

Fluid Automation: The Unsung Contributor to Plant Economic Performance



A Management Brief From ASCO Numatics

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Controlling the flow of profit

A fluid automation product such as a valve operates to shut on and off — to control — the flow of a process liquid, or the supply of compressed air. However, perceptive managers realize that valves, pneumatic actuators, and similar components can do something more.

They can control the flow of profit.

In fact, their speed and reliability can provide competitive economic advantages in operations worldwide. Because these fluid automation products offer exceptional opportunities to extend overall equipment service life, reduce warranty costs, cut maintenance/repair/operations (MRO) inventories, and increase production uptime and productivity.

Changing the rhythm

Wherever goods and materials are manufactured, processed, or packaged, the process often depends on fluid automation components. These include fluid control products such as solenoid pilot valves, angle body piston valves, linear valve position indicators, redundant control systems, and pressure sensors. They also comprise fluid power products, which provide pneumatic and motion control. Examples: valve manifolds; filters, regulators, lubricators (FRLs); actuators or cylinders; grippers; slides; and gantries.

New technologies and forward-thinking business developments have made these offerings faster and more reliable than ever before. Managers across the spectrum, from OEMs to end users, have begun to appreciate how often these fluid automation components play quiet but critical roles in total plant economic performance.

Making even small changes in their performance can change the whole rhythm of the operation. So you prevent losses and drive gains throughout the business.



Feeding the bottom line

The speed and reliability of your fluid automation components can have both immediate and long-lasting impact on the following areas:

Asset availability. Where success is measured by the minute, assets must perform for a lifetime. Selecting the most reliable components ensures fewer shutdowns and lower maintenance costs.

Engineering optimization. Find suppliers that can deliver the products quickly. And make sure they're the right products: ones that suit the unique application at hand, with optimum fit for pipe size, pressure rating, corrosion resistance, and more. This gets easier when your supplier carries a wide selection. For instance, with 50,000 different valves, ASCO Numatics leads the industry in offering a comprehensive choice.

Productivity improvement. Reliability reduces downtime, eliminating one of the most significant drags on productivity. In addition, properly engineered fluid automation products often offer proven improvements in repeatability, flow rates, throughput, and other critical performance characteristics.

Cost reduction. Seek competitive pricing. But remember that total cost of ownership advantages such as longer life, lower maintenance, and reduced power consumption soon outweigh differences in initial purchase cost.

Competitive advantage. For OEMs, superior fluid automation products can be integrated into products offering performance and reliability that other manufacturers can't match. For end users, the right fluid automation solution can help your operation clearly outperform the competition.

You want to deal with suppliers who can provide products that truly make a difference. Not every valve or cylinder vendor fits the bill. Find the ones that do, and drive them to bring the benefits your operation demands.

The benefits of reliability

Selecting fluid automation products with proven records of reliability brings multiple advantages. Products that perform the first time, every time, may permit an elevated pace of operations. In addition, high-reliability products greatly reduce the chances of unplanned plant outages or downtime.

Users report that well-built products using advanced designs and top-grade materials more often perform to spec, provide long-term service, and realize lowest cost of ownership.



We're not just talking about incremental advantages here. The differences can be truly significant. Example: the coils in ASCO solenoid valves outlast competitive designs by factors of two or more!

Nor are engineering advances limited to the features of a given product. Smart engineering can involve a whole program's worth of new approaches. For example, ASCO Numatics is successfully cutting costs for many manufacturers with a new pneumatics methodology. Numasizing® emphasizes properly sizing all a plant's pneumatic system components, as well as correctly selecting plantwide operating pressures. Both efforts optimize the use of a single overlooked but costly energy medium: compressed air.

Finally, the more challenging your application, the more value that ultra-reliable fluid automation can add. Today's best products are designed to tackle tough tasks and difficult environments — from the pressures and radiation levels in a nuclear power plant to the corrosive combination of heat and humidity found in a commercial laundry facility.

The power of speed

These days, your customers won't wait. So your need for speed starts early, and never lets up.

First, look for fluid automation suppliers who make maximum use of the interactive informational power of the net. Good vendors will put up detailed engineering drawings of components. Great vendors will even allow you to configure the product for your application online. And once you know what you want, they'll provide user-friendly capabilities for rapid online ordering.

Accelerated delivery schedules are also critical. Long lead times are no longer acceptable — or often, even survivable — for today's time-crunched businesses. Especially when downtime for a single piece of equipment may mean shutdown of an entire operation.

So seek out suppliers that recognize that need for speed. For instance, the ASCO Today program offers guaranteed same-day shipping for many popular fluid control products. The Numatics Express program similarly offers the fastest lead times across the broadest product range of any quick-ship program for fluid power.

Knowledge is not only power. In today's challenging engineering environment, knowledge is profit. Immediate, responsive technical support from professionals who know their product — and your application — can make the difference between a successful application and an inefficient fit. Select a fluid automation vendor that can provide answers within minutes, and onsite technical support within hours. Some smaller fluid automation vendors just don't have the resources to compete here. By contrast, as part of the Emerson Industrial Automation Group, ASCO Numatics can provide fast, full-spectrum coverage worldwide.



Advantages for the OEM

Original equipment manufacturers can leverage their choice of the right fluid automation supplier to achieve significant improvements in the economic performance of their plants and products.

Speed. A supplier who appreciates the value of speed can allow OEMs to:

- Accommodate just-in-time inventory management
- Implement faster development and production cycle times
- Make last-minute engineering changes without disrupting project schedules
- Reduce time to market

Reliability. Look for fluid automation vendors who focus on reliability measures, permitting OEMs to:

- Realize more efficient air usage
- Optimize Six Sigma and lean manufacturing programs
- Shorten startup and commissioning times
- Sell more competitive products with fewer callbacks and warranty claims
- Attain maximum competitive advantage for their products
- Sell products on value, not on price
- Ensure greater customer loyalty

Advantages for the end user

Choosing the right fluid automation supplier can also help reap real economic gains for end users in industries including life sciences, power generation, biofuels, food and beverage, automotive, petroleum and chemical, water and wastewater, pulp and paper, packaging, commercial laundries, and HVAC.

Speed. Quick delivery and responsive support enable end users to:

- Maintain greater asset availability
- Get fast parts replacement and rebuild kits, with reduced MRO inventory for maintenance departments
- Achieve more efficient engineering of production lines



Reliability. Ensured dependability allows end users to:

- Reduce air leakage
- Rely on longer equipment life
- Cut overall maintenance costs
- Ensure maximum uptime and greater manufacturing asset availability
- Achieve higher assembly line productivity
- Eliminate time or consumables lost to shutdowns

Conclusion

Successful manufacturers across a wide range of industries realize that their choices of valves, actuators, or other components really make a difference. They report that fluid automation products have made surprisingly strong contributions to the economic performance of their operations.

For end users, judicious selection of fluid automation components must play a key role in their performance improvement plans. For OEMs, the right fluid automation choices provide significant cost, time-to-market, and product competitive advantages.



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