Stock Movement mechanisms

The Orixa JTSSys is programmed with stock-movement management which enables location-based stock management.
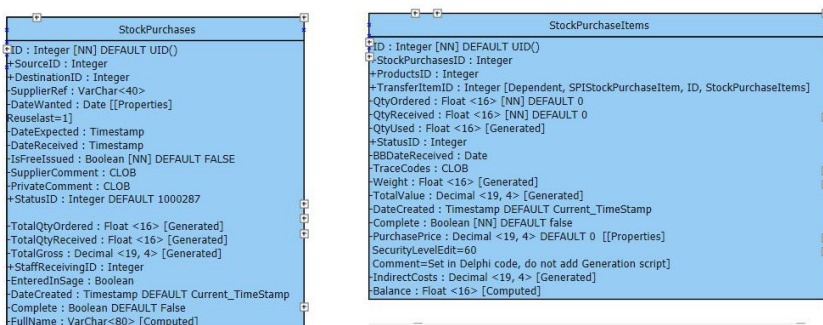
The fundamentals of this process are controlled by data in the StockPurchaseItems and StockAllocations data-tables. The records in these tables linked to the individual stock-items ordered by or owned by JTS, and the master-table StockPurchases which holds records for the Supplier. The StockPurchaseItems data-table also includes fields for the BatchCodes, for traceability purposes. StockAllocations stores specific Warehouse locations, such as a bay-number. StockAllocations is also used when stock items are moved or disposed of (ie they leave the warehouse for any reason other than a Sale).

A critical aspect of the StockPurchases is that it includes a "SourceID" and "DestinationID" fields, which link to Suppliers. This allows StockPurchases to be made with a "Source" such as "NASFAM" and a "Destination" such as "Granta Processors", and for subsequent records to track the movement of the product from Granta to later stages of the supply-chain. In this way, provided StockPurchase data is entered appropriately, the JTS Sys can return accurate stock lists with location data that is accurate across multiple sites.

When Sales are made StockPurchaseItems are linked to each sale, and StockAllocations records are added deducting the quantity sold from quantities stored at a specific location. This allows traceability from the sales-item back to purchase.

As well as records relating to Purchases and movements of stock, the JTSSys includes the StockCounts data-table, which allows regular recording of actual stock on-shelf. This data collection occurs to audit and validate the data from the StockPurchases parts of the system. In the live running system many processes use their starting point as the date of the most recent stock-count, which is stored in the StockCounts data-table.

StockPurchases and StockPurchaseItems

StockPurchases
- ID : Integer [NN] DEFAULT UID()
- +SourceID : Integer
- +DestinationID : Integer
- SupplierRef : VarChar<40>
- DateWanted : Date [[Properties]
- Reuselast=1]
- DateExpected : Timestamp
- DateReceived : Timestamp
- IsFreeIssued : Boolean [NN] DEFAULT FALSE
- SupplierComment : CLOB
- PrivateComment : CLOB
- +StatusID : Integer DEFAULT 1000287
- TotalQtyOrdered : Float <16> [Generated]
- TotalQtyReceived : Float <16> [Generated]
- TotalGross : Decimal <19, 4> [Generated]
- +StaffReceivingID : Integer
- EnteredInSage : Boolean
- DateCreated : Timestamp DEFAULT Current_TimeStamp
- Complete : Boolean DEFAULT False
- FullName : VarChar<80> [Computed]

StockPurchaseItems
- ID : Integer [NN] DEFAULT UID()
- +StockPurchasesID : Integer
- +ProductsID : Integer
- +TransferItemID : Integer [Dependent, SPIStockPurchaseItem, ID, StockPurchaseItems]
- QtyOrdered : Float <16> [NN] DEFAULT 0
- QtyReceived : Float <16> [NN] DEFAULT 0
- QtyUsed : Float <16> [Generated]
- +StatusID : Integer
- BBDateReceived : Date
- TraceCodes : CLOB
- Weight : Float <16> [Generated]
- TotalValue : Decimal <19, 4> [Generated]
- DateCreated : Timestamp DEFAULT Current_TimeStamp
- Complete : Boolean [NN] DEFAULT false
- PurchasePrice : Decimal <19, 4> DEFAULT 0 [[Properties]
- SecurityLevelEdit=60
- Comment=Set in Delphi code, do not add Generation script]
- IndirectCosts : Decimal <19, 4> [Generated]
- Balance : Float <16> [Computed]

StockPurchases and StockPurchaseItems Data-Definitions

StockPurchases is a parent of StockPurchaseItems. Every StockPurchases record can have one or more Items. The StockPurchases record holds data for Source, Destination, Date, References, Status and Total Quantities and Values, as well as other fields. The StockPurchaseItems record holds individual detail of the Product purchased, with its PurchasePrice, Quantity, Value, Tracecodes and the "RcvdLocation", Received Location, which indicates the place of storage on arrival.
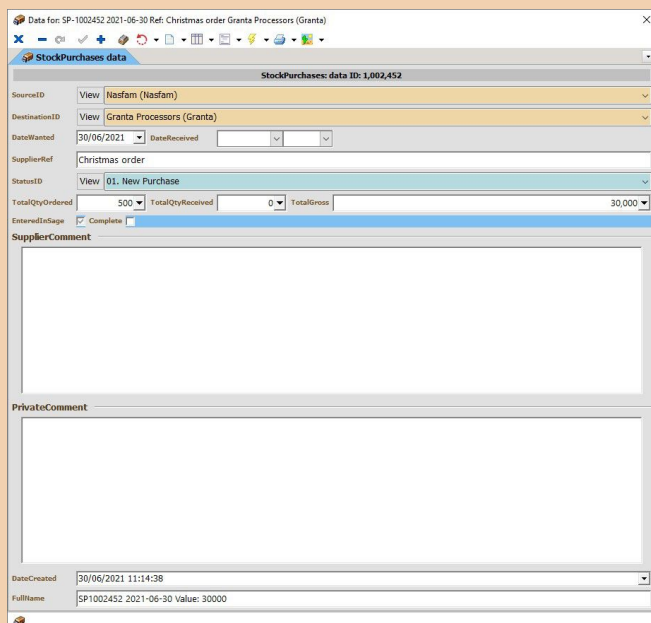
StockPurchase records are created to order stock from suppliers, and to inform Suppliers (such as Warehouses) of the need to move stock to a new location. In the case of a Stock Movement, the StockPurchase record would be created with a Source and Destination.

Stock Computations are done using the Destination to total stock amounts and locations. Financial Computations are done using the Source, as this is the Supplier from which the product has been purchased.

When a SalesInvoice is created it includes a "SourceID", this is the Supplier who is sending the goods. This can be set to "Just Trading" indicating tyhat Just Trading are handling the sale, but could be set to details for any other dispatch business.

When a SalesInvoiceItem is created to detail the product being sent **only stock at the supplier given by "SourceID"** will be available to pick for that SalesInvoiceItem. When stock control reports are printed off, the amount of stock shipped to a location will be used with the sales quantities(and
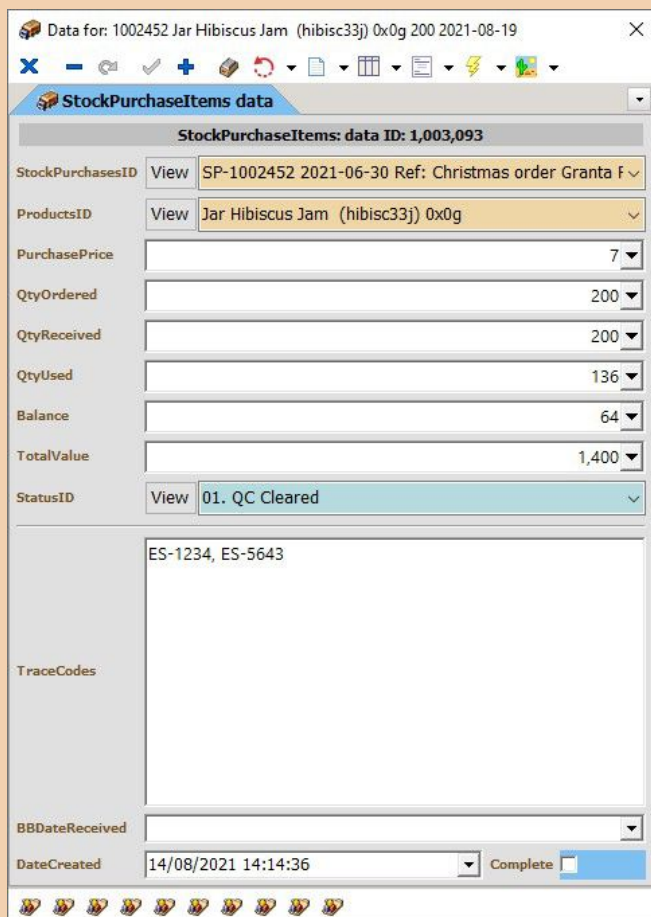
other adjustments detailed below) deducted.

StockPurchases Edit Form

StockPurchases Edit Form

To create a new stock purchase, just click the "+" in the Edit Window and add the necessary details.

The Actions and Print Choices fromt this Edit Form allow the user to generate a Stock Purchase PDF, and email it to the supplier.

As Items are added to a StockPurchase the "Total" fields should update automatically, but you will have to refresh the current record to see these updates.

StockPurchaseItems Edit Form

StockPurchaseItems Edit Form

Use this Edit Form to add individual "lines" or "items" to a stock purchase.

These are usually added as 1 line per product, but if a product uses complex batch-numbering it may be useful to add multiple "Items" records for one product, to allow details of different trace-codes, best-before dates and other data to be linked to this particular set of stock.

Finance staff should enter the "QtyOrdered", and check the "Purchase Price" prior to creating the Stock Purchase to email to the Supplier.

Warehouse staff should correct the "QtyReceived" and use the LocationID, StatusID, BBDateReceived and TraceCodes fields to manage stock-traceability and quality control in the warehouse.

> NOTE: The "QtyUsed" column will automatically increment as stock is either sold or disposed. The record will show a live "balance", being the number of units of the product which are still on-shelf.

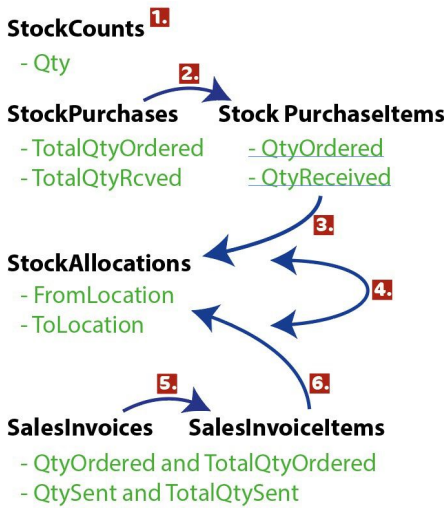# StockAllocations and StockCounts
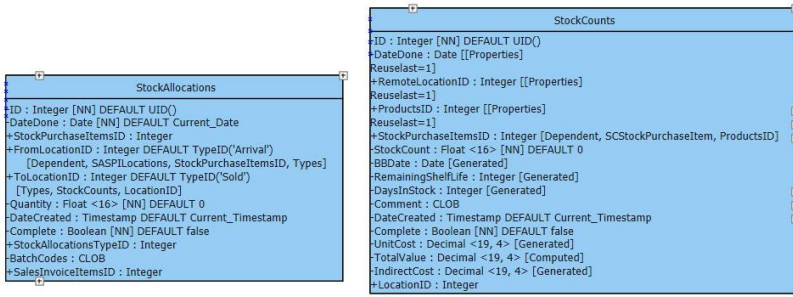
StockAllocations and StockCounts Data-Definitions

Most aspects of stock control are managed by staff directly through the StockPurchases data-tables mentioned above. However JTSSys includes 2 additional data-tables to allow a fully rounded stock-management process.

The StockAdjustments data-table allows for non-sales/purchases related stock management. For example when stock is spoiled, broken, disposed of etc. Add records to the StockAdjustments data-table to cope with writing off stock for any reason.

The StockCounts data-table is used to make regular inventories of stock to allow **actual** stock levels to be compared with the **theoretical** levels computed automatically by JTSSys. On any date, Stock-Count data can be entered, and compared with the levels shown in the JTSSys to see whether actual and theoretical amounts match.

Stock Quantity Computations

Stock Computation:

1. The Date and Qty of the most recent StockCount is used as a starting point for computations. Only Purchases, Sales and Allocations after the most recent StockCount are used to arrive at Current Stock.

2. Orders are placed for products, each StockPurchase (SP) totals a delivery from 1 supplier a Source to 1 Destination.

Each StockPurchaseItem (SPI) represents one product. Usually there is only one SPI for a product on each SP, unless you wish to distinguish batches of incoming product by batch code.

3. On Arrival all SPI's are Allocated to a Location. One SPI may have several StockAllocations (SA) Each Allocation is distinct in the system, so often this is the point where different batches of product are distinguished.

4. When stock is moved in the warehouse a new SA is made with a "From" and "To" location, this maintains traceability of the SPI as it moves around the warehouse.

5. When goods are sold SalesInvoice (SI) and SalesInvoiceItem (SII) records are created which are "outbound" versions of SP and SPI.

6. Each SII record must deduct one or more SA record. The user selects the Product, then the SPI, then the SA(s) to sell.

As a result of the above steps all paperwork and records are created live via the use of the system to track all stock movements.

Stock Quantity Computations
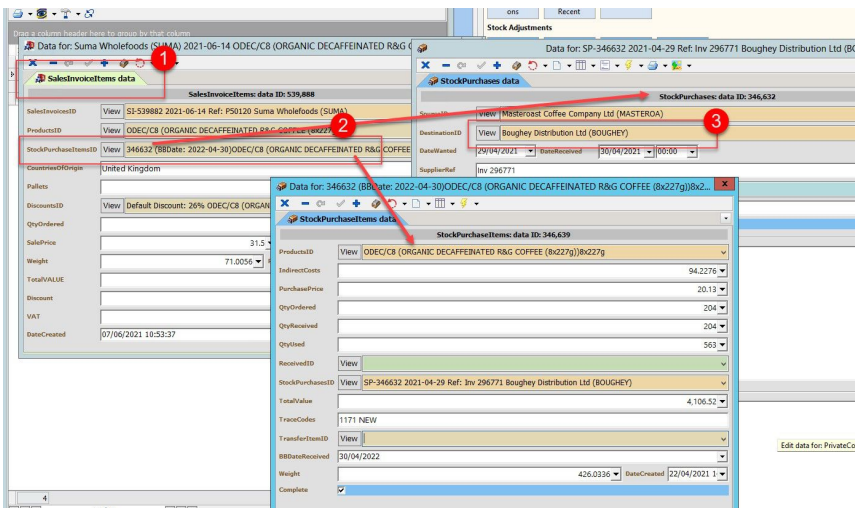
Source and Destination for Purchase and Sales Items

1. A SalesInvoiceItems record is added for a Customer, with a chosen Product.

2. The StockPurchaseItem for this sale is picked from a list. This list will be limited to StockPurchaseItems for the selected Product, **which are available at the source for the selected invoice.**

3. The SalesInvoice has "Boughey Distribution" as the "Source". This means that only StockPurchaseItems logged with this Supplier / Location as a "Destination" will be listed as available for use in this sale.

Stock-Arrival: Entering the Warehouse Locations for StockPurchaseItems

Once an item arrives in the warehouse, staff should find the StockPurchaseItem record that was created when the stock was ordered, and then enter the "QtyReceived" (Received Quantity). Usually this should match the "QtyOrdered", and if it does not accounts staff will be made aware that the consignment has been under-delivered.

Stock can enter the TraceCodes for this StockPurchaseItem in the "TraceCodes" field, and marked the item's "Status" to confirm it has passed Quality Checks (or not!).

Then the goods can be stored in the warehouse. The locations of storage can be kept in the system, so staff can easily locate and stock-count items.
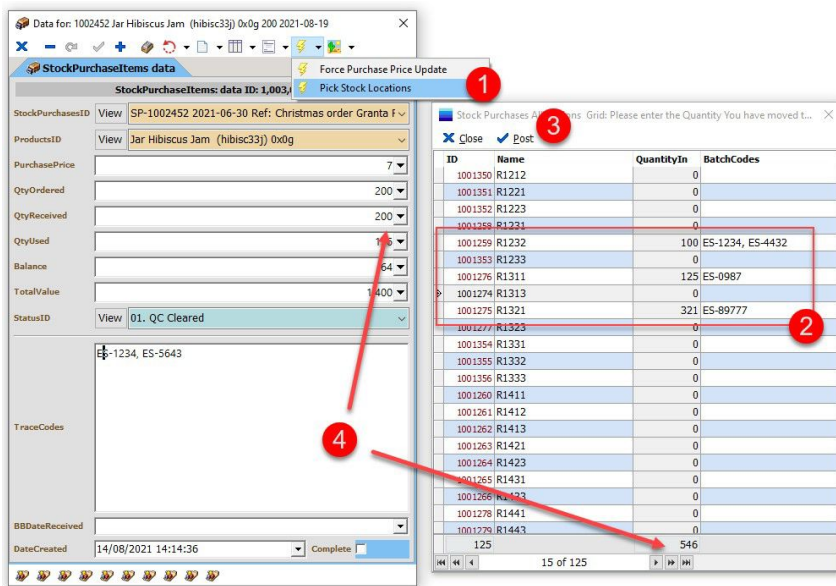
Allocating Stock Purchase Items to specific warehouse locations

1. From the StockPurchaseItems Actions menu, select "Pick Stock Locations".

2. A grid showing all the locations in the warehouse will open. Enter the number of units which have been stored at each location. You can also store BatchCodes by location at this point (this is optional, it is usually adequate to store batch-codes in the StockPurchaseItems record.

3. Once staff are happy they have entered all the correct data, they can post it into the database.

4. Note that the total "QuantityIn" should match the "QtyReceived" (it does not match in the image because it is a made-up example).

Moving stock between locations or disposing of stock which is damaged / past its shelf life, etc.

All movements and disposals of stock are stored in the StockAllocations data-table.

1. Find the StockPurchaseItems record for which you want to make a stock-deduction.

2. Select "Add New StockAllocations" from the "New Items" menu. The StockAllocations Edit Form will open.
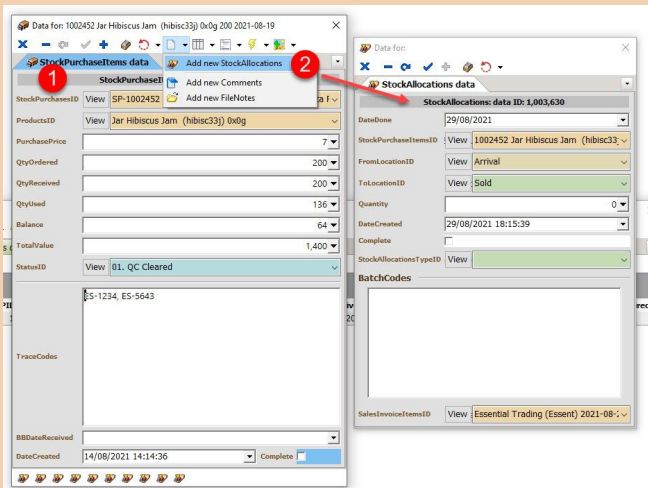
Add StockAllocation data to Move / Dispose of stock
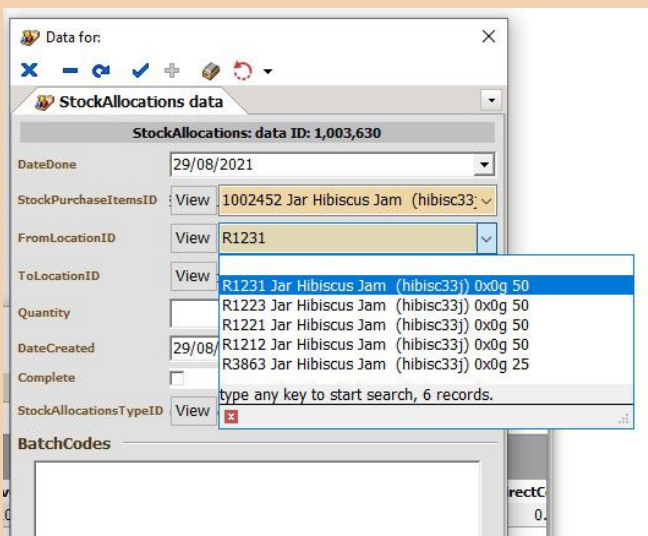
**Pick "From" location of movement/disposal**

Pick a "FromLocation" for this StockAllocation.

This will record the location from which stock has been removed / taken.

NOTE: This is a "clever" list, it will only allow selection of locations where this SPI is stored, other locations will not be visible.

Once the location from which stock is being removed is chosen, next pick the "to" location.

1. If the stock is leaving the warehouse without being sold, select **disposal**.

2. Otherwise select a location that the stock is being moved to.
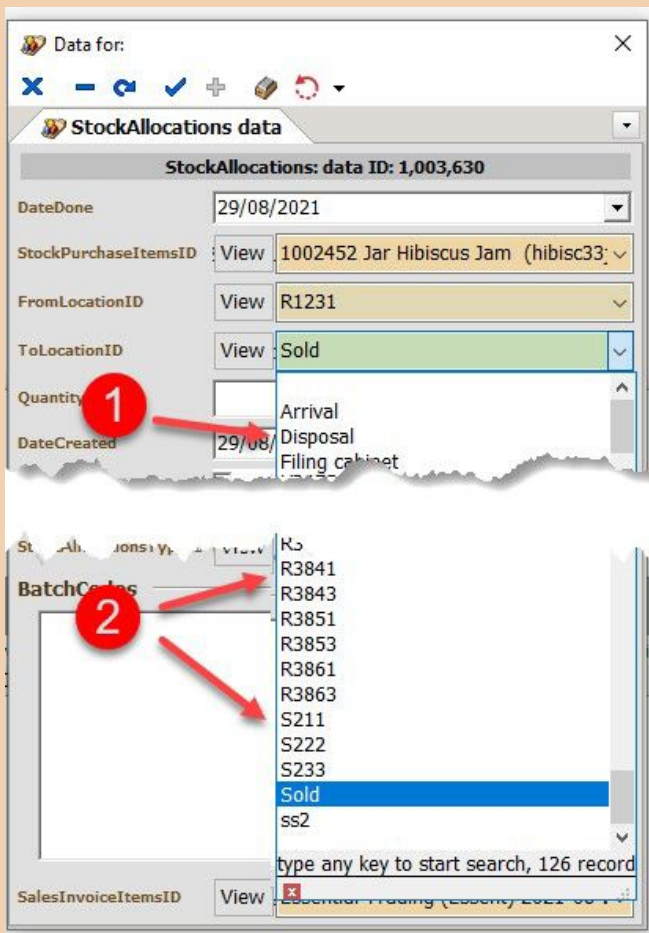
"To" location for StockAllocation
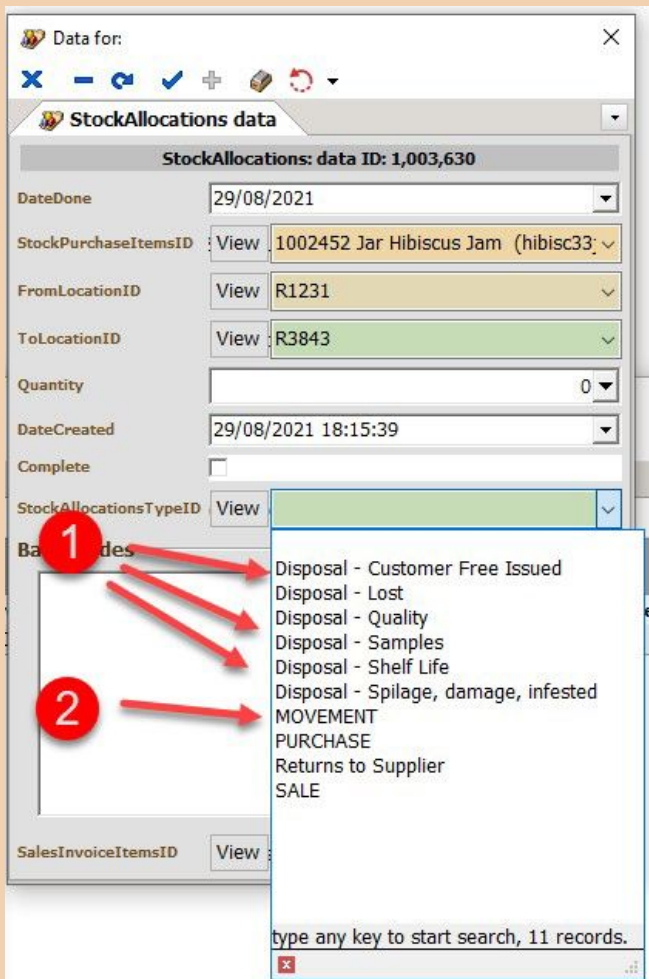
Finally, pick a StockAllocationsType.

> 1. If stock is being desposed of pick one of these options.
>
> 2. If stock is being moved, select "MOVEMENT"

Obviously also remember to enter the Quantity of stock which is being moved, using the standard unit for that particular stock-item.

Picking StockAllocations when SalesInvoices are being picked / dispatched

Basically the same process for "stock out" musts be done as for "stock in" when a sales invoice is dispatched.

Each SalesInvoiceItem must be linked to a StockPurchaseItem (which holds details of the supplier's batch-codes), and then the particular StockAllocations used for this Item must be chosen.
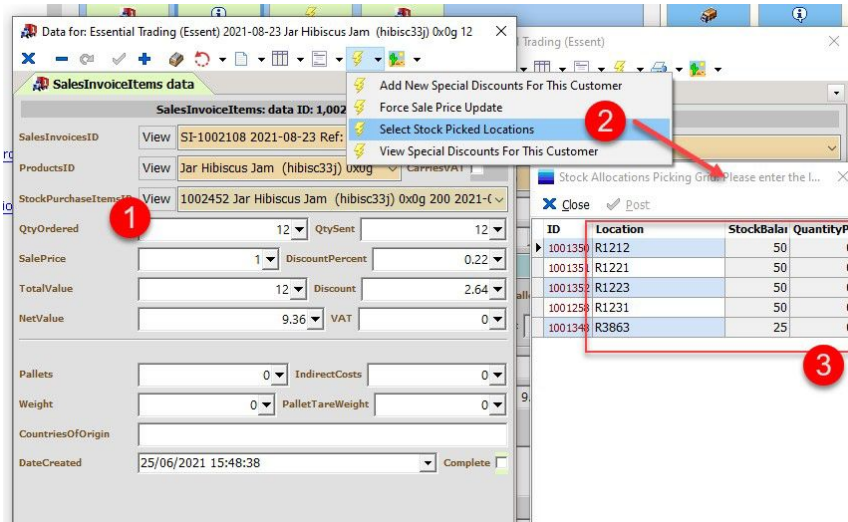
Setting Stock Allocations for a Sales Invoice Item

1. In the SalesInvoiceItem, select a StockPurchasesItem that you wish to use to fulfil the sale. This list will only show items that have been entered as delivered to the destination given by the "SourceID" for this Invoice.

2. From the Actions menu, click on "Select Stock Picked Locations" and a grid to enter the Quantity Picked for each location of this StockPurchaseItem will appear.

3. Enter the required Quantities beside the "Location" note that the "StockBalance" field gives a live record of the number of items at each location, so you can choose from one where there are enough in stock. Once you have entered the required total quantity, to match the "QtySent", click the "Post" button

Monitoring Stock Levels

Orixa monitors stock at 2 levels. Firstly at the level of Stock Purchases, secondly at the level of Stock Allocations (which includes location data).

Stock Purchase Stock Data

Here the total quantity of each Product which has been purchased since the latest stock check is summed, together with the stock-check sold, and disposed Quantities.

This resource does not show location data, but it is very useful for managing stock-levels. For example it shows when sales which have not yet been dispatched may lead to stock-shortages.
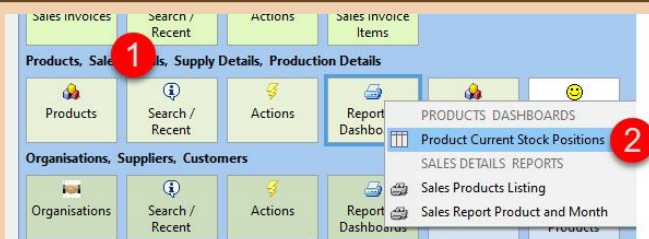
Viewing Stock Purchase Stock Data

To View Stock Purchase stock-data:

1. Find the "Products" entity on the System Entities screen.

2. Select Product Current Stock Positions from the "Reports / Dashboards button.

Product Current Stock Positions Dashboard

Once open the Product Current Stock Positions Dashboard will show 8 useful columns of data. It is good to familiarize yourself with these as viewing this dashboard gives a good, up-todate analysis of the company's stock-position.

1. StockCount: Quantity of the product present at the most recent stock-count.

2. OnOrder: Quantity ordered since the last stock-count but not yet delivered. This amount is "inflight" and might be due to arrive soon.

3. Received: Quantity ordered and received since the last stock-count.

4. SoldDispatched: Quantity sold to customers and actually dispatched from the warehouse since the last stock-count.

5. SoldOnOrder: Quantity entered into sales-invoices but not yet actually sold.

6. Disposed: Quantity thrown away for any reason, with a "StockAllocationType" of "Disposed-xxx"

7. Balance: Quantity that should be on-shelf. Note this **excludes** both "on-order" columns.

8. BalIncOnOrder: Quantity that will be present after both "on-order" columns are added.

So long at the "Balance" is greater than the "SoldOnOrder", then all existing sales can be met by stock-at-hand. So long as the "BalIncOnOrder" is positive, all existing sales can be met once "OnOrder" stock has arrived in the warehouse.

Stock Allocation Stock Data

This resource actually tracks all the Stock Allocations data and sums / reduces totals to give actual figures for each Product and Location.

This resource is most useful for actually viewing how much stock there is in any part of the warehouse at any time.
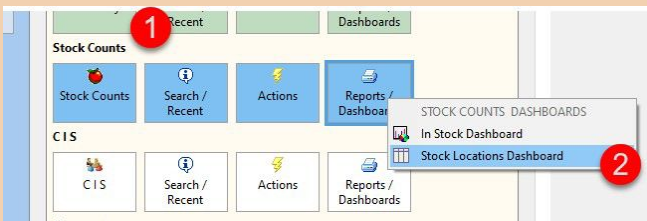
Viewing Stock Location summary data

To View location-based data:

1. Find the "Stock Counts" entity on the System Entities Screen.

2. From the "Reports / Dashboards" button, click on "Stock Location Dashboard"

Stock Location Dashboard

1. Once open, the Stock Location Dashboard will be visible in a new "tab" of the System.

2. Locations and Quantities will be clearly shown.