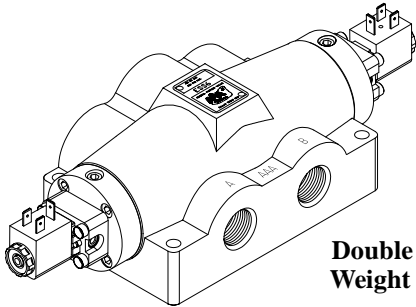
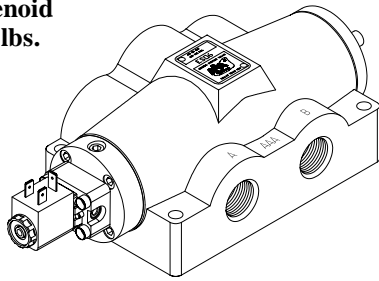


3/4" & 1" SIZE AIR VALVES

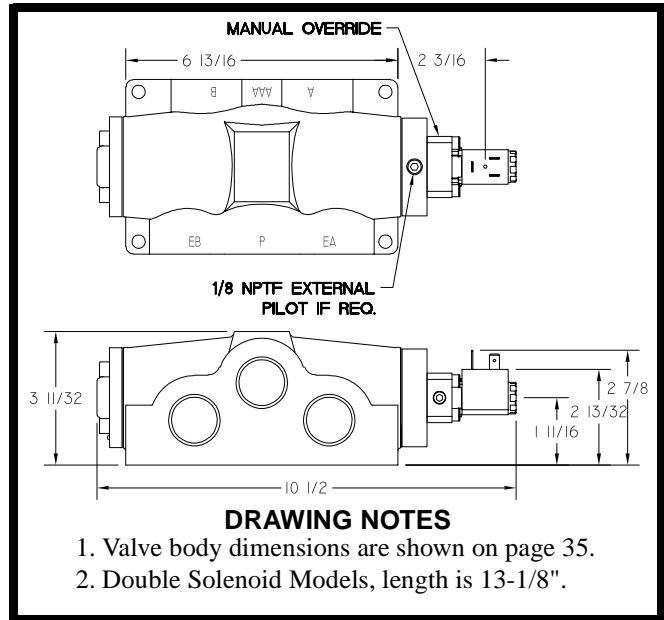
SOLENOID VALVES

SOLENOID CONTROLLED, PILOT-OPERATED TYPE
4-WAY — VACUUM TO 250 PSI AIR*

Single Solenoid
Weight 7 lbs.



Double Solenoid
Weight 7-1/2 lbs.



SOLENOID VALVES. All general and special information on pages 24, 25 and 54 including solenoid coil data, conversion to external piloting and pressure ratings apply to these models.

FLOW PATTERN. Air comes out the cylinder port nearest the solenoid which was energized.

SUBPLATE MODELS. 1" capacity valves mount on subplates with 3/4" or 1" NPTF side or bottom ports. Seals and mounting screws furnished. Select subplate from page 41.

THREADED BODY MODELS. Both 3/4" and 1" valve bodies are identical, with same spool flow capacity. The only difference is 3/4" or 1" NPTF connection threads.

REPLACEMENT SEAL KIT
ERKV-8. One kit required for each subplate valve. Includes 6 V-30 Buna-N body O-rings, 2 EMG3 Buna-N solenoid gaskets, 2 ECG48 composition end cap gaskets, 5 V-90 Buna-N subplate O-rings, 2 V-89 Buna-N subplate pilot hole O-rings (seals used determined by valve model and style).

MODEL SELECTION — SOLENOID VALVES

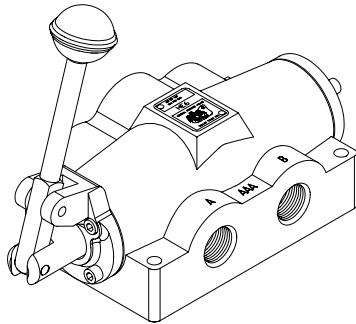
Select basic model. See page 50 for optional spools.

MODEL NUMBER		Subplate 1" Capacity	DESCRIPTION	SYMBOL
Threaded body 3/4" NPTF	1" NPTF			
ESO6	ESO8	ESO8P	Single solenoid, 2-position, spring return. Spool returns to original position when solenoid is de-energized.	
ESR6	ESR8	ESR8P	Single solenoid, 2-position, pilot pressure returned spool. Pilot pressure from an external 3-way valve returns spool to its original position.	
ESS6	ESS8	ESS8P	Double solenoid, 2-position, no springs. Spool shifts and remains shifted when one solenoid or the other is momentarily or continuously energized.	
ESY6	ESY8	ESY8P	Double solenoid, 3-position, spring centered, closed center spool. All ports are blocked when both solenoids are de-energized. See page 50 for other spools.	

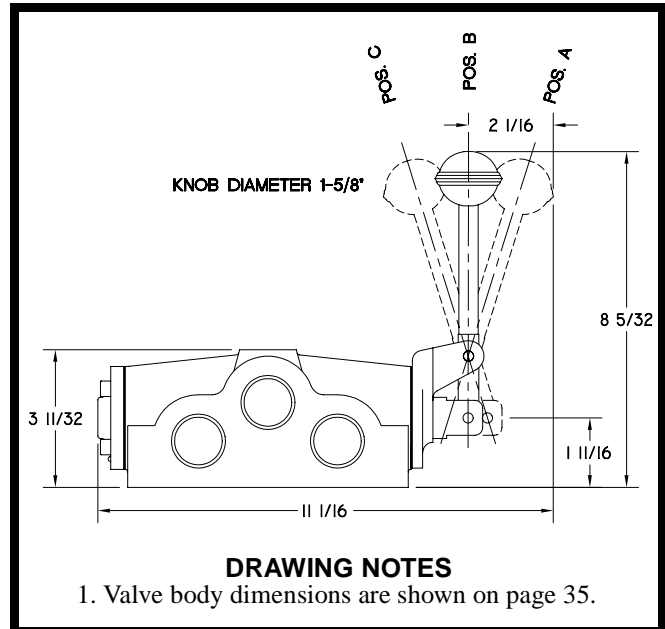
*Operating pressure range of AAA solenoid valves is subject to limitations stated in the text on page 25.

MANUAL LEVER VALVES - 3/4" & 1"

4-WAY — VACUUM TO 250 PSI AIR



Manual Lever - Weight 7 lbs.



MANUAL LEVER VALVES. Handle returns by spring force to center neutral (position “B”) on 3-position HY models. On 2-position spring return HO model, handle returns to position “C”.

Valves will operate from vacuum to 250 psi on compressed air or inert gas. May be used as 3-way by plugging unused “A” or “B” cylinder port.

OTHER HANDLE OPTIONS - See page 51

FLOW PATTERN. When lever is pulled outward, air flows out of cylinder port which is nearest the handle.

SUBPLATE MOUNTED MODELS. Will mount on subplates with 3/4" or 1" NPTF side or bottom connection

threads. Select subplates from page 41. If mounted on user’s special manifold, port hole locations and mounting dimensions can be determined from drawings on page 35.

All subplate models are furnished with a set of mounting screws plus a set of O-ring seals to the subplate.

REPLACEMENT SEAL KIT

ERKV-8. One kit required for each subplate valve. Includes 6 V-30 Buna-N body O-rings, 2 EMG3 Buna-N solenoid gaskets, 2 ECG48 composition end cap gaskets, 5 V-90 Buna-N subplate O-rings, 2 V-89 Buna-N subplate pilot hole O-rings (seals used determined by valve model and style).

MODEL SELECTION — MANUAL LEVER VALVES

Select basic model. See page 50 for optional spools.

MODEL NUMBER		Subplate 1" Capacity	DESCRIPTION	SYMBOL
Threaded body 3/4" NPTF	1" NPTF			
HE6	HE8	HE8P	2-position, friction positioned. Spool stays in any position when handle is released.	
HO6	HO8	HO8P	2-position, spring return. Handle returns to position “C” (see above drawing) when handle is released.	
HY6	HY8	HY8P	3-position, spring centered, closed center spool. All ports blocked when handle is released. See other spools on page 50.	
HD6†	HD8†	HD8P†	3-position, click detent, closed center spool. Handle stays in any one of three positions. See other spools on page 50.	
HD6Q	HD8Q	HD8QP	2-position, click detent. Handle detents in both end positions.	

†Also available, 3-position manual valve detented in position “C”, spring return to center from “A” position.

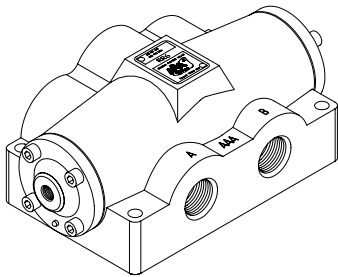
OTHER 3/4" & 1" AIR VALVES

4-WAY — VACUUM TO 250 PSI AIR — EXCEPT AS NOTED

PILOT OPERATED 3/4" AND 1" VALVES

The spool is shifted by applying pilot pressure to the end area of the spool through 1/8" NPTF pilot ports. On threaded body models the pilot ports are on one or both end caps, depending on the particular model. On subplate mounted models, pilot pressure is brought in through 1/8" NPTF connections in the subplate. A minimum of 25 psi pilot pressure is required on RR (no spring) models and 50 psi on all other standard models.

Control of pilot operated models is by means of an auxiliary control valve furnished by the user and located at the remote control point. A 3-way remote control valve may be used to control model RO, and a 4-way valve may be used to control any of the other listed models.



Pilot Operated Model
Weight 6-1/4 lbs.

PISTON-OPERATED 3/4" AND 1" VALVES

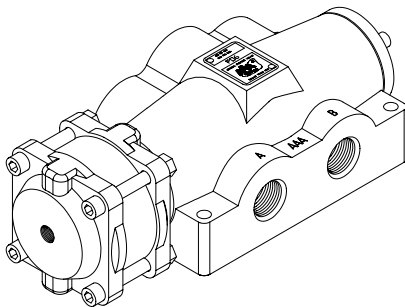
(For low pilot pressure operation)

Piston operated valves are similar to the pilot operated valves described above, with a large diameter piston to shift the spool. The area on the piston is larger than the area on the end of the spool, so these valves will shift on a lower pilot pressure. A pressure as low as 7 psi will shift the PP (no spring) model, and 12 psi is required on all other models.

On all models, threaded body or subplate type, pilot pressure must be connected to the pilot ports on the piston operator; it cannot be brought in through the subplate.

Note that model PO (spring returned) has a single-acting piston operator on one end, and the spool is returned with a spring on the opposite end. Model PP and PY has a double-acting piston on one end of the body, the end shown in the illustration.

Remote control of the Piston-operated valves is accomplished in the same way described above for pilot-operated models.

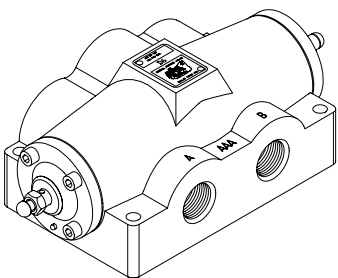


Piston Operated Model
Weight 8 lbs.

DIFFERENTIAL PILOT 3/4" AND 1" VALVES

Differential pilot valves will not operate on vacuum nor on a line pressure less than 25 psi. Bleed buttons are furnished with the valve and may, if desired, be removed from the valve end caps and mounted on 1/4" hose or tube extensions to remotely shift the main valve spool from a few feet away. Instead of the bleed buttons, any other kind of 2-way normally closed (N.C.) valve can be used at the remote control point. See page 47 for optional bleed buttons and accessories.

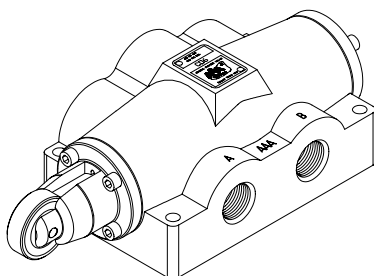
On subplate models, bleed connections are brought through the subplate, and the bleed buttons on each end cap can be left on the valve and used as manual override buttons.



Differential Pilot Model
Weight 6-1/2 lbs.

CAM OPERATED 3/4" AND 1" VALVES

The cam roller is a ball bearing with hardened race. It can be turned to a position at right angles to that illustrated. Remove 4 screws holding cap to body. Rotate the end cap and remount. A force of 50 lbs., and a travel of 7/8" is required to fully shift the spool. An over-travel of 1/32" is provided to protect the valve and the machine from damage due to over-travel.



Cam Operated Model
Weight 8 lbs.

MODEL CHART—3/4" AND 1" VALVES ON PAGES 33

Threaded body 3/4" and 1" models are identical except for connection size. Subplate models of 3/4" and 1" size have the same flow capacity and can be mounted on choice of subplates having either 3/4" or 1" NPTF side or bottom ports.

Pilot and bleed connections are brought into the valve through the subplate. Mounting kits including O-ring seals and mounting screws are furnished with each subplate valve. See page 41 for subplates and page 35 for machining dimensions for user manufactured manifold.

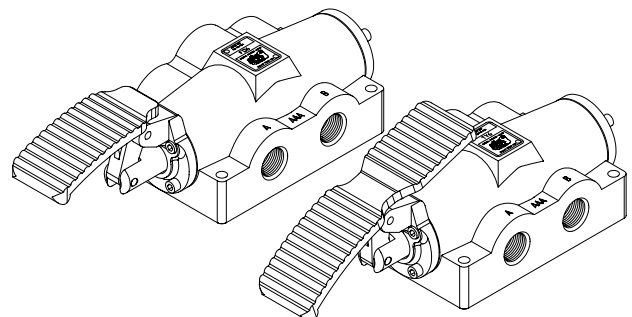
MODEL SELECTION — PILOT OPERATED, DIFFERENTIAL PILOT, PISTON & CAM VALVES

MODEL NUMBER		DESCRIPTION	SYMBOL
Threaded body	Subplate		
3/4" NPTF	1" NPTF	1" Capacity	
RR6	RR8	RR8P	2-position, double pilot, no springs. Spool stays in either shifted position when pilot pressure is removed.
RO6	RO8	RO8P	2-position, single pilot, spring return. Spool returns to original position when pilot pressure is removed.
RY6	RY8	RY8P	3-position, double pilot, spring centered, closed center spool. Spool centers when pilot pressure is removed from both ports. See other spools on page 50.
D6	D8	D8P	2-position, double differential pilot, no springs, furnished with button on both ends. Spool stays in shifted position.
DY6	DY8	DY8P	3-position, double differential pilot, spring centered, closed center spool. Spool centers when buttons are both closed or opened. See other spools on page 50.
DO6	DO8	DO8P	2-position, single differential pilot, spring return. Spool returns to original position when button is pressed.
PP6	PP8	PP8P	2-position, no springs. Double acting piston actuator on one end. Spool stays in shifted position when pilot pressure is removed. Minimum of 7 psi to shift spool.
PO6	PO8	PO8P	2-position, spring return. Single acting piston actuator on one end. Spool returns to original position when pilot pressure is removed. Minimum of 12 psi to shift spool.
PY6	PY8	PY8P	3-position, spring centered, closed center spool. Double acting piston actuator on one end. Spool centers when pilot pressure is removed from both ports. See other spools on page 50. Minimum of 12 psi to shift spool.
CO6	CO8	CO8P	2-position, spring return. Normal spool travel 7/8" with 1/32" over-travel. Spool returns to "Out" position when cam is released.

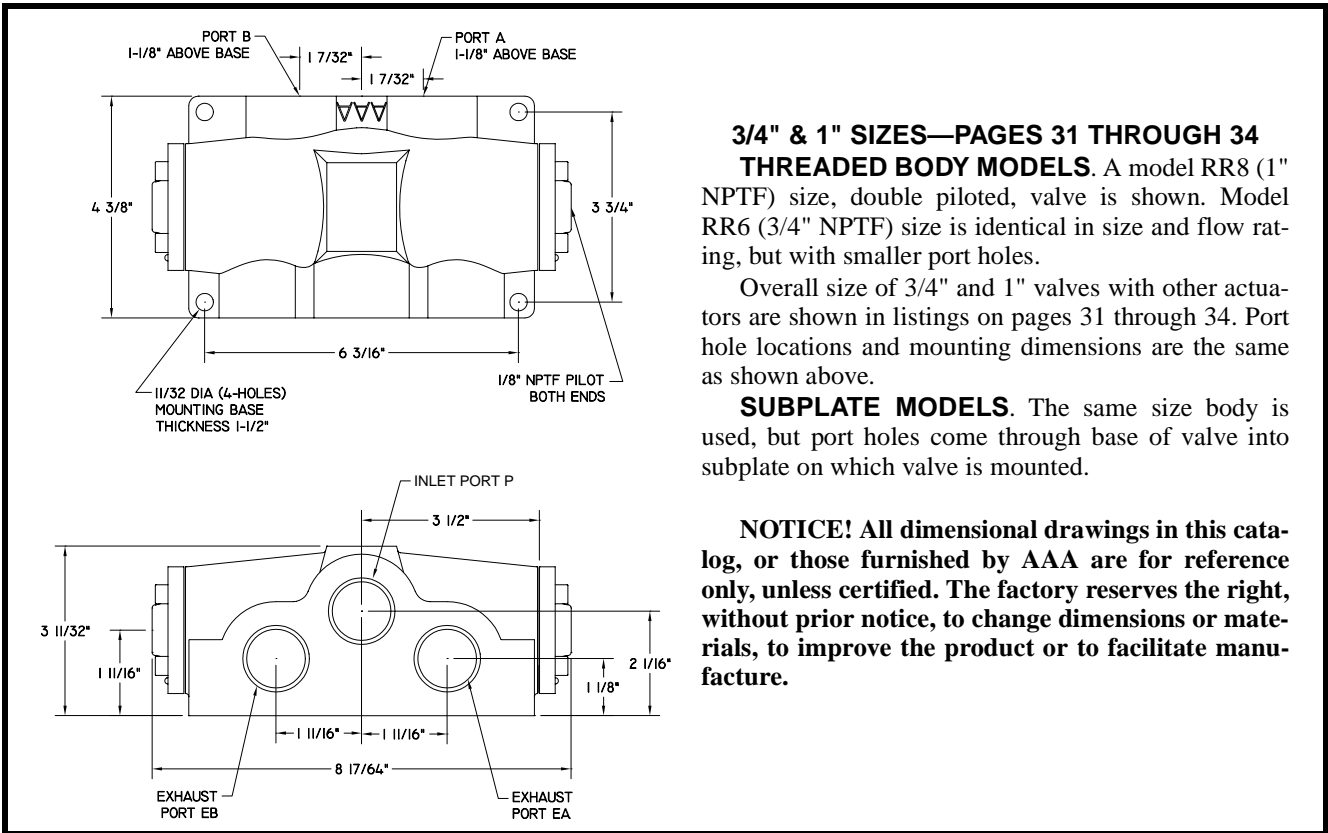
FOOT OPERATED MODELS

Foot operated valves, with pedal and treadle actuators, in 3/4" and 1" sizes have been discontinued from regular production because of lack of demand. They will continue to be available indefinitely. If these models are required please contact factory for quotation. User must assume full safety responsibility for the use of foot valves.

Valves of these types now in service, at user's option, will be repaired or repacked at the factory, or can be serviced by the user, since repair and seal kits will continue to be available for an indefinite period.



BODY DIMENSIONS— 3/4" & 1" VALVES



**3/4" & 1" SIZES—PAGES 31 THROUGH 34
THREADED BODY MODELS.** A model RR8 (1" NPTF) size, double piloted, valve is shown. Model RR6 (3/4" NPTF) size is identical in size and flow rating, but with smaller port holes.

Overall size of 3/4" and 1" valves with other actuators are shown in listings on pages 31 through 34. Port hole locations and mounting dimensions are the same as shown above.

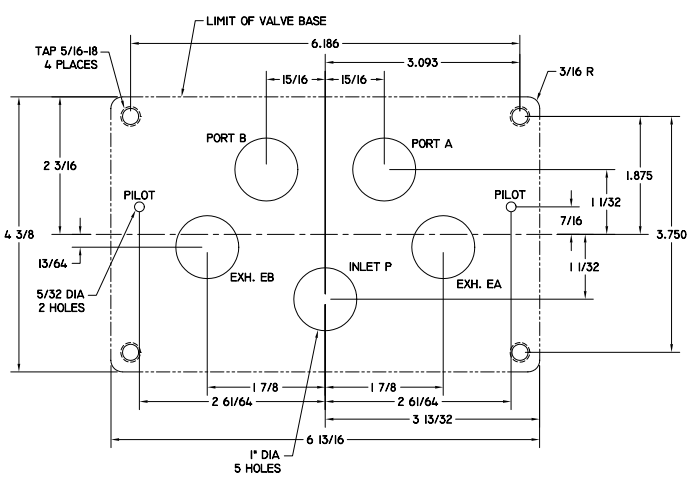
SUBPLATE MODELS. The same size body is used, but port holes come through base of valve into subplate on which valve is mounted.

NOTICE! All dimensional drawings in this catalog, or those furnished by AAA are for reference only, unless certified. The factory reserves the right, without prior notice, to change dimensions or materials, to improve the product or to facilitate manufacture.

SPECIAL INFORMATION ON 3/4" & 1" SUBPLATE MOUNTED VALVES

USER'S SPECIAL MANIFOLDS

When laying out valves on a manifold or on a machine, be sure to allow sufficient clearance between valves for pilot connections, if any, and space for removing of solenoid covers for wiring.



MOUNTING PATTERN — 3/4" & 1" VALVES

STANDARD SUBPLATES

Factory-built subplates are listed on page 41.

SUBPLATE-TO-VALVE PORT SEALS

O-ring seals are furnished with each subplate valve for sealing between valve body and subplate. Replacement O-rings, if needed, can be purchased locally. Any material, such as Buna-N which is compatible with air line lubrication can be used. Seal kits obtained from the AAA factory include these seals.

Subplate No.	O-Ring for Replacement
SP6 & SP8	1-1/8" I.D. x 1-3/8" O.D.

PILOT PORT SEALS

Pilot O-ring seals are furnished with each subplate valve for sealing between valve body and subplate.

Subplate No.	O-Ring for Replacement
SP6 & SP8	3/8" I.D. x 9/16" O.D.

MOUNTING SCREWS FOR SUBPLATES

Mounting screws for attaching valves to subplate are normally furnished with each valve. If replacements are necessary, these can be obtained from the local industrial distributor in the following sizes.

Subplate No.	Thread	Length
SP6 & SP8	5/16-18	2-1/4"