



Crowe Metals Accelerator

For Microsoft Dynamics 365™
for Finance and Operations Platform

Fully integrated and highly flexible, the Crowe Metals Accelerator is an industry-specific, scalable, and robust ERP solution specifically designed to meet the unique needs of the metals industry. Crowe Metals Accelerator has enhanced many business processes in Dynamics 365 software to address the specific challenges metals companies face. Building on the strength and adaptability of the Microsoft Dynamics 365 platform (formerly known as Microsoft Dynamics™ AX), the Crowe Metals Accelerator can help metals companies of all types and sizes manage business processes more efficiently, allocate resources more effectively, and make smart decisions that add lasting value.

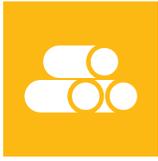
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Product Information Management

The product information management module in Dynamics 365 for Finance and Operations software targets the creation and maintenance of an enterprise products repository. It can support larger organizations with a centralized, structured approach for creating and maintaining core master data. Smaller organizations that require a more decentralized approach can create and maintain their products while they are automatically added to the shared products repository.

Product Attributes

- Allow advanced filter, sort, and query capability by attribute
- Manage product attributes as numeric values, in both U.S. and metric units
- Provide visibility on key forms throughout the application, including item lookup and on-hand inventory forms
- Automatically create the product name and description based on an item's product attribute values and configurable concatenation sequences

Product Dimensions and Variants

- Manage product dimensions and variants as numeric values
- Automatically create new product dimensions when a new value is entered on an order line

Specifications

- Manage sales, purchasing, and production notes and specifications
- Allow specifications to be defined by product, customer/product, or vendor/product combination

Product Creation

- Automatically convert decimal values to fractional values during product creation
- Product copy allows specific data elements to be copied from an existing product to a new, similar product
- Detect duplicate items across the entire enterprise
- Allow ordering and production of random-size items, to accommodate variation in product sizes

Units of Measure and Conversions

- Dynamic units of measure allow width and length product dimensions to be factored into unit conversion routines
- Secondary units of measure allow inventory quantities to be viewed in an alternative unit of measure
- Identify nominal, min, and max gauge values
- Provide visibility to density by commodity and grade/alloy
- Predefined formulas automatically perform intercompany unit of measure conversions

Notes

- Standard notes can be defined by product and/or external product number
- Notes can be set to default on an order based on the customer/vendor and product combination
- Notes can be automatically passed from sales order to production order, purchase order, shipping documentation, or numerous other forms in the application



Sales and Customer Service

The sales and customer service features can provide integrated customer management, sales, and marketing capabilities to maximize the effectiveness and speed of sales representatives, which can lead to increased company sales. By organizing vital data points into easy-to-navigate forms, sales representatives can have faster access to customer, pricing, and inventory information, helping them to negotiate deals more quickly.

Order Entry

- The customer service workbench provides salespeople with relevant information about a customer, including open orders, order history, quotes, sales activity, pricing agreements, shipments, incoming customer supply, returns, and more
- Sales order and sales quotation fact boxes display key order entry details like recent activity, customer balances, and line fulfillment
- Allows multicustomer sales agreements
- Advanced, configurable product search on the sales order and sales quotation forms allows quick, flexible, and repeatable order entry
- Enter order quantities in convertible units of measure and the system automatically converts quantities (for example, inches to pounds for long product)

Pricing

- Assign a pricing unit of measure, allowing an indirect relationship between sales and pricing unit of measure (for example, sell by the foot but price by the pound)
- Update prices and forecasts based on market fluctuations
- Update provisionally priced contract releases with a final price based on the agreement in place with a customer
- Segment the sales price based on additional charges such as material, freight, processing, or others
- Price and/or invoice by actual or theoretical weight
- Manage surcharges (for example, alloy, fuel, freight, handling, and scrap)

Automatic T&C and Certification Generation

- Automatically generate terms and conditions to accompany sales acknowledgments and sales quotations
- Automatically generate material certification (in-house or external) at time of shipment or invoice

Customer Specifications

- Define and manage specifications for sales, purchasing, and production
- Define acceptable tolerances for attributes (gauge, width, length, ID/OD, coil weight, etc.)
 - Define default tolerances by item and product
 - Define default tolerances per customer and item/product combination
 - Override defaults and define new specifications on individual orders (such as sales orders or purchase orders)
- Merge multiple specification sets (such as ASTM specifications and regulatory requirements) and, in cases of duplication, retain only the tightest tolerance

Notes

- Quickly add any type of note to a sales quotation or sales order, and communicate it internally or externally
- Add notes to the sales quotation, sales order, and sales agreement headers and lines
- Set up notes to be automatically copied based on predefined rules

Order Promising

- View both the available physical inventory (item) and available physical inventory by specification (item plus dimension) for a sales quotation or sales order line by the order unit of measure, the inventory unit of measure, and the secondary unit of measure
- Visual display (green checkmark or red "X") on sales order and sales quotation line to validate if there is sufficient inventory to fulfill the order line
- Single form to manage tag availability, allocation, and reservations
- Create cutting or slitting orders directly from the sales order

Kitting

- Explosion of kit components into picking, fabrication, and purchasing requirements
- Price at the kit or component level
- Support for multilevel product structures

Quoting

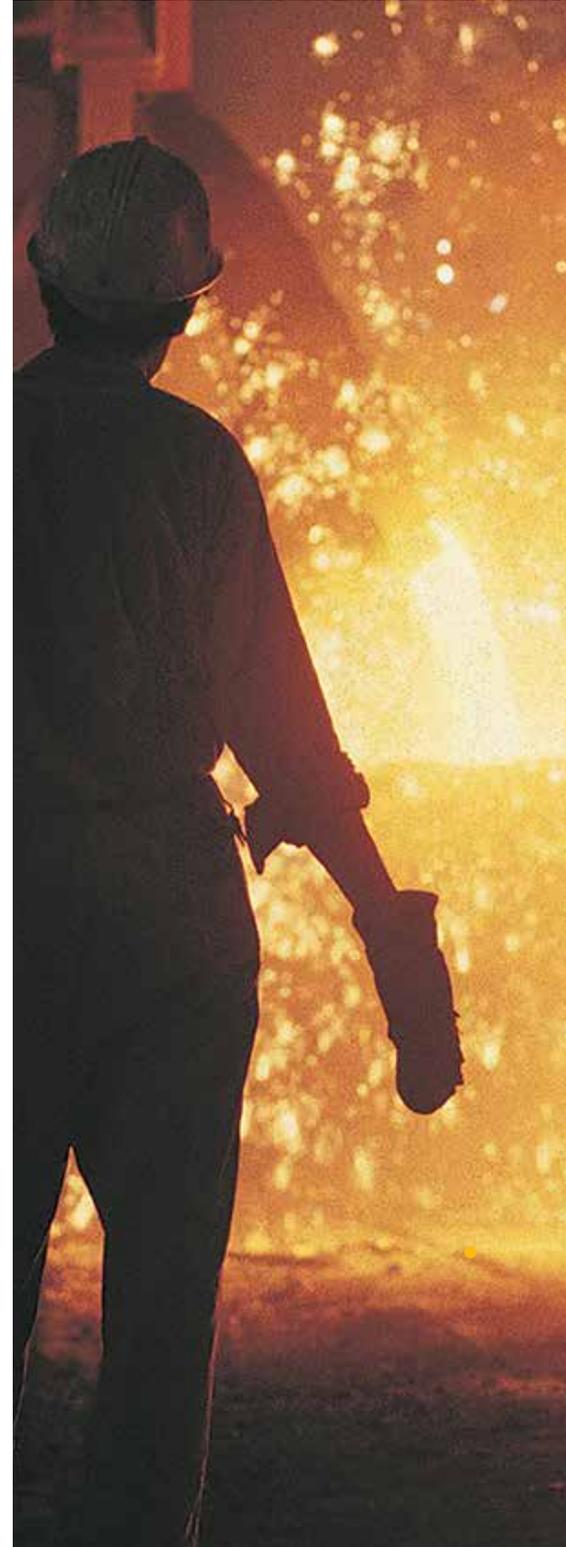
- Create an RFQ directly from a sales quotation
- Easily create a sales order directly from the sales quotation and maintain the link between the two

Toll Processing

- Receive and track customer-owned inventory at zero value and segregate for reporting purposes
- Track scrap loss and recoverable value during toll processing
- Capture estimated scrap value at time of order entry or invoicing and calculate scrap credit, if exceeded
- Manage common tolling EDI transactions including 857, 846, 867, and 870 messages

Product Configuration

- Ready-to-populate models for common service-center processes such as burning and cut-to-length
- Create product structures for customer-specific shapes and cut sizes
- Extensible to include fabricated components, rolling, extruding, drawing, etc.





Procurement and Sourcing

Procurement and sourcing can provide a platform to define and maintain companywide and vendor-specific purchasing policies and effectively manage a steady supply of materials for a business. Improved forecasting capabilities and streamlined ordering processes can allow procurement staff to more effectively carry out day-to-day purchasing operations while reducing inventory and overhead. Stored purchase agreements combined with ratings of vendor quality and timeliness can provide procurement managers with key data points that can lead to a more stable and dependable supply chain.

Vendor Management

- The procurement workbench provides a single source of vendor and purchasing information such as vendor master data, purchase orders, requests for quotations, purchase agreements, trade agreements, activities, contacts, notes, open invoices, and nonconformances
- Multiple purchase order fact boxes display critical order details such as secondary units of measure, order totals, line fulfillment, and pre-reserved demand
- Easily facilitate a buyout scenario by linking the sales quotation and RFQ processes

Unit of Measure Flexibility

- Dynamic unit of measure conversion allows orders to be entered in any convertible unit of measure
- A separate receiving unit facilitates vendor payment by actual weight, length, or piece

Enhanced Pricing

- Assign a pricing unit of measure, allowing an indirect relationship between purchase and pricing unit of measure (for example, purchase by the foot but price by the pound)
- Update prices and forecasts based on market fluctuations
- Update provisionally priced contract releases with a final price based on the agreement in place with the vendor
- Segment the purchase price based on material, freight, processing, etc.
- Price and/or pay by actual or theoretical weight
- Factor in surcharges (alloy, fuel, freight, handling, scrap, etc.)
- Mass-update purchase order line pricing when metals prices change

Vendor Specifications

- Define and manage specifications specific to a vendor or purchased material
- Define acceptable tolerances for attributes (gauge, width, length, ID/OD, coil weight, etc.)
- Define default tolerances by item or vendor and vendor/item combination
- Merge multiple specification sets (such as ASTM specifications and regulatory requirements) and, in cases of duplication, retain only the tightest tolerance

Notes

- Standard notes can be defined by product and/or external product number
- Notes can be set to default on an order based on the customer/vendor and product combination
- Notes can be automatically passed from purchase order to numerous other forms in the application



Pricing

The Crowe Metals Accelerator offers various options to help companies manage their purchase and sales pricing as well as any miscellaneous charges. Trade agreements can be used to store negotiated prices and discounts that will automatically default into purchase orders, sales orders, and sales quotations. Automatic charges can also be set up within the procurement and sales modules to automatically create standard or specific charges on purchase orders, sales orders, and sales quotations.

Attribute-Based Pricing

- Define pricing based on product attributes in addition to by item or item groups
- Attribute hierarchy allows a user to define the priority when multiple attributes for an item contain trade agreement pricing

Charges

- Flexibly apply automatic charges to order lines, including attribute-based charges (e.g., adding a stainless surcharge to all orders that contain the grade 304 attribute value) and charges by site or warehouse
- Include charges on an end purchase or sell price
- Add charges to trade agreement lines to allow companies to build up the total price for an item
- Allow quantity-based charges to be priced in any convertible unit
- Proportionally allocate fixed charges across multiple deliveries
- Distribute fixed header charges to lines proportionally by weight

Pricing Unit

- Specify pricing by any convertible unit of measure for a sales or purchase order line (e.g., an order placed in pieces but priced by feet)
- Change order unit price without affecting the order line total

Additional Pricing Features

- Distinguish actual vs. theoretical variances in order to pay vendors and invoice customers by actual weight, length, or piece as opposed to theoretical
- Handle commodity-based pricing by defining if an order line should be priced at time of order entry or at time of shipment (price in effect)
- Support tiered pricing for an item, regardless of the order unit of measure, with pricing brackets
- Perform margin analysis on sales orders using the anticipated margin of a selected order line based on the item replacement cost and last purchase price

Grossing

- Account for the full material (gross material) being used to produce the cut sizes (net material)
- Handle single line and multiline grossing on a single order
- View grossing history, including cut-from and cut-to dimensions

Cost-Plus Pricing

- Use multiple bases of cost, including replacement, last purchase, gross, and RFQ
- Cost basis and margin percent can be set through a trade agreement or manually entered on an order line to calculate a sell price
- Simulate prices on an order-by-order basis by selecting a cost basis and target margin; the system can then calculate a unit price for the order line

Surcharge Management

- Break out sale and purchase price by surcharge (for example, alloy, freight, handling, skid, and fuel)
- Print surcharges on sales order acknowledgments and purchase order confirmations
- Track surcharges through production across multiple items derived from an initial purchased item and then analyze sales of each end item by segment
- Add and display a fully loaded cost for sales pricing



Costing

Cost accounting in Dynamics 365 for Finance and Operations software allows a business to define and analyze costs associated with inventory, product manufacturing, and finished goods by using normal costing, standard costing, or absorption costing methods. A completely integrated solution, including the production control module, allows production costs to be tied to finished goods, providing a more accurate basis for costs.

Actual Costing by Lot

- Factor in all cost elements (for example, material, surcharges, freight, value add, outside processing, labor, and machining) to calculate actual cost by inventory lot
- Assign different costing methods (for example, actual, standard, FIFO, or LIFO) by item or product
- Update inventory cost and cost of sales based on invoice variances

Costing Unit

- Track multiple bases of costs throughout the application
- Track a replacement cost throughout the application, representing the price a company would have to pay to replace material in current market conditions

Production Costing

- A cost summary fact box provides real-time snapshots of realized production order costs, broken down into predefined segments of starting stock, returns to stock, recovered scrap, processing loss, internal processing, and outside processing
- Recoverable scrap feature allows metals companies to manage multiple scrap costing methods, including backing the cost of scrap out of the value of the finished good

Cost Segmentation

- Display a costing unit of measure throughout the application, regardless of inventory, sales, or purchase unit of measure

- The “tag cost buckets” feature segments inventory costs (such as labor, machine, or processing costs) and tracks them cumulatively through production

Visibility to Product Profitability

- Surcharge management and visibility provide a more detailed analysis of product profitability, with analysis at a level below basic material, surcharges, labor, and overhead
- Multiple costing methods and cost simulation functionality provide the ability to assess profitability models prior to manufacturing and sale of product
- Track gains and losses between internal branches or sites during the transfer of material from one branch or site to another





Production Control

Production control supports discrete, process, and mixed-mode manufacturing processes. The production control module can be used to manage and track production activities such as scheduling production, tracking material and route consumption, registering production feedback, tracking inventory transactions, and tracking production costs.

Chemistry and Certification Inheritance

- Inherit vendor tag, heat number, and chemical properties from parent tag
- Inherit material certification from parent tag
- Generate material certification based on inherited properties

Theoretical Yield

- Calculate anticipated yield, providing visibility to the number of pieces of a given part that can be produced from the available pounds or tonnage of on-hand inventory
- Automatically update production-order material reservations and estimated yield
- Proactively manage inventory levels and more easily identify production discrepancies when the anticipated yield differs from actual yield beyond an acceptable tolerance

One-to-Many/Inverse Bill of Material Support

- Produce multiple product dimensions (such as width and length) from a single order
- Produce multiple items/products from a single order
- Automatically calculate cost allocation based on production yield

Specifications

- Automatically pass customer specifications from sales to production
- Capture, transfer, and validate customer requirements and acceptable tolerances
- Prevent release of material until customer specifications are met
- Specifications may also appear on production order bill of material lines, and those specifications can inherit values from the parent item being produced

Streamlined Outside Processing

- Tightly integrate with order entry and the fulfillment cycle
- Automatically update a production-order route operation based on purchase receipt of an outside processing service
- View and manage inventory tag/lot numbers associated with outside processing orders
- Automatically transfer material to and from outside warehouses
- A delivery note may be generated from a subcontract purchase order – delivery instructions that are automatically added to the delivery note may be added to route operations and the content on the note may also be manually updated to reflect specific details the user wishes to include



Dimensional Transformations

- Factor dimensional transformations into routings (common applications are tube, bar, and wire processors – in the case of a tube mill, a routing operation might result in the material being drawn to a new outside diameter and wall)
- Specify target dimensions (OD/width and wall/gauge) on each production operation along with a factor representing the anticipated change in length or width
- Record the actual dimensions through production reporting and, when applicable, the number of pieces in process
- Automatic calculation of anticipated yield at end of processing, based on reporting at each process step

Notes

- Standard notes can be defined by product and/or external product number
- Notes can be set to default on an order based on the item
- Notes can be automatically passed from sales order to the production order and corresponding documents (e.g., travelers, and delivery notes)

Production Processing

- Compare estimated vs. realized consumption on a production order
- View pre-reserved supply via production order fact box
- Cost summary fact box displays the weight, unit cost, and total cost amount for user-defined elements of the production order
- Cost values are updated interactively as transactions are posted, providing an easy-to-understand snapshot of the order's cost buildup without the need to execute multiple inquiries
- "Theoretical yield" calculates the output of finished product that could be realized if a given lot is processed in full

Remnant Management

- Define probable return-to-stock sizes and quantities when creating a production order
- Report the return to stock at the same time as reporting production is complete
- Identify additional rectangular dimensions (for example, an L shape) attached to a plate or sheet remnant

Toll Processing

- Receive customer-owned material without a purchase order

Scrap Management

- Define and track recoverable scrap, which is scrap that is specifically reported and tracked as inventory
- Automatically calculate processing loss based on comparing input and output weight and allow the cost of the loss to either be written off to a processing loss account or allocated to the cost of the produced items



Inventory Management

Inventory management features can allow companies to plan and control inventory from the raw material stage to the customer. Companies can manage inventory at both the aggregate level and the item level. Key benefits can include increased visibility, streamlined processing, and integration to all areas of the software, such as planning, production, sales, and finance.

Inventory by Dimension and Attribute

- Define product attributes (such as material type, grade, and gauge)
- Define product dimensions that can vary for a single item (width or length)
- Define lot attributes (such as physical properties, actual gauge, width, length, and OD)
- Lot attributes and their respective minimum/maximum tolerances are set up by item or product, but recorded and validated at the individual lot level
- View and search inventory by product attribute, dimension, and lot attribute at order entry and throughout the application

Parent/Child Lineage Traceability

- Maintain complete traceability through item/product transformations and outside processing
- Track vendor and outside processor tag/lot
- Trace material lineage forward (child/grandchild) and backward (parent/grandparent)
- Quickly identify the original raw material and heat associated with a tag or lot
- View certificate or mill test report details by inventory tag, including an image of the actual document

Inventory Workbench

- Review the current inventory position, track notes, drill into open orders, and analyze usage history
- The “usage by site/warehouse” fact box shows inventory usage by month for the past three years, as well as a trailing three-month and 12-month average

Actual and Theoretical Weight Tracking

- Track and manage inventory by dual units of measure, tracking actual weight, actual pieces or feet, and theoretical weight
- Invoice based on actual and theoretical weight
- Perform dynamic unit-of-measure conversions



Warehouse and Transportation

Warehousing transportation management can provide a platform to effectively control the flow of raw materials and finished goods into, out of, and throughout a facility. Warehouses can be set up with predefined storage logic, confirming proper put-away and picking of material. Integration with mobile devices and scan guns, for both receiving and shipping, can add increased flexibility for warehouse operations. Shipment and load planning capabilities can provide shipping personnel with increased visibility of outbound orders and help reduce shipping and distribution costs.

Inbound Order Management

- The inbound order lines form provides a single place where warehouse users can review and receive inbound orders
- Automatic specification validation during item receipt
- View inbound receipt pre-allocation to a sales order, transfer order, or production order
- Streamlined material receipt process for multiple lots of the same material
- Expanded mobile device workflows to accommodate common data capture (e.g., heat, mill tag, or country of origin)
- Manage actual vs. theoretical variances in order to pay vendors and invoice customers by actual weight, length, or piece, as opposed to theoretical
- Separate inventory, receiving, and picking units of measure to provide flexibility during shipping and receiving
- Order by random dimensions and capture actual dimensions at time of product receipt and put-away

Cross-Docking

- Enable cross-docking of purchase orders, transfer orders, and production orders
- Use the standard warehouse work templates and location directives to control the movement of material from the receipt location to shipment staging or the production work center
- Support receipt of material in both the full application and mobile device application

Packaging Workbench

- Warehouse workers can easily package material, including the ability to:
 - Split bundles based on customer requirements
 - Combine multiple items or variants into a single package
 - Repackage
 - Control whether multiple items, heats, or countries of origin are allowed
 - View packaging notes
 - Use one-click packaging
 - View markings

Load Planning

- Load and shipment weight calculations have been extended to factor width and length product dimensions into unit conversion routines
- Regardless of unit of measure, order quantities are converted to the weight unit of measure and factored into load planning and load building
- Load-planning workbench has been extended to calculate weight based on dynamic unit of measure conversions

Handheld Devices and Data Collection

- Enhanced handheld capabilities allow for multiple order receiving modes
- Extended warehouse app enables material receiving and put-away with handheld devices
- Metals-specific data such as heat, mill tag, and country of origin can be recorded during receipt on a mobile device



Quality

Quality features can provide configuration of quality control tests and quality nonconformance handling when a quality standard is violated. Direct integration with inventory management means quality can be effectively managed from one place, reducing the amount of necessary rework or waste by verifying that proper inventory quality controls are followed.



Chemistries Material Certification Generation and Tracking

- Generate in-house certification documents
- Associate an external certification with inventory tags or lots

Comprehensive Testing and Sampling Capabilities

- Record and validate quantitative and qualitative tests
- Record test results for multiple samples
- Generate quality testing orders by transaction type (purchase or production receipt)

Nonconformances, Quarantine, and Disposition Tracking

- Quarantine material for further inspection or quality hold
- Log and report on vendor, customer, and production nonconformance
- Code on-hand inventory at the tag/lot level to restrict types of transactions allowed (pick, ship, transfer, reserve, etc.)

Claim and RMA Management

- Maintain high customer satisfaction by efficient handling of claims, complaints, and returns
- Perform customer and vendor returns and track and report return reasons
- Automatically create rework production orders for returned material

Integrated Quality and Production Reporting

- Report quality and production results simultaneously, reducing the need for offline, paper-based quality inspections
- Automatically put material on quality hold based on test failure
- Validate customer quality requirements and specifications
- Trigger and report quality tests and inspections by route operation



Planning and Scheduling

Max OD/Coil Break Point

- Calculate coil break point, or maximum outer diameter, and number of passes based on customer max coil weight, ID, PIW, coil weight/width, etc.
- Generate production paperwork detailing the slitting work instructions, cut plan, anticipated consumption and yield, and break point
- Assign and track the order in which slit coils were cut (that is, the “mult” or multiple cuts)

Material Optimization

- Set prioritization schemes to check for a range or hierarchy of sizes rather than requiring a specific item or size to be preset in the bill of material
- Reserve material with the weight closest to the quantity required by planning or the production schedule

Order-Promising Tools

- Perform automated, real-time calculation of delivery dates based on availability of resources and materials
- Associate scheduling constraints (for example, resource capabilities and requirements) with a work center

Interactive Graphic Planning

- See production schedule in Gantt chart view and manipulate schedule in a visual, drag-and-drop fashion
- View projected available inventory and capacity loads graphically

Cut, Slit, and Melt Planning Workbenches

- Match supply to demand when cutting, slitting, or melting metal, with an easy-to-use toolset
- Predefined BOM/formulas are not required by the cut plan workbench – instead, one-time production BOMs are created based on user-selected supply
- Automatically calculate coil cut points and number of passes on a master coil to adhere to customer max weight or diameter restrictions
- Hard-reserve inventory tags to verify customer specifications are met
- Manage subcontracting directly from the cut plan workbench
- Match optimal material mix (scrap or virgin) when planning melts to minimize costs and maximize output quality
- Automatically calculate processing loss and allocate the corresponding cost, based on comparing input and output weight on the melt plan workbench





Learn More

For more information about the Crowe Metals Accelerator for Dynamics 365 for Finance and Operations software, contact:

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About Crowe

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