

Machine Module

The Machine Module is where work centers are defined. Work centers are used for capacity requirements planning and detailed scheduling. The module is also where information on dates the facility is closed for production is kept and where maintenance activities and downtime for the work centers is supported.

A work center can be defined as a specific production area consisting of one or more people and/or machines that can be considered as one unit for purposes of capacity planning. It may also be an outside vendor or even an area that is used for activities not requiring an actual machine or person, such as paint drying.

Work centers are assigned on routes to each operation step to detail where the work is to be performed. Each work center has a description and the days and times it is available for production. In the event the work center is a machine, a serial number can be assigned to help track usage and repairs. Since work centers may vary in their efficiency, a percentage can be used to measure that efficiency. This percentage is factored into scheduling calculations. Work centers can be designated as having “finite” or “infinite” capacity and a list of acceptable alternate work centers is maintained where both play a part in scheduling. An overhead rate per hour can be assigned whenever machine operation costs can be identified for a work center.

An ongoing activity of manufacturing is performing preventative maintenance on machines and tools. This includes periodic certification of equipment to make sure they meet standards. For example, certification could include checking that a table for a piece of equipment is level or that drill bits are sharpened on a regular basis.

The Machine Module supports the creation of maintenance routines, complete with routes and bills of material. Periodic maintenance work orders can then be automatically created and included in ALERE’s normal materials planning and shop floor scheduling processes. Maintenance work orders can be manually initiated and released to handle unplanned repairs. The resulting maintenance records from work orders allows analysis to be done of the problems, the percent of uptime machine availability, and the costs involved in performing the work.

	Starting	Available
Sunday	0	0
Monday	7	8
Tuesday	7	8
Wednesday	7	8
Thursday	7	8
Friday	7	8
Saturday	0	0

Time	Date	Day
Downtime 10 Hours	07/23/2012	Monday
Estimated 0 Hours	07/26/2012	Thursday
Uptime 8 Hours	07/26/2012	Thursday