

2. Mobile Device

With Produmex PDC you can start the mobile PDC application itself. You have to start it on the client machine.

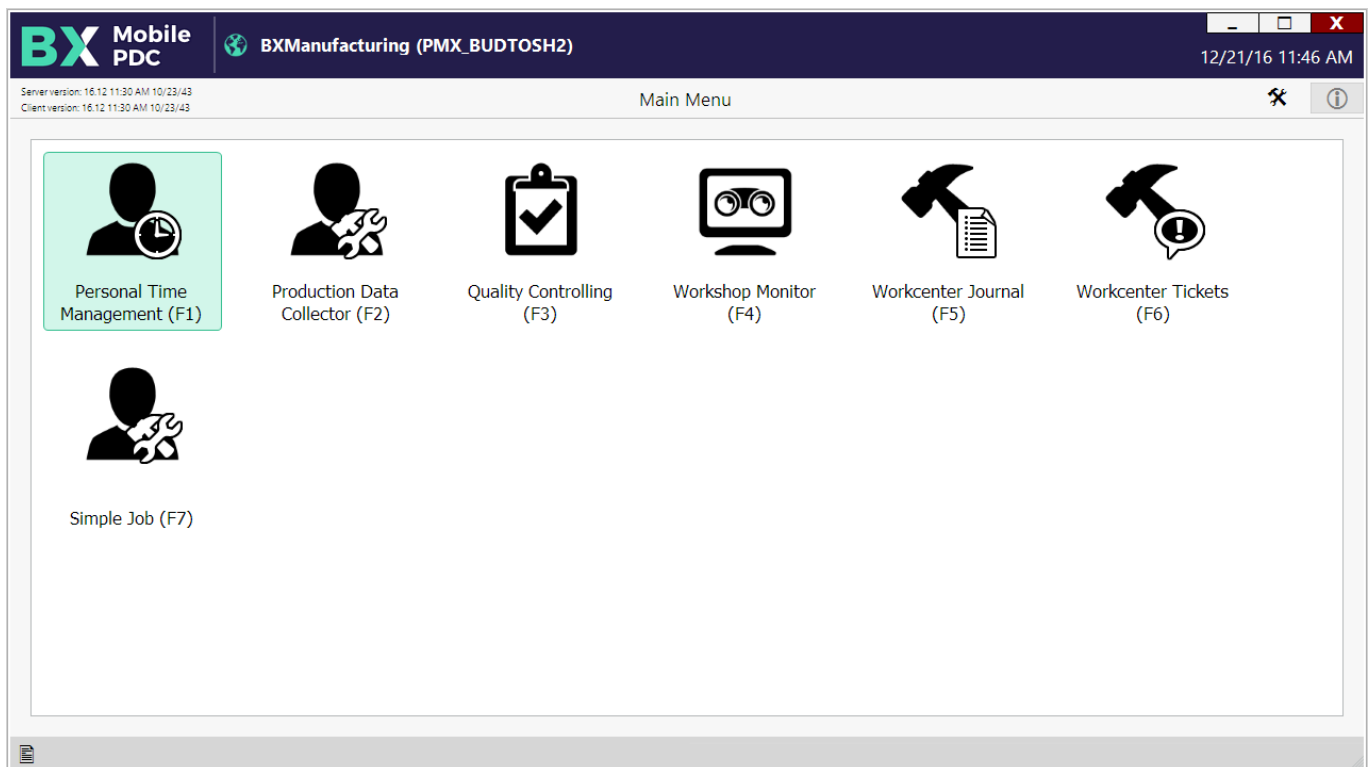
The user interface was primarily designed for industrial PCs and mobile devices. It means that the windows are not 'normal' windows as in any other applications. You can only move the windows with the blue frame around the window and it will not store the form settings so it always starts maximized.


All buttons have a keyboard shortcut, so if you press the keyboard shortcut it is the same as you clicked on the button. In text fields you have a keyboard icon, if you click on that or press F12, the on screen keyboard opens with which you can enter text as well.

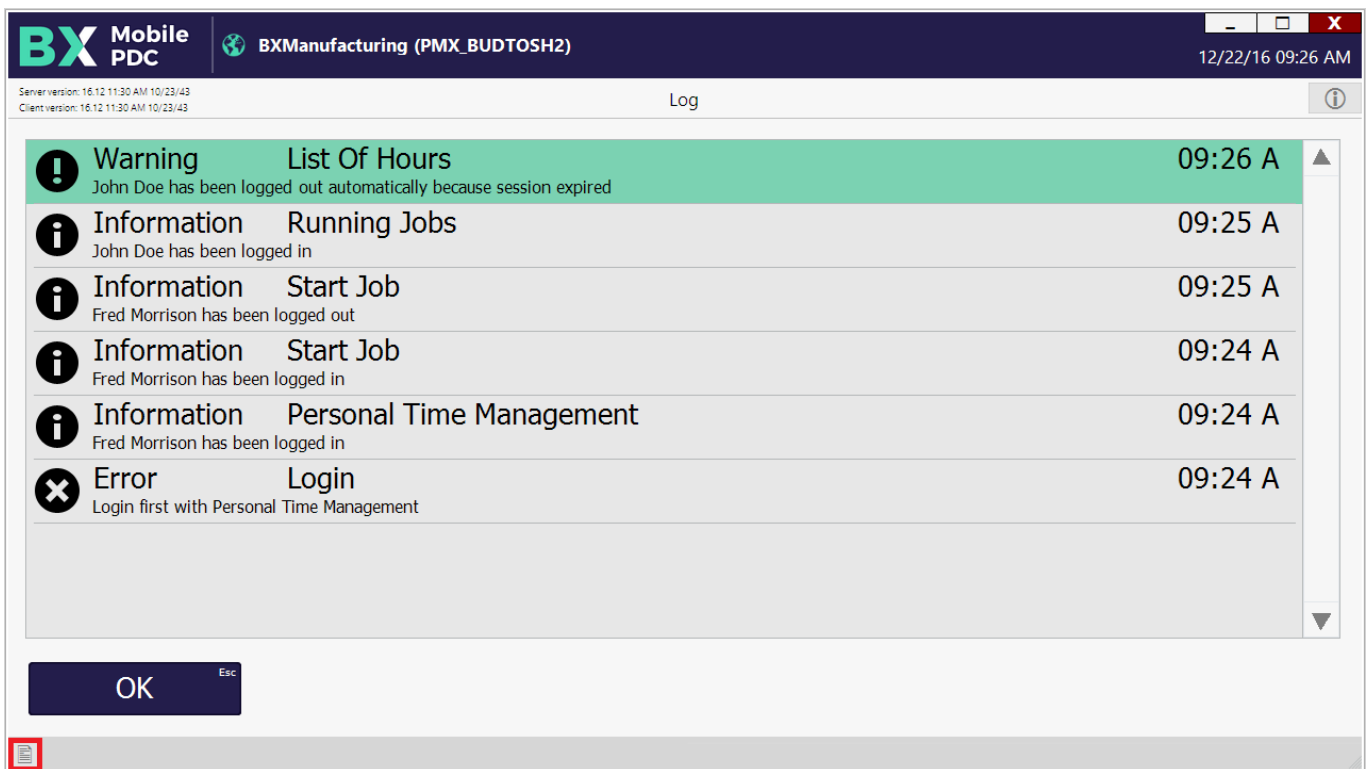
If you press tab after adding the code of an employee or operation, the system automatically populates the respective fields. If you have a scanner attached, any data can be added by scanning the barcode.

Main menu

Running the Mobile PDC Client Application the user will find the Main Menu.



On the main menu every enabled module is displayed. If only one module is enabled, the system automatically proceeds with that module and skips the main menu. Click on the  icon to see the system messages.



2.1. Personal Time Management

At each new session or work day the user has to log in with Personal Time Management once. This will track the user as an employee, who is mobile across different workstations.

Personal Time Management is optional for a company. If the setting is not set, the employees can use the rest of the system without logging in to PTM. The user can tap the Personal Time Management button to advance to the Personal Time Management login screen.

2.1.1. Logging in PTM

Here the user can log in to Personal Time Management. To log in simply enter the employee ID, and click on Login button. When the password protection is enabled, the user has to enter the password instead of the employee ID.

The 'History' textbox will list the latest account event of the user, in this example the last login event.



In the Reason box the user can choose from a list of reasons pre-defined on the Absence Reasons UDT in SAP B1. Open the form via: Tools > User Defined Windows > Absence Reasons.

When the '*PTM Reason for Log out mandatory*' option is enabled on the Thin Client tab of Prosumex Manufacturing Settings, a reason is must be given when creating a log out booking.



Press 'Login' to log in or 'Logout' to log out. To go back to the main menu press the 'Main Menu' button.

To overview the employee actions, press the 'Log' button. The displayed data is supplied by the '**bxtc_pdc_ptm_log_query**' user query. Before using this function, create a custom query. Please see the custom query example here: [PTM Log](#)



2.2. Production Data Collector

When Personal Time Management is enabled, you have to log in with PTM before starting the work with the Production Data Collector. Press the PDC icon. Enter the employee ID and click on the 'Login' button to log in.

If the employee has any open jobs, the system will proceed to the 'Running Jobs' screen otherwise the user will be redirected to the 'Start Job' screen.

2.2.1. Running Job screen

The running jobs window shows all operations that were already started by the employee that has logged in. The jobs for which there is already a started booking (setup or job) or a partial booking will appear.



Displayed information:

1. Operation phase
2. Doc Entry - Line Number (Operation code - name)
3. Production order number, Main product code (name)
4. Open quantity, Planned Quantity, Assigned work center
5. Time of the last PDC booking for the operation
6. Date of the last PDC booking for the operation
7. Type of the last PDC booking for the operation

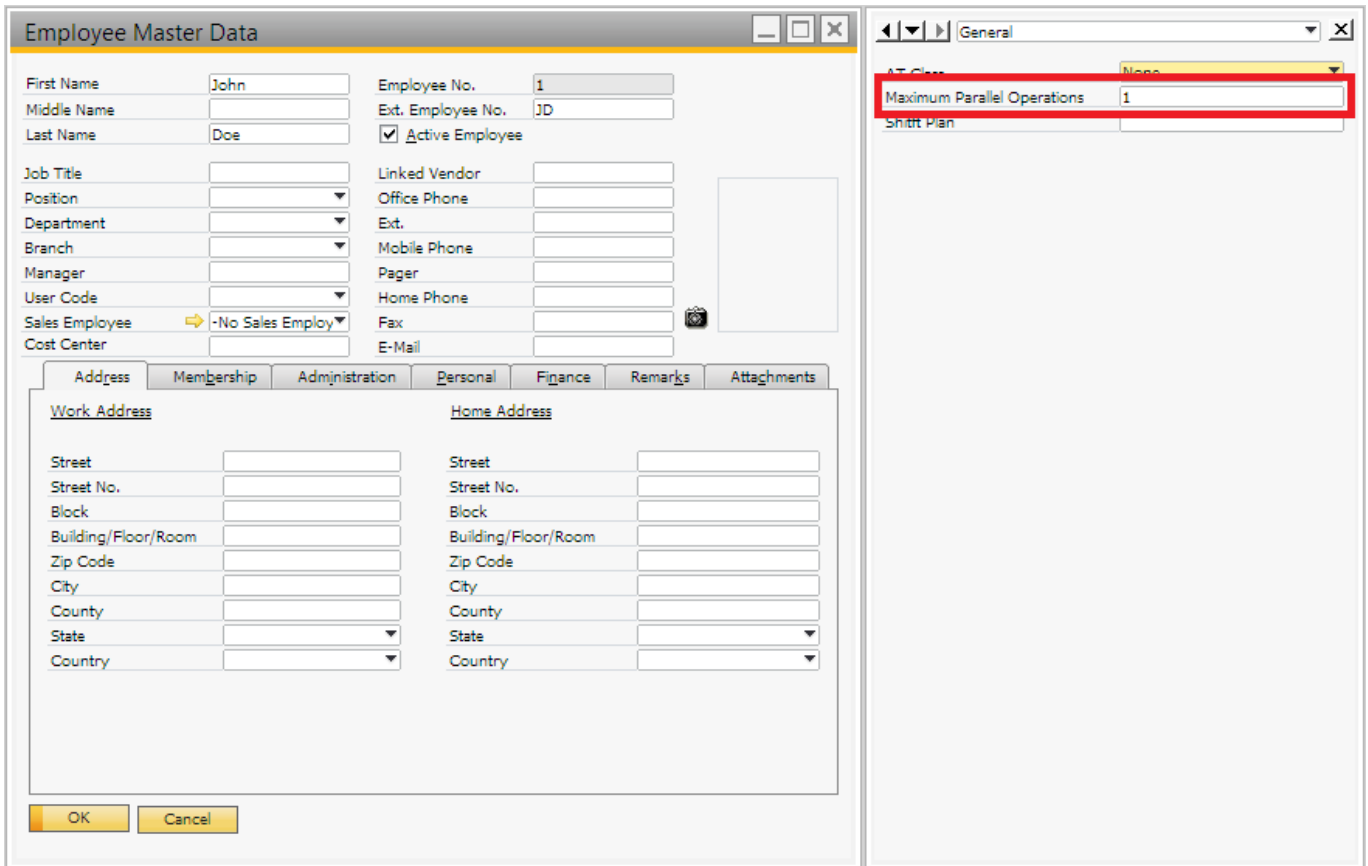
Select an operation from the list. Tick the white box or scan the DocEntry-LineNum identified to the search bar then press TAB.

The DocEntry- LineNum identifier can be found on the Job Requirements report.



To start a new operation that is not listed, scan or enter the *DocEntry-LineNum* identifier from the related production order then press the 'Start' button. The system will proceed to the 'Start Job' screen. See: [2.2.2. Start Job](#)

If the 'Start' button is not active, it means that the employee has reached the maximum number of active operations that can be started at once. The maximum number of parallel operations for an employee can be set on the Maximum Parallel Operations UDF of the Employee Master Data. The employee must close a running operation first before starting another one.



To stop a running operation, press the 'Stop' button. See: [2.2.7. Complete Setup](#) or [2.2.8. Complete Job](#)

To make partial booking for a running operation, press the 'Partial' button. See: [2.2.3. Partial Completion](#)

To review bookings, press the 'Admin' button. See: [2.2.9. Admin](#)

To logout as the current employee, press the 'Logout' button.

2.2.2. Start Job

If the employee has no running jobs, he is redirected to the Start Job page.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 Start Job (00:30)

Default Work Center		F12
Operation	6-1 (oPCU - Cutting - 505)	F11 F12 ...
Work Center	wJD (John Doe)	F11 F12 ...

Start Setup F1 Start Job F2 Admin F3 Clear F4 Cancel Esc

The default work center is the work center defined for the terminal on the 'PDC Terminal Configuration' user table. To disable the default work center, set the 'Work Center Ignore' option to 'Yes' for the employee on the PDC Extended Configuration user table. When there is a default work center, bookings can be created only for operations with the feature assigned to the default work center.

Scan or enter the *DocEntry-LineNum* identifier of the operation to the 'Operation' field.

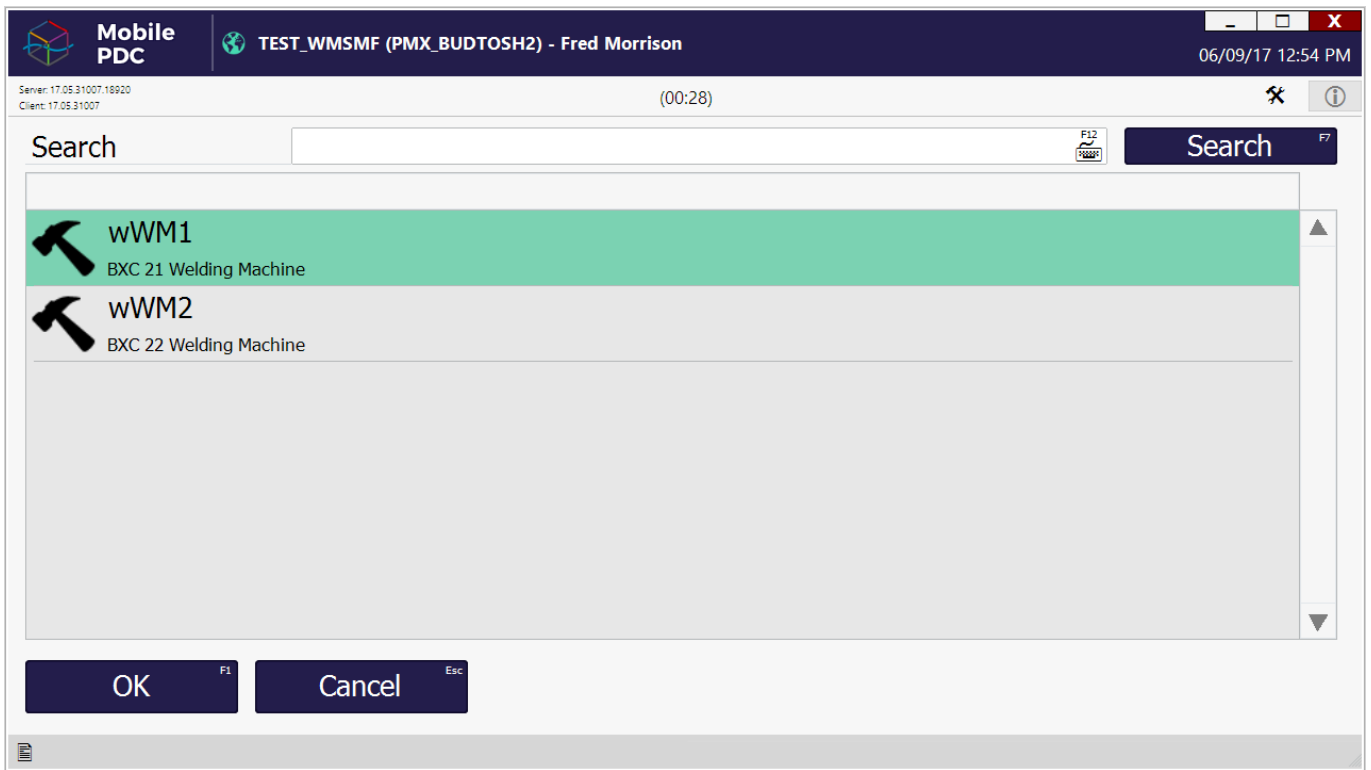
If there is a default work center, the work center field will be populated automatically. The user cannot modify the work center if the default work center is mandatory. The default work center is mandatory in the following cases:

- The employee and/or the work center has no configurations set on the PDC Extended Configuration user table and the 'PDC Modifiable WC for Start' option is disabled on the Thin Client tab of Produmex Manufacturing settings.
- The 'Work Center Modification' option is disabled on the PDC Extended Configuration user table for the employee and/or work center.

Otherwise the work center is not mandatory and the user can select an alternative work center.

If there is no default work center, the user has to enter the work center or select it from a list of available work centers by pressing F11. If there is only one work center for the feature that belongs to the operation, the work center field will be automatically populated with it.

If the operation has a mandatory work center, the operation can only be started on the mandatory work center.



Then he can click on 'Start Setup' or 'Start Job' to start the operation. Based on the settings on the Thin Client tab, setup bookings might be allowed for operations without setup or might be forbidden for every operation. Only operations that meet the following conditions can be started:

- Production order is released
- The operation status is Created or Started

The 'Clear' button erases the contents of all fields, so the entered data will be lost. If the user clicks on the 'Logout' button, he will be logged out and redirected to the Login screen.

On the next screen the user can overview the details of the operation. Press 'Done' to start the setup/job or press 'Cancel' to go back to the previous screen.

PDC Booking	#N/A
Production Order	#501 p1001-1 (Red Bike)
Operation	2-3 (oPAS - Bike Assembly)
Summary	0 completed quantity 0 rejected quantity
Serial / Batch Numbers	0 serial numbers and 0 batch numbers
By-Products	0 by-products
Materials	2 materials
Error	

Done ^{F1} Cancel ^{Esc}

During the Start Job/Setup phase, materials might be issued depending on their milestone type. For more information about issuing materials please see: [2.2.5. Materials](#).

2.2.3. Partial Completion

To create bookings for a partially completed job/setup, press the 'Partial' button. After a partial booking the job/setup remains open therefore it will be listed among the running jobs.

Production Order	#596 p1001-1 (Red Bike)	UoM	pcs
Operation	97-3 (oPAS - Bike Assembly)		
Started	02/22/17 11:51 AM	<input type="checkbox"/>	Completed
Bin Location			
Duration	6 min	This Day	
Quantity	4	Rejected Quantity	1

Done ^{F1} Done & Stay ^{F2} Cancel ^{Esc}

Enter the completed and rejected quantity (if any) for the operation.

Define a Bin Location for material issues/product receipts on the 'Bin Location' field. The default Bin Location is the bin location specified on the PDCExtendedConfiguration UDT. If no bin location has been defined on that form, by default the bin location specified for the work center is shown. If there is no bin location specified on either form, the bin location is empty by default.

The bin location selected on this screen can be overridden for materials and products.

Press the 'Done' button to proceed.

If there are by-products for the operation or the operation is the last operation on the production order and the product is linked to it with a milestone, 'Products' screen will open up. Please see: [2.2.4. Product and By-Products](#)

If an operation has materials linked to it with a milestone, the 'Materials' screen will open up. Please see: [2.2.5. Materials](#)

After the booking was created, the system will return to the Running Jobs screen or the Start Job screen if the employee has no running jobs. When the '*Logout after PDC bookings*' option is enabled on the Thin client 2 tab, the employee will be automatically logged out and redirected to the Main Menu.

When the '*Enable Partial Book & Stay*' option is set to true, an additional 'Done & Stay' button is displayed on the Partial Job screen. To stay on the 'Partial Job' screen after the booking was created, perform the partial completion after pressing this button.

2.2.4. Product and By-Products

Receive the products or by-products on the 'Products' screen. On the grid the main product and the by-products (if any) are listed. The main product is always listed first.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 [Products] (00:30)

Production Order #599 mM1101 (Raw Bike Framework) UoM pcs

Operation 100-1 (oPCU - Cutting)

Product Bin Location 01-SYSTEM-BIN-LOC...

Quantity 5

Item	Name	Bin Location	Quantity
mM1101	Raw Bike Framework	01-SYSTEM-BIN-LOCA	5 of 5 pcs
m2	Steel Pipe	01-SYSTEM-BIN-LOCA	10 of 10 m

Done Cancel Serial / Batch Bin Location

Select the product on the grid then enter the quantity. Add the quantity by pressing the 'Add' button or overwrite the quantity by pressing the 'Update' button.

The default quantity of the main product is the quantity added on the partial or complete job/setup screen.

The default quantity of a by-product is calculated from the received quantity of the main product and the base quantity of the by-product. It is possible to receive more or less of a by-product than the calculated quantity.

The default bin location is the bin location specified for the operation but it can be adjusted. Scan or enter the destination bin location to the 'Bin Location' field or select it from a list after pressing F11. To add a product to different bin locations, select the bin location then press the Bin Location button (F3). The 'Product Bin Location Picker' screen will open. (Please see: [2.2.4.3. Product Bin Location Picker](#)). Please note: The bin location for items managed by batches or serial numbers can be added on the Product Batch/Serial Numbers screen therefore the bin location picker function is not available for such items.

When using the Legacy mode, the Bin Location button is not displayed and the Product Bin Location Picker screen cannot be reached.

After the PDC processor processes the booking, the system automatically creates the Receipt from Production document for the main product and receives it to the inventory. By-products will be taken into stock with a Goods Receipt document which will be converted to a Receipt from production document after the main product has been booked.

If the main product is managed by batches or serial numbers, add the serial/batch numbers before receiving the product. Press the 'Serial/Batch' button. If the product is managed by batches, the Product Batch Numbers screen will open. (Please see: [2.2.4.1. Product Batch Numbers](#)).

If the product has serial numbers, the Product Serial Numbers screen will open. (Please see: [2.2.4.2. Product Serial Numbers](#)). If the 'Skip product serial/batch quantities screen' option is enabled on the

Thin client 2 tab, this button will not be active and the serial/batch numbers will be determined by a custom query. For more information please see: [Product serial/batch number](#)

By-products cannot be managed by serials/batches.

2.2.4.1. Product Batch Numbers

If it is a batch numbered product, the 'Product Batch Numbers' form appears.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 Product Batch Numbers (00:29)

Production Order #600 Item01 (Batch nbr) UoM

Operation 101-1 (oPCU - Cutting)

Item Item01 (Batch nbr) Bin Location 01-W2-W2-S2

Batch Number [User 1]

Quantity 2 [User 2]

Batch Number	Bin Location	Quantity	[Total Quantity]	[User Field 1]	[User Field 2]
PR0001	01-W2-W2-S1	2	4		
PR0001	01-W2-W2-S2	2	4		
Rejected					

Quantity 2 Of 6

Rejected Quantity 2 Of 0

Done Cancel Rejected Split Delete

Enter the created batch number into the 'Batch Number' field then press TAB to add the batch number to the grid. Multiple batch numbers might be added.

Select the batch on the grid. Enter the quantity of the batch into the 'Quantity' field and scan the bin location or select it on the 'Bin Location' field then press TAB. All bin locations must have the same warehouse. Please note: When using Legacy mode, the Bin Location cannot be specified on this screen.

To register the batch for rejected quantities, select the line of the batch number then press the 'Rejected' button. It is possible to set completed and rejected quantities for the same batch number.

To receive the same batch into multiple bin locations, select the batch then press the 'Split' button. The line of the batch will be duplicated but the bin location and the quantity value on the new line will be empty.

To remove a wrongly entered batch number, select it on the grid and click on 'Delete'.

2.2.4.2. Product Serial Numbers

If the product is serial numbered, the 'Product Serial Numbers' window will open.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 Product Serial Numbers (00:30)

Production Order #601 Item03 (Serial nbr) UoM

Operation 102-1 (oPCU - Cutting)

Item Item03 (Serial nbr) Bin Location 01-W2-W2-S2

Serial Number SN2003 [User 1] [User 2]

Serial Number	Bin Location	[User Field 1]	[User Field 2]	Rejected
SN2001	01-W2-W2-S1			
SN2002	01-W2-W2-S2			Rejected

Quantity 1 Of 2

Rejected Quantity 1 Of 0

Done Cancel Rejected Delete

Add the serial numbers into the 'Serial Number' field then press TAB to add it to the grid. If the serial number already exist, an error message will be shown.

To define the bin location, select a serial number and add the bin location to the 'Bin Location' field then press TAB. all bin locations must have the same warehouse. Please note: When using Legacy mode, the Bin Location cannot be specified on this screen.

To add serial numbers belonging to rejected quantities, first enter the serial number, then select it on the grid and press the 'Rejected' button. The serial number will be marked as 'Rejected'.

To remove a wrongly entered serial number, select it and press the 'Delete' button'.

After every serial number has been entered, press the 'Done' button to proceed.

Please note: The added batch/serial quantity must equal to the quantity entered on the partial or complete job/setup form.

2.2.4.3. Product Bin Location Picker

On the 'Product Bin Location Picker' screen scan the Bin Location or select it by pressing F11 or pressing the '...' button then press TAB to add it to the grid. Select the Bin Location line then add the quantity to receive to the 'Quantity' field.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 [Product Bin Location Picker] (00:29)

Production Order #595 mM1101 (Raw Bike Framework) UoM pcs

Operation 96-1 (oPWE -)

Item mM1101 (Raw Bike Framework)

Bin Location

Quantity 1

Bin Location	Quantity
01-W2-W2-S1	0
01-SYSTEM-BIN-LOCATION	1

Quantity 1 pcs Of 1 pcs

Done Cancel Delete

It is of high importance to keep in mind that when working with MultiBranch company databases the user must select a target warehouse from the same branch as defined for the production order, otherwise SAP B1 will reject the inventory transaction. In case of an error the user can fix the issue in the PDC administration screen on the terminal.

2.2.5. Materials

Consumed materials might be reported in different operation phases, depending on their Milestone type.

- Materials with the milestone type 'Depends On Begin' have to be issued when starting a job.
- Materials with the milestone type 'Depends on Every' can be issued in partial and completed PDC bookings.
- Materials with the milestone type 'Depends on End' can only be issued when completing a job.

If the operation has no linked materials, the system will automatically skip this screen.

The screenshot shows the 'Materials' screen in the Mobile PDC application. At the top, the header includes the Mobile PDC logo, the user 'TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison', and the date '06/09/17 12:54 PM'. Below the header, the screen displays the following information:

- Production Order: #596 p1001-1 (Red Bike)
- Operation: 97-3 (oPAS - Bike Assembly)
- Item: (empty field)
- Bin Location: 01-W2-W2-S1
- Quantity: 1

Below this information is a table of materials:

Item	Name	Bin Location	Quantity
mM1001	Painted Bike Framewor	01-W2-W2-S1	1 of 1 pcs Warehouse: 01
m3	Chain	01-W2-W2-S1	1 of 1 pcs Warehouse: 01
m4	Wheel	01-W2-W2-S1	2 of 2 pcs Warehouse: 01

At the bottom of the screen, there are four buttons: 'Done' (F1), 'Cancel' (Esc), 'Serial / Batch' (F2), and 'Bin Location' (F3).

Scan the item code or enter it to the 'Item' field. When the 'Can insert new materials into production orders' option is enabled on the Thin client settings, the user might be able to add items not linked to the operation.

Select the line of the material. If you scan the item code of the material or enter it to the 'Item' field, the material line will be automatically selected.

After that the cursor will be automatically positioned into the Quantity field. Here you can enter the used quantity and click on 'Add' or 'Update'. To add the entered quantity to the already booked quantity, press 'Add'. To overwrite the already booked quantity with the entered quantity, press 'Update'. When the 'Can insert new materials into production orders' option is enabled on the Client 2 tab, new materials can be added during the booking. Scan the item code or enter it to the 'Item' field then press TAB. The item will be listed on the grid. Add the consumed quantity and the bin location as described above. After the booking is processed, a new material line is automatically inserted before the operation on the production order.

If the materials are serial or batch managed, you have to select the batches/serials that were used. Select the line of the material then press the 'Serial/Batch' button. If the material is managed by batches, the Material Batch Number Picker screen will open. (Please see: [2.2.5.1. Material Batch Number Picker](#)) If the material has serial numbers, the Material Serial Number Picker screen will open. (Please see: [2.2.5.2. Material Serial Number Picker](#))

Please note: If you don't enter any quantity on the Materials screen, and click on Serial/Batch button, then the needed quantity will be zero. It means the user can add as many serial/batch numbers as he wants, but he cannot add more than the remaining quantity for the operation.

If the 'Skip material serial/batch quantities screen' option is enabled on the Thin client 2 tab, this button will not be active and the serial/batch numbers will be determined by a custom query. For more information about the custom query please see: [Material serial/batch number](#)

The default bin location is the bin location specified for the operation but it can be adjusted. Scan the

source bin location or add its code to the Bin Location field or select it from a list after pressing F11. To add materials from multiple bin locations select the material then press the 'Bin Location' button. The Material Bin Location Picker screen will open. (Please see: [2.2.5.3. Material Bin Location Picker](#)) When using the Legacy mode, the Bin Location button is not displayed and the Material Bin Location Picker screen cannot be reached.

After the transaction is processed by the PDC processor, the booked materials will be issued with an Issue from Production document.

2.2.5.1. Material Batch Number Picker

Add a batch to the grid by scanning the batch number or entering it to the 'Batch Number' field then press TAB. Only existing batches can be added. Select the batch on the grid then add the quantity to the 'Quantity' field and scan the Bin Location or enter its code to the Bin Location field then press TAB. If the bin location is specified, the batch must exist in the bin location with the specified quantity.

All batch numbers must have the same warehouse.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Material Batch Number Picker (00:29)

Production Order #602 p1001-1 (Red Bike) UoM

Operation 103-2 (oPWE - Welding)

Item Item01 (Batch nbr)

Batch Number Bin Location 01-SYSTEM-BIN-LOC...

Quantity 1

[Batch]	Bin Location	Quantity	[Avail BL Qty]	[Avail WH Qty]	[Total Qty]
BNR4321 (1) 01 (2)	01-SYSTEM (3)	1 (4)	5 (5)	5 (6)	1 (7)

Quantity (8) 1 Of (9) 1

Done Cancel [Split] Delete

1. Existing batch number
2. Warehouse
3. Bin location
4. Allocated quantity
5. Available quantity in the bin location
6. Available quantity in the warehouse
7. Total allocated quantity
8. Total allocated quantity

9. Needed quantity

To issue the same batch from multiple bin locations, select the batch then press the 'Split' button. The line of the batch will be duplicated but the bin location and the quantity value on the new line will be empty.

Please note: When using Legacy mode, the Bin Location cannot be specified on this screen.

To delete a line, select a line then press the 'Delete' button.

Press 'Cancel' to go back.

Press 'Done' to proceed.

2.2.5.2. Material Serial Number Picker

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 Material Serial Number Picker (00:30)

Production Order #602 p1001-1 (Red Bike) UoM

Operation 103-2 (oPWE - Welding)

Item Item03 (Serial nbr)

Serial Number

Serial Number	Bin Location
SNR0008	01-SYSTEM-BIN-LOCATION

Quantity 1 Of 1

Done Cancel Delete

Add the serial number to the serial number field. Already added serial numbers will be listed on the form. Only existing serial numbers can be added. It is not possible to scan serial numbers from different warehouses.

To delete the serial number, select its line and press the 'Delete' button.

You have to add all needed serial/batch numbers. Partial definition is not possible. After all serial/batch numbers have been defined, you can click on 'Done'.

2.2.5.3. Material Bin Location Picker

On the 'Material Bin Location Picker' screen scan the Bin Location or select it by pressing F11 or pressing the '...' button then press TAB to add it to the grid. Select the Bin Location line then add the quantity to consume to the 'Quantity' field.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 [Material Bin Location Picker] (00:29)

Production Order #596 p1001-1 (Red Bike) UoM pcs

Operation 97-3 (oPAS - Bike Assembly)

Item mM1001 (Painted Bike Framework)

Bin Location

Quantity 1

Bin Location	Quantity	[Available Qty]
01-W2-W2-S1	0	0
01-SYSTEM-BIN-LOCATION	1	9

Quantity 1 pcs Of 1 pcs

Done Cancel Delete

It is of paramount importance that when working with MultiBranch company databases the user must select a source warehouse from the same branch as defined for the production order, otherwise SAP B1 will reject the inventory transaction. In case of an error the user can fix the issue in the PDC administration screen on the terminal, nevertheless.

2.2.6. Confirmation



You will get a confirmation dialogue with all the data you entered.

Click on 'Done' to finish the process. If the booking does not need approval or quality controlling, it will be processed by the PDC Processor. Click on 'Cancel' to go back to the Materials screen where the entered data can be changed.

2.2.7. Complete Setup (Stop Booking)

To finish a setup, press the 'Stop' button. The steps of a setup completion are identical to the steps of a partial completion. After the setup is completed, the system will ask whether to start the job part of the operation. Press 'Yes' to start the job. A start job booking will be created for the operation. Press 'No' to start the job later. Only a 'Complete setup' booking will be created and the user must manually start the job for the operation.

When a setup was finished, the phase is closed and it will not be listed on the Running jobs screen.

2.2.8. Complete Job (Stop Booking)

To finish a job, press the 'Stop' button.



Enter the completed and rejected quantity (if any) for the operation.

Define a Bin Location for material issues/product receipts on the 'Bin Location' field. The default Bin Location is the bin location specified on the PDC Extended Configurations UDT. If no bin location has been defined on that form, the bin location specified for the work center is shown by default. If there is no bin location specified on either form, the bin location is empty by default.

The bin location selected on this screen can be overridden for materials and products.

If the employee has permission to mark operations as completed, the 'Completed' checkbox is active. You can set this permission on the PDC Extended Configurations user table. If the employee checks the 'Completed' checkbox, the operation is marked as 'Completed' and the status of the operation is changed to 'Finished' when the booking is processed. Finished operations cannot be started again.

Press the 'Done' button to proceed.

If there are by-products for the operation or the operation is the last operation on the production order and the product is linked to it with a milestone, 'Products' screen will open up. Please see: [2.2.4. Product and By-Products](#)

If an operation has materials linked to it with a milestone, the 'Materials' screen will open up. Please see: [2.2.5. Materials](#)

After the booking was created, the system will return to the Running Jobs screen or the Start Job screen if the employee has no running jobs. When the 'Logout after PDC bookings' option is enabled on the Thin client 2 tab, the employee will be automatically logged out and redirected to the Main Menu.

After a job is completed, it is not shown on the running jobs screen.

2.2.9. Admin

On the Admin screen the employee can overview the bookings he created. Press the 'Admin' button to open the 'Admin' screen.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - Fred Morrison 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 List Of Hours (00:29)

Unapproved
 Approved
 Rejected
 Processed
 Error

Operation: _____
 Employee: _____
 Work Center: _____
 From: 12/21/16 To: 12/21/16
 Production Order: _____ Refresh

00009193 (1)	6-3 (oPWE - Welding) (2)	(7) Start Job
#505 mM1101 (Raw Bike Framework) (3)		(8) 0 / 0
12/21/16 04:30 PM (4)	wWM2 (5) John Doe (6)	(9) Processed
00009191	6-3 (oPWE - Welding)	Completed Set
#505 mM1101 (Raw Bike Framework)		1 / 0
12/21/16 04:29 PM	wWM2 John Doe	Processed
00009180	5-10 (oPBI - Ball Installation)	Completed Job

1. Allocation Code
2. DocEntry- LineNumber (operation code -name)
3. Production order number. Main product code (name)
4. Booking date and time
5. Work center
6. Employee (who made the booking)
7. State/ Phase
8. Completed/ Rejected quantity
9. Process status

The upper part of the window is a filter. The user can select what type of bookings he wants to see (unapproved, approved, rejected, processed or error) for which operation and work center in which date range. When the user filled the filter fields he has to click on the 'Refresh' button to get the list of the operations in the grid below.

Please note: Only employees with approver role can change the Employee code and see the bookings of other employees. Employees without approver role can only see their own bookings.

Details

To overview the details of a booking, select the operation and press the 'Details' button. First the summary page will be shown. To see the details of the selected materials or products (if any) click on the 'Done' button. To go back to the Admin page, press 'Cancel'.

When the materials/ products are managed by serials or batches, an additional 'Serial/Batch' button is displayed. Press this button to review the added serials/batches. Click on the 'Done' button to proceed.

Modify

If the *Worker can modify bookings* setting is enabled, employees can change their bookings. If the *Approver can modify bookings* setting is enabled, employees with approver role can change any

bookings.

To modify the booking, press the 'Modify' button. The following can be modified:

- The booked time.
- Completed status. (Please note: Only employees/approvers who have the permission to mark an operation as 'Finished' can modify the completed status. The permission can be set on the PDC Extended Configurations user table.)

It is not advised to use this function for correcting material/product bookings. Use these SAP BO functions instead:

- right-click menu on the Production order: Report completion >Return components
- Goods Issue/ Goods receipt
- Disassembly order

Complete

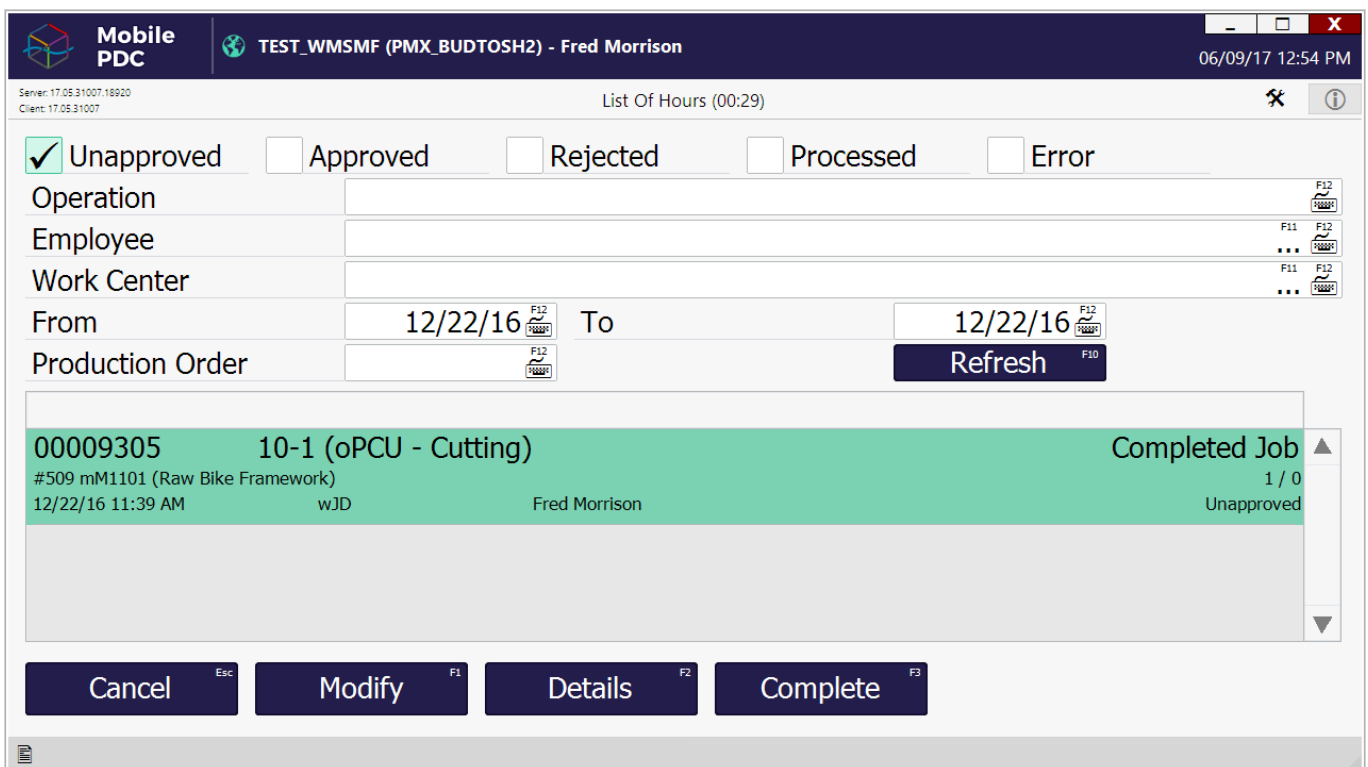
To finish a job booking, press the 'Complete' button. Only jobs with 'Started' status can be completed.

2.2.10. Approval of PDC Bookings

PDC supports approving of the PDC bookings by the appointed approver person only.

If there is at least one material/product where the 'NeedsPDC Approval' option is set to 'Yes', approval is needed for the PDC booking. To approve the PDC booking the approver employee has to log in to the mobile PDC, and click on the 'Admin' button on the Start Job page.

The filter form will open preloaded with all the operations that are unapproved:



The filter fields works as described in the **2.2.9. Admin section**. Approver employees can see the

bookings of other employees too. Press the 'Details' button to review or press the 'Modify' button to revise the details of the selected booking.

On the summary page additional 'Approve' and 'Reject' buttons are displayed if the status of the selected operation is 'Unapproved'.

Field	Value
PDC Booking	#00009305
Production Order	#509 mM1101 (Raw Bike Framework)
Operation	10-1 (oPCU - Cutting)
Summary	1 completed quantity 0 rejected quantity
Serial / Batch Numbers	0 serial numbers and 0 batch numbers
By-Products	1 by-products
Materials	1 materials
Error	

Buttons: Done (F1), Cancel (Esc), Approve (F2), Reject (F3)

If the PDC booking is rejected, the material bookings will not happen and the booking will be marked as 'Rejected'.

If the PDC booking is approved, it will be processed by PDC Processor.

Employees without approver role cannot perform an operation that has materials or products that needs to be approved. If a non-approver employee starts a job for such operation, it will be disposed automatically to an approver employee. When this setting is enabled, sticky jobs completed by approver employees will be automatically approved.

2.3. Quality Controlling

Quality Controlling is a manufacturing shop-floor quality control/assurance data collection function of Produmex Manufacturing. It supports two major processes:

- QC for production order operations
- QA for outsourcing deliveries

When a worker reports the (partial) completion of an operation with the PDC system (either via the mobile client or shop floor PDC wizard), a QC officer can report QA data for that operation. The QC

officer can qualify an operation as rejected (repairable or un-repairable) or approved. The QA data are stored in a database (in the @BXPQAPARAMSJRNL table), and custom reports can be created by the customers or the partner. Saving QA data to that table is the only result of the quality controlling terminal; any additional steps that should be taken after the quality control process (workflow, repairing job, etc.) should be implemented separately as an addition to the quality controlling terminal.

When a delivery (Goods Receipt PO) document is created for an outsourced operation, a QC officer can enter QA data for that delivery. Based on the quality qualifications, the outsourced operation may be rejected.

2.3.1. Set up quality controlling

In order to set up quality control parameters for an operation, enable the 'Production Operation Parameters' option on the PDC tab of Produmex Manufacturing Settings. Next open the Operation Parameter Types form from: Tools > User-Defined Windows.

Here company specific reporting parameter types (dimensions) can be specified. Each operation can have multiple parameter types associated with it.

Typically in QA these parameters are some metric of the component worked on or the result of some QC tests. In the following example four parameter types were added, that will cover all the relevant features.

#	Code	Name	Default Value Default	Is Deleted	Maximum Value Default	Minimum Value Default	UoM	Valid Values	Value Type	Last Modif.
1	COMM	Comment		No					String	
2	DD	DueDate		No					Date	
3	Q	Quantity		No					Float	
4	QUAL	Quality		No					Integer	
5	Y/N	Approval		No				Y:OK N:Defective	Valid Valu	
6				No					String	

Based on the value type

- String: Text can be specified freely. Here it is used for a comment parameter type.
- Float, Integer, Boolean: Numeric fields can be used for measurement.
- Valid Values: This type can be used to create a 'choose from list' parameter. With a taglanguage, the entries in the list can be specified. The syntax is the following: 'Value in database':'Description'|'Value in database':'Description'|... For example in this case Y: OK|N: Defective was specified.
- Date, Time: Date and time is best stored in these types.

Please note: It is not necessary to add timestamp to every operation, as this is automatically collected.

Next open the Production > Manufacturing Operations form. Here, under the Parameters tab, the used parameters can be specified for each kind of operation.

In the Type column, the previously defined parameter types can be chosen. To use the parameters for the mobile QC terminal the value at the Quality Assurance column has to be set to true. In this example four parameters were specified.

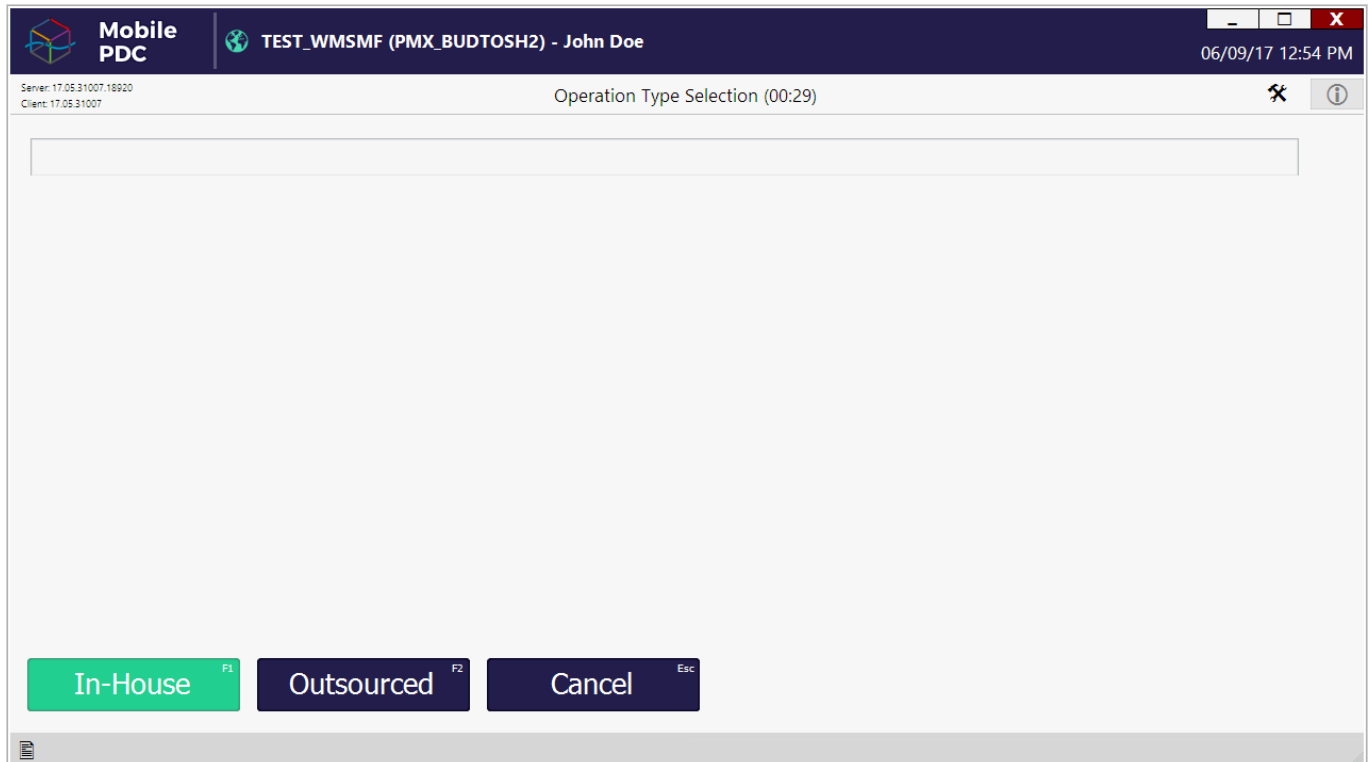


2.3.2. Logging in to QC

Only employees appointed quality inspectors can log into Quality Control.

In the next screen the employee can choose between the two mentioned functions: the in-house QC and the outsourced QC.

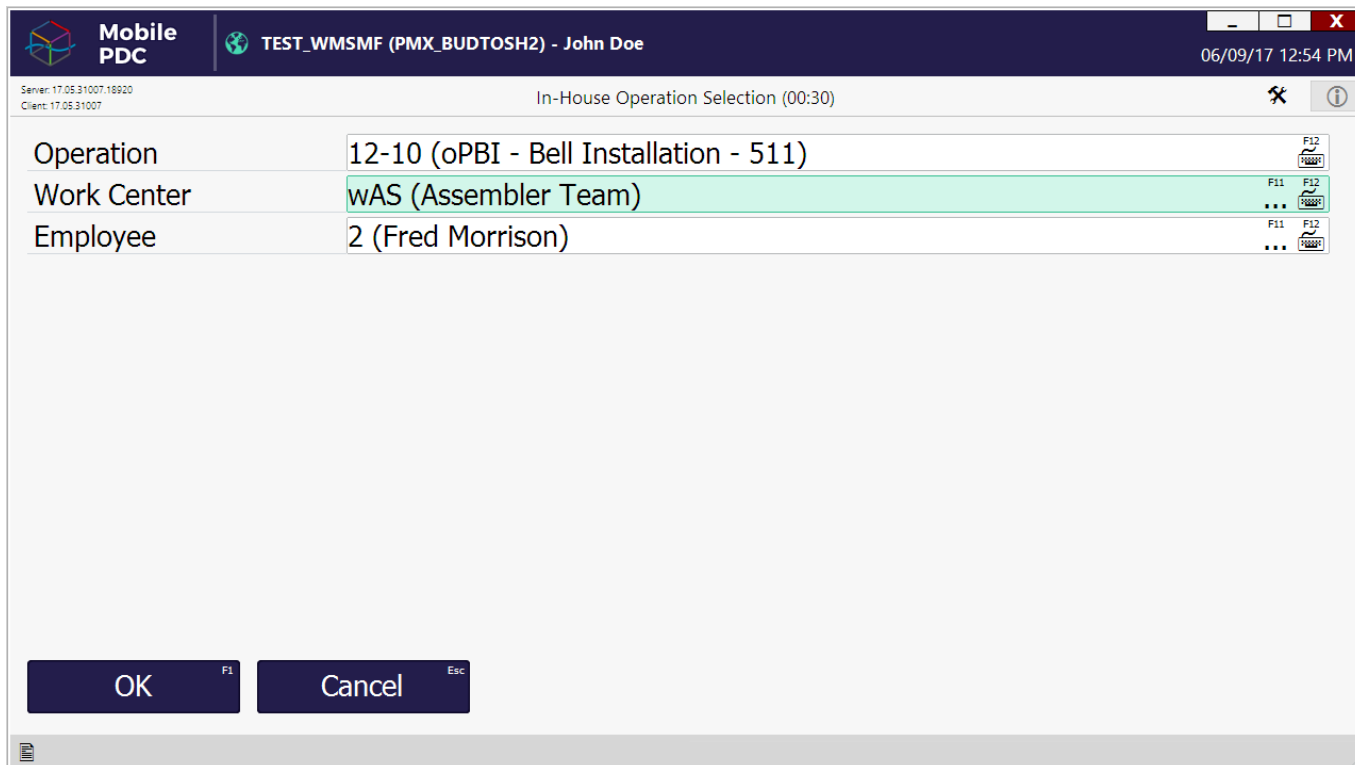
Select the type of the operation on the next screen. Press the 'In-house' button to inspect in-house operations, or press the 'Outsource' button to inspect the quality of outsourced products. Press the 'Cancel' button to go back to the previous screen.



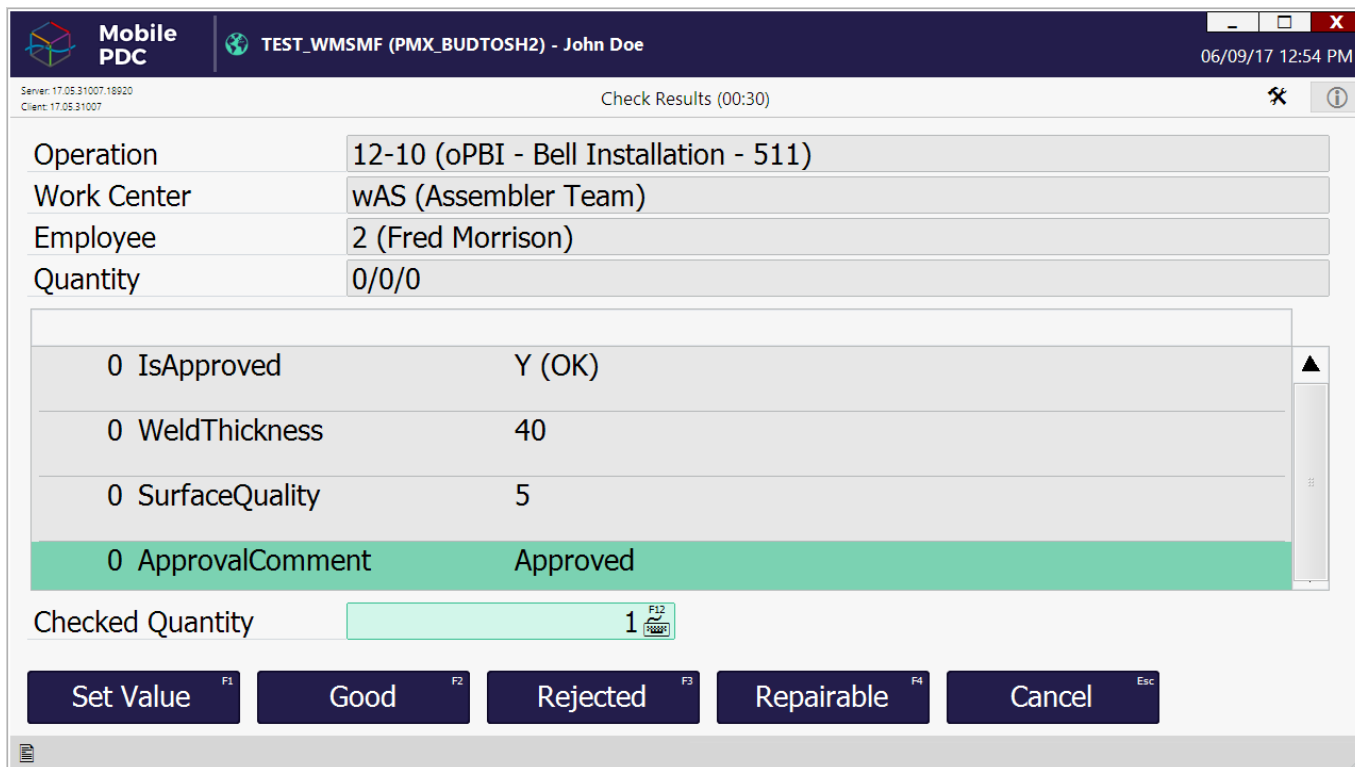
2.3.3. In-House QC

On the 'In-House Operation Selection' screen enter an operation ID. Choose a work center and the employee who performed the operation. Only operations with at least one PDC booking can be

selected.



The system will proceed to the 'Check Results' screen. On this screen the quality of the operation can be reported with the previously defined parameters. Add the number of the tested instances to the 'Checked Quantity' field.



To specify parameters, select the parameter from the list and press the 'Set Value' button. This will prompt the 'Set Value' form.

The method for entering the value varies according to the value type of the parameter:

- String: Enter the text to the textbox.
- Float, Integer, Boolean, Date -Time: Add the value to the textbox.
- Valid Values: Select a value from the list.

To approve the operation quality, press the 'Good' button.

To reject the operation, press the 'Rejected' button.

To register the operation as repairable, press the 'Repairable' button.

2.3.4. Outsourced QC

For more information about outsourced operations please see: [Outsourced Manufacturing](#).

The Quality Control of an outsourced operation can be handled by selecting 'Outsourced' on the Operation Type Selection form. The procedure is the same as an in house operation with the one exception of the selection form.

In the Outsourced Operation Selection window the operation can be specified and then the supplier and the instance of the delivery can be selected.

Field	Value	Actions
Operation	5-3 (oPAS - Bike Assembly - 504)	F12
Supplier	bGU (Bike Gurus)	F11, F12, ...
Delivery	500 (Quantity: 1.000000 Due date: 12/21/2016 12:00:00 AM)	F11, F12, ...

Buttons: OK (F1), Cancel (Esc)

After this the procedure is the same as introduced in the in-house case.

Quality Assurance entries can be seen on: Tools > User Defined Windows > QualityAssuranceJournal

2.4. Workshop Monitor

On the workshop monitor ongoing operations can be overviewed. The workshop monitor will display data supplied by the **'bxtc_pdc_workshop_monitor_query'** user query. Before using the workshop monitor, create the custom query. See the example query here: [Workshop Monitor](#)

Only employees appointed as Workshop Monitor inspector can log in the Workshop Monitor.

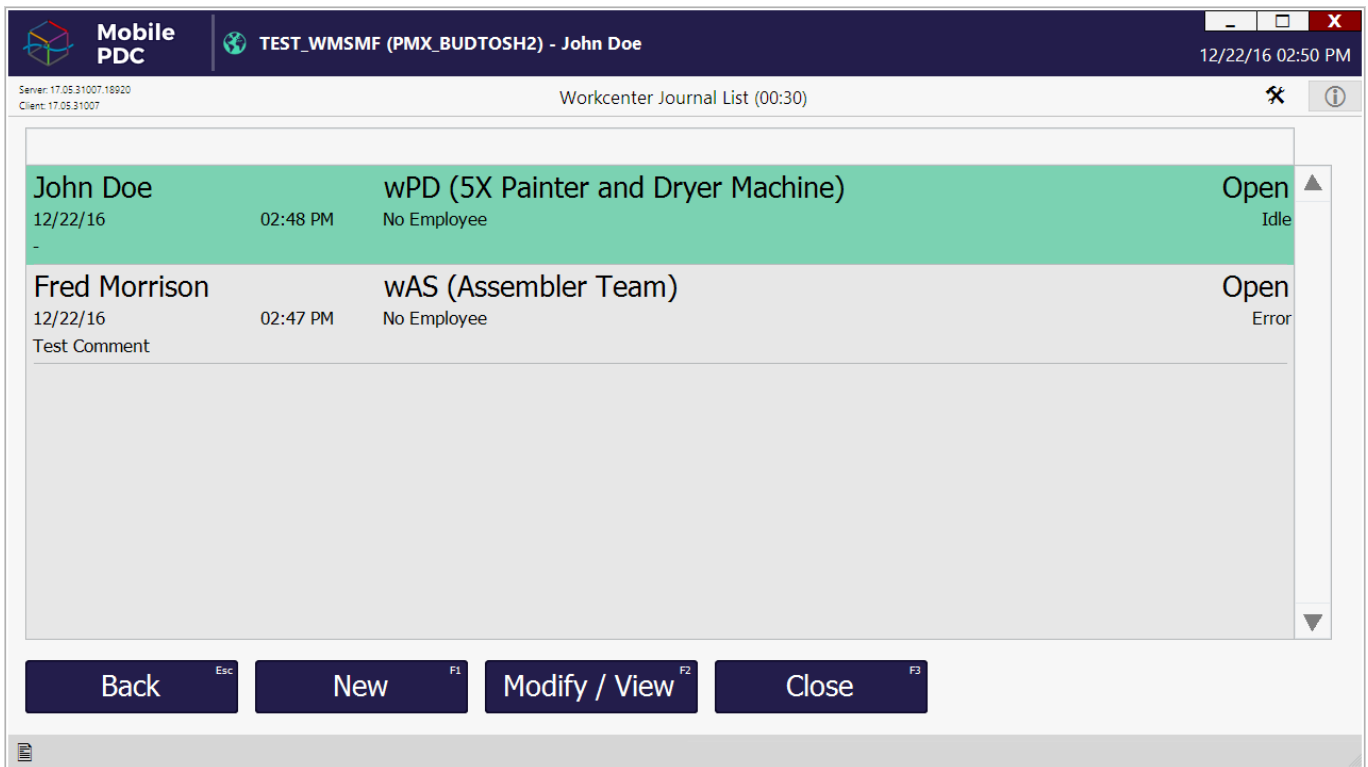


2.5. Work Center Journal

With Work Center Journal tickets work center unavailability reasons can be reported. To create work center journal entries, login the Work Center Journal module. Every employee can create WC journal entries or modify their entries. Only employees appointed as WC admins can close journal entries or modify entries created by other employees.

2.5.1. Work Center Journal List

After the login, the list of open entries are displayed.



Press the 'Back' button to go back to the login screen.

Press the 'Modify/View' button to review or modify the elected entry. The 'Work Center Journal Entry' screen of the selected entry will open up.

If the employee is appointed to the Work Center Admin role, an additional 'Close' button is displayed on the screen. Press this button to close the entry.

Press the 'New' button to create a new entry. The 'Workcenter Journal Entry' screen will be prompted.

2.5.2. Work Center Journal Entry



On the 'Information' field the employee name and the date of the creation is displayed. Non modifiable field.

Enter the code of the work center to the work center field or select it from a list after pressing F11.

Select a reason for the work center unavailability. The possible values are: 'No Employee', 'No Material' or 'None'. Select an entry type. The possible values are: 'Idle', 'Error' or 'None'. It is possible to add remarks to the journal with the 'Comment' textbox.

Press the 'Done' button to create the entry or press the 'Cancel' button to go back to the previous screen.

Work Center Journal entries can be reviewed in the office environment as well. Open the Work Center Journal UDT via: Tools > User Defined Windows. On this form closed journal entries are also displayed.

2.6. Work Center Tickets

With work center tickets machine failures and malfunctions can be reported.

2.6.1. Setup Work Center Ticket types

If you would like to use the Work Center Ticket module, it is recommended to setup ticket types for the work center. Open the Form via: Tools > User Defined Fields > WorkCenterTicketTypes. Add the ticket code and name then press 'Update'.



2.6.2. Work Center Ticket List

After the login, the list of open tickets are displayed.

The screenshot displays the 'Workcenter Ticket List' interface. At the top, the Mobile PDC logo and user information 'TEST_WMSMF (PMX_BUDTOSH2) - John Doe' are visible. The date and time '12/22/16 03:41 PM' are shown in the top right. The main content area shows a single ticket entry with the following details:

- Creator: Fred Morrison (1)
- Date and Time: 12/22/16 03:40 P
- Comment: Bearing misalignment (2)
- Work Center: wWM1 (BXC 21 Welding Machine) (3)
- Status: (4) Open
- Ticket Type: (5) BearingFailure

At the bottom of the screen, there is a toolbar with four buttons: 'Back' (Esc), 'New' (F1), 'Modify / View' (F2), and 'Close' (F3).

1. Creator name, date and time of the creation
2. Added comment
3. Work center code and description
4. Ticket status
5. Ticket type

Press the 'Back' button to go back to the login screen. Press the 'Modify/View' button to review or modify to selected ticket. The 'Work Center Ticket Entry' screen of the selected entry will open up.

If the employee is appointed to the Work Center Admin role, an additional 'Close' button is displayed on the screen. Press this button to close the ticket.

Press the 'New' button to create a new entry. The 'Workcenter Ticket Entry' screen will be prompted.

2.6.3. Work Center Ticket Entry

The screenshot shows a mobile application interface for 'Workcenter Ticket Entry'. The header includes the 'Mobile PDC' logo, the user name 'John Doe', and the date '12/22/16 03:47 PM'. The form fields are: 'Information' (John Doe - 12/22/16 03:46 PM), 'Work Center' (wPD (5X Painter and Dryer Machine)), 'Comment' (empty), and 'Entry Type' (Accident). The 'Entry Type' dropdown is open, showing 'Accident' and 'BearingFailure'. At the bottom, there are 'Cancel' and 'Done' buttons.

On the 'Information' field the employee name and the date of the creation is displayed. Non modifiable field.

Enter the code of the work center to the 'Work Center' field or select it from a list after pressing F11. Add a comment to the 'Comment' textbox.

Select an entry type. Every ticket type defined on the Work Center Ticket Type UDT can be selected.

Press the 'Done' button to create the entry or press the 'Cancel' button to go back to the previous screen.

Work Center Ticket entries can be reviewed in the office environment as well. Open the Work Center Tickets UDT via: Tools > User Defined Windows. On this form closed ticket entries are also displayed.

2.7. Simple Job module

With the Simple Job module, the user can start and complete a job and a setup at one step.

2.7.1. Start Job

Field	Value
Default Work Center	wPD
Operation	13-1 (oPPD - Painting and Drying - 512)
Work Center	wPD (5X Painter and Dryer Machine)

Buttons: Done, Admin, Clear, Logout

The default work center is the work center defined for the terminal on the PDC Terminal Configuration user table. To disable the default work center, set the 'Work Center Ignore' option to 'Yes' for the employee on the PDC Extended Configuration user table]]. When there is a default work center, bookings can be created only for operations with the feature assigned to the default work center.

Add the *DocEntry-LineNumber* identifier to the 'Operation' field.

If there is a default work center, the work center field will be populated automatically. The user cannot modify the work center if the default work center is mandatory. The default work center is mandatory in the following cases:

- The employee and/or the work center has no configurations set on the PDC Extended Configuration user table and the 'PDC Modifiable WC for Start' option is disabled on the Thin Client tab of Produmex Manufacturing settings.
- The 'Work Center Modification' option is disabled on the PDC Extended Configuration user table for the employee and/or work center.

Otherwise the work center is not mandatory and the user can select an alternative work center.

To erase the content of the modifiable fields, press the 'Clear' button.

To log out as the current employee, press the 'Logout' button.

To see the Admin screen, press the 'Admin' button. For more information about the Admin function please see: [2.2.9. Admin](#)

Press the 'Done' button to proceed.

Mobile PDC TEST_WMSMF (PMX_BUDTOSH2) - John Doe 06/09/17 12:54 PM

Server: 17.05.31007.18920 Client: 17.05.31007 Complete Job (00:30)

Production Order	#512 mM1001 (Painted Bike Framework)	UoM	pcs
Operation	13-1 (oPPD - Painting and Drying)		
Started	12/22/16 03:50 PM		
Bin Location	01-SYSTEM-BIN-L...	Setup	<input checked="" type="checkbox"/>
Duration	25 min	This Day	
Quantity	1	Rejected Quantity	0

Done F1 Cancel Esc

2.7.2. Complete Job

Scan the destination Bin Location or enter its code.

The default Bin Location is the Bin Location defined for the employee/work center on the PDC Extended Configuration user table. If there is no default bin location defined for the employee/work center on the PDC Extended Configuration user table, then the default bin location is the bin location defined for the work center.

To create setup bookings too, tick the 'Setup' box. The box is only active if there is setup time defined for the operation. Scan the destination Bin Location or enter its code.

Then enter the completed and rejected quantity. When the user enters the completed/rejected quantity, the duration is automatically calculated.

- If setup time is defined for the operation and the 'Setup' checkbox is checked, the duration is calculated as $\{(\text{Setup base quantity} + \text{Operation base quantity}) * (\text{Completed quantity} + \text{Rejected quantity})\}$.
- If there is no setup time defined for the operation and/or the 'Setup' checkbox is not checked, the duration is calculated as $\{\text{Operation base quantity} * (\text{Completed quantity} + \text{Rejected quantity})\}$.

After the Duration field is filled, the system also calculates the Start time as $\{\text{Current Date/Time} - \text{Duration}\}$.

If the 'Manual Job Duration' option is enabled on the PDC Extended Configuration user table, the user can enter the duration. When the user enters or modifies the duration, the system recalculates the Start time. Please note: The completed quantity will not be recalculated based on the duration.

If the 'Comment Visible' option is enabled on the PDC Extended Configuration user table, an

additional Comment field is displayed on the screen.

Press the 'Done' button to proceed.

When there are materials linked to the operation with a milestone, receive the materials. Please see: [2.2.7.Materials](#)

When there is a by-product linked to the operation or the operation is the last one on the production order and there is a milestone set for the product, receive the (by-)products too. Please see: [2.2.6.Products](#)

Operation Details

Because the user does not start the job manually, the booked time cannot be measured. The system will automatically create the 'Start Setup', 'Completed Setup', 'Start Job' and 'Completed Job' bookings. The Posting Time of the Complete Job booking is the time when the PDC booking was created. The Posting Time of the 'Start Setup', 'Completed Setup', 'Start Job' bookings is calculated backwards.

Production Order Operation Details - [DocNum: 529, Line: 1]

Operation Code	oPPD		Operation Break	Allowed
Operation Name	Painting and Drying		Operation Time UoM	Minutes
Before Time	min	0.000	Is Parallel Operation	<input type="checkbox"/>
Safety Time	min	0.000	Is Overlapping Operation	<input type="checkbox"/>
Setup Time	min	5.000	Max Parallel Operations	0
Job Time	min	20.000	Overlapping Quantity	0.000
Teardown Time	min	5.000	Allocation Window	0.000
After Time	min	400.000	Min Job Quantity	0.000
Time Base	1.000		Message	
Planned Quantity	2.000		Is Pinned	<input type="checkbox"/>
Completed Quantity	1.000		Pinned Start Date	
Rejected Quantity	1.000		Pinned Start Time	00:00

Time UoM	Minutes	Open Job	53.333
Booked Job	0.000	Open Setup	5.000
Booked Setup	0.000	Open Teardown	5.000
Booked Teardown	0.000	Planned Job	53.333
State	Created	Planned Setup	5.000
Booked Completed Quantity	0.000	Planned Teardown	5.000
Booked Rejected Quantity	0.000		

Posting Date	Posting Time	Posting Code	Compl. Qty.	Rej. Qty.	Mach. Duration	Pers. Duration	Emp. ID	Emp. Name	Reason ...
01/03/17	10:12	Start Setup	0.000	0.000	0.000	0.000	1	Doe, John	
01/03/17	10:17	Completed Setup	0.000	0.000	0.000	0.000	1	Doe, John	
01/03/17	10:17	Start Job	0.000	0.000	0.000	0.000	1	Doe, John	
01/03/17	10:57	Completed Job	1.000	1.000	40.000	40.000	1	Doe, John	

Buttons: OK, Cancel, Allocations

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