



CASE STUDY

The Client: Metaldyne
The Challenge: Incorrect pressure; allow reserve compressor to remain in reserve
The Conclusion: Quincy QGV 200 Quincy EQ® Analysis



Quincy Compressor helps Metaldyne's Twinsburg factory cut energy usage and operating costs with expert precision.

Metaldyne Cranks out a Smooth Operation

The Client

In Twinsburg, Ohio, Metaldyne has two identical factory wings turning molten aluminum into red-hot auto parts for the big automakers. The global manufacturer specializes in one part at its Twinsburg facility. "We make the industry's best transmission valve body," said plant technician Bill Cleary, noting the essential role Quincy Compressor plays during a vital stage of assembly. "We can't produce a single auto part without compressed air and we've always counted on the reliability and durability of Quincy machines." Three 150 horsepower Quincy QSI 740 rotary screw compressors have successfully run the plant's critical die lube process for more than 15 years. A fourth Quincy compressor provides a backup and routinely rotates into service to allow

regular and preventative maintenance. Automated robots create the highly regarded transmission parts, and while one pours hot metal into the die, another sprays special oil onto the die to lubricate and cool the precision mold. "There's some real magic in how that Quincy air optimizes the coverage and effectiveness of the cooling spray," explained Cleary, who spent much of 2007 on the hot seat as the plant's compressed air tech. "We had an obsolete brand "X" controller managing our compressors. When it failed, another compressor company sold us on a new control solution, claiming it would reduce air pressure and operating costs," Cleary recalled. "That's when our problems started."

The Challenge

The new control gear "ended up costing us big time in energy consumption, maintenance, equipment wear and tear, and downtime," Cleary said. The controller attempted to build air reserves and put the plant at risk by enlisting the fourth compressor fulltime. "All of a sudden we had no backup and no way to perform much-

needed machine maintenance," said Cleary. "We were definitely under pressure after assuring Metaldyne the controller was the right solution. We couldn't have been more wrong." After nearly a year of debating the correct fix with the controls supplier, Metaldyne partnered with Quincy Compressor to help solve the foundry's puzzling and costly air challenge.

The Solution

"Our air machines are designed to deliver up to 110 pounds of pressurized air, but we were continuously maxing them out at 125 plus," Cleary, explained, noting the compressors were instructed to load and unload as many as 400 times a day. "We collected data readings during an extensive efficiency quotient (EQ®) analysis of the plant, which enabled us to diagnose and eliminate operational problems," said Joe Maione, a Quincy area manager who performed the analysis with Wes Jenkins of authorized distributor Tomlin Equipment. "The Quincy EQ provided the hard data needed to justify the elimination of the expensive control system and the neces-

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sary investment in a new remedy," Jenkins explained.

The controller was replaced with the Quincy QGV 200, a 200 horsepower, variable speed air compressor capable of stabilizing the air flow and freeing up two of the over-worked compressors at the Twinsburg factory. "The QGV 200 combined with two of the four existing QSI 740 compressors offered the most efficient and effective solution possible," Maione explained.

Quincy also added a Net Sync switch to automatically rotate the plant's two newfound backup compressors into operation. Metaldyne also installed a 10,000 gallon compressed air storage tank for additional capacity.

"We had a tough patient to diagnose, I'll admit, but Quincy has turned deciphering plant data into an art with the

EQ," said Cleary. "As a result, we've reclaimed our critical backup compressors and Quincy has helped us regain control of the operation."

Impacting the Bottom Line

The integration of the Quincy QGV 200 into the plant system has resulted in a list of cost and operational benefits. Perhaps the biggest advantage is the plant's ability to rededicate one compressor for backup and another for future growth.

The breakthrough has taken 100 horsepower offline and turned countless hours of primetime maintenance expenses into a distant and unpleasant memory. "We have the luxury of performing maintenance just about any-time we want to during the week and that's allowed us to cut overall maintenance costs

by at least 50 percent," Cleary said.

Metaldyne's operation is greener than ever before, thanks in large part to major energy savings that can be traced back to the Quincy QGV 200. "That variable speed machine allows our two primary Quincy air compressors to run fully loaded, while lowering and narrowing the pressure range in our storage tank," explained Cleary. "That should save us at least 5% on our energy bill."

"The QGV 200 is so responsive, Metaldyne can produce all the compressed air it needs at lower pressure points, which translates into much lower price points," Jenkins said. Quincy's Joe Maione with his EQ calculator estimates Metaldyne will realize between \$75,000 and \$150,000 in annual operating expense savings,

including energy, maintenance, replacement parts and equipment, and downtime. "That Quincy QGV 200 will pay for itself in far less than two years," predicted Maione.

Smooth Operation

"Two of my original Quincy compressors are running wide open 24 hours a day, while the QGV 200 operating at about 50 percent capacity provides the rest of the cubic foot per minute [CFM] capacity we need," said Cleary. "It's a beautiful thing. Quincy has played a key role in lowering our risk factor tremendously." With his weekends free and his workday mornings free of chaos, Cleary knows he made the right call as he surveys the compressor room.

"Everybody in manufacturing wants a smooth operation. We've got one now."

PRODUCTS AND SERVICES

Quincy's product line includes the following categories:

- Rotary Screw Compressors
 - QSI 50 hp 300 hp
 - QGV 50 hp 200 hp
 - QGB 10 hp 60 hp
 - QSF 50 hp 200 hp
- Reciprocating Compressors
 - QR25 1 hp 25 hp
 - QT 3 hp 15 hp
 - PLT 3 hp 15 hp
- Climate Control & Medical Systems
- Vacuum Pumps
- Air Treatment
- EQ Auditing Services

MARKETS AND INDUSTRIES

- Agriculture/Farm
- Automotive/Tire
- Climate Control
- Contractor/Builder
- Dry Cleaning
- Energy Exploration
- Food & Beverage
- Low Pressure
- Manufacturing
- Medical & Dental
- Pharmaceutical
- Plastics
- Woodworking

UNDENIABLY THE WORLD'S FINEST

Quincy Compressor, an EnPro Industries company, specializes in compressed air technology, offering top-notch products and services since 1920. Serving the industry nearly nine decades, Quincy is on the cutting edge, engineering quality and reliability into every offering. Award-winning accomplishments have allowed Quincy to build solid relationships with its customers and achieve compressed air systems best practices. Quincy's flagship products include the QSI and QGV rotary screw compressors, the reciprocating QR-25, QT and Climate Control packages along with its innovative Royal Blue Warranty, widely recognized as the industry's strongest warranty program.



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