

North American Pneumatic Cycle Valve

The 1447 Pneumatic Cycle Valve isolates oil, water, or gas in industrial applications including air dryers, ovens, furnaces, autoclaves, food, and sterilization processes. They are high duty cycle on/off angled globe valves that are primarily used on StepFire™ and TwinBed II™ systems. Compressed air opens the valve and a spring returns the valve to the original closed position.

The "Y" pattern valve is operated by a linear piston actuator. When the valve is in the normally closed position, the pressure is against the valve seat, not the packing. The shaft seals are self-adjusting and protected by a wiper ring against fouling and damage. This ensures a tight seal even after long periods of operation. The fail-safe actuator is maintenance-free and can be rotated 360 degrees.



SPECIFICATIONS

Maximum fluid temperature (1/2" - 2")	285 F
Maximum fluid temperature (2 1/2" and 3")	355 F
Maximum compressed air temperature (1/2" - 2")	140 F
Maximum compressed air temperature (2 1/2" and 3")	175 F
Maximum ambient temperature (1/2" - 2")	140 F
Maximum ambient temperature (2 1/2" and 3")	175 F
Actuator volume (1/2" - 2")	7.62 in. ³
Actuator volume (2 1/2" and 3")	38 in. ³
Body material	cast bronze
Seal	Teflon
Valve end connection	NPT
Compressed air connection	1/4" BSP (1/4" NPT adapter supplied loose)
Compressed air quality	Water free, prefer oil free, but can be lubricated

CAPACITIES

Valve designation	Valve size, inches	CV, gpm	Natural gas 0.62 sp gr scfh at 1" ΔP	Max. fluid inlet pressure, psig	Actuator compressed air pressure, psig
1447-01	1/2	6.3	370	150	60-120
1447-0	3/4	9.8	570	150	60-120
1447-1	1	17.7	1030	150	60-120
1447-2	1 1/4	26	1510	105	60-120
1447-3	1 1/2	47	2720	67	60-120
1447-4	2	82	4750	45	60-120
1447-5	2 1/2	126	7300	105	60-150
1447-6	3	186	10800	75	50-150

The North American 1447 can be ordered with two-position indication switches only. Single position is not available. Specify -LL after the part number. Example: 1447-2-LL.

The position indicator consists of two micro-switches with roller arms. Each switch is mounted on a carrier. Separate threaded spindles enables them to be independently adjusted for a maximum stroke of 20 mm. The unit is mounted on a plastic base that can be rotated 360 degrees. The complete assembly fits under a transparent hood which fits on the base plate. Two PG 9 cable glands are supplied for the electrical connections. Integral LED indicators show whether the circuit is open (red LED) and that the system voltage is present (green LED). (See Figure 1 for electrical wiring diagram.)

POSITION INDICATOR SWITCH SPECIFICATIONS

Voltage	110 V ac
Switch rating	3 amps
Power consumption	3 mA
Ambient temperature range	-4 F to 140 F

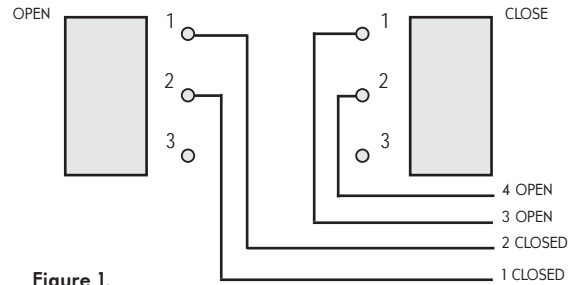
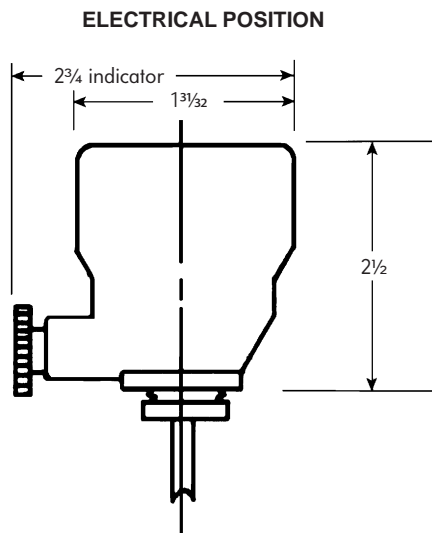
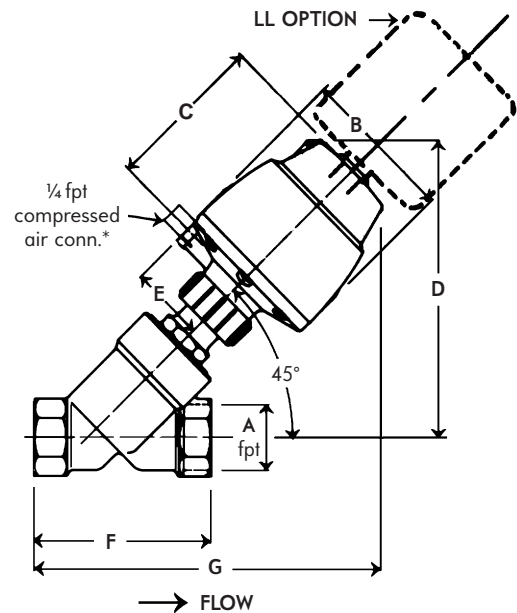


Figure 1.

DIMENSIONS inches



*1/4" BSP to 1/4" fpt adapter shipped loose.



Valve designation	dimensions in inches							Wt, lb
	A	B	C	D	E	F	G	
1447-01	1/2	3 ²⁵ / ₃₂	3 ²⁸ / ₃₂	6 1/2	1 ²⁷ / ₃₂	2 ⁹ / ₁₆	7 ³ / ₁₆	2.9
1447-0	3/4	3 ²⁵ / ₃₂	3 ²⁸ / ₃₂	6 3/4	1 ²⁷ / ₃₂	2 ³¹ / ₃₂	7 ¹⁵ / ₃₂	3.3
1447-1	1	3 ²⁵ / ₃₂	3 ²⁸ / ₃₂	6 ¹⁵ / ₁₆	1 ²⁷ / ₃₂	3 ⁹ / ₁₆	7 ⁷ / ₈	3.5
1447-2	1 1/4	3 ²⁵ / ₃₂	3 ²⁸ / ₃₂	7 ⁹ / ₃₂	1 ²⁷ / ₃₂	4 ¹¹ / ₃₂	8 ¹⁹ / ₃₂	4.8
1447-3	1 1/2	3 ²⁵ / ₃₂	3 ²⁸ / ₃₂	7 ⁹ / ₁₆	1 ²⁷ / ₃₂	4 ³ / ₄	8 ³ / ₄	5.3
1447-4	2	3 ²⁵ / ₃₂	3 ²⁸ / ₃₂	7 ³¹ / ₃₂	1 ²⁷ / ₃₂	5 ²⁹ / ₃₂	9 ¹⁷ / ₃₂	6.8
1447-5	2 1/2	6 ¹⁵ / ₃₂	5 ²⁵ / ₃₂	10 ²⁷ / ₃₂	2 ⁷ / ₁₆	7 ¹ / ₂	-	18.7
1447-6	3	6 ¹⁵ / ₃₂	5 ²⁵ / ₃₂	11 ¹¹ / ₃₂	2 ⁷ / ₁₆	8 ¹¹ / ₁₆	-	21.1

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.



CONTACT US:
 Fives North American Combustion, Inc.
 4455 East 71st Street - Cleveland, OH 44105 - USA
 Tel: +1 216 271 6000 - Fax: +1 216 373 4237
 Email: fna.sales@fivesgroup.com

www.fivesgroup.com