

# EOQ & ROP Calculation

## Ranking Table

- Product Ranking Table for Corporate and by Branch including required Turns and Safety Stock Factor based on Annual Sales Dollars or Units.
- Use of dollars or units determined by billing parameter setting.

## Purchasing Parameters

- Default Timer for new product added
- Weeks Active
- Number of Weeks with Activity
- Weighting Weeks
- EOQ and ROP rounding
- ROP and EOQ corporate or store
- Use Demand Smoothing
- Internal Review
- ROP/EOQ Use - DC or Corporate
- Branch Replenishment from DC - B/S/N

## Ranking Calculation

- Ranking calculated based on Unit Sales or Dollar Sales according to Billing Parameter setting screen 4 - Sales Rank Basis (U/\$)
- Run once for all locations
- Calculate Active Weeks from first receipt date to current date
- Ignore items without a first receipt date
- Calculate sales value by week for weighting weeks using invoice costing based on billing parameter setting, screen 2 invoice costing Average or Last (P6)
- Sum these values and the rank will set when the total sales value is less than the next value in the rank parameters.
- The sum of the sales value for all branches is used to calculate the corporate sales rank

# Calculate EOQ Values

- This is done for each branch separately
- Age Week Sales
- If Reorder Allowed = N, S or K do nothing
- If Reorder Lock not 0 do nothing
- Calculate the Active Weeks
- Only done for products that have a first receipt date
- Active weeks from First Receipt to current
- If the Active Weeks is > Weeks Active parameter use the parameter value
- If the Active Weeks is 0 do nothing
- Calculate Annual Unit Sales = previous 52 weeks sales.
- If Active weeks is < 52 calculate annual units as sum of previous 52 weeks \* 52 / Active Weeks.
- Weeks with Activity = Weeks in Active Weeks that have sales not = 0
- If Weeks with Activity < Number of Weeks with Activity move zero to Vendor and Transfer EOQ
- Assign the EOQ
- Based on the ranking parameter for the part divide the annual unit sales by the turns parameter giving the EOQ Vendor and Transfer.

# Calculate Lead Time by Part

- Use the number of receiving's set on the supplier record. If blank or 0 then default of 8 is used
- Calculate the average lead time for the most recent number receiving's of the part.
- Compare the average lead time to the highest number of days and add the lower of the difference or 25% of the average lead time.

# Calculate ROP Values

- Use DC lead time from branch record.
- If Lock value = 99 do nothing
- Does not use RANK-CUTOFF value
- Reduce the lock value by 1
- Calculate active weeks from first receipt date to current date
- Sum the sales units for the Weighting weeks.
- Compute the daily sales = total sales by week / (weighting weeks \* 6). It was decided early on that only 6 business days per week should be used for the daily sales calculation.
- Using the sales ranking and lead time for the part calculate the Vendor ROP. Daily Sales \* (Lead Time + Internal Review Time). Round this value based on Purchasing Parameter

settings. Add safety stock percentage and round again.

- Calculate the DC ROP value as  $\text{Daily Sales} * \text{DC Lead Time}$ , then round based on purchasing parameter setting. Add safety stock percentage and round again.

## Calculate Corporate Values

- Add the Vendor EOQ for all locations and put the total as the Corporate EOQ
- Add the Vendor ROP for all locations and put the total as the Corporate ROP

## Daily Suggested Order

- The daily suggested order calculation can be based the DC or Corporate ROP/EOQ
- Recalculates for all parts each day with the exception of parts on outstanding suggested orders where the order quantity has been modified and not ordered yet.
- Suggested order will buy direct to branch based on supplier setting
- Do not order product set as N for reorder allowed unless there is a customer backorder.
- DC available quantity for replenishment to branches calculated based parameter Branch Replenishment from DC.
- Transfers it the quantity available is equal to or less than the ROP DC order the DC EOQ – Qty Available + ROP DC base on DC Available Quantity. Use branch purchase quantity for transfers
- Corporate Vendor Orders compare the DC available quantity to the Corporate ROP and order when the available is less that the corporate ROP

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