

AIR ACTUATED VALVES

DESCRIPTION

The R-K AOV series air valves feature a compact plastic valve available in six different models to handle a multitude of piping system functions. This patented valve is designed so there is no metal contact with the fluid. Engineered with automatic fail-safe shut-off, this 2-way air operated valve is designed to actuate at 40-80 PSI. This direct acting full flow valve features top entry for easy in-line maintenance and minimum water hammer.

Designed to operate in any position, this valve is ideal for pollution control, wet processing stations, plating equipment, chemical processing and water treatment applications.

R-K AOV SERIES

AIR-OPERATED VALVES WITH VERSATILE FLOW CONTROL



KEY FEATURES

- **Six Configurable Valve Types:** Supports a variety of control and flow applications.
- **Air-Operated Design:** Actuates between 40–80 PSI.
- **Fail-Safe Operation:** Spring-return models for normally closed or normally open fail-safe function.
- **Non-Metallic Construction:** Ensures chemical compatibility and prevents corrosion.
- **Direct-Acting Full Flow:** Efficient flow with low pressure loss.
- **Top-Entry Maintenance:** Easy in-line service without disconnecting piping.
- **All-Position Installation:** Operates effectively in any orientation.
- **Low Water Hammer:** Smooth actuation reduces hydraulic shock.

VALVE BODY MATERIALS:

- Type 1 – Grade 1 PVC
- Natural Polypropylene (PP)
- PVDF (Polyvinylidene Fluoride)
- Teflon

Spring: Stainless steel, fully isolated from fluid path

O-Ring Options: EPDM, Viton or Kalrez.

Port Alignment: Inlet and outlet ports are parallel for easy installation

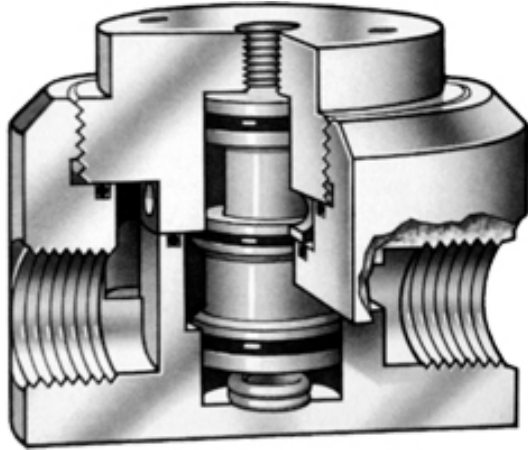
SIZES & PORTING

Valve Sizes: ¼", ½", ¾", 1", 1½", and 2". ½", ¾", and 1" available in molded body styles

Port Types:

¼" to 1": Female Pipe Thread (FPT)
1½" and 2": Male Pipe Thread (MPT)

Mounting: Four standard ¼"-20 tapped holes (two cut-out slots on molded bodies) for simple mounting.



PATENT NO: 4,267,861

PRESSURE & TEMPERATURE RATINGS:

Pressure Range: 0 to 150 PSIG with a maximum recommended operating temperature

Temperature Range

- PVC: 0°F to 140°F
- POLYPRO: 0°F to 180°F
- PVDF: 0°F to 280°F
- Teflon: 0°F to 340°F

SIX MODELS TO CHOOSE FROM

Type 1	Normally Closed	Most popular style. Fail-safe closed. Air pressure to the 1/8" top port opens the valve. Removing pressure allows the spring to close it.
Type 2	Normally Open	Fail-safe open. Air pressure to the top port closes the valve. Removing pressure allows the spring to reopen it.
Type 3	Air-to-Open, Air-to-Close	No spring action. Controlled through pneumatics. Air to the top port opens, air to the bottom port closes
Type 4	Bottom Flow Control	Adjustable screw/locknut on bottom sets flow rate. Air pressure opens the valve to a pre-set rate. Spring closes the valve when air is off.
Type 5	Top Flow Control	Adjustable screw/locknut on top controls preset flow even with no air pressure. Air pressure opens the valve to full flow; spring returns to pre-set position.
Type 6	Top and Bottom Flow Control	Combines Type 4 and Type 5 features with adjustable screws on both ends for maximum flow control flexibility.

The chart below will specify R - K standard valves regarding valve size, valve material, and seal material.
For special orders, please consult the factory for pricing and delivery information.

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VALVE SIZE

25 = 1/4"
50 = 1/2"
75 = 3/4"
100 = 1.0"
150 = 1.5"
200 = 2.0"

MATERIAL

1 = PVC
2 = POLYPRO
3 = PVDF
4 = TEFLON
5 = OTHER (Please specify)

SEALS

E = EPDM
V = VITON
K = KALREZ
O = OTHER (Please specify)

X = MOLDED BODY
(1/2", 3/4", 1" ONLY)

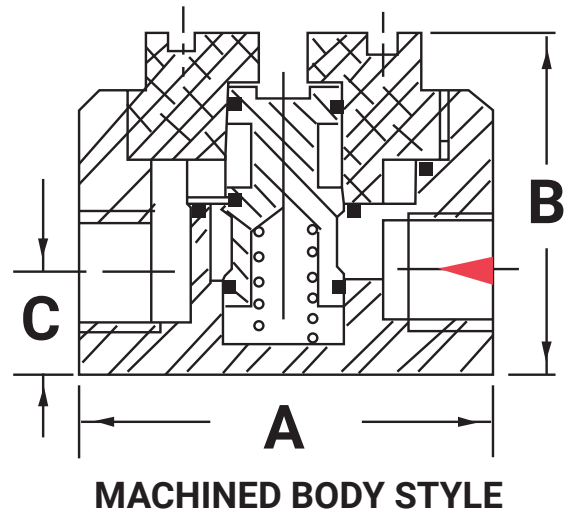
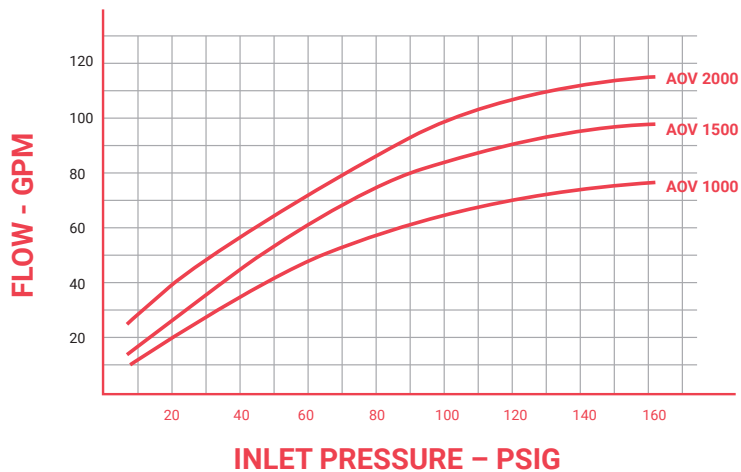
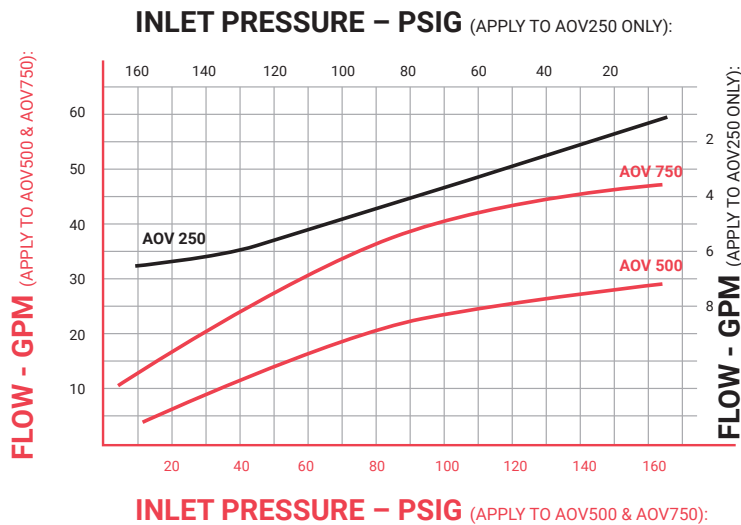
VALVE TYPE

1 = NORMALLY CLOSED
2 = NORMALLY OPEN
3 = AIR TO OPEN/CLOSE
4 = BOTTOM FLOW CONTROL
5 = TOP FLOW CONTROL
6 = TOP AND BOTTOM FLOW CONTROL

ENGINEERING & PERFORMANCE DATA

NOTES

- Test data was performed with 68°F water, and 160 PSIG maximum pressure.
- These performance curves will be changed with higher viscosity liquid and/or higher temperature.
- Consult your local sales rep or the manufacturer directly for custom products or special applications.



DIMENSIONAL DATA

DIMENSIONS IN INCHES

() MOLDED BODY DIM

Valve size	Ports	A	B	C	Cv
1/4"	FNPT	2	1.8	0.5	0.58
1/2"	FNPT	3.0 (2.9)	2.5 (2.4)	.7 (.7)	2.42
3/4"	FNPT	3.5 (3.3)	3 (2.8)	.9 (.7)	3.28
1.0"	FNPT	4 (3.9)	3.5 (3.3)	1.1 (.9)	4.32
1.5"	MPT	5	4.7	1.5	16.1*
2.0"	MPT	6	5.5	1.7	21.7*

(*) Cv value @ 150 GPM

