

Wonderware Operations Software 3.5

Improve Production Consistency, Visibility and Agility

Wonderware Operations Software provides a configurable and highly scalable Manufacturing Execution System (MES) that is integrated with the Wonderware ArchestrA-based System Platform and InTouch HMI for unsurpassed connectivity and flexibility.

Using real-time production information decision makers and operators can help;

- **Improve inventory velocity** through increased visibility into actual material consumptions, movements and inventory levels.
- **Reduce production order lead time** for rapid responses to changes in demand by dynamic allocation of production assets and more granular production planning horizon.
- **Reduce time-to-volume for new product introductions** with quick 'change-overs' between products and lines.
- **Improve compliance and governance** through complete electronic system records for 'as planned' and 'as built' information.
- **Improve predictability of order fulfillment** by monitoring accurate 'planned vs. actual' production quantities and improved consistency in operational activities.

The Wonderware MES system is highly configurable and can be applied to essentially any manufacturing or process industry. A rich selection of .NET data display controls enables broad flexibility in how information is presented to plant personnel – from the industry's premier HMI solution, InTouch software, to web-based tools or any other .NET container application.



Improve Manufacturing Agility – Turn Opportunities into Profits

In today's fast moving markets it is vital to be able to capitalize on opportunities when they arise. Having agility in your manufacturing processes is key but improving agility requires the ability to precisely understand your manufacturing processes and what is going on right now in your production facility. Wonderware Operations Software gives you the real-time production information you need to increase agility and provide this information at the right time to the people that need to know it.

Using information from Wonderware Operations Software, your manufacturing team can study – with hard data – what your process capabilities truly are and can help determine ways to improve them so you are in a better position to change product runs on a dime.

More Consistent Production Execution Reduces Production Errors

A key challenge for many manufacturers is how to execute your production runs more consistently. It starts with consistent interpretation of operating guidelines and procedures – everyone should be reading the same script. Next, centralized bill of materials and material specifications also help eliminate variation in production execution. Lastly, detailed user roles with standardized user privileges help ensure that the right people are involved.

Wonderware Operations Software provides centralized configuration and maintenance of manufacturing steps and procedures, bills of materials and material specifications. The Wonderware System helps ensure more consistent production results due to a template driven approach. Base templates can be created by a central engineering group then reused by plant engineers to quickly build a production process.

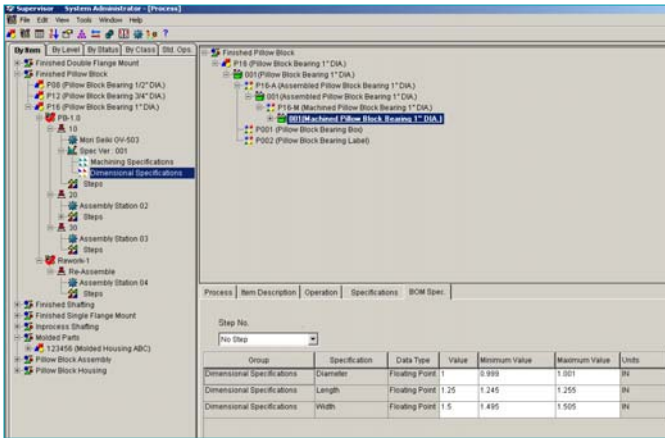


Figure 1: Electronic Bill of Materials provides key production information to operators and plant personnel, helping ensure more consistent production results.

Complete Track & Trace Capabilities Provides Immediate Visibility

Wonderware Operations Software provides real-time visibility into the full range of the production process from production planning and setup to actual execution of operational activities. Production managers and planners can build and view material specifications and grades, bills of materials, manufacturing procedures or steps; define production routing; define shifts; download production schedules from the ERP system; and define production entities such as plant, cell, warehouse, line or machine.

During production you can track real-time and historical material and labor consumption, lots, WIP inventory, waste, yield and finished good totals along with other important production events. A complete genealogy tree for all of your production activities can be built and exposed to operators and other plant personnel. This is particularly important during a product recall or if a serious production problem occurs.

Wonderware provides visibility to all of your production information so you can focus on operating your manufacturing facility in the most efficient and productive manner possible using information you can trust.

Develop and Leverage Best Practices

To sustain top performance plant managers need to be able to develop and implement best operating practices. Timely and detailed production information delivered by the Wonderware Operations Software solution allows production teams to measure the performance of their production processes and expose what works best. Armed with this information plant managers can steer their team toward more productive, best operating practices and drive higher levels of plant performance.

Wonderware Operations Software allows managers and engineers to view and compare the production processes used across their plant or other sister plants to determine what combination of materials, labor, equipment and procedures deliver the best results. There is no guessing, just detailed production information that can be leveraged to develop best manufacturing practices. Wonderware also delivers a template based system that makes capturing, developing and deploying best practices easier than ever through ArchestrA-based products.

Open Data Source Connectivity, Seeing All of Your Plant Data

Wonderware has been a leader in open data source connectivity since its inception 20 years ago. This broad connectivity to your plant data provides the real-time data collection that helps ensure that you have all of the production data you need to better visualize your production processes and how best to operate them.

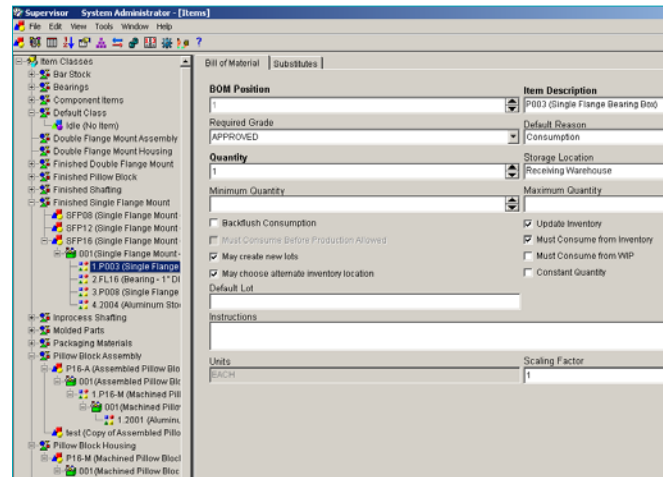
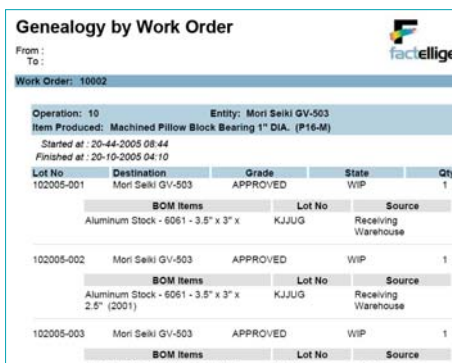


Figure 2: Specifications allow detailed material specifications to be documented and used by operations personnel.

Web-based Production Reporting Empowers the Entire Plant

The entire manufacturing facility operates better when plant personnel at all levels have real-time production information at their fingertips. Wonderware Operations Software is integrated with Wonderware InTouch and Wonderware System Platform so the complete array of production information can be captured and presented to operations personnel and others via intuitive user interface screens. Wonderware Information Server also is integrated with Wonderware Operations Software so web-based production reports are available to anyone with Internet access and a need to know. Information Server can be tailored to individual information needs so each user can see only the plant information they need to work at a higher level.



The screenshot shows a web-based report titled "Genealogy by Work Order" from factelligence. It displays details for a work order (10002) and an operation (10) for a "Machined Pillow Block Bearing 1" DIA. (P16-M)". The report includes a table of BOM items for three lots (102005-001, 102005-002, 102005-003), each with columns for Lot No, Destination, Grade, State, and Qty. The BOM items listed are Aluminum Stock - 6061 - 3.5" x 3" x 2.5" (2001).

Figure 3: A wide range of web-based reports are available "out of the box" with Wonderware Operations Software.

Protect Your Investment

Wonderware Operations Software is fully integrated with Wonderware's System Platform and InTouch Software, enabling you to implement a complete MES solution built on a single software platform. This means that your investment in plant software solutions today is protected as your plant information needs evolve.

Scalable to Fit your MES Needs, Now and into the Future

Wonderware offers two "editions" of Operations Software: Standard and Premium. Each edition provides an incremental level of MES functionality. This allows manufacturers to start at a level comfortable to them and then grow their functional capabilities over time, as their requirements evolve.

Standard Edition provides a first level of MES functionality including: WIP tracking; bill of materials; material definition/specifications; material consumption; lot tracking; and support document linking along with traceability and genealogy reporting and analysis.

Premium Edition provides the complete scope of MES capabilities including all features of Standard Edition plus step/procedure definition, inventory tracking, labor tracking, and certifications.

KEY PRODUCT CAPABILITIES

Operations Personnel

- Electronic production order management with ability to perform prioritization/sequencing
- Immediate access to real time status of current inventories
- Dynamic allocation of production assets based on actual availability of material, equipment or personnel
- Efficient management of labor resources and certifications, avoiding manual data entry and eliminating paperwork
- Safe operations with enforcement of SOPs, according to environmental, health and safety standards
- Accurate equipment setup according to site-specific product specifications
- Central administration of process and product parameters
- Consistent interpretation of operating guidelines and procedures
- Complete historical records for documentation of products and processes
- System of record for 'As-Built'

IT Personnel

Easily upgrade from 'Standard' to 'Premium' – a new license enables increased capabilities – using the same software.

Make it much easier, less time-consuming and less costly to manage MES applications in large scale deployments by:

- Permitting greater flexibility in hardware purchasing decisions
- Reducing time spent managing the application environment
- Reducing the effort and cost to establish and maintain the plant IT infrastructure
- Reducing the need for highly specialized IT skills and requisite training costs
- Accessing award winning technical support and training resources
- Accommodating special requirements through extensibility and scalability

Engineering Personnel

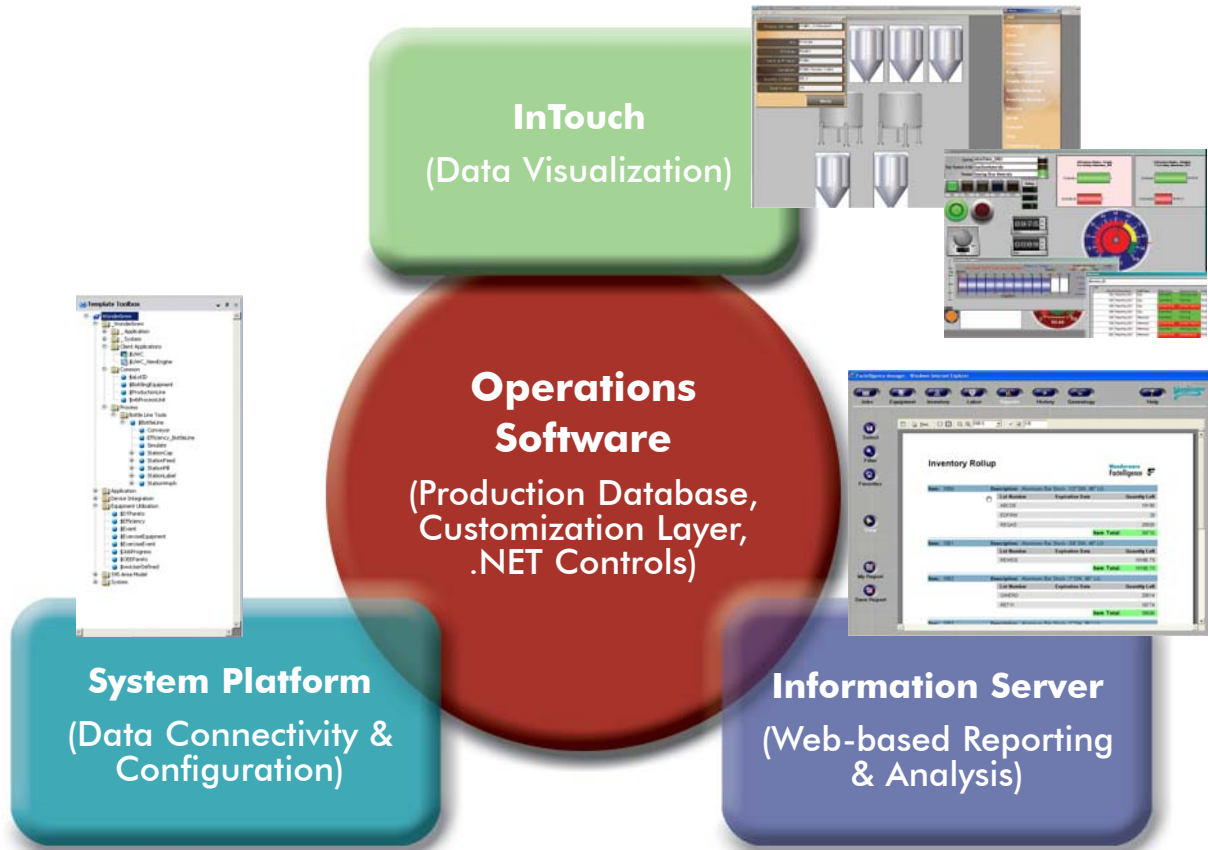
- Common services for security, availability, data collection, data communication and high availability
- Unparalleled device connectivity
- Support of corporate production standards
- Built-in system extensibility
- Reuse of engineering from project to project, with reusable MES applications
- Combine 'production history' with 'process history' for complete genealogy
- Real-time contextualization of process and product-matching process model with production and material models

SOLUTION ARCHITECTURE

The Wonderware MES solution leverages;

- Wonderware InTouch, the World's leading HMI application
- Wonderware System Platform, the industry's most powerful application development environment
- Wonderware Operations Software (formerly the CIMNET Factelligence MES application)
- Wonderware Information Server, the Wonderware web solution

The Wonderware MES solution streamlines configuration and maintenance, offers broad scalability and extensibility, provides dramatic data visualization and powerful web-based reporting and analysis.



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Contact Wonderware or your local Wonderware Distributor for more information about industrial automation and information software solutions.

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