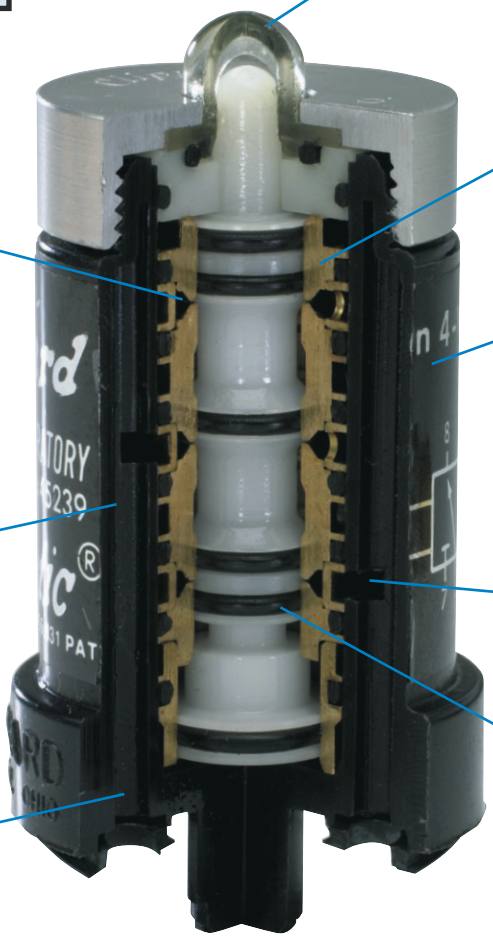
One of the major elements of Clippard's award winning design concept is the manifold body. It encircles a central valve cavity with air passages that can be used at any point along the axis of the valve. These passages terminate at the base of the body in a circular octoport pattern. The body mates with 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



Visual indicator shows valve position

Valves are of brass, nickel plated brass, stainless steel, and acetal copolymer.

Exclusive microgap construction for full air flow, no blow by, long life and fast response

Manifold body is molded of high density acetal copolymer; high dimensional stability, outstanding impact resistance, and excellent moisture, ultraviolet, and temperature characteristics

Eight air passages extend longitudinally through the body surrounding the valve cavity

Milled slots in valve cavity connect the valve through longitudinal passages to octoport outlets

All valves are fully ported for maximum versatility

Nickel plated internal parts reduce breakaway friction

Patent no.'s 3,766,935 and 3,786,831

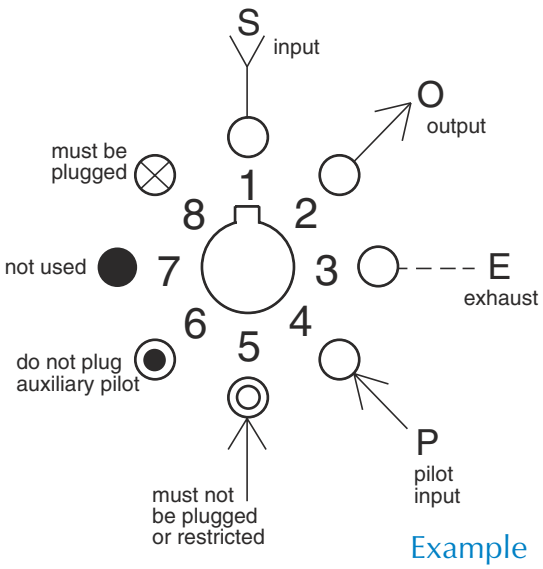
Octoport Port Coding

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

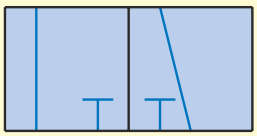
Where more than one supply, output, exhaust, etc. are involved in one module, subscript numerals are provided: S_1, S_2, etc.
Where an auxiliary output is provided it may be identified by the letter O in parentheses: (O).

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.

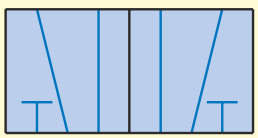


Example

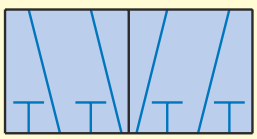
Base Valve



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



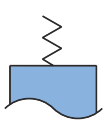
Can be used as a:
- 4-way fully ported valve
- Dual 2-way valves (one N.O. & one N.C.)
- Dual 3-way valves with common exhaust (one N.O. & one N.C.)

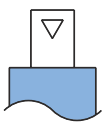


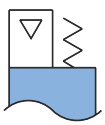
Can be used as a:
- 6-way fully ported valve
- Dual 2-way normally closed valve
- Dual 2-way normally open valve
- Dual 3-way normally closed valve
- Dual 3-way normally open valve
- Dual selector valve

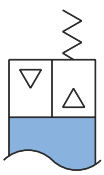
Versatility is the key when it comes to Clippard's Minimatic® Modular Valves. Available in an unlimited variety of directional, flow, pressure and special control valves - each in a valve body designed to mount and link together with a simple piping system. The piping system eases assembly and plumbing, 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.

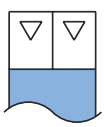
Actuation Methods

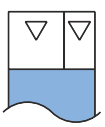

Spring Return

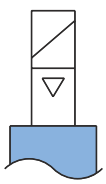

Air Pilot

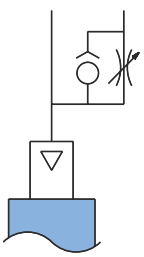

Spring & Auxilary Pilot

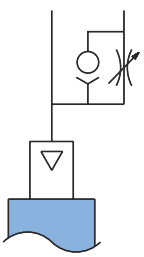

Removable Spring & Auxilary Pilot

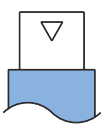

2 Air Pilots "OR"

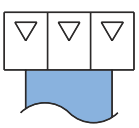

Differential Air Pilots

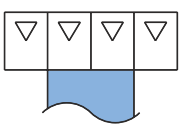

Solenoid Piloted

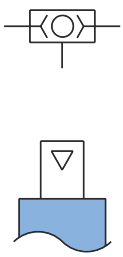

Delay Out From Air Pilot

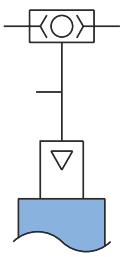

Delay In To Air Pilot

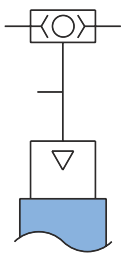

Low Pressure Air Pilot

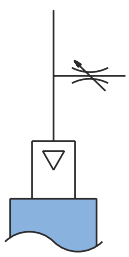

3 Air Pilots "OR"

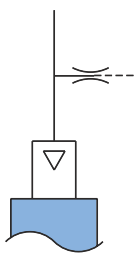

4 Air Pilots "OR"

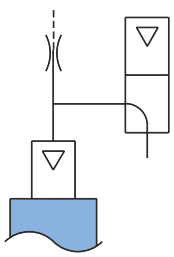

Independant Shuttle Valve & Air Pilot


Shuttle Valve To Air Pilot


Shuttle Valve To Low Pressure


Delay To Air Pilot


Bleed Pressure Pilot

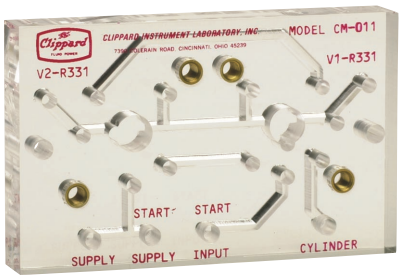

Fluidic Interface Pilot

Simplified Assembly

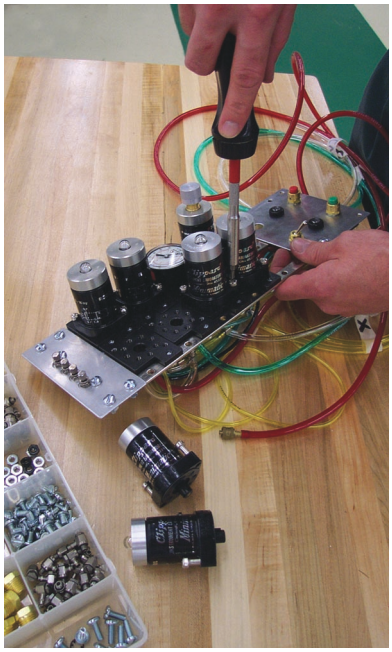
Screws and lockwashers (replacement part R-105) plated steel, binder head, 10-32 thread.

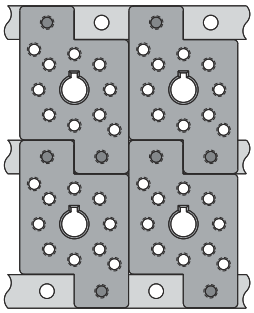
Molded gasket (replacement part R-104) furnished with each module.

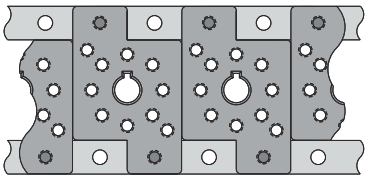
Custom plastic manifold subplates of clear plastic have most interconnections inside; speed assembly, assure integrity of circuit. Valves plug in easily.



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.

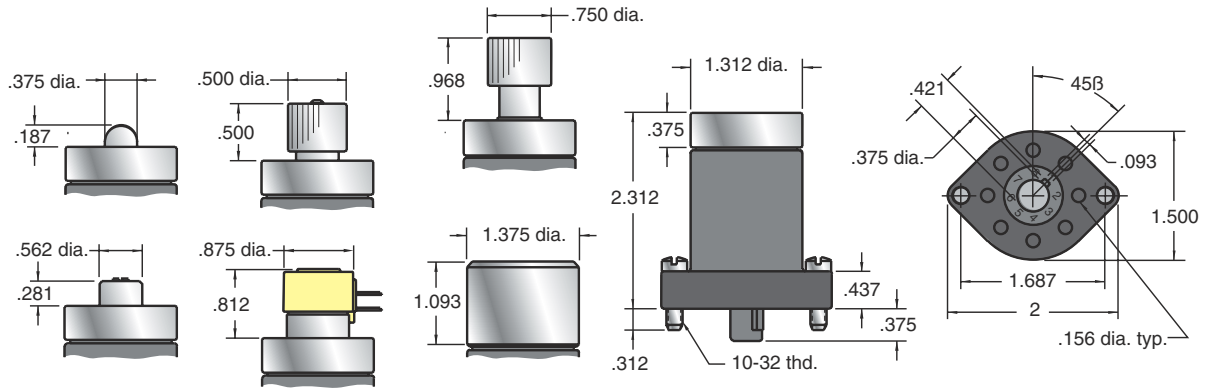
System Requirements

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.

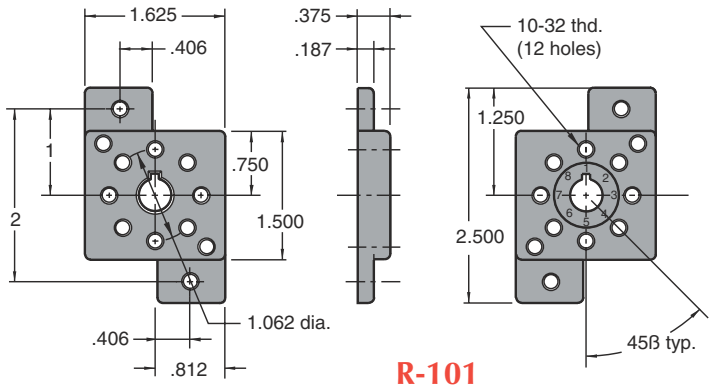
Manifold Module Dimensions

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

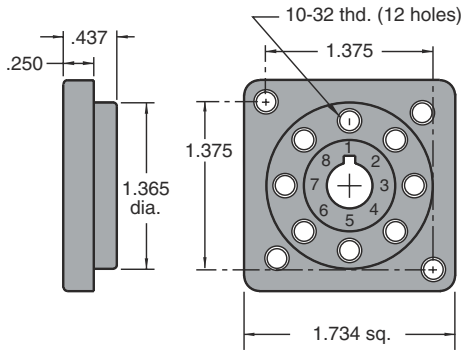


Subplate Dimensions

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-101

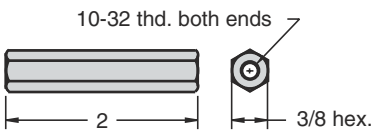


R-111

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

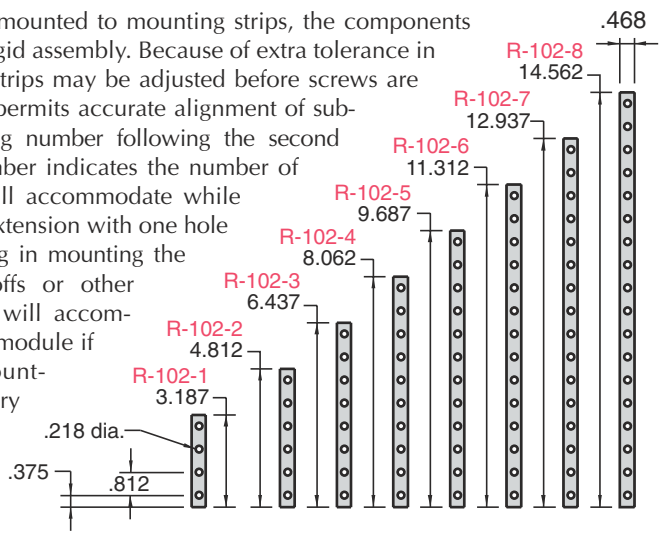
Mounting Strips & Stand-Off Dimensions

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.)



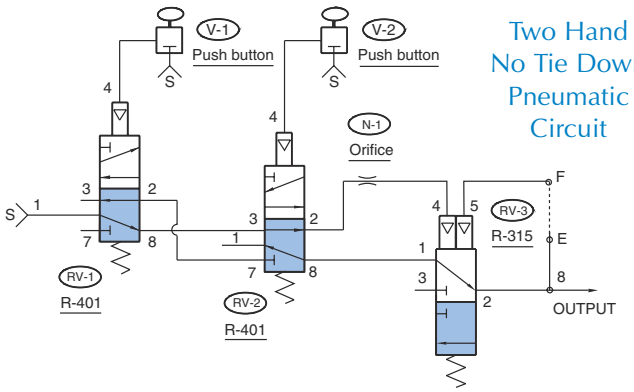
Building a Pneumatic Circuit

STEP ONE

Pneumatic Circuit

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

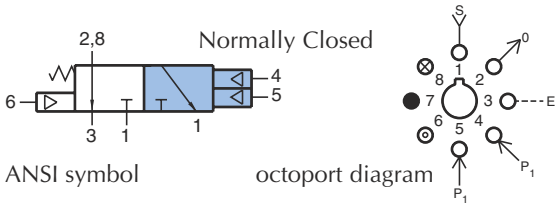
Starting on page 291 we have a number of circuits utilizing Clippard Minimatic Modular Components. We have chosen the Two Hand No Tie Down Circuit for this demonstration.



Two Hand No Tie Down Pneumatic Circuit

STEP TWO

Specifications for the R-315 modular valve

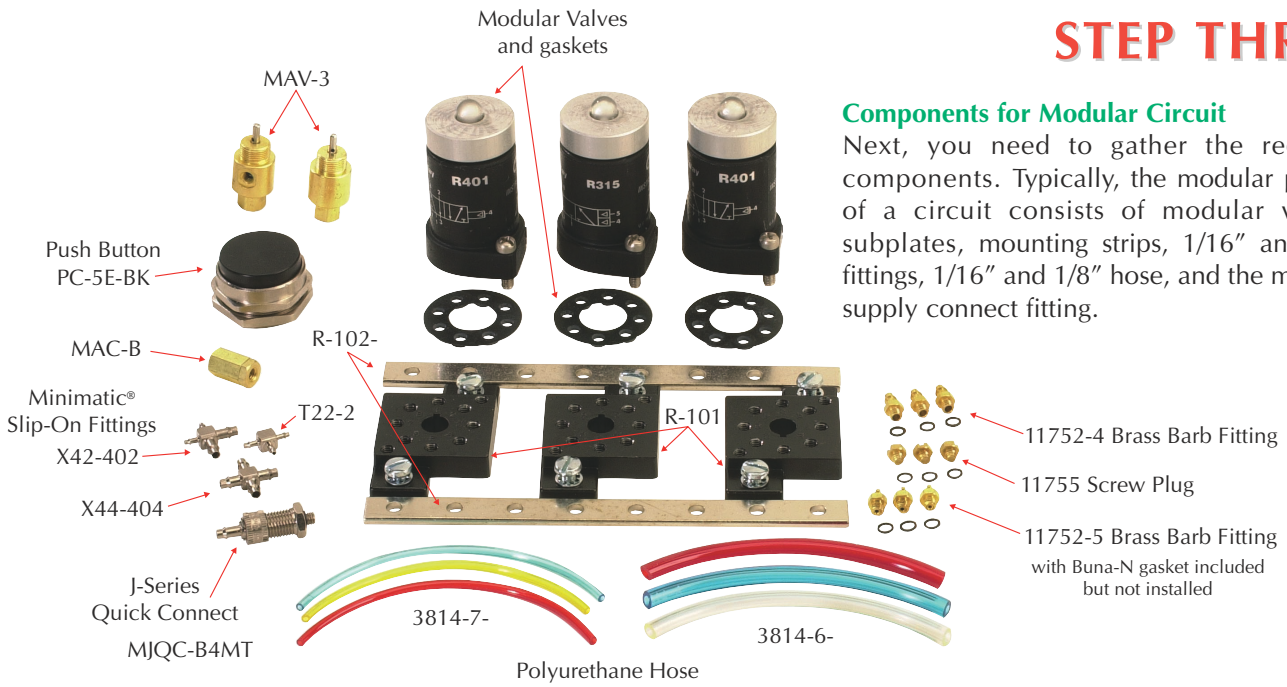


Octoport Diagrams

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



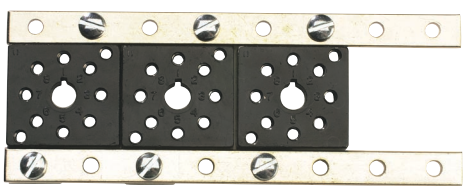
Components for Modular Circuit

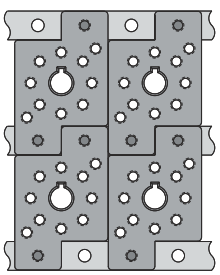
Next, you need to gather the required components. Typically, the modular portion of a circuit consists of modular valves, subplates, mounting strips, 1/16" and 1/8" fittings, 1/16" and 1/8" hose, and the main air supply connect fitting.

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

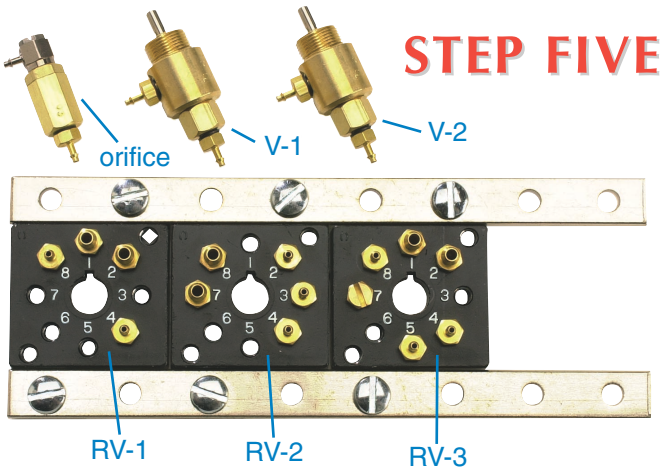
STEP FIVE

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.

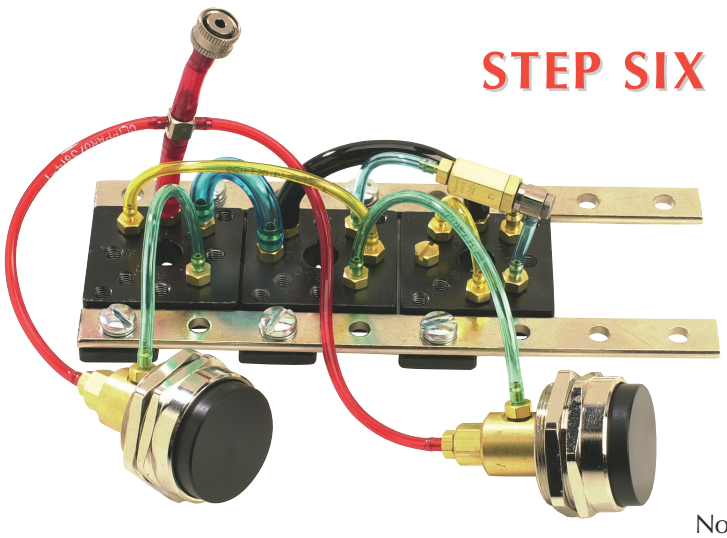
Looking at the two hand no tie down circuit:

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



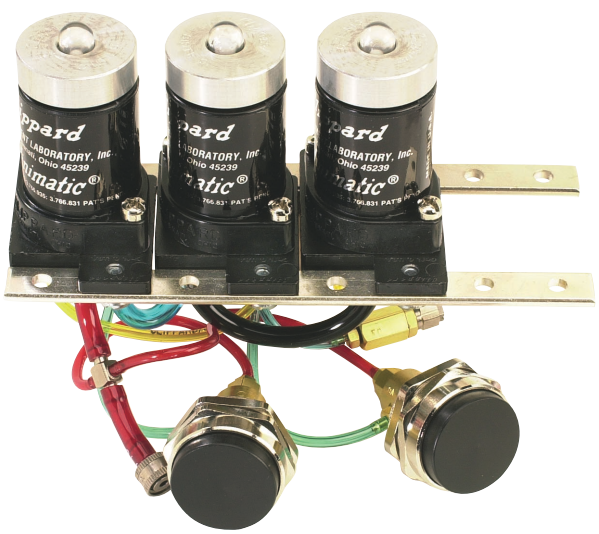
Connecting Hose

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.

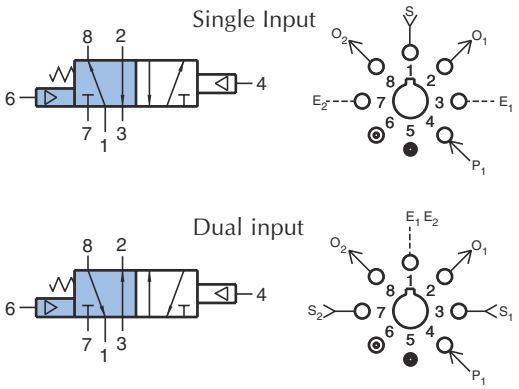
Hose and barb sizes were picked with this particular application in mind. Both may vary to meet your needs. Feel free to contact our facility for technical support.

R-401

Four way valve

Features:

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



Performance:

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

Description:

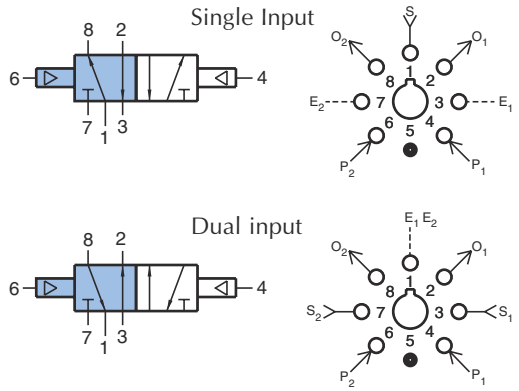
R-401 is a 4-way, spring return, pilot operated, fully ported 5-ported 4-way valve. R-401 is a versatile component in basic logic circuits, and can perform all 2, 3, and 4-way functions. Operates double acting cylinders, and allows speed control by restricting exhaust ports. It can be used with one input, two independent outputs and two independent exhausts, or with two independent inputs, two independent outputs and a common exhaust. Auxillary pilot feature.

R-402

Four way valve

Features:

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



Performance:

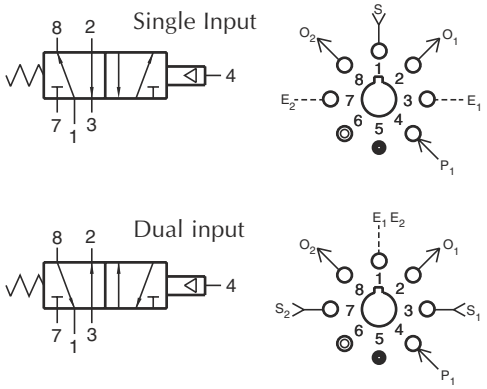
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum.....20
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

Description:

R-402 is a 4-way, double piloted, fully ported, 2-position valve. R-402 is a versatile component in basic logic circuits, and can perform all 2-, 3-, and 4-way functions. Operates double acting cylinders, and allows speed control by restricting exhaust ports.

R-405

L.P. pilot valve



Features:

- Pilot actuates valve with low pressure signal
- Multiple porting speeds piping
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts

Performance:

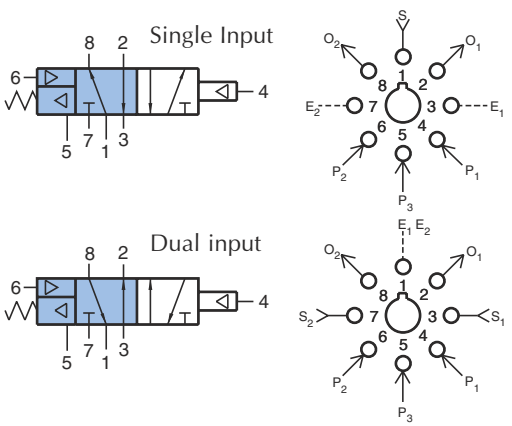
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum.....10
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

Description:

R-405 is a 4-way, spring-return, fully ported 5-port valve with a low pressure pilot. Pilot pressures as low as 10 psi will actuate the valve. It can perform all 2, 3, and 4-way functions. Operates double acting cylinders, allows speed control by restricting exhaust ports. It can be used with 1 input, 2 independent outputs and two independent exhausts, or with 2 independent inputs, 2 independent outputs and a common exhaust. The R-405 may be used in place of an R-401 where lower pilot actuation pressure is desired.

R-410

Four way reset valve



Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts
- Unique piloted spring reset

Performance:

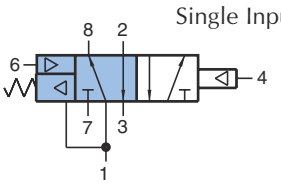
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum (against spring).....40
Pilot pressure (psi) minimum (spring retracted).....20
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

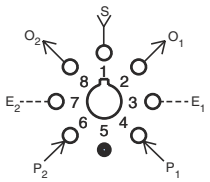
Description:

R-410 is a 4-way, fully ported valve with a special air retracted spring return that will return the valve to a definite position when there is no signal at ports 5 and 4. This "reset" feature may be used in circuits in the event of loss of air pressure or to change the operating characteristics of the valve in the circuit in response to an independent input at port 5. When port 5 is not piloted, the R-410 acts as a R-401 4-way spring return, fully ported valve. When port 5 is actuated, the R-410 acts as an R-402 4-way, two position valve. With no signal at port 5, a signal at port 6 acts as an auxiliary pilot type valve and will override a signal at port 4.

R-412

Four way reset valve





Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts
- Reset feature allows for fail safe circuit design

Performance:

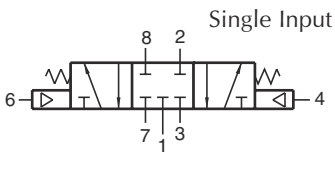
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum.....20
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

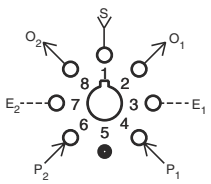
Description:

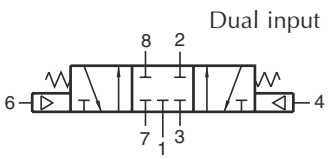
R-412 is a 5 ported 4-way double piloted, fully ported, 2-position valve with a special air-retracted spring that returns the valve to a definite position when the input air is off. This "memory" feature is ideal for circuitry where a definite starting position is required should the air supply fail and come on again unexpectedly. When there is pressure at port one, the spring pilot compresses the spring and holds it out of the way: valve functions normally as a double piloted 4-way valve identical to the R-402.

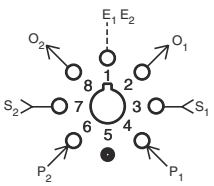
R-421

3-position, 4-way valve









Features:

- Micro gap construction - snap action and no blow by
- Three positions
- Balanced design allows speed control at exhausts

Performance:

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

Description:

R-421 is a 4-way, 3-position, spring centered, fully ported valve. In the center position, all ports are blocked. It is ideal for approximate positioning and holding of pneumatic cylinders.

R-431

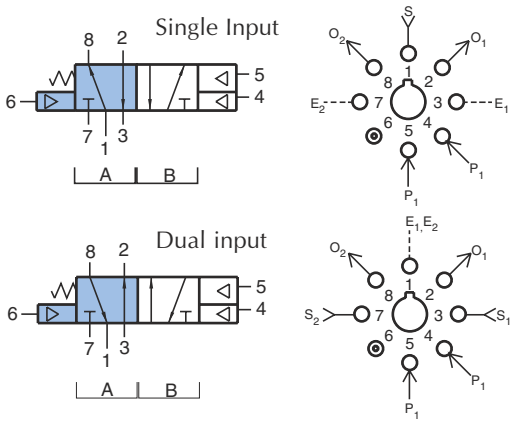
Twin pilot four way valve

Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Dual pilots eliminate shuttle valve
- Balanced design allows speed control at exhausts

Performance:

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



Description:

R-431 is a 5 ported, 4-way valve, with spring return and dual pilots. When ports 5 and 2 are connected, a momentary pilot signal at port 4 will shift the valve to the "latched" position. It will remain in this position until the supply (port 1) is removed, or connection between ports 5 and 2 is interrupted.

Special Note: R-431 uses differential pilots and, as a result, the auxiliary pilot with the spring is not sufficiently large to cancel out the force of pilot 5. The auxiliary pilot will overcome pilot 4. The valve is actuated by pilot signals per the following chart:

Pilot			Position
6	5	4	
off	off	off	A
off	off	on	B
off	on	on	B
off	on	off	B
on	off	off	A
on	off	on	A
on	on	off	B*

*Dependent on pressure relation of port 4 and 6

R-432

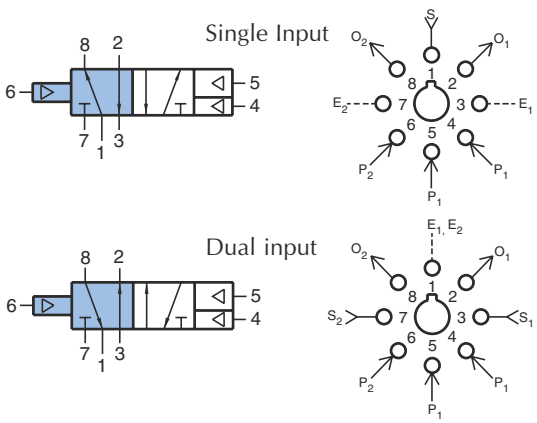
Twin pilot four way valve

Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Dual pilots eliminate shuttle valve
- Balanced design allows speed control at exhausts

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:

R-432 is a 5 ported, 4-way, two position, double piloted valve.

Modular 4-Way Twin Pilot Valves

R-433

Twin pilot four way valve

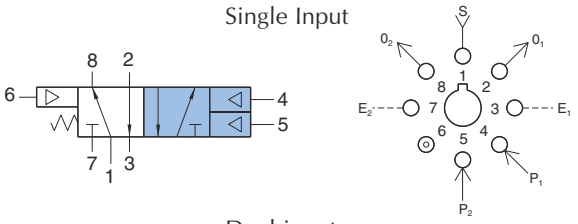
Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Dual pilots eliminate shuttle valve
- Balanced design allows speed control at exhausts

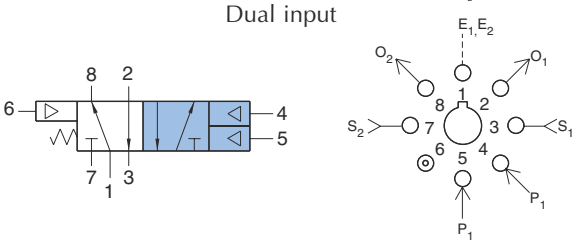
Performance:

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

Single Input



Dual input



Description:

R-433 is a 5 ported, 4-way valve, with spring return and dual pilots.

R-434

Twin pilot four way valve

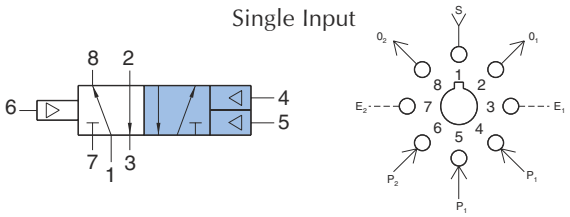
Features:

- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Dual pilots eliminate shuttle valve
- Balanced design allows speed control at exhausts

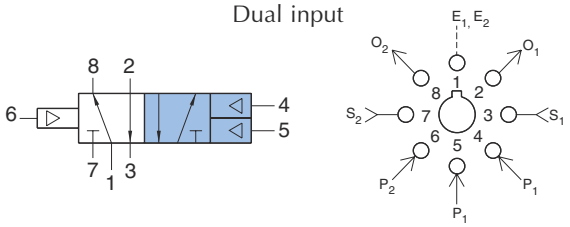
Performance:

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

Single Input



Dual input



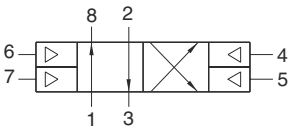
Description:

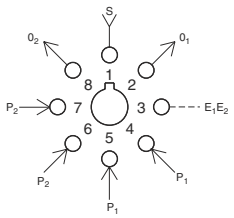
R-434 is a 5 ported, 4-way, two position, double piloted valve.

R-436

Dual twin pilot four way valve

Single Input





Features:

- Micro gap construction - snap action and no blow by
- Dual pilots eliminate shuttle valve
- Balanced design allows speed control at exhausts

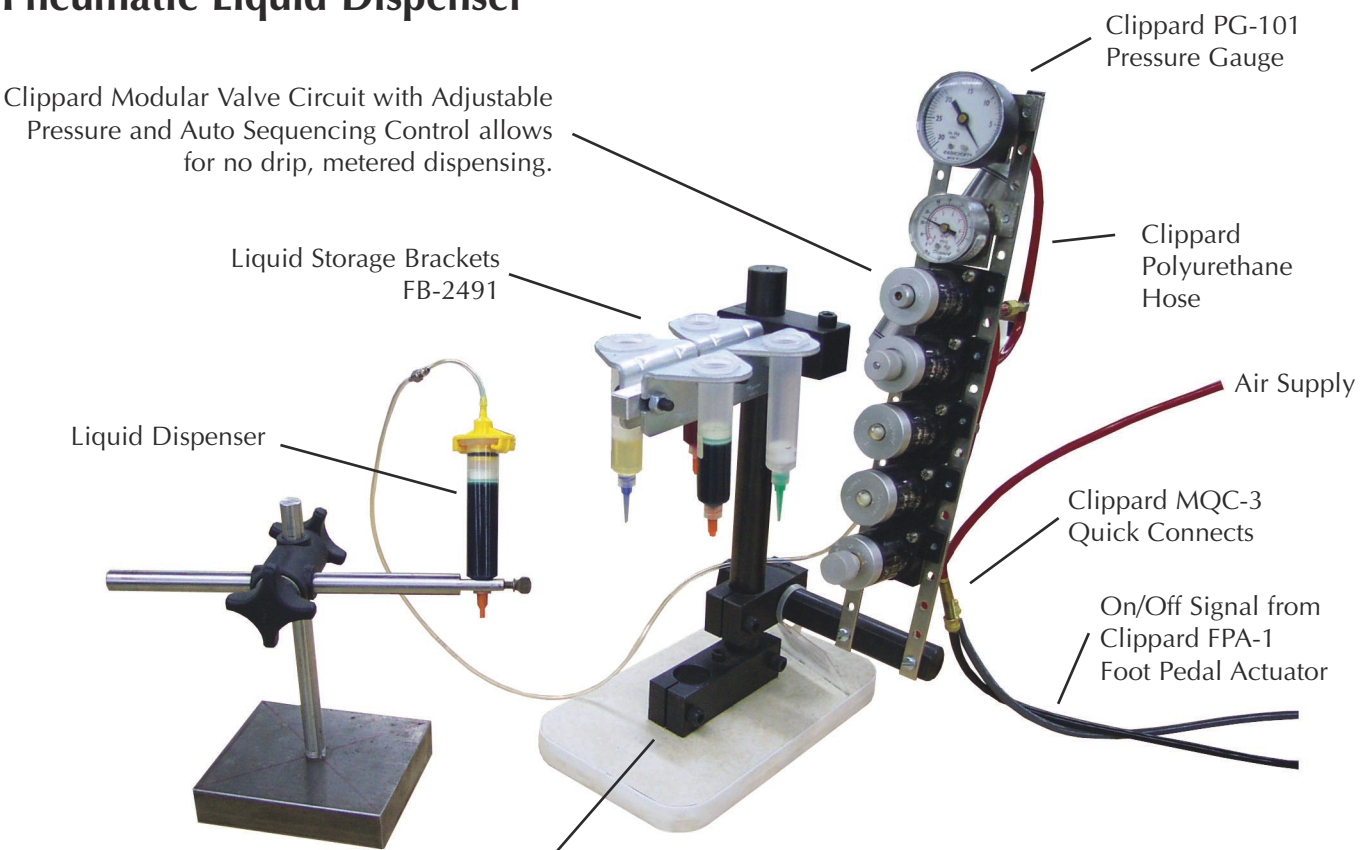
Performance:

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:

R-436 is a 4-way, two position valve with two pilots on each side. Actuating more than one pilot on the same side has no additional effect. Pilot signals must be absent from all pilots on one side before an opposite pilot will shift the valve. Port 3 is used as a common exhaust path.

Pneumatic Liquid Dispenser



This device precisely meters small amounts of liquids to parts with no drip or mess. It is made entirely of Clippard components.

Modular 4-Way Bleed Pilot Valves

R-441

Four way valve

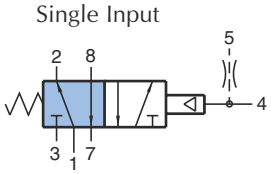
Features:

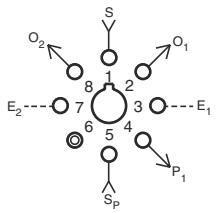
- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts

Performance:

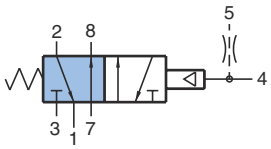
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum.....40
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

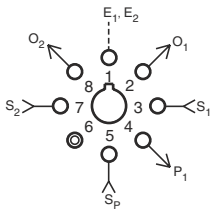
Single Input





Dual input





Description:

R-441 is a 4-way, spring return, bleed piloted valve for use with simple low force sensors. The vent supply pressure is independent of the inlet pressure to the valve. This pilot supply passes through a built-in restriction and shifts the valve compressing the spring. Venting (exhausting) the pressure in the pilot chamber (faster than the restricted supply can recover) shifts the valve.

R-442

Four way valve

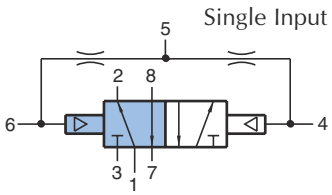
Features:

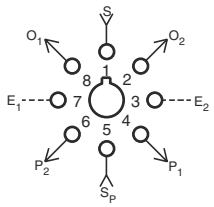
- Indicator shows valve in shaded position
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts

Performance:

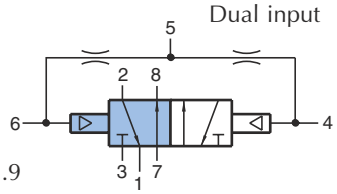
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum.....20
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

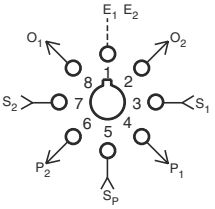
Single Input





Dual input





Description:

R-442 is a 4-way, double bleed pilot valve. The vent supply pressure is independent of the inlet pressure to the valve. Pilot supply passes through built-in restrictions and pressurizes both pilots. Venting (exhausting) the pressure in one pilot chamber (faster than the restricted supply can recover) causes the valve to be shifted by the opposite pilot.

R-443

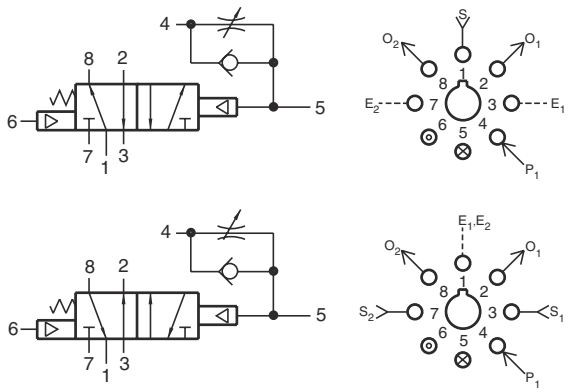
Four way delay valve

Features:

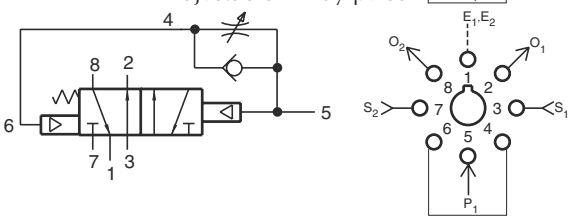
- Micro gap construction - snap action and no blow by
- Screwdriver slot needle adjustment deters tampering
- Balanced design allows speed control at exhausts

Performance:

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



Adjustable 4-way pulse



Description:

R-443 is a 4-way, spring return, fully ported 5-port valve with an adjustable flow control valve interconnected to the pilot. A pilot input signal in port 4 actuates the valve. When the pilot signal is exhausted it is delayed, out keeping the valve actuated until the pilot pressure has decayed. The R-443 can perform all 2, 3, and 4-way functions. The R-443 also features an auxiliary pilot on the spring side of the valve. Port 5 is an auxiliary for adding volume for longer time delays, if not used, port 5 should be plugged.

R-445

Four way delay valve

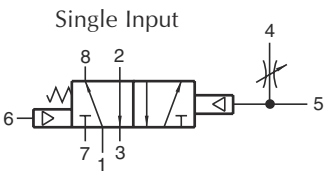
Features:

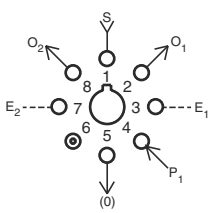
- Micro gap construction - snap action and no blow by
- Screwdriver slot needle adjustment deters tampering
- Balanced design allows speed control at exhausts

Performance:

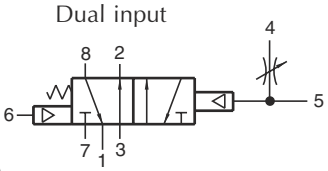
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) minimum.....40
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....10

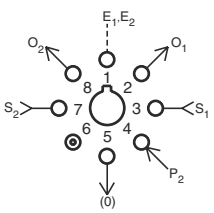
Single Input





Dual input



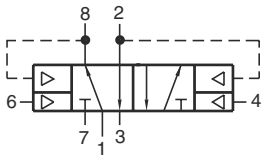


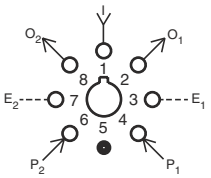
Description:

R-445 is a 4-way, spring return, fully ported, 5-port valve with an adjustable needle valve connected in parallel to the pilot. A pilot signal input in port 4 will be delayed in before actuating the valve. When the pilot signal is exhausted it is delayed out keeping the valve actuated until the pilot pressure has decayed. The R-445 can perform all 2, 3, and 4-way functions. The R-445 also features an auxiliary pilot on the spring side of the valve. It can also be used as a bleed pilot by a constant supply to 4 and connecting port 5 to a bleed valve.

R-451

Binary trigger valve





Features:

- Micro gap construction - snap action and no blow by
- Dual pilots eliminate shuttle valve
- Balanced design allows speed control at exhausts

Performance:

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

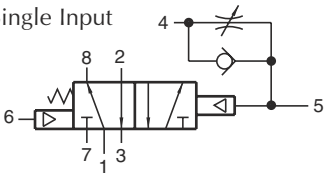
Description:

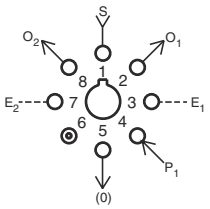
R-451 is a special purpose valve designed to work in conjunction with the R-402/R412 valve to provide a single input flip-flop (binary sub-circuit).

R-453

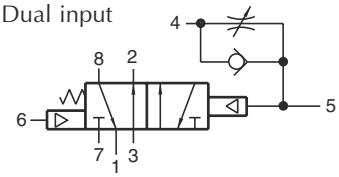
Four way delay valve

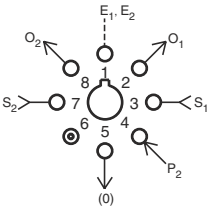
Single Input





Dual input





Features:

- Micro gap construction - snap action and no blow by
- Screwdriver slot needle adjustment deters tampering
- Balanced design allows speed control at exhausts

Performance:

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

Description:

R-453 is a 4-way, spring return, fully ported 5 port valve with an adjustable flow control valve interconnected to the pilot. A pilot signal input in port 4 will be delayed in before actuating the valve. When the pilot signal is exhausted, the spring shifts the valve. The R-453 can perform all 2, 3, and 4-way functions. The R-453 also features an auxiliary pilot on the spring side of the valve.

R-454

Four way delay valve

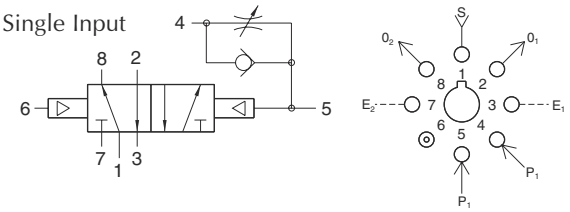
Features:

- Micro gap construction - snap action and no blow by
- Screwdriver slot needle adjustment deters tampering
- Balanced design allows speed control at exhausts

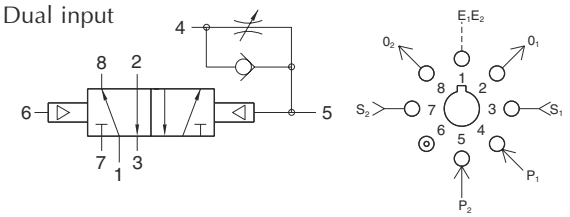
Performance:

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

Single Input



Dual input



Description:

R-454 is a 4-way, double pilot, fully ported 5 port valve with an adjustable flow control valve interconnected to one pilot. A pilot signal input in port 4 will be delayed in before actuating the valve. The R-454 can perform all 2, 3 and 4-way functions.

R-461

Four way valve, six ported

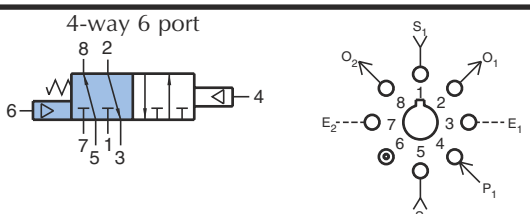
Features:

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

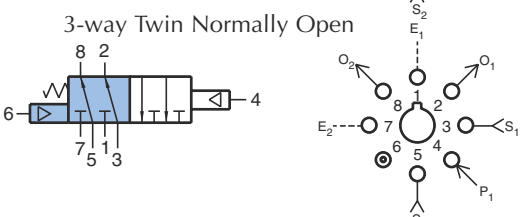
Performance:

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

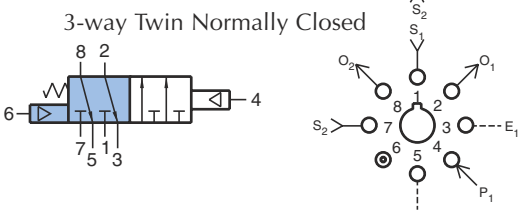
4-way 6 port



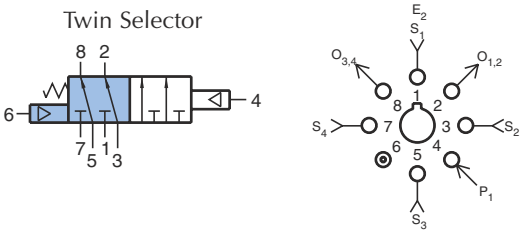
3-way Twin Normally Open



3-way Twin Normally Closed



Twin Selector



Description:

R-461 is a 6 ported, 4-way, spring return, fully ported, pilot operated valve. It is basically two fully ported 3-way valves with a common pilot. It can be used in a variety of applications including dual pressure operations with two independent inlets, outlets, and exhausts.

R-462

Four way valve, six ported

Features:

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

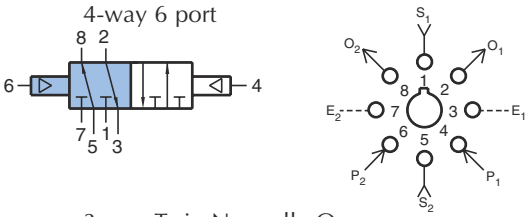
Performance:

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

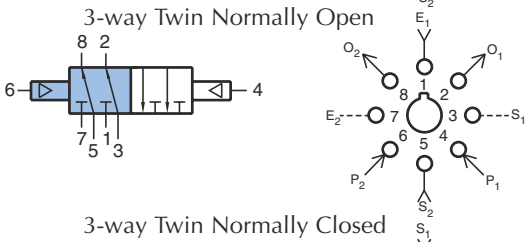
Description:

R-462 is a 6 ported, 4-way, double piloted, fully ported, two position valve. It is basically two fully ported 3-way valves with a common pilot. It can be used in a variety of applications including dual pressure operations with two independent inlets, outlets and exhausts.

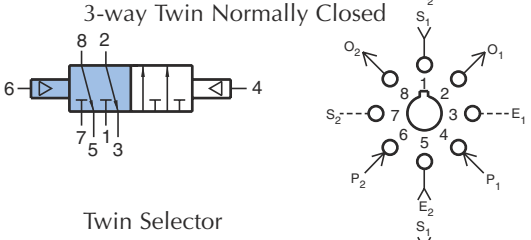
4-way 6 port



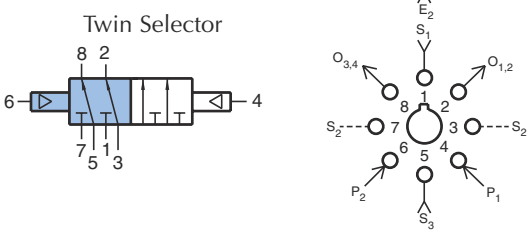
3-way Twin Normally Open



3-way Twin Normally Closed



Twin Selector



R-465

Low pressure four way valve, six ported

Features:

- Pilot actuates valve with low pressure signal
- Multiple porting speeds piping
- Micro gap construction - snap action and no blow by
- Balanced design allows speed control at exhausts

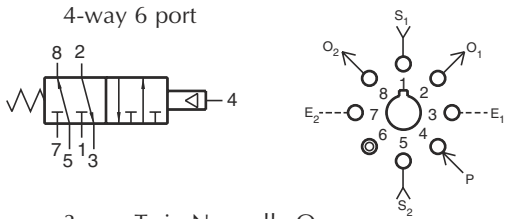
Performance:

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

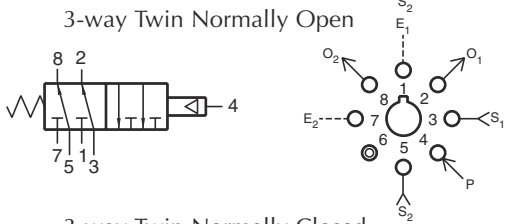
Description:

R-465 is a 6-ported, 4-way, spring-return, fully ported valve with a low pressure pilot. Pilot pressures as low as 10 psi will actuate the valve. It is basically two fully ported 3-way valves with a common low pressure pilot. It can be used in a variety of applications including dual pressure operation, with two independent inlets, outlets and exhausts. The R-465 may be used in place of an R-461 where a lower pilot actuation pressure is desired.

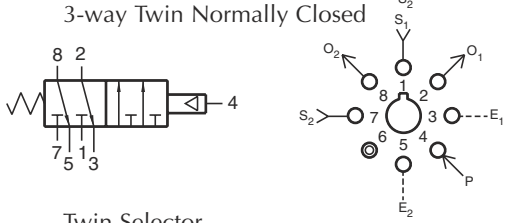
4-way 6 port



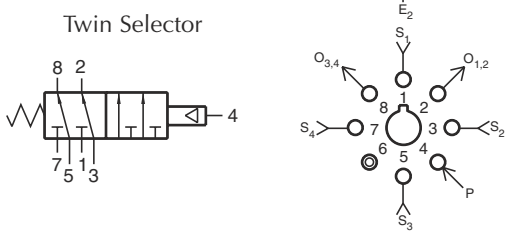
3-way Twin Normally Open



3-way Twin Normally Closed



Twin Selector

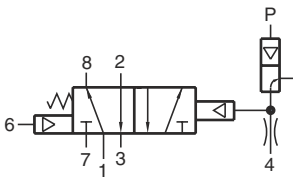


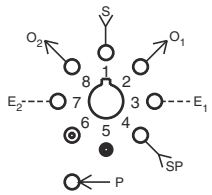
R-471

Four way amplified pilot valve

Features:

- Micro gap construction - snap action and no blow by
- 3200 Fluidamp® bleed type amplifier section assures long life and repeatability
- Standard octoport plug-in design





Performance:

Flow (SCFM @ 100 psi).....9
Pilot pressure (psi)
Minimum.....8″ H_2O on 1″ H_2O off
Pilot supply pressure (psi).....45 to 100
Temperature.....32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....20
Bleed flow (amplifier orifice)..... .010″

Description:

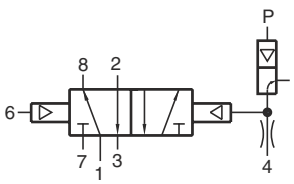
R-471 is a 4-way, fully ported, spring return, amplified pilot valve. The R-471 is a hybrid combination of the R-401 and model 3200 snap action valve.

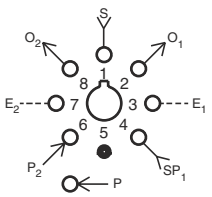
R-472

Four way interface valve

Features:

- Micro gap construction - snap action and no blow by
- NFI 3200 Fluidamp® bleed type amplifier section assures long life and repeatability
- Standard octoport plug-in design





Performance:

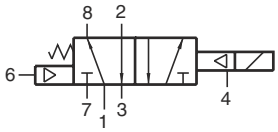
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi)
Minimum.....8″ H_2O on 1″ H_2O off
Pilot supply pressure (psi).....45 to 100
Temperature..... 32˚ to 180˚ F
Working pressure.....0 to 150
Response time (milliseconds).....20
Bleed flow (amplifier orifice)..... .010″

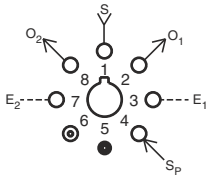
Description:

R-472 is a 4-way, fully ported, two position, amplified pilot valve. R-472 is a hybrid combination of the R-402 and model 3200 snap action valve.

R-481-❑

Electronic valve





Features:

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

Performance:

Working range (psi).....0 to 150
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) .....40 to 105 (on port 4)
Response time (milliseconds).....20
Temperature.....32˚ to 180˚ F
Power consumption.....0.65 watt at rated voltage

Voltage.....

R-481-6	6VDC
R-481-12	12VDC
R-481-24	24VDC

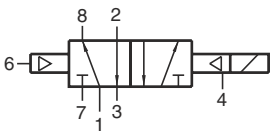
Duty.....Continuous duty at 150% of rated voltage

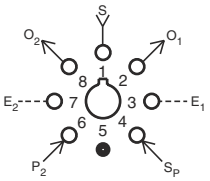
Description:

R-481 is a fully ported (five ported), 4-way valve. It is essentially a hybrid valve consisting of the R-401 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-401 4-way valve to which it is attached. A 40 psi pilot pressure must be present at port 4.

R-482-❑

Electronic valve





Features:

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

Performance:

Working range (psi).....0 to 150
Flow (SCFM @ 100 psi).....9
Pilot pressure (psi) .....20 to 105
At port 6 (min).....20
Response time (milliseconds).....20
Temperature.....32˚ to 180˚ F
Power consumption.....0.65 watt at rated voltage

Voltage.....

R-482-6	6VDC
R-482-12	12VDC
R-482-24	24VDC

Duty.....Continuous duty at 150% of rated voltage (50% overload) permissible

Description:

R-482 is a fully ported (five ported), 4-way valve. It is essentially a hybrid valve consisting of the R-402 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-402 4-way valve to which it is attached. A 20 psi pilot pressure must be present at port 4.