



Sage Production Management Design and Structures Overview

Production Management

Production Management (PM) was developed for Sage 100cloud as the replacement for the legacy Work Order module. The underlying design is based on the original JobOps Job Management software, now renamed Operations Management, the full function version. The primary difference is that PM provides only for make to stock production.

Underlying Production Management Design and Structures

It is important to provide details about the basic structures, or building blocks, of Sage Production Management (PM) and how these integrate with the standard Sage 100cloud functions. This document will assist in understanding how these relate to the current systems, procedures, and workflows.

Work Ticket

The work ticket is the first task for the production function. The work ticket contains all the information required to build the item. It may also be referred to as a work order, traveler, router, or job ticket. The work ticket includes a header step 000 and up to 999 additional steps. These relate to tasks or operations. The work ticket and step structure contain labor and parts budgets, scheduling data, labor required and used, parts detail required and used, and status.

Work Ticket Step

Work ticket steps represent tasks required to build the parent item and may be referred to as activity centers, labor classes, tasks, routings, processes, phases, or operations. These are where all required parts and quantities are resident, and costs are incurred when parts are used. When labor is entered, it is shown in detail and adds to the cost of the work ticket.

Work Ticket Template

Work ticket templates are predefined formats used to create work tickets. For standard build items, these templates may include the required steps, as well as the required parts. For custom jobs and parts, the template defines the basic operational steps, and the parts may be added or imported as the requirements are defined.

Work Ticket Class

A work ticket class is a job type that defines how an item is to be built and defines coding for various postings. Specific parameters include work ticket creation parameters (defaulted to make to stock and line-based work tickets for PM), scheduling parameters, invoicing rules, accounting posting rules, user-defined fields, warranty/serial number data, and overhead calculations. There is no limit to the number of work ticket classes that may be created.

Activity Code

Activity codes primarily relate to labor in terms of standard costs, burden calculations and billable rates, when applicable. The codes may also be applied to machines and other entities, such as subcontractors. Each step has an activity code assigned, but transactions, such as labor hours may have many activity codes assigned that are different than the step the detail resides on.

Work Centers

Work Centers allow defining the areas within a production facility where manufacturing functions are performed. Work Centers may be different locations, different warehouses, and/or different areas within a given production floor. They may also consist of different employees or machines. Along with Activity Codes, they allow the creation of groupings of similar activities in a single work center or multiple work centers. By doing this, different rates may be applied to activities performed in one or more work center. An example would be several machines located in one work center with activity codes assigned to each machine.

Sales Order

Although a Work Ticket may be designated as “Make For a Sales Order”, this is informational only with no direct connection in PM. All completed quantities on Work Tickets will be received into inventory and not issued to the sales order.

Purchase Order

In addition to the standard function of purchase orders, these may be linked specifically to work tickets and their steps. When this is done, the receipt of goods posts the item quantity directly to the work ticket and WIP without going through inventory. Linking of purchase orders may be performed from the purchase order module, from the work ticket or through inventory replenishment planning. They may only be unlinked from the purchase order module.

Inventory Requirements Planning (IRP)

IRP is the MRP function within Production Management. There are two primary purposes:

1. Purchasing for inventory or work ticket requirements based on inventory level parameters or items required on work tickets. Purchase orders that are created may be specific to inventory or a single work ticket or consolidated into a single purchase order for multiple requirements – for stock and/or work tickets. The receipt of goods for these items will correctly allocate quantities to each requirement.

2. Creation of production work tickets or items on work tickets that are defined as make to order or subassemblies. Subassemblies are closed to the parent work ticket that created the work ticket.

For multi-level bills of materials, lower level steps will be identified by the IRP and subassembly work tickets created that eventually will be fulfilled and closed to the bill level above it.

Bill of Materials

When the Bill of Materials module is integrated with Production Management, work tickets may be populated with components from bills using work ticket templates or the import parts feature in work ticket entry. Multi-level bills generate parts at the highest level. Each item code on a template step may have the explode BOM check box field set to checked to explode the parts onto the step.

Subsequent levels on a bill or items that are subassemblies will be identified in the IRP and subassembly work tickets created with parts exploded onto the step.

Parts on Work Tickets

Parts on work tickets are essentially a collection of required parts assigned to steps based on the activity code assigned to that step. Because parts may be imported from a bill of material or the explode BOM is checked on for a bill on a template, there is no actual bill of material resident on a work ticket step, just the parts from that bill.

Parts may be individually included on steps of a template or entered directly to those steps once a work ticket has been created. Parts may be imported to work ticket steps from three sources:

1. Work Ticket Template
2. File Import
3. Bill of Material

Parts may be issued directly on work tickets or entered using Work Ticket Transaction Entry.

Labor Entry

Labor Entry is the primary data entry point for workers and supervisors on the production floor. This may be entered using four transaction types:

1. Labor - single employee time entry
2. Miscellaneous - non-work ticket production time
3. Crews - time entry by crew
4. Cost: total hours/cost entry without specific employees