



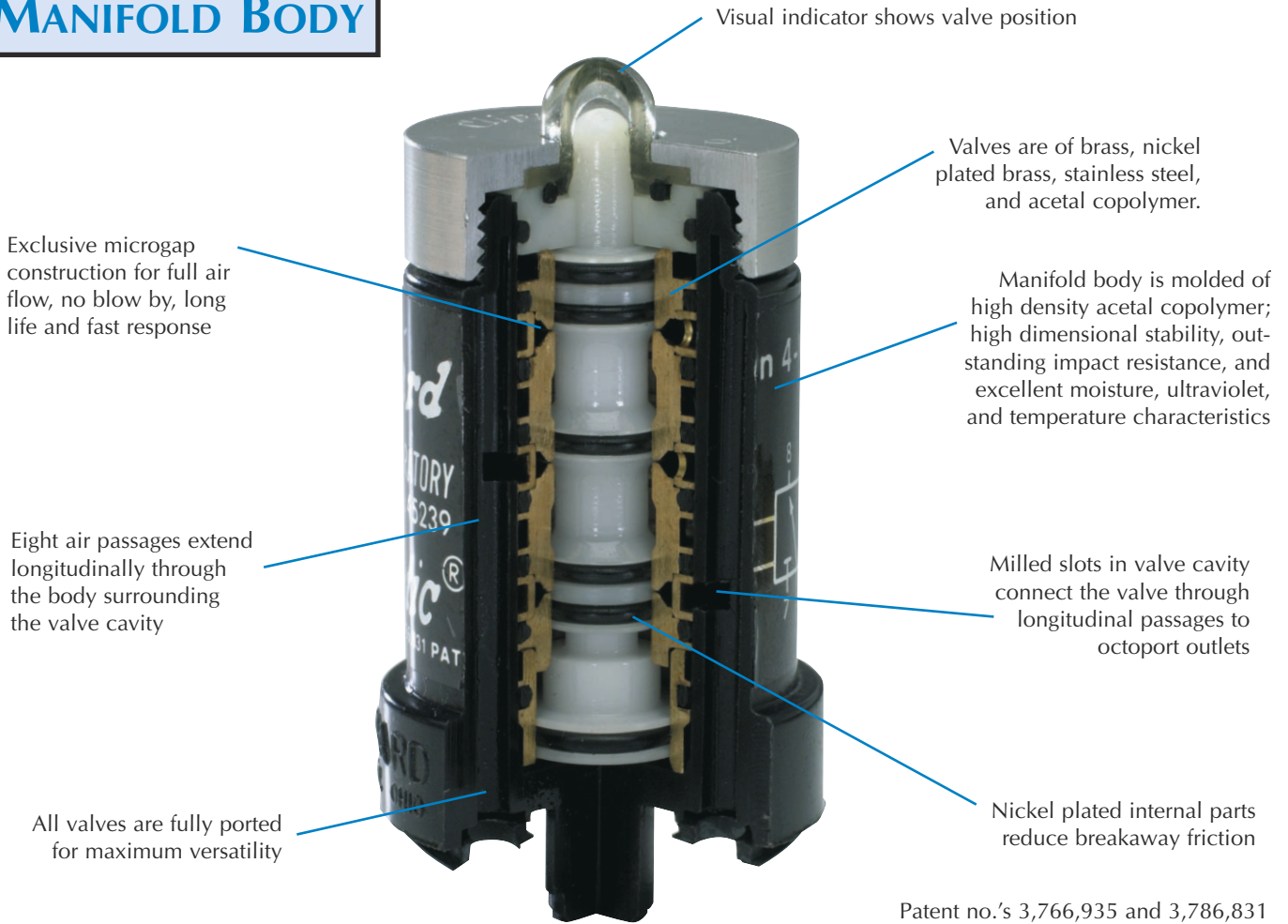
BUILDING A PNEUMATIC CIRCUIT	262 - 263
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One of the major elements of Clippard's award winning design concept is the manifold body. It encircles a central valve cavity with air passages that can be used at any point along the axis of the valve. These passages terminate at the base of the body in a circular octoport pattern. The body mates with a manifold subplate which mounts the complete module and provides 10-32 tapped holes for standard hose fittings. A single molded Octoport gasket, held in place by the two mounting screws, insures a positive seal. Because of the easy availability of an air connection wherever it is required, the manifold body permits valve elements to be designed for maximum performance without the restrictive limitations of rigid port configurations. It also allows multiple porting... using two or more ports as an inlet, outlet, supply, etc. This reduces the amount of external piping needed to complete the circuit. Furthermore the manifold body enables the internal interconnection of ports. This is especially valuable in a number of modules that contain more than one valve.

The separate elements are interconnected in the same module to provide complete subcircuits such as three input "OR", three input "AND", or a two input "NOR". These functions further reduce external piping.

MANIFOLD BODY



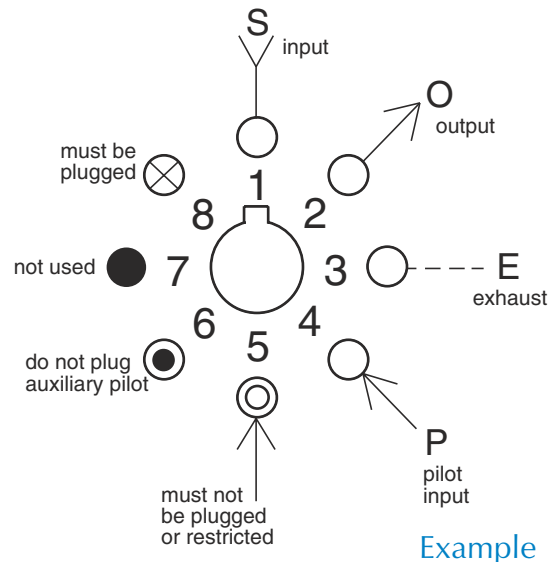
Octoport Port Coding

The coding method shown here is used on the individual product catalog sheets. You will find a port usage diagram furnished for each variation of each model shown. Letters are used to identify port usage:

- S - Supply or Signal
- O - Output
- E - Exhaust
- P - Pilot Input

Where more than one supply, output, exhaust, etc. are involved in one module, subscript numerals are provided: S₁, S₂, etc. Where an auxiliary output is provided it may be identified by the letter O in parentheses: (O).

NOTE: Many of the Octoport valves have multiple ported supplies, outputs, or exhausts, etc. The port usage symbols will usually show one or the other of these ports with an "X" (must be plugged) in it. Both or either of the multiple ports may be used. Unused multiple ports must be plugged. The ANSI symbol will always show which valves have multiple ports.



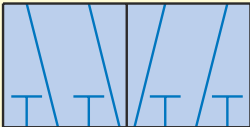
Base Valve



- Can be used as a:
- 2-way normally closed valve
 - 2-way normally open valve
 - 3-way normally closed valve
 - 3-way normally open valve
 - 3-way diverter valve
 - 3-way selector valve



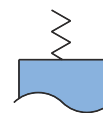
- Can be used as a:
- 4-way fully ported valve
 - Dual 2-way valves (one N.O. & one N.C.)
 - Dual 3-way valves with common exhaust (one N.O. & one N.C.)



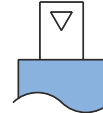
- Can be used as a:
- 6-way fully ported valve
 - Dual 2-way normally closed valve
 - Dual 2-way normally open valve
 - Dual 3-way normally closed valve
 - Dual 3-way normally open valve
 - Dual selector valve

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 in a valve body designed to mount and link together with a simple piping system. The piping system eases assembly and plumbing, resulting in reduced labor costs, errors in installation, and the potential for plumbing leakage. In addition, multiple valve elements can be contained in a single body; providing incredible flexibility and variety to accomplish a myriad of control challenges. The Minimatic® modular valves are the supreme "Plug and Play" devices for pneumatic applications.

Actuation Methods



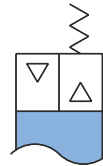
Spring Return



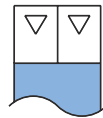
Air Pilot



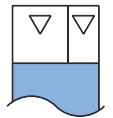
Spring & Auxiliary Pilot



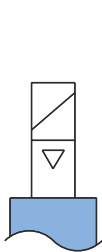
Removable Spring & Auxiliary Pilot



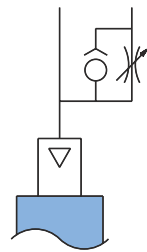
2 Air Pilots "OR"



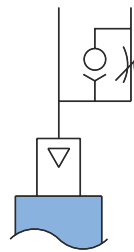
Differential Air Pilots



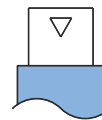
Solenoid Piloted



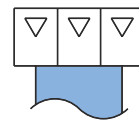
Delay Out From Air Pilot



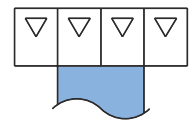
Delay In To Air Pilot



Low Pressure Air Pilot



3 Air Pilots "OR"



4 Air Pilots "OR"



Independent Shuttle Valve & Air Pilot



Shuttle Valve To Air Pilot



Shuttle Valve To Low Pressure



Delay To Air Pilot



Bleed Pressure Pilot



Fluidic Interface Pilot



MODULAR VALVE SYSTEM

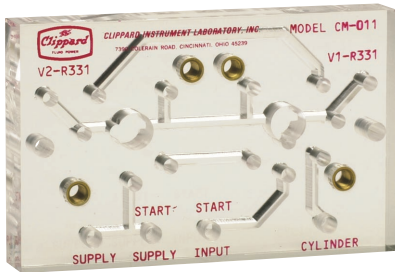
SIMPLIFIED ASSEMBLY

Screws and lockwashers (replacement part R-105) plated steel, binder head, 10-32 thread.

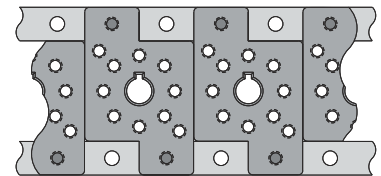
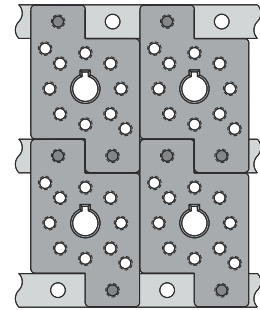
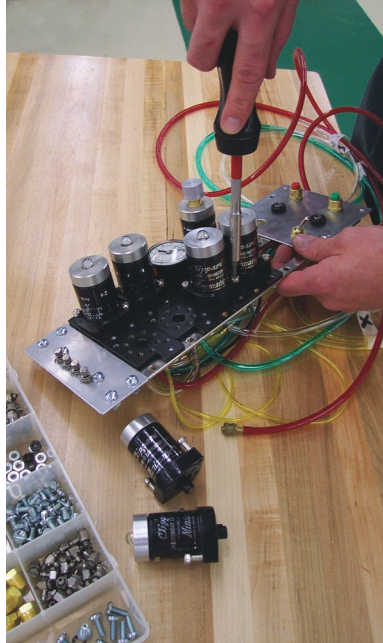


Molded gasket (replacement part R-104) furnished with each module.

Custom plastic manifold subplates of clear plastic have most interconnections inside; speed assembly, assure integrity of circuit. Valves plug in easily.



Standard mounting strips attach to interlocked subplates with 10-32 screws. Resulting circuit plate is rigid and strong. Modules plug in to circuit plate and are held by two fully captivated screws. Molded gasket provides seal between each module and subplate.



See page 262 for further details.

Auxiliary Pilots

One of the bonus features of the Clippard Minimatic® modular components system is the availability and use of auxiliary pilots. These auxiliary pilots are included as standard on the following valves:

R-301	R-311	R-321	R-323	R-331	R-333
R-341	R-343	R-401	R-431	R-443	R-445
R-453	R-461	R-471	R-481		

All of these valves are air piloted with a spring return, with the added advantage of an auxiliary air pilot on the spring side of the valve. The auxiliary pilot consists of an air pilot in addition to the standard spring pilot. This feature greatly increases the versatility of the valve.

The auxiliary pilot may be used to cancel the force of the opposite pilot, thus enabling the spring to shift the valve, even though there is still air pressure on the opposite pilot. (Except R-431)

The majority of these valves will be used without the auxiliary pilot, but the ANSI symbols and port usage drawings show the auxiliary pilot.

Octoport Stamp

Part number R-108

Complete pneumatic circuit drawings in minimum time with this small, self inked octoport stamp.



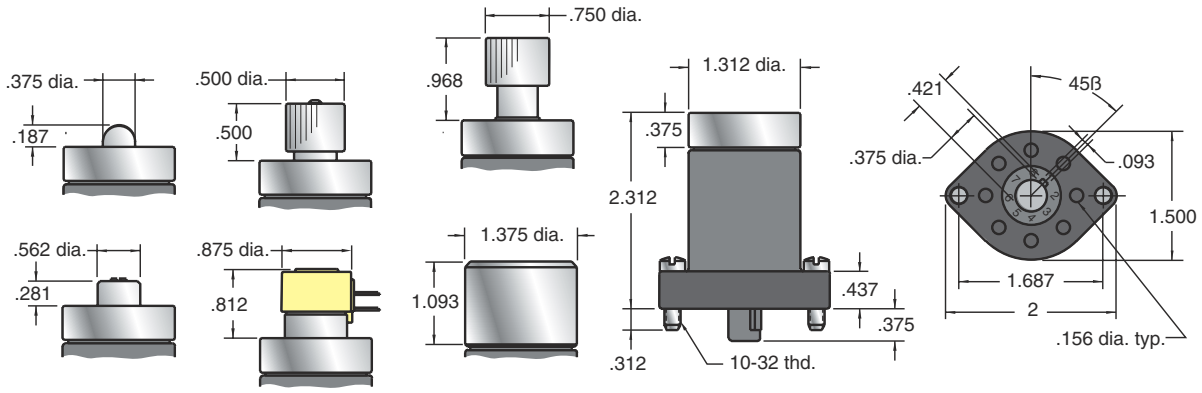
System Requirements

The Clippard Minimatic® modular components system is designed to operate on standard shop air. The air supply should be reasonably clean and dry for optimum performance. The system operating range is 0 to 150 psi. Recommended filtration is 40 micron. Many units have pilot pressure requirements of 20 to 40 psi, therefore, system pressure should be sufficient to assure 40 psi as the absolute minimum pilot pressure at all times. A normal system operating pressure from 60 to 100 psi should adequately provide this. The system operates in a temperature range of 32° F to 230° F.

NOTE: Constant operation at temperature range extremes may affect system performance.

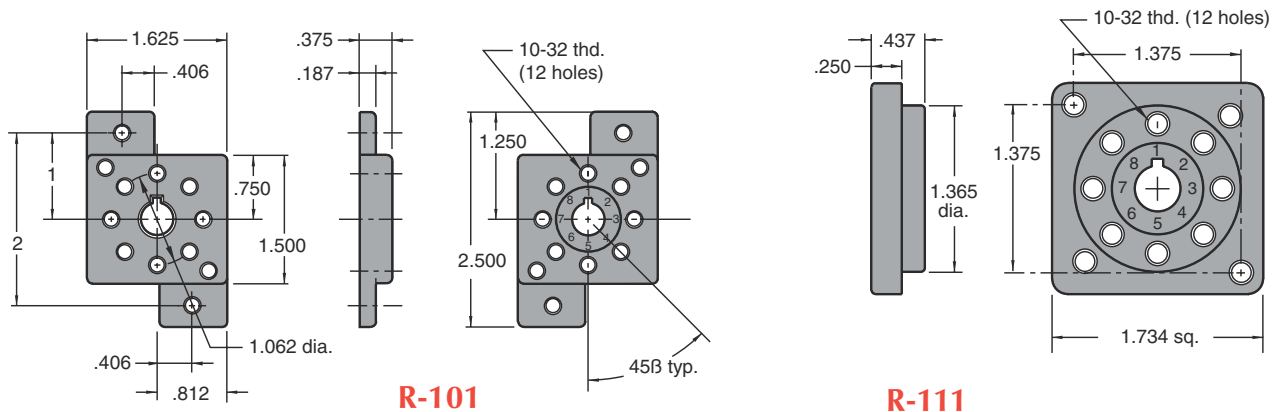
Manifold Module Dimensions

Module manifold body is injection molded high density acetal copolymer for high dimensional stability, outstanding impact resistance, and excellent moisture, ultraviolet, and temperature characteristics.



Subplate Dimensions

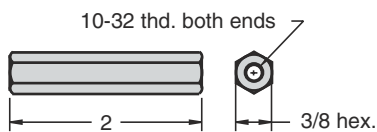
R-101 subplate mounts to mounting strips with 10-32 screws and lockwashers provided. Ports on module base are numbered in the same pattern as on the subplate, making piping easy to identify. Module stem is keyed to fit center hole in subplate; assures fast insertion and proper positioning.



R-111 subplate mounts in 1 3/8" hole in electrical box, control panel. Mounting screws and gasket provided seal subplate to mounting plate.

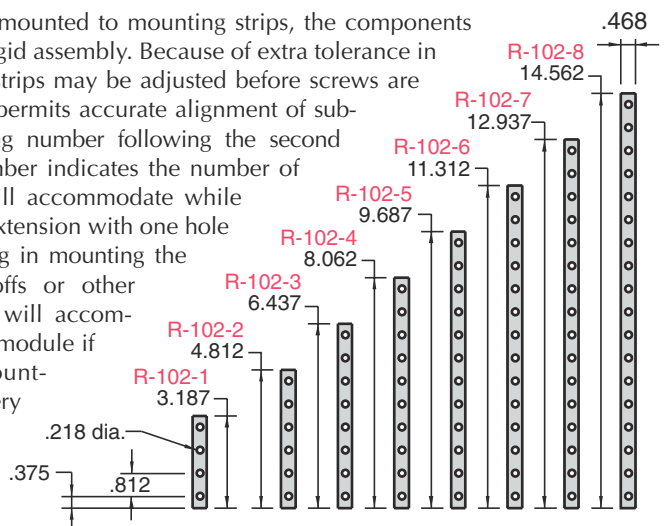
Mounting Strips & Stand-Off Dimensions

R-107-20



For providing space beneath assembled group of modules, use R-106 (order R-107-20, packet of four with hardware). Provides 2" clearance from enclosure wall for piping with Clippard fittings and tubing. Keeps piping and installation neat.

When subplates are mounted to mounting strips, the components build into a strong, rigid assembly. Because of extra tolerance in the holes, note that strips may be adjusted before screws are fully tightened. This permits accurate alignment of subplates. The identifying number following the second dash in the part number indicates the number of modules the strip will accommodate while still proving a short extension with one hole at both ends for using in mounting the assembly to stand-offs or other structures. The strip will accommodate 1 additional module if no extensions for mounting are needed. (Every two holes will accept a subplate.)

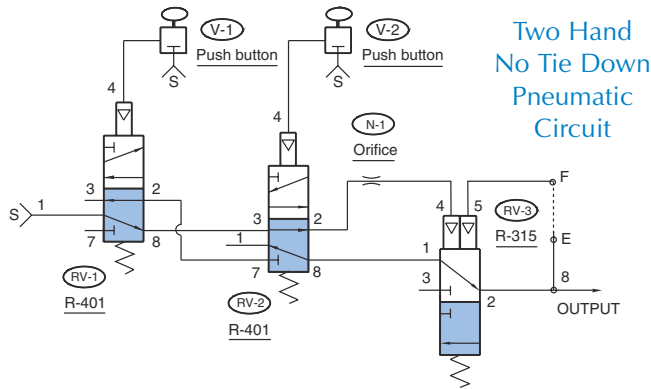


STEP ONE

Pneumatic Circuit

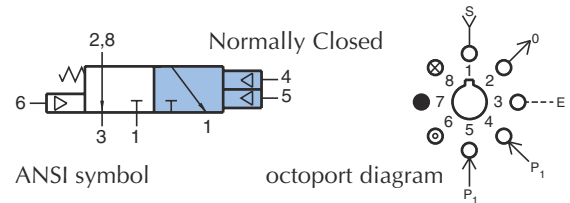
The first step in building a modular circuit is designing the pneumatic circuit using ANSI symbols.

Starting on page 291 we have a number of circuits utilizing Clippard Minimatic Modular Components. We have chosen the Two Hand No Tie Down Circuit for this demonstration.



STEP TWO

Specifications for the R-315 modular valve



Octoport Diagrams

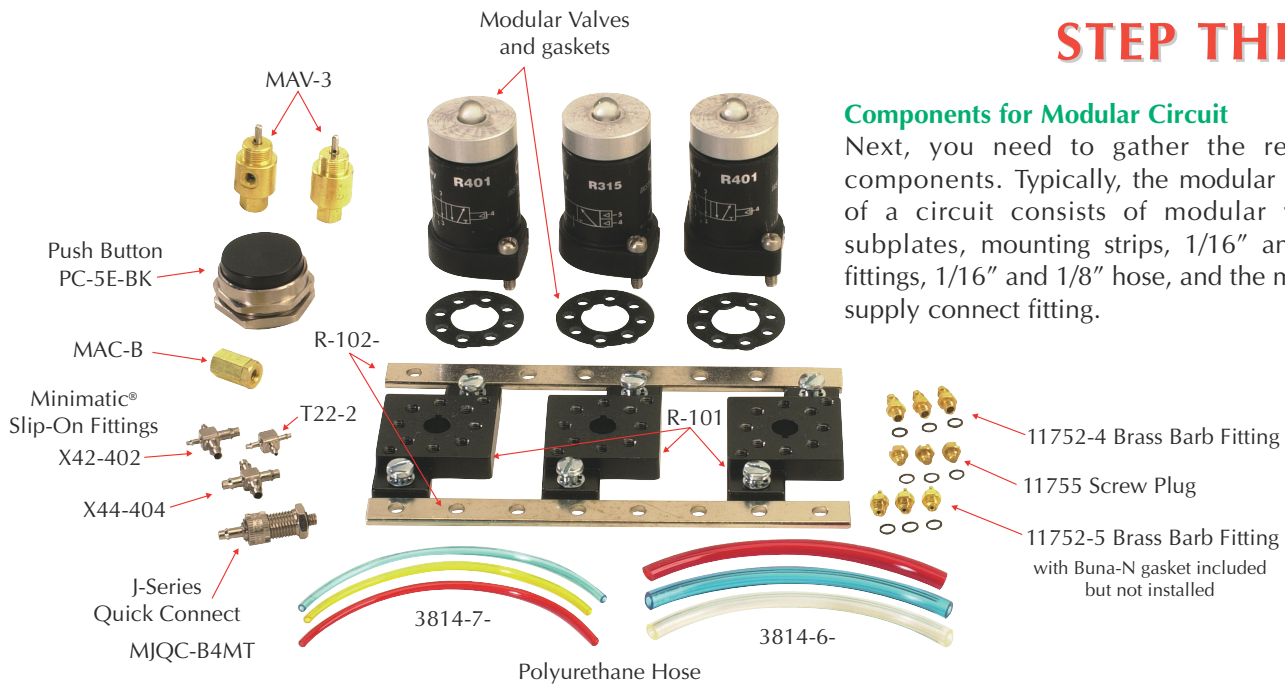
The next step is selecting the octoport diagram for each modular valve. Each Clippard modular valve (R-series) has its own unique octoport diagram which is shown to the right of the ANSI symbol.

See page 258 for clues for deciphering the Octoport port coding.

STEP THREE

Components for Modular Circuit

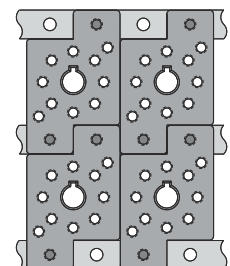
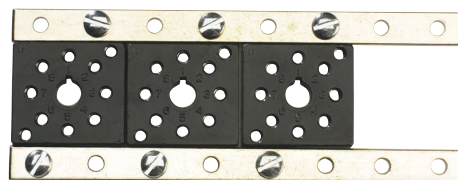
Next, you need to gather the required components. Typically, the modular portion of a circuit consists of modular valves, subplates, mounting strips, 1/16" and 1/8" fittings, 1/16" and 1/8" hose, and the main air supply connect fitting.



STEP FOUR

Mounting Strip and Subplate Assembly

The next step is assembling the mounting strips (R-102-) and subplates (R-101).



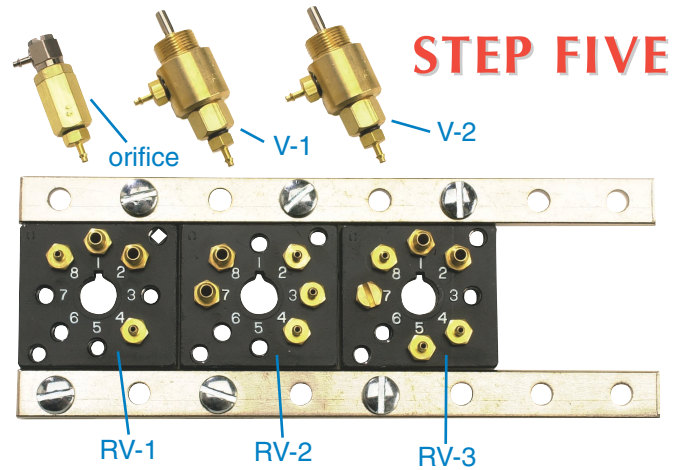
Possible configurations for subplates

Subplate and Fitting Installation

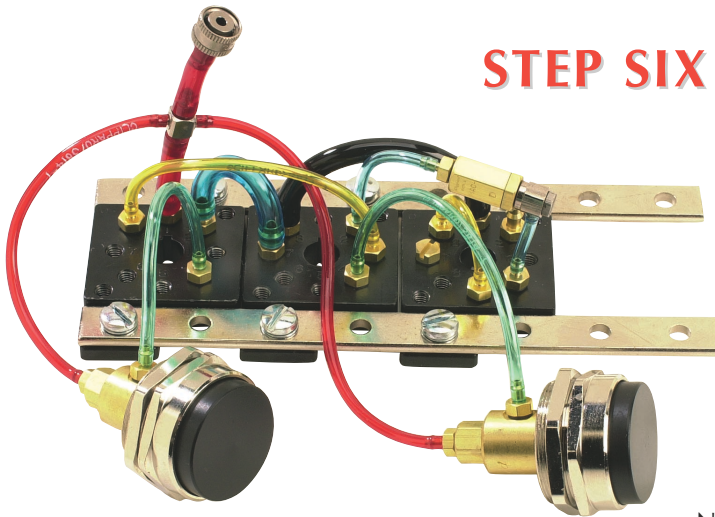
The next step is to install the fittings into the R-101 subplates using the octoport, octoport port coding, and pneumatic circuit diagrams. Generally, 1/16" hose is used for pilot ports and their adjoining lines and 1/8" hose are for supply lines and cylinders.

Looking at the two hand no tie down circuit:

1. Valve RV-1 has fitting 11752-5 (10-32 to 1/16" ID hose fitting) installed in ports 4 and 8
2. Fitting 1752-4 (10-32 thd. to 1/8" ID hose fitting) installed in ports 1 and 2 because port 1 is the main air supply for the circuit and port 2 is the outlet.
3. On valves V-1 and V-2, fitting 11752-5 was installed in both the inlet and outlet of each valve because both valves are used for pilot actuation of valves RV-1 and RV-2.



4. Being in a pilot line, the inline fixed orifice air choke N-1 was fitted with an 11752-5 on one end and a UTO-2 universal "L" fitting on the other.



STEP SIX

Connecting Hose

With the fittings installed, the circuit is ready for hose. The color coding we use at Clippard is quite simple. Red hose is used for all supply lines. For all other hose as many different colors as possible are used in order to facilitate circuit trouble shooting.

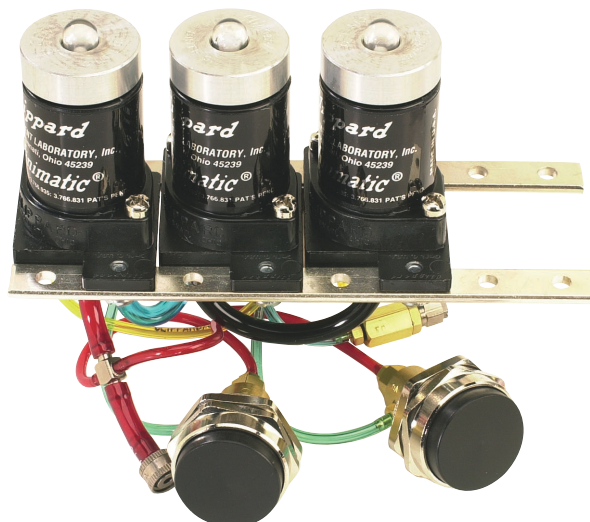
1. Supply lines - Red hose
2. The 1/16" ID fittings require 3814-7- hose
3. The 1/8" ID fittings require 3814-6- hose
4. The main supply line was fitted with a MJQC-CB4 which can be attached to any of the MJQC valve bodies.

Note: The MJQC series is not compatible with the MQC series.

STEP SEVEN

Modular Valve Hook-Up

The final assembly step is installing the modular valves and mounting gasket to the subplates.



Hose and barb sizes were picked with this particular application in mind. Both may vary to meet your needs. Feel free to contact our facility for technical support.

R-501 R-502



Flow control valve

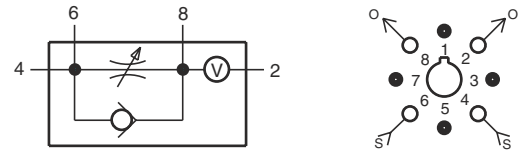
Features:

- Multiple porting speeds piping
- Knurled knob for fast, accurate adjustments - no tools needed
- Fine adjustment for pneumatic timing

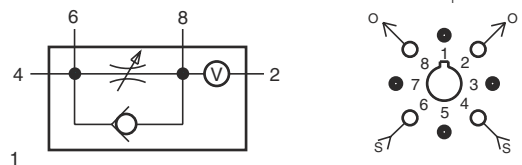
Performance:

Flow (SCFM @ 100 psi).....0 to 1
 Pilot pressure (psi) minimum..... -
 Temperature.....32° to 180° F
 Working pressure.....0 to 150
 Response time (milliseconds)..... -

R-501 Delay In Flow Control



R-502 Delay Out Flow Control



Description:

R-501 is an adjustable flow control designed to meter “IN” to an integral volume chamber to delay pressure build-up in one direction. Dual ports are provided to add extra volume or for multiple input-output connections.

R-502 is an adjustable flow control designed to meter “OUT” from an integral volume chamber to delay pressure decay in one direction.

R-602 R-603



Dual shuttle valves

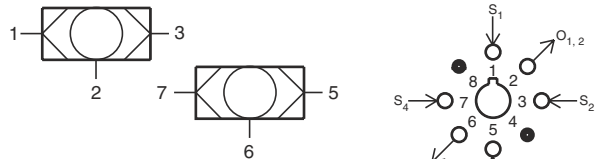
Features:

- R-602**
- Bubble tight operation
 - Two independent units in one module
 - Saves space
- R-603**
- Complete three input subcircuit in one module
 - Auxiliary outputs save fittings and time

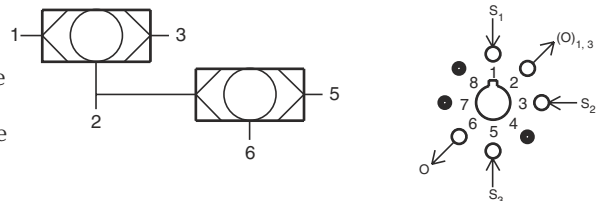
Performance:

Flow (SCFM @ 100 psi).....10
 Pilot pressure (psi) minimum..... -
 Temperature.....32° to 180° F
 Working pressure.....5 to 150
 Response time (milliseconds).....10

R-602 Dual Shuttle Valve



R-603 3-Input “OR”



Description:

R-602 is a dual element combination consisting of two completely independent shuttle valves in a single body.

R-603 is a dual element combination consisting of two shuttle valves which are interconnected into a subcircuit.

It provides a 3-input “or” with port 2 available as an auxiliary. If not used, port 2 should be plugged.



MODULAR REGULATOR & PULSE VALVES

R-701

Pressure regulator

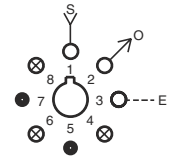
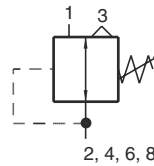


Features:

- Multiple porting speeds piping
- Knurled knob for fast, accurate adjustments - no tools needed
- Self-relieving

Performance:

Flow (SCFM @ 100 psi).....12
 Pilot pressure (psi) minimum..... -
 Temperature.....32° to 180° F
 Working pressure.....0 to 150
 Response time (milliseconds).....10



Description:

R-701 is a self-relieving, adjustable pressure regulator with multiple output ports. Pressure can be piped directly from ports 2, 4, 6 and 8. Eliminates need for additional fittings. Unused output ports should be plugged.

R-711

Pulse valve

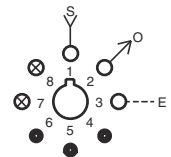
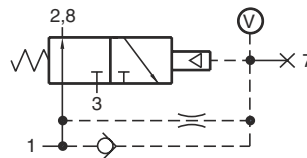


Features:

- Multiple porting speeds piping
- Micro Gap Construction - snap action and no blow by
- Complete function in one module

Performance:

Flow (SCFM @ 100 psi).....10
 Pilot pressure (psi) minimum.....40
 Temperature.....32° to 180° F
 Working pressure.....40 to 150
 Response time (milliseconds)..... -



Description:

R-711 is a 3-way, normally-OPEN, self-piloted valve that closes shortly after being pressurized and remains closed until signal pressure is exhausted. It converts a continuous input signal into a single pulse of approximately 50 milliseconds. Port 7 is provided for additional volume for extending pulse duration and should be plugged if not used.

R-731

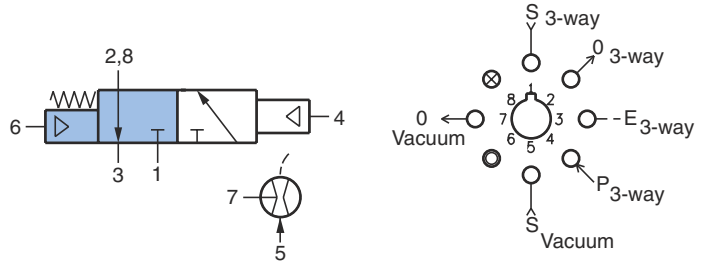


Modular vacuum generator

Turn pressure to vacuum generator on/off

Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by



Performance:

3-Way Valve

Flow (SCFM @ 100 psi).....	9
Pilot pressure (psi) minimum.....	40
Temperature.....	32° to 180° F
Working pressure.....	0 to 150
Response time (milliseconds).....	10

Vacuum Generator

Vacuum (in. Hg@ 60 psig).....	25
Vacuum flow (scfm @ 60 psig).....	0.6
Air consumption (scfm @ 60 psig).....	1.7
Temperature.....	32° to 180° F

Description:

The R-731 is a combination venturi vacuum generator and an independent pilot actuated, spring return, fully ported 3-way valve. Applying pressure at port 5 creates a vacuum at port 7. The 3-way valve can be used to turn the vacuum generator on or off or it can be used to switch the vacuum on or off. 40 PSI is required to pilot the 3-way valve.

For mounting and muffler information see page 285.

R-732

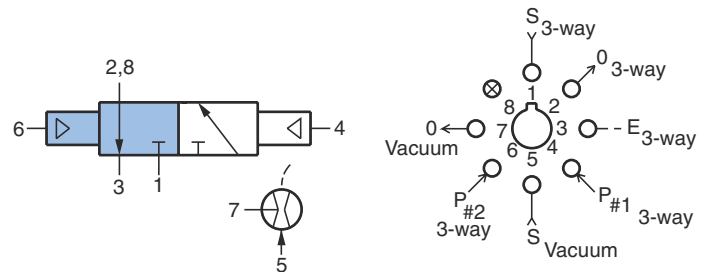


Modular vacuum generator

Select Pressure or Vacuum Output

Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by



Performance:

3-Way Valve

Flow (SCFM @ 100 psi).....	9
Pilot pressure (psi) minimum.....	20
Temperature.....	32° to 180° F
Working pressure.....	0 to 150
Response time (milliseconds).....	10

Vacuum Generator

Vacuum (in. Hg@ 60 psig).....	25
Vacuum flow (scfm @ 60 psig).....	0.6
Air consumption (scfm @ 60 psig).....	1.7
Temperature.....	32° to 180° F

Description:

The R-732 is a combination venturi vacuum generator and an independent double pilot actuated, fully ported 3-way valve. Applying pressure at port 5 creates a vacuum at port 7. The 3-way valve can be used to turn the vacuum generator on or off or it can be used to switch the vacuum on or off. 20 PSI is required to pilot the 3-way valve.

For mounting and muffler information see page 285.



VACUUM GENERATOR

R-781-□



Modular vacuum generator

Turn Vacuum on/off

Features:

- Micro gap construction - snap action and no blow by

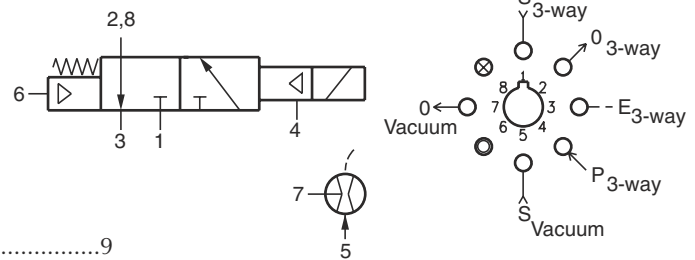
Performance:

3-Way Valve

Flow (SCFM @ 100 psi).....	9
Pilot pressure (psi) minimum.....	20
Temperature.....	32° to 180° F
Working pressure.....	0 to 150
Response time (milliseconds).....	10

Vacuum Generator

Vacuum (in. Hg@ 60 psig).....	25
Vacuum flow (scfm @ 60 psig).....	0.6
Air consumption (scfm @ 60 psig).....	1.7
Temperature.....	32° to 180° F
Available voltage.....	6, 12, 24, VDC



Voltage.....	R-781-6	6VDC
	R-781-12	12VDC
	R-781-24	24VDC
Power consumption.....	0.65 W @ rated voltage	
Duty.....	Continuous duty to 150% of rated voltage	

Description:

R-781 is a combination venturi vacuum generator and an independent pilot actuated electronically controlled, spring return, fully ported 3-way valve. Applying pressure at port 5 creates a vacuum at port 7. The 3-way valve can be used to turn the vacuum generator on or off or it can be used to switch the vacuum on or off. To shift the 3-way valve 40 PSI is required at port 4 along with the appropriate DC voltage being applied to the solenoid.

R-782-□



Modular vacuum generator

Features:

- Micro gap construction - snap action and no blow by

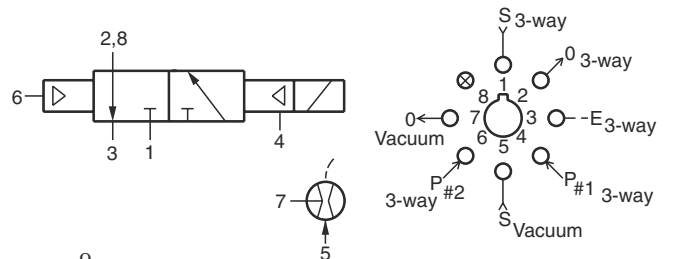
Performance:

3-Way Valve

Flow (SCFM @ 100 psi).....	9
Pilot pressure (psi) minimum.....	20
Temperature.....	32° to 180° F
Working pressure.....	0 to 150
Response time (milliseconds).....	10

Vacuum Generator

Vacuum (in. Hg@ 60 psig).....	25
Vacuum flow (scfm @ 60 psig).....	0.6
Air consumption (scfm @ 60 psig).....	1.7
Temperature.....	32° to 180° F
Available voltage.....	6, 12, 24, VDC



Voltage.....	R-782-6	6VDC
	R-782-12	12VDC
	R-782-24	24VDC
Power consumption.....	0.65 W @ rated voltage	
Duty.....	Continuous duty to 150% of rated voltage	

Description:

The R-782 is a combination venturi vacuum generator and an independent pilot actuated electronically controlled, air pilot return, fully ported 3-way valve. Applying pressure at port 5 creates a vacuum at port 7. The 3-way valve can be used to turn the vacuum generator on or off or it can be used to switch the vacuum on or off. To shift the 3-way valve 20 PSI is required at port 4 along with the appropriate DC voltage being applied to the solenoid. To return the valve a pilot pressure of 20 PSI is required at port 6.

MODULAR VACUUM GENERATOR



The Modular Vacuum Generator is a combination venturi vacuum generator and 3-way valve, contained in a modular body for simplicity and ease of installation. This combination allows the user to control the pressure to the vacuum generator, vacuum from the generator, and other circuit functions as required.

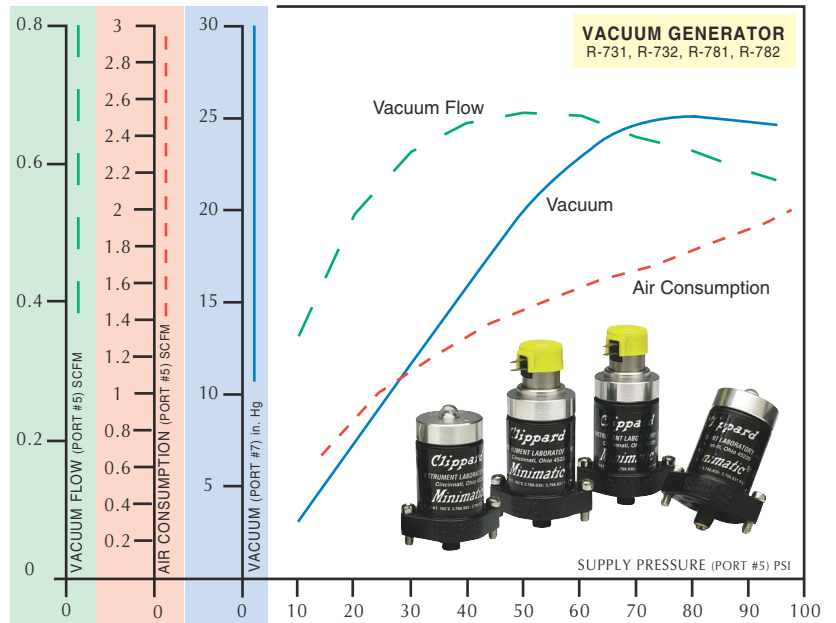
With 60 psig air to the modular generator, a vacuum of 25 in. Hg and 0.6 scfm is generated from the outlet. This vacuum may be used for pick, place, and hold applications, or liquid drawback circuits and is an energy efficient alternative to both electric and multi-stage air powered pumps.

The venturi vacuum generator provides a low cost vacuum source with no required maintenance. It contains a large flow path in a design that is self-cleaning, eliminating the need for a filtered air supply.

The 3-way valve is a proven Clippard modular valve design utilizing micro gap construction for a very short stroke of the balanced spool.

The Clippard modular vacuum generator uses a Delrin® body with a central valve cavity surrounded by (8) independent air passages that terminate at the base of the body in a circular, octoport pattern. The body mates with a manifold subplate (sold separately) that mounts the complete module and provides 10-32 tapped holes for standard hose fittings. A single octoport gasket (included with the module), held in place by two mounting screws, insures a positive seal.

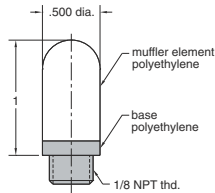
Performance: Clippard modular vacuum generators provide high vacuum flow with high vacuum levels and are field adjustable. The adjustment screw at the base of the modular allows setting to the optimum performance needed to perform the task.



Muffler 3849-1



The 3849-1 muffler is constructed of durable polyethylene with a 1/8 NPT male thread which installs in the extension of either the R-101-10 or R-11-10 subplate.



Gauge VG-30

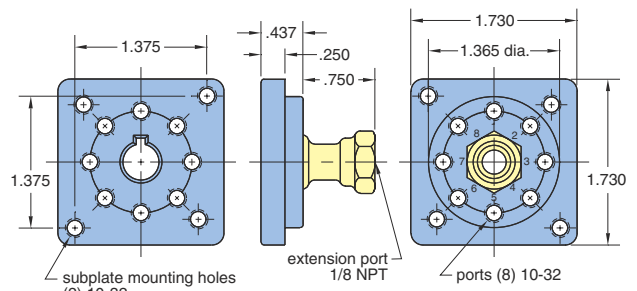
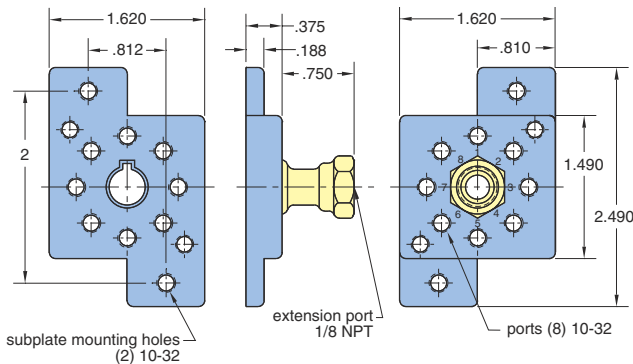


Inlet Vacuum: scale reading from 0 to -30 in. Hg. & 0 to -1 bar

Construction: black case, plastic face, dial shows two ranges; in. Hg in black, bars in red; built-in pressure snubber

Ports: connection located at rear is threaded both
OD - male thread 1/8 NPT
ID - tapped for 10-32 fitting

Mounting: Stud mount using 1/8 NPT center stud or panel mount using the zinc plated steel bracket supplied.



Subplate Dimensions

The **R-101-10** subplate mounts to mounting strips with 10-32 screws and lockwashers provided. Ports on module base are numbered in the same pattern as on the subplate, making piping easy to identify. Module stem is keyed to fit center hole in subplate; assures fast insertion and proper positioning.

R-11-10 subplate mounts in 1 3/8" hole in electrical box, control panel. Mounting screws and gasket provided seal subplate to mounting plate.





MODULAR VOLUME CHAMBER, FILTER & SEQUENCE VALVE

R-801



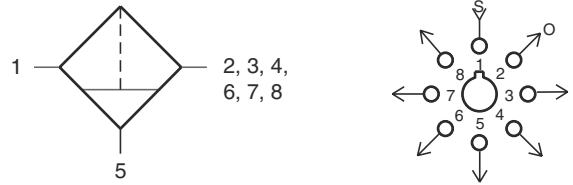
Filter

Features:

- Multiple porting speeds piping
- Clean out port for easy maintenance
- Protects system - assures proper functioning
- Replaceable filter element (Part no. R-801-14)

Performance:

Flow (SCFM @ 100 psi).....12
 Pilot pressure (psi) minimum..... -
 Temperature.....32° to 180° F
 Working pressure.....0 to 150
 Response time (milliseconds)..... -



Description:

R-801 is a 25 micron filter with multiple outlets at ports 2, 3, 4, 6, 7 and 8 to minimize need for fittings. Port 5 is a drain and should be plugged; however, when the valve is mounted vertically port 5 can be tubed to a drain. Unused ports should be plugged.

R-811

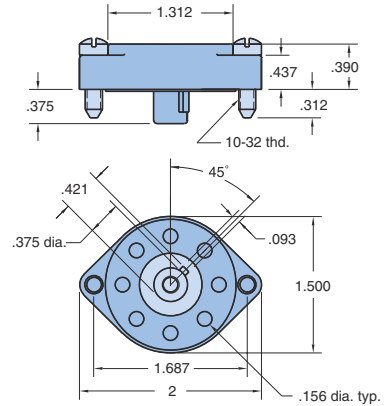


Connector

Connects to subplate R-101, R-111 and manifolds

Description:

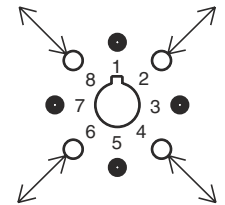
R-811 is an octoport connector that provides rapid and accurate connection of up to eight hoses. Truly a convenience connection; saves time; eliminates mistakes.



R-821



Volume chamber



Description:

Volume chamber provided in standard, plug-in Clippard Minimatic® module body, using standardized octoport. May be used for providing time delay in pneumatic circuits. This model has 1.2 cubic inch volume chamber.

R-901



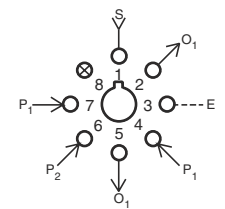
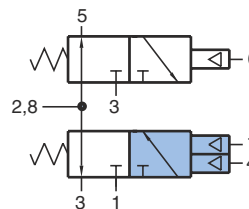
Sequence valve

Features:

- Indicator shows valve position
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts

Performance:

Flow (SCFM @ 100 psi).....10
 Pilot pressure (psi) minimum.....40
 Temperature.....32° to 180° F
 Working pressure.....0 to 150
 Response time (milliseconds).....10



Description:

R-901 is a dual element combination consisting of a 3-way normally-closed, spring return air piloted valve and a 3-way normally-open, spring return, air piloted valve. One of the outputs of the N.C. valve is the input to the N.O. valve. A valve position indicator is provided for the N.C. valve. The R-901 is intended for use in sequential stepping control circuits.

R-932



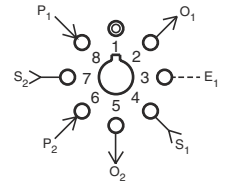
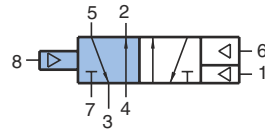
Sequence valve

Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by

Performance:

Flow (SCFM @ 100 psi).....	9
Pilot pressure (psi) minimum.....	20
Temperature.....	32° to 180° F
Working pressure.....	0 to 150
Response time (milliseconds).....	10



Uses:

The R-932 Sequence Control Module is a compact, efficient component for creating a sequential system for control of a multi-step operation. It has many uses throughout industry: see page 292

Description:

R-932 is a 4-way, 5 ported, double piloted, two position valve designed for sequence control application. Availability of two supply and two output ports enables the module to perform the sequential function. One output controls the operation assigned to that step in the cycle. The other output maintains the next step in a hold mode until ready for release. Likewise, the R-932 uses differential pilots. This enables the signal at port 6 to cancel out the force of the opposite pilot at port 8. Shifting of the valve is not possible until the signal at port 6 is removed. When a step is completed, a limit feedback signal actuates the next step. At the end of the sequence the last step resets all the sequence valves, resetting the operation for the next cycle. For each step in the cycle, a separated R-932 module must be used.

R-934



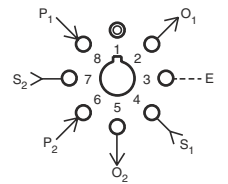
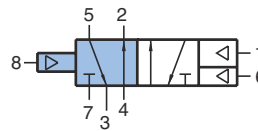
Sequence valve

Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by

Performance:

Flow (SCFM @ 100 psi).....	9
Pilot pressure (psi) Minimum.....	20
Temperature.....	32° to 180° F
Working pressure.....	0 to 150
Response time (milliseconds).....	10



Description:

The R-934 sequence valve is the same as the R-932 sequence valve with the exception of ports 1 and 6. The R-934 port 6 pilot is the same size as the port 8 pilot. This provides a built in safety that if a limit valve is held actuated, the reset signal at port 6 will not reset the sequence, therefore stopping the system with the indicator being in the down position for trouble shooting. The R-934 sequence valve can only be used on the steps that do not have the input signal held normally open.



MODULAR ELECTRONIC SEQUENCING VALVES

R-982-□

Electronic piloted sequence valve

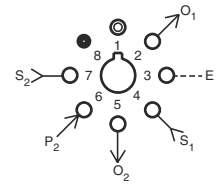
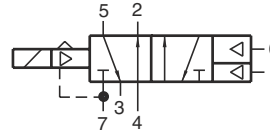


Features:

- Extremely low power consumption
- Patented micro gap valving for quick action, no blow by
- Standard octoport plug-in design
- Provides interface between electronics and pneumatics

Performance:

Working range (psi).....	20 - 105
Flow (SCFM @ 100 psi).....	9
Return pilot pressure (min).....	20
At port 6 (min).....	20
Response time (milliseconds).....	20
Temperature.....	32° to 180° F
Power consumption.....	0.65



Voltage.....	R-982-6	6VDC
	R-982-12	12VDC
	R-982-24	24VDC

Duty.....Continuous duty at 150% of rated voltage

Description:

R-982 electronic sequence valve is essentially a hybrid valve consisting of the R-932 valve and the Clippard model ET-3 electronic/pneumatic valve. The ET-3 responds to low current, low voltage signals and pneumatically actuates the R-932 sequence valve to which it is attached.

R-984-□

Electronic piloted sequence valve

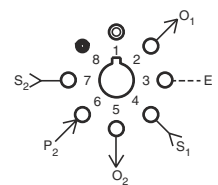
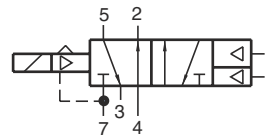


Features:

- Extremely low power consumption
- Micro gap construction - snap action and no blow by
- Standard octoport plug-in design
- Provides interface between electronics and pneumatics

Performance:

Working range (psi).....	20-105
Flow (SCFM @ 100 psi).....	9
Return pilot pressure (min).....	20
At port 6 (min).....	20
Response time (milliseconds).....	20
Temperature.....	32° to 180° F
Power consumption.....	0.65



Voltage.....	R-984-6	6VDC
	R-984-12	12VDC
	R-984-24	24VDC

Duty.....Continuous duty at 150% of rated voltage

Description:

The R-984 electronic sequence valve is essentially a hybrid valve consisting of the R-934 valve and the Clippard model ET-3 electronic/pneumatic valve. The ET-3 responds to low current, low voltage signals and pneumatically actuates the R-934 sequence valve to which it is attached.