

# Material Requirements Planning

with Standard ERP



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## INTRODUCTION

The MRP module in Standard ERP is designed to facilitate the planning of productions and purchase orders for the component items that are needed for the production and sale of finished goods. At the same time it allows for the comparison between sales forecasts and actual sales.

The MRP module is suitable for both retail and production companies, offering the following main functions:

Retail companies:

- definition of sales forecasts, either as totals for the company or broken down by department, by branch or by sales person
- comparison between sales forecasts and actual sales
- purchase order planning
- creating purchase orders from purchase order plans
- definition of required stock levels

Production companies:

- definition of sales forecasts, either as totals for the company or broken down by department, by branch, by factory or by sales person
- comparison between sales forecasts and actual sales
- production planning and creating production orders from production plans
- purchase order planning for components and creating purchase orders from purchase order plans
- definition of required stock levels for both finished goods items and component items

Companies that produce for stock inventory will get the most benefit out of this module. Companies that produce to order i.e. tailored items per customer order, can use a combination of MRP and the creation of Productions from Sales Orders to finalise the process. The MRP module supports the use of multi level recipes and productions using routings. The use of routings does not require any additional set up or change the workflow of the MRP module.

This training material will cover both retail and production workflows.

As is the case with all modules in Standard ERP, the MRP module is fully integrated with the rest of the system.

The main benefits of using the MRP module can be summarised in one word – efficiency:

- Sales forecast entry and comparison with actual sales;
- Efficient production planning process;
- Efficient purchase order planning;
- Efficient stock management;
- Just-in-time information for the decision-making process

Before we start with our course, let's check some concepts:

MRP (Material Requirements Planning) - An MRP system provides answers to 3 main questions:

1. What needs to be produced
2. How many need to be produced
3. When the production should take place.

This is done while keeping costs as low as possible.

The target of an MRP system is to:

1. Ensure that materials and products are available for production and delivery to customers



2. Maintain the lowest possible inventory levels
3. Plan manufacturing activities, purchases and delivery schedules

To meet these targets, the company should meet the following requirements:

1. The data in the MRP system must be accurate and correct. Errors in stock data will cause incorrect output from the MRP system.
2. Recipes, also known as Bills of Materials (BOM), must be set up correctly. Outputs are based on the information found here.
3. Purchase order management must be efficient and accurate. Sales forecasts must reflect estimated sales and they can be adjusted as needed.

The company needs to enter and maintain proper inputs in the MRP system. The output is a recommended activity level, for both productions and for purchases.

The MRP module does not take factory capacity into consideration when suggesting production plans (i.e. it assumes infinite capacity). It is up to the MRP manager to consider factors that are not reflected in the system, such as market environment and production capacities, and then make the appropriate decisions based on these factors.

JIT (Just-in-time): is the policy of purchasing raw materials and components only when they are needed for production, with the intention of keeping stock levels at a minimum and so reducing costs.

BOM (Bills of Materials or Recipes): is a list all components needed to produce a finished good or sub-assembly, including all in-(input) and out-(output) items. A BOM can include additional information such as instructions for production, duration times, machines needed etc.

There are three types of production companies:

1. Companies producing for stock inventory, usually producing a large quantity of items with a small unit value;
2. Companies producing to order, usually small quantities with a high unit value;
3. A combination of both of the above.

The example used in this training material covers the type of company that produces for stock inventory. Companies producing to order would use the "Create Planned records" routine in the Sales Orders module to generate Production Orders from Orders, instead of using the MRP module. Companies that produce both for stock inventory and to order can use the MRP module for the 'produce for stock inventory' part of production and purchase planning, and then combine that with the workflow for 'produce to order'. For details on the 'produce to order process', please refer to our Production training material.

The examples we are inspecting are linear, whereas in a real business environment several combinations can occur.

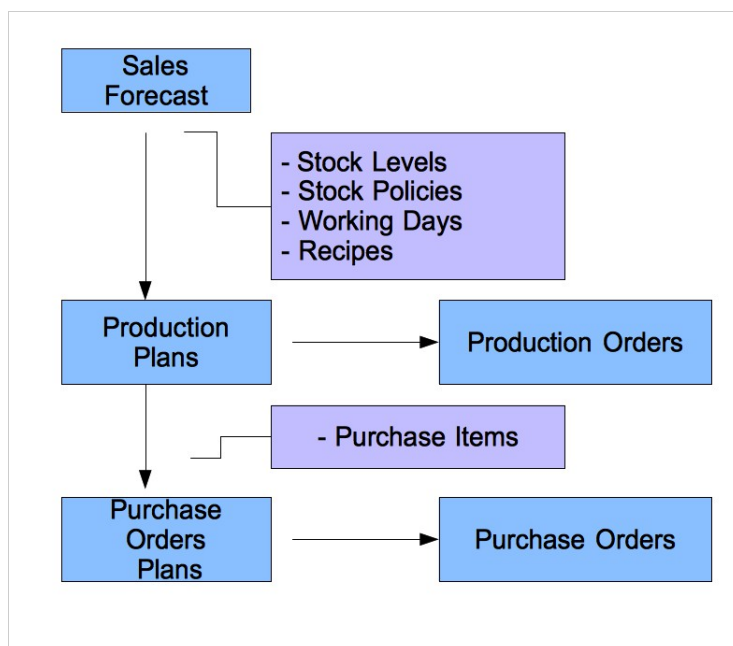
It is required that the trainee should be familiar with the logistics process (sales and purchases) and production module, prior to taking the current MRP module training.

## WORK FLOW

For our course, we will use the example of a company that produces finished goods items for sales and that also purchases and resells retail items. With this example we cover several different types of the companies that can benefit from using this module.

Firstly, it is required to define the variables for the MRP process:

- Stock Policies need to be set up for retail items, finished goods and component items. This is done to maintain stock numbers at a safe level, making sure the company always has items available to sell according to the forecast.
- Default purchase items must be created, recipes must be defined, and the number of working days and the machines available for production must also be set up.
- The Sales manager defines sales forecasts for different items (retail items and finished goods).
- Based on this basic information entered in the system it is then possible to let the system create suggestions for Production Plans and Purchase Orders Plans.
- The image below illustrates this workflow, where the production plans and purchase order plans are generated based on the Sales Forecast, Stock Policies and forecast settings.



Find below a brief description of the workflow.

Step 1: In the Forecast Settings setting, enter a Number of Periods. This figure will be used to calculate average quantities of predicted sales per day. Set the Period Type to Months or Weeks.

For example, if the Period Type is Months and the Number of Periods is six, average predicted sales per day figures will be calculated from the Sales Forecasts for the next six months. This means that you should ensure you always have Sales Forecasts for each Item for at least the next six months.

Step 2: If your Period Type is Months, enter the number of sales days in each month in each year in the Number of Work Days setting. These figures will also be used to calculate average predicted sales per day figures. Again, you should maintain this setting well ahead of time, so that the average calculation remains accurate. Set the Type to Sales in these records.

If you will be producing items for sale, you should also enter the number of production days in each month in each year. These figures will be used when calculating stock levels. Set the Type to Production in these records.

If your Period Type is Weeks, use the Bank Holidays for Sales Forecast setting to enter the numbers of sales and production days in each year.

Step 3: Enter the minimum and maximum stock levels of each finished goods item and its component items in the Stock Policies setting, expressed as a number of days' sales. For example, the minimum stock level for an Item might be the quantity that you estimate you will sell in ten days. This quantity will be calculated from Sales Forecasts for the Item.

Step 4: Enter the predicted sales of each sellable Item in the Sales Forecast register. To activate a Sales Forecast record, mark it as OK and save it.

Step 5: If you will be producing Items for sale, run the "Create Production Plans" maintenance routine periodically. This will create a Production Plan specifying the quantity of each Item you need to produce to meet the requirements of the Sales Forecast and the Stock Policies. Inspect this record, amending the quantities if necessary, and then mark it as OK and save it. To preview the Production Plan that will be created by the maintenance routine, you can run the Create Production Plan – Preview report prior to running the maintenance routine.

Step 6: You will also need to run the "Create Purchase Order Plan" maintenance routine periodically. This will create a Purchase Order Plan specifying the quantity of each Item you need to purchase to meet the Sales Forecast, the Stock Policy and the components you need to produce the Items in the Production Plan in step 5. Inspect this record, amend the quantities if necessary and specify Needed Dates on any rows where they are missing, and then mark it as OK and save it. To preview the Purchase Order Plan that will be created by the maintenance routine, run the Create Purchase Order Plan – Preview report prior to running the maintenance routine.

Step 7: When you are sure the Production Plan is correct, create a Production or Production Order from it. You can do this by opening the Production Plan and selecting "Create Productions" from the Operations menu. If you have more than one Production Plan, you can use the "Create Productions" maintenance routine. To specify whether these functions will create Productions or Production Orders, use the Generate Planned options in the Production Settings in the Production module.

Step 8: When you are sure that the Purchase Order Plan is correct, create Purchase Orders from it. You can do this by opening the Purchase Order Plan and selecting "Create Purchase Orders" from the Operations menu. If you have more than one Purchase Order Plan, you can use the "Create Purchase Orders" maintenance routine.

Step 9: Ensure that the Sales Forecast register is always up-to-date (depending on the Number of Periods), and regularly repeat steps 5-8.

## BACKGROUND INFORMATION AND CONFIGURATION

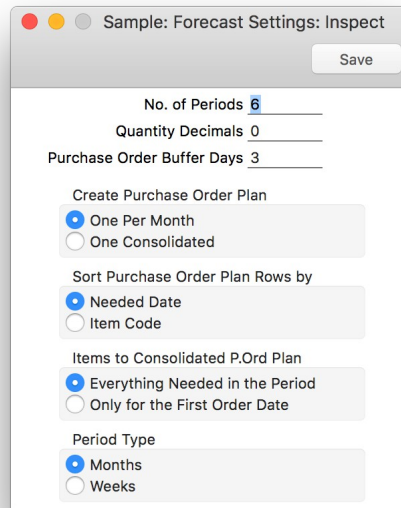
Before we start with the process itself, let's start by defining the required settings.

### Forecast Settings

This setting is the first one that needs to be set up, as it will determine the basis of the planning policy in the company. Based on this setting, the average number of sales per day used for the stock policy will be calculated. This setting also sets the number of periods to be planned ahead, in either months or weeks.

Before completing this set up, decide on the period that will be used for MRP: months or weeks. This decision depends on the product cycle and how the company defines and controls the forecasts, purchase process and production process. The most common usage is by months.

For example, in a company that issues purchase orders for three months in advance and with items that take a month to produce, the number of periods should be long enough to cover all the required purchases and productions. In this example the minimum period would be 4 months. Productions for August would need to be planned for in July and the purchase orders should be sent in May.



Sample: Forecast Settings: Inspect

Save

No. of Periods

Quantity Decimals

Purchase Order Buffer Days

Create Purchase Order Plan

☒ One Per Month

☐ One Consolidated

Sort Purchase Order Plan Rows by

☒ Needed Date

☐ Item Code

Items to Consolidated P.Ord Plan

☒ Everything Needed in the Period

☐ Only for the First Order Date

Period Type

☒ Months

☐ Weeks

**Number of Periods:** Specify a number of periods that will be used to calculate the average predicted sales per day figures. For example, if the Number of Periods is six and the period type is set to months, average predicted sales per day figures will be calculated from the Sales Forecasts for the next six months. This will mean you should ensure you always have Sales Forecasts for each Item for at least the next six months. Please refer to the Stock Policy section for more details. If this field is blank, the Number of Periods will be assumed to be 1.

**Quantity Decimals:** Specify the number of decimals to be used in the forecasting reports.

**Purchase Order Buffer Days:** This field allows items to be gathered together in a single purchase order, instead of being included in several smaller purchase orders with different dates.

If this field is blank or contains 0, each Purchase Order Plan row will contain an order date that is calculated back from the needed date using the number of delivery days defined in the Default Purchase Items. This may create a situation where you need to order several items from the same supplier but many Purchase Orders containing very few items will be generated, as the order dates are all different.

If you enter a number of Buffer Days, for example 5, then the "Create Purchase Order Plan" maintenance will sort the rows in a Purchase Order Plan by order date, find the earliest order date and add 5 days to get a period. It then finds all item rows with an order date within that five day period and with the same supplier and assigns the earliest order date to all of these items. After that, it sorts the remaining items by order date again, finds the next earliest order date and adds 5 days to get the period. It finds all item rows falling into this second five day period and assigns the second earliest date to all of these items. This process is repeated until the last row is reached.

The Delivery Days and Needed Date fields in Purchase Order Plan rows are not affected by Buffer Days.

**One Per Month:** This option creates one Purchase Order Plan record per month. This is the option used more commonly.

**One Consolidated:** This option creates one Purchase Order Plan record that is valid for all future months.

**Sort Purchase Order Plan rows by:** Needed Date or Item Code. These options determine the order in which the rows in Purchase Order Plans will be listed.

**Items to Consolidated P.Ord Plan:**

**Everything Needed in the Period:** If this option is selected and if the “Create Purchase Order Plan” function finds that the same item is needed on different days, it will add the item to the resulting Purchase Order Plan more than once, with different needed dates. This is the more commonly used option.

**Only for the First Order Date:** If this option is selected and if the “Create Purchase Order Plan” function finds that the same item is needed on different days, it will only add the earliest requirement to the Purchase Order Plan and will skip the remaining requirements.

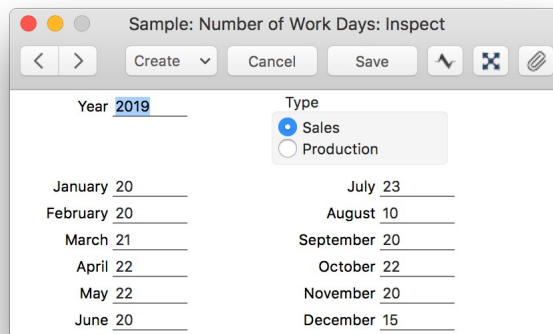
**Period Type:** Months/Weeks: Set the period that you want the MRP to run. If you select Months, your Sales Forecasts should all be one calendar month in duration, beginning on the first day of a month. If you select Weeks, your Sales Forecasts should be one week in duration, beginning on a Monday. When you run the maintenance routines to create planned records, those planned records will be created for the same type of period.

## Number of Working Days

If your Period Type is Months, use the Number of Working Days setting to specify the number of working days in each month. Ensure this setting contains records for months well in advance of the current date, depending on the number of periods in the Forecast settings. For example, if you have defined 6 months in the Forecast settings, you need to ensure the Number of Work Days are always defined for 6 months in advance of the current date, to ensure the calculations are accurate.

If this setting is blank, the Number of Working days will be assumed to be 0. This means that average sales will also be assumed to be 0.

If your Period Type is Weeks, use the Bank Holidays for Sales Forecast setting instead of this one.



Year	Type	January	February	March	April	May	June	July	August	September	October	November	December
2019	Sales	20	20	21	22	22	20	23	10	20	22	20	15

**Year:** Specify the calendar year that the Number of Days record refers to.

**Type:** Select one of the options, sales or production. The number of days specified on each month applies to the type selected. It is usually recommended that you enter a Sales record and a Production record for each year, even if those records are the same.

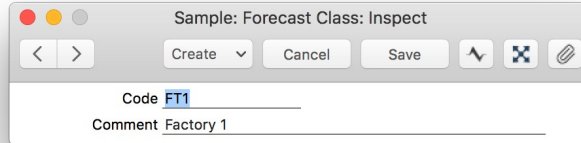
**No of production days:** Specify the number of produceable days per month, this will be used by the “Create Production Plans” and “Create Purchase Plans” maintenance routines.

**No of sales days:** Specify the number of days in sales per month, this will be used by the “Create Production Plans” and “Create Purchase Plans” maintenance routines. These numbers of days will be used when calculating the estimated sales per day and the stock policies.



## Forecast Classes

Here you can specify the codes that you want to use to classify your Sales Forecasts. The most common Sales Forecast class used is Salesman. You can run the Sales Forecast Accuracy report by Forecast Class. Other commonly used classes are either per Branch or per Factory.



Sample: Forecast Class: Inspect

Code FT1

Comment Factory 1

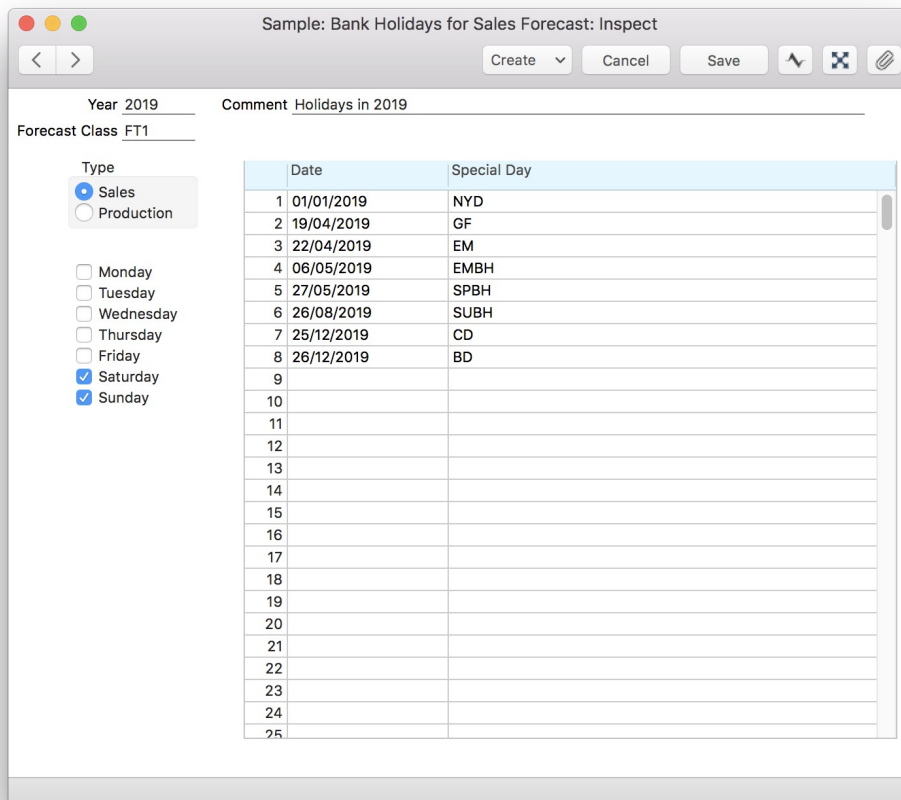
**Code:** Specify the code.

**Description:** Enter a description for your sales forecast class.

## Bank Holidays for Sales Forecast

If your Period Type is Weeks, use the Bank Holidays for Sales Forecast setting to specify the number of working days in each month.

This setting is similar to the Bank Holidays setting in the System module, with the required adjustments.



Sample: Bank Holidays for Sales Forecast: Inspect

Year 2019 Comment Holidays in 2019

Forecast Class FT1

Type

☒ Sales

☐ Production

☐ Monday

☐ Tuesday

☐ Wednesday

☐ Thursday

☐ Friday

☒ Saturday

☒ Sunday

	Date	Special Day
1	01/01/2019	NYD
2	19/04/2019	GF
3	22/04/2019	EM
4	06/05/2019	EMBH
5	27/05/2019	SPBH
6	26/08/2019	SUBH
7	25/12/2019	CD
8	26/12/2019	BD
9		
10		
11		
12		
13		
14		
15		
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25		

**Year:** Set the calendar year that the bank holidays refer to.

**Forecast Class:** This is used when the company has several branches using different working days, and the Forecast Classes are set up as Branches. You can then set up different bank holidays per branch. When doing the calculations for planned records these days are taken into consideration as non-working days.

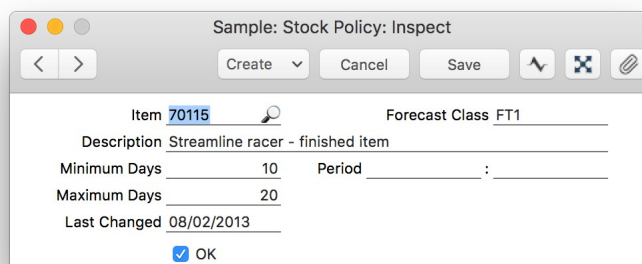
**Type:** Sales or production – you can set up different bank holidays for sales or production with separate records for each type option. If the same bank holidays apply to both sales and production, then create two entries – one for each option. Select the weekdays when the company is going to be closed, and for each date paste special to the Special Days setting.

## Stock Policies

In the Stock Policies setting, you should specify the minimum and maximum number of units of each item that should be in stock at the end of each month or week (depending on the Period Type). Express each quantity as a number of days' sales. If this setting is blank, the system will assume that the quantity you want to have in stock at the end of each month or week is zero, and production plans will be created for the sales forecast quantities.

Stock Policies allow the setting up of different stock levels per item and per Forecast Class (for example, per salesman, per branch, depending on how the Forecast Classes are defined). They also support different stock levels for different seasons.

You should define Stock policies for all items: retail items, finished goods and component items.



Sample: Stock Policy: Inspect

Item 70115      Forecast Class FT1

Description Streamline racer - finished item

Minimum Days 10      Period            :           

Maximum Days 20

Last Changed 08/02/2013

☒ OK

**Item:** Paste special to the item register. Create one record per sales item and per component item.

**Forecast Class:** If you need to set different stock levels for different factory plants and the Forecast Classes are set up as different factories, then you can separate Stock Policies for each Forecast Class. You should also create an overall Stock Policy without a Class.

**Minimum days:** The minimum quantity that should be in stock at the end of a month or week (depending on the Period Type), expressed as a number of days' sales. In the illustration above, our minimum quantity is the quantity that will be sold over a period of 10 days. The number of units that will be sold in one day will be estimated from Sales Forecast records.

**Maximum days:** The maximum quantity that should be in stock at the end of a month or week (depending on the Period Type), expressed as a number of days' sales.

**Period:** If a stock policy applies only to a particular period, for example for a seasonal item, enter the period here. If the same stock policy applies all year around, leave the period blank.

**Last Changed:** This date will be updated automatically by the system each time you save the record.

**OK:** You need to OK a Stock Policy record for it to be used in the calculations.

## Number Series – Purchase Orders Plans

Each record in the purchase order plan register has its own unique identifying number, based on a sequential series. When you enter a new record, the next number in the series will be used. If required, you can have a number of such sequences running concurrently, perhaps representing different years.

This setting is used to define these sequences, or number series. The different series cannot overlap. If you leave the setting empty, purchase order plans numbers will start at 1 and continue consecutively.

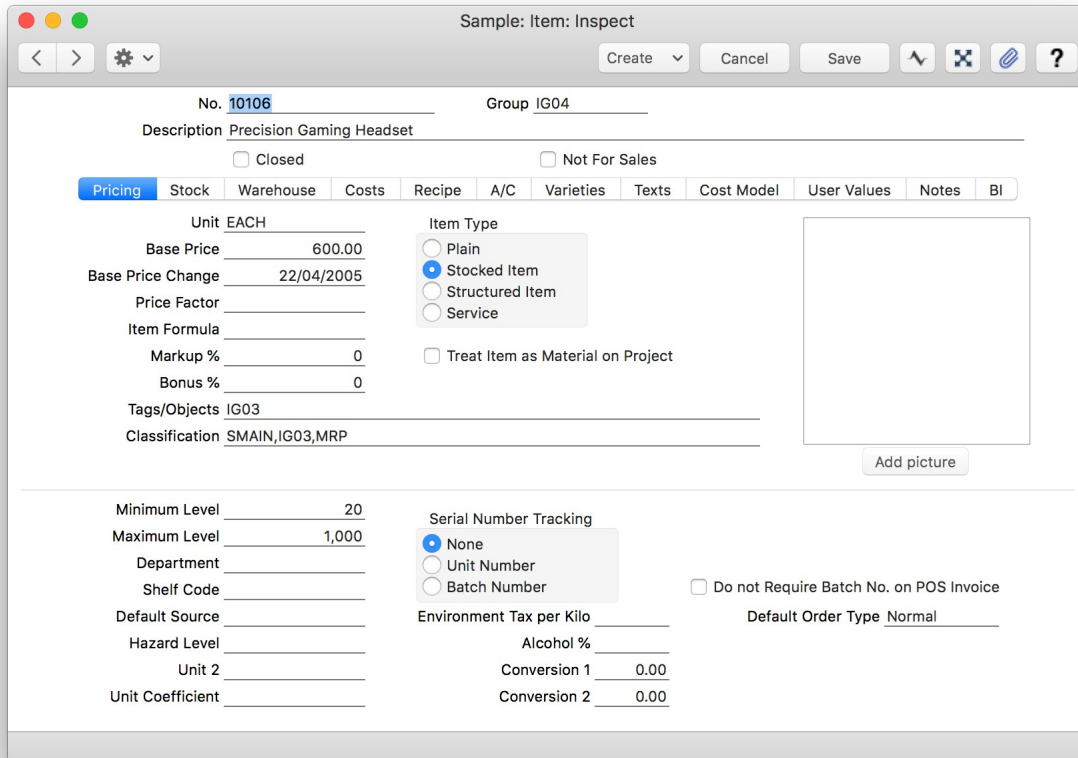
## Number Series – Sales Forecasts

Use these settings to define the number sequences for sales forecast, in a similar manner to that described above.

## Items

In the Item register you should enter all the items you sell, purchase and produce in the company, including the items used as components in productions.

Find described below the relevant fields in the Item record that need to be filled in when using the MRP Module.



**Item:** Enter the unique identifier code you are assigning to this item.

**Group:** Paste special to Item group setting. You can then use the Item Group as a selection in several reports.

**Description:** Enter the description of the item.

**Unit:** Paste Special to the Units setting, specify the unit to which the Base Price refers.

**Base Price:** Enter the basic sales price for the item in this field. The price must be in your local currency.

**Item Type:** The Item Type should be "Stocked Item".

## Recipe

Before entering a recipe, enter a record in the Item register for the final item that will be produced using the recipe.

You can only use Stocked Items in Recipes used in the MRP module. Structured Items are not used with the MRP module.

In the record in the Item register for the final item, specify a recipe on the "Recipe" tab. You can either define the Recipe using the Recipe register as described below and then paste it into the Item record using Paste Special; or you can create a new Recipe from the Item using the Operations menu option "Create Recipe". If you use the Operations menu function, the Recipe code will be the same as the Item Number and the Item will automatically be entered in the Recipe as the Out-Item. In addition, when you save the Recipe, the Recipe code will be pasted automatically in the Recipe field in the Item record.

The Recipe register can be found in the MRP module as well as the Production module. Enter each Recipe as follows:

Sample: Recipe: Inspect

Code 70130 Comment Streamlined racer - Final assembly

Normal Prod Qty 1 Time to Setup 00:30:00 Language

Min Prod Qty 1 Days to Produce  ☐ Closed

Fixed Assembly Days 1 Hours to Produce 3.00 Minutes  Seconds

Res. mgr. Colour Strawberry Number Produced 1

Standard Batch  Extra Prod Qty

Default Routing

Instructions Recipe without routing

Item	Specification	In	Out	Unit	Rel.	I-cost	W-cost
1 70113	Streamline racer - wheels	2.00				372.00	
2 70114	Streamline racer - saddle	1.00		EACH		125.00	35.00
3 70130	Streamline racer - finished item,...		1.00	EACH		1,352.59...	
4							
5							
6							
7							

☐ Locked Cost of In-Items 904 Value of Out-Items 1,352.593

**Code:** The code for the recipe can be up to 20 characters long. For simplicity reasons it is recommended that the Recipe code used should be similar to the item code of the produced Item.

**Comment:** Enter a description of the produced item.

**Normal Prod Qty:** This field is only used if the result of the recipe is a Stocked Item. Specify here how many times the recipe is to be used in a single production record. For example, if the output quantity of the recipe is two (entered on the output row of the matrix) and the Normal Production Quantity is set to five, the result of a Production of this Recipe will be ten units of the output item being added to stock.

This field should be set to 1 if the output item or any of the components are serial numbered at unit level.

**Min Prod Qty:** This field is only used if the result of the recipe is a Stocked Item. It is the minimum number of applications of the Recipe in a single record in the production register.

**Fixed Assembly Days, Days to Assemble Each Unit:** These fields are only used if the result of the recipe is a Stocked Item. The "days to produce" is the time required to build a single Item (i.e. it is the work time that is carried out to produce one unit, many times per production run). The "fixed assembly days" is a constant figure irrespective of the quantity being built (i.e. it is the work time that is carried out once per production run).

For example, the recipe might represent the assembly of an item from several components. The time taken to retrieve the set of components from the store, order the raw materials and set up the assembly line is the same, irrespective of the quantity being built. Enter this time in the Fixed Assembly Days field. The remainder of the production time is taken up by assembling the components, polishing, painting and quality control.

This information will be used by the "Create Production Plans" maintenance routine in the MRP module. This function will create Production Plans whose dates are calculated from the Forecast date and these lead times from the appropriate recipes. This ensures that Productions are started as late as possible, so that the goods are produced just before they are expected to be required for sales.

**Standard Batch:** This field must contain a value. Define here the quantity that is usually produced using the Recipe. For example, if a machine must be filled with enough raw material to produce four applications of a Recipe, enter 4 as the Standard Batch. If the quantity varies for each batch produced, then enter 1 as the Standard Batch.

**Instructions:** Use these three lines to record instructions about how the recipe should be used. These instructions will be copied to Production Orders.

#### Flip A

**Item:** Although you can enter the items in a Recipe in any order, it is usually recommended for clarity that you list the component items first, followed by the finished goods item.

**Specification:** Standard ERP fills in the item description, when the Item code is pasted.

**In:** Enter the quantity of each component required to make or build the finished goods item. Do not enter an in quantity for the finished goods item.

If any item (component or finished item) carries serial numbers at unit level, enter separate rows for that item each with a quantity of one if a multiple quantity is needed.

In Nominal Ledger transactions generated from production records using this recipe, the credit amounts will be taken from the Production rows with "in quantity" (i.e. input items or component items).

**Out:** This field contains the quantity of assembled items that can be made from the components listed above. Usually, this will be just one (although not relevant to MRP, it must be one if the assembled item is a Structured Item).

In Nominal Ledger transactions generated from production records using this recipe, the debit amounts will be taken from the Production rows with an "out quantity" (i.e. output items or finished goods items).

**Rel.:** Relativity. This field is only used if the result of the recipe is that more than one item will be assembled (i.e. with different item numbers). In each row representing an output item, enter a percentage figure. When the input cost of each production record is calculated according to the Stock Valuation Method, the total cost of the components will be distributed to the output items according to the Relativity percentages.

**I-cost:** Input cost value (per unit). If the row contains an input item, enter the unit cost price for the item. The default will be the cost price from the item record. The cost shown in this field is NOT the same as the stock value according to the Stock Valuation Method. You can update this cost using the "Update Recipes" maintenance routine.

If the row contains an output item (i.e. the assembled item), enter the unit cost value of that item. This will usually be the sum of the cost prices of the input items, taking quantities into account. Again, the default will be the cost price from the item record.

The total input costs are shown in the cost field in the footer, while the total output costs are shown in the value field.

**W-cost:** Work cost value (per unit produced). Enter a work cost incurred in building or assembling the item. Usually, this will be cost of the labour required to fulfil the recipe.

You should only specify a work cost if the result of the recipe is a Stocked Item that you will build using the Production register.

You should enter the work cost on a row featuring an input item, as shown in the illustration above. This ensures the work cost will correctly be credited to the Production Work Cost account in Nominal Ledger transactions generated from production records using this recipe. If you enter the work cost on an output row, the work cost will be debited to the Production Work Cost account.

Work cost values are included in both the cost and value fields in the footer of the recipe window. This field is automatically calculated using the formula: (time to setup + hours to produce) \* work cost per hour from production setting.

#### Flip B

**Description:** Any notes about the item can be recorded here.

**Recipe:** This field shows whether the item is an assembly (i.e. it is one with a recipe specified on its "Recipe" tab). This is updated automatically by Standard ERP and cannot be changed.

**Locked:** Once you are certain that the recipe is correct, you should check this box to prevent further changes.

**Cost:** This field contains the sum of the costs of the input items ( $W\text{-cost} + (I\text{-cost} * In\ qty)$ ). If the assembled item is a Stocked Item, you must transfer this value to the cost price field on the "Costs" tab of the item record for the assembled item, either manually or using the "Update Recipes" maintenance routine in the production module.

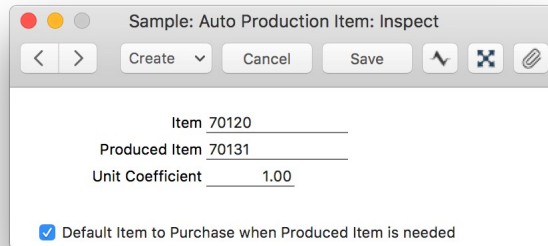
**Value:** This field contains the sum of the costs of the output items ( $W\text{-Cost} + (I\text{-Cost} * Out\ Qty)$ ).



## Auto Production Items

This setting will be useful if you have Recipes in which you can substitute various different component Items to produce the same final Item. For example, you have to use tube for the production of your bikes, but you can buy from different suppliers, with different item codes, though the end result of your production will be the same regardless of the item you order. Your generic item (or produced item) will then be “a tube”.

When creating the recipe you will then use the generic item “tube”. When you create purchase orders you will need to specify exactly the item you need to order.



**Item:** Enter here a specific Item that you can use when a Recipe calls for a generic Item. Following the example used in this description, you should enter the Item representing Tube Brand A or Tube Brand B here.

**Produced Item:** Specify the generic Item here (in the example, the Item for Generic tube). It is likely you will need to enter several Auto Production Item records for the same Produced Item, with different Items specified in the field above.

**Unit Coefficient:** If the two Items supplied are used in different Units, enter the ratio between them here. The ratio should represent how many Produced Items can be made from one Item. For example, if you measure the Produced Item in multiples of 1 kg, and the Item is supplied in 100 kg, enter “100” here.

If you subsequently need to order 110 of the Produced Item, enter “110” as the Suggested Quantity or Adjusted Quantity in a Purchase Order Plan. When you create a Purchase Order, the Order Quantity will be 1.1 (110/100, rounded up to the nearest whole number).

If the unit is the same, enter 1. Do not leave the field empty.

**Default Item to Purchase when Produced Item is needed:** If you have several Auto Production Item records for the same Produced Item, use this checkbox to choose which one is to be treated as the Default Auto Production Item. This is the Item that you prefer to purchase when the Recipe calls for the generic Item. For example, you can use this checkbox to signify your preference to purchase Brand A tube over Brand B tube.

When you include the Produced Item in a Purchase Order Plan (either yourself or remotely through the “Create Purchase Order Plan” maintenance routine), the Default Auto Production Item will determine the Item that will be placed in the Item to Order field on flip C of the Purchase Order Plan row. You will be able to change the Item to Order, but only to another Item that has been connected to the Produced Item in this setting. When you create a Purchase Order from the Purchase Plan, the Item to Order is the Item that will be purchased. This Item’s Default Purchase Item will determine the Supplier, pricing and other details.

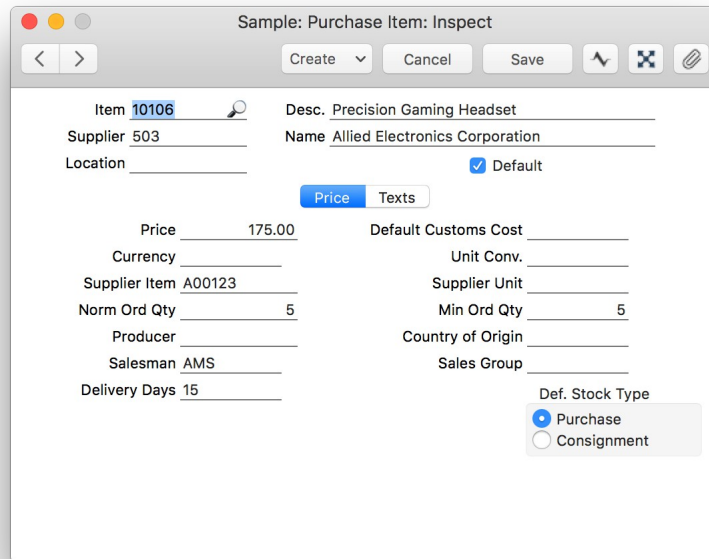
You can only have one Default Auto Production Item for a particular Produced Item (generic Item).

## Settings in other modules

Purchase Orders >> Register >> Purchase Items

For each item you resell, an item record must be created (Stocked Item). You should also enter a Default Purchase Item for each Item.

Create the Default Purchase Item from the Operations menu when looking at an Item record or just create it directly in the Purchase Item register.



Sample: Purchase Item: Inspect

Item 10106 Desc. Precision Gaming Headset

Supplier 503 Name Allied Electronics Corporation

Location \_\_\_\_\_ ☒ Default

**Price** **175.00** **Default Customs Cost** \_\_\_\_\_

Currency \_\_\_\_\_ Unit Conv. \_\_\_\_\_

Supplier Item A00123 Supplier Unit \_\_\_\_\_

Norm Ord Qty 5 Min Ord Qty 5

Producer \_\_\_\_\_ Country of Origin \_\_\_\_\_

Salesman AMS Sales Group \_\_\_\_\_

Delivery Days 15

Def. Stock Type

☒ Purchase

☐ Consignment

**Item:** Select a code from the item register. You can have several purchase items for the same item if you order it from different suppliers.

**Supplier:** Paste special to Suppliers in the Contact register.

**Default:** Only one item/supplier combination can be set as default. Make sure you have a Default Purchase Item for all items that you need to order.

**Location:** Leave this field blank as it is not used with MRP.

**Price:** Enter the purchase price for the Item offered by the Supplier. This figure is per Supplier Unit.

**Purchase Cost:** The extra cost associated with a purchase transaction for the Item from the Supplier. When you create a Goods Receipt from a Purchase Order in which this Purchase Item has been used, any value entered here will be transferred to the Customs field on the Goods Receipt.

**Currency:** If the Price (above) is recorded in a Currency other than the local Currency, record that Currency here.

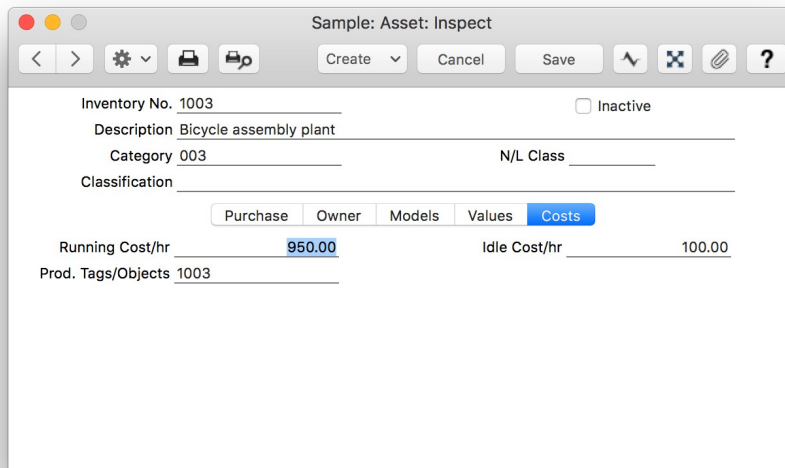
**Unit Conv./Supplier Unit:** Use these fields when the Item is purchased from the supplier in a different Unit to your main stock keeping unit (i.e. to the Unit in the Item record).

**Norm Ord Qty/Min Ord Qty:** The system will check these quantities when creating Purchase Orders from Purchase Order Plans. If you have set a normal order quantity, the Purchase Order quantities will be multiples of this quantity. If you have set a Minimum Order Quantity and the required quantity is lower, the Minimum Order Quantity will be ordered.

Assets >> Registers >> Assets

Create an Asset record for each machine used in the production process. To be able to use an Asset in the MRP and Production modules, you should at least specify the asset code (make sure this code is not used for Display Groups or Persons), the description, and the costs per hour and objects on the "Costs" tab.

Please note that for MRP and Production purposes, you might want to enter a group of machines instead of individual machines.



Sample: Asset: Inspect

Inventory No. 1003 ☐ Inactive

Description Bicycle assembly plant

Category 003 N/L Class

Classification

Purchase Owner Models Values **Costs**

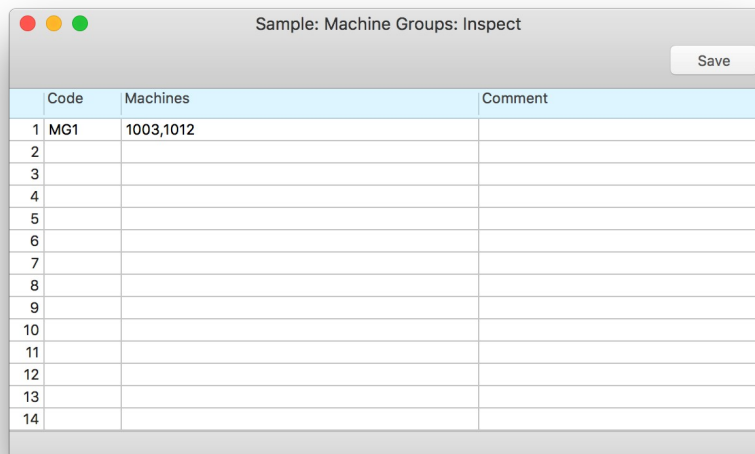
Running Cost/hr 950.00 Idle Cost/hr 100.00

Prod. Tags/Objects 1003

## Production >> Settings >> Machine Groups

This setting allows you to group together the different machines in your company. These groups might represent the different recipes that the machines can produce, types of work, or various departments of your company. The Machine Groups are used in the graphical Resource Planner. Production orders will be shown in the Resource Planner, per Machine Group and within each group per machine.

Each machine should have its own record in the Asset register in the Assets module. This register will allow you to account for each machine's depreciation. Please refer to the 'Assets' manual for details. You should record each machine in the Asset register before setting up the Machine Groups.



Sample: Machine Groups: Inspect

Save

	Code	Machines	Comment
1	MG1	1003,1012	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

The Machine Groups setting is in the Production module. When you open the setting you will see a window listing the Machine Groups that have already been entered. To add a new record, simply enter its details on the first blank line and press [Save] to save and close. Click the close box to close without saving changes.

**Code:** Specify a unique identification code for each Machine Group. Use a code that makes it easy to distinguish Machine Groups from other records in the Resource Planner, but do not use a code that is the same as a machine code (asset code) or person's signature (initials).

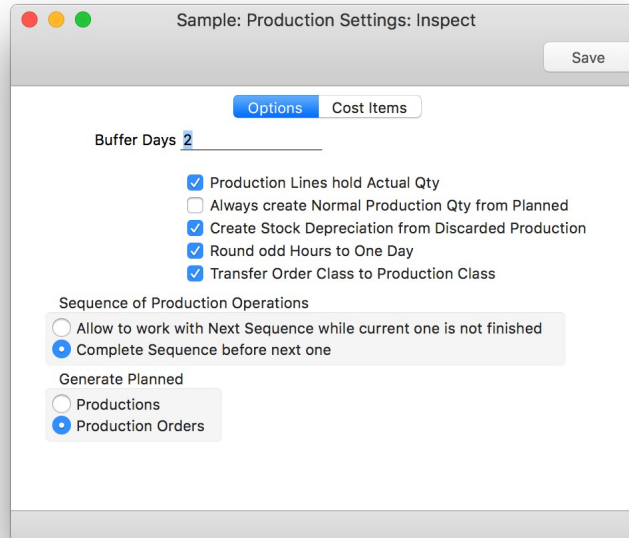
**Machines:** Use the "paste special" function to enter the asset code of each machine (asset) that belongs to the Machine Group, separated by commas.

## Number Series – Productions Orders

Use these settings to define the number sequences for Production Orders.

### Production Settings

This setting contains different options controlling various functions of the Production module.



**Buffer Days:** Enter here the number of days that assembled items must be in stock before the planned delivery date from sales orders. This will be applied when using the “Create Planned Records” maintenance routine in the Sales Orders module and “Create Production Plans” in the MRP module.

**Production Lines hold actual Qty:** If you select this option, then when you paste a recipe into a Production record the quantity in each Production row will be calculated to be the Qty in the Production record header \* Qty from the Recipe.

This option will be useful when you use a different quantity during production than is estimated in the Recipe and you want to make this correction on the Production record.

**Create Stock Depreciation from Discarded Production:** When you finish a production you may need to discard the finished items. For example the produced items may not be compliant with quality control and need to be removed from stock. If you are using this option, then when you mark the Production record as Finished but Discarded, the system will create an OK’ed Stock Depreciation record automatically, to write these faulty items off.

**Generate Planned:** Select here whether running the “Create Planned Records” maintenance routine in the Sales Orders module and “Create Productions” in the MRP module should create Production or Production Order records. For better workflow, it is recommended to set this option to “Production Orders”.

### Production >> Registers >> Machine Hours

This register is used to determine the “Start Date” of the production plans. This register is also used to specify the working hours of each machine group.

For example, if the machine group is available between 08:00 and 16:00 from Monday to Thursday and between 08:00 and 14:00 on Friday, you need to enter start at 8:00 for 8 hours for Mondays to Thursdays, and start at 8:00 for 6 hours on Fridays.

If the machine group is not available during weekends, then enter 00:00 as the starting time and 0 hours as the working time for Saturdays and Sundays.

Sample: Machine Hours: Inspect

< > Create Cancel Save

No. 1

Group MG1 Colour Flamingo

Machine \_\_\_\_\_

Description Machine group 1

Monday Start	<u>08:00:00</u>	for <u>8.0</u>	hours
Tuesday Start	<u>08:00:00</u>	for <u>8.0</u>	hours
Wednesday Start	<u>08:00:00</u>	for <u>8.0</u>	hours
Thursday Start	<u>08:00:00</u>	for <u>8.0</u>	hours
Friday Start	<u>08:00:00</u>	for <u>6.0</u>	hours
Saturday Start	<u>00:00:00</u>	for <u>0.0</u>	hours
Sunday Start	<u>00:00:00</u>	for <u>0.0</u>	hours



## STARTING WORK

Now that we have set our system up to satisfy the requirements for the work flow, we need to enter Sales Forecasts for retail items and create the purchase orders on time, in order to be able to supply our customers while maintaining the lowest possible stock level.

Review of the workflow:

1. Definition of Sales Forecast
2. Production Plans Process
  - 2.1 Run the Create Production Plans – Preview report
  - 2.2 Run the “Create Production Plans” maintenance routine
  - 2.3 Revise the Productions Plans
  - 2.4 Run the “Create Productions” maintenance routine
- 3 Purchase Order Process
  - 3.1 Run the Create Purchase Order Plans - Preview report
  - 3.2 Run the “Create Purchase Orders Plans” maintenance routine
  - 3.3 Revise the Purchase Orders Plans
  - 3.4 Run the “Create Purchase Orders” maintenance routine
  - 3.5 Follow up on created Purchase Orders
4. Sales Forecast Accuracy

Let's start by setting up the Sales Forecast. The Sales Forecast is usually prepared by the sales department of the company.

### Sales Forecast

Enter your sales forecasts in the Sales Forecast register in the MRP module. You should enter sales forecasts for each Item that you sell. In case of production companies, you only need enter sales forecasts for finished goods items. The system will handle the components from the recipes and sub-recipes automatically.

Make sure you have a purchase item with a default supplier defined for each retail item, and that you have assigned a recipe to the item records for each production item and that these recipes are defined in the recipe register.

The system assumes that an item can be produced if a recipe has been assigned to it (on the “Recipe” tab in each Item record), and that an item can be purchased if it has a default purchase item set up. When generating purchase order plans, the system will ignore items that can be produced i.e. it will not try to create purchase orders for items that can be produced.

Create a new Sales Forecast record, one per Period and Forecast Class combination.

Sample: Sales Forecast: Inspect

Code 1012 Version 1 New Version

Description Production Items

Period 01/03/2019 - 31/03/2019 Creation Date 05/02/2019

Row Type Item Class FT1 Last Changed 06/02/2019

Item/	Item Group	Description	Qty	Sum
1	70115	Streamline racer - finished item	30	240,000.00
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

☒ OK ☐ Closed

**Number:** The number of the Sales Forecast. The default is the first free number in the number sequence.

**Version, [New Version]:** Please see the “Revision/Correction of Sales Forecast” section below for details about this.

**Description:** Enter a short description for the Sales Forecast.

One suggestion is to describe the Items included in the Sales Forecast: the Description is shown in the Sales Forecasts: Browse window, so this will allow you to find Forecasts for particular Items relatively easily. Information such as Dates and Class are shown separately in the browse window, so it is not so necessary to repeat this information in the Description.

**Period Paste Special:** Choose date

Use these two fields to specify the Start and End Dates of the period covered by the Sales Forecast record. The default Start Date is the first day of the current period, and the default End Date of the current period – depending on what Period Type is set up in the Sales Forecast Setting. In our example we have set it to Months. If you change the Start Date, the End Date will be updated automatically to the last day of the current period. For example, if the current date is the 8th February, when creating new sales forecast, the start date becomes 1.2.2019 and last date 28.2.2019. If you change the start date to 1.3.2019, the end date will automatically become 31.3.2019.

If the Period Type in the Sales Forecast Settings is set as Weeks, then the same logic applies, considering always a full week.

Depending on the Period Type, the period covered by a Sales Forecast record must always be one calendar month beginning on the first of the month or one week beginning on a Monday.

You should set up one or more Sales Forecast records per Period and Forecast Class combination, without repeating Items or Item Groups in different Sales Forecast records for the same Period and Forecast Class combination. You would use Forecast Classes for example if you would like to predict sales of the same Item made separately by different production factories.

#### Row Type Paste Special: Choices of possible entries

Use this field to specify whether you will use the Sales Forecast record to predict sales of individual Items or of all Items belonging to a particular Item Group. Use "Paste Special" to select the appropriate option here.

If a Sales Forecast record is set up to use Item Groups, you can only use it to make sales predictions and for the subsequent analysis comparing forecasts with actual sales, using the Sales Forecast Accuracy report. This report compares Sales Forecast records against the actual sales by both quantities and values. In this case the Sales Forecast Class would best be set up per Salesman, allowing for analysis per Salesman.

If you also want to use the Sales Forecast records to plan Productions and Purchase Orders for the Items you expect to sell, then the Sales Forecast must be set up to use Items, not to use Item Groups.

**Class:** Select the appropriate Forecast Class code. Please see the Period section above for details about the usage of Forecast Class in Sales Forecast records.

**Creation Date:** This field automatically records when the Sales Forecast record was added to your Standard ERP database and this field cannot be changed by the user.

**Last Changed:** This field is updated automatically whenever you save any changes in the Sales Forecast record.

Use the grid to list the sales for each Item or Item Group that you predict for the Period.

**Item/Item Group:** If you have set the Row Type in the Sales Forecast header to "Item Group" then list the Item Groups whose sales you are predicting in this column. If you have set the Row Type to "Item" then list the Items in this column. Please note that for MRP it is required that Sales Forecasts are entered per Items, and not per Item Group.

**Description:** This field displays the Description of the Item or the Name of the Item Group entered.

**Qty:** Specify the predicted sales quantities for each Item or Item Group for the Period.

**Sum:** If the first column contains an Item code, this field will be calculated automatically as the total sales value when you enter the Qty, using the formula Qty \* Base Price from the Item record. You can change this figure if you anticipate a change in Base Price, or a higher volume of discounted sales planned in the Period. If the first column contains an Item Group, the sales value will not be calculated automatically, so you will need to enter one manually.

**OK:** When the Sales Forecast record is complete and correct, approve it by marking it as OK and saving it. This will make it available to reports and to the purchase and production planning functions. Un-OK'ed Sales Forecast records are not included in any of the reports, nor are they included in the calculations for purchase and production planning functions.

Once you have approved a Sales Forecast record, you will no longer be able to edit it. If you find it contains a mistake, use the [New Version] button to correct the mistake, as described in the "Revision/Correction of the Sales Forecast" section below.

You can use Access Groups to control which users can approve Sales Forecasts. To prevent a user from approving Sales Forecasts, set their access/level to the Action "OKing Sales Forecast" as None.

**Closed:** Marking a Sales Forecast as Closed and saving it will remove it from MRP reports and from the purchase and production planning functions.

If you create a new version of a Sales Forecast, the old one will be marked as Closed automatically when you approve the new one.

#### Revision/Correction of the Sales Forecast

You cannot change a Sales Forecast after you have approved it (marked it as OK and saved it). If you need to change a Sales Forecast, open it and click the [New Version] button. A new Sales Forecast record will be created, with the same Number as the original record but with the Version incremented by one. When you mark the new Forecast as OK and save it, the old one will be marked as Closed automatically, rendering it inactive. This allows you to build up and maintain a forecast history.

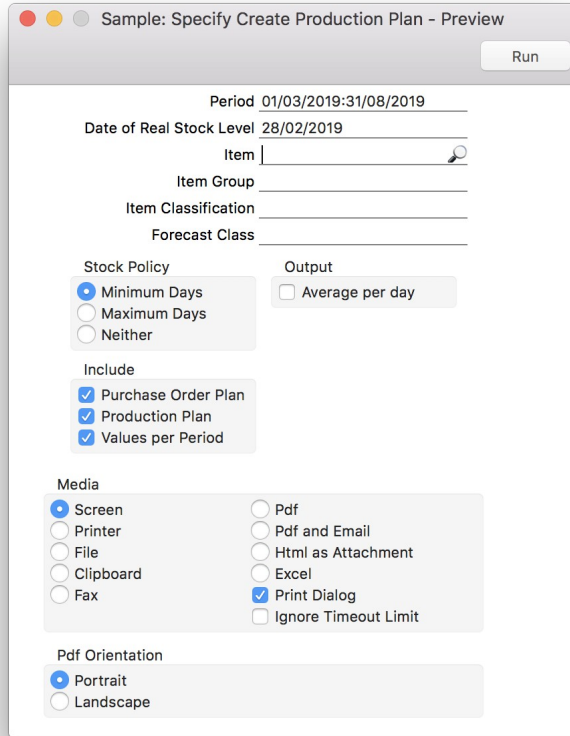
#### Production Plan Process

Once the Sales Forecast is defined, we can now start the production plan process. The period that we should run Production Plans for depends on the production and purchase order lead times. For example, if the production and purchase order cycle is less than a month, then it is enough to plan productions for one month in advance. For example, in May you would run the Production plans for June. If the production cycle is longer, then you will need to adjust the period accordingly.

When running the preview report, you can always select a longer period, to have medium term information.

## Create Production Plan – Preview Report

Based on the OKed Sales Forecast and the other variables for Production Plans, this report calculates the quantities of each item the company needs to produce per period. Running the report before creating Production Plan records, will give the production manager information to help with decision-making prior to creating of the Production Plans. For example, in case of shortage in the capacity of the factory to produce all that is required, the production manager may need to arrange for overtime, subcontract labour, purchase order some of the component items, or even adjust the sales forecast.



**Period:** Insert the period of the Production Plan you are interested in.

**Date of Real Stock Level:** Insert the date your stock is accurate to or today's date. This date has to be before the start date of the period in the Period field above.

**Item Paste Special:** to Item Register

Specify an Item if you want to check the Production Plan for a specific Item only.

**Item Group Paste Special:** Item Group Register

Specify the Item Group if you want to check the Production Plan for Items belonging to a specific Item Group.

This selection can be useful if there are different managers responsible for production of different groups of items. Each manager can run the report so that it only displays the items they are responsible for.

**Forecast Class Paste Special:** To Forecast Class setting

If you specify a Forecast Class, information in the report will be related to that specific Forecast class only.

If a Forecast Class refers to a specific branch, you can use this field to check the Productions Plans for that specific branch.

**Stock Policy:** The stock policy determines the quantity of each item that should be in stock at the end of a month or week (depending on the Period Type) after the sales forecasts have been fulfilled, expressed as a number of days' sales.

Select "Minimum days" if you would like the stock level of each item to be the minimum number of days' sales from

its Stock Policy, or “Maximum days” if you would like it to be the maximum number of days’ sales from its Stock Policy. Choose “Neither” if you do not need to have any stock left after the sales forecasts have been fulfilled.

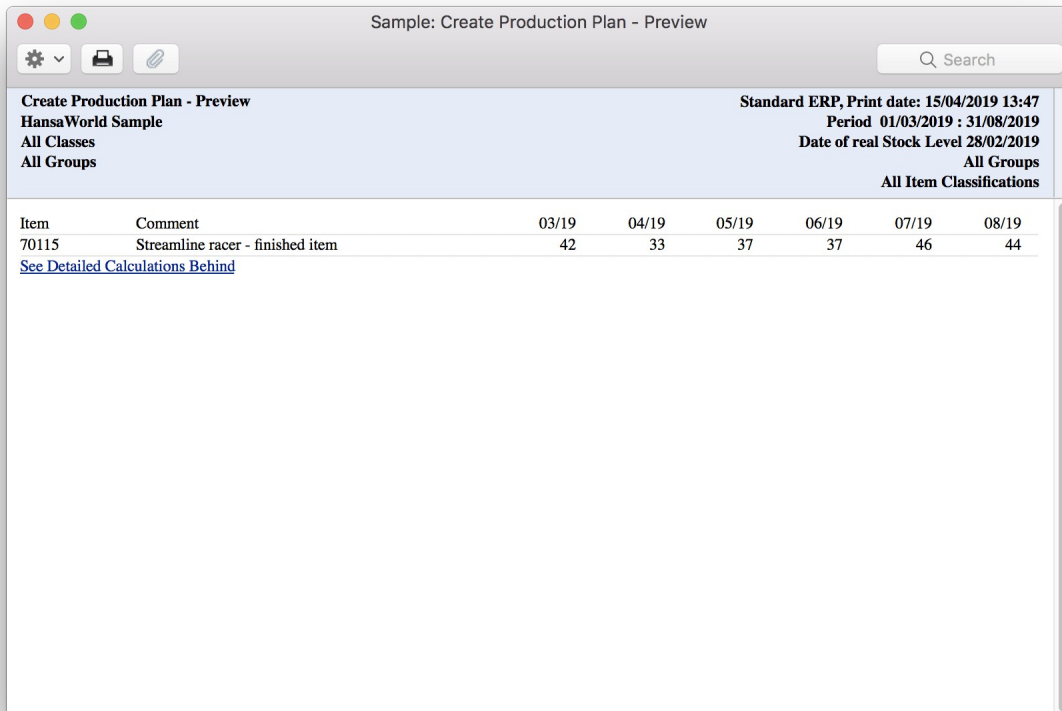
**Include:** You can select between Purchase Orders Plans and Production Plans.

**Production Plan:** By selecting include “Production Plan” the system will include Production Plans already created that affect the period. For example, if you need to produce 100 units of a certain item to satisfy a Sales Forecast and there is already a Production Plan for 75, the report with this option selected will show that you need to produce 25 units. With this option not selected, the report will show that you need to produce 100 units.

**Purchase Order Plan:** The logic of this field is the same as for Production Plan.

**Values per Period:** If this checkbox is on, the production quantities presented in the report will be the figures for each period. If this checkbox is off, the production quantities listed will be accumulated figures i.e. the figure in column 1 will be the figure for week 1/month 1, the figure in column 2 will be the accumulated figure for weeks/months 1 and 2, and so on.

**Average per day:** Usually the report will show total production quantities for each week or month. Select this option if you would like to see average per day figures instead. The averages will be calculated using the numbers of working days defined in the No. of Work Days setting (if the Period Type is Months) or the Bank Holidays for Sales Forecast setting (if the Period Type is Weeks).



Item	Comment	03/19	04/19	05/19	06/19	07/19	08/19
70115	Streamline racer - finished item	42	33	37	37	46	44

[See Detailed Calculations Behind](#)

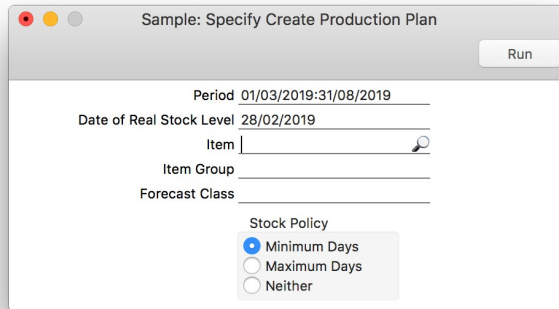
This is an example of the output of the report. The detailed calculation formula will be explained towards the end of this training material.

## Create Production Plan Maintenance

Once the Production manager decides that the Production Plan is correct, s/he should then run the “Create Production Plans” maintenance routine. In the specify window of this maintenance routine, specify the same data as when running the previous report.

The fields in this specify window work in the same way as in the previous report, but some options are not available.





Sample: Specify Create Production Plan

Run

Period 01/03/2019:31/08/2019

Date of Real Stock Level 28/02/2019

Item

Item Group

Forecast Class

Stock Policy

- ☒ Minimum Days
- ☐ Maximum Days
- ☐ Neither

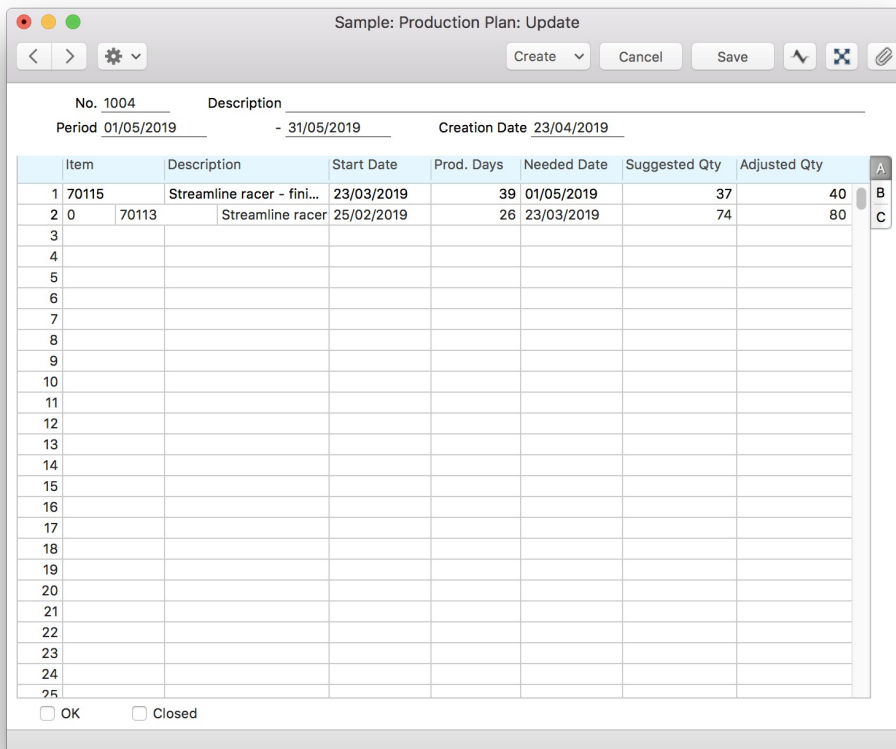
This routine will create Production Plans for the main items and sub-items so that sufficient quantities will be produced to satisfy the sales forecast. The new Production Plans will be saved in a "not OK'ed" status. The production manager should then analyse and adjust the Production Plans if required, either by creating some additional records manually, or by adjusting the records created by the maintenance routine. Find the details for this register in the next paragraph.

### Production Plan Register

The "Create Production Plan" maintenance routine will create Production Plan records for all Stocked Items in the Sales Forecast that have Recipes specified (on the "Recipe" tab of each Item record).

If the production manager agrees with the quantities suggested by the system, then there is no need to make any adjustment to the Production Plans created. If they do not agree with the suggested quantities, then the manager can override the suggested quantities by entering a new quantity in the "Adjusted Qty" field. When they adjust the quantity for a finish good item, the quantities of any sub-assemblies will automatically be adjusted, to meet the needs for the production of the main item.

Find below an explanation of the different fields in a Production Plan record.



Sample: Production Plan: Update

Create Cancel Save

No. 1004 Description

Period 01/05/2019 - 31/05/2019 Creation Date 23/04/2019

Item	Description	Start Date	Prod. Days	Needed Date	Suggested Qty	Adjusted Qty
1 70115	Streamline racer - fini...	23/03/2019	39	01/05/2019	37	40
2 0 70113	Streamline racer	25/02/2019	26	23/03/2019	74	80
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

☐ OK ☐ Closed

**No.:** The number of the Production Plan record. This field defaults to the first free number in the number sequence specified in the Number Series - Production Plans setting. You may change this number, but not to one that has already been used. If you are working in a multi-user environment, the Production Plan Number is assigned when you first save the Production Plan record.

**Description:** Enter a description of the Production Plan, to be shown in the Production Plans: Browse window. You can leave this field blank.

**Period:** If you are entering a Production Plan manually, use these two fields to specify the Start and End Dates of the period covered by the Production Plan record. The Start Date should be the first day of the period and the default End Date is either one calendar month later, if the Period Type is set to "Months" in Forecast Settings, or one week later, if the Period Type is set to "Weeks". If you change the Start Date, the End Date will be updated automatically.

Depending on the Period Type, the period covered by a Production Plan record must always be one calendar month beginning on the first of the month or one week beginning on a Monday.

You can enter more than one Production Plan record for the same Period, but each Item or Item Group can only be specified in one Production Plan record for the same Period.

When you use the "Create Production Plan" maintenance routine to create a Production Plan from a Sales Forecast, the Period from the Sales Forecast will be used in the new Production Plan. If you have more than one Sales Forecast for the same Period (with different Items and/or different Classes), they will be combined into a single Production Plan. For example, if you have two Sales Forecast records for June, they will be included in a single Production Plan for June. However, if the number of rows is not enough for all the required items, then more than one Production Plan for the same period will be generated automatically.

**Creation Date:** This field automatically records when the Production Plan record was added to your Standard ERP database and cannot be changed.

Use the grid to list the Items that you need to produce during the Period. In the case of a Production Plan created by the "Create Production Plan" maintenance routine, the Items and quantities will be calculated based on the Sales Forecast for the same Period.

Flip A

**Item Paste Special:** Item register

Specify an Item to plan its Production. This must be a Stocked Item with a Recipe (i.e. an Item that you can build using a Production).

If the Item is one that is built from sub-assemblies (i.e. the Recipe contains at least one component Item that itself has a Recipe), the Item Numbers of the sub-assemblies will be listed on the rows below, indented to show that they are sub-assemblies. This is shown in the illustration above.

**Description:** Default taken from Item

This field shows the Description of the Item, pasted automatically from the Item register.

**Start Date:** This is the date when production of the item should start. It is calculated by subtracting the Production Days from the Needed Date, taking also the Buffer Days specified in Production Settings into account.

**Prod. Days:** The number of days required to produce the Item. This is calculated using the Time to Setup, Fixed Assembly Days, Time to Produce, and the Days to Produce in the Recipe, and the Suggested or Adjusted Qty.

In case of a manually entered Production Plan, the Prod. Days and the Start Date will be calculated when you enter the Suggested or Adjusted Qty.

**Needed Date:** The date when the Item is required. This is the first date of the Period of the Production Plan and it cannot be changed.

In a row showing a sub-assembly, the Needed Date will be the Start Date from the row above (i.e. the date the sub-assembly should be ready, to allow work on the next level assembly to begin).

**Suggested Qty, Adjusted Qty:** In case the Production Plan is created by the "Create Production Plan" maintenance routine, the Suggested Qty field will contain the quantity of the Item that you need to build in order to satisfy the Sales Forecast for the relevant Period, taking the stock level at the beginning of the Period and Stock Policy for the Item into account.

In the case of a Production Plan that you are entering manually, enter the quantity of the Item that you believe you need to build during the Period.

You cannot change the Suggested Qty after you have saved the Production Plan for the first time. If you need to change the Suggested Qty, enter the new figure in the Adjusted Qty field. You will not be able to specify a Suggested Qty for an Item added to a Production Plan after it has been saved: again, use the Adjusted Qty field.

When creating a Production from the Production Plan row, the quantity used on the Production will be the Adjusted Qty. If that is blank, then the Suggested Qty will be used.

#### Flip B

**Sug. Date:** In the case of a Production Plan created by the "Create Production Plan" maintenance routine, this field will contain the date the record was created, shown for information only. You can change this date if necessary.

**Adj. Date:** Each time you enter an Adjusted Qty, the date of the adjustment will be placed here automatically.

#### Flip C

**Prod. No:** When you create a Production or Production Order from the Production Plan, the Production Number or Production Order Number will be entered here automatically.

**Recipe:** The Recipe that will be used to build the Item will be shown here, taken from the Item record. This is for information only and cannot be changed.

#### Footer

**OK:** When the Production Plan record is complete and correct, approve it by marking it as OK and saving it. When you use the "Create Productions" maintenance routine to create Productions or Production Orders from Production Plans, you will have the option to create them from OKed Production Plans only.

When you create Productions or Production Orders from a Production Plan using either the "Create Productions" Operations menu function or the "Create Productions" maintenance routine, the Production Plan will be marked as OK automatically.

Once you have approved a Production Plan record, you will no longer be able to change it.

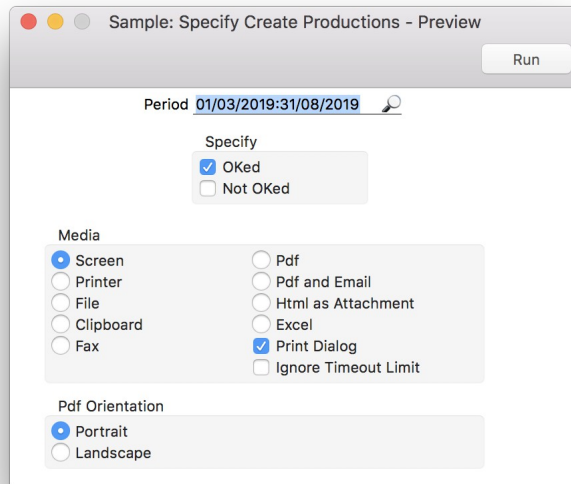
You can use Access Groups to control which users can approve Production Plans. To do this, set the access to the Action "OKing Production Plan" to None. You should also consider denying access to the "Create Productions" maintenance routine, because otherwise somebody unable to approve Production Plans will still be able to create Productions or Production Orders from Production Plans that have not been marked as OK.

**Closed:** You can mark a Production Plan as Closed and save it to cancel it. The "Create Productions" maintenance routine will exclude Closed Production Plans when creating Productions or Production Orders

## Create Productions Process

### Create Productions - Preview Report

After you have created the Production Plan and before marking it as OK, you can run the Create Productions – Preview report to check what Production Orders or Productions will be created. This is an opportunity for you to analyse the information and confirm that the suggestions are correct or to see if they require adjustments. The adjustments will not necessarily be down to wrong data in the database (such as wrong stock levels, wrong information regarding recipes, etc), but may also be due to the current business environment conditions, such as market conditions or a good business opportunity. If the report shows that adjustments are needed, enter them in the Adjusted Qty field in the relevant Production Plan row(s) as described above.



Sample: Specify Create Productions - Preview

Run

Period 01/03/2019:31/08/2019

Specify

☒ OKed  
☐ Not OKed

Media

☒ Screen  
☐ Printer  
☐ File  
☐ Clipboard  
☐ Fax

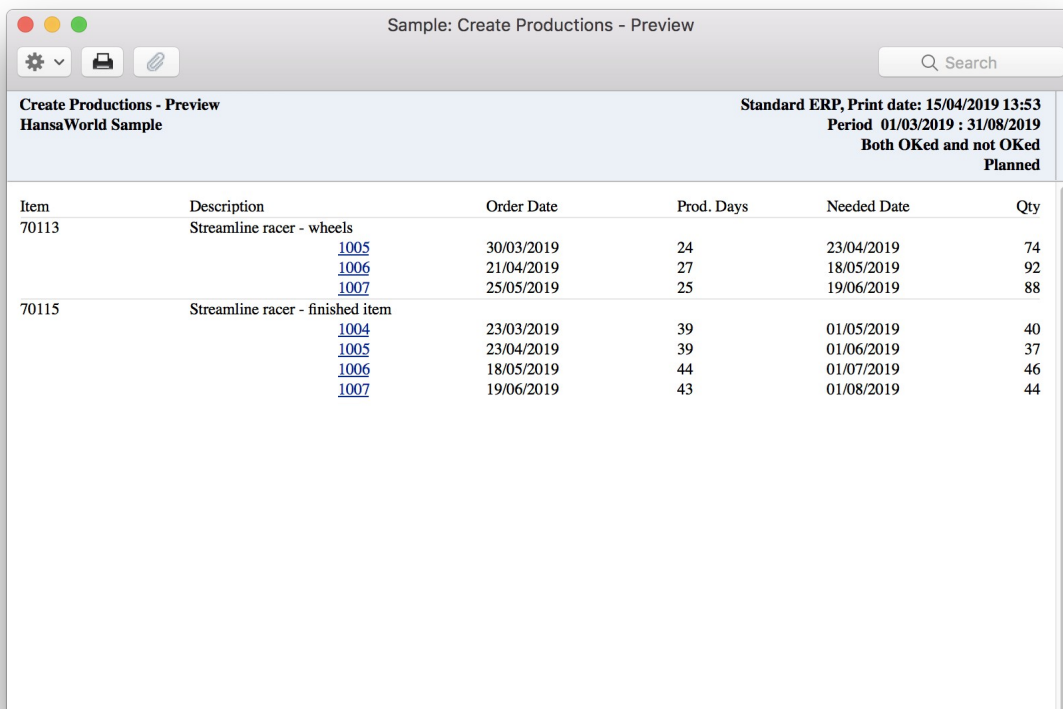
☐ Pdf  
☐ Pdf and Email  
☐ Html as Attachment  
☐ Excel  
☒ Print Dialog  
☐ Ignore Timeout Limit

Pdf Orientation

☒ Portrait  
☐ Landscape

Specify the period whose Production Plans you want to review. The report will include every Production Plan row whose start date falls in the specified period. At this stage, always include OKed and non OKed Production Plans, so you can check the suggested numbers before OKing them. All Production Plan rows that do not contain a production number will be included in this report.

The report will list the items that need to be produced, both the finished good items and sub-assembly items.



Sample: Create Productions - Preview

Standard ERP, Print date: 15/04/2019 13:53  
Period 01/03/2019 : 31/08/2019  
Both OKed and not OKed Planned

Item	Description	Order Date	Prod. Days	Needed Date	Qty
70113	Streamline racer - wheels				
	<a href="#">1005</a>	30/03/2019	24	23/04/2019	74
	<a href="#">1006</a>	21/04/2019	27	18/05/2019	92
	<a href="#">1007</a>	25/05/2019	25	19/06/2019	88
70115	Streamline racer - finished item				
	<a href="#">1004</a>	23/03/2019	39	01/05/2019	40
	<a href="#">1005</a>	23/04/2019	39	01/06/2019	37
	<a href="#">1006</a>	18/05/2019	44	01/07/2019	46
	<a href="#">1007</a>	19/06/2019	43	01/08/2019	44

To make any adjustments, just select a Production Plan number in the report window to open the record, enter the adjusted quantity, and save the record without "OKing" it. Recalculate the report to include the changes made. You might need to make more adjustments.

When this task is finished, the next step is to create Productions.

## Create Productions Maintenance

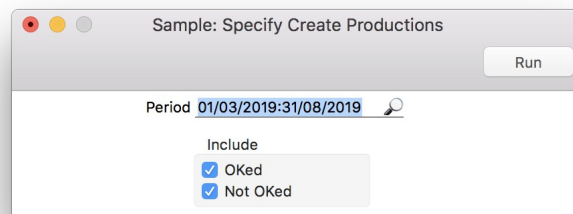
Use the "Create Productions" maintenance routine to create Production Orders or Productions from Production Plans.

Fill in the specification window of this maintenance routine as follows:

**Period:** Specify the period for which Production Orders or Productions are to be created. They will be created from Production Plan rows whose start dates fall in the specified period. Usually the period that you specify will depend on lead times and the production cycle. For example, if you create Production Orders monthly, then it is enough to enter a period of one month.

**Include OKed and Not OKed:** Choose whether Production Orders or Productions will be created from OKed Production Plans, not OKed Production Plans or both. If you choose the not OKed option, the maintenance function will mark Production Plans as OK automatically as part of the process.

If managers need to approve production plans manually, select only the OKed option in the specify window.



The maintenance routine will proceed as follows:

- It will create Productions or Productions Orders in the Production module, depending on which option for Generate Planned Records was selected in the Production Settings.
  - The Due Date will be taken from the Needed Date field in the Production Plan row
  - The Should Start date will be taken from the Start Date field in the Production Plan row
- Production Plans with rows whose start dates fall in the selected period will be marked as OK
- The Number of the new Production or Production Order will automatically be entered in the Production Plan row, flip C.

You can run the Production Plan Info report from the Operations menu of the Production Plan if you need to see all Productions or Production Orders created from the Production Plan, with the option to drill down to these records if needed.

**Important:** do not amend or delete any Productions or Production Orders. Any changes made to these records will not be reflected in the MRP.

If you need to make any changes, you need to cancel the Production Order and the Production plan by marking both of them as Closed, and create new records. Alternatively create an extra Production Plan record and generate new Production Orders from there.

## Purchase Order Plan Process

You can begin the Purchase Order Plan process after OKing the Production Plan or at a later point, after generating Production Orders or Productions in the Production module.

Before creating Purchase Order Plans or previewing their details in the report prior to doing so, it is required that Production Plans are created and OKed. This is because the Purchase Order Plans will include purchasing suggestions for the components required by the Production Plans. The timing for this is dependent on the company and it has to be agreed upon with the managers.

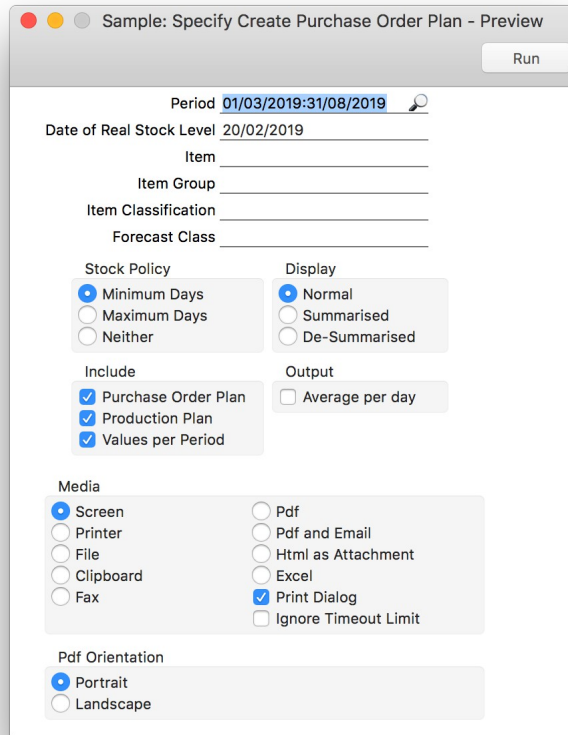
The period for which the Purchase Order Plans should be run depends on the lead times given by the suppliers. For example, if lead times are short enough to replenish your stock one month in advance, then for example in May you can run

the Purchase Order plans for June. If the lead time is longer, then you will need to adjust the period accordingly.

When running the report, you can always select a longer period, to have medium term information. For example, the Start Date in a Production Plan row may be earlier than the Start Date of the Production Plan as a whole. If the report is to include purchasing suggestions for the components required by the Production Plans, the report period should run from the earliest Start Date in any of the Production Plan rows for which components might need to be purchased.

## Create Purchase Order Plan - Preview Report

This report gives information about stock deficiencies, based on the sales forecast, stock levels, stock policies and outstanding purchase orders.



**Sample: Specify Create Purchase Order Plan - Preview** [Run]

Period 01/03/2019:31/08/2019

Date of Real Stock Level 20/02/2019

Item \_\_\_\_\_

Item Group \_\_\_\_\_

Item Classification \_\_\_\_\_

Forecast Class \_\_\_\_\_

**Stock Policy**

☒ Minimum Days

☐ Maximum Days

☐ Neither

**Display**

☒ Normal

☐ Summarised

☐ De-Summarised

**Include**

☒ Purchase Order Plan

☒ Production Plan

☒ Values per Period

**Output**

☐ Average per day

**Media**

☒ Screen

☐ Printer

☐ File

☐ Clipboard

☐ Fax

☐ Pdf

☐ Pdf and Email

☐ Html as Attachment

☐ Excel

☒ Print Dialog

☐ Ignore Timeout Limit

**Pdf Orientation**

☒ Portrait

☐ Landscape

**Period:** Insert the period of the Purchase Order Plan you are interested in.

**Date of Real Stock Level:** Insert the date your stock is accurate to or today's date. This date has to be before the start date of the period from the previous field.

**Item Paste Special:** to Item Register

Specify an Item if you want to check Purchase Order Plans for a specific item only.

**Item Group Paste Special:** Item Group Register

Specify an Item Group if you want to check Purchase Order plans for items belonging to a specific item group.

This selection can be useful when there are several managers in the company responsible for different item groups.

**Forecast Class Paste Special:** To Forecast Class setting

If you specify a Forecast Class, information in the report will be related to that specific Forecast class only .

For example if the Forecast Class refers to a specific branch, you can use this field to check Purchase Order Plans for a specific branch.

**Stock Policy:** The stock policy determines the quantity of each item that should be in stock at the end of a month or week (depending on the Period Type) after the sales forecasts have been fulfilled, expressed as a number of days' sales.

Select "Minimum days" if you would like the stock level of each item to be the minimum number of days' sales from

its Stock Policy, or “Maximum days” if you would like it to be the maximum number of days’ sales from its Stock Policy. Choose “Neither” if you do not need to have any stock left after the sales forecasts have been fulfilled.

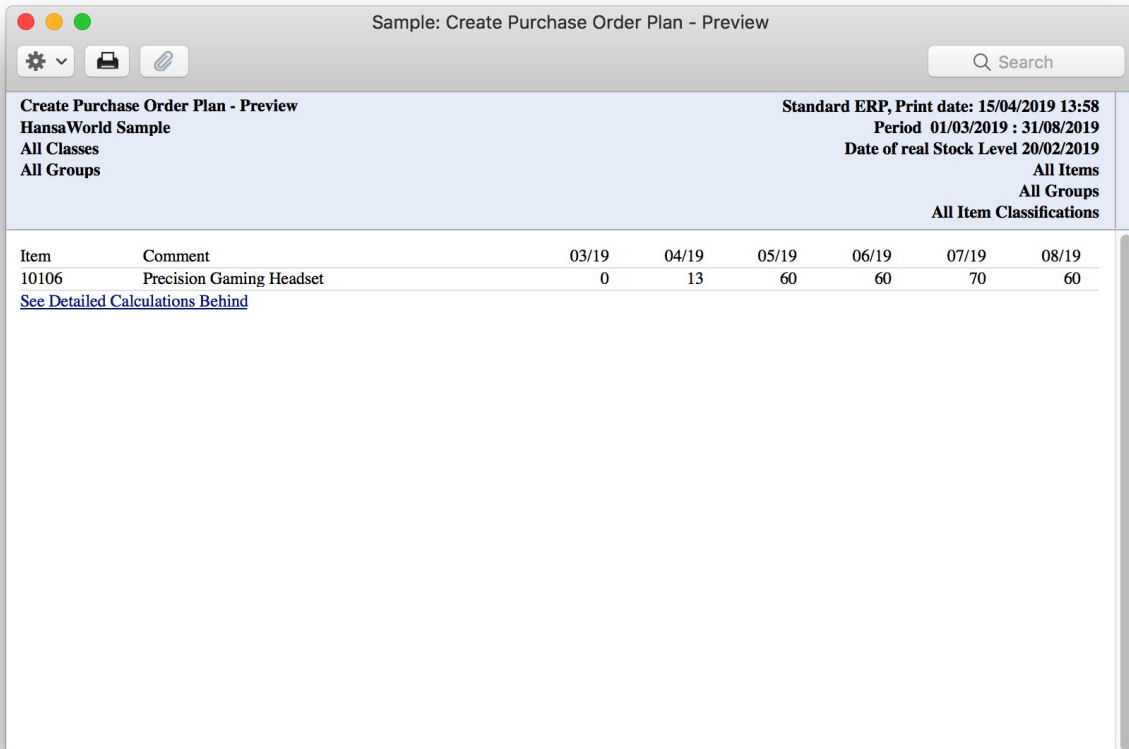
**Include:** You can select between Purchase Order Plans and Production Plans.

**Purchase Order Plan:** By selecting include “Purchase Order Plan” the system will include Purchase Order Plans already created that affect the period. For example, if you need to purchase 100 units of a certain item to satisfy a Sales Forecast and there is already a Purchase Order Plan for 75, the report with this option selected will show that you need to purchase 25 units. With this option not selected, the report will show that you need to purchase 100 units.

**Production Plan:** Same logic as Purchase Order Plan, applying to Production Plans. For retail companies with no production facilities, this option will have no effect.

**Values per Period:** if this checkbox is on, the purchase quantities presented in the report will be the figures for each period. If this checkbox is off, the purchase quantities listed will be accumulated figures i.e. the figure in column 1 will be the figure for week 1/month 1, the figure in column 2 will be the accumulated figure for weeks/months 1 and 2, and so on.

**Average per day:** Usually the report will show total purchase quantities for each week or month. Select this option if you would like to see average per day figures instead. The averages will be calculated using the numbers of working days defined in the No. of Work Days setting (if the Period Type is Months) or the Bank Holidays for Sales Forecast setting (if the Period Type is Weeks).



Item	Comment	03/19	04/19	05/19	06/19	07/19	08/19
10106	Precision Gaming Headset	0	13	60	60	70	60

[See Detailed Calculations Behind](#)

Running this report before running the maintenance routine will provide information about the purchase order plans that will be created, including the quantities per item. After checking the report, a manager can revise the Sales Forecast if required by creating a new version. If the manager agrees with the suggested numbers, s/he can then move on to the next step and run the “Create Purchase Order Plan” maintenance routine.

## Create Purchase Order Plan Maintenance

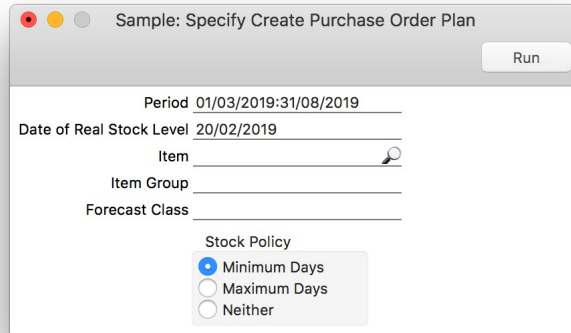
This maintenance routine will generate Purchase Order Plans, based in the options specified.

There are fewer options in the maintenance routine specify window compared to the preview report.

The information in the specify window should be the same as was specified when running the preview report and that the



manager was happy with.



If you review a Sales Forecast and then run this maintenance routine for a second time, all purchase order plans for the period that do not have purchase orders assigned will first be closed, and new purchase order plans will be created.

This maintenance routine creates records in the Purchase Order Plan register.

## Purchase Order Plan Register

If required, you can enter a Purchase Order Plan manually. However, usually you will generate these records using the "Create Purchase Order Plans" maintenance routine.

The maintenance function will create Purchase Order Plan records that are not OKed, giving managers the option to analyse and make adjustments if required, or to accept the suggested quantities.

The manager should always analyse this information, adjust the suggested quantities if required, and accept the plan.

Purchase Order Plan records will be created for Stocked Items in the Sales Forecast that have default purchase items set up, and that do not have recipes specified (on the "Recipe" tab of each Item record).

If the purchasing manager does not agree with the quantities suggested by the system, s/he can enter a required quantity in the "Adjusted Qty" field in any row in the Purchase Order Plan.

To buy the item suggested from a different supplier, just choose a different supplier using paste special from the Supplier field on flip B of the row. The lead times will be adjusted automatically using the delivery days in the purchase item record for that supplier.

Another adjustment that you can make is to split the line. For example, the system suggests you buy 50 units of a certain item from the default supplier. That month the manager can get a better agreement for 30 units from a second supplier. The manager can right-click (Windows) or Ctrl-click (macOS) the line that is to be split and then select the "Split Line" option from the pop-up menu. On iOS/Android, "Split Line" is on the Tools menu (with "wrench" icon). The row will be duplicated: change the Adjusted Qty in the original row and place the remaining quantity in the Adjusted Qty field in the new row. You can use the "Split Line" function for any other situation when you will not order the whole suggested quantity in one go, for example different supplier, different dates, etc.

When you have checked the Purchase Order Plan and found it to be correct, you can run the "Create Purchase Orders" maintenance routine. This maintenance routine is described in a separate section below.

Find below the explanation of the different fields in the Purchase Order Plan record.

Sample: Purchase Order Plan: Inspect

No. 1004 Description \_\_\_\_\_

Period 01/04/2019 - 30/04/2019 Supplier \_\_\_\_\_ Date 17/03/2019

	Item	Description	Order Date	Del. Days	Needed Date	Suggested Qty	Adjusted Qty	
1	10106	Precision Gaming Heads...	17/03/2019	15	01/04/2019	13		A
2								B
3								C
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

☐ OK ☐ Closed

**No.:** The number of the Purchase Order Plan. The default is the first free number in the number sequence specified in the Number Series - Purchase Order Plans setting. You may change this number, but not to one that has already been used. If you are working in a multi-user environment, the Purchase Order Plan Number is assigned when you first save the Purchase Order Plan.

**Description:** Enter a description of the Purchase Order Plan, to be shown in the Purchase Order Plans: Browse window. You can leave this field blank.

**Period Paste Special:** Choose date

When you use the "Create Purchase Order Plan" maintenance routine to create Purchase Order Plan records from a Sales Forecast, the Period will be copied from that Sales Forecast. If you have more than one Sales Forecast for the same Period (with different Items and/or different Classes), they will be combined into a single Purchase Order Plan.

You can also create Purchase Order Plans manually, for example, when you need to purchase items without referring to Sales Forecasts or Production Plans. In this case, use these two fields to specify the Start and End Dates of the period covered by the Purchase Order Plan record. If the Period Type in the Forecast setting is selected as Months, the default period will be the current calendar month, and if the Period Type is Weeks, the default period will be the current week. If you change the Start Date, the End Date will be updated automatically.

Depending on the Period Type, the period covered by a Purchase Order Plan record must always be one calendar month beginning on the first of the month or one week beginning on a Monday.

You can use the same Period in more than one Purchase Order Plan record, providing there is no common Item.

**Supplier Paste Special:** Suppliers in Contact Register

When you create Purchase Order Plans using the maintenance routine, this field will be blank. You can leave it blank, or select a supplier from the Contact register. This field will be used when you create Purchase Orders from a Purchase Order Plan as follows:

1. If you enter a Supplier in a particular Purchase Order Plan row (flip B), that Supplier will be used, providing there is a

Purchase Item set up for the Item/Supplier combination. Pricing will be taken from that Purchase Item.

2. If the Supplier field in a Purchase Order Plan row (flip B) is blank or there is no Purchase Item set up for the Item/Supplier combination, the Supplier specified in the Purchase Order Plan header will be used, providing there is a Purchase Item for the Item/Supplier combination. Pricing will be taken from that Purchase Item.
3. If the Supplier fields in the row and the header are both empty and/or there are no Purchase Items set up for the Item/Supplier combination, the Supplier and pricing will be taken from the Default Purchase Item for the Item, if there is one.

If an Item has no Purchase Items at all, it will not be included in any Purchase Orders that you create from the Purchase Order Plan.

**Date:** This field automatically records the earliest Order Date used in the Purchase Order Plan rows and cannot be changed.

Use the grid to list the Items that you need to order during the period. In Purchase Order Plans created by the "Create Purchase Order Plan" maintenance routine, the Items and quantities will be the same as in the Create Purchase Orders Plan – Preview report.

To add rows to a Purchase Order Plan, click in any field in the first blank row and enter appropriate details. To remove a row, click on the row number on the left of the row and press the Backspace key. To insert a row between existing rows, click on the row number where the insertion is to be made and press Return. If you are using iOS or Android, add rows by tapping + below the matrix. To insert a row, long tap on a row number on the left of a row and select "Insert Row" from the resulting menu. To remove a row, select "Remove Row" from the same menu.

If you are using Windows or macOS, you can also bring Items into a Purchase Order Plan by opening paste special from the first free Item field, selecting a range of Items in the Paste Item window by clicking the mouse while holding down the Shift key, and then dragging and dropping them to the Item field in the first empty Purchase Order Plan row.

## Flip A

Item Paste Special: Item register

These are the Items that you are planning to purchase. They must be Stocked Items with connected Purchase Items (Items without Purchase Items will not be included in any Purchase Orders created from the Purchase Order Plan). In a Purchase Order Plan created by the "Create Purchase Order Plans" maintenance routine, all items in the Sales Forecast that that are without recipes will be included.

**Description:** This field shows the description of the Item, brought in from the Item record.

**Order Date:** The date you should order the Item, calculated by subtracting the Del. Days from the Needed Date.

**Del. Days:** The number of days the Supplier requires to deliver the Item to you. This is taken from the Delivery Days field in the relevant Purchase Item (i.e. the Purchase Item for the Item with the Supplier specified on flip B or in the header, or the Default Purchase Item for the Item).

**Needed Date:** The date when the Item is required.

**Suggested Qty/Adjusted Qty:** When you create a Purchase Order Plan using "Create Purchase Order Plans" maintenance routine, the Suggested Quantity field will contain the quantity of the Item that you need to purchase in order to satisfy the Sales Forecast for the relevant Period. If you want to adjust the quantity suggested by the system, enter the new value in the Adjusted Qty field.

## Flip B

Supplier Paste Special: Suppliers in Contact Register

In a Purchase Order Plan created by the "Create Purchase Order Plan" maintenance routine, the Supplier field will be blank. The calculation of the Delivery Days will use the Default Purchase Item. If you want Purchase Orders to be issued to the Default supplier, you can leave this Supplier field blank.

## Flip C

Item to Order>>Paste Special>>Item register

If you need to purchase an alternative Item to the one specified on flip A, specify that alternative Item here. The alternative Item must be connected to the Item on flip A through the Auto Production Items setting (described earlier in this material). The alternative Item must also be connected to at least one Purchase Item, otherwise it won't be included in any Purchase

Orders.

Footer

**OK:** When the Purchase Order Plan record is complete and correct, approve it by marking it as OK and saving it.

When you use the “Create Purchase Orders” maintenance routine to create Purchase Orders from a Purchase Order Plan, the Purchase Order Plan will be marked as OK automatically.

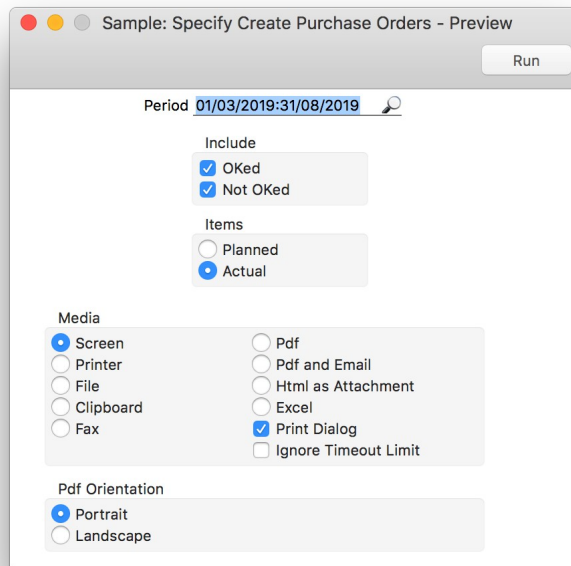
**Closed:** If you mark a Purchase Order Plan as Closed and save it, the “Create Purchase Orders” maintenance routine will exclude the Purchase Order Plan when creating Purchase Orders.

## Purchase Order Process

### Create Purchase Orders Preview Report

After creating the Purchase Orders Plans the purchase manager needs to analyse the suggestions by the system and take the decision to adjust or accept them.

The adjustments might be necessary not because of any wrong data in the database (such as wrong stock levels, wrong information regarding lead times, etc.), but because of current conditions, such as market conditions or a good business opportunity.



Specify the period whose Purchase Order Plans you need to review. The report will include every Purchase Order Plan row whose order date falls in the specified period. At this stage, always include OKed and non OKed Purchase Order Plans, so you can check the suggested numbers before OKing them. All Purchase Order Plan rows that do not contain a purchase order number will be included in the report.

If you have any Purchase Order Plan rows where you have specified an Item (usually a generic Item) on flip A and an Item to Order (usually a specific Item) on flip C, use the “Planned” and “Actual” options to choose whether the report should show the generic Item or the specific Item. Select “Planned” if you need the report to show the generic Item (from flip A), or select “Actual” if you need the report to show the Item to Order from flip C.

Sample: Create Purchase Orders - Preview

Create Purchase Orders - Preview  
HansaWorld Sample

Standard ERP, Print date: 15/04/2019 14:26  
Period 01/03/2019 : 31/08/2019  
Both OKed and not OKed  
Actual

Item	Description	Order Date	Del. Days	Needed Date	Qty
10106	Precision Gaming Headset				
	<a href="#">1004</a>	17/03/2019	15	01/04/2019	13
	<a href="#">1005</a>	16/04/2019	15	01/05/2019	60
	<a href="#">1006</a>	17/05/2019	15	01/06/2019	60
	<a href="#">1007</a>	16/06/2019	15	01/07/2019	70
	<a href="#">1008</a>	17/07/2019	15	01/08/2019	60
	<a href="#">1009</a>	17/08/2019	15	01/09/2019	70

The report will list all the Items that need to be purchased. To make any adjustments, just select a Purchase Order Plan number in the report window to open the record, enter the adjusted quantity, and save the record without "OKing" it. Recalculate the report to include the changes made. You might need to make more adjustments.

When this task is finished, the next step is to create Purchase Orders.

## Create Purchase Orders Maintenance

Use the "Create Purchase Orders" maintenance routine to create Purchase Orders from Purchase Order Plans.

Fill in the specification window of this maintenance routine as follows:

**Period:** Specify the period for which Purchase Orders are to be created. They will be created from Purchase Order Plan rows whose start dates fall in the specified period. Usually the period that you specify will depend on the lead times and purchase cycle. For example, if you create Purchase Orders monthly, it is enough to enter a period of one month. If the Purchase Orders need to be placed 6 months in advance, then the period needs to be 6 months as well.

**Include OKed and not OKed:** Choose whether Purchase Orders will be created from OKed Purchase Order Plans, not OKed Purchase Order Plans or both. If you choose the not OKed option, the maintenance function will mark Purchase Order Plans as OK automatically as part of the process.

Sample: Specify Create Purchase Orders

Run

Period 01/03/2019:31/08/2019

Include

☒ OKed

☒ Not OKed

This operation has several actions:

- It will create Purchase Orders in the Purchase Orders register. The new Purchase Orders will not be marked as OK.
- The Purchase Order Date will be taken from the Order Date field in the Purchase Order Plan row
- The Purchase Order Planned Delivery Date will be taken from the Needed Date field in the Purchase Order Plan row
- Purchase Order Plans with rows whose start dates fall in the selected period will be marked as OK
- The Number of the new Purchase Order will automatically be entered in the Purchase Order Plan row, flip C.

You can run the Purchase Order Plan Info report from the Operations menu of the Purchase Order Plan if you need to see all the purchase orders created from the Purchase Order Plan record, with the option to drill down to these records if needed.

Important: do not amend or delete any Purchase Orders. Any changes will not be reflected in the MRP.

If you need to make any changes, you should close the Purchase Order and the Purchase Order Plan, and create new Purchase Order Plans and Purchase Order records.

After you have marked the Purchase Orders as OK and sent them to the suppliers, you can follow up on the quantities per item that you expect to arrive, using the Expected Arrivals report in the MRP module.

The Expected Arrivals report shows, in monthly columns, the quantity of each Item that you are expecting to receive, according to the Purchase Order Plan.

If you have any Purchase Order Plan rows where you have specified an Item (usually a generic Item) on flip A and an Item to Order (usually a specific Item) on flip C, use the “Planned” and “Actual” options to choose whether the report should show the generic Item or the specific Item. Select “Planned” if you need the report to show the generic Item (from flip A), or select “Actual” if you need the report to show the Item to Order from flip C. The expected arrival quantity will be the Adjusted or Suggested Qty divided by the Coefficient in the Auto Production Item record that connects the Item and the Item to Order.

Sample: Expected Arrivals

Standard ERP, Print date: 15/04/2019 14:33  
Period 01/02/2019 : 31/12/2019  
All Items

Item	Comment	03/19	04/19	05/19	06/19	07/19	08/19
10106	Precision Gaming Headset	0	23	60	0	0	0
70110	Streamline racer - frame	32	37	46	0	0	0
70111	Streamline racer - handlebars	32	37	46	0	0	0
70112	Streamline racer - pedals	64	74	92	0	0	0
70114	Streamline racer - saddle	32	37	46	0	0	0
70116	Streamline racer - Spokes	2,448	3,312	0	0	0	0
70117	Streamline racer - Rim	0	74	0	0	0	0
70118	Streamline racer - hub	0	74	0	0	0	0
70119	Streamline racer - tyre	0	74	0	0	0	0

[See Detailed Calculations Behind](#)

## Sales Forecast Accuracy Report

One of the benefits of the MRP Module is the possibility of comparing Sales Forecasts with actual sales. To do this, use the Sales Forecast Accuracy report.

Specify the period you want to analyse, and you can select a specific item or sales forecast class.

You can then run the report comparing actual sales with sales forecast, by quantities, by values or both.

Sample: Sales Forecast Accuracy

Standard ERP, Print date: 15/04/2019 14:34  
Period 01/01/2019 : 31/12/2019  
All Items  
All Groups  
All Item Classifications

Sales Forecast Accuracy  
HansaWorld Sample  
All Classes

Item	Comment	Quantity			Sales		
		Forecast	Actual	Diff	Forecast	Actual	Diff
10106	Precision Gaming Headset	50	104	+108%	30,000	56,160.00	+87%
70115	Streamline racer - finished item	20	28	+40%	160,000	201,600.00	+26%
	General take on item		0			0.00	



## REPORTS

### Introduction

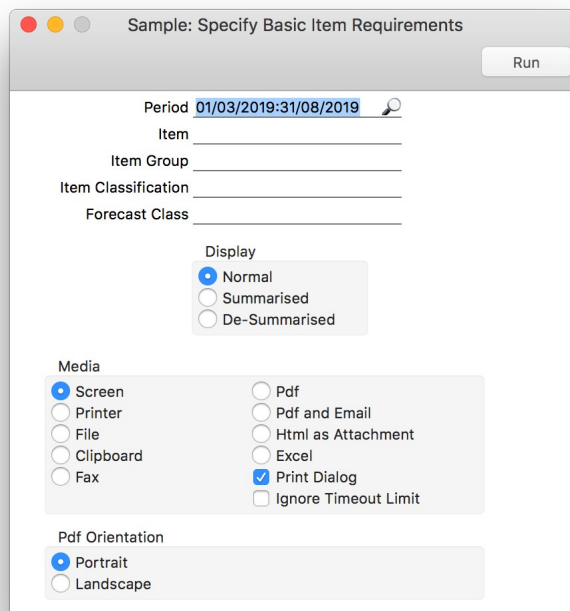
As in all modules you can print a report from the MRP module by selecting the 'Reports' icon in the Navigation Centre and then choosing the report that you need from the list.

Some of the reports available in this module were already described in previous sections in this material.

The following reports are also available in the MRP module:

### Basic Item Requirements

This report lists the quantities of each Item that you need to produce or purchase to meet Sales Forecast estimates.



While the Sales Forecast Report lists only the forecasted items, the Basic Item Requirements report lists both sales items and component items. Regarding the components, you can list:

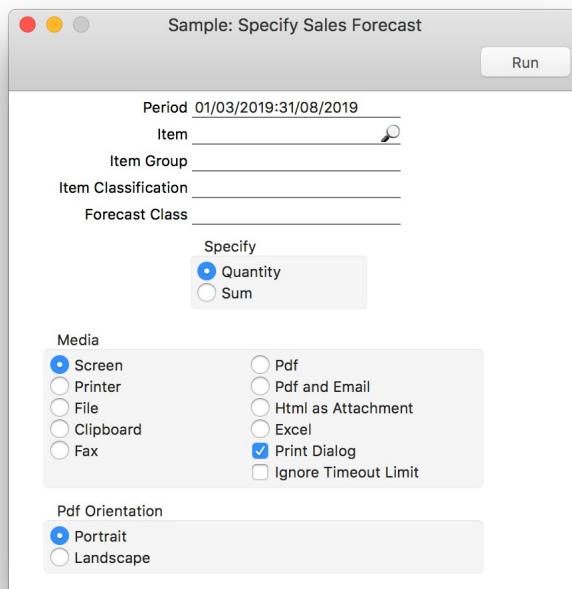
**Normal:** Shows all items that have requirements: specific items and generic items

**Summarised:** Checks the Auto Production Items setting and converts specific items to generic items (only generic items will be shown in the report)

**Desummarised:** Checks the Auto Production Items setting and converts generic items to specific items (only specific items will be shown in the report)

## Sales Forecast

This report lists data from the Sales Forecast register according to the selections in the specify window. This report only includes OKed Sales Forecast records that have not been Closed.



Sample: Specify Sales Forecast

Run

Period 01/03/2019:31/08/2019

Item

Item Group

Item Classification

Forecast Class

Specify

☒ Quantity

☐ Sum

Media

☒ Screen

☐ Printer

☐ File

☐ Clipboard

☐ Fax

☐ Pdf

☐ Pdf and Email

☐ Html as Attachment

☐ Excel

☒ Print Dialog

☐ Ignore Timeout Limit

Pdf Orientation

☒ Portrait

☐ Landscape

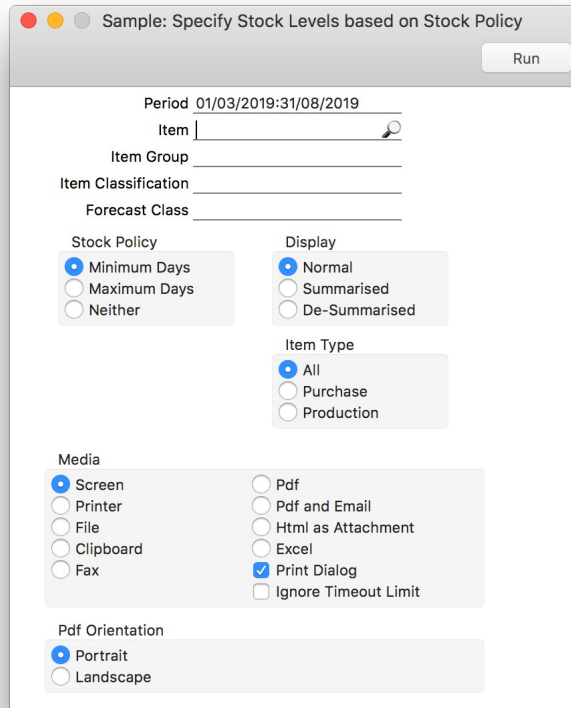
## Stock Levels based on Stock Policy

This report gives you information about the quantities of each Item you should have in stock at a given date based on your Sales Forecast and Stock Policies.

You can select the type of Item that will be shown in the report, as follows:

**Purchase:** This option will only list the items from the Sales Forecast that have Purchase Items and that do not have Recipes specified.

**Production:** This option will only list the items from the Sales Forecast that have Recipes specified (on the "Recipe" tab in the item record), regardless of whether they also have connected Purchase Items.



Sample: Specify Stock Levels based on Stock Policy

Run

Period 01/03/2019-31/08/2019

Item

Item Group

Item Classification

Forecast Class

Stock Policy

☒ Minimum Days

☐ Maximum Days

☐ Neither

Display

☒ Normal

☐ Summarised

☐ De-Summarised

Item Type

☒ All

☐ Purchase

☐ Production

Media

☒ Screen

☐ Printer

☐ File

☐ Clipboard

☐ Fax

☐ Pdf

☐ Pdf and Email

☐ Html as Attachment

☐ Excel

☒ Print Dialog

☐ Ignore Timeout Limit

Pdf Orientation

☒ Portrait

☐ Landscape

## Stock List

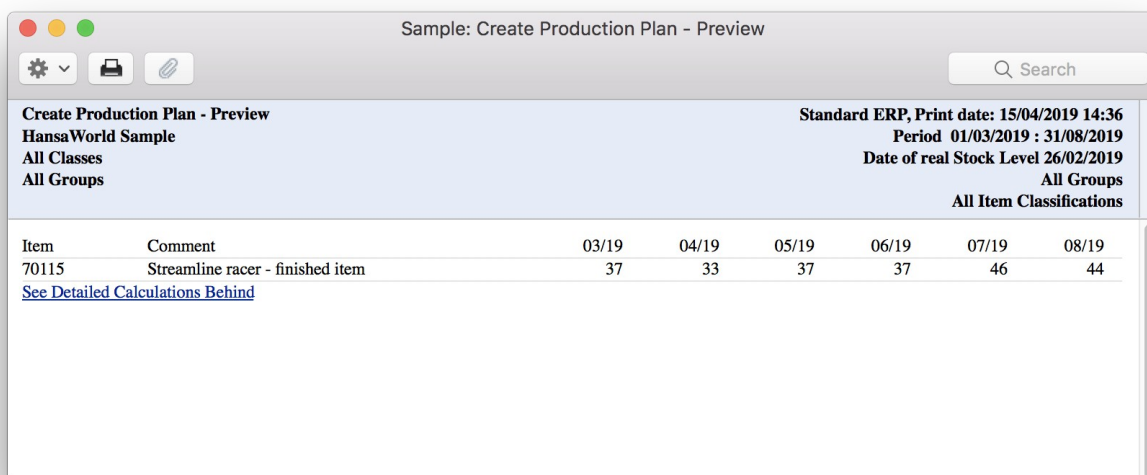
This report is the same as the one available in the Stock module. For details, please refer to the training material for Stock module.

## FORMULAE

The following examples illustrate the forecasting formulae that are used to calculate the production and purchasing requirement figures in the MRP module. These formulae will calculate the quantity of each Item you need to produce or buy each month to satisfy forecasted sales. In the case of Items that you need to produce (using Productions), the calculation will be used by the Create Production Plan - Preview report and the "Create Production Plan" maintenance routine. In case of Items that you need to buy for resale, the calculation will be used by the Create Purchase Order Plan - Preview report and the "Create Purchase Order Plan" maintenance routine. This will include purchasing requirements for the components for the Items that you will produce yourself: this requires that you run the "Create Production Plan" maintenance routine for a particular period and OK the resulting Production Plan(s) before running the "Create Purchase Order Plan" routine.

### Production Plan Formula

Below is an example of the Create Production Plan - Preview report



Item	Comment	03/19	04/19	05/19	06/19	07/19	08/19
70115	Streamline racer - finished item	37	33	37	37	46	44

[See Detailed Calculations Behind](#)

Select the "See Detailed Calculations Behind" text link to see the calculation in detail. This report is shown below in several parts, as it is too long to fit in a single window. In the report, each stage of the calculation (from 1 to 15) is shown separately. Below you will find a more detailed explanation for some of the sections of this report.

The columns in the report will each represent one week or one month, depending on the Period Type you are using.

Sample: Create Production Plan - Preview

Search

Create Production Plan - Preview

HansaWorld Sample

All Classes

All Groups

Standard ERP, Print date: 15/04/2019 14:37

Period 01/03/2019 : 31/08/2019

Date of real Stock Level 26/02/2019

All Groups

All Item Classifications

Detailed Calculations Step by Step

1. The Forecast Array

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	0	-60	-60	-60	-60	-70	-60	-70
70115	Streamline racer - finished item	0	-60	-30	-40	-40	-50	-50	-60

2. With the Stock Policy Appended

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	0	0	0	0	0	0	0	0
70115	Streamline racer - finished item	0	-23	-23	-26	-23	-20	-16	-10

3. Forecast

26/02/2019

10106	Precision Gaming Headset	3.57	2,142.85
70115	Streamline racer - finished item	1.42	11,428.57

4. PO Plan

26/02/2019

70110	Streamline racer - frame	3.00
70111	Streamline racer - handlebars	3.00
70112	Streamline racer - pedals	6.00
70114	Streamline racer - saddle	3.00
10106	Precision Gaming Headset	4.00

This detailed report is divided into the following sections:

**The Forecast Array (section 1):** This section displays sales forecast figures for each Item, taken from OKed records in the Sales Forecast register. This section includes the week or month before and the week or month after the report period.

**With the Stock Policy Appended (section 2):** The Stock Policies setting contains minimum and maximum start-of-period stock levels for each Item, expressed as a number of days' worth of sales. This section of the report uses the Stock Policies setting to calculate the quantity that you should have in stock at the beginning of each week or month. When you produce the report or run the maintenance function, you will be able to specify whether this calculation will use the minimum or maximum stock level in the setting. Please refer to the "Stock Policy – Average Sales Per Day" section for details of this calculation.

If an Item has no Stock Policy, it will be assumed that the stock level should be zero at the beginning of each week or month. If you choose "Neither" when producing a report or running a maintenance routine, it will be assumed that the stock level at the beginning of each week or month should be the full Sales Forecast quantity for each Item. In this case the section will not be shown in the report, but the figures will be visible in section 10.

**Current Stock (section 7):** This section shows the actual stock level of each Item at the beginning of the report period.

When you produce a report or run a maintenance function, you will need to specify the date when you know the stock figure to be accurate (the "Date of Real Stock Level"). If the stock level at the beginning of the report period is not known (perhaps you are producing the report ahead of time or you are not up to date in entering stock transactions), the stock level for the beginning of the report period will be estimated by subtracting the relevant Sales Forecast figure from the actual stock level on the Date of Real Stock Level, and adding the relevant figures from Production and Purchase Order Plans.

For example, the report period begins on March 1st, and you know that the stock level figure for an Item is correct as of February 26th. Enter this date as the Date of Real Stock Level in the report specification window. Extra sections will be inserted in the detailed report above the "Current Stock" section to display the following calculations: Two days of sales will be estimated from the Sales Forecast record for February, and will be subtracted from the stock level

figure. Two days' production will be estimated from the Production Plan record for February and two days' Goods Receipts will be estimated from the Purchase Order Plan record for February, and these figures will be added to the stock level.

**With the Stock Level and Forecast Appended (section 8):** This section shows the stock level at the end of the month, calculated by subtracting the Sales Forecast for that month from the stock level at the beginning of that month. If the figure is negative, the Sales Forecast cannot be met from stock and so this is the quantity that needs to be produced to meet the requirement.

Sample: Create Production Plan - Preview									
Create Production Plan - Preview									
HansaWorld Sample									
All Classes									
All Groups									
Standard ERP, Print date: 15/04/2019 14:37									
Period 01/03/2019 : 31/08/2019									
Date of real Stock Level 26/02/2019									
All Groups									
All Item Classifications									
8. With the Stock Level and Forecast Appended; Stock on Date of Real Stock Level - [(3) - (4) - (5)]									
Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	93	33	-27	-87	-147	-217	-277	-347
70115	Streamline racer - finished item	43	-17	-47	-87	-127	-177	-227	-287
9. Next calculation will take Projected Stock Levels from Previous Month; (9) = (8)									
Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	93	33	-27	-87	-147	-217	-277	-347
70115	Streamline racer - finished item	43	-17	-47	-87	-127	-177	-227	-287
10. Minus: Stock Policy for next month; (10) = (2)									
Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	0	0	0	0	0	0	0	0
70115	Streamline racer - finished item	0	-23	-23	-26	-23	-20	-16	-10
11. Minus: Forecast of this month, resulting in:									
Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	
10106	Precision Gaming Headset	0	-33	27	87	147	217	277	
70115	Streamline racer - finished item	0	40	73	110	147	193	237	
12. With the Purchase Plan Appended; (12) = (11) - (4)									
Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	
10106	Precision Gaming Headset	0	-37	23	83	143	213	273	
70115	Streamline racer - finished item	0	40	73	110	147	193	237	

**With the Purchase Plan Appended (section 12):** If there already is an OKed Purchase Order Plan for the Item for a week or month, then this section will show the quantity in that Purchase Order Plan subtracted from the previous figure (in section 11). Figures in sections 8, 9 and 11-13 are accumulated: for example, the April figure of 73 in section 12 for Item 70115 includes the March total of 40.

This suggests that a subsequent running of the "Create Purchase Order Plan" maintenance function will create a second Purchase Order Plan for the Item for the month in question, effectively updating the original Purchase Order Plan. In fact, the maintenance routine will mark the original Purchase Order Plan as Closed and will create a new Purchase Order Plan for the entire requirement.

**With the Production Plan Appended (section 13):** This section is similar to the previous one, but applies to existing Production Plans.

**Final Results (section 15):**

Sample: Create Production Plan - Preview

Create Production Plan - Preview  
HansaWorld Sample  
All Classes  
All Groups

Standard ERP, Print date: 15/04/2019 14:37  
Period 01/03/2019 : 31/08/2019  
Date of real Stock Level 26/02/2019  
All Groups  
All Item Classifications

15. 15. Final Results

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19
70115	Streamline racer - finished item	0	37	33	37	37	46	44

This section shows the quantity that you need to produce. While the previous sections contained every Item in the Sales Forecasts, this section will only contain the Items that can be produced (i.e. that have Recipes).

If you need the figures in sections 14 and 15 to be cumulative, deselect the Values per Period option when producing the report.

## Purchase Order Plan Formula

Below is an example of Create Purchase Order Plan - Preview report

Sample: Create Purchase Order Plan - Preview

Create Purchase Order Plan - Preview  
HansaWorld Sample  
All Classes  
All Groups

Standard ERP, Print date: 15/04/2019 14:39  
Period 01/03/2019 : 31/08/2019  
Date of real Stock Level 26/02/2019  
All Items  
All Groups  
All Item Classifications

Item	Comment	03/19	04/19	05/19	06/19	07/19	08/19
10106	Precision Gaming Headset	0	23	60	60	70	60
70110	Streamline racer - frame	29	37	46	0	0	0
70111	Streamline racer - handlebars	29	37	46	0	0	0
70112	Streamline racer - pedals	58	74	92	0	0	0
70114	Streamline racer - saddle	29	37	46	0	0	0
70116	Streamline racer - Spokes	2,448	3,312	0	0	0	0
70117	Streamline racer - Rim	0	74	0	0	0	0
70118	Streamline racer - hub	0	74	0	0	0	0
70119	Streamline racer - tyre	0	74	0	0	0	0
70120	Streamline racer - tube	0	0	0	0	0	0

[See Detailed Calculations Behind](#)



Select the “See Detailed Calculations Behind” text link to see the calculation in detail. This report is shown below in several parts, since it is too long to fit in a single report window. In the report, each stage of the calculation (from 1 to 15) is shown separately. Below you will find a more detailed explanation for some of the sections of the formula.

The columns in the report will each represent one week or one month, depending on the Period Type you are using.

This detailed report is divided into the following sections:

Sample: Create Purchase Order Plan - Preview

Create Purchase Order Plan - Preview

HansaWorld Sample

All Classes

All Groups

Standard ERP, Print date: 15/04/2019 14:40

Period 01/03/2019 : 31/08/2019

Date of real Stock Level 26/02/2019

All Items

All Groups

All Item Classifications

Detailed Calculations Step by Step

1. The Forecast Array

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	0	-60	-60	-60	-60	-70	-60	-70
70115	Streamline racer - finished item	0	-60	-30	-40	-40	-50	-50	-60

2. With the Stock Policy Appended

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	0	0	0	0	0	0	0	0
70115	Streamline racer - finished item	0	-23	-23	-26	-23	-20	-16	-10

3. Forecast

10106	Precision Gaming Headset			3.57		2,142.85			
70115	Streamline racer - finished item			1.42		11,428.57			

4. PO Plan

70110	Streamline racer - frame			3.00					
70111	Streamline racer - handlebars			3.00					
70112	Streamline racer - pedals			6.00					
70114	Streamline racer - saddle			3.00					
10106	Precision Gaming Headset			4.00					

5. Prod Plan

70115	Streamline racer - finished item			3.00					
70113	Streamline racer - wheels			6.00					

6. Forecast plus Production and Purchase Plan (used in the next step) for period 26/02/2019 - 28/02/2019; (6) = (3) + (4) + (5)

10106	Precision Gaming Headset			-0.00		2,143.00			
70115	Streamline racer - finished item			-2.00		11,429.00			

**The Forecast Array (section 1):** This section displays sales forecast figures for each Item, taken from OKed records in the Sales Forecast register. This section includes the week or month before and the week or month after the report period.

**With the Stock Policy Appended (section 2):** The Stock Policies setting contains minimum and maximum start-of-period stock levels for each Item, expressed as a number of days' worth of sales. This section of the report uses the Stock Policies setting to calculate the quantity that you should have in stock at the beginning of each week or month. When you produce the report or run the maintenance function, you will be able to specify whether this calculation will use the minimum or maximum stock level in the setting. Please refer to the “Stock Policy – Average Sales Per Day” section for details of this calculation.

If an Item has no Stock Policy, it will be assumed that the stock level should be zero at the beginning of each week or month. If you choose “Neither” when producing a report or running a maintenance routine, it will be assumed that the stock level at the beginning of each week or month should be the full Sales Forecast quantity for each Item. In this case the section will not be shown in the report, but the figures will be visible in section 10.

Sample: Create Purchase Order Plan - Preview

Standard ERP, Print date: 15/04/2019 14:40  
 Period 01/03/2019 : 31/08/2019  
 Date of real Stock Level 26/02/2019  
 All Items  
 All Groups  
 All Item Classifications

7. Current Stock on 26/02/2019 3. Forecast 26/02/2019 until 28/02/2019; (7) = Stock on Date of Real Stock Level - (6) 26/02/2019

10106	Precision Gaming Headset	93.00							
70115	Streamline racer - finished item	43.00							

With the Raw Materials needed from the Production Plan appended

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	93	-60	-60	-60	-60	-70	-60	-70
70110	Streamline racer - frame	5	-37	-37	-46	0	0	0	0
70111	Streamline racer - handlebars	5	-37	-37	-46	0	0	0	0
70112	Streamline racer - pedals	10	-74	-74	-92	0	0	0	0
70114	Streamline racer - saddle	5	-37	-37	-46	0	0	0	0
70115	Streamline racer - finished item	43	-60	-30	-40	-40	-50	-50	-60
70116	Streamline racer - Spokes	216	-2,664	-3,312	0	0	0	0	0
70117	Streamline racer - Rim	92	-74	-92	0	0	0	0	0
70118	Streamline racer - hub	92	-74	-92	0	0	0	0	0
70119	Streamline racer - tyre	92	-74	-92	0	0	0	0	0
70120	Streamline racer - tube	420	-74	-92	0	0	0	0	0

8. With the Stock Level and Forecast Appended; Stock on Date of Real Stock Level - [(3) - (4) - (5)]

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	93	33	-27	-87	-147	-217	-277	-347
70110	Streamline racer - frame	5	-32	-69	-115	0	0	0	0
70111	Streamline racer - handlebars	5	-32	-69	-115	0	0	0	0
70112	Streamline racer - pedals	10	-64	-138	-230	0	0	0	0
70114	Streamline racer - saddle	5	-32	-69	-115	0	0	0	0
70115	Streamline racer - finished item	43	-17	-47	-87	-127	-177	-227	-287
70116	Streamline racer - Spokes	216	-2,448	-5,760	0	0	0	0	0
70117	Streamline racer - Rim	92	18	-74	0	0	0	0	0
70118	Streamline racer - hub	92	18	-74	0	0	0	0	0
70119	Streamline racer - tyre	92	18	-74	0	0	0	0	0
70120	Streamline racer - tube	420	346	254	0	0	0	0	0

**Current Stock (section 7):** This section shows the actual stock level of each Item at the beginning of the report period.

When you produce a report or run a maintenance function, you will need to specify the date when you know the stock figure to be accurate (the "Date of Real Stock Level"). If the stock level at the beginning of the report period is not known (perhaps you are producing the report ahead of time or you are not up to date in entering stock transactions), the stock level for the beginning of the report period will be estimated by subtracting the relevant Sales Forecast figure from the actual stock level on the Date of Real Stock Level, and adding the relevant figures from Production and Purchase Order Plans.

For example, the report period begins on March 1st, and you know that the stock level figure for an Item is correct as of February 26th. Enter this date as the Date of Real Stock Level in the report specification window. Extra sections will be inserted in the detailed report above the "Current Stock" section to display the following calculations: Two days of sales will be estimated from the Sales Forecast record for February, and will be subtracted from the stock level figure. Two days' production will be estimated from the Production Plan record for February and two days' Goods Receipts will be estimated from the Purchase Order Plan record for February, and these figures will be added to the stock level.

With the Raw Materials needed from the Production Plan appended: If you already have an OKed Production Plan with rows whose Start Dates fall in the report period, this section will list the components and quantities that should be purchased to satisfy those Production Plan rows. Note that the Start Date in a Production Plan row may be earlier than the Start Date of the Production Plan as a whole, so the report period for the Create Purchase Order Plan – Preview report should take this into account.

**With the Stock Level and Forecast Appended (section 8):** This section shows the stock level at the end of each week or month, calculated by subtracting the Sales Forecast figure for that week or month from the stock level at the beginning of that month. If the figure is negative, the Sales Forecast cannot be met from stock and so this is the

quantity that needs to be purchased to meet the requirement. Figures in sections 8, 9 and 11-13 are accumulated: for example, the May figure of -87 in section 8 for Item 10106 includes the April total of -27.

Sample: Create Purchase Order Plan - Preview

Create Purchase Order Plan - Preview  
HansaWorld Sample  
All Classes  
All Groups

Standard ERP, Print date: 15/04/2019 14:40  
Period 01/03/2019 : 31/08/2019  
Date of real Stock Level 26/02/2019  
All Items  
All Groups  
All Item Classifications

12. With the Purchase Plan Appended; (12) = (11) - (4)

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	-97	-37	23	83	143	213	273	343
70110	Streamline racer - frame	-8	29	66	112	0	0	0	0
70111	Streamline racer - handlebars	-8	29	66	112	0	0	0	0
70112	Streamline racer - pedals	-16	58	132	224	0	0	0	0
70114	Streamline racer - saddle	-8	29	66	112	0	0	0	0
70115	Streamline racer - finished item	-43	40	73	110	147	193	237	287
70116	Streamline racer - Spokes	-216	2,448	5,760	0	0	0	0	0
70117	Streamline racer - Rim	-92	-18	74	0	0	0	0	0
70118	Streamline racer - hub	-92	-18	74	0	0	0	0	0
70119	Streamline racer - tyre	-92	-18	74	0	0	0	0	0
70120	Streamline racer - tube	-420	-346	-254	0	0	0	0	0

13. With the Production Plan Appended; (13) = (12) - (5)

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	-97	-37	23	83	143	213	273	343
70110	Streamline racer - frame	-8	29	66	112	0	0	0	0
70111	Streamline racer - handlebars	-8	29	66	112	0	0	0	0
70112	Streamline racer - pedals	-16	58	132	224	0	0	0	0
70114	Streamline racer - saddle	-8	29	66	112	0	0	0	0
70115	Streamline racer - finished item	-46	-3	-3	-3	-3	-3	41	91
70116	Streamline racer - Spokes	-216	2,448	5,760	0	0	0	0	0
70117	Streamline racer - Rim	-92	-18	74	0	0	0	0	0
70118	Streamline racer - hub	-92	-18	74	0	0	0	0	0
70119	Streamline racer - tyre	-92	-18	74	0	0	0	0	0
70120	Streamline racer - tube	-420	-346	-254	0	0	0	0	0

**With the Purchase Plan Appended (section 12):** If there already is an OKed Purchase Order Plan for the Item for a week or month, then this section will show the quantity in that Purchase Order Plan subtracted from the previous figure (in section 11).

This suggests that a subsequent running of the "Create Purchase Order Plan" maintenance function will create a second Purchase Order Plan for the Item for the month in question, effectively updating the original Purchase Order Plan. In fact, the maintenance routine will mark the original Purchase Order Plan as Closed and will create a new Purchase Order Plan for the entire requirement.

**With the Production Plan Appended (section 13):** This section is similar to the previous one, but applies to existing Production Plans.

Sample: Create Purchase Order Plan - Preview

Create Purchase Order Plan - Preview  
HansaWorld Sample  
All Classes  
All Groups

Standard ERP, Print date: 15/04/2019 14:40  
Period 01/03/2019 : 31/08/2019  
Date of real Stock Level 26/02/2019  
All Items  
All Groups  
All Item Classifications

14. But first appending assumed correct monthly plans

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	-97	0	23	60	60	70	60	70
70110	Streamline racer - frame	-8	29	37	46	0	0	0	0
70111	Streamline racer - handlebars	-8	29	37	46	0	0	0	0
70112	Streamline racer - pedals	-16	58	74	92	0	0	0	0
70114	Streamline racer - saddle	-8	29	37	46	0	0	0	0
70115	Streamline racer - finished item	-46	0	0	0	0	0	41	50
70116	Streamline racer - Spokes	-216	2,448	3,312	0	0	0	0	0
70117	Streamline racer - Rim	-92	0	74	0	0	0	0	0
70118	Streamline racer - hub	-92	0	74	0	0	0	0	0
70119	Streamline racer - tyre	-92	0	74	0	0	0	0	0
70120	Streamline racer - tube	-420	0	0	0	0	0	0	0

After existing Purchase Orders

Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
10106	Precision Gaming Headset	-97	0	23	60	60	70	60	70
70110	Streamline racer - frame	-8	29	37	46	0	0	0	0
70111	Streamline racer - handlebars	-8	29	37	46	0	0	0	0
70112	Streamline racer - pedals	-16	58	74	92	0	0	0	0
70114	Streamline racer - saddle	-8	29	37	46	0	0	0	0
70115	Streamline racer - finished item	-46	0	0	0	0	0	41	50
70116	Streamline racer - Spokes	-216	2,448	3,312	0	0	0	0	0
70117	Streamline racer - Rim	-92	0	74	0	0	0	0	0
70118	Streamline racer - hub	-92	0	74	0	0	0	0	0
70119	Streamline racer - tyre	-92	0	74	0	0	0	0	0
70120	Streamline racer - tube	-420	0	0	0	0	0	0	0

After existing Purchase Orders: If there already are Purchase Orders for the Item with Planned Delivery Dates that fall in a week or month, this section will show the quantities in those Purchase Orders subtracted from the previous figure (in section 14).

Final Results (section 15):

Sample: Create Purchase Order Plan - Preview

Create Purchase Order Plan - Preview  
HansaWorld Sample  
All Classes  
All Groups

Standard ERP, Print date: 15/04/2019 14:40  
Period 01/03/2019 : 31/08/2019  
Date of real Stock Level 26/02/2019  
All Items  
All Groups  
All Item Classifications

15. 15. Final Results

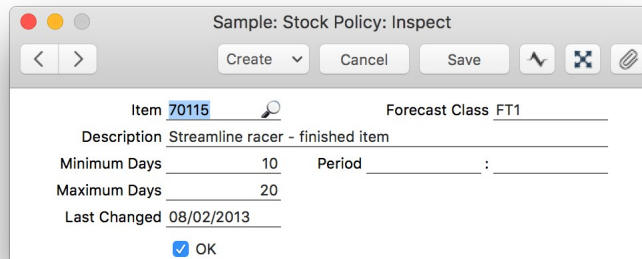
Item	Comment	02/19	03/19	04/19	05/19	06/19	07/19	08/19
10106	Precision Gaming Headset	0	0	23	60	60	70	60
70110	Streamline racer - frame	0	29	37	46	0	0	0
70111	Streamline racer - handlebars	0	29	37	46	0	0	0
70112	Streamline racer - pedals	0	58	74	92	0	0	0
70114	Streamline racer - saddle	0	29	37	46	0	0	0
70116	Streamline racer - Spokes	0	2,448	3,312	0	0	0	0
70117	Streamline racer - Rim	0	0	74	0	0	0	0
70118	Streamline racer - hub	0	0	74	0	0	0	0
70119	Streamline racer - tyre	0	0	74	0	0	0	0
70120	Streamline racer - tube	0	0	0	0	0	0	0

This section shows the quantity that you need to purchase.

If you need the figures in sections 14 and 15 to be cumulative, deselect the Values per Period option when producing the report.

## Stock Policy - Average Sales per Day

The Stock Policies setting allows you to specify minimum and maximum start-of-period stock levels for each Item, expressed as a number of days' worth of sales. In the example illustrated below, we have specified that we want to keep ten days' worth of sales in stock as a minimum, and assumes the Period Type is Months:



Sample: Stock Policy: Inspect

Item 70115 Forecast Class FT1

Description Streamline racer - finished item

Minimum Days 10 Period            :           

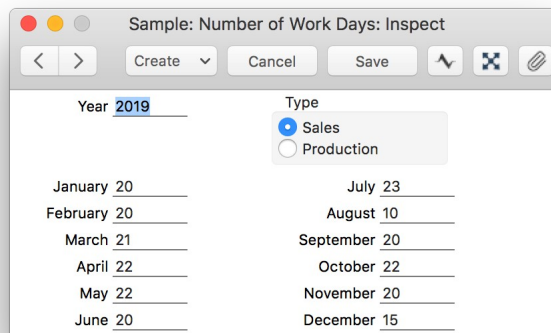
Maximum Days 20

Last Changed 08/02/2013

☒ OK

Calculating the quantity you will sell in ten days requires the following information:

1. The Sales Forecast for the Item
2. As the Period Type is Months, the Number of Work Days setting should contain the number of sales days in each month.



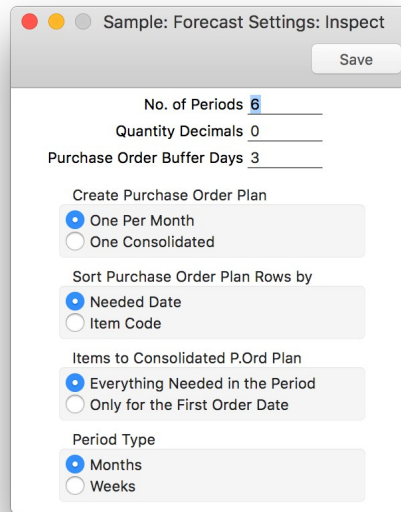
Sample: Number of Work Days: Inspect

Year 2019 Type   
☒ Sales   
☐ Production

January <u>20</u>	July <u>23</u>
February <u>20</u>	August <u>10</u>
March <u>21</u>	September <u>20</u>
April <u>22</u>	October <u>22</u>
May <u>22</u>	November <u>20</u>
June <u>20</u>	December <u>15</u>

3. The Forecast Settings should contain the number of periods (i.e. number of months in this example) that you want to be used in the calculation.





Sample: Forecast Settings: Inspect

Save

No. of Periods

Quantity Decimals

Purchase Order Buffer Days

Create Purchase Order Plan

☒ One Per Month

☐ One Consolidated

Sort Purchase Order Plan Rows by

☒ Needed Date

☐ Item Code

Items to Consolidated P.Ord Plan

☒ Everything Needed in the Period

☐ Only for the First Order Date

Period Type

☒ Months

☐ Weeks

In this example, the Number of Periods is six. This means that the estimated sales per day will be calculated using the sales forecasts for the next six months. The formula is:

Forecast + Forecast + ... Forecast

Month 1 Month 2 Month n x Stock Policy

Days in + Days in + ... Days in

Month 1 Month 2 Month n

where n is the Number of Months.

As per our example, we need to keep sufficient stock for ten days' worth of sales. The following formula will calculate this figure for March for Item 70115:

$$\frac{(60 + 45 + 40 + 40 + 50 + 50) \times 10}{(21 + 22 + 22 + 20 + 23 + 10)}$$

Estimated sales per day therefore is 2.41, so ten days' sales will be 24, rounded to the nearest whole number.

When making the calculation, you will be able to choose whether to use the minimum or the maximum stock level, or to ignore the Stock Policy setting and base the calculation on the Sales Forecast alone.

A large Number of Months figure will result in an average sales per day figure that is relatively unaffected by seasonal variations. However, specifying a large Number of Months figure will mean that you should ensure that you have Sales Forecasts for at least that number of months ahead of your reporting periods, to maintain accuracy in the calculation. For example, if a report covers the period from March to August and the Number of Months is six, this requires you to enter Sales Forecasts until February the following year, at least six months ahead. The Number of Work Days setting should also have entries at least until February the following year. If you only have Sales Forecasts until December, the average sales per day figure will not be correct because it will be calculated by dividing four months' Sales Forecast figures by six months' sales days.

## APPENDIX

### Terminology between different versions of English language

The language used in this material is British English. There are slight differences between the various versions of the English language, which can lead to confusion. This table should help to clear this up. Sorted alphabetically

British	USA	Canada	Australia + New Zealand	Singapore
Cheque	Check	Cheque	Cheque	Cheque
Colour/coloured	Color/colored	Colour/coloured	Colour/coloured	Colour/coloured
Credit Note (CN)	Credit Memo (CN)	Credit Memo (CM)	Credit Note (CN)	Credit Note
Dialogue	Dialog			
Instalment	Installment			
Jewellery	Jewelry	Jewellery	Jewellery	Jewellery
Licence (noun)	License	Licence	Licence	Licence
Mileage Claim	Miles	Way Lists	Mileage Claim	Mileage Claim
Miles	Miles	KM	KM	KM
Mobile	Cell	Mobile	Mobile	Mobile
Nominal Ledger (NL)	General Ledger (GL)	General Ledger (GL)	General Ledger (GL)	General Ledger (GL)
Post Code	ZIP Code	Post Code	Post Code	Post Code
Profit and Loss Statement	Income Statement	Income Statement	Statement of Profit or Loss	Statement of Profit or Loss
Purchase Ledger	Payable (PL = AP)	Payable (PL = AP)	Purchase Ledger	Purchase Ledger
Sales Ledger	Receivable (SL = AR)	Receivable (SL = AR)	Sales Ledger	Sales Ledger
Salesman	Salesperson	Salesperson	Salesman	Salesperson
Stock	Inventory	Inventory	Stock	Inventory
Stocktake	Inventory Count	Inventory Count	Stocktake	Inventory Count
Stock Depreciation	Inventory Adjustment	Inventory Adjustment	Stock Depreciation	Inventory Adjustment
Supplier	Vendor	Vendor	Supplier	Vendor
Turnover	Revenue	Revenue	Revenue	Revenue
VAT	Sales Tax or Tax	Tax (or GST/PST)	GST	GST/SST/HST