COMPANY PROFILE
IQ Valves Co. was incorporated in 2005 after years of experience in the contract manufacturing and solenoid industries under the previous name Teknocraft Inc. The company has provided manufacturing and engineering services dealing with solenoid valve technology for the medical, instrumentation, and natural gas industries dating back to 1984. The company was a pioneering leader in the ventilator market in the late 80s, providing proportional valve design that has become an industry standard.

With over 20 patents in the fluid flow category, IQ Valves has separated itself as a leader in fluid flow and proportional solenoid technology and innovation.

Please visit our website for more information about our standard line of solenoid valve products and accompanying accessories for flow control. Not all products are listed on the website, and most products can be customized for OEM customer requests.

All products are designed, manufactured, and tested at our Melbourne, Florida facility. Machined parts for medical applications are sourced from ISO 13485 manufacturing facilities.
When designing a system, it comes down to the right blend of people and product. The current ventilator market demands higher flows at varying pressures, while not sacrificing performance. This is where the versatile proportional valve offerings from iQ really differentiate themselves from the competition. iQ Valves has developed multiple pressure balanced designs which help maintain the precision flow and tight hysteresis that is currently being demanded for by the medical ventilator market. These valves have undergone millions of cycles in life cycle testing, and are made from proprietary materials which enhance performance. Depending on the application, iQ has sealing methods that use either a compliant elastomeric seal or a hard seal which does not use any elastomer at all. Our valves have been used in the industry since the early 1990s, and have only been improved in both design and manufacturing since.

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The second approach uses an air blower and oxygen supply being fed into a blender, which then moves downstream to a proportional valve at a much lower pressure. This valve faces two challenges: being able to deliver the flow with a much lower inlet pressure (e.g., 1 psid), and being able to deal with any back pressure being created by the patient. The outlet pressure balancing of our PFCV allows us to address both issues while delivering premium flow performance.

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Differing Ventilator and Valve Designs

Due to the vast differences in approaches over the years when it comes to ventilator design, we have offered two proportional valve types to make sure flow requirements are met, while still keeping the overall footprint and cost in mind. Many ventilators will run off of an in room supply of both air and oxygen. This hospital supplied wall pressure can vary based on location. With a fixed supply and varying inlet pressure ranges, we use our patented inlet pressure balancing technology to counteract any variances from hospital to hospital. These types of systems often use two proportional valves prior to blending that deliver optimal flow of around 150-180 slpm at around 25-35 psid.

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Quality and Life Cycle Testing

Every proportional valve that leaves our facility is uniquely identified with a serial number. We retain the date of manufacture, testing and material information, as well as the flow curves to be able to refer to at a customer’s request. All valves are put through stringent life cycle testing that tests these solenoid valves into the millions of cycles.
Balanced PFCV (.625"")

High flow, high precision.

The iQ PFCV has been designed for maximum performance in ventilator applications, with both inlet and outlet pressure balancing the flow characteristic is consistent and accurate. These valves are great for low pressure systems where big flow is needed. At 5 psid, this valve is able to deliver 150+ slpm. This is all done without sacrificing high resolution on the low end, where the system is still able to finely control the flow.

Non-Isolated and Isolated PFCV

Depending on the application, iQ offers two versions of the same valve, with the latter being a diaphragm isolated valve where the media never touches the magnetic members. This valve also provides peak performance, and the most stable pressure balancing for extreme cases.

For more information on the different types of balanced valves we offer, please visit our website or give us a call for more information.

Balanced Tesla Proportional

Big performance in a small package.

The iQ Tesla Proportional has been a staple in the standard valve portfolio. The balanced version was introduced in order to extend up our flow rates, and outperform competition in the same size, fit, and function. Designed for maximum performance in ventilator applications, the inlet pressure balanced version is repeatable and accurate. These valves are great for higher pressure systems where big flow is needed in a small package.

Cost Effective Flow Control Solution

Typically valves that pack this kind of flow in such a small package come at a premium. We designed this valve to be able to be produced in numbers and keep costs down. It gives you all the performance you need at price point that is superior to the competition.

The beauty of this valve is that it can be converted into many different footprints to fit the customers needs. We offer these valves standard in a manifold mount configuration, but these can also be bought with other types of porting.

For more information regarding the availability, pricing, and other configurations, please give us a call so we can help guide your selection.