

6.01. Ordering items from suppliers

Introduction to ordering

mSupply provides ways for you to generate a Purchase Order with manually or automatically calculated quantities. Each organisation tends to have different requirements for their ordering process, so we have tried to strike a balance between providing different methods and making the ordering module so complex that it is of little use to anyone. mSupply has two general methods for generating a purchase order:

- [Creating a new calculated purchase order](#). We recommend that you use this method since it will save you time and avoid mistakes.
- [Creating a blank Purchase Order](#). This method allows you to create a purchase order based on manual calculations of quantities.

However you create a purchase order, the purchase order window looks like this:

New order

Order for all suppliers

every item will be evaluated to see if it has enough stock.
Warning- this can take a few minutes with a big data file.

☐ Separate order for each supplier

Other info....

Months stock required4Calculate

Use the last6months usage to calculate average usage

Comment

Requested delivery date15/10/19

☒ Exclude transfers from usage calculations

☒ Include usage for build ingredients

☐ Include items with suggested zero order quantity

☒ Exclude items which expire within0months

Builds....

☐ Include planned builds

Make sure planned builds will be covered1times

CancelCreate Order...

There is some read-only information at the top of the window which cannot be edited:

- *Order num*: This is the purchase order's number. It is automatically generated and increments by 1 for each new purchase order. It is **unique within a store** only so it is possible for purchase orders in different stores to have the same number.
- *Confirm date*: The date the purchase order was confirmed. If it has not been confirmed yet, this will be "00/00/00".
- *Status*: The current status of the purchase order - refer [Purchase order status explained](#) below.
- *Store*: The name of the store the purchase order belongs to.

Creating a new (calculated) purchase order

Before launching into creating a new (calculated) Purchase Order, it is important to understand the logic that mSupply uses.

Logic used for calculating purchase order quantities

There are three distinct steps required to arrive at Purchase Order quantities for each line of stock:

- Forecast future consumption
- Calculate required stock quantity
- Calculate purchase order quantity

mSupply uses this methodology to produce a suggested order quantities in a number of other places including:

- Creating a new tender
- The suggested order report

To assist in understanding these calculations, an example will be developed through the following sections. **Amoxycillin 250mg tabs/caps** is being ordered at the end of December 2015. Historical consumption data is as follows:

Month	2013	2014	2015
Jan	200	1,000	1,000
Feb	250	1,050	1,100
Mar	300	950	900
Apr	350	1,000	1,000
May	400	1,200	1,400
Jun	450	800	600
Jul	500	1,000	1,000
Aug	550	1,150	1,300
Sep	600	850	700
Oct	650	1,000	1,000
Nov	700	1,100	1,200
Dec	750	900	800

From this data, the following AMC (Average Monthly Consumption) calculations can be made.

Period	AMC
Last 36 months (Jan 2013 - Dec 2015)	825
Last 24 months (Jan 2014 - Dec 2015)	1,000
Last 12 months (Jan 2015 - Dec 2015)	1,000
Last 6 months (Jul 2015 - Dec 2015)	1,000

A more detailed analysis of this historic consumption shows a steady increase through 2013, and then the AMC sits at 1,000 per month in 2014 and 2015. In this case, we have an AMC of 1,000 per month regardless of whether we look at 6, 12 or 24 months of historic consumption data.

Forecast future consumption

By default, mSupply uses the assumption that future consumption will continue at the same level as consumption over a given historic period. mSupply has a number of other options for making a

forecast of future consumption. All of these methods are documented in the [Forecasting section](#).

Calculate required stock quantity



mSupply does not use set “minimum” & “maximum” stock levels as its primary means of determining order quantities. Conventional minimum and maximum stock levels are calculated using the methods described here, but it is problematic to try and fix these values, because:

- The parameters will keep on changing,
- It takes a lot of manual work to calculate,
- The assumptions made in calculating them are often lost.

Be assured that the system that mSupply uses will give you much better inventory control!

Having said that, mSupply does allow for minimum stock levels so as to allow you to ensure a minimum quantity of rarely used items. e.g. essential emergency supplies - refer [Other information on the stock details page](#). These minimum stock levels should **not** be used for most items.

The amount of stock you require to have is based on the forecast of future consumption (previous section), modified by a range of factors including:

- The **Lead time**: The time delay between carrying out the quantification analysis and when the stock is delivered to the store.
- The **Ordering cycle**: How often you order from this supplier
- How many months of **“buffer” stock** you want on hand just before your next order arrives.

All of these are measured in months.



Some agencies recommend the buffer stock to be double the Ordering cycle. However, if your ordering cycle is long (say 12 months) then this means keeping two years worth of stock as a buffer. This could become a problem with expiry dates.

Stock required = Lead time + Ordering cycle + (months of) buffer stock

For example:

- Lead time = 3 months
- Ordering cycle = 6 months
- Buffer stock = 12 months

From the equation above, Stock required is calculated as:

- = Lead time + Ordering cycle + buffer stock
- = 3 + 6 + 12
- = 21 months.

So, 21 months worth of stock is required.



The amount of stock required is almost certainly **NOT** the amount of stock to be purchased! See the next section: [Calculate purchase order quantity](#) for an explanation.

Calculate purchase order quantity

Purchase Order quantities are based on the amount of stock required, normally expressed as a number of months of AMC, modified by factors including:

- The current stock level.
- The amount of stock on backorder to customers ((if you are running the backorder feature)).
- The amount of stock already on order from Suppliers, but that has not yet arrived in your store.
- The months of anticipated stock-out before the order arrives (more on this below).

Purchase order quantity = stock required - current stock level + stock on backorder to customers - stock on order from suppliers - months of anticipated stock-out

mSupply makes an important assumption as to how to handle **anticipated stock-out**. That is, the situation of running out of stock before the order arrives. mSupply assumes that the consumption that you forecast to happen between you running out of stock, and the purchase order stock arriving **should not** be provided under this purchase order. The basis for this are two further assumptions:



- You will either obtain the shortfall through another purchase order (an emergency order, or from another supplier), or you will simply run out of stock.
- Your customers will **not** increase their demand in the time immediately after you receive the stock *from this purchase order* to compensate for the stock being unavailable prior to the new order arriving.

Therefore, mSupply reduces the purchase order quantity by the anticipated stock-out amount.

It can be seen that

- Anticipated Stockout = the Lead time - Current stock level + stock on backorder to customers - stock on backorder from suppliers

If the above equation produces a negative number, this means that there will be no stock-out, and the

anticipated stock-out will have no impact on the Purchase order quantity. So, for the purposes of this mSupply calculation, Anticipated Stockout = *maximum of zero and the above expression*. This is expressed mathematically as:

Anticipated Stockout = $\max(0, \text{Lead time} - \text{Current stock level} + \text{stock on backorder to customers} - \text{stock on backorder from suppliers})$

Continuing our worked example, suppose:

- Current stock levels = 5 months
- Stock on backorder to customers = 3 months
- Stock already on order from Suppliers = 2 months

Then, Anticipated stock-out is calculated as:

- = $\max(0, \text{Lead time} - \text{Current stock levels} + \text{stock on backorder to customers} - \text{stock on backorder from suppliers})$
- = $\max(0, 3 - 5 + 3 - 2)$
- = $\max(0, -1)$
- = 0

and Purchase order quantity is calculated as:

- = $\text{stock required} - \text{current stock level} + \text{stock on backorder to customers} - \text{stock on backorder from suppliers} - \text{months of anticipated stock-out}$
- = $21 - 5 + 3 - 2 - 0$
- = 17

So **17** months worth of stock *to be ordered*. Compare this with the **21** months worth of *stock required* calculated in the previous section!

To demonstrate the impact of a stock-out, let us suppose that we have only **1 month's** worth of stock on hand:

- Current stock levels = **1 month**
- Stock on backorder to customers = 3 months
- Stock already on order from Suppliers = 2 months

Then, Anticipated stock-out is calculated as:

- = $\max(0, \text{Lead time} - \text{Current stock levels} + \text{stock on backorder to customers} - \text{stock on backorder from suppliers})$
- = $\max(0, 3 - \mathbf{1} + 3 - 2)$
- = $\max(0, \mathbf{3})$
- = **3**

and Purchase order quantity is calculated as:

- = stock required - current stock level + stock on backorder to customers - stock on backorder from suppliers - months of anticipated stock-out
- = 21-5+3-2-3
- = **14**

So, due to the **3** month anticipated stock-out, only **14** months worth of stock are to be ordered.

Create a purchase order

Choose *Supplier* > *New Purchase Order*.

In most instances the following window will be displayed:

This window allows for a number of factors to be entered.

Types of order available from the popup menu

Firstly, you have the opportunity to select the order types:

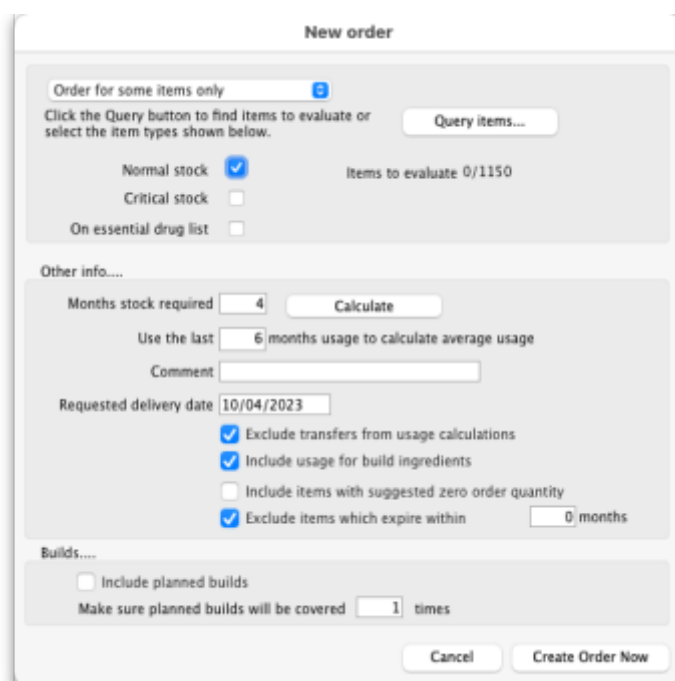
Order for all suppliers

- All items in the database will be evaluated to see if they need ordering. This is the default option
- If you have a large number of items, this may take a few minutes.
- By default, a single order will be generated. You have the option to generate a separate order for each supplier by checking the *Separate order for each supplier* box. In this case, mSupply

will

- For each item, look to see whether a supplier has been identified as **preferred** on a current quote
- Create a separate order for each supplier.
- Items without a **preferred** quotation will all be placed together in a single order.

Order for some items only



- Either click on the *Query items* box, to bring up the *Query Editor* window, and enter the required parameters, or select one or more criteria by placing check marks as appropriate in the three boxes; use of the *Query Editor* is described in detail in the Reports chapter. See [Using the Query Search modifier](#)

Order for one supplier

- This method is the best method to use for ordering from a particular supplier (you might have guessed that!)
- Enter the supplier code, and press the tab key. The supplier name will be filled in, or you will be given a list to choose from.
- Any items that have a quotation from that supplier that is marked as “preferred” will be evaluated to see if they need reordering.

Calculate forecast

Secondly, the forecast of future consumption will be calculated in accordance with each item's settings as documented in the [Forecasting](#) section. The only forecasting factor that can be adjusted here is the number of months of historical consumption data that will be used to calculate historical AMC.



- The bigger the number you enter here, the more accurate mSupply is likely to be, *provided that consumption has been reasonably stable over that period*. Entering a large number will slow down the calculation.
- Also, beware of extending this time period to a time in the past when data is inaccurate or non-existent. This will be detrimental to the quality of the forecast.

From our worked example above, consumption has been stable at 1,000 per month for the last two years (2014 and 2015), but was significantly lower in 2013. Putting 36 months would result in a lower AMC than has been the case for 2014 and 2015.



The number of months of historical consumption data to be used to calculate historical AMC **will be ignored** for those items that are configured not to use AMC in the forecast - refer [Forecasting](#).

Calculate quantity required

The quantity of stock required can be entered directly into the **Months of stock required** field. However, as demonstrated in the [Calculate Purchase Order quantities](#) section above, a more reliable way of getting to this figure is to use the Lead time, order cycle and buffer stock parameters. Clicking on the *Calculate* button brings up a window allowing you to enter these values, from which mSupply will calculate the quantity required.

Using the same figures as in our worked example above:

Months stock required

Lead time Month(s)

Ordering cycle Month(s)

Orders will cover until 10/12/2016

with buffer stock Month(s)

Months stock required 21 Month(s)

Cancel OK

- Orders take three months to arrive from your supplier - (Lead time = 3 months)
- You order every six months. (Ordering cycle = 6 months)
- We want a buffer stock of at least 12 months when a Purchase Order arrives.



- The **Lead time** figure will generate an **Expected delivery** date, and the **Lead time / Expected delivery** date can have a significant impact on actual Purchase order quantities - refer [Calculating Purchase order quantity](#) above.
- **BEWARE** of manually entering in a date that is unrealistically far into the future - this will **REDUCE** the quantity ordered!

Other settings in the create order window

Comment

Add a comment (note) to the order should you so wish.

Exclude transfers from usage calculations

This option is only applicable if you are running [multiple \(virtual\) stores](#). If you have more than one store, this option controls whether inter-store transfers are taken into account when calculating historic consumption. The default setting is *not* to exclude transfers. That is, stock transfers will be *included* in the calculation.

Include usage for build ingredients

Selecting this option ensures that any items that were used in [builds](#) (i.e. manufactured items) will be taken into account when calculating historic consumption.

[Builds](#) can be entered with placeholder lines to reflect a projected manufacturing schedule. If the *Include usage for build ingredients* check box in the "new order" window is checked, the proposed order quantity for each item will be adjusted by the amount of the item that is required for all projected builds, multiplied by the "times covered" value you have entered.

Using our worked example:

- Let us say that we wish to 'build' a kit which includes 100 x Amoxycillin 250mg tabs/caps.
- We have a projected build for 200 of these kits.
- This will consume 20,000 Amoxycillin 250mg tabs/caps.
- We enter 1.5 in the *times covered* box
- Then the additional quantity of Amoxycillin 250mg tabs/caps that will be added to the order will be:
 - = $100 \times 200 \times 1.5$
 - = 30,000 tabs/caps
- In our worked example, ignoring projected builds, 14 months usage was to be

ordered.

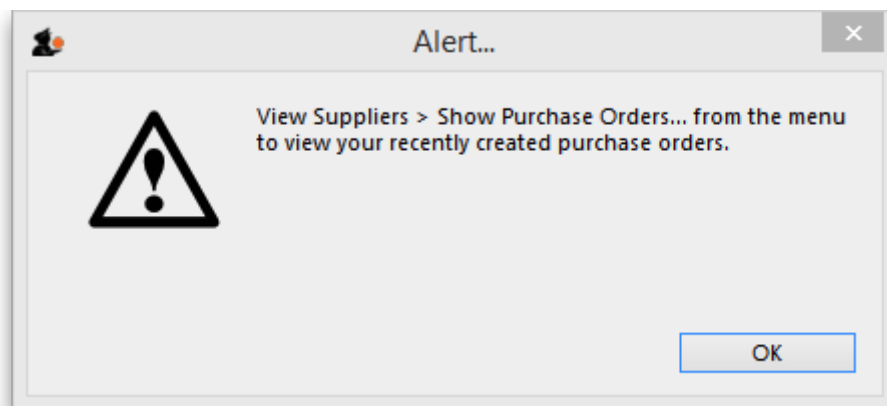
- The AMC is 1,000 per month.
- Without taking into account projected builds, this would result in an order of 14,000 tabs/caps.
- When we add the usage of the projected builds, the amount to be ordered will be:
 - =14,000+30,000
 - =44,000 tabs/caps

Include items with suggested zero order quantity

If mSupply calculates that any of the lines from the supplier are not required, when this box is checked such lines will appear on the Purchase Order, the order quantity being 0.

Create order button

Once you have entered the details, click the *Create order* button. Order generation may take a couple of minutes, depending on how many items need to be evaluated. You will then be presented with the following Alert box:



Clicking on *OK* will close the Alert box and return you to the Navigator.

Creating a blank Purchase Order

Choose *Supplier > New blank Purchase Order* . You are presented with a blank order form, to which you can add items. This form only allows the choice of one supplier.

New order

Order for all suppliers

every item will be evaluated to see if it has enough stock.
Warning- this can take a few minutes with a big data file.

☐ Separate order for each supplier

Other info....

Months stock required4Calculate

Use the last6 months usage to calculate average usage

Comment

Requested delivery date15/10/19

☒ Exclude transfers from usage calculations

☒ Include usage for build ingredients

☐ Include items with suggested zero order quantity

☒ Exclude items which expire within0 months

Builds....

☐ Include planned builds

Make sure planned builds will be covered1 times

Cancel

Create Order...

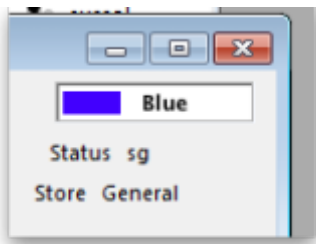
The **name** field is where you choose the supplier you are ordering from (type in the first few characters of the supplier's name and press the Tab key on the keyboard, then select the right supplier from a list of those beginning with what you typed - if there's only one that matches, it will be automatically chosen for you).

If it has been set in *Preferences*, the **Donor** field will appear, and the donor details may be entered here (in the same way as entering the supplier name - type the first few characters of the donor's name and press the Tab key to select from a list of donors starting with what you typed). Setting this preference is described in [Supplier Invoices](#).

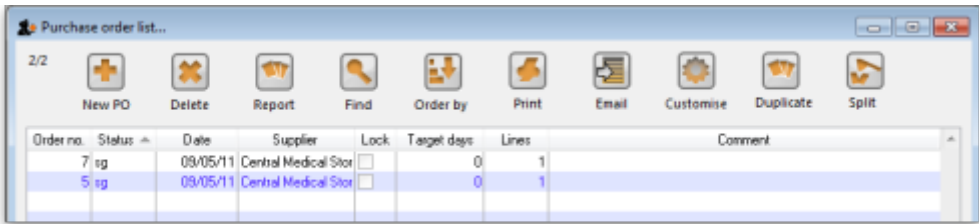
The **Reference** field allows you to enter any relevant information.

The **Requested delivery date** field is for the date you have requested the supplier to deliver the items. Anything entered in this field becomes a default and is automatically set for all lines added to the purchase order. Such a requested delivery date can still be manually edited for each line if required. There is a preference to make this field mandatory (see [Purchase order preferences](#) for details).

In the top right hand corner, there is a box where you may select a particular colour from a range of colours - in the window shown below, *blue* has been selected.



The purpose of this is to distinguish this particular Purchase Order in the Purchase Order list - see the example below where PO number 5 is shown in the selected colour (blue):



Once a supplier(**Name**) has been chosen you may enter the item you are ordering by clicking the **New Line** button.

New Purchase Order line...

GeneralUsageQuotesReceipt historyLedger

Item

Store: ESSENTIAL

Location

Volume per pack m3

Shelf location

Original order

Number of packs0

Pack size1

Total Quantity0

Units (ea,kg,ml)

Supplier item code

Pricing for this item

Price before discount0.0000

discount (%)0

Price after discount0.0000

Extension0.00

Requested delivery date17/03/2016

Expected delivery date00/00/00

Stock

On hand0

On backorder0

On order0

Received on previous deliveries0

Comment (will print on purchase order)

Notes

Show notes on Goods Received

CancelOKOK & Next

In the **Item** field type the beginning letter of the item you want and hit the *Tab* button. You may then

mSupply documentation wiki - <https://docs.msupply.org.nz/>

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In the Requested delivery date field put the date you are requesting the supplier to deliver this item.

From more information on the other tabs in this window see [Editing Purchase Order lines](#)

Once you have chosen the Item and entered the appropriate details clicking OK will return you to the

New purchase order...

Order num : 25	Name CHINA	CHINA	Black
Confirm date : 00/00/00	Donor	Reference	Status sg
Requested delivery: 18/03/2016			Store: ESSENTIAL

General Details Ad hoc items Goods Received Supplier invoices Log Location

New line
 Delete lines
 Update EDD
 Info
 Print
 Confirm

Period 1/07/2015 - 30/06/20...
Category none

show all lines Currency Forex rate 1

Line	Item code	Item	Orig Qty	Pack	Adj. Qty	Tot. receiv...	Stock on ...	On Order	Cust.b/dors	Price Ext	Expected...	Store:
1	ES10023	Chlopromazine 100mg Tab	150000	500	150000	0	416500	225000	269500	366.00		ESS...

< >

Supplier discount

Percentage 0 Discount amount 0.00

☐ Locked ☐ Auto calc usage

Estimated subtotal 366.00

Estimated cost after discount 366.00

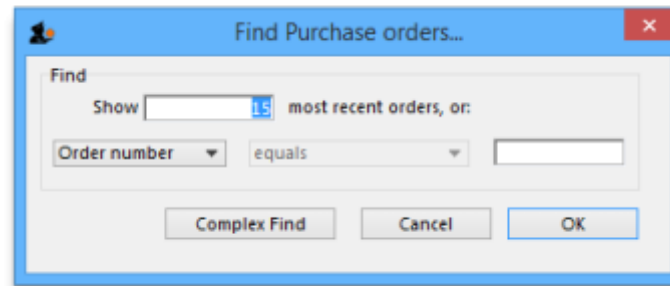
☐ Finalize order ☐ Authorise OK & Next Delete OK

The Original and Adjusted Quantities columns show the number of packs you ordered multiplied by

Viewing a Purchase Order

To view a recently created order choose *Show Purchase Order...* from the *Supplier* menu.

Choosing this menu item shows a window where you can enter either the number of recent orders to



You will then be shown a window with a list of Purchase Orders. (If you entered a Purchase Order number you will be taken straight to the Purchase Order details window, bypassing the Purchase Order list, as shown above).

Buttons in the Purchase Order list Window

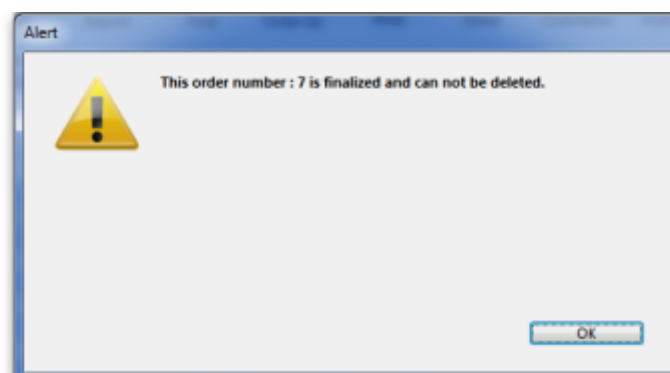


New Purchase Order

When you click the *New PO* button, a Purchase Order details window is displayed . See “New Purchase Order” below.

Delete

Any highlighted orders will be deleted by clicking this button. You can delete multiple Purchase Orders by highlighting more than one line. To do so, control-click (command-click on Mac) the lines you wish to highlight. If your orders are finalised, those can not be deleted. If you attempt to delete a finalised order, you will receive an alert message:

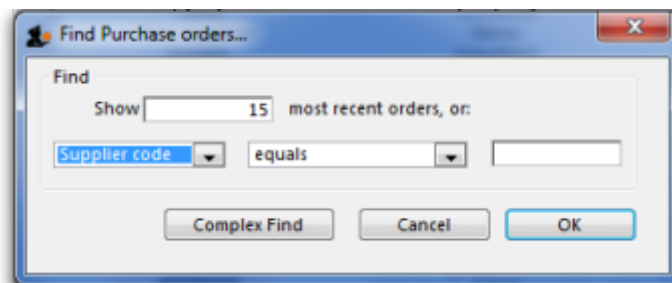


Report

Clicking on the **Report** button presents you with the quick report modifier window, from which a simple report can be constructed. This report can be viewed, saved to disk or printed.

Find

This button is very useful for quickly finding a group of Purchase Orders. when you click on the *Find* button, you will be presented with a window with the same functionality as if you chose the Menu item Supplier > Show Purchase Orders (above).



Order by

The *Order by* button allows you to sort the orders by multiple fields. Otherwise simply clicking on an individual column will also sort the order list by that column.

Print

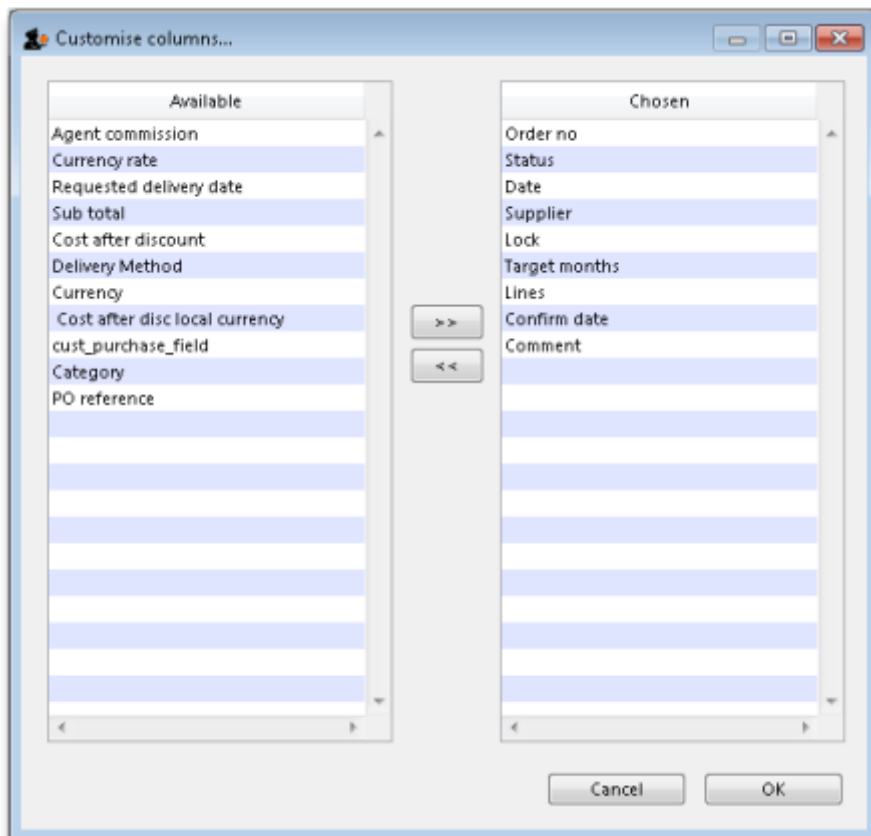
This allows you to print the displayed list of purchase orders. When you click on the **Print** button, it shows two windows. The first is the page setup for your printer, the second allows you to specify how many copies to print. The column sizes set in the list window are reflected in the printed output.

E-mail order(s)

Any highlighted orders will be converted to queued emails.

Customise list

This button allows you to change the columns that are displayed in the list and what order they are displayed in:



See [Working with lists](#) for more details.

Duplicate

If you wish to duplicate any orders, highlight desired orders from list and click the “Duplicate” button.

Split

This button allows you to split the selected order between two or more suppliers, and may be used only on orders with a status of *sg*.

Editing a Purchase Order

Double-click the order in the list you want to modify.

You will be presented with the Edit Purchase Order window:

Order num : 892 Name **Boucher & West Pharmacy Ltd** AU118 **Black**

Confirm date : 13/04/17 Donor **MINISTRY OF HEALTH** Reference **RFQ-17-021** Status on

Requested delivery: 13/04/17 Store: General (SAME)

General Details Ad hoc items Goods Received Supplier invoices Log Location

New line Delete lines Update EDD Info Print Confirm Category none

show all lines Currency USD Forex rate 1

Line	Item code	Item	Orig.Qty	Pack	Adj. Qty	Tot. rece...	Stock on...	On Order	Cust.b/o...	Price Ext	Expected...	Store:
1	03_0070	Acyclovir 200mg tabs	100	25	100	0	0	100	0	25.0000	13/04/17	Ce...S
2	06_1108	Betamethasone...Cream 0.1% Tube	10400	1	10400	0	7925	11375	0	4,056.0000	13/04/17	Ce...S
3	05_2410	Bromhexine Syru...g/5ml Bot/60ml	82100	1	82100	0	92268	82100	0	27,093.0000	13/04/17	Ce...S
4	05_5318	Lactulose Solutio.../5ml Bot/250ml	4400	1	4400	0	52	4400	0	19,008.0000	13/04/17	Ce...S
5	03_6693	Nystatin 100,000 IU Vaginal Pessary	26110	14	26110	0	0	26110	0	1,212.2500	13/04/17	Ce...S
6	03_6692	Nystatin 100,000 IU/g Cream	13000	50	13000	0	0	13000	0	9,656.4000	13/04/17	Ce...S
7	06_7037	Permethrin Shampoo 1% Bot/100ml	11700	1	11700	0	0	11700	0	11,583.0000	13/04/17	Ce...S

Supplier discount
☐ Percentage Discount amount
☐ Locked ☐ Auto calc usage

Estimated subtotal 72,634.8100
 Estimated cost after discount 72,634.8100

☐ Finalise order ☐ Authorise

OK & Next Delete OK



If the entire order qualifies for a discount, either the discount percentage should be entered at 1, or the cash value of the discount should be entered at 2.

Split Deliveries

There may be occasions when you want to arrange for split deliveries - for instance if you are placing a single order for a year's supply, but you want certain items to be delivered in, say, four consignments, at three monthly intervals. The order as generated lists the total quantity to be ordered, and you need to modify this; what you are actually doing is modifying a Purchase Order line. The procedure is described in *Split deliveries* in [The order menu](#)

Editing Purchase Order lines

To modify an order line, double click on the line you wish to modify.

Note: you can resize the order modifying window to show more lines, or to show more of the item name. To do so, drag the handle in the lower right corner to a new position.

When you double-click an order line (or when you click on the *New line* button) you will be presented with a window allowing you to modify the item, quantity and pack size:

Information in the Edit Order Line window

Item

Here you can modify the item that is being supplied. To change the item, type as much of the item name as you know, then press the tab key. If only one item matches your entry, it will be filled in automatically, otherwise you will be presented with a list where you can double-click the item you wish to enter.

Comment

You can enter any information you wish to record about this order line here. Comments will be added to order lines when you email an order to a supplier.

Original quantity

The original quantity ordered from the supplier. This information is not modifiable once you have confirmed an order.

Pack size

This is the pack size you are requesting the supplier to provide (or the pack size the supplier has said they can provide).

Units

The units that the pack is measured in.

Price before discount

The price quoted by the supplier for one pack (of the pack size shown in the **Pack size** field) of this item. If you enter it here, it will be carried through onto the goods received note and then the supplier invoice. Of course it can be edited on the supplier invoice if the delivered price turns out to be different to what is entered here). Entry of this field can be made mandatory if the preference is turned on (see [Purchase order preferences](#) for details).

Extension

The price multiplied by the quantity ordered.

Volume per pack

In this field, you can define the volume per pack for the pack size chosen. If you are entering a new line the volume and pack size you have entered for the item will be used.

Note the mSupply always stores volumes as m3 (cubic metres), but you can enter a volume as millilitres (ml), litres (L) or cubic metres (m3)

Shelf location

Type the first few characters of location name or code as you know, then press the *Tab* key. If only one location code matches your entry, it will be filled in automatically, otherwise you will be shown a standard choice list with the option to create a new location.

Adjusted quantity

The total quantity you now expect to receive from the supplier in all consignments. You can adjust this figure so that the amount received is reduced or increased due to changes in what the supplier actually sends.

Refresh Buttons

The refresh button (to the right of Volume per pack), on clicking, displays the default volume of the selected item if it has been set previously. Similarly the refresh button next to Shelf location displays the default location.

The refresh button in the “Pricing for this item” frame reloads the price data from a preferred quotation. The price from the most recent quote is used if there are no preferred quotations. If you have received an updated quotation after generating the original price, use this button to apply the updated details to this line.

Comment

Put anything you need to have recorded for this purchase order line in here. It will print against the line when the purchase order is printed out.

Notes

Any important notes you need to make about this purchase order line should go in here. These notes will not print out when the purchase order is printed but, if you check the *Show notes on Goods Received* checkbox, the note will be displayed on the goods received note line and the line will be coloured red when the goods are received into mSupply - see [Goods receipts](#) for details.

Other information in the Order line details window:

On hand: This is the quantity of stock on hand of the item

On order: This is the quantity of stock in other confirmed orders awaiting delivery.

On backorder: The quantity of stock you owe to customers on backorders

Quantity received: The total quantity of this line that has already been received on this order.

Tabs in the Order line details window

The usage tab

This tab shows the usage for the last 24 months of the item being viewed. This is useful for deciding if reported usage is consistent from month to month, or is due to one or two very large supplies to clients.

	last 12 months	previous 12 months
this month	0	410
last month	0	538
3 months ago	0	331
4 months ago	0	266
5 months ago	42	318
6 months ago	350	448
7 months ago	213	308
8 months ago	370	382

Months: 6 Mean: 0 Standard dev: 0

Buttons: Cancel, OK, OK & Next

The quotes tab

This tab shows quotes from suppliers for the item being viewed.

You can double-click a quote to view and/or modify details.

View quotations for the item in question. You can double-click a quotation to modify its information.

Note that the supplier of the quotation that is marked as “preferred” will be the supplier selected when using the “split” command to break a general order into orders for each supplier.

The **New** button allows you to add a new quotation.

Edit order line...

GeneralUsageQuotesReceipt historyLedger

Item	Date	Supplier	Cu...	Rate	Price	Pac...	Freight	Strip	Cost	Adj Cost	Preferred	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	1.00	<input type="checkbox"/>	28.20	2.3500	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	1.00	<input type="checkbox"/>	52.50	4.3750	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	1.00	<input type="checkbox"/>	12.97	1.0811	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	0.00	<input type="checkbox"/>	16.19	1.3496	<input checked="" type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	0.00	<input type="checkbox"/>	27.50	2.2916	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	0.00	<input type="checkbox"/>	19.89	1.6575	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	0.00	<input type="checkbox"/>	0.00	0.0000	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	0.00	<input type="checkbox"/>	45.63	3.8025	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						1	0.00	<input type="checkbox"/>	1.39	1.3900	<input checked="" type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						1	0.00	<input type="checkbox"/>	2.75	2.7500	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	0.00	<input type="checkbox"/>	0.00	0.0000	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						1	1.00	<input type="checkbox"/>	0.00	0.0000	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						1	1.00	<input type="checkbox"/>	3.00	3.0000	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						1	1.00	<input type="checkbox"/>	1.85	1.8514	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						12	1.00	<input type="checkbox"/>	15.81	1.3177	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						1	1.00	<input type="checkbox"/>	3.97	3.9700	<input type="checkbox"/>	
Sodium Chloride 0.9% iv inf (1 Ltr)						10	1.00	<input type="checkbox"/>	14.95	1.4950	<input checked="" type="checkbox"/>	

Cancel

OK

OK & Next

The receipt history tab

This tab shows all goods receipts for the item being viewed.

If you double-click a line the associated goods receipt transaction will open in a new window.



- You can display a sub-set of the transaction lines by choosing options from the drop-down lists.
- The option *Received ledger for this Purchase Order line* shows all supplier invoice transactions for the current Purchase Order line item. This is particularly useful if you want to see the history of prices paid for this item.
- Goods receipts are shown on [the Receipt history tab](#).



- Unordered List ItemThe **Dates** drop-down list allows you to show only recent transactions....



- If you double-click a ledger line, the associated invoice will be opened in a new window

Buttons in the Edit Purchase Order Line window

OK & Next

This button will take you to the next order line, unless you have reached the last line in the order, in which case you will be taken back to the order modifying window.

OK

Will exit the window saving changes to the current window.

Delete

If you click the **Delete** button, the order will be deleted and the order number will be reused for the next order.

Purchase Order status explained:

- When a purchase order (PO) is first created it has status “sg” (for “suggested”)
 - POs with status sg can be modified in almost every way, including changing the supplier.
- Once there are no more lines to add to a PO, it can be confirmed and sent to the supplier. A PO is confirmed by clicking on the **Confirm** button.
 - Once a PO is confirmed, it has status “cn” (for “confirmed”) and an appropriate log entry is created.
 - Confirmed POs have the order amount added to the “on order” field for each item, so that if another PO is created for the same item, this quantity already on order will be taken into account.
 - Confirmed POs can not have new lines added to them. However, details of existing PO lines can be amended.
- Once no more stock is to be received against a PO, it can be finalised. An order becomes finalised by clicking on the *Finalise order* tick-box at the bottom left of the PO window.
 - POs that have been finalised have status “fn” (for “finalised”) and an appropriate log entry is created.
 - Finalised POs can no longer be modified in any way.
 - No more goods can be received against a finalised PO. The ‘unsupplied’ lines will not appear when you look for outstanding PO lines (*Supplier>Show outstanding PO lines*) and the ‘unsupplied’ quantities are ignored in any of mSupply's subsequent *Stock on order* calculations.

Estimated order costs explained



From version 1.7 onwards, mSupply displays a new column (Price Ext) in the order modifying window that shows the cost of the order line.

Buttons on the General tab

New line

Click this button to add a new line to the Purchase Order. You will be shown this window:

New Purchase Order line...

×

GeneralUsageQuotesReceipt historyLedger

Item

Store: ESSENTIAL

Location

Volume per pack

m3

Shelf location

Original order

Number of packs

0

Pack size

1

Total Quantity

0

Units (ea,kg,ml)

Supplier item code

Pricing for this item

Price before discount

0.0000

discount (%)

0

Price after discount

0.0000

Extension

0.00

Requested delivery date

17/03/2016

Expected delivery date

00/00/00

Stock

On hand

0

On backorder

0

On order

0

Received on previous deliveries

0

Comment (will print on purchase order)

Notes

☐ Show notes on Goods Received

Cancel

OK

OK & Next

You may enter the quantity of the item either by number of packs or by total quantity. mSupply will automatically fill in the other fields for you.

By default the Requested delivery date will be today's date but you may edit this to request deliveries at the times you require. The expected delivery date can be entered manually now but it would normally be entered once a response from the supplier has been received.

Delete lines

Select one or more lines in the Purchase Order and then click this button to delete the lines from the Purchase Order.

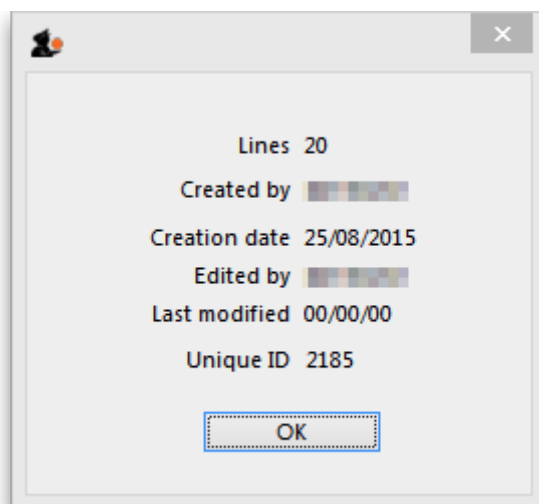
Update EDD

Select one or more lines in the Purchase Order and then click on the Update EDD (Estimated Date of Delivery) button to enter a new date when delivery is expected.

Info

Click the Info button to display information about the Purchase Order including the name of the initials of the Purchase Order creator and modifier - refer figure below.

mSupply documentation wiki - <https://docs.msupply.org.nz/>



Lines 20

Created by [REDACTED]

Creation date 25/08/2015

Edited by [REDACTED]

Last modified 00/00/00

Unique ID 2185

OK

Notes:



- If the Purchase Order has not been modified, then a modify date of 00/00/00 will be displayed.
- If there is no name against the Created by and Modified by entries, then this Purchase Order was created / modified on the Primary Server in a synchronised mSupply system.

Print

Clicking the **Print** button will print the complete Purchase Order form for sending to a supplier. Note that you should fill in relevant details on the *Details* tab before printing the order.

Confirm

See the section above on “order status” for an explanation. Orders should be confirmed once the order has been placed with the supplier.

Check boxes on the General tab

Locked

When the locked check box is checked, the Purchase Order cannot be processed to the next status (confirmed or finalized) - refer [Order Status explained](#).

Auto calc usage

When the Auto calc usage check box is checked, each time you modify an item line, the usage for

that line will be calculated. This is slower, but gives useful information upon which to base your ordering . Note that this option can also be turned on within the order line modifying window.

Print my signature

When the Print my signature check-box is checked, the user's signature will be printed on the Purchase Order if it has been loaded - refer [Managing users](#).

The Details tab

This tab allows you to record a range of information that will be entered on the Purchase Order when it is sent to the supplier.

Edit Purchase order...

Order num : 902 Name IDA Foundation TL108 ☐ Black

Confirm date : 6/04/17 Donor MINISTRY OF HEALTH Reference Status cn

Requested delivery: 4/06/17 Store: General (SAME)

General Details Ad hoc items Goods Received Supplier invoices Log Location

Tender reference BTL JAMES, BPO-17-020

Order details

PO sent date 06/04/17 Contract signed date 00/00/00 Advance paid 00/00/00 Received at port 00/00/00

☒ Include when calculating stock on order

Comment

PO generated for tender number: 93 No of PO Lines 18

Info for purchase order

Supplier's agent Heading message

Delivery method Agent's Commission 0.00000

Authorizing officer 1 Document charge 0.00000

Authorizing officer 2 Communications charge 0.00000

Additional instructions Insurance charge 0.00000

Freight charge 0.00000

Freight conditions

OK & Next Delete OK

PO sent date

Enter the date the Purchase Order was sent to the supplier. When you print a Purchase Order mSupply will offer to fill in this date for you, but you should modify it if necessary to reflect the exact date.

Contract signed date, Advance paid and Received at port fields

Enter dates in these fields as appropriate. They are all optional unless any of them are made compulsory by turning on the appropriate preferences on the *Purchase orders 2* tab of the **File > Preferences...** menu item. See [Purchase order preferences](#) for more details.

Heading message

Any text you enter here (e.g. Urgent or Supplementary order for P0 183) will be printed in a large font across the top of the Purchase Order so your supplier will (or at least *should*) notice the message.

Expected Delivery

Enter the date you expect the order to arrive

Goods Received date

Fill in the actual delivery date. Leave the date blank for Purchase Orders that have not been delivered

Invoice received

Enter the date when you received the invoice from the supplier

Hint: you can find all orders that have not had an invoice supplied by querying on this field.

Comment

You can enter any appropriate comments here.

Supplier's agent

Enter the name of the intermediary party here - if there is one.

Delivery method

Enter a delivery method (eg "Air", "Courier" ...)

Authorizing officers

Enter the names of the people who are required to sign off the Purchase Order. These names are printed on the Purchase Order.

Freight conditions

Enter the delivery address, shipping marks, etc. here.

Additional instructions

Enter any further information you wish to appear on the Purchase Order.

Commissions and charges fields

Fill in any relevant charges agreed between you and the supplier. Note that any charges that are zero will be skipped when printing the Purchase Order.

The Ad Hoc items tab

Here you can display a list of items that have been assigned to the supplier, but not yet added to a Purchase Order.

[illegible]

Click on a line, then click the “Add selected line to order” button to add a line to the current Purchase Order.

Warning: if you delete a line from a Purchase Order it will not have its status updated automatically- it

is your job to do so using the Items > Manage Ad Hoc items menu.

New Ad Hoc line button

Here you can add an ad hoc item “on-the-fly”. This is useful if you want to process a Purchase Order for a single Ad Hoc item that has not yet been entered into mSupply.

Note that the Items > Manage Ad Hoc items menu is the normal route to add, modify and delete Ad Hoc items.

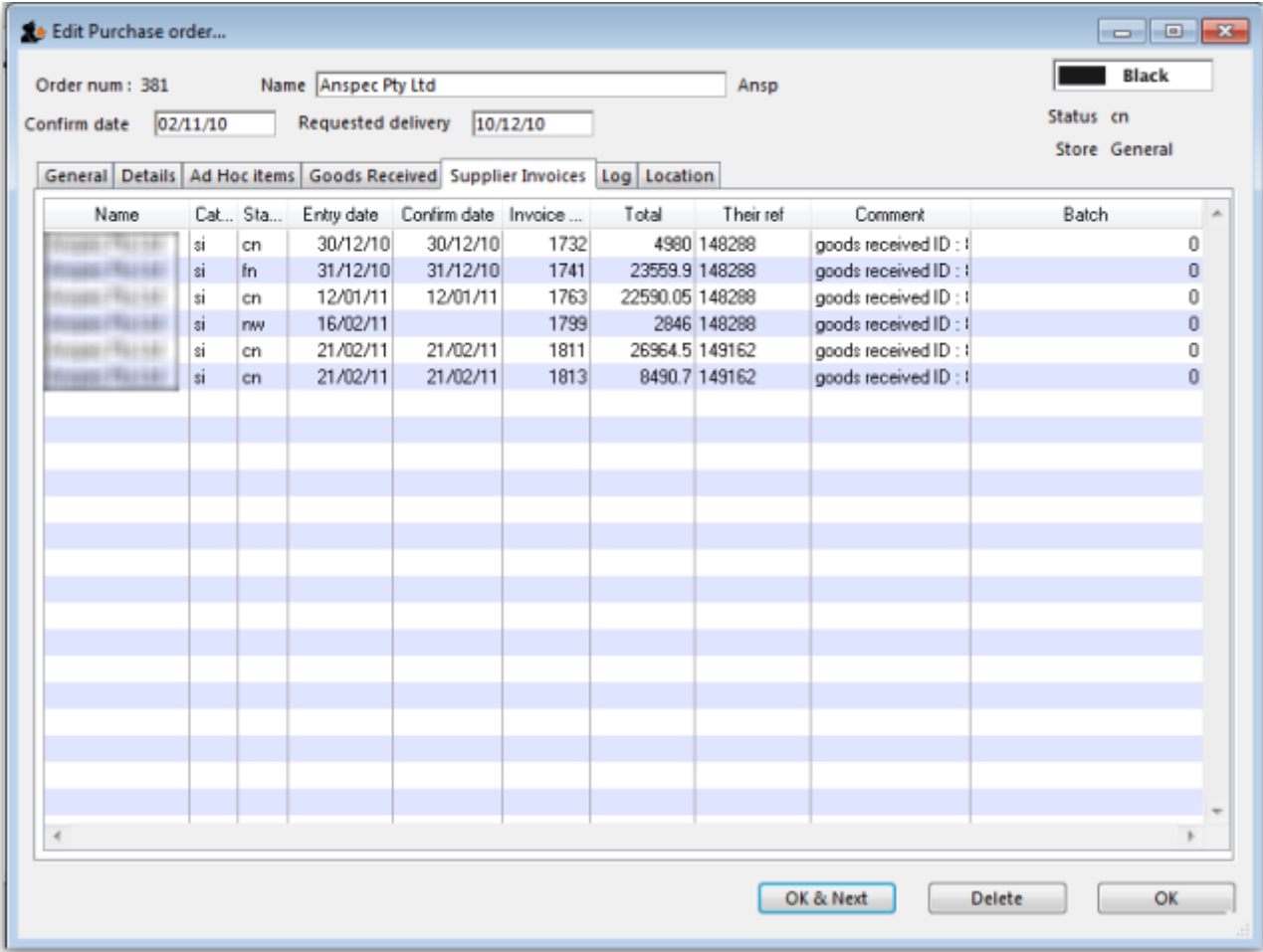
The Goods Received tab

This is a record of the receipt of the order, and, where multiple deliveries have been made, records each instance.

[illegible]

The Supplier Invoices tab

This tab displays a list of invoices related to this Purchase Order.



There are two types of invoice that are created directly from Purchase Orders:

- Supplier invoices are created each time [an associated Goods Received Note](#) is processed.
- Customer invoices are created when a supplier invoice is created that contains [Ad Hoc items](#).

The Log tab

This tab records a log of actions that have been performed on this purchase order. The below image shows that the Purchase Order has been confirmed for sending to the supplier and printed by the user Margaret at the date and times shown:

[illegible]

The Location tab

This tab displays the locations of the items received, if this feature is used. Where details of the volume of available space in any location has been entered, and where details of the area/volume of item pack has also been entered, the remaining available space will be displayed.

Lines will also be coloured red/orange/green to indicate greater than 100%, 90 to 100% or less than 90% of space used. showing which lines are likely to cause space problems on receipt.

Print

Prints the order. You will be shown the standard printing dialog boxes.

Note that if **Show all lines** is selected, the entire order is printed; if *Show incomplete lines* is selected, the printout lists only lines which have either not been supplied at all or require a balance to complete the order.

Split

Splits the order into a number of smaller orders based on the preferred supplier for each line. The preferred supplier is the quotation that is marked as “preferred” for that item. To view and modify quotations you can double-click the order line then chose “quotes” from the “show” menu. All items that do not have a quotation marked as “preferred” will be put into a separate order.

Email in body

The order will be turned into an e-mail and placed in the queue so that it is sent next time you send e-mails. You will be warned if you have not entered an e-mail address for the supplier.

The e-mail will be formatted as follows:

To:xyz@hk.com.npFindStatus:queueDate:19/01/07

Subject:XYZ

Body

item	quan	pack
CHLORPHENIRAMINE TABS 4MG	3	1000
CHLOROQUINE TABS 150MG BASE	50	1000
CHLOROQUINE TABS 150MG BASE	100	100
CHLORAMPHENICOL CAPS 250MG	50	1000
CHLORAMPHENICOL CAPS 250MG	200	100
CARBIMAZOLE TABS 5MG	60	100
ASCORBIC ACID TABS 250MG (VITAMIN C)	1	1000
BROMOCRYPTINE TABS 2.5MG	20	100
BISACODYL TABS 5MG	10	100
ASPIRIN TABS 300MG	20	100
AMOXICYLLIN TABS/CAPS 250MG	50	1000
AMOXICYLLIN TABS/CAPS 250MG	300	100
ALLOPURINOL TABS 100MG	9	1000
ALLOPURINOL TABS 100MG	10	100
ACETAZOLAMIDE TABS 250MG	30	1000
CIMETIDINE TABS 400MG	10	500
CLINDAMYCIN CAPS 150MG	20	100
CLOXACILLIN TABS/CAPS 250MG	100	100
CLOXACILLIN TABS/CAPS 250MG	100	1000
CO-TRIMOXAZOLE TABLETS 480G	60	100
CO-TRIMOXAZOLE TABLETS 480G	40	1000
DOTHIEPIN TABS/CAPS 25MG	10	100
DOXYCYCLINE TABS 100MG	2	1000
DOXYCYCLINE TABS 100MG	10	100
ENALAPRIL TABS 5MG	13	100
ENALAPRIL TABS 5MG	100	500
ERYTHROMYCIN TABS 250MG	100	100
ERYTHROMYCIN TABS 250MG	20	1000
ETHAMBUTOL TABS 400MG	20	100

Mailbox:Out

Link to name:NATIONAL MEDICAL STORE

CancelQueue

To check the email before sending it, choose *Special > show I_formatemails* , then double-click the email to modify it. Note that to make the columns line up properly, you will have to click the <|-|> button to view the text in a fixed-width font.

Email HTML attachment...

The order will be turned into an HTML attachment, and attached to a new email that is then placed in the queue so that it is sent next time you send e-mails. You will be warned if you have not entered an e-mail address for the supplier. The attachment will be stored in the export folder you have nominated in the Preferences. (For multi-user mSupply, the export folder is set as the folder "C:\mSupply\mSupply client\Export" (on the assumption that you have selected the default install location for mSupply).

Email PDF

Choosing this item will cause mSupply to generate a PDF file, create an email and attach the PDF file to the email.

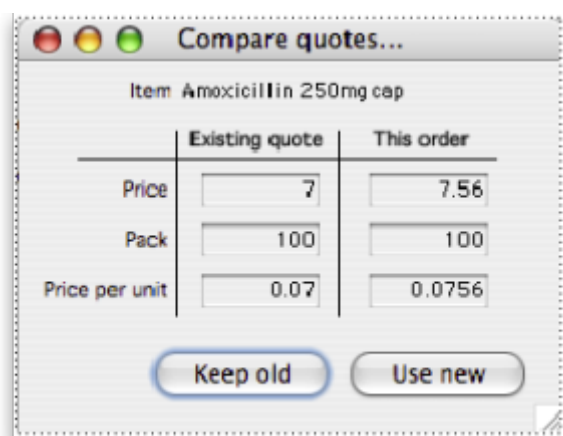
Note that you must use the PDF xChange PDF driver installed on the computer generating the email for this to work. The driver currently costs US\$50, and is available from Sustainable Solutions info@ss.org.np

The PDF that is created is stored in the mSupply data file, so you can create a PDF attachment on one computer and send it from a different computer without problems.

Update quotes using this order

This command allows you to check that quotation data is up to date based on actual supplied prices.

Each order line will be evaluated, and if a quotation does not exist, one will be created. If a quotation does exist and the price you have paid in the order and the price stored for your quotation are different, you will be shown a window to compare prices, and you can decide whether to keep the existing quotation or update it.



Note that you need to have your user permissions “Can add quotations” and/or “Can modify quotations” set before this command is available.

Split Deliveries

Creating split or multiple deliveries will now be described using the following example.

It is important to note that the Purchase Order should not be finalised before this procedure is performed, as a finalised order may not be modified or altered in any way.

A store is placing an order for Normal Saline and, having followed the normal procedures, mSupply has created the Purchase Order displayed: below.

New purchase order...

Order num : 15 Name: Black

Confirm date : 00/00/00 Donor: Reference: Status sg

Requested delivery: 17/03/2016 Store: ESSENTIAL

General Details Ad hoc items Goods Received Supplier invoices Log Location

+ New line - Delete lines Update EDD Info Print Confirm Period: 1/07/2015 - 30/06/2016 Category: none

show all lines Currency: NZD Forex rate: 1

Line	Item code	Item	Orig. Qty	Pack	Adj. Qty	Tot. recei...	Stock on ...	On Order	Cust.b/odrs	Price Ext	Expected...	Store:
1	FMCK1	Normal Saline	31250	25	31250	0	0	0	0	0.00		ESS...

Supplier discount: Percentage 0 Discount amount 0.00 Estimated subtotal 0.00 Estimated cost after discount 0.00

☐ Locked ☐ Auto calc usage

☐ Finalize order ☐ Authorise OK & Next Delete OK

The store does not have the storage capacity to hold 1250 packs of Normal Saline, so the supply of this item needs to be made in multiple deliveries; it is decided that 500 be requested for delivery at the beginning of January, followed by 250 at the beginning of each of the months of April, July and October - i.e. at three monthly intervals.

The Purchase Order is modified as follows:

- Click on **New line**, and add the item Normal Saline
- In the **Number of packs** field, enter 500
- In the **Requested Delivery date** enter 1/1/17
- Click **OK & Next**

- In the **Number of packs** field, enter 250
- In the **Requested Delivery date** enter 1/4/17
- Click **OK & Next**
- In the **Number of packs** field, enter 250
- In the **Requested Delivery date** enter 1/7/17
- Click **OK & Next**

Repeat the last two steps, but enter 1/10/17 in the **Requested Delivery date** field for the final delivery in October.

To complete the process, delete the line calling for 1250 units on 1/1/17.

The Purchase Order should now look like this:

New purchase order...

Order num : 15
Name

Black

Confirm date :
Donor
Reference
Status sg

Requested delivery:
Store: ESSENTIAL

General
Details
Ad hoc items
Goods Received
Supplier invoices
Log
Location

New line

Delete lines

Update EDD

Info

Print

Confirm

Period
Category

show all lines
Currency
Forex rate

Line	Item code	Item	Orig.Qty	Pack	Adj. Qty	Tot. recei...	Stock on ...	On Order	Cust.b/orders	Price Ext	Expected...	Store:
2	FMCK1	Normal Saline	12500	25	12500	0	0	0	0	0.00		ESS...
3	FMCK1	Normal Saline	6250	25	6250	0	0	0	0	0.00		ESS...
4	FMCK1	Normal Saline	6250	25	6250	0	0	0	0	0.00		ESS...
5	FMCK1	Normal Saline	6250	25	6250	0	0	0	0	0.00		ESS...

Supplier discount

Percentage
Discount amount

☐ Locked
☐ Auto calc usage

Estimated subtotal
Estimated cost after discount

0.00
0.00

☐ Finalize order
☐ Authorise

OK & Next

Delete

OK

You won't see the different requested dates on this screen. Expected dates are generated upon feedback from the supplier or can be entered manually.

This feature enables mSupply to take future deliveries into its reckoning if, for example, an additional order for Normal Saline was placed in mid June, and a delivery of 2,500 had already been arranged for 1 July.'

Authorising purchase orders

If required, it is possible to turn on authorisation of purchase orders. An unauthorised purchase order

purchasing:ordering_from_suppliers https://docs.msupply.org.nz/purchasing:ordering_from_suppliers?rev=1571246876

will print with an “Unauthorised” watermark clearly visible across it. An authorised purchase order will print *without* the watermark. This is the only difference authorising purchase orders makes - unauthorised purchase orders can still be confirmed and have goods receipted against them so it is not as restrictive as, for example, customer invoice authorisation.

To turn on purchase order authorisation, check the *Purchase order must be authorised* store preference. See [Virtual stores preferences](#) for details of how to do this.

When a user is logged into a store with this preference turned on, an *Authorise* checkbox appears in the bottom left hand corner of a purchase order:

[illegible]

Only users with the *Can authorise purchase orders* permission can check the *Authorise* checkbox and therefore authorise a purchase order. See [Managing users](#) for instructions on setting permissions for users.

Purchase order categories

Purchase order categories are useful for separating up your purchase orders when reporting. For details about setting them up and assigning them to purchase orders please see [Purchase order categories](#).

Previous: **6. Tenders** | | Next: **7.2. Managing purchase orders**

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