

Fan-Array Maker Q-PAC's Explosive Growth Supported by Acumatica Manufacturing ERP

OVERVIEW

Disrupter in the commercial HVAC industry, Q-PAC was a spin-out that began operations with QuickBooks, spreadsheets, and a custom-made ordering system. But it soon became apparent the manufacturer needed much more sophisticated technology to handle engineering changes, inventory, and bill of materials. Q-PAC deployed Acumatica Manufacturing ERP, which streamlined operations, improved inventory control, and provided end-to-end data visibility.

KEY RESULTS

- Implemented a single, connected, modern manufacturing platform that helps it scale and grow
- Improved customer service, providing a seamless connection between its project configurator QUIPS and Acumatica Manufacturing, which allows data to flow engineering, manufacturing, shipping, and invoicing
- Gained inventory management with visibility into inventory and production costs used to calculate project profitability while also reducing inventory carrying costs
- Automated reporting, saving time while gaining insights on which to make better decisions
- Gained Bill of Materials functionality that sped production and improved revision history access
- Replaced manual data entry with automated processes, saving time

CHALLENGES

Spun out of Mass HVAC in 2019, Q-PAC makes custom Plug-and-Play fan systems for commercial HVAC systems for air handling retrofits and OEMs. Its success stems from having a disruptive product that it delivers and installs quickly. Each fan array is custom-built according to customer specifications, with simple installations and a variety of features for optimizing facilities.

The company sells its fan systems to office buildings, universities, airports, hospitals, and entertainment venues like stadiums and arenas. Because each venue has different requirements, Q-PAC internally designed its ordering software, QUIPS, which automates the selection and design process according to a customer's facility operation and space requirements.

The company operated within Mass HVAC for eight years before being spun out in 2019, says Kevin Van Dyke, Chief Financial officer.

"We were incubated inside a company that built air handlers, and we were the fan component," he says. "We have a very innovative idea of using EC fans and assembling them in a kit-oriented way for new air handlers and retrofit opportunities, allowing us to repair and replace fans in the field."

Each fan array ships as a kit with every component needed to install, assemble, and begin operating in the shortest amount of time. With its patent-pending Quick Connect Box and its wiring system, electricians have cut 75 percent of the time needed to install a unit. With its optional BACnet compatible controller, a system can stand alone without any field-installed controls.

Q-PAC operates on the premise that "Fan systems should be easy; we are easier."

"When it comes to the HVAC component we provide, we are probably the fastest in the industry when it comes to installation," says Luis Burgos, Director of Operations. "We provide a simple service: our products are easy to select, install, and service."

Customers seem to like Q-PAC's easy-to-install fans. "We are averaging around 30% growth," says Van Dyke. "Actually, it's been 40% growth since starting as a standalone company. We'll do close to \$32 million this year."



Company

Q-PAC Systems, Inc.
www.q-pac.com

Industry

Manufacturing: Industrial machinery; they make HVAC fan arrays

Number of Employees

Approx. 70 full time employees

Location

Elkton, Fla

Products

Acumatica Advanced Manufacturing with:

- CRM
- Sales Order
- Payables
- eBizCharge
- Inventory
- Receivables
- Finance
- Velixo reporting

Customer Social Sharing Details



www.facebook.com/QPACFanArray



[@Q-PACsystems](http://www.youtube.com/user/@Q-PACsystems)



www.linkedin.com/company/q-pac

Partner Details



i-Tech Support, Inc.
www.i-techsupport.com

Difficult to Operate on Spreadsheets

When Q-PAC began operating as a separate company, it operated on QuickBooks and Excel spreadsheets. Managing production and inventory was tedious, cumbersome, not always up-to-date, and prone to error. It was anything but straightforward but typical for a fast-growing startup.

“We didn’t really know our costs at all accurately,” explains Burgos. “We didn’t have part numbers, and most of the visibility on sales orders was via Excel files. Our operations were very task-oriented, and it was really hard to keep track of the status of orders. We barely even had part numbers.”

Without part numbers, executives lacked insights into inventory and project costs, making it difficult to quote projects accurately. The rudimentary and disconnected applications made it difficult and time-consuming to process engineering changes, and assemble bill of materials. Forecasting was difficult.

“We would ship something, and at the end of the year, we could look at the macro view,” says Kurt Thomas, Director of Marketing. “But we had no idea what our individual job gross margins were. With QuickBooks, we couldn’t dive that deep, and we couldn’t link all of our inventory. Plus, we were using so many different systems and many different Excel sheets, so linking all those just didn’t make sense.”

Part of the difficulty in accessing product profitability stemmed from the custom nature of its fans, and the different configurations that customers needed. To make it easier for customers to order, Q-PAC created custom software called QUIPS to automate the fan system selection and design process according to the variables provided by the client. The possibilities included choosing from more than 4,000 parts.

The company’s fast growth, frustration with manual work, and disconnected systems prompted them to look for better systems to run the company. “We reached the maximum potential of Excel to run a business.,” Burgos says. “We found very clever ways of using Excel and macros, but at some point, we just couldn’t use it anymore.”

“The volume of orders was getting really high and we weren’t being that efficient.” Adds Nick Tulip, Director of Technology, “The more orders we had, the more demand increased for either hiring people or we had issues with scheduling the work.”

SOLUTION

Acumatica Manufacturing Edition

Connecting its QUIPS ordering system was the top priority for a new system. Q-PAC also wanted a cloud-based system with multi-region support and a system that could scale and allow them to customize unique processes. “We didn’t want to adapt to a tool,” says Burgos. “We wanted to have a great tool with a good base that we could modify a little bit and customize for our use.”

Q-PAC evaluated Microsoft Dynamics, Odoo, and Oracle NetSuite, and then learned about Acumatica. They narrowed the list to Dynamics and Acumatica, choosing Acumatica for its unlimited user pricing, open API, and ease-of-use. Acumatica Manufacturing provided a single source of truth, and the flexibility to integrate third-party applications.

In Acumatica, “you could see the integration capabilities that were exposed and available,” Tulip says. “And it became a no-brainer. Acumatica had some things that we did not even think about that we might need. The open API was the driving factor for us. And price was a significant factor.”

“Everybody else had a user per seat license and it was ridiculous, but Acumatica had unlimited users and was transaction based,” he explains.

Early on, Q-PAC was considered an All-Microsoft shop. Still, the enterprise-grade price of Dynamics and its seemingly overly complicated implementation for a small startup made them reconsider that move. “I thought it was going to be an expensive experience, and if we failed to integrate outside applications properly at the cost that it had just didn’t make sense,” Tulip says.

From a technical perspective, several executives said that Acumatica had everything Q-PAC needed to integrate and operate. “Once I learned more about how Acumatica worked and the architecture behind the pages where we see the data and how all of the data is connected in the background, and how we can access it and make it available for others via different generic inquires, that’s when it clicked,” Burgos says. “I realized it was going to be super, super easy to use because we could customize it however we wanted and see the data that we needed.”



“ We are able to make strategic decisions faster using Acumatica. It creates improved collaboration across departments, which has been really helpful. ”

– Piro Zisi,
Supply Chain Manager
Q-PAC Systems Inc.

Smooth Implementation

As a startup, executives created new workflows with help from I-Tech Solutions, Inc., its integration partner. “We needed to set up our customers, our business accounts, customer accounts and other items,” says Tulip.

Once everything was set up and configured, the company moved over two years of data from its many spreadsheets. “The transition process to Acumatica involved understanding the different concepts like sales orders, bill of materials, vendors, inventory, stock items, and non-stock items to configure the different endpoints that allowed us to port data over,” Tulip says. “It was actually rather smooth.”

BENEFITS

Automated Processes Save Time

Q-PAC gained instant access to a single record of information that used to take days to find and compile—if executives could find it among many spreadsheets. Reports can be run in real-time with accurate information, and executives better understand how the company is performing daily—not weeks or months after the fact. Faster access to critical data allows Q-PAC to operate more efficiently and flex as needed to address market changes.

“Previously, the information was spread out; nobody knew what the latest information was, and having to find it across different Excel files was very challenging,” says Burgos. “Thanks to Acumatica and the integrations that we have, we get daily reports instantly, and monthly reports two or three days after the month ends. Having access to data anywhere, at any time, is key.”

Burgos likes that he can access customized dashboards from his smartphone no matter where he is. “I mainly use it for our dashboard just to know how the week is going and what’s been produced,” he says.

Improved Inventory, Production

Q-PAC now imports its design specs from QUIPS directly into Acumatica, which automates the process of creating the manufacturing requirements and work orders for the subassemblies that ultimately roll up into a final assembly. Acumatica provides visibility so everyone sees whether components are in stock and what capacity is needed for a project. Acumatica allows Q-PAC to see accurate inventory and production costs, which allows executives to calculate the project profitability correctly.

“There are no more Excel files, and no more errors,” Tulip says. “Prior to Acumatica I had to manually transcribe things into a spreadsheet and use a search feature to try to find an order and what its status was,” says Randall West, Operations Manager. “Now, I open a window and take a look at it and don’t spend 45 minutes searching. We can actually track what we can do now.”

Order status was mostly a guess previously, he says. “In terms of personal productivity, Acumatica probably saved me years of my life. I think there’s a lot of time saved in inventory management, and now (the shop floor) has confidence that when they start an order, we’re not stalled for three weeks waiting for a part because we didn’t realize we needed it.”

Acumatica provides the inventory forecasting and management Q-PAC lacked previously. “We haven’t missed an order, or we haven’t skipped an order because we ran out of components in a long time,” Burgos says.

Piro Zisi, Supply Chain Manager, says he’s dramatically reduced the time it takes to access important data now that he doesn’t spend time transferring data and then manipulating it. “I receive data for vendor on-time delivery, inventory, dollar amounts per item, what type based on the component, and which items are below safety stock levels,” he says. “This information is updated in real time on a dashboard.”

“The data is uploaded right away with a click of a button so I can devote more time on important issues and objectives.” Having Acumatica as our ERP system, it has allowed us to get real-time visibility into all aspects of our organization,” he adds. “We are able to make strategic decisions faster using Acumatica. It creates improved collaboration across departments, which has been really helpful.”



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Accurate Bill of Materials

Austin Pleasants, Product Engineering Manager, says Acumatica gave them bill of materials information that they didn't have previously. "We can now handle different (product) revisions and make sure that production is producing the right order, and compare it to the revision and see if there are any differences."

Design changes happen faster, and BOM is much more accurate. "Every job that we make is different," Pleasants explains. "Everything's unique. We have different dimensions every single time, different arrangements. So that means our bill materials are different for every project. The open API allows us to integrate our CPQ with Acumatica to create a different BOM for every order and allows us to group a bunch of different products and stock items together in a specific arrangement to match exactly what the customer wants."

More Efficient Warehouse

Q-PAC is modifying its warehouse to include four or five different internal locations for item inventory and adding a support-related section so the team can better understand item utilization for customer orders or support tickets. The company is also reconfiguring inventory to be closer to workstations to reduce the time needed to pick parts.

Q-PAC has also streamlined its shipping processes, providing the logistics manager with advanced information on production competition and shipment preparation. The data is also available to the accounting department, which prepares and sends invoices.

In addition to the QUIPS integration, Q-PAC added Velixo Reports for advanced financial reporting and EBizCharge for credit card processing. The company plans to automate customer notifications when their orders hit milestones, which can boost customer satisfaction and experience.

Fast Growing Manufacturer

Transitioning from a small company limited by simple processes to being a standard manufacturer, everyone now "has a full understanding of why we needed new processes like having part numbers, whether or not it's going into work-in-progress, where it ends up, and how it plays into the big picture," says West. "Acumatica has helped us learn how to operate the right way and to pay attention to processes we weren't paying attention to that are super important."

According to Burgos, Acumatica will allow Q-PAC to ramp up production by 5 to 10 times if needed. "I don't think that Acumatica will ever be a limitation. Our data visibility is great, and we have a scorecard that we use every day where we see how we're doing daily, monthly, and year- to- date."

More importantly, "It makes our life much easier," Burgos says.

