![Acumatica - The Cloud ERP]

Manufacturing: Industrial Equipment and Machinery

Industry Digest

ABSTRACT

Manufacturers of industrial equipment and machinery often struggle to manage production with long production lead times for complex equipment, global supply chains for components, and constant struggles to keep up with engineering changes. Extensive, multi-level bills of material are difficult to manage between CAD and PLM applications and the manufacturing ERP system.

Equipment manufacturers using legacy ERP systems lack integration, automation, and information to boost profits, reduce costs, and improve the customer experience.

Digital transformation is a reality for capital equipment manufacturers across industry segments. Modern ERP applications provide mobility, cloud computing, and deep connections to engineering applications such as product lifecycle management.

This Industry Digest provides an overview of the Industrial Equipment and Machinery Manufacturing market with insights into the industry's future, critical features to consider when evaluating a new ERP application, and a list of resources to get more information.

Discover How Manufacturers Succeed with Acumatica

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INDUSTRY
Overview

Machinery manufacturing is a $2.5 trillion-dollar global industry with $150 billion in annual exports. The industry has a prolific, global supply chain, including downstream suppliers of components, industrial process controls, electronics, and electrical supplies. The industry employs more than one million Americans. Manufacturers are heavy users of computer-aided drafting and design (CAD), product lifecycle management (PLM), product configurators, and engineering change order (ECO) applications to manage product design and revisions. While some companies make-to-stock, the vast majority are job shops, make-to-order, engineer-to-order, and configure-to-order. Remanufacturing is common among some industry segments.

Industrial equipment and machinery manufacturers produce standard and custom-engineered machinery. Equipment is used by manufacturers, distributors, construction, agriculture, retail, service, and other industry segments. Manufacturers engaged in industrial equipment manufacturing are classified under SIC Code 35 and NAICS Code 333. A breakdown of industry segments for US manufacturers by employee size is provided below.[1]

INDUSTRY SEGMENT	1-20	21-50	51-100	101-250	251-500	501+	TOTAL
Agriculture, Construction, and Mining	7,434	2,068	717	488	134	165	11,006
Industrial Machinery	3,124	783	348	265	56	104	4,680
Commercial and Service Equipment	11,039	2,151	832	573	145	159	14,899
HVAC, Ventilation, and Refrigeration	4,684	1,012	497	348	126	130	6,797
Metalworking Machinery, Tool and Die	8,756	2,226	858	554	124	92	12,610
Engines, Turbines, and Power Transmission	2,207	592	245	197	62	81	3,384
Other Machinery and Equipment	14,856	3,951	1,670	1,155	308	295	22,235
TOTAL	52,100	12,783	5,167	3,580	955	1,026	75, 611

"As we start to schedule production orders, things of that nature, that's something else that we've been able to streamline in Acumatica versus what we were doing in CMS which was our old system. So, that is something that has definitely improved."

– NICK GREEEN, OPERATIONS MANAGER
   SCOTT FETZER CONSUMER BRANDS

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INDUSTRY OUTLOOK

The global industrial equipment and machinery manufacturing market is expected to grow from $535 billion in 2020 to $573 billion in 2021 at a compound annual growth rate (CAGR) of 7.1%.[2] Some industry segments, such as construction machinery and equipment, are growing with a healthy housing market and federal infrastructure projects. Other segments serving suppliers to aerospace and defense, automotive, and other markets impacted by the COVID-19 pandemic are expected to recover at a slower rate. Digital transformation is in process for manufacturers adopting modern technologies such as additive manufacturing, industrial internet of things (IIoT), and virtual or augmented reality for product design. Manufacturers increasingly offer online portals for business customers to find and purchase replacement parts and supplies. Service and project management and collaboration applications are increasingly important as manufacturers expand from product-centric to solution-based businesses.

1. Data Axle USA 2021.
2. Research and Markets 2021

ERP
Features

Selecting an ERP system is a decision that will affect your company for many years. Many products offer similar features. The [Acumatica Manufacturing System Evaluation Checklist](#) provides a starting point to evaluate manufacturing ERP requirements, including accounting, purchasing, sales order, inventory, and general manufacturing capabilities. The checklist below provides a shortlist of critical features standard in capital equipment ERP applications.
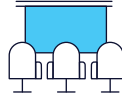
FEATURE	BENEFIT	PRIORITY	Acumatica		
Engineering Change Orders	Configure approvals workflows for Engineering Change Requests (ECR) and Engineering Change Orders (ECO).		✓		
Product Lifecycle Management	Synchronize engineering BOMs and items from CAD/PLM apps to manufacturing BOMs and items in the ERP system.		✓		
Product Configurator	Create new manufactured products with a rules-based configurator for quotes, sales orders, and production orders.		✓		
Manufacturing Estimates	Create estimates for new items. Convert estimates into bills of material, production orders, or other estimates.		✓		
B2B Commerce Storefront	Synchronize inventory and automate order processing with an online storefront for dealers and distributors.		✓		
Lot and Serial Tracking	Pre-assign lot and serial numbers for production with traceability from raw materials to finished goods.		✓		
Quality Management	Manage quality programs with connected applications for testing, quality data analysis, and tools to streamline industry compliance.		✓		
Remote Install and Repair	Shorten the time between call receipt and job assignment. Track resource commitments and arm technicians with mobile apps for navigation, job reporting, and expense receipts.		✓		
Equipment Management	Maintain visibility of customer equipment under warranty with equipment history. Manage service contracts and schedules.		✓		
Project Management	Know the actual costs of internal or external projects. Manage budgeting, timesheets, project inventory, and complex billing. Compare actual costs with original budgets.		✓		
Capable-to-Promise	Use APS logic to determine how many units of an item will be available by a date or calculate availability dates based on capacity constraints, material availability, and lead times.		✓		
Purchase Orders	Purchase to the job, manage outside process costs, set up blanket orders, and create requisitions with approvals and vendor bidding.		✓		
Sales Orders	Link purchase orders and production orders with sales orders, manage drop-shipments, reserve stock for orders, and manage shipments.		✓		

INDUSTRY
Resources

Resources are provided below to aid industrial equipment and machinery manufacturers in their digital transformation projects. Attend industry trade shows, read about ERP software and manufacturing technologies in trade media and industry analyst reviews, network with peers in associations, and access Acumatica resources to learn more about ERP software to automate and streamline business operations and manufacturing processes.

INDUSTRY EVENTS

- AHR Expo (Link)
- AWFS Fair (Link)
- CONEXPO-CON/AGG (Link)
- Fabtech International (Link)
- Forest Products Machinery & Equipment (Link)
- GIE+EXPO (Link)
- International Manufacturing Technology Show – IMTS (Link)
- International Woodworking Fair (Link)
- Minexpo International (Link)
- National Farm Machinery Show (Link)
- North American Association of Food Equipment Mfg (Link)
- Pack Expo International (Link)
- Pack Expo Las Vegas (Link)
- PowerGen International (Link)
- Process Expo (Link)

INDUSTRY ASSOCIATIONS

- ASHRAE – HVAC and Refrigeration (Link)
- Association of Equipment Manufacturers (Link)
- Farm Equipment Manufacturers Association (Link)
- Industrial Heating Equipment Association (Link)
- Machinery and Allied Products Institute (Link)
- Motion Control & Motor Association (Link)
- North American Association of Food Equipment Mfg (Link)
- Hydraulic Institute (Link)
- Outdoor Power Equipment Institute (Link)
- Oven Manufacturers Association (Link)
- Packaging Machinery Manufacturers Institute (Link)
- Process Equipment Manufacturers' Association (Link)
- Robotic Industries Association (Link)
- Wood Machinery Manufacturers of America (Link)
- Woodworking Machinery Industry Association (Link)

TRADE MEDIA AND ANALYSTS

- Assembly Magazine (Link)
- Automation World (Link)
- Capterra (Link)
- Equipment Today (Link)
- Equipment World (Link)
- G2 Crowd (Link)
- Industrial Machine Digest (Link)
- Industrial Market Place (Link)
- Machine Design (Link)
- Modern Machine Shop (Link)
- New Equipment Digest (Link)
- Packaging + Processing OEM (Link)
- Packaging World (Link)
- Plant Engineering (Link)
- Plant Services (Link)
- Processing Magazine (Link)
- SNIPS Magazine (Link)
- Software Advice (Link)

ACUMATICA RESOURCES

Access the online Resource Center to learn more about Acumatica's Product Configurator, Engineering Change Control, Acumatica for Arena Native Connector, and other resources for Industrial Equipment and Machinery manufacturers.

Visit Resource Center

Personalized ERP Demonstrations

Answer a few questions to configure a customized demonstration of Acumatica

LAUNCH DEMO >

INTERACTIVE MANUFACTURING DEMO

START INTERACTIVE DEMO

Industrial equipment and machinery manufacturers excel with Acumatica Cloud ERP. Harmonize engineering and manufacturing bills of material with Acumatica for Arena Native Connector, streamline engineering changes, manage approved vendors for components, and reduce sales cycles with the robust, rules-based product configurator.

With Acumatica, industrial equipment manufacturers have everything they need to reduce the engineering to manufacturing handoff, requisition new parts with vendor bidding, and create estimates for custom equipment. In addition, create production orders from sales orders, schedule operations against finite capacity constraints, manage outside processes, and automate inventory and manufacturing transactions with barcoding.

ACUMATICA FOR INDUSTRIAL EQUIPMENT AND MACHINERY MANUFACTURERS

Acumatica Manufacturing Edition helps manufacturers maximize resources, reduce costs, and improve profits. Last-mile features such as disassembly, engineering change control, demand forecasting, and outside processing streamline critical manufacturing processes. Commerce and Field Service extend Acumatica for manufacturers who sell online (B2B or B2C) or provide installation and on-site services. Balance supply and demand with inventory, sales, and purchasing on top of a comprehensive suite of accounting applications. Leverage automation, workflows, and document management to connect data and processes throughout all parts of the manufacturing business for improved customer service, customer retention, and growth.

> "Carrying a multi-million dollar inventory, you've got to have good controls for that . . . With the new controls that Acumatica has in place, our inventory is much more accurate."
>
> – ROGER COLLINS, CFO, DEMTECH

LEARN MORE >

Acumatica Manufacturing Edition is designed for make-to-stock, make-to-order, configure-to-order, engineer-to-order, batch process, and project-centric manufacturers. Acumatica provides unparalleled manufacturing depth with robust financials, native customer relationship management, and powerful business intelligence applications. Built on a future-proof cloud platform with an open architecture for modern technologies, rapid integrations, scalability, and ease of use, Acumatica delivers an unparalleled experience for users and customers alike.

Acumatica
The Cloud ERP

Acumatica Cloud ERP is a comprehensive business management solution that was born in the cloud and built for more connected, collaborative ways of working. Designed explicitly to enable small and mid-market companies to thrive in today's digital economy, Acumatica's flexible solution, customer-friendly business practices, and industry-specific functionality help growing businesses adapt to fast-moving markets and take control of their future.

For more information on Acumatica, visit www.acumatica.com or follow us on LinkedIn.