

Rootstock Software®

Shop Floor Control



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.

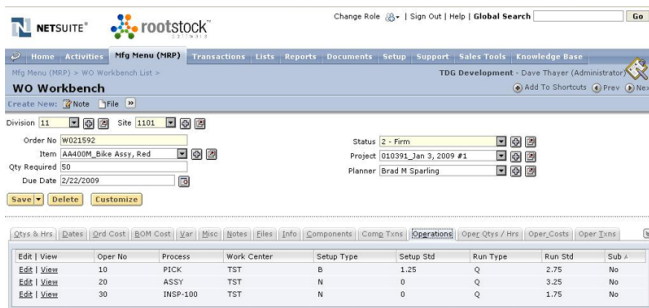
Rootstock Shop Floor Control manages the life cycle of the work order and the routing that is used as a basis for defining the steps or processes that are required in the assembly and manufacture of the item on the shop floor. Scheduling and Capacity Requirements Planning is contained in a separate module.

Rootstock Shop Floor module capabilities include: Routing Maintenance, Work Order Add & BOM Explosion, Work Order Firming, Work Order Release & Operation Extract, Work Order Pick, Work Order Operation Time Booking, Work Order Operation Quantity Recordings, Work Order Receipt & Backflush, and Work Order Cost.

Routing Maintenance

Before defining the Routing, the labor grades, departments, work centers, machine master files and processes must be defined by the manufacturing engineer (and cost accountant when denoting the labor grades and departmental standard labor and overhead rates). Those master files having been defined, a Routing can be established for each item.

The Routing will be comprised of a series of steps (i.e. operations). Each operation will denote the work center, machine (if appropriate), labor grade and process – and the time it takes to do a unit or a batch of work. These times can be setup, or labor assembly or machine time. An operation can also be identified as an 'outside operation' where the assembly is sent to a vendor for additional processing. For those organizations that want to control the operation's effectivities by item revision or by change order, this capability is also provided.



Oper No	Process	Work Center	Setup Type	Setup Std	Run Type	Run Std	Sub
10	PICK	TST	B	1.25	Q	2.75	No
20	ASSY	TST	N	0	Q	3.25	No
30	INSP-100	TST	N	0	Q	1.75	No

The Routing can be defined at an item grouping level so that one isn't required to develop a routing for each item and still gain the benefit of shop floor operation tracking for a given work order. Routings are also used in a Standard Cost Rollup to compute the labor, direct labor overhead, fringe overhead, machine overhead and subcontract labor cost components of the standard cost of the manufactured item.

Work Order Add & BOM Explosion

Typically the work order is added by MRP and then firmed by the material planner. The capability however exists to manually add the Work Order in the Work Order Work Bench at a 'firmed' status. The user only needs to denote the Item, the Project (if project control is active), the Due Date and the Quantity (and if this is a special type of work order termed 'rework order').

The Work Order Work Bench enables the user to explode the Bill of Material. This process will use the derived schedule pick date and retrieve the effective bill of material and create work order demands, one for each component. The work order demand quantity required is calculated by multiplying the bill of material quantity per by the work order supply quantity required. There is additional capability to get bill of material 'override' information that will denote which work center components can be issued to, so that the work order demand could be added with work center 'issued to' information. (Operation Extract – below will link that work order demand to a work order operation).

Work Order Firm

Planned work orders generated by MRP can be firmed by the material planner. This action will insure that MRP will not delete this work order in the next planning run.

Work Order Release & Operation Extract

Prior to picking the material from stock, the work order is 'released' which is an indication that Production Control now supervises the management of the work order. As part of the work order release process, the work order operation extract will create the work order operations from the effective routing. If there are any work order component demands that designate that components are to be issued to the work center, as part of this extract the work order component demand will be linked to a work order operation.

Work Order Pick

The next step in the process is the Pick Process of components from stores. Production Control will denote that the work order is to be picked and a work order pick list for all components that are not backflushed will be made available to the store room for picking and sending to the shop floor. Stores will also record the quantity issued.

Work Order Time Booking

The direct laborer can record the times spent on an operation. These times are recorded in terms of hours (or fractions of hours). Machine times can also be recorded where appropriate.

Work Order Quantity Recordings

The quantity completed and moved to the next operation can be recorded. Based on the routing operation indicators, one transaction could be used to record both a 'complete and move' or one transaction can be used to record the 'complete' and a second to record the 'move'.

Work Order Receipt & Backflush

The quantity that is completed at the last operation and is received into inventory is the Work Order Receipt. For those work order component demands identified as backflush, the appropriate 'work order demand issue' will automatically be done as part of the work order receipt.

Work Order Cost

The work order contains all of the costs associated with material component issues and labor and machine time recordings. In a standard cost environment, the work order close process will compute the work order variance.

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>.