



“ If you’re finding it difficult to get to grips with the suggested outputs from your MRP system, below are 10 tips that address some of the more common problem areas (these may be old hat to some seasoned MRP veterans but if any of these elements are not working correctly, they can have a negative impact on the successful running of your system):

1

Is your **stock** live and accurate? In order for an MRP system to operate efficiently, stock accuracy is imperative. Ensure that stock transactions are captured timeously and that any stock discrepancies are adjusted immediately. After all, the system is making its suggestions based on the stock quantities on hand so these need to be as accurate as possible.

2

Ensure that all **purchase orders and/or requisitions** are accurate. Housekeeping is extremely important and this includes back order quantities on part-received purchase order lines. It should be ascertained whether these lines should remain outstanding or not. The MRP system will not suggest any new purchase orders if there are existing open orders in the system. Also, check that the expected receipt dates are correct on the purchase order lines. If not, the system might suggest that these dates are changed but the result could then be that you end up being out of stock due to not actioning these suggestions.

3

How is the **demand** in the MRP system going to be generated? Demand is what drives the MRP **calculations**, and the suggestions for supply to match that demand. It can be in the form of Sales Orders in various statuses, Supply Chain Transfers, Forecasts, the Build Schedule for Master Production Schedule items, Safety Stock, Quotations, or even jobs with manual dates. It is important to understand where all these demands originate from and how they are managed in the setups of the MRP system.

4

Ensure that your **Bill of Materials (BOMs)** are accurate. This drives the purchasing and production calculations and suggestions in the MRP system and is just as important as your inventory master data. Check your manufacturing lead times by running the Lead Time Calculation (this is the data that SYSPRO uses to work backwards to plan when jobs should start, and thus when raw materials should be ordered and delivered). The MRP system works backwards from the demand required dates, to the supply suggested dates so if your operations on your BOMs are way out, you may end up supplying jobs or purchase orders incorrectly.



5

Ensure that you have a good understanding of all the **Configuration Settings** applied to the MRP module. Check if 'Schedule jobs and purchase orders' is ticked or not – make sure you understand the implications relating to this. This schedules supply according to the earliest demand date found, even if the supply is 'linked' to a demand in the future (for example, purchase orders linked to jobs or sales orders directly, or jobs linked to sales orders directly). Selecting this may lead to incorrect assumptions: there may be suggestions to alter supply dates to new dates which may be impractical, or inadvertently 'steal' stock for a new order that was already committed to another client. Conversely, not selecting this option may lead to over-ordering of supplies, as an unsatisfied demand generates a suggested job or purchase order, despite the possibility of an imminent supply.

| Configuration > Manufacturing > Requirements Planning | |
|---|-------------------------------------|
| Default pricing method | Current inventory cost price |
| Requirements planning load levelling | <input checked="" type="checkbox"/> |
| Forecast planning | |
| Frequency allowance (days) | 0 |
| Visibility factor (days) | 180 |
| Planning | |
| Schedule jobs and purchase orders | <input type="checkbox"/> |
| Do not lock live files during snapshot | <input checked="" type="checkbox"/> |

6

Ensure the correct preferences have been selected in the **MRP setup options**. Do you know what all of the settings mean and why you have selected them? In some instances, a trick may be to change your settings to 'Override all items' batching rules, thereby ignoring all settings. This does the MRP calculation with a 'Lot for Lot' batching rule, which means only order / suggest exactly what goods are needed (for example, 1 for 1, or 1.356 for 1.356). Select this just to test if your batching rules are adversely affecting your data. Make sure all the data that needs to be taken into account is in fact included in the calculation, by way of the relevant ticks in the 'Include in requirements calculation' section.

| Preferences > Manufacturing > Requirements Planning | |
|---|---|
| Default period for reports and queries | Weeks |
| Number of days | 1 |
| First day of week | Monday |
| Include confirmed jobs in job review | <input checked="" type="checkbox"/> |
| Browse stock codes with requirements | <input type="checkbox"/> |
| Days after stock arrival it can be used | 2 |
| Resource planning | |
| Number of decimals in resource quantity | 6 |
| Default time period length (days) | 7 |
| Amendment journals required | |
| Forecast amendment journals | <input type="checkbox"/> |
| Build schedule amendment journals | <input type="checkbox"/> |
| Include in requirements calculation | |
| Stock on hand | <input checked="" type="checkbox"/> |
| Safety stock | <input checked="" type="checkbox"/> |
| Purchase orders | <input checked="" type="checkbox"/> |
| Confirmed jobs | <input checked="" type="checkbox"/> |
| Unconfirmed jobs | <input checked="" type="checkbox"/> |
| Jobs on hold | <input checked="" type="checkbox"/> |
| Forecasts | <input checked="" type="checkbox"/> |
| Sales orders | <input checked="" type="checkbox"/> |
| Quotations | <input checked="" type="checkbox"/> |
| Build schedule | <input type="checkbox"/> |
| Forward orders | <input type="checkbox"/> |
| Orders in suspense | <input type="checkbox"/> |
| Supply chain transfer orders | <input checked="" type="checkbox"/> |
| Goods in transit | <input checked="" type="checkbox"/> |
| Non-MPS items | |
| Apply gross requirement rules I and S | <input checked="" type="checkbox"/> |
| Apply gross requirement rules H and C | <input checked="" type="checkbox"/> |
| Period length for H and C | 1 |
| Apply demand time fence rule | <input checked="" type="checkbox"/> |
| Planning | |
| Apply safety stock time fence rule | None |
| Override batching rules with rule A | Do not override any items' batching rules |

7

Is your **inventory master data** correct in SYSPRO? This includes important fields related to the inventory master data, such as Part Category, Warehouse to Use, Supplier, Lead Time, Dock to Stock, Batching Rule, Fixed Time Period and EBQ (both related to some Batching Rules), MPS and Non-MPS Items, Gross Requirements Rule, and Kit Types. Make sure you understand all of these settings and why you have chosen them. For example, if your company has sales orders for goods, and also forecasts these same goods, how will the system predict the demand? Using the correct Gross Requirement Rule could have a dramatic effect on what suggestions the MRP system makes.

8

Ensure that the **correct warehouses** are selected in the MRP Setup Preferences program. Make sure that only the warehouses that are used for saleable stock and planning purposes are included. As an example, perhaps exclude warehouses for Rejected or Quarantine Materials. Have you consolidated warehouses to provide a complete picture of stock? And do you understand the difference between doing the consolidation or not? Consolidating warehouse data can be very useful but in certain circumstances (like Transfer Supplied warehouses set up for distribution hubs) suggested Supply Chain Transfers (SCTs) will not be generated by the system to replenish the warehouses.

Preferences > Manufacturing > Requirements Planning

| | |
|--|---|
| Period length for H and C | 1 |
| Apply demand time fence rule | <input checked="" type="checkbox"/> |
| Planning | |
| Apply safety stock time fence rule | None |
| Override batching rules with rule A | Do not override any items' batching rules |
| Schedule specific supply | <input type="checkbox"/> |
| Include all stock codes in requirements | <input checked="" type="checkbox"/> |
| Reduce quantity on hand by allocated | <input checked="" type="checkbox"/> |
| Make provision for lot expiry | <input type="checkbox"/> |
| Allow additional requisition users | <input checked="" type="checkbox"/> |
| Suppress MRP ordering | <input type="checkbox"/> |
| Allow MRP to reschedule goods in transit | <input checked="" type="checkbox"/> |
| Apply current structures to past due job | <input type="checkbox"/> |
| Quotations with probability greater than | 7 |
| Scheduling | |
| Assign higher date priority | Start date |
| Assign higher priority | Suggested |
| Finite schedule generated queue time | 20 |
| Warehouse selection | |
| Warehouse option | All |
| From warehouse | |
| To warehouse | |
| List | |
| Consolidate selected warehouses | <input type="checkbox"/> |
| Requisition users | |
| Requisition users selection | All |
| Requisition user option | C |
| Forecast depletion | |
| Deplete forecasts | <input checked="" type="checkbox"/> |
| Forecast depletion period type | None |
| Forecast period length in days | 0 |
| Allow past due forecasts to be depleted | Yes |
| Forecast days prior to ship date | 0 |
| Deplete forecasts by customer | <input type="checkbox"/> |
| Forecasts outside of depletion period | <input type="checkbox"/> |
| Exclude forecast depletion for | |
| Gross requirements rule A | <input checked="" type="checkbox"/> |
| Gross requirements rule I | <input type="checkbox"/> |
| Non-MPS items | <input type="checkbox"/> |
| Non-stocked items | <input type="checkbox"/> |

Make provision for lot expiry in requirement calculation



9

If you're a manufacturer of goods, are all your **WIP jobs** in the system up to date and complete? If not, the system may still think these jobs are upcoming and will not suggest new ones. Do you keep track of what jobs still have to be completed? How do you create jobs, from MRP Job Review, Back Order Review or manually? There are efficient ways of seeing what jobs should be created by when, in the MRP Job Review screen. In addition, this is where jobs can be auto created. Also, be sure to check jobs that the system suggests you cancel; it's important to establish why it's making the suggestion.

10

The settings on your **inventory warehouse records** play a major role in how the MRP system works. These include Transfer Supplied items, Safety Stock, Minimum and Maximum quantities and Order Policy Details (both related to some batching rules). Ensure that you understand all these settings and why you have selected them. Remember that Safety Stock is not linked to any batching rules and so becomes its own 'demand generator' in the MRP system. Be careful when using this field, especially when in conjunction with batching rules that make use of the minimum and maximum quantities, as this may result in overstocks.

| Warehouse Maintenance for Stock Code: A100 | |
|--|-------------------------------------|
| Stock code | A100 |
| Stock code description | 15 Speed Mountain Bike Boys |
| Warehouse | E |
| Warehouse description | Eastern Warehouse |
| Warehouse list | Define list |
| Cost multiplier | 1.000000 |
| Cost | 100.00000 |
| Minimum quantity | 0.000 |
| Maximum quantity | 0.000 |
| Safety stock level | 0.000 |
| Re-order quantity | 0.000 |
| Pallet quantity | 0.000 |
| Default bin location | |
| User defined 1 | |
| User defined 2 | |
| User defined 3 | |
| Order policy details | |
| Order policy | C - Cover shortages |
| Major order multiple | 0.000 |
| Minor order multiple | 0.000 |
| Minimum order quantity | 0.000 |
| Maximum order quantity | 0.000 |
| Fixed time period | 1 |
| Transfer supplied details | |
| Transfer supplied item | <input checked="" type="checkbox"/> |
| Source warehouse | N |
| Transfer lead time (days) | 4 |
| Transfer dock to stock (days) | 0 |
| Use warehouse buying rule | <input type="checkbox"/> |
| Replenishment rule | A - Lot for lot |
| Fixed time period (days) | 0 |
| Transfer cost multiplier | 1.000000 |

For assistance with these topics covered, please contact
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Turning SYSPRO MRP problems into profits