

Rootstock Software®

# Production Engineering



Rootstock Software® provides the breadth and depth of solutions that today's discrete manufacturers need to operate and grow their business. Whether a small operation with five users, or a large organization with many sites and hundreds of users, Rootstock offers a solution for all sizes and types of discrete manufacturers and supports the manufacturing system requirements of Build to Order, Build to Stock and even Engineer to Order Manufacturers – whether standard or actual cost in both a single and multi plant environment.

**Rootstock Production Engineering** includes the following capabilities: Item Master Maintenance, Bill of Material Maintenance, Item and Bill of Material Revision Control, and Engineering Change Control.

Item Characteristics are maintained. Key information such as Item Description, the Commodity Code, Responsible Engineer, Lot or Serial Tracking within Inventory, Part Status and Part Type is recorded. Additionally Inventory attributes such as lead times and MRP policies and purchasing policies such as vendor lead time and Responsible Buyer are noted as well.

Of importance is the identification as to how the item is 'sourced'. Rootstock supports manufactured, purchased and subcontract sourcing. The assignment of the Commodity Code is of key consideration because the item can inherit many of the Commodity Code attributes thus reducing users having to enter every field on the Item Master.

Netsuite has many item classifications. The Netsuite Item Classifications 'Inventory', 'Lot' and 'Serial' are maintained within the Rootstock Item Master Maintenance. The Netsuite Item Classification of 'Assembly' is not used and this capability is provided by the Rootstock Bill of Material.

## Bill of Material Maintenance

The Manufacturing or Subcontract Assemblies are identified within Bill of Material Maintenance. Each Component contains a separate record and standard information associating the component to the assembly can be kept on the Rootstock Bill of

## Item Master Maintenance

Within Item Master Maintenance the Direct Material

Material. Required information such as the quantity per assembly and add and delete effectivity data is maintenance on each component link. Required Add and Delete effectivity information includes status and date with optional information including revision and engineering change order. Additional capabilities includes a scrap factor, 'issue to' work centers on the Shop Floor and lead time offset for planning purposes.

Bills of Material are also used in a Standard Cost Rollup to compute the material cost and the subcontract material cost of the purchased (or subcontract purchased) item.

### *Item Revision Maintenance*

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All items are added with a revision (zero). If Revision Control is desired, then the user can maintain status (planned, released, implemented) as well as effectivity date which can facilitate the setting of effectivity status and date information on multiple bill of material component links. Additional revisions to the part (drawing changes, bill of material structures and even routing changes) can be maintained by the user and referenced to the appropriate bill of material and/or routing operations.

Another capability of maintaining an item revision is that a work order's demands can be generated by specifying the appropriate revision on the work order. This enables the system to copy the correct bill of material in generating the work order's demand records.

### *Engineering Change Control*

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Engineering Change Control is the process that 'manages' the related items' revisions that are associated with an Engineering Change Order. Revision Control denotes the change and Engineering Change Control denotes the process that manages the revisions to the bill of material and the routings. Since the management of item revisions can be accomplished by the Engineering Change Control process, Engineering Change Control therefore enforces discipline and management control over modifications to bill of materials and shop floor routings based on revision control.

Component and operation changes can be tracked through an authorization and approval process and are logged into an ECO history database. MRP and Work Order Bill of Material Explode will retrieve component records based on correlating the work order's scheduled pick date to the add and delete

effectivity dates associated with a revision. Work Order Routing Operation Extract will extract those Routing's operations using similar add and delete effectivity comparisons.

All Rootstock programs that use bill of materials and routing master records to "explode" or "extract" components and operations contain ECO capabilities. Material Requirements Planning explode bill of materials to create the component demands for each work order and subcontract PO requisition. These configurations are based on the scheduled pick date of the orders compared with the ECO effective dates on the bills.

### *About Rootstock Software®*

Rootstock Software® is the leading Software as a Service (SaaS) provider of manufacturing enterprise software serving discrete manufacturers in the mid-market. Rootstock Software® was launched in 2008 in response to the growing need for a SaaS solution for mid-market manufacturers to cut costs, improve processes, and drive revenues. Rootstock is a premier partner with NetSuite Inc, a leading vendor of on-demand, integrated business management software suites for the mid-market enterprise and divisions of large companies. Rootstock and NetSuite deliver these critical manufacturing capabilities to the underserved mid-market with minimal IT infrastructure investment. For more information, please visit <http://www.rootstocksoftware.com>.