Clippard

Manufacturers of Quality Pneumatic & Electronic Control Devices
William L. Clippard, Jr. founded Clippard Instrument Laboratory in 1941. The initial product line consisted of electrical test equipment, magnetic windings, and radio frequency coils. The first miniature fluid power devices designed and built by Clippard were for use in the manufacture of this equipment.

In the early 1950's, Clippard introduced Minimatic® components as a new product line. The need for miniature pneumatics was so widespread, that the Minimatic line was successful enough to become Clippard's primary product line, and remains so today.

Industry Diversity
Over the past five decades, a diverse range of industries throughout the world have come to rely on Minimatics to control machines, systems and processes through an unlimited list of applications. Clippard’s quality in design, engineering, and manufacturing, as well as expansive product offering, makes Clippard the preferred choice for miniature and sub-miniature pneumatic applications.

Applications
Today, Clippard pneumatic control devices are used virtually everywhere for control, interface, sensing, logic, and actuation functions. This broad range of applications spans a variety of industries including machinery, textile, medical equipment, animation, material handling, assembly, electronics, food processing, packaging and many more.
Complete Product Line

The complete Minimatic line includes over 5,000 standard products. Some of the many products offered include valves, stainless steel and brass cylinders, fittings, modular components, push buttons, electronic manifold cards, circuit analyzers and pre-piped manifold subplates. Special components designed OEM applications are also welcomed.

Quality in Manufacturing

Quality remains a primary feature of every product Clippard produces. This is achieved through the excellence in manufacturing practices and craftsmanship that has continued throughout the years. The high standards set by Leonard Clippard, in company relationships with customers, distributors, suppliers and employees continue to be upheld. The company motto, "Quality People, Quality Products", emphasizes the important role every employee plays in maintaining the company's reputation.
In the early 1950’s, Clippard introduced miniature pneumatic cylinders and valves to industry. No other manufacturer can boast of the same experience or knowledge of miniature components. Clippard cylinders are of original design, are of the finest OEM quality available, and are fully-tested for outstanding performance and long life.

Stainless Steel
Clippard’s reliable, high-quality stainless steel pneumatic cylinders feature polished ID 304 stainless steel tubes for low breakaway. Quality and craftsmanship assure excellent performance and long life. Available in 12 bore sizes with strokes up to 40”.

Brass & Corrosion-Resistant
Brass and aluminum cylinders compliment the Minimatic® line of components with some of the most original and long lasting cylinders available today. Brass cylinders are available in bore sizes up to 7/8”, and the aluminum cylinders are offered in 1 1/8” bore.
Air Force One®
The Air Force One compact cylinders are the perfect choice for applications where physical size or harsh environments are an issue. The AFO cylinders feature a stainless steel tube and roller burnished piston rod. This means longer rod and piston seal life. Applications where dirt and abrasives may be ingested and cause seals to wear faster than normal, the AFO offers the benefit of tie rod construction, which enables seals to be replaced, rather than replacing the entire cylinder.

Polished ID 304 stainless steel tubes for low breakaway
Precision rolled construction for solid leakproof cylinders at reasonable prices
Machined aluminum heads are clear anodized for extra protection against corrosion
Cylinder heads are machined from one side for better concentricity
304 stainless steel rods provide a smoother rod finish that protects rod seals for longer life
Full piston area breakaway to assure full power from the beginning of each stroke
Buna-N “U”-cup piston seals for full power, low friction and trouble free performance
2D drawings and 3D CAD models available
Product configurator available at www.clippard.com/cylinders/
Maximum pressure of 250 psig

Support Products
Clippard manufacturers and stocks a complete line of accessories to support the cylinder product lines. Products include Hall Effect position sensors, reed switches, mounting hardware, flow controls, clamps, sensors, squeeze blocks and more.
When the need arises for small, electronic valves, the first name to come to mind should be Clippard! The company that pioneered the #10-32 thread as a port, maintains an attitude of quality as evidenced in every product manufactured and assembled.

Clippard Minimatic® valves are quiet in operation and produce consistent results. The small size makes them well-suited for a wide range of applications.

**Modular**

Versatility is the key when it comes to Clippard’s Minimatic modular valves. Available in an unlimited variety of directional, flow, pressure and special control valves, each is encased in a body designed to mount and link together with a simple piping system. These modular valves are the supreme “Plug and Play” devices for pneumatic applications.

**EV/ET Series**

The EV/ET series electronic valves are precision-built 2- or 3-way control valves utilizing a unique, patented valving system. These valves are quiet, quick and use extremely low power. They accept low voltage and current signals, and convert them into high pressure pneumatic outputs. Many options are available including various flow configurations, mounting options, orifice sizes, coil styles and more.
Proportional Control

The EVP proportional control valves combine the features of the existing EV series valve—long life, low power, and outstanding performance—with the patented “Spider” armature. The EVP valve provides air or gas flow control, and varies the output flow based on the current input to the solenoid. The consistent gain of this valve provides a high degree of control for many applications.

- Easy-to-mount, small in size and fast response
- #10-32, 1/8” NPT and metric threads available
- Quiet and long life operation
- Over 50 years of industry experience behind every product
- High quality materials and workmanship—every product 100% tested
- Over 2,300 models manufactured

Reliable and dependable

E Series

The E series valves are fully-ported and can be solenoid or air piloted. They provide complete flexibility for use in numerous applications. Whether you need a stack of manifold-mounted 4-way valves to control cylinders in a machine, or a single remote-mounted 4-way to pilot a large pneumatic/air piloted hydraulic device, this series has the features and options to match your needs.
designed to meet today’s engineering needs

lippard Minimatic® miniature valves and associated products have evolved into a widely used system of fluid power control devices, known for quality, value and performance.

Our diverse range of control valves is supported by an experienced team of engineers and application specialists devoted to finding a solution to all your engineering challenges.

2-, 3- & 4-Way

Clippard control valves are available in poppet or spool design, 2-, 3- or 4-way function, in sizes #3-56, #10-32, 1/8” NPT and metric ports, and for pressure up to 300 psig. They are available with solenoid, air pilot, manual and mechanical actuators. Mounting styles include in-line, panel and manifold.

Check & Flow

A variety of check valves are offered which permit flow in one direction only. All have bright-dipped brass bodies that provide for in-line mounting.

Several models of adjustable flow control valves feature a combination needle and check valve which controls the flow in one direction, and allows free flow in the opposite direction. They are ideal for use with a cylinder, providing a slow extend stroke while allowing a fast retract stroke.
Shuttle & Needle

Clippard's various shuttle valves feature a shuttle that allows flow from one inlet to the outlet while blocking the other inlet. Exhaust occurs through the port where pressure was last applied. They may be mounted directly to valves and cylinders, or utilized in-line using hose barbs on certain models.

Adjustable control needle valves restrict the flow in both directions through various configurations to provide coarse or fine flow adjustment.

2-, 3- or 4-way functions
Port sizes #3-56, #10-32 and 1/8”
NPT Metric also available
Quiet and long life operation
Pressures up to 300 psig
In-line, panel and manifold mounting
Over 2,300 valves ready to ship
Reliable and dependable
Unlimited application potential

Actuators

Easily-actuated panel controls are the hallmark of any professional control system. Whether the system is a single valve machine control or an operating console for controlling complex pneumatic systems, you will find the actuator you require at Clippard. Our line includes round push button, in flush, extended, and mushrooms styles. Also available are key locking controls, twist actuators, and electric switches where a combination of electric and pneumatic switching is desired in a single panel.
For ease in construction of pneumatic logic control and fluid power systems, Clippard offers an extensive choice of useful miniature fittings. Clippard fittings are designed for the greatest flexibility, practical usefulness and for savings in time, cost and space. From barbed fittings for 1/16” ID tubing to the new Push-Quick line, Clippard has the fittings for you.

**Brass**

Clippard brass fittings support thread sizes #3-56, #10-32, 1/16” and 1/8” NPT. From the first hose barb manufactured to a comprehensive offering of over fifty fittings now available, Clippard can help with all your connection requirements.

**Quick-Connect**

The Quick-Connect series is ideal for permanent or experimental instrumentation, patch systems and quick set-ups of machines, jigs and fixtures using air, oil or water. Simply plug in, turn to the right position and you are assured of a positive, leak-proof, high pressure connection that will not accidentally pull out.
Clippard fittings save time, cost and space

**FITTINGS**

Flexible and practical

**Slip-On**

Slip-on fittings provide a flexible, easy alternative to ferrule and push-to-connect design fittings. The flexibility and strength of Clippard’s urethane hose, and the compact design of these fittings are ideal for pneumatic applications where convenience and size are considerations. This combination provides a leak free connection that will hold well beyond the working pressure of the hose without the need for additional clamps.

**Push-Quick**

Push-Quick fittings provide a simple method of connecting pneumatic components to each other and system piping. They are designed for use with both flexible hose and stiff tubing. These fittings generally provide higher flows than barbed fittings due to the full size orifice. Offered threaded and non-threaded.

- Designed for easy, quick positive seal
- Miniature size provides a low profile
- Threaded and non-threaded fittings
- Accommodates flexible hose and stiff tubing
- Wide variety of materials, configurations and connection options
- Broad selection of hose and tubing is in stock and ready to ship
Recognized as the original and most complete line of miniature fluid power components, Clippard’s Minimatic® line is available across the globe through a network of fully-trained, stocking distributors. Clippard and our distributors stand ready to provide expert application assistance, support and technical answers to help our customers achieve the highest level of performance in their systems.

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