			
* Item:	ultrivauser x	Purchase:	
Usage Information			
* Usage per Day:	20	* Safety Time:	1 (in days)
* Quantity On Card:	20		
Group Information			
Product Line:	None	Commodity Code:	None
Tolerance Information			
* Ship Quantity:	0	* Receive Qty:	0
Card Cycle Settings			
<input type="checkbox"/> Check this box for this item to Wait at Dock <input type="checkbox"/> Check this box to Force Tolerance for this item <input type="checkbox"/> Consignment Item Temporary card will be created for Partial Shipment - No			
Supplier Information			
* Supplier:	Production WC x	* Supplier Item No.:	G-2678909

Assigning Operations

Once the Item is created and assigned a supplying work center, then the flow of operations for that ITEM should be defined.

- Login as ADMIN (or a user with proper rights) at the Production WC
- Click on ADMIN menu at the top right hand corner
- Click on Supplier Item
- Following screen will show up
- Select the Item
- Click on "Assigned Operations" button

Supplier Item for Consuming WC Filters Views How do I?

Plant: Consuming WC Filter By Select Operator Enter Value Go

Edit View Assigned Operations

Plant Item No	Supplier Item No.	Description	Carrier	Lead Time	Transit Time	Qty On Card
G-2678909	G-2678909	Sub Assy Kit 909	Unknown	2.00	1.00	20.00

Sorted by: Supplier Item No. 1 to 1 of 1

- Following screen will show up
- Pick from the list the desired operations
- Enter the cycle time for that item in that operations (in seconds, Minutes, Hours, Pieces per Minute, Pieces Per Hour)
- Check the Machine on which the operation will be performed
- Click save

Add Operation for Item:G-2678909 How do I?

Operation Information

* Operation: * Cycle Time:

Machine Information

Machine Code	Machine Description	Ideal Run Rate (in pieces per minute)
<input checked="" type="checkbox"/> SAWS	Sub assembly work station	<input type="text" value="0.0100"/>

* Required field Save | » X | Cancel

Creating Cards

Once the item is set up then Kanban cards has to be created.

- Login as ADMIN (or as a user with proper rights) in Consumption WC
- Click ADMIN menu at the top right hand corner
- Click ITEM sub menu
- Select the Item
- Click "More Options" button and select cards
- When the item is a new item and no cards are set up the following screen shows up

Adjust Loopsize for Item: G-2678909 How do I?

Input Parameters Adjust Loopsize

Initial Setup

Please enter your current inventory on hand and on order data to setup the Initial Loopsize for the Item:

* Units On Hand:

* Units On Order:

Next | >> **X** | **Cancel**

This screen wizard takes your input and computes the total number of cards required to be in the system. The units on hand defines the actual stock in your factory floor (line side or supermarket or at whatever consuming work center). “Units on order” is the outstanding orders at the upstream supplying location (production work center, external supplier etc.). This is the first step in the card creation wizard. After inputting the data click NEXT. The following screen will show up.

Adjust Loopsize for Item: G-2678909 How do I?

Input Parameters Adjust Loopsize

Configure Loopsize Parameters

Initial Setup:

	Units	Equivalent Kanban Cards
Units On Hand	20	1
Units On Order	20	1
Total	40	2

Kanban Calculator:

	Current
Quantity On Card	20
Handling Time (in days)	0.00
Lead Time (in days)	2.00
Transit Time (in days)	1.00
Usage Per Day	20.00
Safety Stock (in days)	1.00
No of Cards	4

Kanban Formula:

Usage per Day * (Handling Time + Lead Time + Transit Time + Safety Time)

Quantity on Card

Recommendation:

Based on the above formula, the following adjustments will be made:

- 1 Card(s) will be created to represent your On Hand Inventory
- 1 Card(s) will be released to represent your On Order Inventory
- 2 additional Card(s) will be created and released to match the Loopsize
- Loopsize will be adjusted to 4 Card(s).

* Required field

<< | **Prev** **Finish** | **>>** **X** | **Cancel**

- To compute the total number of cards required to size your material the following process is done:
- System sizes the number of cards based on the defined Kanban parameters in Item master using the formula described above
 - It assigns the equivalent cards (lot/bin sizes) to on hand units

- It assigns the equivalent cards (lot/bin sizes) to on order units
- Exceptions
 - o If the total number of cards calculated is more than the units defined (On hand + On order), then additional cards are sent to the supplying location as new orders. This is the case above
 - o If the total number of cards calculated is less than the units defined (On hand + On order), then additional cards are created to do the following:
 - If units on hand is greater, then additional cards are created and card delete count is set to equivalent of the excess cards
 - If units on order is greater, then additional cards are created and released to the suppliers and card delete count is set to equivalent of the excess cards

In the above scenario 2 additional cards were created for the supplying location. A total of three cards (lot/bin sizes) were released to Production WC for replenishment

Fulfilling the orders through production

The three orders released for the item will be queued up at the Production WC. They will be scheduled on the dates based on the lead time and the schedule offset defined. Let us go through the process of replenishing the order

- Login as the user (supervisor or operator) in to Production WC
- Click ACTION menu on the top
- Click Production Sequence from the Supplier Action list
- The following screen with the three orders will be displayed

Close Schedules How do I?

Find Card ID

■ On Setup
 ■ Started
 ■ Stopped not finished

Start Setup
End Setup
Start Job
Hold Job
Take a Break
Close Job
Print Card

Active Orders | Orders In Production | Completed Orders

RYG	Card ID	CycleNo	Item	Start Time	Card Qty	Completed Qty	Past Due
2011-03-28 (Monday)		Capacity Utilization		<input type="text"/>	0 Hour(s) and 0 Minute(s)		
2011-03-29 (Tuesday)		Capacity Utilization		<input type="text"/>	0 Hour(s) and 0 Minute(s)		
2011-03-30 (Wednesday)		Capacity Utilization		382%	30 Hour(s) and 30 Minute(s)		
	KCD3TP3CNARB	1	G-2678909		20	0	
	KCD3TP4CNALJ	1	G-2678909		20	0	
	KCD3TP5CNABP	1	G-2678909		20	0	

Managing Orders that exceed capacity

The screen shows that all orders are due on 3/30/2011 and scheduled for that date. The cycle time required to produce 60 units (20 units per lot size) is in excess of available capacity. In fact it is over 3 times the capacity. There are two options to ensure that these orders are delivered on time

- One is to increase the capacity (running multiple shifts)
- Pre pone the orders and produce them in advance

We will do both to show how it works.

- Login as supervisor in Production WC
- Click ACTION
- Click "Resequence Production Orders" from the list
- The production list will show up

The screenshot displays the 'Resequence Production Orders' application. A modal window titled 'Select a Date to Reschedule' is open, showing three calendar grids for March, April, and May 2011. The current date is 2011-03-29. Below the calendar, a table shows capacity utilization for 2011-03-29 (0%) and 2011-03-30 (169%).

Month	Sun	Mon	Tue	Wed	Thu	Fri	Sat
March			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		

Month	Sun	Mon	Tue	Wed	Thu	Fri	Sat
April						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30

Month	Sun	Mon	Tue	Wed	Thu	Fri	Sat
May	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				

Date	Capacity Utilization	Hours/Minutes
2011-03-29 (Tuesday)	0%	0 Hour(s) and 0 Minute(s)
2011-03-30 (Wednesday)	169%	27 Hour(s) and 2 Minute(s)

Reschedule Orders

- Check the order(s) to reschedule
- Click RESCHEDULE button
- A calendar will pop up.
- Select the date to which you wish to move the order
- The orders will be moved to that date and capacity for respective dates will be recalculated

Change production capacity

- Login as Admin in to the parent plant
- Click on ADMIN at the top right hand corner
- Click on Work Centers from the list
- Select the work center (Production WC)
- Click on "More Options" and select schedule configuration
- Change the Capacity per day from 8 to 16 (running two shifts instead of one)
- Click Save
-

The screenshot shows a web application window titled "Production Sequence Configuration for Production WC". At the top right, there is a "How do I?" link and a "Reset current configuration" button. Below the title bar, there are four tabs: "Schedule", "Custom Field List", "Sort Info", and "Screen Info". The "Schedule" tab is active. The main content area contains four input fields with red asterisks indicating they are required: "Capacity Per Day" (set to 16 Hours), "Schedule Offset" (set to 0 Days), "Grouping Preference" (with radio buttons for "By Release Time" and "By Sort Condition", where "By Release Time" is selected), and "Buckets Per Day" (set to 0). At the bottom left, there is a "Required field" label. At the bottom right, there are three buttons: "Save", "Clear", and "<< Back".

Managing production

- Login as operator in Production WC
- Click ACTION
- Click Production Sequence from Supplier Action list
- Following screen is displayed

Close Schedules How do I?

Find Card ID 
 On Setup Started Stopped not finished

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-28 (Monday)		Capacity Utilization		64%	<input type="text"/>	10 Hour(s) and 10 Minute(s)		
<input checked="" type="checkbox"/>	KCD3TP3CNARB	1	G-2678909	-Accepted-		20	0	
2011-03-28 (Monday)		Capacity Utilization		<input type="text"/>		0 Hour(s) and 0 Minute(s)		
2011-03-29 (Tuesday)		Capacity Utilization		64%	<input type="text"/>	10 Hour(s) and 10 Minute(s)		
<input checked="" type="checkbox"/>	KCD3TP4CNALJ	1	G-2678909	-Accepted-		20	0	
2011-03-29 (Tuesday)		Capacity Utilization		<input type="text"/>		0 Hour(s) and 0 Minute(s)		
2011-03-30 (Wednesday)		Capacity Utilization		64%	<input type="text"/>	10 Hour(s) and 10 Minute(s)		
<input checked="" type="checkbox"/>	KCD3TP5CNABP	1	G-2678909	-Accepted-		20	0	

1 to 3 of 3

Internet | Protected Mo

The orders are now rescheduled across three days and excess capacity is available to pull in more or take new orders

- *Check the order to produce*
- *Click Start button*
- *The following screen will be displayed highlighting the active job in GREEN*

Close Schedules How do I?

Job Successfully Started. - KCD3TP3CNARB ✕

Print Card

Find Card ID
■ On Setup
 ■ Started
 ■ Stopped not finished

Start Setup
End Setup
Start Job
Hold Job
Take a Break
Close Job
Print Card

Active Orders
Orders In Production
Completed Orders

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-28 (Monday)		Capacity Utilization		64%	<input type="text"/>	10 Hour(s) and 10 Minute(s)		
■	KCD3TP3CNARB	1	G-2678909	Base Op	2011-03-26 20:50:48	20	0	
2011-03-28 (Monday)		Capacity Utilization		<input type="text"/>	<input type="text"/>	0 Hour(s) and 0 Minute(s)		
2011-03-29 (Tuesday)		Capacity Utilization		64%	<input type="text"/>	10 Hour(s) and 10 Minute(s)		
■	KCD3TP4CNALJ	1	G-2678909	-Accepted-		20	0	
2011-03-29 (Tuesday)		Capacity Utilization		<input type="text"/>	<input type="text"/>	0 Hour(s) and 0 Minute(s)		
2011-03-30 (Wednesday)		Capacity Utilization		64%	<input type="text"/>	10 Hour(s) and 10 Minute(s)		

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Close Job Options

When operator wishes to close (production complete or end of shift or stopping a batch)

- Click Close Job button
- A window pops up where Operator
 - o Can input the completed quantity. This could be entire lot size or partial quantity
 - o Can input the scrap quantity if any
 - o Can close the lot short, if necessary
 - o Can mark as "End of Shift", if that is so
 - o Can close additional operations, if that is enabled
 - o State reason for the scrap, if scrap quantity is filled
 - o Click Close Job

Close Job

Card ID	Item	Plant	Operation Name	Card Qty	Completed Qty	Close Qty	Scrap Qty	Final Lot?	End Of Shift?
KCD3TP3CNARB	G-2678909	Consuming WVC	Base Op	20	0	5	0	<input type="checkbox"/>	<input type="checkbox"/>

Additional Operators:

Scrap Reason:

Enter comma separated

Close Job | » **X | Cancel**

2011-03-29 (Tuesday) Capacity Utilization 0 Hour(s) and 0 Minute(s)

2011-03-30 (Wednesday) Capacity Utilization **64%** 10 Hour(s) and 10 Minute(s)

KCD3TP5CNABP 1 G-2678909 -Accepted- 20 0

- The following job completed screen will be displayed
- If it is partially completed the job will still be shown on the screen for completing the balance quantity.

Close Schedules How do I?

Job Successfully Completed. - KCD3TP3CNARB

Print Card

Find Card ID On Setup Started Stopped not finished

Start Setup End Setup Start Job Hold Job Take a Break Close Job Print Card

Active Orders | Orders In Production | Completed Orders

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-28 (Monday)		Capacity Utilization		64%	10 Hour(s) and 10 Minute(s)			
<input checked="" type="checkbox"/>	KCD3TP3CNARB	1	G-2678909	Base Op	2011-03-26 20:50:48	20	5	
2011-03-28 (Monday)		Capacity Utilization			0 Hour(s) and 0 Minute(s)			
2011-03-29 (Tuesday)		Capacity Utilization		64%	10 Hour(s) and 10 Minute(s)			
<input type="checkbox"/>	KCD3TP4CNALJ	1	G-2678909	-Accepted-		20	0	
2011-03-29 (Tuesday)		Capacity Utilization			0 Hour(s) and 0 Minute(s)			
2011-03-30 (Wednesday)		Capacity Utilization		64%	10 Hour(s) and 10 Minute(s)			

Internet | Protected Mode:

- If the job is fully completed then the order line item will be removed from the list.

Multiple Operations - Production

The above detailed process relates to a scenario where single operation completes the production. Let us now see what happens if we add one more operation at the Production WC.

Adding next operation

- Login as Admin (or an authorized user) in the Production WC
- Click on ADMIN menu at the top right corner
- Click on Entities from the list
- Select Operation tab
- Click Add to create a new operation

Create New Operation

How do I?

Operation Information

* Operation Name:

* Setup Time:

* Teardown Setup Time:

* Required field

- Fill in the details, operation name, set up time and Teardown setup time
- Click Save
- System will prompt for the next step to assign machine to this new operation as shown below
- Click Next

Please select Next Steps below

How do I?

Next Steps

Assign Machines for Operation

Assign Users for Operation

Back to Operation List

* Required field

- Assign the operation to the same or a different machine
- Click Save

Add Machine for Operation: Kitting ? How do I?

Machine Information

* Machine: ▼

Item Information

* Required field

- Select the operation
- Click Assigned users
- Add a user to the operation
- Check the user
- Click Assign

Assign Users for Operation: Kitting Filters Views ? How do I?

Filter By ▼ Select Operator ▼ Enter Value

<input type="checkbox"/>	User ID	First Name	Last Name	Email ID	Work Phone	Buyer Code
<input checked="" type="checkbox"/>	ultrivuser	Ultriva	User	naveen@ultriva.com	12345324	

Sorted by: User ID 1 to 1 of 1

TIP: This is a critical step. If a user is not assigned to the operation, the order will not be visible and hence cannot be completed

How multi-operation flow works in LFM

Multiple such operations can be added with in a work center. Items which are being produced in this work center can flow through one or more of these operations. Each item if necessary can follow multiple flows with respect to number of operations and sequence of operations. For e.g. Assume there are 5 operations in a work center 1,2,3,4, &5. Assume there are 3 items (A,B &C) are being produced in this work center. The Item routing can be done in multiple combinations.

- Item A – Op1 →Op3 →Op5
- Item B – Op2 →Op3 →Op4 →Op5
- Item C – Op3 →Op2 →Op4 →Op5

Modifying the Item routing

- Click on ADMIN menu on the top right corner
- Click on Supplier Item from the list
- Select Item and click on Assigned Operations
- Click ADD
- Select the second operation (Kitting) to the flow
- Enter the cycle time for this operation
- Select the machine in which the operation will be performed
- Click Save

Add Operation for Item:G-2678909 How do I?

Operation Information

* Operation: * Cycle Time:

Machine Information

<input type="checkbox"/>	Machine Code	Machine Description	Ideal Run Rate (in pieces per minute)
<input checked="" type="checkbox"/>	SAWS	Sub assembly work station	<input type="text" value="0.200"/>

* Required field

- The following screen is displayed showing the operation list for a specific item.
- The buttons on the top describes all the routing changes that you can do for the part
 - o ADD – Add a new operation to the routing
 - o Edit – Edit an existing operation for cycle time or machine
 - o View Details – see the operation details
 - o Resequence – Allows to change the routing flow by modifying the operation sequence
 - o Remove – Removes an operation from the current routing

Assigned Operations for Supplier Item:G-2678909 for Production WC Filters Views How do I?

i Operation added Successfully ✕

Filter By Select Operator Enter Value

Find Operation Name

<input type="checkbox"/>	Operation Name ▾	Cycle Time ▾	Setup Time	Tear down Setup time
<input type="checkbox"/>	Base Op	30.0000 Minutes	10 Minutes	0 Hours
<input type="checkbox"/>	Kitting	50.0000 Minutes	12 Minutes	0 Hours

1 to 2 of 2

Closing Job – one or more operations

After modifying the routing, revisit the production sequence screen

- Login as the operator in Production WC
- Click Actions menu from the top
- Click Production Sequence from the Supplier Action list
- Following screen will be displayed
-

Close Schedules How do I?

Find Card ID On Setup Started Stopped not finished

Start Setup **End Setup** **Start Job** **Hold Job** **Take a Break** **Close Job** **Print Card**

Active Orders | Orders In Production | Completed Orders

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-29 (Tuesday)		Capacity Utilization		169%	27 Hour(s) and 2 Minute(s)			
	KCD3TP4CNALJ	1	G-2678909	-Accepted-		20	0	
2011-03-29 (Tuesday)		Capacity Utilization		<input type="text"/>	0 Hour(s) and 0 Minute(s)			
2011-03-30 (Wednesday)		Capacity Utilization		169%	27 Hour(s) and 2 Minute(s)			
	KCD3TP5CNABP	1	G-2678909	-Accepted-		20	0	

1 to 2 of 2

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- When an item has more than one operation, then the production sequence screen displays an additional column called Operation Name. This column displays the last completed operation when in a passive state. In this case the last operation is order has been accepted
- Select the order
- Click Start button
- When the order switched from a passive state to an active order state you will see the operation name switches to the current operation
- By moving the cursor on the order, you can view the routing queue of all operations
- Following screen displays all of the above

Close Schedules How do I?

Find Card ID

■ On Setup
 ■ Started
 ■ Stopped not finished

Start Setup End Setup Start Job Hold Job Take a Break Close Job Print Card

Active Orders Orders In Production Completed Orders

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due								
2011-03-29 (Tuesday)		Capacity Utilization			169%	27 Hour(s) and 2 Minute(s)										
■	KCD3TP4CNALJ	1	G-2678909	Base Op	2011-03-26 22:39:59	20	0									
2011-03-29 (Tuesday)		<div style="border: 1px solid gray; padding: 2px;"> Operation Details: KCD3TP4CNALJ <table border="1"> <thead> <tr> <th>Operation Name</th> <th>Completed Qty</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Base Op</td> <td>0</td> <td></td> </tr> <tr> <td>Kitting</td> <td>0</td> <td></td> </tr> </tbody> </table> </div>			Operation Name	Completed Qty	Status	Base Op	0		Kitting	0		0 Hour(s) and 0 Minute(s)		
Operation Name	Completed Qty	Status														
Base Op	0															
Kitting	0															
2011-03-30 (Wednesday)						27 Hour(s) and 2 Minute(s)										
■	KCD3TP5CNABP	1	G-2678909	-Accepted-		20	0									

1 to 2 of 2

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Operation on hold

- An operation can be put on hold for several reasons
 - o Resource reallocation
 - o Machine Down
 - o Material not available
 - o Higher priority order requires to done first
- A job which is started can be put on hold by clicking the **Hold Job** button
- The system will prompt for a reason code
- User can select from the list of Production Issues (see the details in the earlier section on how to set up Production Issues list)
- Click submit
- The system will change the highlight of the production order to yellow as shown below

Close Schedules ? How do I?

Find Card ID
■ On Setup ■ Started ■ Stopped not finished

Start Setup End Setup Start Job Hold Job Take a Break Close Job Print Card

Active Orders Orders In Production Completed Orders

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-29 (Tuesday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)		
■	KCD3TP4CNALJ	1	G-2678909	Base Op	2011-03-26 22:39:59	20	0	
2011-03-29 (Tuesday)		Capacity Utilization				0 Hour(s) and 0 Minute(s)		
2011-03-30 (Wednesday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)		
■	KCD3TP5CNABP	1	G-2678909	-Accepted-		20	0	

1 to 2 of 2

Internet | Protected Mode

Tip: Operator has an option of taking a break without putting the job on hold. He can click on Take a Break button then the following screen will show up

Operator is on Break ? How do I?

i Operator is on Break. ✕

← Back to Job

Operator can click Back to Job when he returns to work

When the order goes in to an hold state, it has to be reset by the supervisor before the operator can restart production.

Resetting the order is a similar process like Rescheduling:

- Login as supervisor at Production WC
- Click on Actions menu at the top
- Click on Resequence Production Orders from the list
- Following screen will be displayed
- Select the order which is on hold
- Click Reset Job button on the top
- The yellow highlight will go away

- The operator will see the same on his screen
- The operator can start the job again to complete it

Resequence Production Orders How do I?

Find Card ID Started Stopped not finished

Active Orders | Completed Orders

RYG	<input type="checkbox"/>	Card ID	CycleNo	Item	Description	Plant	Card Qty	Completed Qty	Hot Flag	Past Due
2011-03-28 (Monday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)				
<input type="checkbox"/>	<input type="checkbox"/>	KCD3TP3CNARB	1	G-2678909	Sub Assy Kit 909	Consuming WC	20	0	<input type="checkbox"/>	
2011-03-28 (Monday)		Capacity Utilization				0 Hour(s) and 0 Minute(s)				
2011-03-29 (Tuesday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	KCD3TP4CNALJ	1	G-2678909	Sub Assy Kit 909	Consuming WC	20	0	<input type="checkbox"/>	
2011-03-29 (Tuesday)		Capacity Utilization				0 Hour(s) and 0 Minute(s)				
2011-03-30 (Wednesday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)				
<input type="checkbox"/>	<input type="checkbox"/>	KCD3TP5CNABP	1	G-2678909	Sub Assy Kit 909	Consuming WC	20	0	<input type="checkbox"/>	

Started Stopped not finished
 2 to 2 of 5 Week of (03/27 - 04/02)

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When routing is defined for an item, Ultriva automatically moves the order from one operation to next on completion. If the same operator is assigned for the current and next operation, then the order will show up on the list. If the operations are assigned to different operators then the order will be removed from the current operator queue as soon it is completed.

For the sake of this documentation, both the operations are assigned to the same operator.

- When production is completed in this operation, click Close Job button
- Fill the pop up window with the details
- Click Close Job button on the pop up window
- Following screen will be displayed

Close Schedules ? How do I?

Find Card ID
■ On Setup
 ■ Started
 ■ Stopped not finished

Start Setup End Setup Start Job Hold Job Take a Break Close Job Print Card

Active Orders Orders In Production Completed Orders

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-28 (Monday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)		
■	KCD3TP3CNARB	1	G-2678909	Base Op (Completed)	2011-03-26 20:50:48	20	0	
2011-03-28 (Monday)		Capacity Utilization		0 Hour(s) and 0 Minute(s)				
2011-03-29 (Tuesday)		Capacity Utilization		54 Hour(s) and 4 Minute(s)				
■	KCD3TP4CNALJ	1	G-2678909	Base Op (Completed)	2011-03-26 22:57:57	20	0	
■	KCD3TP2CNAEE	1	G-2678909	-Accepted-		20	0	
2011-03-29 (Tuesday)		Capacity Utilization		0 Hour(s) and 0 Minute(s)				
2011-03-30 (Wednesday)		Capacity Utilization		169%		27 Hour(s) and 2 Minute(s)		
■	KCD3TP5CNABP	1	G-2678909	Base Op (Completed)	2011-03-26 23:05:40	20	0	

1 to 4 of 4

Start Setup End Setup Start Job Hold Job Take a Break Close Job Print Card

■ On Setup
 ■ Started
 ■ Stopped not finished

- Under operation name it shows the last completed operation (Base Op(completed))
- By hovering the mouse on the order you can see the window which shows which operations are completed and which is the next operation. It also displays the quantity completed in the previous operation

Completing the next and final operation:

- Click on the order
- Click Start button
- The order will be highlighted in Green
- The operation name will change from previous completed operation to currently active on (in this case Kitting)
- Screen below is displayed

Close Schedules

Find Card ID

On Setup
 Started
 Stopped not finished

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due
2011-03-28 (Monday)		Capacity Utilization		169%	27 Hour(s) and 2 Minute(s)			
<input checked="" type="checkbox"/>	KCD3TP3CNARB	1	G-2678909	Kitting	2011-03-26 23:19:12	20	0	
2011-03-28 (Monday)		Capacity Utilization			0 Hour(s) and 0 Minute(s)			
2011-03-29 (Tuesday)		Capacity Utilization		338%	54 Hour(s) and 4 Minute(s)			
<input checked="" type="checkbox"/>	KCD3TP4CNALJ	1	G-2678909	Base Op (Completed)	2011-03-26 22:57:57	20	0	
<input checked="" type="checkbox"/>	KCD3TP2CNAEE	1	G-2678909	-Accepted-		20	0	
2011-03-29 (Tuesday)		Capacity Utilization			0 Hour(s) and 0 Minute(s)			
2011-03-30 (Wednesday)		Capacity Utilization		169%	27 Hour(s) and 2 Minute(s)			
<input checked="" type="checkbox"/>	KCD3TP5CNABP	1	G-2678909	Base Op (Completed)	2011-03-26 23:05:40	20	0	

1 to 4 of 4

Internet | Protected Mode

- Click Close Job button.
- Pop up window is displayed

Close Job

Card ID	Item	Plant	Operation Name	Card Qty	Completed Qty	Close Qty	Scrap Qty	Final Lot?	End Of Shift?
KCD3TP3CNARB	G-2678909	Consuming W/C	Kitting	20	0	<input type="text" value="20"/>	<input type="text" value="0"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Operators:

Scrap Reason:

Enter comma separated

- Fill in the details
- Click Close Job button
- Screen below is displayed
- The order has completed both the operations and hence removed from the queue

Close Schedules

Job Successfully Completed. - KCD3TP3CNARB

Print Card

Find Card ID

On Setup Started Stopped not finished

Start Setup End Setup Start Job Hold Job Take a Break Close Job Print Card

Active Orders Orders In Production **Completed Orders**

RYG	Card ID	CycleNo	Item	Operation Name	Start Time	Card Qty	Completed Qty	Past Due	MachineRating	KitColor
2011-03-29 (Tuesday)				Capacity Utilization	338%	54 Hour(s) and 4 Minute(s)				
<input type="checkbox"/>	KCD3TP4CNALJ	1	G-2678909	Base Op (Completed)	2011-03-26 22:57:57	20	0		0.00	
<input type="checkbox"/>	KCD3TP2CNAEE	1	G-2678909	-Accepted-		20	0		0.00	
2011-03-29 (Tuesday)				Capacity Utilization		0 Hour(s) and 0 Minute(s)				
2011-03-30 (Wednesday)				Capacity Utilization	169%	27 Hour(s) and 2 Minute(s)				
<input type="checkbox"/>	KCD3TP5CNABP	1	G-2678909	Base Op (Completed)	2011-03-26 23:05:40	20	0		0.00	

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- Click on the completed orders tab
- You can see the list of orders that has been completed as shown below

Completed Orders

Select Operation: All Operations

Close Date Range: 03/28/2011-03/28/2011

Show Report

Active Orders Orders In Production **Completed Orders**

Supplier Item No.	Operation Name	Plant Name	Card ID	CycleNo	Req. End Time	End Time	Completed Qty	Completed By	Print?
G-2678909	Kitting	Consuming WC	KCD3TP3CNARB	1	03/27/2011 04:11:12 PM	03/28/2011 12:05:44 PM	20	ultrivauser	Print

Sorted by: End Time

1 to 1 of 1

- In this tab user has an option of filtering by operations as well as desired date range.

Shipping Completed Orders

Once the production is completed the order is ready to be shipped (or moved) to the consuming location. In Ultriva that is done using a ship Action

- Login as the user authorized to ship
- Click Actions button on top
- Click Ship from Supplier Action list

- Following screen will be displayed

- List will display items for which orders have been completed
- Select the item
- Click show cards (or click directly on the item number)
- Following screen with cards ready to ship will be displayed

- If there is no check box but this symbol  appears then it shows the item is still work in process and cannot be shipped
- Enter the details on the screen
 - o Tracking number (only if the parts are being transported outside the facility)
 - o Carrier (only if the parts are being transported outside the facility)
 - o Packing slip # (only if the parts are being transported outside the facility)
 - o Charge Number – this is like a traceability number

- *Change ship quantity if it is different from order quantity. System will prompt for confirmation if the ship quantity is different*
- *Attach notes – if some comments have to be made or some documents to be attached*
- *Click Ship*
- *Following screen will be displayed with a confirmation and an option to print the cards*

Ship Cards Results [How do I?](#)

[Back To Items](#)

1 card(s) have been shipped without printing. Please immediately print the card(s) by clicking Print Cards button

	Card ID	Supplier Item No.	Description	Printed
	KCD3TP3CNARB	G-2678909	Card Successfully Shipped and Not Printed.	No

[Print Cards | >](#)

For internal replenishment, the material handler will move the parts to the consuming location. The parts will then go to on-hand inventory at the consuming location through one of the following process:

- *At the time of setting the work center, if the Auto Receive flag is checked, then the material will go to on-hand as soon as it is shipped*
- *Alternatively the material handler can deliver at the consuming location and scan the card.*

The process starts all over again when the material is consumed and the card is scanned for release.

OEE Reports

OEE Reports

Closed Production
View Closed Production Report

Operator Efficiency
View Operator Efficiency report

Scrap
View Scrap report

Jobs not Completed
View a list of orders that are not completed before a specified date

Hourly Production By Part
View hourly completion of Parts

OEE
View OEE report

OEE reports are generally a summary and detail of the shop floor operations.

Closed Production

This report takes the date range and shows for the work center total units completed for each item

Closed Production Summary			Filters Views How do I?
Supplier:OEE- Fab Tube shop, DateRange:04/01/2011-04/01/2011			Change Filter
OperationName	Customer	Units Completed	
D672233P03			
CUT TUBE	OEE-I-2 Outdoor Braze	501	
Total		501	
D672324P01			
BEND (3) .0032	OEE-I-2 Outdoor Braze	172	
DOWNSIZE	OEE-I-2 Outdoor Braze	172	
Total		344	
D672325P01			
EXPAND AT SAW .00065	OEE-I-2 Outdoor Braze	253	
Total		253	
D672326P01			
CUT TUBE	OEE-I-2 Outdoor Braze	253	
Total		253	
D672842P01			
BEND (3) .0032	OEE-I-2 Outdoor Braze	169	
DOWNSIZE	OEE-I-2 Outdoor Braze	169	
Total		338	
D673900P01			
AutoBend	OEE-I-2 Outdoor Braze	317	
END FORM AT SAW	OEE-I-2 Outdoor Braze	317	

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If there are multiple operations it shows the completion for each operation.

By clicking the item number you can drill down to see the cards (orders) for that item that were completed.

Closed Production Details								Filters	Views	How do I?
Supplier: OEE- Fab Tube shop, DateRange: 04/01/2011-04/01/2011, Item: D672233P03, Plant: All Plants, Operation: All Operations								Change Filter Back to Summary		
Supplier Item No. ▾	Operation Name ▾	Plant Name	Card ID ▾	CycleNo ▾	Req. End Time ▾	End Time ▲	Completed Qty ▾	Completed By ▾		
D672233P03	CUT TUBE	OEE-I-2 Outdoor Braze	KCD5JZCTRA7F	89	03/31/2011 06:41:19 AM	03/31/2011 06:24:49 AM	167	132301		
D672233P03	CUT TUBE	OEE-I-2 Outdoor Braze	KCD5JZ8TRATJ	89	03/31/2011 01:15:10 PM	03/31/2011 12:58:38 PM	167	132301		
D672233P03	CUT TUBE	OEE-I-2 Outdoor Braze	KCD5JZ2TRAUN	53	03/31/2011 07:51:22 PM	03/31/2011 07:37:23 PM	167	048104		
Total							501			
Sorted by: End Time								1 to 3 of 3		

Jobs not completed

Similarly the jobs not completed within the specified time is listed in this report.

Jobs Not Completed within Cycle Time		Filters	Views	How do I?
Supplier: OEE- Fab Tube shop, DateRange: 04/01/2011-04/01/2011		Change Filter		
Plant Name	Units Completed			
D672325P01				
OEE-I-2 Outdoor Braze	253.00			
Total	253.00			
D674097P01				
OEE-I-2 Outdoor Braze	37.00			
Total	37.00			
D674186P01				
OEE-I-2 Outdoor Braze	333.00			
Total	333.00			
		1 to 3 of 3		

Drill down will show which cards (orders) that were not completed.

Jobs Not Completed for OEE- Fab Tube shop between 3/31/2011 and 3/31/2011. Item(s): D672325P01							Filters	Views	How do I?
Supplier: OEE- Fab Tube shop, DateRange: 04/01/2011-04/01/2011							Change Filter Back to Summary		
Supplier Item No.	Plant Name	Card ID	CycleNo	Req. End Time	End Time	Completed Qty			
D672325P01	OEE-I-2 Outdoor Braze	KCD5JZPTRA8W	54	03/31/2011 11:11:37 AM	03/31/2011 11:13:36 AM	253			
Sorted by: Req. End Time							1 to 1 of 1		

Operator Efficiency

This report gives the work details of all the operators in the cell. The report shows work hours and earned hours. Some companies will compensate differently for the time depending on the operators skill or operation type. In such scenario, earned hours come in to play

Operator Efficiency Summary							
Operator Name ▾	First Name ▾	Last Name ▾	Shift Day ▾	Total Units Completed ▾	Total Items Completed ▾	Work Hours ▾	Earned Hours ▾
020084	SHERRY A	ROGERS	02/22/2010	172	1	8.00	0.60
047800	JOYCE L	GILYARD	02/22/2010	448	1	8.00	0.75
132301	MICHAEL J	BOOKER	02/22/2010	792	2	8.00	0.44
nanduffs	Nandu	Gopalun	02/22/2010	172	1	8.00	0.57

1 to 4 of 4

Supervisors can drill down to each operator and look at all the information related to their jobs.

Efficiency Detail for Operator: SHERRY A ROGERS (020084) and Shift Day:2/22/2010							
Item No	Setup Time (minutes)	Cycle Time (minutes)	Cycle Time (pieces per minutes)	Total Units Completed	Earned Hours	Earned Minutes	Machine Code
D672324P01	1.7833	0.1920	5.2083	172	0.60	36.18	VB100
Total	1.7833	0.1920	5.2083	172.00	0.60	36.18	

1 to 1 of 1

OEE Metrics

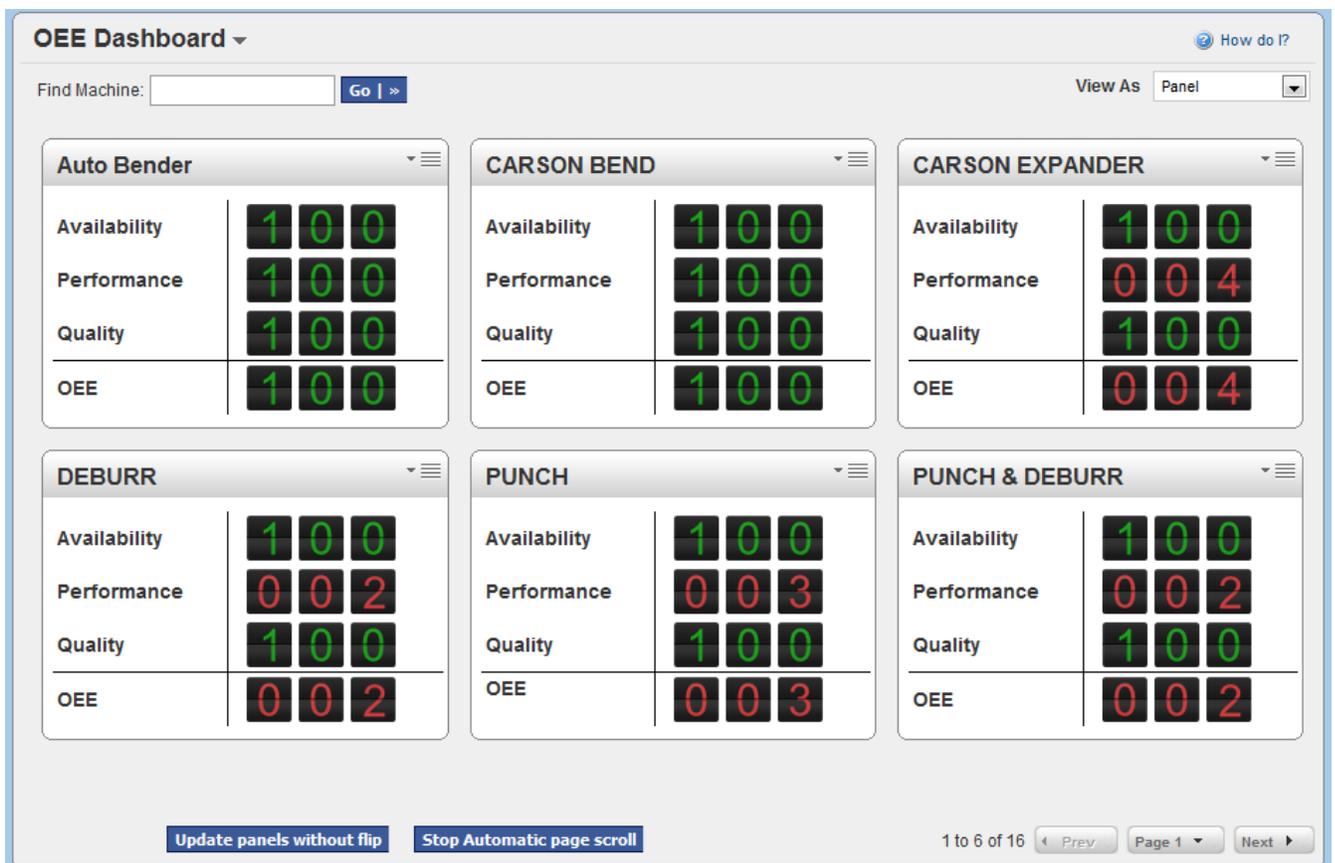
If OEE is enabled and all the necessary data like Standard machine rate, standard production rate etc. then the dashboard will show the OEE results as shown below.

The OEE metrics are:

- Machine Availability
- Performance
- Quality of output

This dashboard will be automatically updated every few minutes if needed. The data can be seen like a panel or in a tabular form.

This will be shown on the home page.



If you run the OEE report, then the following information is displayed for each shift in a given date range. Placing the cursor on any machine will provide all the OEE related details as shown below

OEE Details						Filters	Views	How do I?
Supplier: OEE- Fab Tube shop, DateRange: 04/01/2011-04/01/2011						Change Filter		
Machine Code ▾	Machine Description ▾	Shift Day ▲	Shift1 OEE	Shift2 OEE	Shift3 OEE			
PUNCH	PUNCH	03/31/2011	3.12	0.00	0.00			
CARSON DOWNSIZE	CARSON DOWNSIZE	03/31/2011	12.32	0.00	0.00			
AutoBender	Auto Bender	03/31		0.00	0.00			
Saw 2	SAW #2	03/31		3.41	3.24			
VB100	VB100	03/31		0.00	2.49			
Spin Close	SPIN CLOSE	03/31		0.00	1.15			
CARSON PUNCH	CARSON PUNCH	03/31		0.00	2.91			
DEBURR	DEBURR	03/31		0.00	1.40			
PUNCH & DEBURR	PUNCH & DEBURR	03/31		0.00	2.31			
Sorted by: Shift Day						1 to 9 of 9		

OEE Detail: CARSON DOWNSIZE		
Available Time (in Hours)	8.0	
Break Time (in Minutes)	25.0	
Down Time(in minutes)	0.0	
Ideal Run Rate (pieces per minute)	4.27	
Planned Production Time (in Hours)	7.6	
Operating Time (in Hours)	7.6	
Completed Qty	240.00	
Units Scraped	0.00	
Total Qty	240.00	
Availability	100.00	
Performance	12.32	
Quality	100.00	
OEE	12.32	