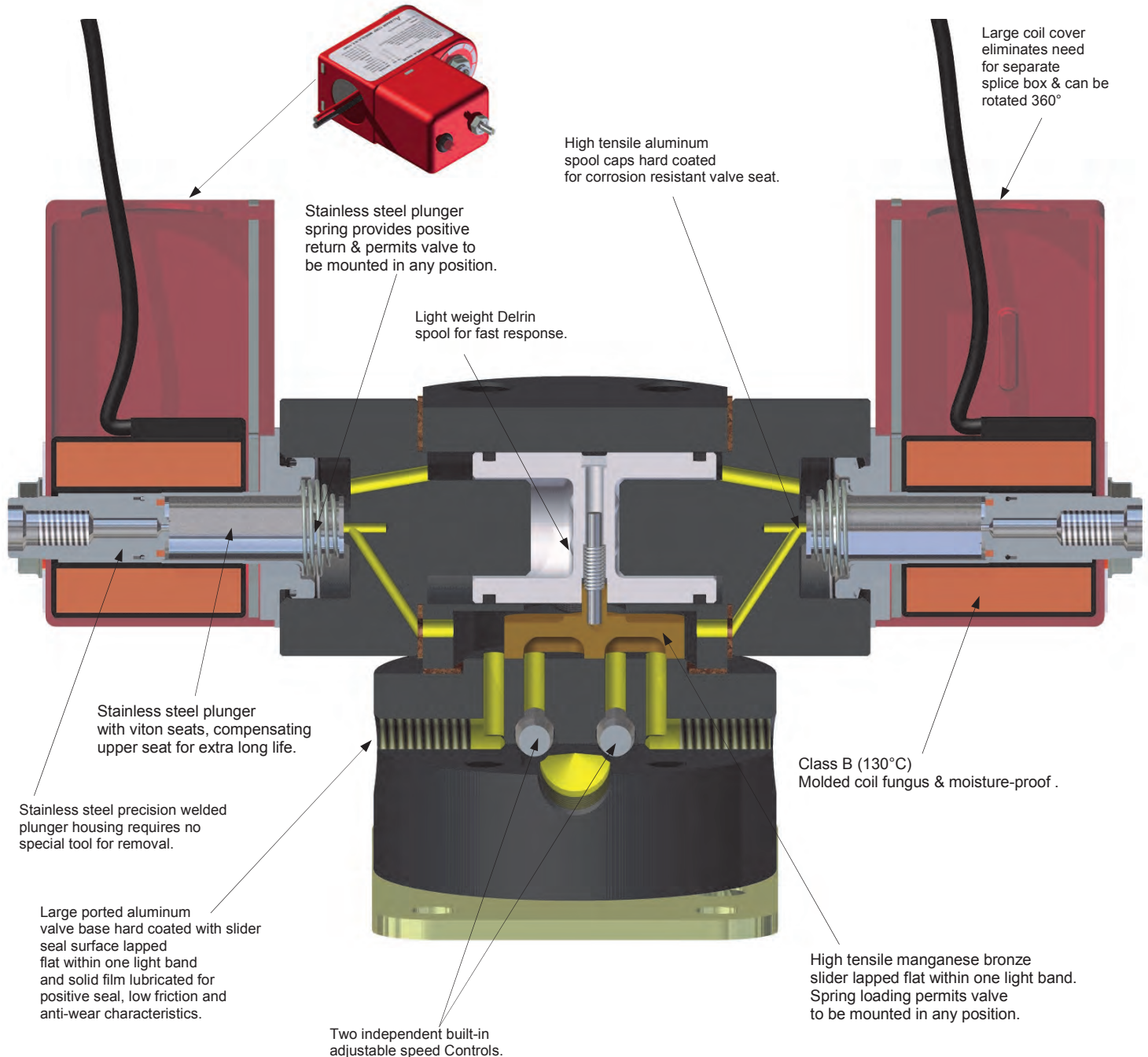


4-WAY VALVES

1/4", 3/8" & 1/2"

ALLENNAIR Slider-type 4-Way 2-Position Valves are rugged, field proven Valves that can be mounted in any plane. They are available in a wide range of Solenoid, Pressure Pilot, Bleed Pilot and Manual Models. The basic principle of operation is the use of a pilot operated spool which moves the slider across the internal porting. Operating pressure 10 P.S.I to 150 P.S.I, maximum.

ALLENNAIR "TIME-A-VALVE"[®]
See page 80. A solid state Electronic Timer,
integral with Allenair Solenoid Operators



The above Valve shows the combined design features of our basic Valve and standard "AAS" splice box housing solenoid operators.

4-WAY VALVES

1/4", 3/8" & 1/2"

4-WAY VALVES: 1/4", 3/8" & 1/2" N.P.T.

STANDARD VOLTAGES

12, 24, 120 & 240/60 AC and 6, 12 & 24VDC. Other voltages are available.

DOUBLE SOLENOID PRESSURE PILOT MODEL VDS GENERAL PURPOSE

A momentary or maintained electrical contact applied to one solenoid will shift the Valve. It will remain in that position until the other solenoid is energized, which will cause the Valve to shift to its original position. If a maintained contact is employed, the first solenoid must be de-energized before the other is energized.



MODEL VDS-AAC



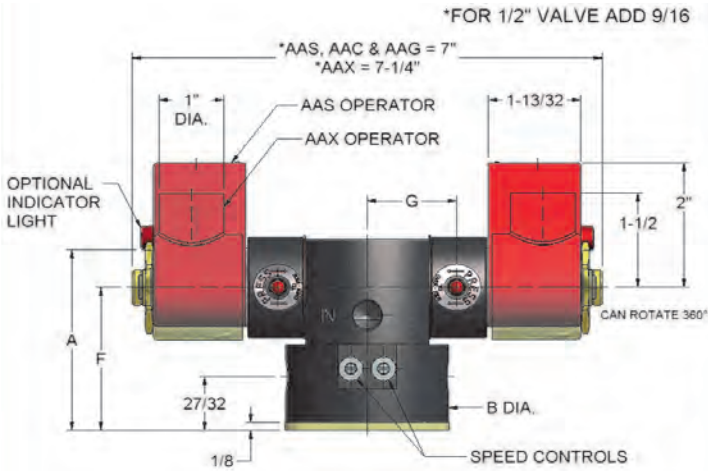
MODEL VDS-JIC
(NEMA 4)



MODEL VDS-AAS



MODEL VDS-AAX



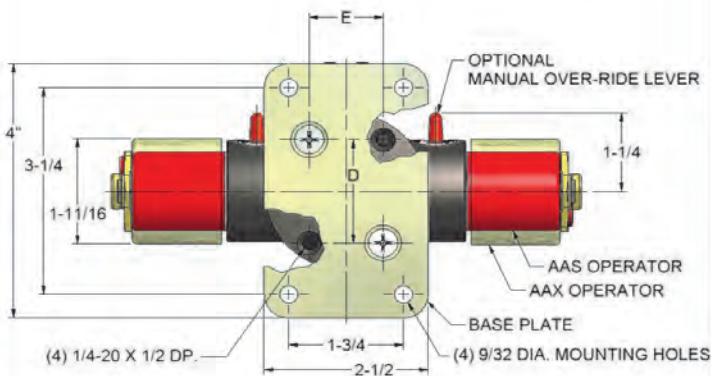
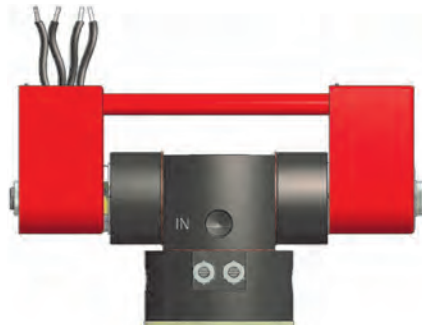
DIM.	PORT SIZES (N.P.T.)		
	1/4"	3/8"	1/2"
A	3-1/4	3-1/4	3-5/8
B	2-1/2	2-1/2	3"
D	1-5/8	1-5/8	1-3/4
E	1-1/8	1-1/8	1-3/4
F	2-1/2	2-1/2	2-13/16
G	1-7/16	1-7/16	1-3/4
EXH PORT N.P.T.	1/4"	1/4"	1/2"
Cv FACTOR	1	1	1.5

NOTES:

- 1) ENERGIZING SOLENOID PRESSURIZES CYLINDER PORT DIRECTLY UNDER THAT SOLENOID.
- 2) EXHAUST PORT IS LOCATED 180° FROM SPEED CONTROLS.

OPTIONAL COMMON LEAD CONNECTOR FOR "AAS" OPERATORS ONLY SPECIFY **CLC** AFTER THE VALVE NOMENCLATURE

A neat, compact assembly eliminating the need for two separate conduit connections. This consists of a rigid tubing between the solenoid covers, which allows the coil leads of one coil to be passed through the connector and into the other coil housing, so that all coil leads exit through a common outlet.



4-WAY VALVES 1/4", 3/8" & 1/2"

4-WAY VALVES: 1/4", 3/8" & 1/2" N.P.T

SINGLE SOLENOID (GENERAL PURPOSE)



MODEL VSS
(PRESSURE PILOT)

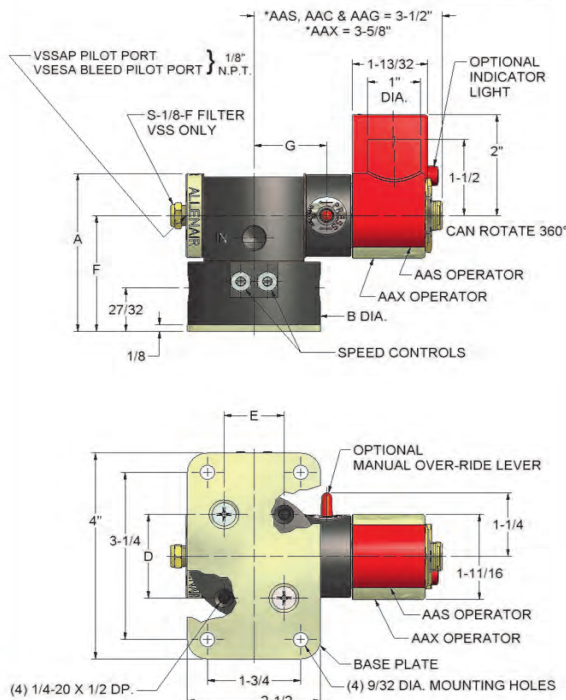
A maintained electrical contact is required to shift the valve. Breaking the electrical contact will return the valve to its original position.

MODEL VSSAP
(PRESSURE PILOT)

A momentary (NOT continuous) electrical contact is required to shift the valve. It will remain in that position until a separate momentary pilot pressure is applied to the spool cap opposite the solenoid, returning the valve to its original position. Pilot pressure must be at least 25% of the operating pressure

MODEL VSESA
(BLEED PILOT)

*FOR 1/2" VALVE ADD 9/32



A momentary (NOT continuous) electrical contact is required to shift the valve. A separate Bleeder Valve, such as the Allenair BV100 or BV-1/8, must be installed in the line to the spool cap opposite the solenoid. Depressing this Bleeder Valve momentarily will return the valve to its original position

DIM.	PORT SIZES (N.P.T.)		
	1/4"	3/8"	1/2"
A	3-1/4	3-1/4	3-5/8
B	2-1/2	2-1/2	3"
D	1-5/8	1-5/8	1-3/4
E	1-1/8	1-1/8	1-3/4
F	2-1/2	2-1/2	2-13/16
G	1-7/16	1-7/16	1-3/4
EXH PORT N.P.T.	1/4"	1/4"	1/2"
Cv FACTOR	1	1	1.5

NOTES:

- 1) MODELS VSS & VSSAP: ENERGIZING SOLENOID PRESSURIZES CYLINDER PORT DIRECTLY UNDER SOLENOID.
- 2) MODEL VSESA: ENERGIZING SOLENOID PRESSURIZES CYLINDER PORT OPPOSITE SOLENOID.
- 3) EXHAUST PORT IS LOCATED 180° FROM SPEED CONTROLS.

OPTIONS (SOLENOID VALVES)

SPECIFY HTP FOR HIGH TEMPERATURE SEALS

These seals are a fluorocarbon compound (viton) and have an operating temperature range of +10° F to +350° F. They will function at temperatures up to +400° F with reduced life.

SPECIFY IL FOR INDICATOR LIGHT (AAS OPERATOR ONLY)

Light indicates when solenoid is energized.

SPECIFY OR FOR MANUAL OVER-RIDE LEVER

These are non-locking and are particularly useful for set-up or electrical failure.

SPECIFY PE FOR PIPED EXHAUST ADAPTERS

Enables the solenoid exhaust to be piped from the actuator.

SOLENOID OPERATORS

- AAC CONDUIT HOUSING,** UL & CSA Listed.
- AAD DIN-type HOUSING** A male connector configuration of DIN 43650/ISO 4400. See page 75 for female connectors.
- AAG GROMMET HOUSING,** UL & CSA Listed.
- AAS SPLICE BOX HOUSING** (STANDARD), UL & CSA Listed.
- AAX EXPLOSION PROOF,** UL Listed covering Class I Groups C & D (NEMA 7) and Class II Groups E, F & G (NEMA 9).
- AAY SPADE TERMINALS,** UL & CSA Listed.
- JIC NEMA 4/IP-56** Water Tight per NEMA 4/IP-56
- AAN6 NEMA 6** Water Tight per NEMA 6

ORDERING PROCEDURE (SOLENOID VALVES)

MODEL	SIZE 1/4, 3/8 or 1/2	OPTIONS	VOLTAGE
-------	-------------------------	---------	---------

EXAMPLES:

VSS 1/2 AAS HTP - OR - PE 24VDC
VDS 1/4 AAX OR - 120/60

4-WAY VALVES

1/4", 3/8" & 1/2"

4-WAY VALVES: 1/4", 3/8" & 1/2" N.P.T.

DOUBLE PILOT

MODEL VAP PRESSURE PILOT

A momentary or maintained pilot pressure applied to one side of the valve will cause it to shift. It will remain in that position until a pilot pressure is applied to the other side, which will cause the valve to return to its original position. If a maintained pilot pressure is employed, it must be released before the other pilot pressure is applied. Pilot pressure must be at least 25% of the operating pressure.

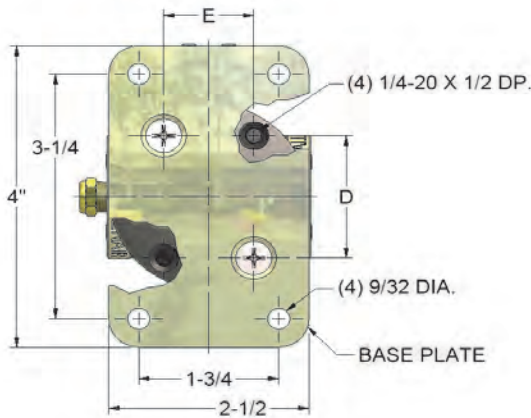
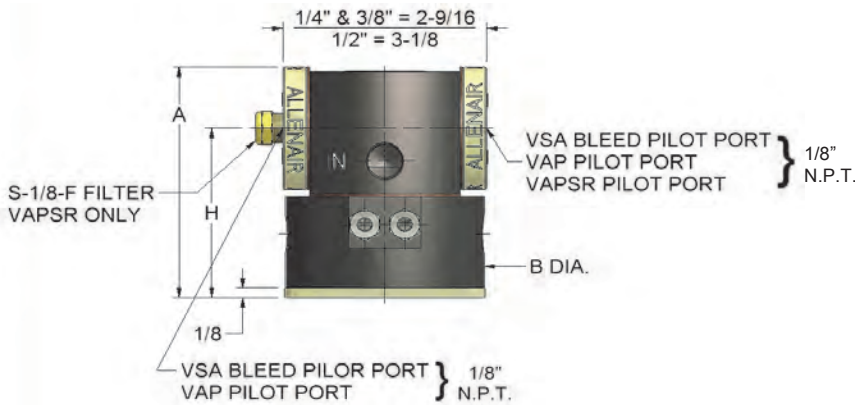
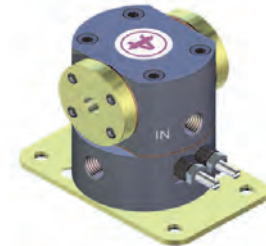
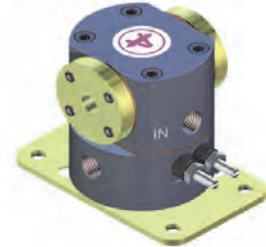
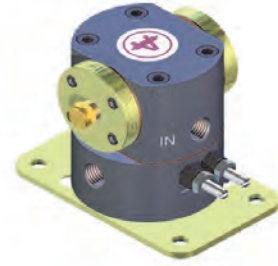
MODEL VSA BLEED PILOT

A separate Bleeder Valve, such as the Allenair BV100 or BV-1/8, must be installed in a line to each spool cap. Depressing one Bleeder Valve momentarily will shift the valve. It will remain in that position until the other Bleeder Valve is depressed, which will cause the valve to shift to its original position.

SINGLE PILOT

MODEL VAPSR PRESSURE PILOT

A continuous pilot pressure applied to "IN" side of the valve will shift the valve. When the pilot pressure is released the valve will shift to its original position. The pilot pressure must be at least 75% of the operating pressure.



DIM.	PORT SIZES (N.P.T.)		
	1/4"	3/8"	1/2"
A	3"	3"	3-5/8"
B	2-1/2"	2-1/2"	3"
D	1-5/8"	1-5/8"	1-3/4"
E	1-1/8"	1-1/8"	1-3/4"
H	2-1/4"	2-1/2"	2-13/16"
EXH PORT N.P.T.	1/4"	1/4"	1/2"
Cv FACTOR	1	1	1.5

NOTES:

- 1) MODELS VAP & VAPSR: PILOT SIGNAL PRESSURIZES CYLINDER PORT DIRECTLY UNDER THAT PILOT PORT.
- 2) MODEL VSA: BLEED PILOT SIGNAL PRESSURIZES CYLINDER PORT OPPOSITE THAT BLEED PILOT PORT.
- 3) EXHAUST PORT IS LOCATED 180° FROM SPEED CONTROLS.

OPTION

SPECIFY HTP FOR HIGH TEMPERATURE SEALS

These seals are a fluorocarbon compound (viton) and have an operating temperature range of +10° F to +350°F. They will function at temperatures up to +400°F with reduced life.

ORDERING PROCEDURE

MODEL	SIZE	OPTION
-------	------	--------

VAPSR 1/2 HTP
VSA 1/4

4-WAY VALVES 1/4", 3/8" & 1/2"

4-WAY VALVES: 1/4", 3/8" & 1/2" N.P.T.

MANUALLY OPERATED

MODEL VH HAND

Manual operation of the lever is required to shift the valve to either position.

MODEL VHSR HAND

Manual operation of the lever is required to shift the valve. It is equipped with a built-in spring return which automatically shifts the valve when the lever is released.

MODEL VT FOOT TREADLE

Foot operation of the treadle is required to shift the valve to either position.

MODEL VP FOOT PEDAL

Foot operation of the pedal is required to shift the valve. Releasing the pedal will shift the valve to its original position.

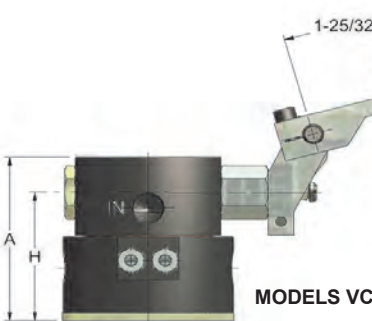
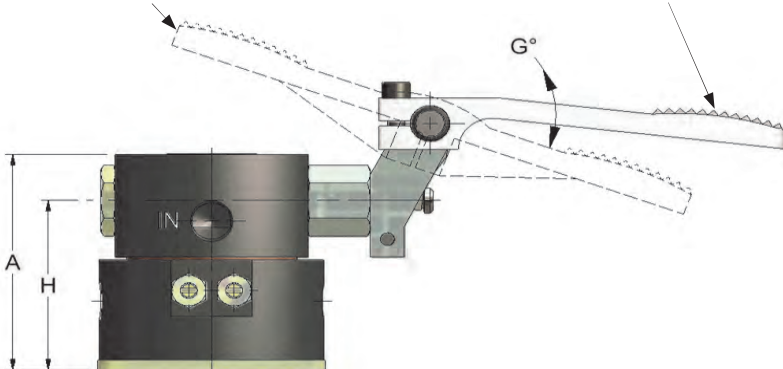
MODEL VC CAM

Manual operation of the cam is required to shift the valve. It is equipped with a built-in spring return which automatically shifts the valve when the cam is released.

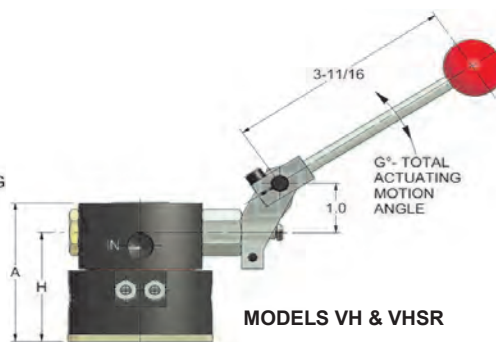


MODELS VT 6" OVERALL LENGTH

MODELS VP 4-1/2" OVERALL LENGTH



MODELS VC



MODELS VH & VHSR

OPTION

DIM.	PORT SIZES (N.P.T.)		
	1/4"	3/8"	1/2"
A	3"	3-1/4"	3-5/8"
G°	16°	16°	23°
H	2-1/4"	2-1/2"	2-13/16"
EXH PORT N.P.T.	1/4"	1/4"	1/2"
Cv FACTOR	1	1	1.5

NOTES:

- 1) FOR BASE PLATE DIMENSIONS SEE DRAWING ON PAGE 70.
- 2) EXHAUST PORT IS LOCATED 180° FROM SPEED CONTROLS.
- 3) THE ACTUATORS HAVE A 180° ADJUSTMENT AND MAY BE ROTATED TO ANY POSITION ABOUT THEIR CENTERS.

SPECIFY HTP FOR HIGH TEMPERATURE SEALS

These seals are a fluorocarbon compound (viton) and have an operating temperature range of +10° F to +350°F. They will function at temperatures up to +400°F with reduced life.

MODEL	SIZE	OPTION
VH	1/2	HTP
VT	1/4	

2-WAY & 3-WAY 1/8" & 1/4" SOLENOID VALVES

A LINE OF OUTSTANDING 2-WAY & 3-WAY SOLENOID VALVES

**SMALLER IN SIZE • GREATER Cv FACTORS
LESS POWER REQUIRED • SIMPLICITY IN WIRING
ACHIEVED THROUGH
SUPERIOR DESIGN AND DIMENSIONAL QUALITY CONTROL**

3-WAY VALVES are available as Normally Closed, Normally Open or Multi-Purpose.

2-WAY VALVES are available as Normally Closed or Normally Open. All types can be supplied in various operating pressure ranges with 1/8" or 1/4" N.P.T. Ports. To satisfy a wide variety of applications, the valve bodies are offered in Hardcoated Aluminum, Brass or Stainless Steel.

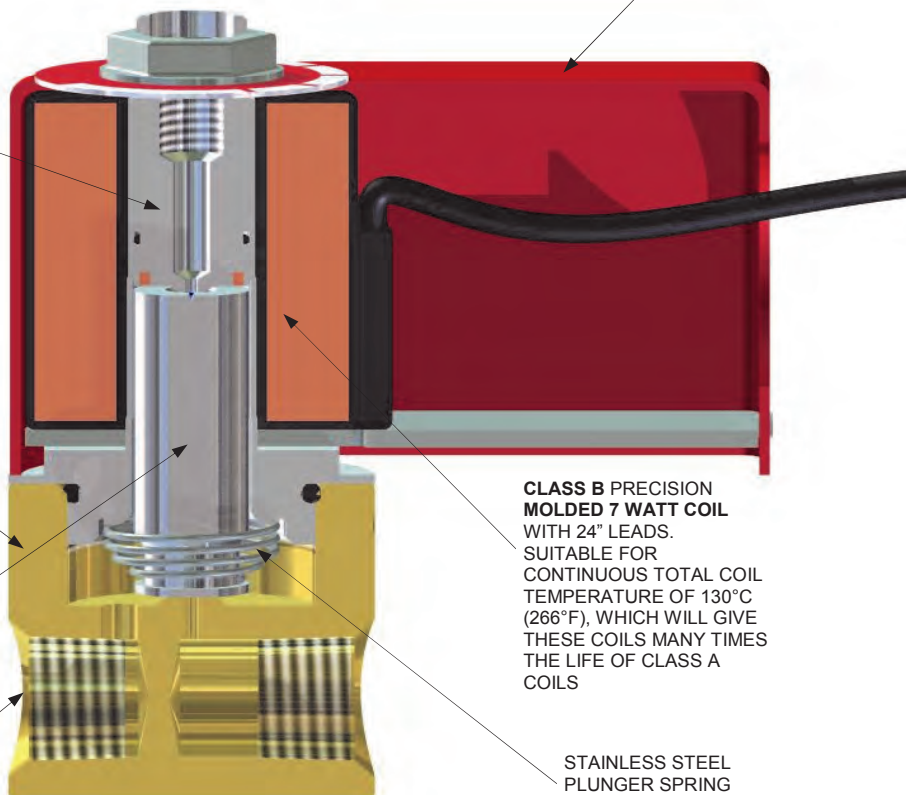
DESIGN FEATURES

STAINLESS STEEL
PRECISION WELDED
PLUNGER HOUSING
REQUIRES NO SPECIAL
TOOLS FOR REMOVING

- 3 BODY MATERIALS AVAILABLE:**
- 1) **ALUMINUM HARD COATED** IS FILE HARD, ABRASION & CORROSION RESISTANT.
 - 2) **BRASS.**
 - 3) **STAINLESS STEEL**

STAINLESS STEEL
PLUNGER WITH **VITON
SEATS. COMPENSATING
UPPER SEAT FOR EXTRA
LONG LIFE**

1/8" OR 1/4" NPT PORT SIZES



SPLICE BOX HOUSING:
LARGE COIL COVER OF
GENERAL PURPOSE
VALVES, ELIMINATES
NEED FOR SEPARATE
SPLICE BOX.

**CLASS B PRECISION
MOLDED 7 WATT COIL**
WITH 24" LEADS.
SUITABLE FOR
CONTINUOUS TOTAL COIL
TEMPERATURE OF 130°C
(266°F), WHICH WILL GIVE
THESE COILS MANY TIMES
THE LIFE OF CLASS A
COILS

STAINLESS STEEL
PLUNGER SPRING
PROVIDES POSITIVE
RETURN PERMITS VALVE
TO BE MOUNTED IN ANY
POSITION.

Voltages: 12, 24, 120 & 240/60 AC and 6, 12 & 24VDC are standard.
Special voltages available upon request.

Temperature Range: - 40°F to + 190°F.

Orifices: From 3/64" to 1/8".

Pressures: Vacuum To 250 P.S.I.

Media: Pneumatic & Hydraulic.

2-WAY & 3-WAY 1/8" & 1/4" SOLENOID VALVES

GENERAL PURPOSE

3-WAY VALVES - AVAILABLE AS NORMALLY CLOSED, NORMALLY OPEN OR MULTI-PURPOSE.

2-WAY VALVES - AVAILABLE AS NORMALLY CLOSED OR NORMALLY OPEN.



3-WAY NORMALLY CLOSED
OPTIONAL (CONDUIT HOUSING SHOWN)



3-WAY NORMALLY CLOSED
OPTIONAL (NEMA 6 HOUSING SHOWN)



3-WAY NORMALLY OPEN, MULTI-PURPOSE
OR **2-WAY NORMALLY OPEN**
STANDARD (SPlice BOX HOUSING SHOWN)

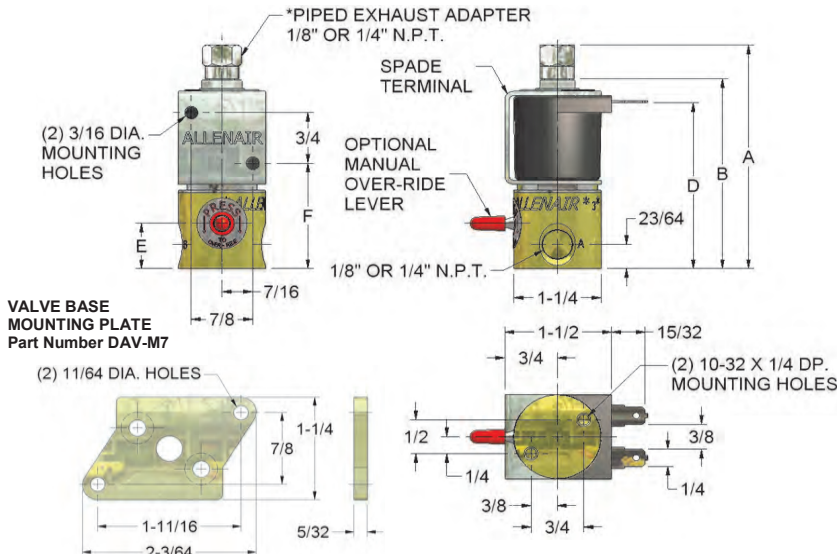
TYPE	Maximum Operating Pressure	Orifice Size		Inlet Cv Factor	CATALOG NUMBERS-SPECIFY OPTIONS AND VOLTAGE						
		Inlet	Exhaust		1/8 N.P.T.			1/4 N.P.T.			
					Aluminum Hardcoated	Brass	Stainless	Aluminum Hardcoated	Brass	Stainless	
3-WAY	NORMALLY CLOSED	175	3/64	3/64	.055	3CAX8A	3CAX8B	3CAX8S	3CAX4A	3CAX4B	3CAX4S
		150	1/16	1/16	.095	3CBX8A	3CBX8B	3CBX8S	3CBX4A	3CBX4B	3CBX4S
		75	3/32	1/16	.195	3CCY8A	3CCY8B	3CCY8S	3CCY4A	3CCY4B	3CCY4S
	NORMALLY OPEN	50	1/8	3/32	.260	3CDY8A	3CDY8B	3CDY8S	3CDY4A	3CDY4B	3CDY4S
		160	3/64	1/16	.055	3OAX8A	3OAX8B	3OAX8S	3OAX4A	3OAX4B	3OAX4S
		125	1/16	3/32	.095	3OBY8A	3OBY8B	3OBY8S	3OBY4A	3OBY4B	3OBY4S
	MULTI-PURPOSE	75	3/32	1/8	.195	3OCZ8A	3OCZ8B	3OCZ8S	3OCZ4A	3OCZ4B	3OCZ4S
		150	3/64	3/64	.055	3PAW8A	3PAW8B	3PAW8S	3PAW4A	3PAW4B	3PAW4S
		75	1/16	1/16	.095	3PBX8A	3PBX8B	3PBX8S	3PBX4A	3PBX4B	3PBX4S
2-WAY	NORMALLY CLOSED	50	3/32	3/32	.195	3PCY8A	3PCY8B	3PCY8S	3PCY4A	3PCY4B	3PCY4S
		250	3/64	-	.055	2CA8A	2CA8B	2CA8S	2CA4A	2CA4B	2CA4S
		200	1/16	-	.095	2CB8A	2CB8B	2CB8S	2CB4A	2CB4B	2CB4S
		150	3/32	-	.195	2CC8A	2CC8B	2CC8S	2CC4A	2CC4B	2CC4S
	NORMALLY OPEN	125	1/8	-	.260	2CD8A	2CD8B	2CD8S	2CD4A	2CD4B	2CD4S
		200	3/64	-	.055	2OA8A	2OA8B	2OA8S	2OA4A	2OA4B	2OA4S
		150	1/16	-	.095	2OB8A	2OB8B	2OB8S	2OB4A	2OB4B	2OB4S
		100	3/32	-	.195	2OC8A	2OC8B	2OC8S	2OC4A	2OC4B	2OC4S

ORDERING PROCEDURE

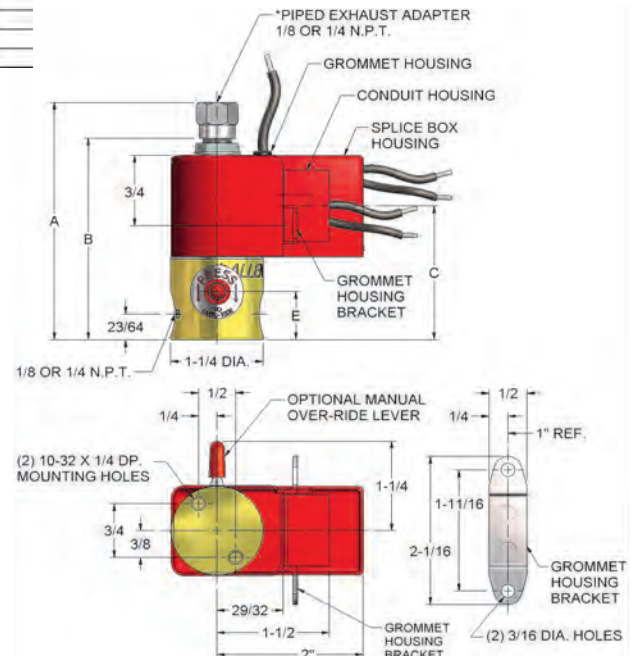
- STANDARD VALVE**
SPECIFY: Catalog Number and Voltage.
- STANDARD VALVE with OPTIONS:**
SPECIFY: Catalog Number, Option Code and Voltage

DIMENSIONS

DIM.	3-WAY 1/8 & 1/4 N.P.T.	2-WAY	
		NORMALLY CLOSED 1/8 N.P.T.	NORMALLY OPEN 1/8 & 1/4 N.P.T.
A	3-5/16	-	3-5/16
B	2-13/16	2-15/16	2-5/8
C	1-29/32	1-9/16	1-23/32
D	2-21/64	2-9/64	2-21/64
E	43/64	31/64	41/64
F	1-9/16	1-1/4	1-1/4



*Standard on 3-Way N.O., M.P. and 2-Way N.O.



2-WAY & 3-WAY 1/8" & 1/4" SOLENOID VALVES

EXPLOSION-PROOF

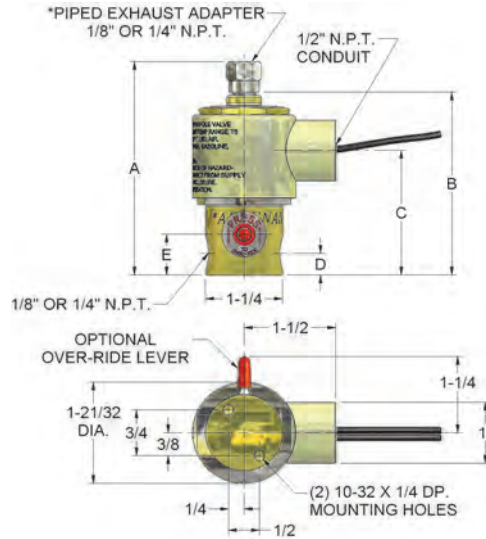
THE SMALLEST 2-WAY 3-WAY EXPLOSION-PROOF SOLENOID VALVES WITH STANDARD FLOW CHARACTERISTICS These valves are UL listed for use in hazardous locations Class I, Groups C D (NEMA 7) and Class II, Groups E, F G (NEMA 9).



3-WAY NORMALLY CLOSED



3-WAY NORMALLY OPEN, MULTI-PURPOSE OR 2-WAY NORMALLY OPEN



DIMENSIONS EXPLOSION PROOF & NEMA 6

DIM.	3-WAY 1/8 & 1/4 N.P.T.	2-WAY	
		NORMALLY CLOSED 1/8 N.P.T.	NORMALLY OPEN 1/4 N.P.T.
A	3-1/2	-	3-1/2
B	3"	2-21/32	2-13/16
C	2-1/32	1-11/16	2-1/32
D	23/64	17/64	21/64
E	43/64	31/64	41/64

*Standard on 3-Way N.O.,
M.P. and 2-Way N.O.

ADD THE PREFIX LETTER "X" TO THE CATALOG NUMBER TO SPECIFY EXPLOSION-PROOF

OPTIONS



CONDUIT HOUSING: ADD THE SUFFIX LETTER "C" TO THE CATALOG NUMBER.



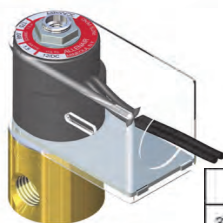
SPADE TERMINALS: ADD THE SUFFIX LETTER "Y" TO THE CATALOG NUMBER.



NON-LOCKING MANUAL OVER-RIDE LEVER: Particularly useful for set-up and electrical failure. ADD THE SUFFIX LETTER "O" TO THE CATALOG NUMBER.



METER IN: Allows adjusting of the inlet flow. ADD THE SUFFIX LETTER "M" TO THE CATALOG NUMBER (Not available with over-ride).



1.5 WATT: Available on normally closed valves with any housing or option. 6, 12 or 24VDC voltage ONLY. ADD THE SUFFIX LETTER "N" TO THE CATALOG NUMBER

2-WAY	3-WAY
3/64" orifice 250 PSI (2CA)	3/64" orifice 175 PSI (3CAX)
1/16" orifice 200 PSI (2CB)	1/16" orifice 150 PSI (3CBX)



HOUSING BRACKET: ADD THE SUFFIX LETTERS "HB" TO THE CATALOG NUMBER.



INDICATOR LIGHT: Available on Splice Box housing ONLY. Light indicates when solenoid is energized. ADD SUFFIX LETTER "L" TO THE CATALOG PART NUMBER Example: 120/60L



GROMMET HOUSING: ADD THE SUFFIX LETTER "G" TO THE CATALOG NUMBER.



NEMA 6 HOUSING: ADD THE SUFFIX "N6" TO THE CATALOG NUMBER. Coil Housing is nickel plated and epoxy filled to provide a corrosion resistant water tight barrier.

DIN-type HOUSING: DIN 43650/ ISO 4400. ADD THE SUFFIX LETTER "YD" TO THE CATALOG NUMBER.



NEMA 4 HOUSING: ADD THE SUFFIX "JIC" TO THE CATALOG NUMBER



TIME-A-VALVE®: A solid state electronic timer, integral with the Allenair Solenoid Operator. See page 80.

INDUSTRIAL OXGEN SERVICE: ADD THE SUFFIX LETTERS "IOS" TO THE CATALOG NUMBER.



2-WAY & 3-WAY 1/8" & 1/4" SOLENOID VALVES

MISCELLANEOUS INFORMATION & ACCESSORIES



ADJUSTABLE EXHAUST
Available for 3-way normally closed only.
PART NUMBER EA-21

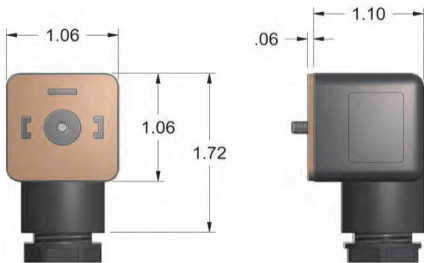


PIPED EXHAUST
Available for 3-way normally closed only.
Only in 1/8 N.P.T. or 1/4 N.P.T.
PART NUMBER
1/8 N.P.T. EA-19
1/4 N.P.T. EA-19-4



FILTER SILENCER
Available for top exhaust Port on 3-way valves.
PART NUMBER EA-27
Also available for Body Ports
S-1/8 FOR 1/8 N.P.T.
S-1/4 FOR 1/4 N.P.T.

NOTE: ACCESSORIES MUST BE ORDERED AS SEPARATE ITEMS.

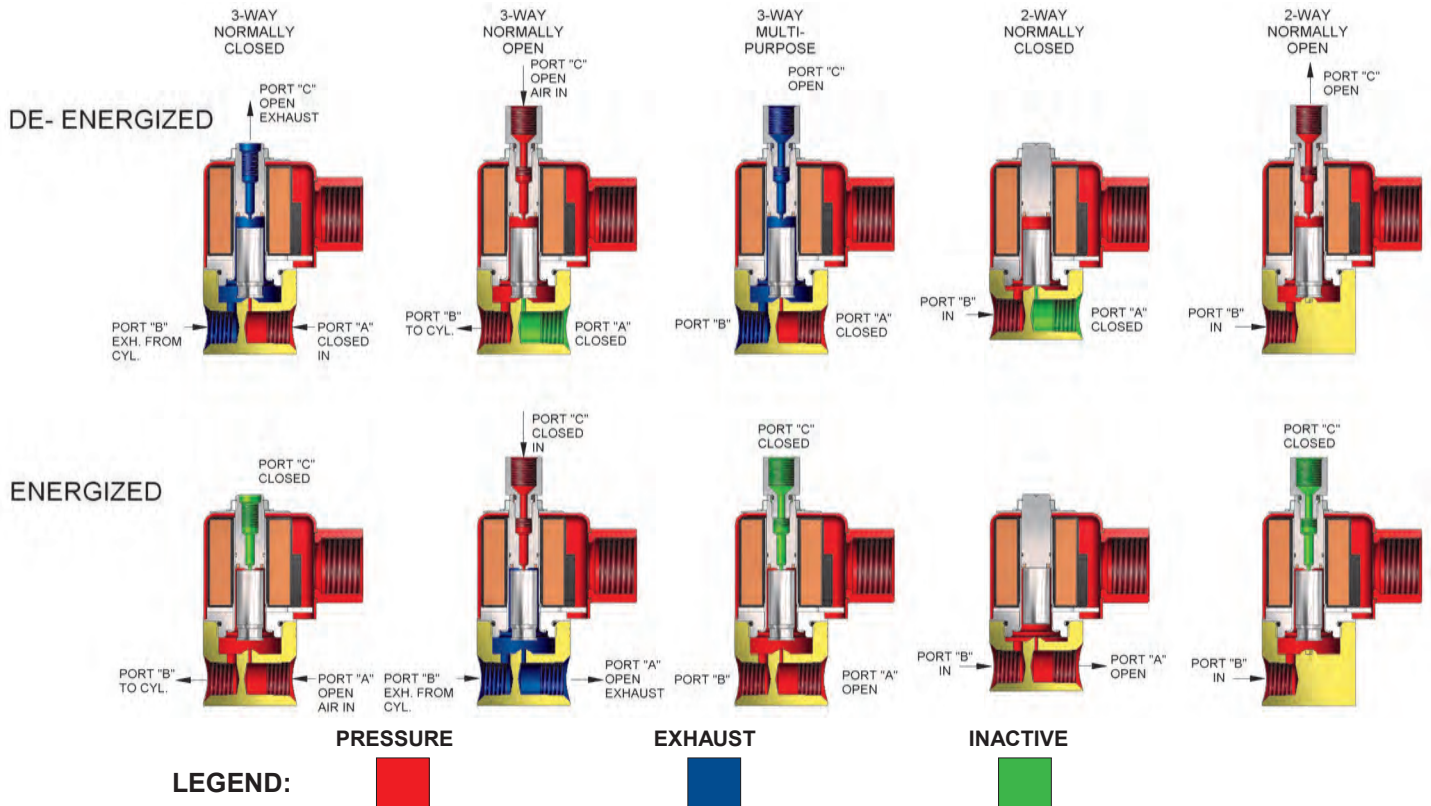


PART NO.	STRAIN RELIEF	CONDUIT	VOLTAGES		LIGHTED
			AC	DC	
EA-310	.24 TO .31	---	250-50/60	300	NO
EA-320	.31 TO .41	---	250-50/60	300	NO
EA-330	.24 TO .31	---	6-48-50/60	6-48	YES
EA-340	.31 TO .41	---	6-48-50/60	6-48	YES
EA-350	.24 TO .31	---	100-240-50/60	48-120	YES
EA-360	.31 TO .41	---	100-240-50/60	48-120	YES
EA-370	---	1/2"	250-50/60	300	NO
EA-380	---	1/2"	6-48-50/60	6-48	YES
EA-390	---	1/2"	100-240-50/60	48-120	YES

All connectors are rated for 10 amp service and are supplied with a silicon gasket (EA-305S) rated at 125°C. The metal encased potted coil housing, when used with the appropriate female connector, is designed to fulfill NEMA requirements 1 - 4, 12 and 13.

ALLENAIR'S FLEXIBILITY ALLOWS FOR A WIDE VARIETY OF SPECIAL VALVES.
CONTACT ALLENAIR WITH YOUR SPECIAL REQUIREMENTS.

FLOW DIRECTION



Note: Multi-purpose valves may be operated with air inlet at Port A, B or C. Follow flow direction according to method used.

4-WAY 1/8" DIRECT ACTING VALVES

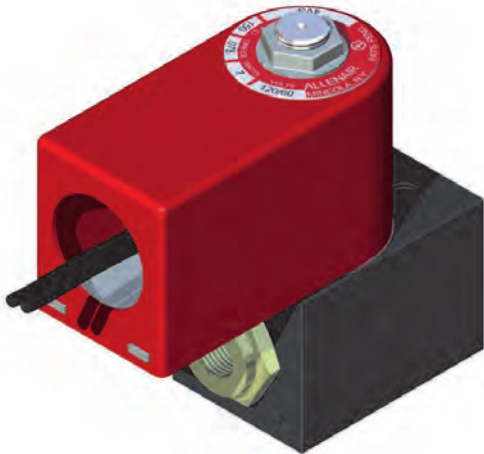
4-WAY DIRECT ACTING VALVES

AVAILABLE IN A VARIETY OF
SOLENOID, PRESSURE PILOT & BLEED PILOT MODELS

ALLENNAIR'S Field Proven High Tensile Manganese Bronze Slider against a hardcoated aluminum slider base (both lapped flat within one light band) help make this a rugged, long life, bubble tight, high flow compact valve. This valve in many cases is tested with helium and used as an instrument grade valve.

SINGLE SOLENOID

MODEL **4VS** FOR SINGLE VALVE



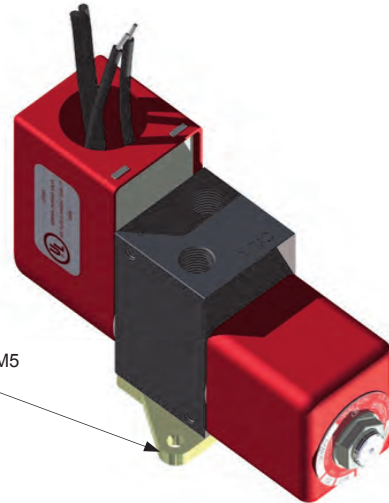
A maintained electrical contact is required to hold the valve in its shifted position. Breaking the electrical contact will return the valve to its original position.

(Standard Splice Box Housing is shown above.)

For DC voltages see note below.

DOUBLE SOLENOID

MODEL **4VD** FOR SINGLE VALVE



Optional DAV-M5
Mounting Plate

A momentary or maintained electrical contact applied to one solenoid will shift the valve. It will remain in that position until the other solenoid is energized, which will cause the valve to shift to its original position. If a maintained contact is employed, the first solenoid must be de-energized before the other is energized.

Voltages: 12, 24, 120 & 240/60 and 12 & 24VDC are standard.

Watts: 7

Temperature Range: - 10°F to + 190°F.

Pressures: Vacuum to 150 P.S.I.

Orifice: .078 Dia., Cv .12

Ports: 1/8 N.P.T.

Note for Single Solenoid DC Valves:

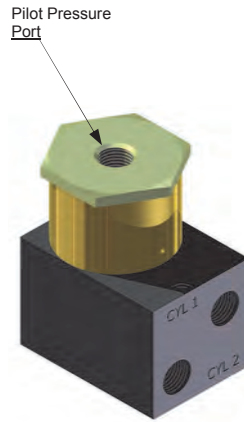
For operating pressures of 80-150 P.S.I., a special coil and Splice Box Housing is required. See Price List for additional charges. For pressures up to 80 P.S.I. maximum, all housings are available. The Prefix "8" must be added to the Model Number.

PILOT OPERATED

SINGLE AIR PILOT

MODEL 4VPS FOR SINGLE VALVE

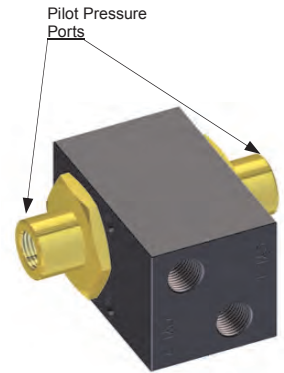
A continuous pilot pressure applied to the valve will hold it in its shifted position. When the pilot pressure is released the valve will shift to its original position. Pilot pressure must be at least 25% of the operating pressure. Minimum operating pressure is 30 P.S.I.



DOUBLE AIR PILOT

MODEL 4VPD FOR SINGLE VALVE

A momentary or maintained pilot pressure applied to one side of the valve will cause it to shift. It will remain in that position until a pilot pressure is applied to the other side, which will cause the valve to return to its original position. If a maintained pilot pressure is employed, it must be released before the other pilot pressure is applied. Pilot pressure must be at least 25% of the operating pressure.



DOUBLE BLEED PILOT

MODEL 4VBL FOR SINGLE VALVE

A separate Bleeder Valve, such as the Allentair **BV100** or **BV-1/8**, must be installed in a line to each bleed port. Depressing one Bleeder Valve Momentarily will shift the valve. It will remain in that position until the other Bleeder Valve is depressed, which will cause the valve to shift to its original position.

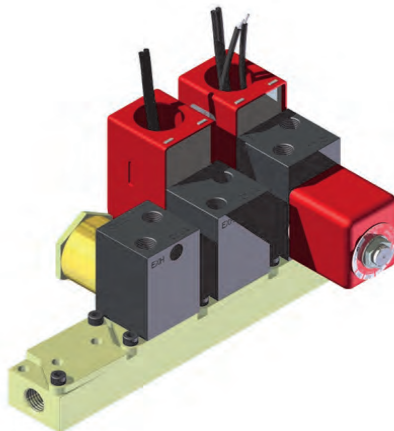


GROUP MOUNTED

MODEL GM

Group mounting is a convenient method of mounting two or more valves using a single common inlet port. One or any combination of valves can be used on this group mounting.

SPECIFY: "GM"__ (No. of Stations) for Mounting Base and add the Prefix "GM" to the valves required.



ORDERING EXAMPLE:

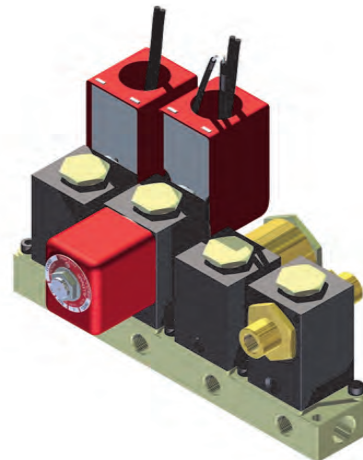
- 2) GM-4
- 8) GM4VS-120/60 mounted on all stations. If a combination of valves is used, designate each valve for each station. **BLANK COVERS** are available for unused stations. Part Number DAV- M8.

MANIFOLD MOUNTED

MODEL MM

Manifold mounting reduces cost over individually mounted valves by providing convenient permanent piping of the common inlet and cylinder ports. One or any combination of valves can be used on this manifold mounting.

SPECIFY: "MM"__ (No. of Stations) for Manifold Base and add the Prefix "MM" to the valves required.



ORDERING EXAMPLE:

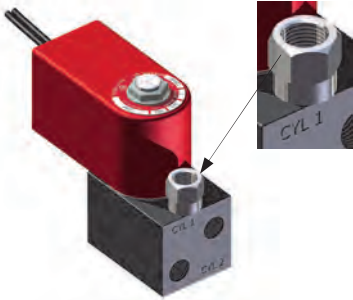
- 2) MM-4
- 8) MM4VS-120/60 mounted on all stations. If a combination of valves is used, designate each valve for each station. **BLANK COVERS** are available for unused stations. Part Number DAV- 904.

4-WAY 1/8" DIRECT ACTING VALVES

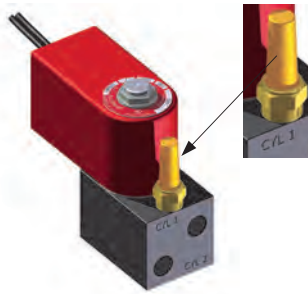
ACCESSORIES & OPTIONS

ACCESSORIES

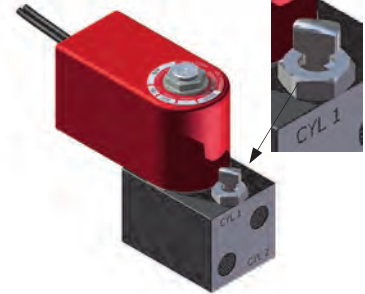
PIPED EXHAUST
PART NUMBER EA-19
(1/8-N.P.T.)



FILTER SILENCER
PART NUMBER EA-27

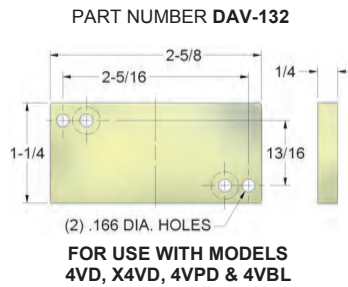
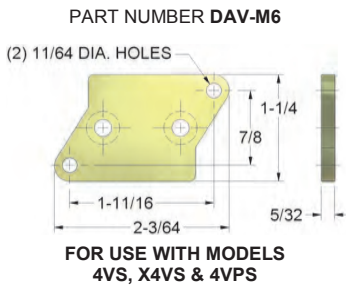


SPEED CONTROL
Single Speed Control for Common Exhaust.
PART NUMBER QE-104

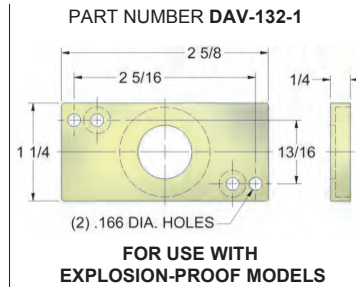
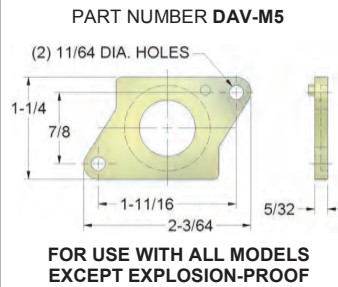


MOUNTING PLATES

HORIZONTAL MOUNTING



VERTICAL MOUNTING



Note different location for Inlet Ports on dimensional drawings when using vertical mounting.

OPTIONS



LOCKING MANUAL OVER-RIDE LEVER
Particularly useful for set-up and Electrical failure.

ADD THE SUFFIX LETTER "O" TO THE CATALOG NUMBER.
(Not available on "GM" or vertically mounted valves.)



DIN-type HOUSING
DIN 43650/ISO 4400
ADD THE SUFFIX LETTER "YD" TO THE CATALOG NUMBER.
See page 75 for female connectors.



CONDUIT HOUSING
ADD THE SUFFIX LETTER "C" TO THE CATALOG NUMBER.



EXPLOSION PROOF
"Not available on 4VS-DC ADD THE PREFIX LETTER "X" TO THE CATALOG NUMBER. (Double Solenoid shown)



NEMA 6
ADD THE SUFFIX "N6" TO THE CATALOG NUMBER.
Coil Housing is nickel plated and epoxy filled to provide a corrosion resistant water tight barrier.



GROMMET HOUSING
ADD THE SUFFIX LETTER "G" TO THE CATALOG NUMBER.



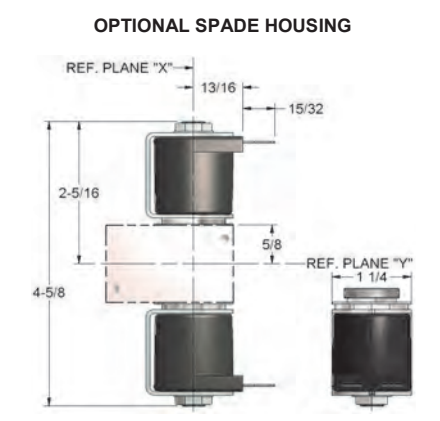
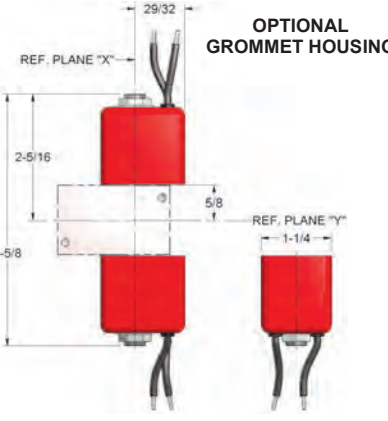
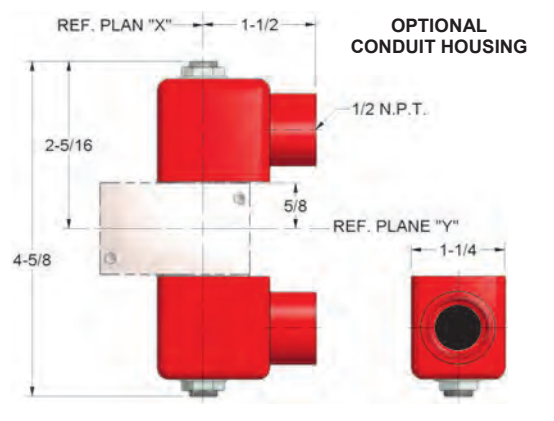
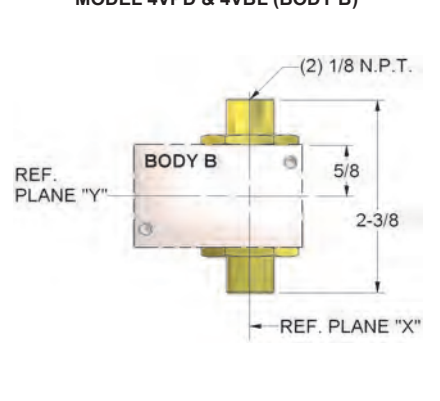
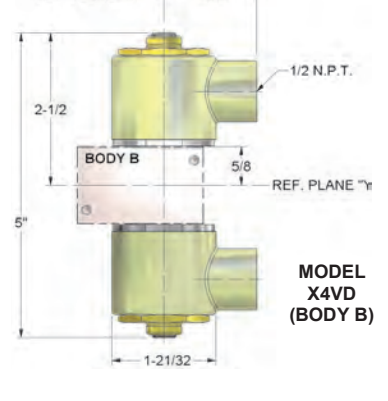
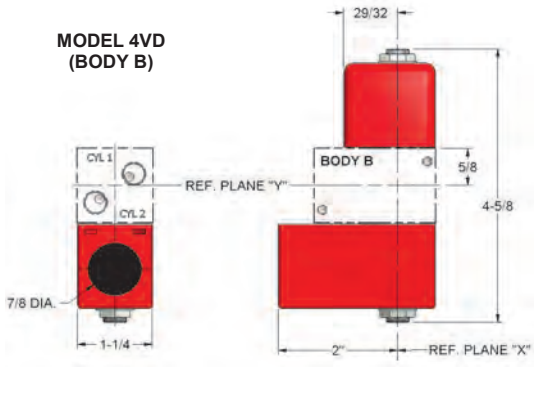
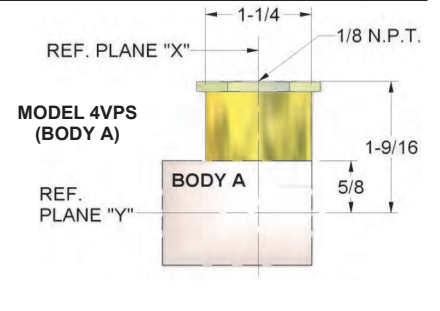
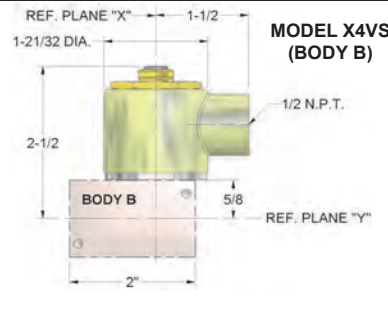
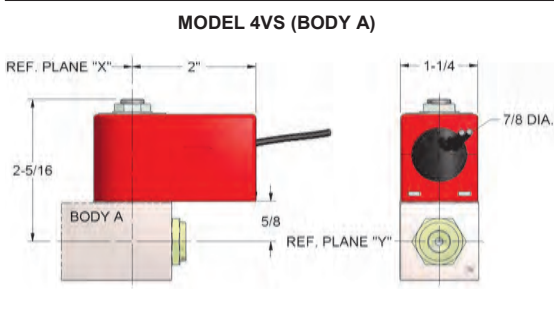
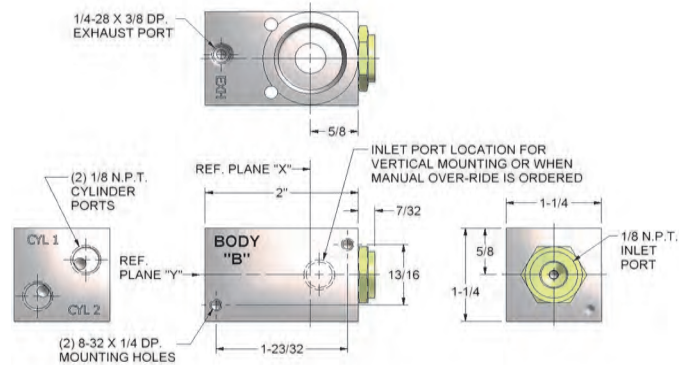
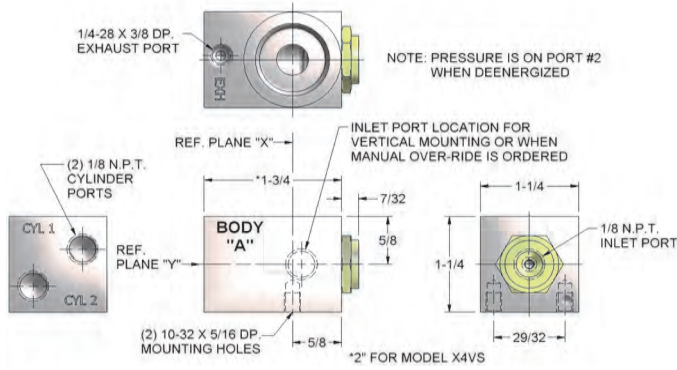
NEMA 4
ADD THE SUFFIX LETTER "JIC" TO THE CATALOG NUMBER.



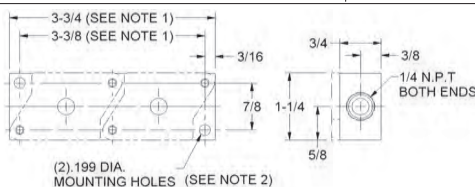
SPADE TERMINAL
ADD THE SUFFIX LETTER "Y" TO THE CATALOG NUMBER.

4-WAY 1/8" DIRECT ACTING VALVES

DIMENSIONS



GROUP AND MANIFOLD MOUNTING BASE



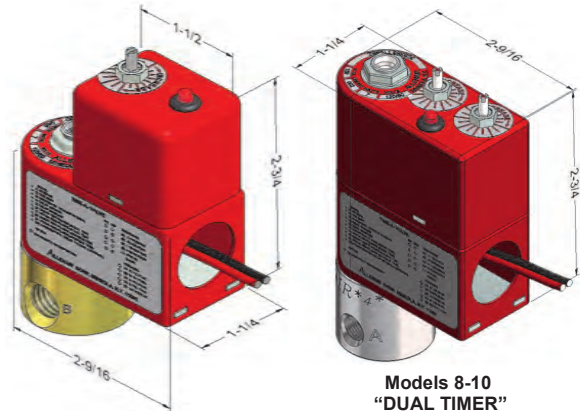
1. Dimensions shown are for mounting two valves. For each additional valve, add 1-11/16" to these dimensions.
2. Additional mounting holes are provided when three or more valves are used. Mounting holes will be located under valve bodies.
3. On manifold base all cylinder ports are 1/8 N.P.T.

TIME-A-VALVE®

A high quality, Solid State Electronic Timer available integral with any Allenair Solenoid Valve.
 Eliminates the need for complicated wiring to a control panel.
 Air circuitry, maintenance and troubleshooting are simplified.
 Pre-assembled Time-A-Valves® are simpler to install than separate timing devices and they are less costly.

FEATURES:

- Sturdy housing and permanent connection make it immune to machine vibrations.
- Long life Light Emitting Diode (LED) gives visual indication of solenoid energization.
- Electrical Override is standard on all timers. Allows direct energization of solenoid coil, bypassing the timer.
- Only one electrical connection operates both timer and solenoid.
- Simple, screw-type time adjustments. Lock nut prevents time setting from changing.
- Time delay and speed control adjustments (on 4-Way Valves) made at the same time and place -- at the valve.
- Compact, space-saving assembly.
- Timer and solenoid replacements can be made without disturbing the valve body or piping.
- Auxiliary output is standard. This allows actuation of an external relay or control device and the Time-A-Valve®, simultaneously. A load of no more than 1 AMP can be connected to the Auxiliary Output.



**Models 1-7
"SINGLE TIMER"**

Time-A-Valve® shown with an Allenair 3-Way Solenoid Valve.

The Time-A-Valve® is available with any Allenair Solenoid Valve, Cyl-Check®, Index Table, Valve-in-Head® Cylinder or other Allenair Solenoid Operated Fluid Power Products.

TIME-A-VALVE® SPECIFICATIONS

Time Ranges

- (A) .2-2 seconds
- (B) .5 - 5 seconds
- (C) 1 - 10 seconds
- (D) 3 - 30 seconds

Timer Voltages

- (V) 12/60
- (W) 12VDC
- (X) 24/60
- (Y) 24VDC
- (Z) 120/60

All 10 Time-A-Valve Models are designed Only for Allenair Solenoid Operated Valves.

ENGINEERING DATA

1. Repeatability of Timing Period: $\pm 2\%$ @ nominal voltage & 72°F
2. Reset (Recycle) Time: 100 milliseconds (.1 second) minimum.
3. Operating Temperature Range: -20°F to +185°F
4. Operating Voltage Tolerance: AC Models +10% -15%
DC Models +10% -20%
5. Timing Variation Over Temperature Range: $\pm 10\%$
6. Transient Protection: Will withstand up to 8 joules of transient energy.
7. Shock Protection: All timer electronic components are solid state and can withstand normal operating vibration and shock. The timers are encapsulated in epoxy to protect them against environmental liquids and gases.

OPTIONAL ACCESSORY

MODEL RP: REMOTE POTENTIOMETER TIME ADJUSTMENT

Instead of mounting the time adjusting control (potentiometer) in the timer case, we will supply a separate potentiometer for remote mounting. Two color coded wires are used to connect the timer to the remote potentiometer. You can supply your own potentiometer for more precise time setting. Consult factory for advice.

Time-A-Valve® can be added to existing Allenair solenoid valves, consult factory.

ORDERING PROCEDURE

MODEL No.	TIME RANGE	VOLTAGE	OPTION
Model T			

MODEL NO.

- (1) Interval
- (2) One Shot
- (3) Momentary Contact Interval or One Shot
- (4) Delay On Make
- (5) Delay On Break
- (6) On/Off Recycling - Equal Time
- (7) Off/On Recycling - Equal Time
- (8) On/Off Recycling - Un-equal Time
- (9) Off/On Recycling - Un-equal Time
- (10) Combination (Delay on Make + Interval)

TIME RANGES

- (A) .2-2 seconds
- (B) .5-5 seconds
- (C) 1-10 seconds
- (D) 3-30 seconds

VOLTAGES

- (V) 12/60
- (W) 12VDC
- (X) 24/60
- (Y) 24VDC
- (Z) 120/60

OPTION

- RP-
- Remote
- Potentiometer

The Time-A-Valve® is an option. The Timer Part Number must be added to the end of the Model Number of the Allenair product the Timer is to be assembled to. On Models 8, 9, 10 specify 2 time ranges, the first letter for the first part of the cycle and the second letter for the second part of the cycle.

EXAMPLE: 3 C B X 8 A T 1 C Z RP



MODELS	TIMING PERIODS	APPLICATIONS										
<p>Model 1 — Interval Timer. Upon application of maintained input power, the solenoid energizes and time delay interval begins. At end of time delay, the solenoid de-energizes and remains off. To recycle, power is removed and reapplied.</p>	<p>POWER <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr></table></p>	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF	OFF	<p>Use whenever you wish a device to stay on only for the adjustable time even though power is supplied continuously.</p> <ul style="list-style-type: none"> • Time-A-Valve will stroke a single solenoid Valve-in-Head Cylinder and hold it for the pre-set time before allowing it to return. This eliminates the need for momentary contact Switches and other timing devices. • Time-A-Valve replaces fixed or adjustable cam setups controlling cylinders and valves in parts feeding applications. • Clamping operations: Energize Time-A-Valve to operate air clamps which will hold for pre-determined time and then release.
ON	ON	ON	ON	OFF								
ON	ON	OFF	OFF	OFF								
<p>Model 2 — One Shot Timer* (Same as interval but with factory pre-set time.) When input power is turned on, the solenoid energizes for 400 milliseconds (.4 sec.) and then shuts off. To re-energize, remove power and re-apply. *A modern, solid state device similar in function to Palsa-Pak. ** **Reg. TM Schrader/Bellows Corp.</p>	<p>POWER <table border="1" style="display: inline-table;"><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td></tr></table></p>	OFF	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF	<p>Use where you want a device to get a signal for 400 milliseconds and then turn off even though power is supplied continuously (a fixed interval timer).</p> <ul style="list-style-type: none"> • Use to operate index tables and automatic return cylinders. Eliminates the need for momentary contact switches. • Use with air cylinder to activate date coding equipment on conveyor lines. • Activate air blow-off valve on punch press to reduce compressed air consumption. • Greatly reduces power consumption on battery operated valves located in remote field positions.
OFF	ON	ON	ON	ON								
OFF	ON	ON	OFF	OFF								
<p>Model 3 — Momentary Contact Interval or One-Shot Timer. Input power is on continuously. A 10 millisecond minimum closure of an external control switch (not supplied) energizes the solenoid and time delay interval begins. At the end of time delay, the solenoid de-energizes and remains off until the control switch is opened.</p>	<p>POWER SWITCH <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td></tr></table></p>	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	<p>Use whenever you want a device to stay on only for an adjustable time whether the external control switch is closed continuously or only for a moment. (10 milliseconds minimum).</p> <ul style="list-style-type: none"> • Use with 3-way solenoid valve for dispensing metered amounts of liquids, such as potting materials, glue, inks, dyes, etc. • Use for automatic operation of index table by actuating switch with V2 operating pin in drive cylinder. • Single solenoid valves and Valve-in-Head Cylinders Momentary contact will stroke unit, hold in position and return unit to original position. • Use on automatic reciprocating (VCR) cylinder for pre-determined number of cycles. Mixing, pumping, shaking of dust collector bags.
ON	ON	ON	ON	ON								
ON	ON	ON	OFF	OFF								
<p>Model 4 — Delay On Make Timer. The time delay period begins when the power is turned on. At end of the delay time period, the solenoid is energized and stays on as long as power is supplied. To reset, disconnect and then re-apply input power.</p>	<p>POWER <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr></table></p>	ON	ON	ON	ON	OFF	OFF	ON	ON	ON	OFF	<p>Use whenever you want a device to go on after an adjustable time delay and then stay on as long as power is supplied.</p> <ul style="list-style-type: none"> • Two cylinders are to be fed forward, one before the other. Send the same signal to one cylinder directly, the other through a Delay-on-Make, Time-A-Valve. One cylinder advances immediately; the other a preset time later. Many cylinders can be sequenced in this fashion. • You want a cylinder to go forward, dwell and return. Using double solenoid valve, have momentary switch contact energize one side of valve to feed cylinder forward. At end of stroke micro switch operates a delay-on-make timer on other side of valve. Cylinder will dwell for pre-set time period and then return.
ON	ON	ON	ON	OFF								
OFF	ON	ON	ON	OFF								
<p>Model 5 — Delay On Break Timer. Input power is on continuously. Closure of external control switch (not supplied) energizes solenoid. When the switch is opened, solenoid remains on and the time delay period begins. At the end of "on" time period, solenoid de-energizes.</p>	<p>POWER SWITCH <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td></tr></table></p>	ON	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF	<p>Use whenever you wish a device to stay on as long as external control switch is closed and to stay on for an adjustable time after control switch is open.</p> <ul style="list-style-type: none"> • Uses with chemical processing equipment to operate purge valves when pumping stops. • Use with three way valve operating liquid coolant flow on cutting tools. When control switch is turned off, coolant will continue to flow for a predetermined time, washing away chips and cleaning fixture for insertion of next parts. • Use to delay return stroke of a second cylinder after first unit has returned.
ON	ON	ON	ON	ON								
OFF	ON	ON	OFF	OFF								
<p>Model 6 — On/Off Recycling (Equal On and Off Time). Model 7 — Off/On Recycling (Equal Off and On Time). Depending on which model you choose — on/off or off/on — the solenoid is alternately energized and de-energized repeatedly with equal time on and off. This sequence is repeated until input power is removed. Single control adjusts both ON and OFF times.</p>	<p>POWER <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td></tr></table></p>	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	<p>Use when you want a device to turn on and off (adjustable equal intervals) as long as power is applied (a flasher).</p> <ul style="list-style-type: none"> • Use on double solenoid valve air return and double acting cylinder or 3-way valve on spring return single acting cylinder for automatic reciprocating of cylinder. • Use on single solenoid valve applications for timed parts feeding-conveyor line feed for bulk packaging to control amount of product feed to each packing station.
ON	ON	ON	ON	ON								
OFF	ON	OFF	ON	OFF								
<p>Model 8 — On/Off Recycling (Un-equal On and Off Time). Model 9 — Off/On Recycling (Un-equal Off and On Time). Depending on which model you choose — on/off or off/on — the solenoid is alternately energized and de-energized repeatedly with un-equal time on and off. This sequence is repeated until input power is removed. Two separate controls independently adjust ON and OFF times.</p>	<p>POWER <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td></tr></table></p>	ON	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	<p>Use when you want a device to turn on and off (adjustable unequal intervals) as long as power is applied.</p> <ul style="list-style-type: none"> • Use to ratchet feed a rotating disc or a ratchet advanced conveyor continuously. • On air-operated heat sealing equipment you can use a Time-A-Valve to control sealing time and "off" time independently. • Use to control drill feeds for "pecking" operations. • Alternate product flow between two conveyor lines. Independently adjustable delay times will help compensate for different size cartons and conveyor speeds.
ON	ON	ON	ON	ON								
ON	OFF	ON	OFF	ON								
<p>Model 10 — Combination Timer (Delay On Make & Interval). When input power is turned on, delay (OFF) cycle begins. After delay time is completed, solenoid then energizes for "ON" time interval. When ON cycle is over, solenoid de-energizes until input power is removed and re-applied. Two separate controls independently adjust ON and OFF times.</p>	<p>POWER <table border="1" style="display: inline-table;"><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td></tr></table></p> <p>SOLENOID <table border="1" style="display: inline-table;"><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td></tr></table></p>	ON	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF	<p>Used for a device which when power is applied, device remains off for adjustable time, then on for a different adjustable time and then shuts off.</p> <ul style="list-style-type: none"> • Use on punch press blow-off operation to turn the part-eject air on and off at exactly the right points in the stamping cycle. • Signal at start of stroke keeps air off until ram begins return stroke. Time-A-Valve then actuates solenoid valve to start blowing part clear of press and then shuts air off until next cycle begins. Saves valuable compressed air, reduces noise, allows for quicker and safer setups.
ON	ON	ON	ON	ON								
OFF	ON	ON	OFF	OFF								

AIR SWITCH

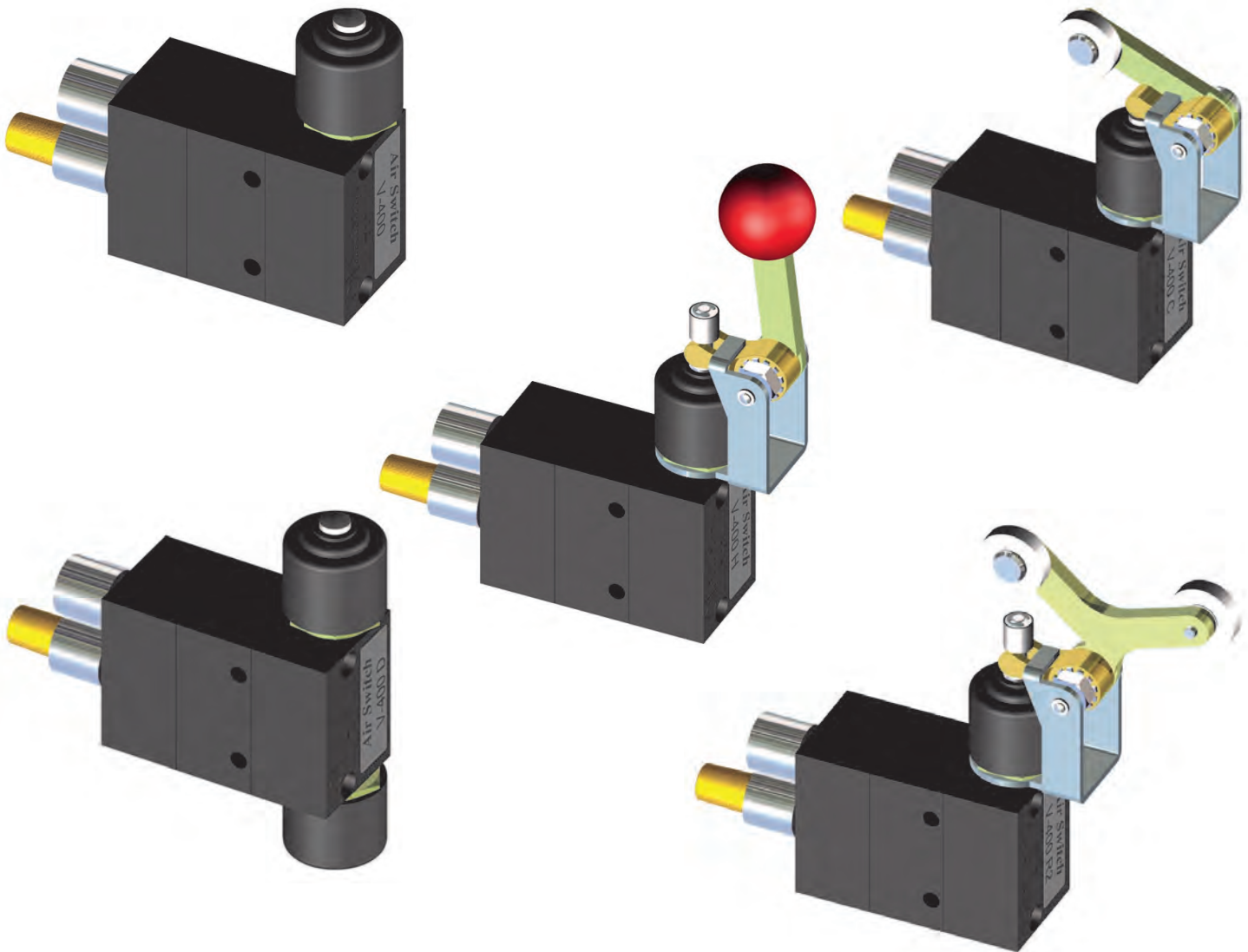
TWO FUNCTIONS IN ONE:

1) A SNAP ACTION SWITCH

For Precise Direct Control of Pneumatic Systems, Increasing Reliability, Simplifying Circuitry and Thriving in Adverse Environments.
(For replacing electrical Micro® type switches with pneumatic switches.)

2) A RUGGED 4-WAY VALVE

With full 1/4" flow (Cv=1) and ultra-high speed response. Shear type, lapped and hardened stainless steel seal surfaces make valve absolutely leak proof and provide long trouble-free life. Pressure range: 0 -150 P.S.I air only. Vacuum: Consult factory.



TYPICAL APPLICATIONS

DIRECT CONTROL OF LARGE CYLINDERS

Valve will stroke a 4" x 6" Cylinder in 1/6 of a second at 100 P.S.I, using a quick exhaust, 1/3 of a second exhausting through valve. No switches, solenoids, electric or pilot circuitry to install and maintain.

PRECISE SENSING

Actuator position has a repeatability of less than ± 0.001 for superior accuracy in control system.

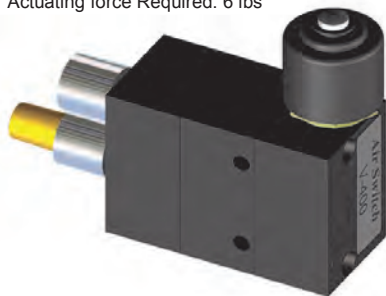
PROGRAM MODULE

Valves may be easily stacked to centralize controls, save space, simplify piping and engineering, highly suited to automated operations.

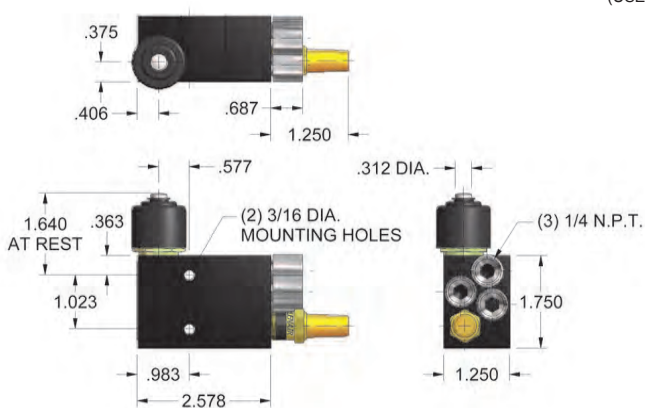
V400

Actuates with direct force on plunger.

Actuating force Required: 6 lbs



BASIC MODEL

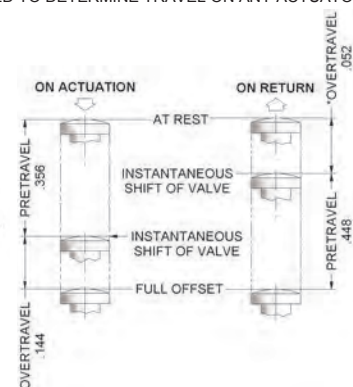


ALL VALVES FURNISHED WITH TWO # 8-32 X 1-3/4 MOUNTING SCREWS, 1/8 WASHERS & LOCK NUTS

MATERIALS

Hard coated aluminum body, stainless steel or other corrosion resistant internal parts. BUNA-N SEALS

PLUNGER STROKE POSITIONS (USED TO DETERMINE TRAVEL ON ANY ACTUATOR)



NOTES:

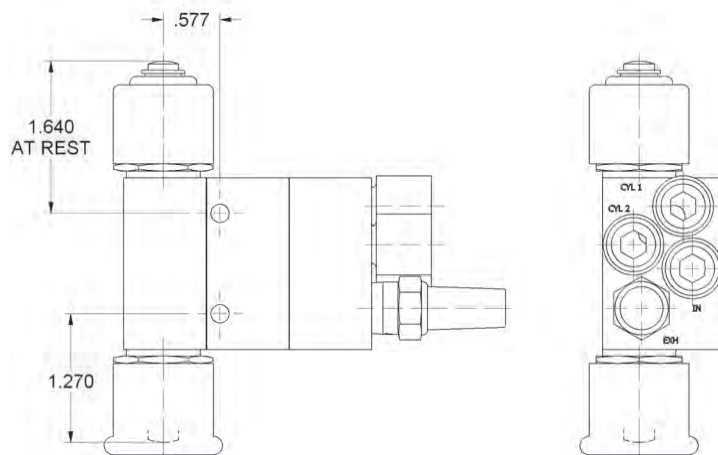
- * (1) ON MODELS V-400-2R & V-400-H OVER TRAVEL IS .177
- (2) ON V-400-D "ON ACTUATION" APPLIES TO BOTH DIRECTIONS

DOUBLE ENDED PLUNGER

V400D

Actuates with force on either end of plunger.
Remains offset once shifted.

Actuating force Required: 3 lbs

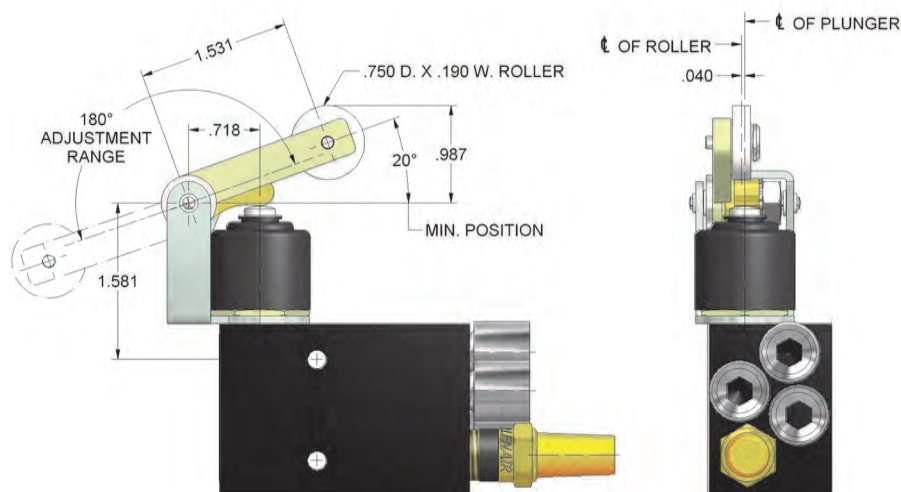
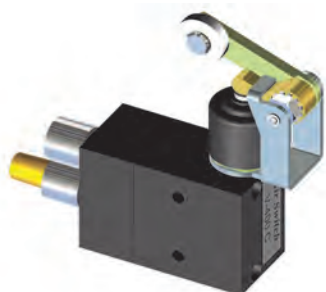


CAM ROLLER ARM

V400C

Actuates by Cam Depressing Roller from
Either Direction.

Actuating force Required: 4 lbs



AIR SWITCH

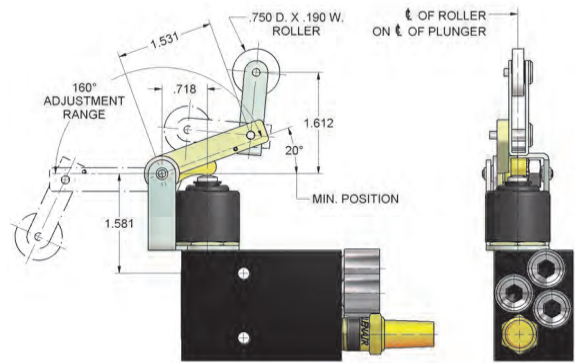
MODEL (CONTINUED)

ONE WAY ROLLER

V400R

Actuates by Cam Depressing Roller from one Direction only. Roller Displaces without actuation in other Direction.

Actuating Force Required 4 lbs.

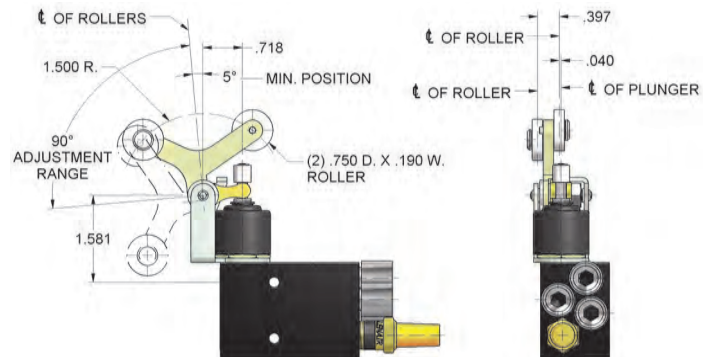
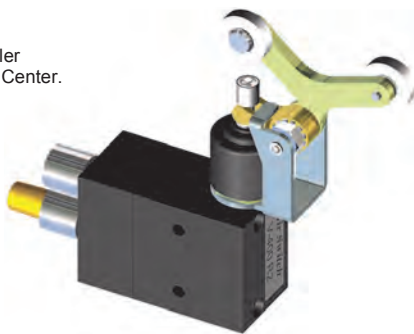


TWO WAY YOKE ROLLER

V4002R

Actuates by Cam Depressing Roller On movement to either side from Center.

Actuating Force Required 2 lbs.



PALM LEVER, SPRING RETURN

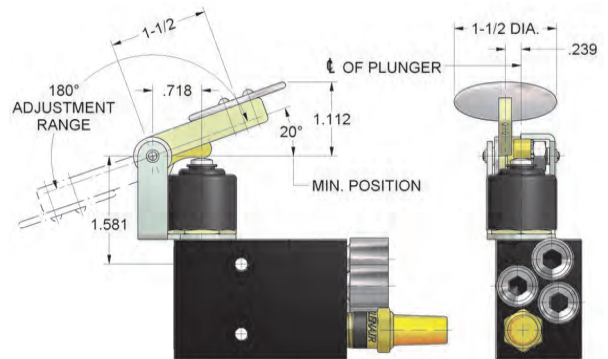
V400P

Actuates by Depressing Lever. Returns to normal position by spring.

Actuating Force Required 4lbs.



With knob.
Order as V400PH

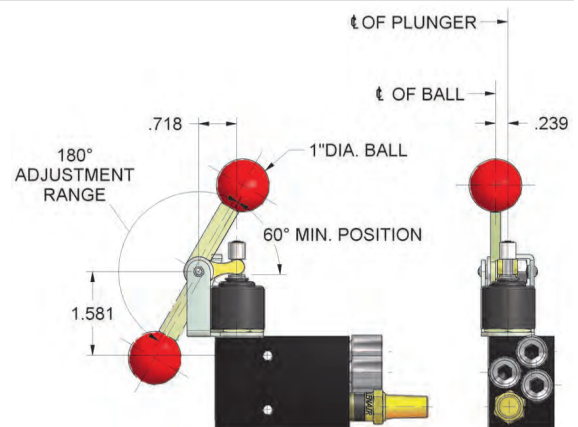
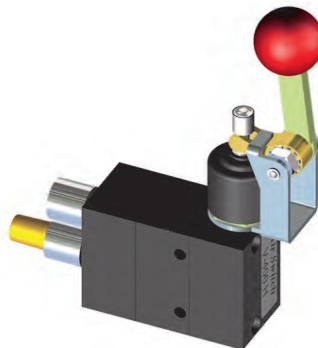


HAND LEVER

V400H

Actuates by Offsetting Lever. Remains in offset once shifted.

Actuating Force Required 2 lbs



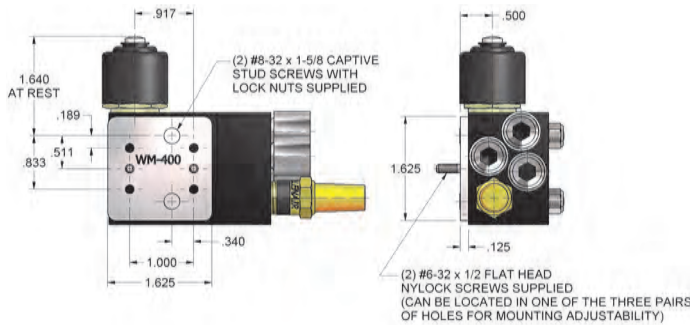
NOTE: ALL ACTUATOR BRACKETS ROTATABLE 360 DEGREES ABOUT \uparrow OF PLUNGER

MOUNTING BRACKETS

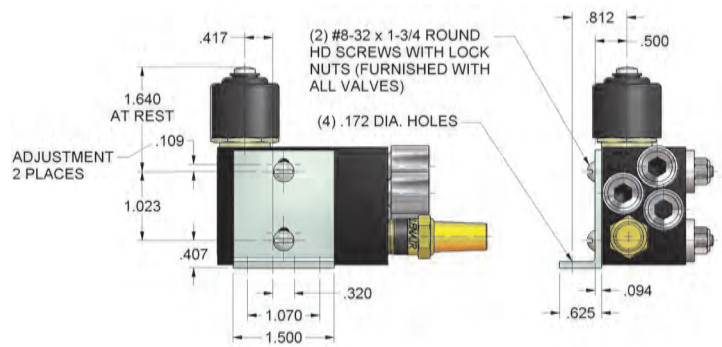
(Order Separately)

These Brackets adapt Valves directly to existing electric (Micro-type®) switch locations

WM-400 WALL MOUNTING

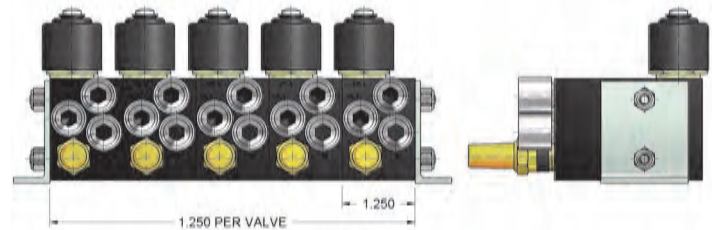
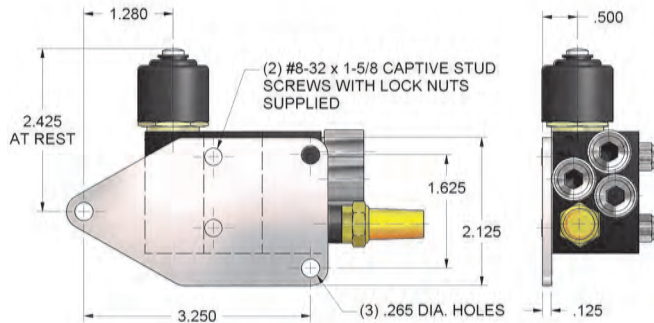


BM-400 BASE MOUNTING



HM-400 WALL MOUNTING, HEAVY-DUTY

Matches high capacity (Micro®-type F) electric switch dimensions
When using VL400 Series (Left Hand Models) order HML-400 Bracket.



Valve stack

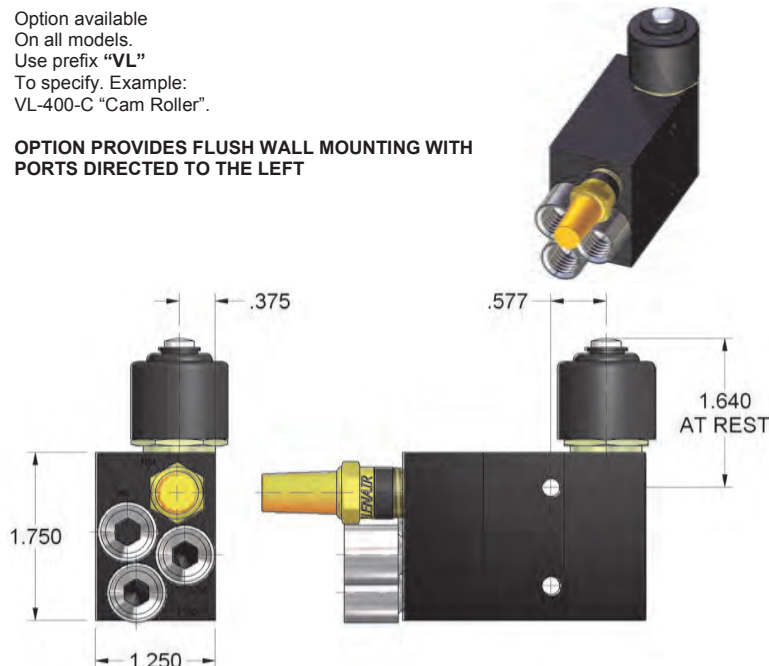
Specify no. Of stations and model for each station.
(2) BM 400 brackets & (2) #8 threaded rods with nuts furnished. Refer to BM-400 drawing for bracket dimensions and V400 drawing for other dimensions.

OPTIONS

VL400 STRAIGHT PLUNGER-LEFT HAND OPTION

Option available
On all models.
Use prefix "VL"
To specify. Example:
VL-400-C "Cam Roller".

OPTION PROVIDES FLUSH WALL MOUNTING WITH PORTS DIRECTED TO THE LEFT



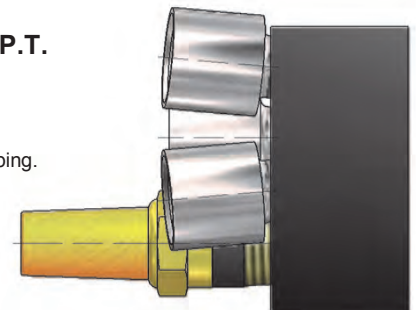
OPTIONAL PORTING (SPECIFY WHEN ORDERING)

1/8" N.P.T. (3) 1/8 N.P.T.



OFFSET 1/4" N.P.T.

Inlet & Cyl Port # 1 have 5° compound angle for increased separation on large piping.



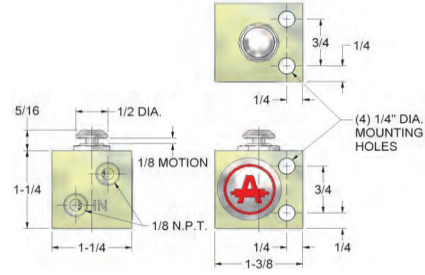
1/8" POPPET VALVES

1/8" POPPET TYPE-VALVES provide a complete line of economical, compact, trouble-free units. They are available in a wide variety of manually operated 2-way, 3-way and 4-way models. The valve bodies are corrosion resistant aluminum. All other parts are treated or plated to provide long service and resist corrosion. The poppet seal is Buna-N. Air flow capacity is 25 Cu. Ft. free air per minute at 100 P.S.I. Maximum operating pressure is 150 P.S.I. Maximum temperature range is 250°F.

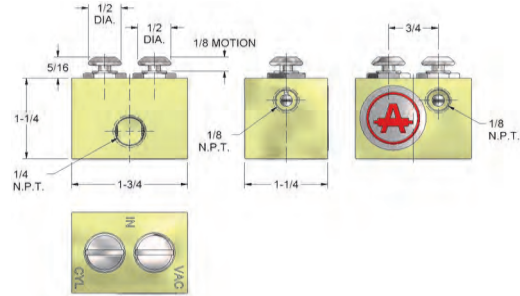


V2 TWO-WAY BUTTON VALVE
Depressing button will permit flow.
May be mounted on any one of three sides.

V23 THREE-WAY BUTTON VALVE
Depressing button will permit flow. Releasing button will permit exhaust flow through button stem.



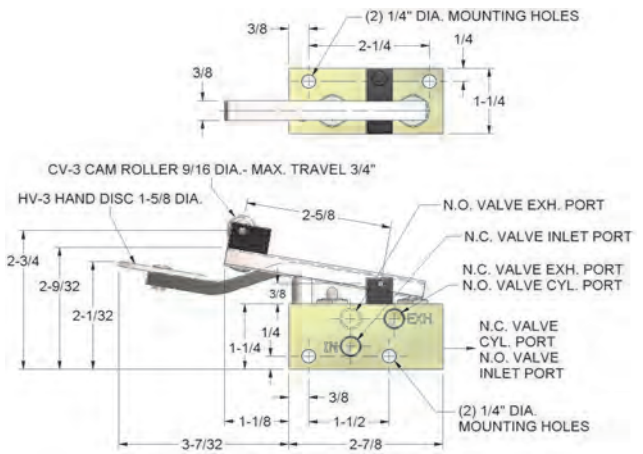
V2H TWO WAY TWO BUTTON VALVE
One common inlet Two separate outlets.



THREE-WAY VALVES

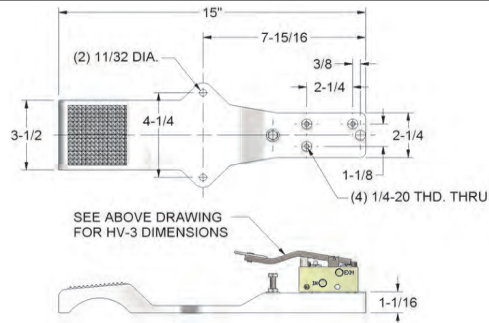
During operation, air will not escape to atmosphere. Lever bearings are of hardened steel for long service. The utilizable exhaust port will accept our Bleed Control Valve PTV305 for controlling the exhaust. Can be mounted on either of two sides.

- LEVER OPERATED**
- V3NC THREE-WAY NORMALLY CLOSED**
- V3NO THREE-WAY NORMALLY OPEN**
- HAND OPERATED**
- HV3NC THREE-WAY NORMALLY CLOSED**
- HV3NO THREE-WAY NORMALLY OPEN**
- CAM OPERATED**
- CV3NC THREE-WAY NORMALLY CLOSED**
- CV3NO THREE-WAY NORMALLY OPEN**



FOOT OPERATED

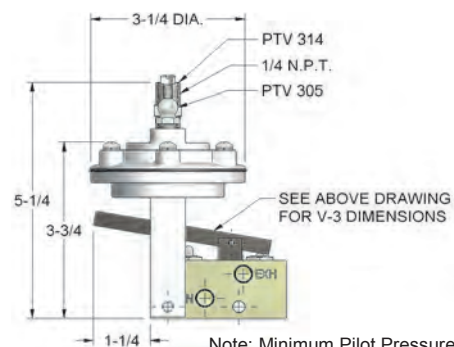
- FT300NC THREE-WAY NORMALLY CLOSED**
- FT300NO THREE-WAY NORMALLY OPEN**



PILOT TIMER VALVE

- PTV3NC THREE-WAY NORMALLY CLOSED**
- PTV3NO THREE-WAY NORMALLY OPEN**

Valve consists of a diaphragm pilot chamber which operates the 3-way valve section. A momentary pilot pressure feeds air into the pilot chamber through Check Valve PTV314 depressing the lever of modified V3 Valve. As air escapes from the pilot chamber through the Adjustable Bleed Control Valve (PTV305) the lever rises to its original position. Max. delay is 60 seconds



Note: Minimum Pilot Pressure 20 P.S.I.

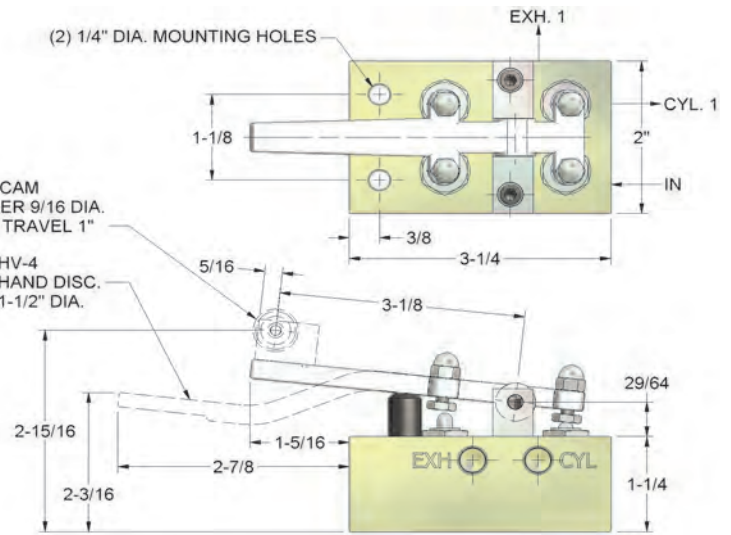
1/8" VALVES CONTINUED



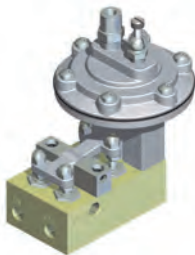
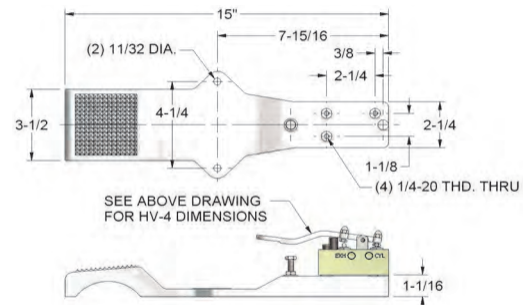
FOUR-WAY VALVES

Used for actuating Double Acting Cylinders. The utilizable exhaust ports will accept our Bleed Control Valve (PTV305) for controlling the speed of the forward and return strokes.

- V4** FOUR-WAY LEVER OPERATED
- HV4** FOUR-WAY HAND OPERATED
- CV4** FOUR-WAY CAM OPERATED



FT400 FOUR-WAY FOOT OPERATED

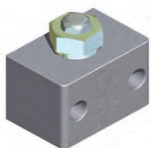
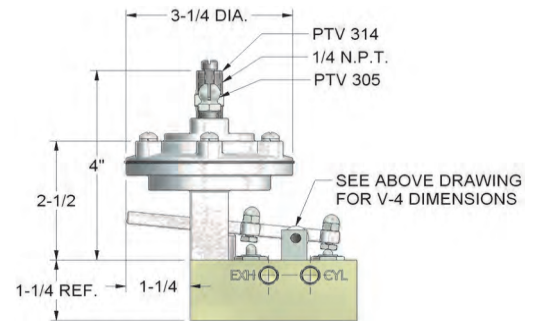


PILOT TIMER VALVE

PTV4 FOUR-WAY

Valve consists of a diaphragm pilot chamber which operates a 4-way valve section. A momentary pilot pressure feeds air into pilot chamber through Check Valve PTV314 depressing valve lever. As air escapes from the pilot chamber through the Adjustable Bleed Control Valve (PTV305) the lever rises, shifting valve to its original position. Maximum delay is 60 seconds.

Note: Minimum Pilot Pressure 20 P.S.I.



BV100 - BLEEDER VALVE 1/8" N.P.T.

Designed to be used wherever air pressure must be bled off such as the control of "Atmosphere Bleed" 4-way Pilot Valves. 1/8" N.P.T. Port is located on bottom of block.



SC100 - FLOW CONTROL VALVE 1/4" N.P.T.

This brass body valve provides control in one direction and free flow in reverse. Both ports are 1/4" N.P.T.



BV - 1/8" BUTTON BLEEDER VALVE 1/8" N.P.T.

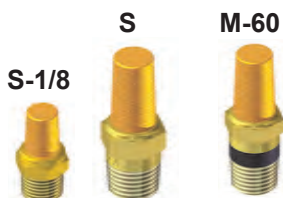
Designed for same purpose as BV-100 above. This valve has a 1/8" male pipe thread. The body is brass, with an aluminum button.



PTV305 - BLEED CONTROL VALVE 1/8" N.P.T.

This valve permits control of air flow from any exhaust port to atmosphere.

Body is steel, plated for corrosion resistance with stainless steel adjusting screw.



- S** - SINTERED BRONZE FILTER SILENCER
- M - 60** NON CLOGGING SINTERED BRONZE FILTER-SILENCER

See page 52 for full description.



PTV314 - CHECK VALVE 1/4" N.P.T.

This zinc plated brass valve allows flow in one direction only.

Maximum Pressure: 150 P.S.I.
Cracking Pressure: 20 P.S.I.

