# Functional Guide

Produmex Operator uses production orders as an input for defining jobs. The planned quantity of the components is used for defining normal jobs and the additional quantity is used for defining setup jobs.

Because SAP B1 links resources to projects with production orders, the Produmex Operator provides solution not only for manufacturing but also for project management.

Assign a job to an employee

Produmex Operator allows the user to assign only one employee to a job. In this case only the assignee will be able to make bookings for that job.

Create a 'Task' activity linked to the production order. It is recommended to define a new subject for assignments. Select this new subject as the subject of the task.
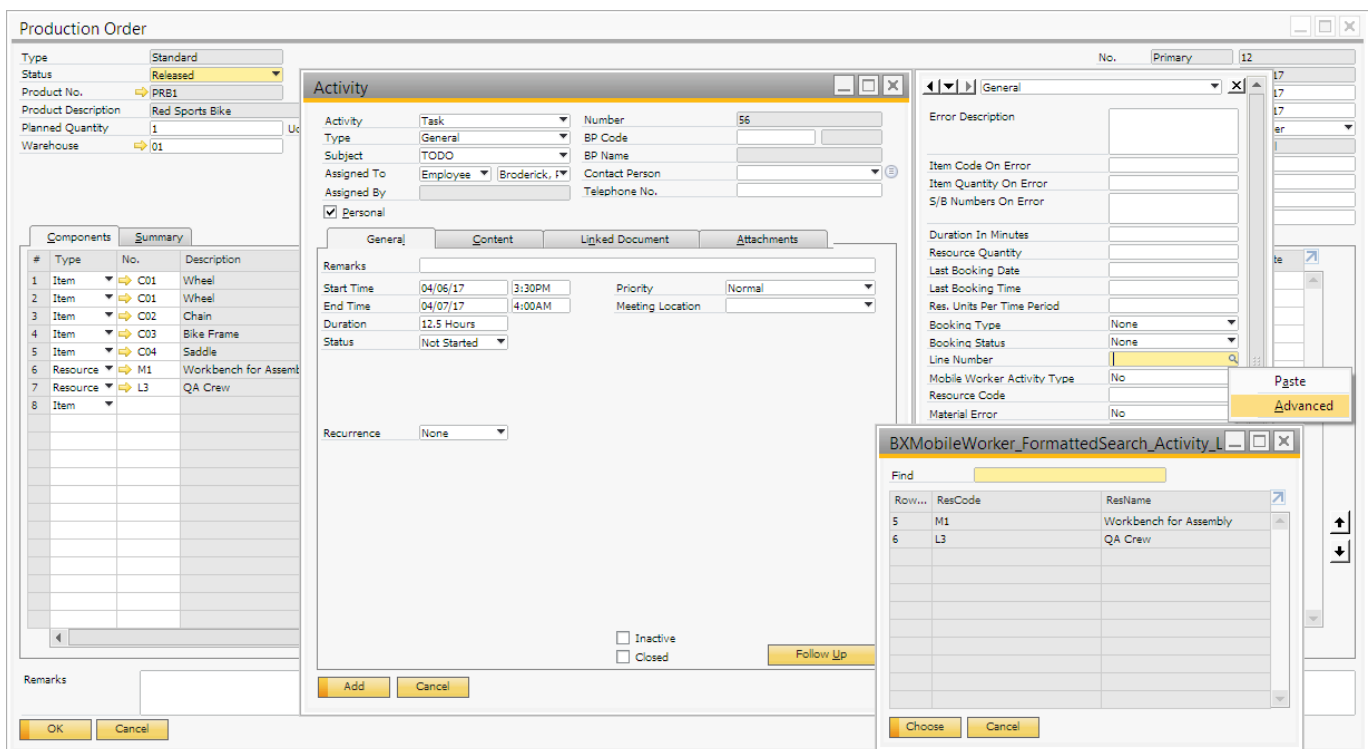
Select the 'Employee' option as the 'Assigned To' and then select the given employee on the next box.

Specify the details of the task on the General tab.

Make sure that the production order is selected as the linked document on the 'Linked Document' tab.

On the User Defined Fields, assign the resource to the activity on the Line Number field.

- When there is only one resource component, click in the Line Number field. The system automatically fills the Line number, Resource Code and Resource Name fields
- When there are more than one resource component on the production order, click in the Line Number field. Select the 'Advanced' option from the right-click menu then select the resource on the

opening screen. After the resource has been selected, the system automatically fills in the Resource Code and the Resource Name fields.

Mobile Device

Login
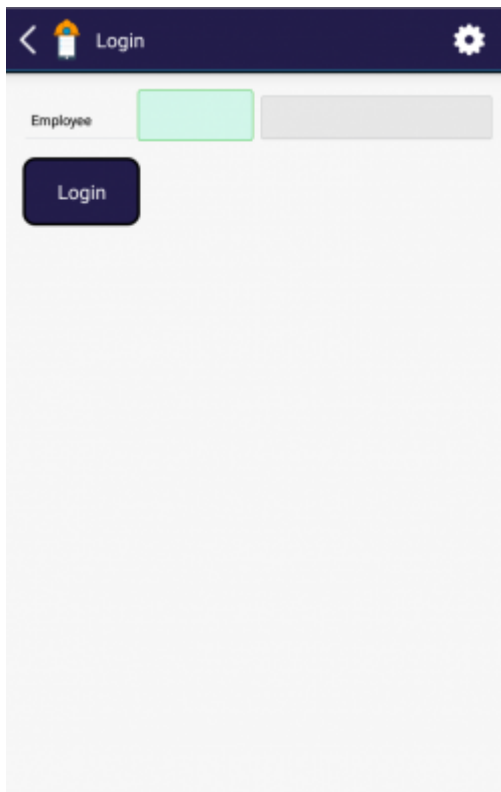
Enter the *Ext. Employee No.* code defined in the Employee Master Data to the textbox.
The system automatically fills the next field with the name of the employee.

When there is an employee configured, on the login screen the employee code and name are automatically filled on the Login screen.
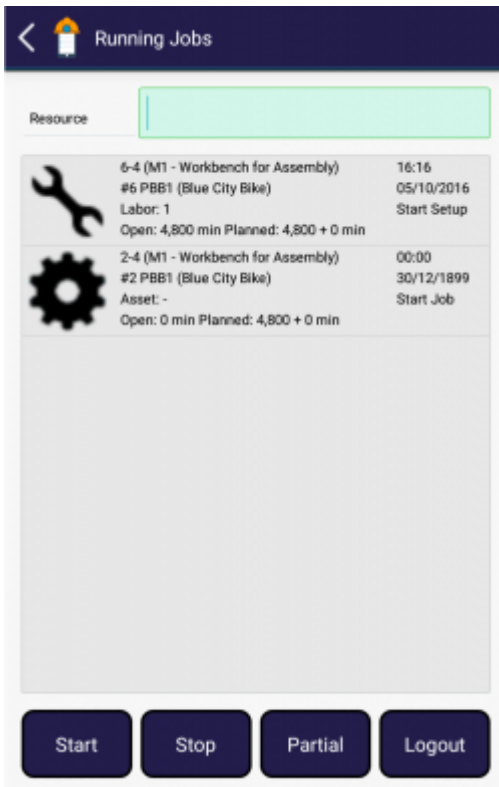
Press the 'Login' button to log in.
Press the gear icon to open the Configuration screen.

Press the [icon] icon to close the app.

1. Stop Watch Mode

When the Simple Work Time Mode is not enabled on the Configuration screen, the system runs in Stop Watch mode.

1.1. Running jobs

After the login, the system list the employee's open jobs and setups. When there is no started job or setup for the employee, the system automatically proceeds to the Start Job screen.

Setup jobs are indicated with the ⚙ icon.

Normal jobs are indicated with the ⚙ icon.
To start a new job, press the 'Start' button. The system will proceed to the **Start Job** screen.
To complete a job, select the job and press the 'Stop' button. The timer of the job will stop to run and the system will proceed to the **Complete Job** screen.
It is also possible to book hours to incomplete jobs. Press the 'Partial' button. The timer will be stopped and restarted after the booking.

Press the 'Logout' button or the 📱 icon to log out as the current employee.

1.2. Start Job
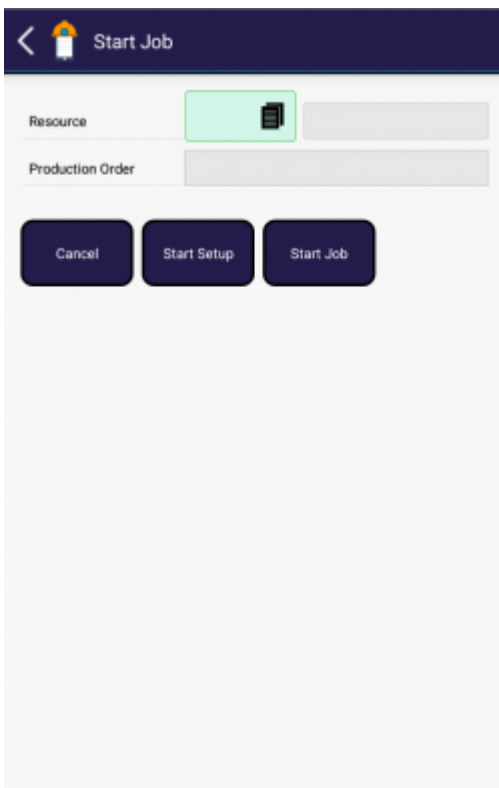
Identify the resource. When the 'Resource Picking Allowed' option is set to true on the Booking Config window, resources can be selected from a list. Press the 📋 icon on the 'Resource' field to open the **Resource Picker** screen. After the resource has been identified, the system automatically fills the text fields.

Displayed information:
Production order number - Resource line number
Resource Code- Name
#Production order number: Product code - Name

Press the 'Start Job' button to start a job.

Press the 'Start Setup' button to start a setup job.
If the 'Enforce Planned Setup' option is enabled on the Booking Config window, then the job only can be started after the setup is completed. If the 'Setup Bookings Allowed' option is not enabled on the Booking Config window, then no setup bookings can be started.

When pressing the Start Job/Start Setup button, the time for the job/setup will start to run.
The system will go back to the **Running Jobs** screen. After a job has been started, it will be listed among the running jobs.
Press the 'Cancel' button or the Produmex Operator icon to go back to the Running Jobs screen without starting a job/setup.

1.2.1. Resource Picker
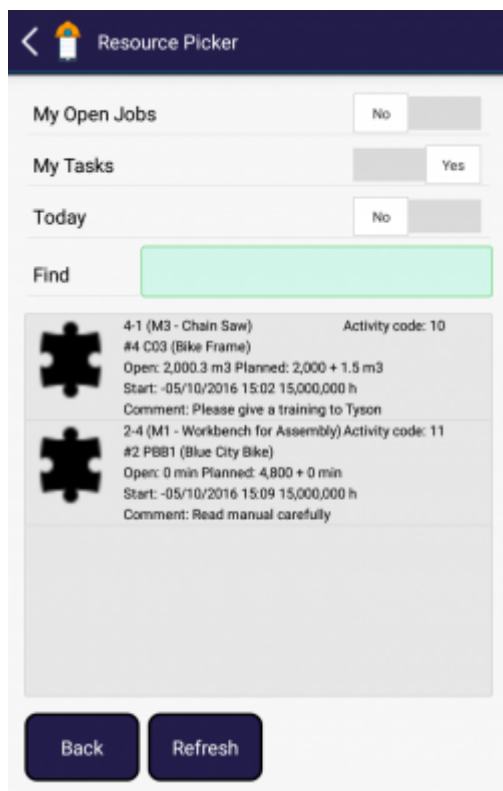
Select the resource from the list of jobs. Jobs are listed in reverse order. Only resources from released production orders are listed. To filter the list, switch the sliders:

- *My Open Jobs:* When enabled, only jobs with reported hours are listed.
- *My Tasks:* When enabled, only jobs assigned to the user are listed.
- *Today:* When enabled, only jobs assigned to the current day are listed.

It is also possible to filter the list by entering text to the *Find* textbox. When the device has a scanner, the list can be filtered by scanning barcodes as well.

To apply the filers press the 'Refresh' button.

Press a resource to select it. The system will go back to the **Start booking** screen.
To go back to the previous screen without selecting a resource, press the 'Back' button or the Produmex Operator icon.

Displayed information on the resource line:

1. Production order DocEntry - Line of the resource (Resource code and description)
2. Production order number, Product code (Product name)
3. Open: Open quantity for the resource
   Planned: Planned quantity + Additional quantity for the resource
4. Start: Starting date and time of the activity, planned length
5. Comment: The remark from the activity.
6. Activity code: The number of the activity linked to the job.
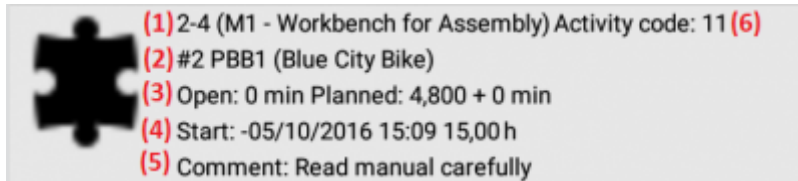
1.2.2. Labor

If the resource type of the selected resource is Labor, an additional 'Labor' field is displayed on the screen. On this field the employee number and the name of the employee assigned on the 'Employees' tab of the Resource Master Data is displayed. If there is more than one employee assigned on the Resource Master Data, select the employee from a list after pressing the icon.
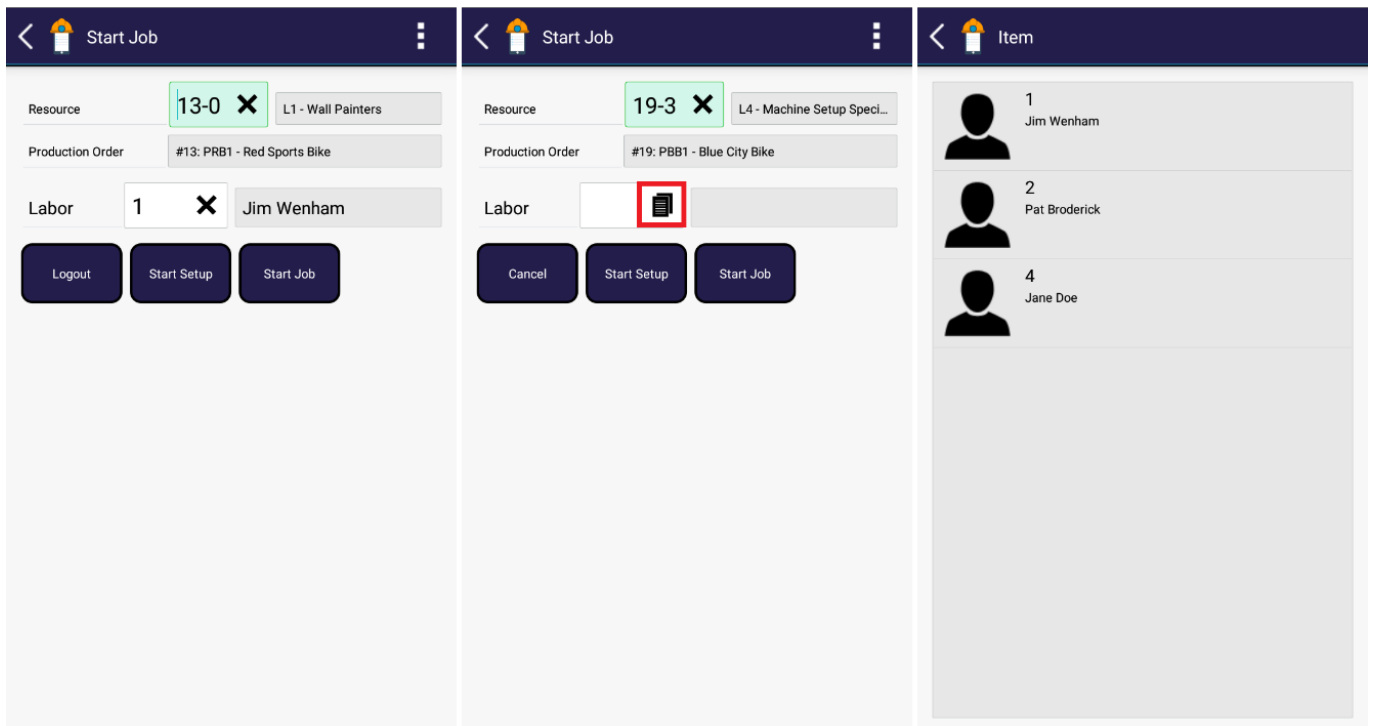
The employee selected as Labor will be added to the 'Labor Employee Number' UDF on the Activity. The labor employee number is for information only.

1.2.3. Machine

If the resource type of the selected resource is Machine, an additional 'Machine' field is displayed on the screen. On this field the machine number and the name of the machine assigned on the 'Fixed Assets' tab of the Resource Master Data is displayed. If there is more than one asset assigned on the Resource Master Data, select the asset from a list after pressing the icon.
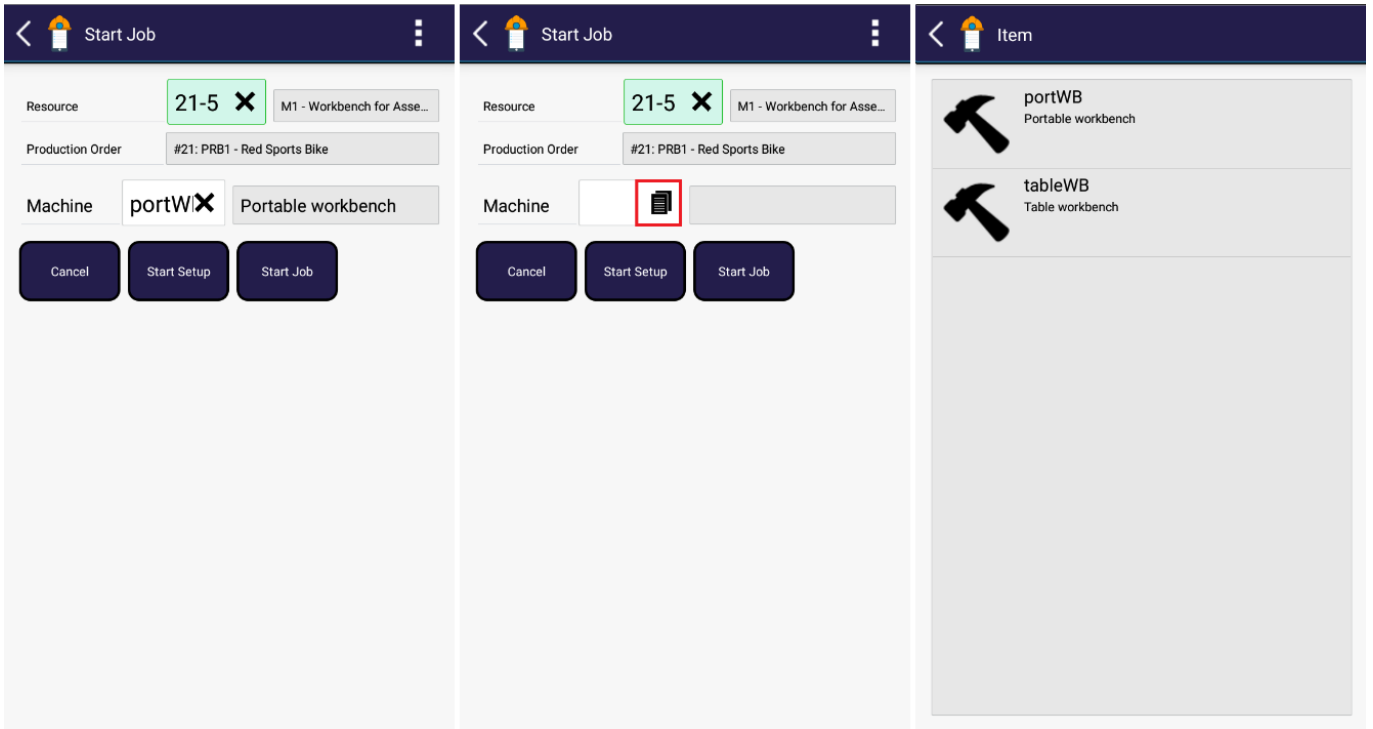
The asset selected as the Machine will be added to the 'Machine Code' UDF on the Activity.
The machine code is for information only.
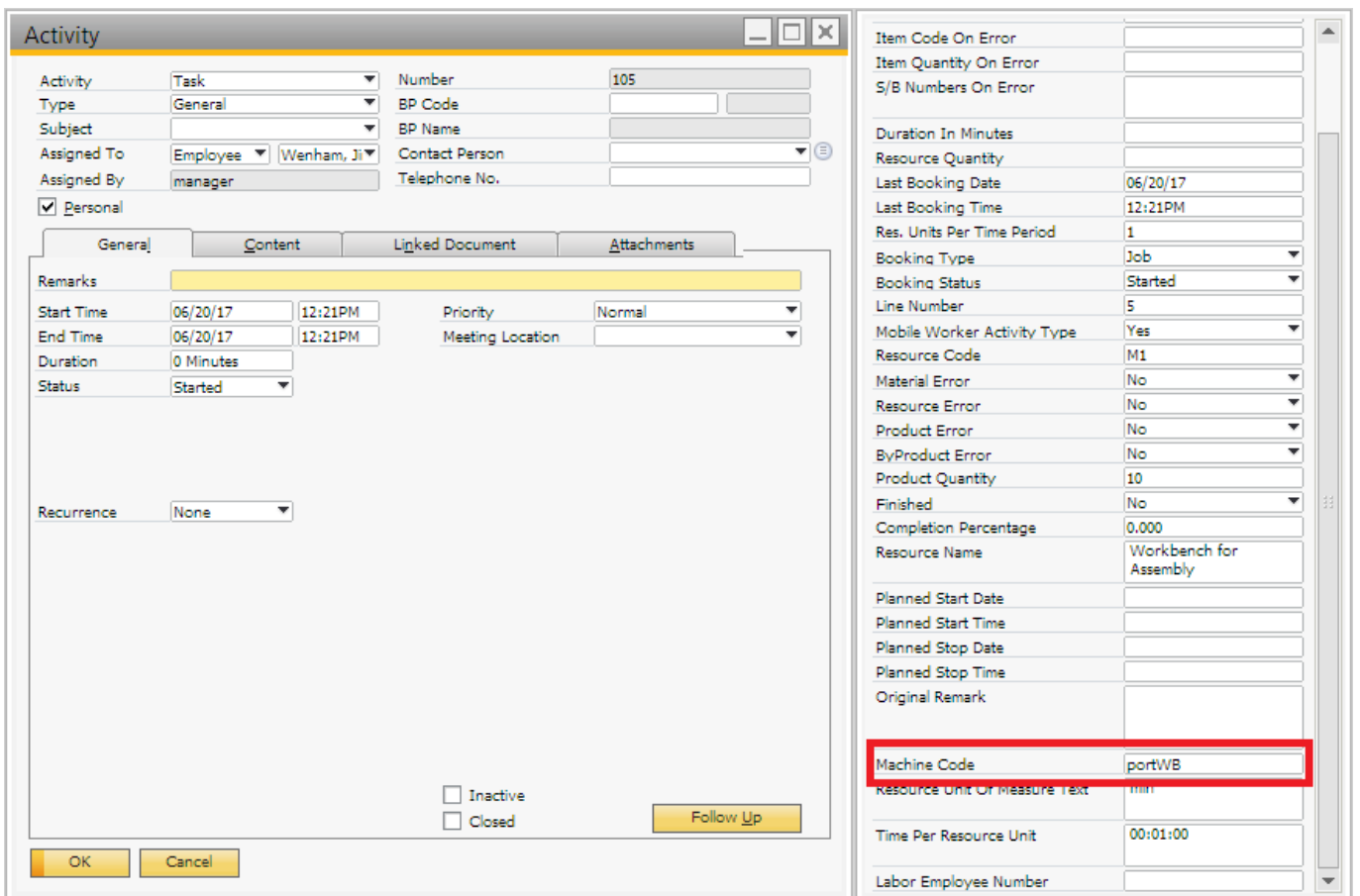
1.3. Complete Job

The details of the job are displayed on the screen. Add the produced quantity and adjust the used

resource quantity if needed. *Only values in white boxes can be modified.*

Production order: Production order number, the code and name of the product.

Resource: Resource code and description.

Started: The date when the job was started.

Minutes: The measured duration in minutes.

This day: Number of hours reported by the employee on the current day.

Time/ Res. Unit: The Time per Resource Units defined in the Resource Master Data of the resource.

Res.Unit/Time: The Res. Units per Time Period defined in the Resource Master Data of the resource.

Product quantity: The produced quantity. If the 'Prefill Product Quantities' option is set to true on the [Booking Config window](), the default value is calculated based on the duration. Otherwise the default value is zero.
When the 'RFP for main product' option is not set, then the Product quantity field is not displayed on the screen and therefore cannot be modified.

Planned quantity: The product's planned quantity in the production order.
When the 'RFP for main product' option is not set on the [Booking Config window](), then the Product quantity field is not displayed on the screen.

Resource Quantity: The used resource quantity. For more information about the resource quantity calculation please see: [3. Resource usage calculation]()

Base/ Planned quantity: The base and planned quantity of the resource from the production order.

Completion: The percentage of the competition. This value is only referential when working with the default settings.

Finished: With this slider the user can mark the job as finished. Finished jobs will not be listed among the running jobs of the employee.

Comments: Add comments to the textbox. The added comments will be displayed as remarks on the Activity.

Press the 'Cancel' button to go back to the previous screen. A system warning will pop up. Press the 'Yes' button to go back or press the 'No' button to stay on the screen.
Press the 'Next' button to proceed with the booking. Confirm the consumed materials then complete the job confirmation. For more information see: 1.4. Materials, 1.5. Complete Job Confirmation

1.4. Materials

On this screen it is possible to report back the materials consumed during the job. Item type components are listed based on the value set for the 'Material Query Type' on the Booking Config window. Only materials with 'Manual' issue type are displayed.

The following information is shown for the material:
Item code and name
Consumed quantity
Planned quantity
Warehouse

If the *'Prefill Material Quantities'* option is set to true on the Booking Config window, then the default consumed quantity is calculated from the produced quantity and the base quantity of the material. Otherwise the default value is zero.
Select a material from the list and enter the consumed quantity to the Quantity filed. Press the 'Add' button to add the entered value to the consumed quantity.
Update the quantity by pressing the 'Update' button.

If the 'Can Insert New Materials' option is set to true on the Booking Config window, it is allowed to

add materials apart the production order. Press the ▤ icon on the Item field. The system will go to the **Item Picker** screen.

1.4.1. Material Batch Number Picker
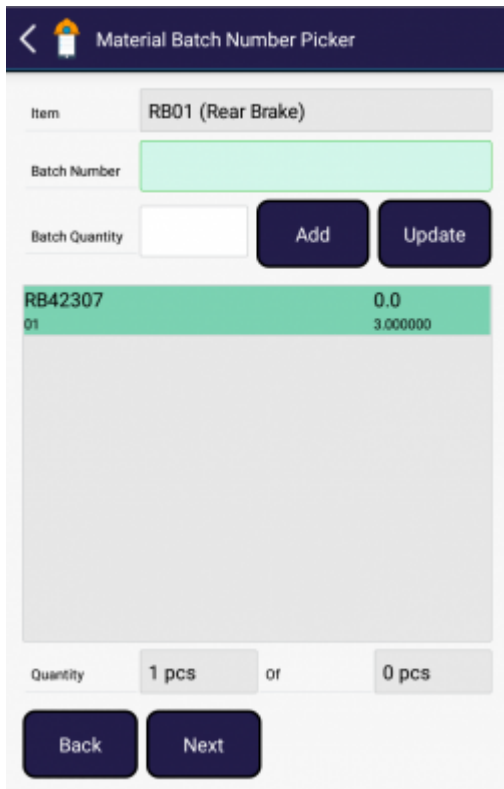
When working with components managed by serial numbers or batches, add the consumed serial or batch number as well. Press the 'Serial/Batch…' button to open a new screen where batches/serial numbers can be identified. When the device has a scanner, the serial or batch numbers can also be added by scanning.

1.4.2. Item Picker

Add the warehouse code to the Warehouse field or select it form a list after pressing the ▤ icon.
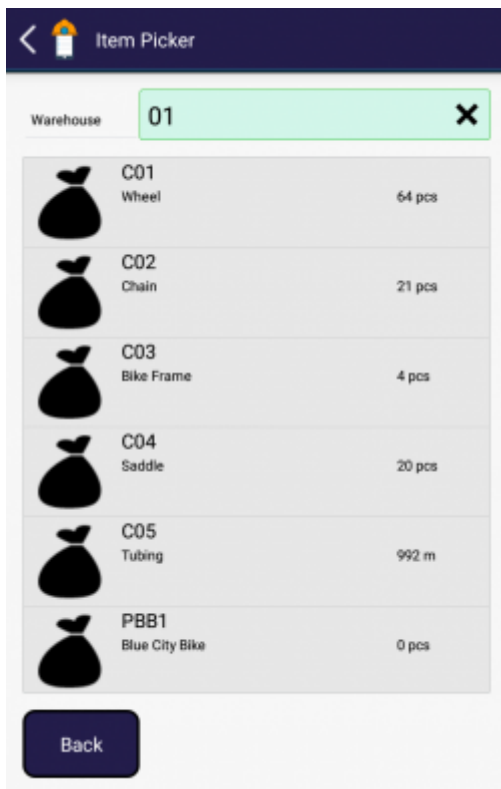
After the warehouse has been selected, the item list with the quantity available in the warehouse is displayed. Press the line of the item to select. The system will go back to the Materials screen and the item will be added to the list of Materials.
Please note: Bin Locations are not yet supported in Produmex Operator.

1.5. Complete Job Confirmation
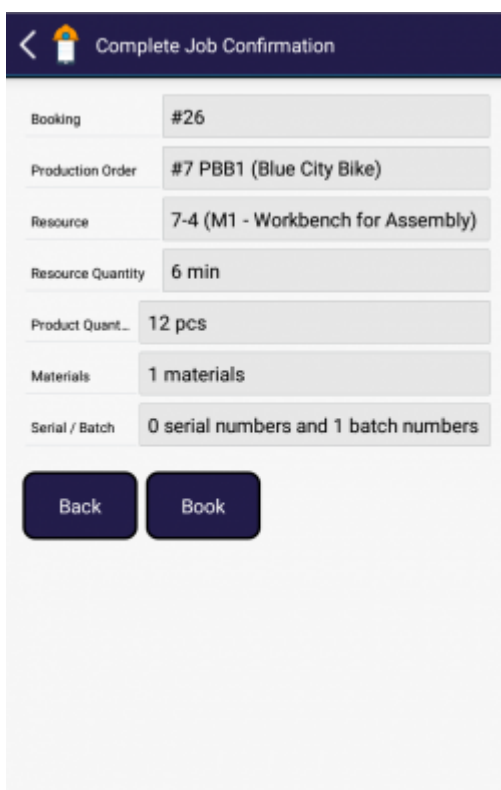
Overview and check the booking details. *Booking:* The activity number. When the value is negative, a new activity will be created after the booking.

Production order: The production order number and the product's item code and name.

Resource: The production order number, the production line of the resource, the resource code and name.

Resource Quantity: The used quantity of the resource.

Product Quantity: The produced quantity.

Materials: The number of the reported materials.

Serial/Batch: The number of the linked serial numbers and batch numbers.

Press the 'Back' button to go back to the previous screen.
Press the 'Book' button to book the job. If the *'Log out After Booking'* option is enabled the Booking Config window, the system will automatically log out the employee after the booking. Otherwise it will return to the Running Jobs screen.

1.6. Complete setup
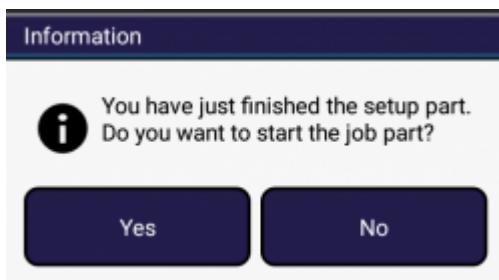
The steps of the setup booking are identical to the steps of a normal setup. After the setup has been finished, the system asks whether to start the normal job or not.
Press a button accordingly.

1.7. Report a partial job

The steps of the reporting a partial completion are identical to the steps of a full completion, but after the booking the timer for the job will restart and the job will be listed among the running jobs.

2. Simple Work Time Mode

2.1. Start Booking
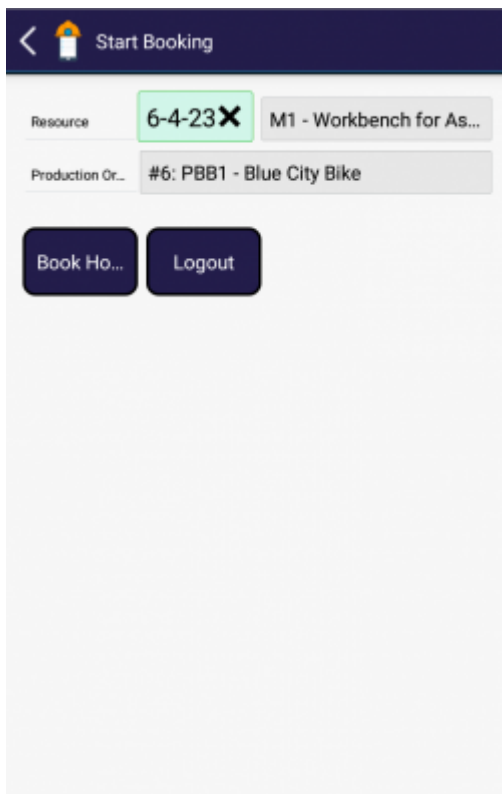
Identify the resource. When the 'Resource Picking Allowed' option is set to true, resources can be selected from a list. Press the ▤ icon on the 'Resource' field to open the 'Resource Picker' screen. See: Resource Picker.

After the resource has been identified, the system automatically fills the text fields.

Displayed information:
Production order number - Resource line number
Resource Code- Name
#Production order number: Product code - Name

Press the 'Book Hours' button to book the hours.
Press the 'Logout' button or the Produmex Operator icon to log out as the current employee.

2.2. Book hours

The details of the job are displayed on the screen. Adjust the duration and the produced quantity. Only values in white boxes can be modified. *Production order:* Production order number, the code and name of the product.

Resource: Resource code and description.

Date From: The start date. If the job was assigned to the user, by default the box is filled with the Start Time value on the Activity. Otherwise the default value is the current date.

Date To: The end date. If the job was assigned to the user, by default the box is filled with the End Time value on the Activity. Otherwise the default value is the current date.

Time From: The start time. If the job was assigned to the user, by default the box is filled with the Start Time value on the Activity. Otherwise the default value is the current time.

Time To: The end time. If the job was assigned to the user, by default the box is filled with the End Time value on the Activity. Otherwise the default value is the current time.

Job Time: The time spent on the job. If the job was assigned to the user, by default the box is filled with the Duration value on the Activity. Otherwise the default value is zero.

When the Date From/To or the Time From/To values are modified, the system automatically recalculates and updates the Job Time. When the Job Time value is modified, the system automatically updates the Date To and Time To values accordingly.

This day: Number of hours reported by the employee on the current day.

Time/ Res. Unit: The Time per Resource Units defined in the Resource Master Data for the resource.

Res.Unit/Time: The Res. Units per Time Period defined in the Resource Master Data for the resource.

Product quantity: The produced quantity. If the 'Prefill Product Quantities' option is set to true, the default value is calculated based on the duration. Otherwise the default value is zero.
When the 'RFP for main product' option is not set, then the Product quantity field is not displayed on the screen and therefore cannot be modified.

Planned quantity: The product's planned quantity in the production order. When the 'RFP for main product' option is not set, then the Product quantity field is not displayed on the screen.

Resource Quantity: The used resource quantity. For more information about the resource quantity calculation please see: 3. Resource usage calculation

Base/ Planned quantity: The base and planned quantity of the resource from the production order.

Completion: The percentage of the competition. This value is only referential when working with default settings.

Finished: With this slider the user can mark the job as finished. Finished jobs will not be listed among the running jobs of the employee.

Comments: Add comments to the textbox. The added comments will be displayed as Remarks on the Activity.

Press the 'Next' button to proceed.
Press the 'Cancel' button to cancel the booking. The system will go back to the Login screen.

2.3. Materials

See: 1.4. Materials

2.4. Complete Job Confirmation

See: 1.5. Complete Job Confirmation

3. Resource usage calculation

Based on the resource settings, there are three different ways to calculate resource usage in Produmex Operator.

3.1. Time resources

A resource is a time resource if the *'Res.Units per Time Period value'* is 1 and the *'Time per Resource Units'* value is either 1 hour (1:00:00), 1 minute (0:01:00) or 1 second (0:00:01).

In the case of time resources, the resource quantity is automatically calculated based on the measured time/booked job time. The *'Time per Resource Units'* value of the resource defines whether the resource quantity is calculated in days, hours, or minutes.

The calculated resource quantity cannot be modified.

Example 01: Stop Watch mode

Time per Resource Units = 1:00:00
Res.Units per Time Period value = 1

Measured time = 6 min
Resource Quantity = 0.1 h

Example 02: Simple Work mode

Example 01: Stop Watch mode	
	Time per Resource Units = 0:01:00 Res.Units per Time Period value = 1 Job Time = 0.5 hour Resource Quantity = 30 min

3.2. Non-time resources

A resource is a non-time resource if its *'Time per Resource Units'* value is zero (0:00:00).

In the case of non-time resources the resource quantity is automatically calculated based on the produced product quantity only. The resource quantity is calculated by: {Product Quantity*Base Quantity}. The UoM is the *'Unit of Measure Text'* value of the resource.

The calculated resource quantity is editable.

Example 01: Stop Watch mode

Time per Resource Units = 0:00:00
Res.Units per Time Period value = 1 job
Measured time = 32 min

Product Quantity = 0 pcs
Base Quantity = 1 pcs
Resource Quantity = 0 job

Calculation:
Resource Quantity = {Product Quantity*Base Quantity} = 0 pcs * 1 job = 0 job

Example 02: Simple Work mode

Time per Resource Units = 0:00:00
Res.Units per Time Period value = 1 job
Job Time = 0 hour

Product Quantity = 2 pcs
Base Quantity = 2 job
Resource Quantity = 4 job

Calculation:
Resource Quantity = {Product Quantity*Base Quantity} = 2 * 2 job = 4 job

3.3. Mixed resources

A resource is a mixed resource in the following scenarios:

- The *'Time per Resource Units'* value is either 1 hour (1:00:00), 1 minute (0:01:00) or 1 second (0:00:01) and the *'Res.Units per Time Period value'* is greater than 1.
- The *'Time per Resource Units'* value is not 1 hour (1:00:00), 1 minute (0:01:00), 1 second (0:00:01) or 0 (0:00:00).

In the case of mixed resources, the resource quantity is automatically calculated based on the booked product quantity.

- If the user does not enter the product quantity, the Resource Quantity is calculated by: {Job Time * (Res.Units per Time Period/ Time per Resource Units)}.
- When the user enters the product quantity, the Resource Quantity will be recalculated by: {Product Quantity*Base Quantity}.
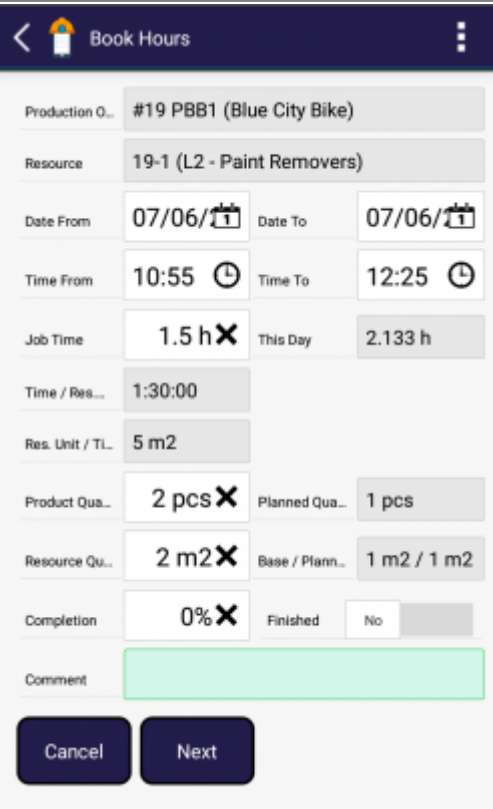
The displayed UoM is the Unit of Measure Text value. The calculated resource quantity is editable.

Example 01: Stop Watch mode	
	Time per Resource Units = 0:05:00 Res.Units per Time Period value = 2 m^3 Measured time = 18 min Product Quantity = 0 pcs Base Quantity = 1 m^3 Resource Quantity = 7.2 m^3 **Calculation:** Product Quantity = 0, therefore: Resource Quantity = {Measured Time * (Res.Units per Time Period/Time per Resource Units)} = 18 min * (2m^3/5min) = 7.2 m^3
Example 01: Stop Watch mode	

Example 01: Stop Watch mode

Time per Resource Units = 1:30:00
Res.Units per Time Period value = 5 m^2

Job Time = 1.5 h
Product Quantity = 2 pcs
Base Quantity = 1 m^2
Resource Quantity = 2 m^2

Calculation: Product Quantity > 0, therefore:
Resource Quantity = {Product Quantity*Base Quantity} = 2 pcs* 1 m^2 = 2 m^2

Office

1. Inventory transactions

After a booking was completed for a resource, the system automatically books a Resource Issue for Production document with the reported resource quantity and issues the resource from the inventory. On the Resource Issue for Production document a remark is added based on the Remark template text with the details of the job.

If there was material consumption reported during the booking, the system books Material Issue for Production documents with the reported quantities for the materials, and issues those materials from the inventory. On the Material Issue for Production document a remark is added based on the Remark template text with the details of the job.

When the *'RFP for main product'* option is set to true on the Booking Config window and products or byproducts were produced during the job, the system books a Receipt from Production document for the (by)product with the reported quantity and receives the finished goods to the inventory. On the Receipt for Production document a remark is added based on the Remark template text setting on the Booking Config window with the details of the job.

2. Activities created by Produmex Operator

When a job is started, Produmex Operator creates a 'Task' activity linked to the production order. Whenever the user books time to the job, this activity is updated. In the case of an error, Produmex Operator creates a separate activity to document the error.

Activity overview

The assigned employee is the employee reporting the activity.

The subject is added based on the subject set on the Booking Config window

The status is added based on the status set is on the Booking Config window.

On the 'General' tab, the Start Time is the time when the job was started. When working in Simple Work Time mode, the time is the Start Time added on the Book Hours screen. The End Time is the time when the job was stopped. When working in Simple Work Time mode, the time is the End Time added on the Book Hours screen. The Duration is calculated based on Start Time and the End Time. The Remarks field is filled with the comment added on the Complete Job screen.

On the 'Content' tab, a comment is added. When starting a job, the comment is added based on the Activity Create template text. When reporting a partial or a full completion for a normal or a setup job, a comment is added based on the Activity Update Text template. In the case of errors, the comment is generated based on the Activity Error Text.

When a job was assigned to the employee, whenever the employee reports work for the job, the system adds a comment to the task that assigned to the job.

3. User Defined Fields for Activities

Duration in Minutes	The duration added or measured in Produmex Operator in minutes.
Resource Quantity	The used quantity for the resource.
Last Booking Time	The time when the last booking was made.
Last Booking Date	The date when the last booking was made.
Res.Units Per Time Period	The Res.Units Per Time Period value defined in the Resource Master Data.

Booking type	Indicates the type of the booking. Possible values: Job/ Setup/ Error/ None
Booking Status	The status of the job. Possible values: Started/ Completed/ Partial/ None.
Line Number	The production order line number of the resource.
Activity type	Indicates whether the activity was created by Produmex Operator or not.
Resource Code	The code of the resource linked to the activity.
Product Quantity	The quantity produced during the activity.
Finished	Indicates whether the job was reported finished or not.
Completion Percentage	The completion percentage added by the employee.
Resource Name	The name of the resource.
Planned Start Date	Start Date from the Task that assigned the job to an employee
Planned Start Time	Start Time from the Task that assigned the job to an employee
Planned Stop Date	Stop Date from the Task that assigned the job to an employee
Planned Stop Time	Stop Time from the Task that assigned the job to an employee
Original Remark	Remark from the Task that assigned the job to an employee
Machine Code	The machine code. Only relevant for 'Machine' type resources.
Resource Unit of Measure Text	The Resource Unit of Measure Text defined in the Resource Master Data.
Time Per Resource Unit	The Time Per Resource Unit value defined in the Resource Master Data.
Labor Employee Number	The employee code. Only relevant for 'Labor' type resources.
Error description	The error description.
Item Code On Error	Affected item.
Item Quantity On Error	Affected quantity.
S/B Numbers On Error	Affected serial/ batch numbers.
Material Error	The type of the affected item.
Resource Error	
Product Error	
ByProduct Error	