

Remote and Direct Operated Poppet-Type On-Off Valves



Quick-Acting
2 & 3-Way Valves For Air,
Liquid, Gas or Vacuum Service

Lexair® Poppet-Type On-Off Valves

Remote or Direct Operated Valves for a Variety of Industrial and Process Needs

Lexair poppet-type valves provide high flow, positive shut-off operation for a variety of industrial and process control needs. Constructed of non-corrosive materials, they can be used with a wide range of liquids and gases where quick-acting control is required.

Positive, bubble-tight shut-off is accomplished by an exclusive poppet-seat design that provides a long lasting, extrusion resistant seal. There's easy maintenance too, with quick access to valve internal parts without the need for removing in-line piping. Smaller port sized valves have one-piece poppet assemblies that are replaced in seconds. These are important advantages when a valve is installed in hard-to-reach places.

Dual Poppet Design on Larger Valve Sizes

To minimize the pilot pressure required to actuate valves and assure fast operation with viscous media, larger port sizes of solenoid and mechanical models incorporate a dual poppet design. Inlet media flows into the large poppet chamber through orifices so that line pressure is applied in the same direction as the poppet spring to hold both poppets closed. When the valve is actuated, the piston and operating stem readily opens the inner poppet which has a small surface area that requires a minimal force to open. This immediately relieves the large poppet chamber pressure into the valve outlet so that less force is required to open the large poppet as the pin continues its stroke. The entire sequence is instantaneous, insuring fast valve response with minimal operating effort.

For High Flow, Bubble-Tight Control

Pilot Cap

Aluminum hard anodized for corrosion resistance (Optional: Nickel-plated brass)

Pilot Piston With "U"-Cup Seals

provide low-friction positive sealing.

Resilient, Poppet Seat Design

assures leak-tight shut-off for hard-to-handle fluids.

Captive Seal Poppet Construction

for high resistance to extrusion under pressure.

Pressure-Assisted Sealing.

Inlet pressure works in seal direction, assuring positive closure.

Smaller Line Sizes Furnished with Single, Direct-Acting Poppet.

Dual poppet design in larger sizes operate on a pressure differential, requiring minimal force for valve actuation.

Handles, Air, Water, Oil, Vacuum—Even Non-Lube Air

Wide Range of Pilot Ratios for high media pressure, low pilot pressure operation.

"U"-Cup Stem Seal isolates controlled flow media from pilot chamber for multi-media service.

Wide Open Flow. Poppet opens large orifice flow path—comparable to manual valve designs.

Heavy-Duty Construction.

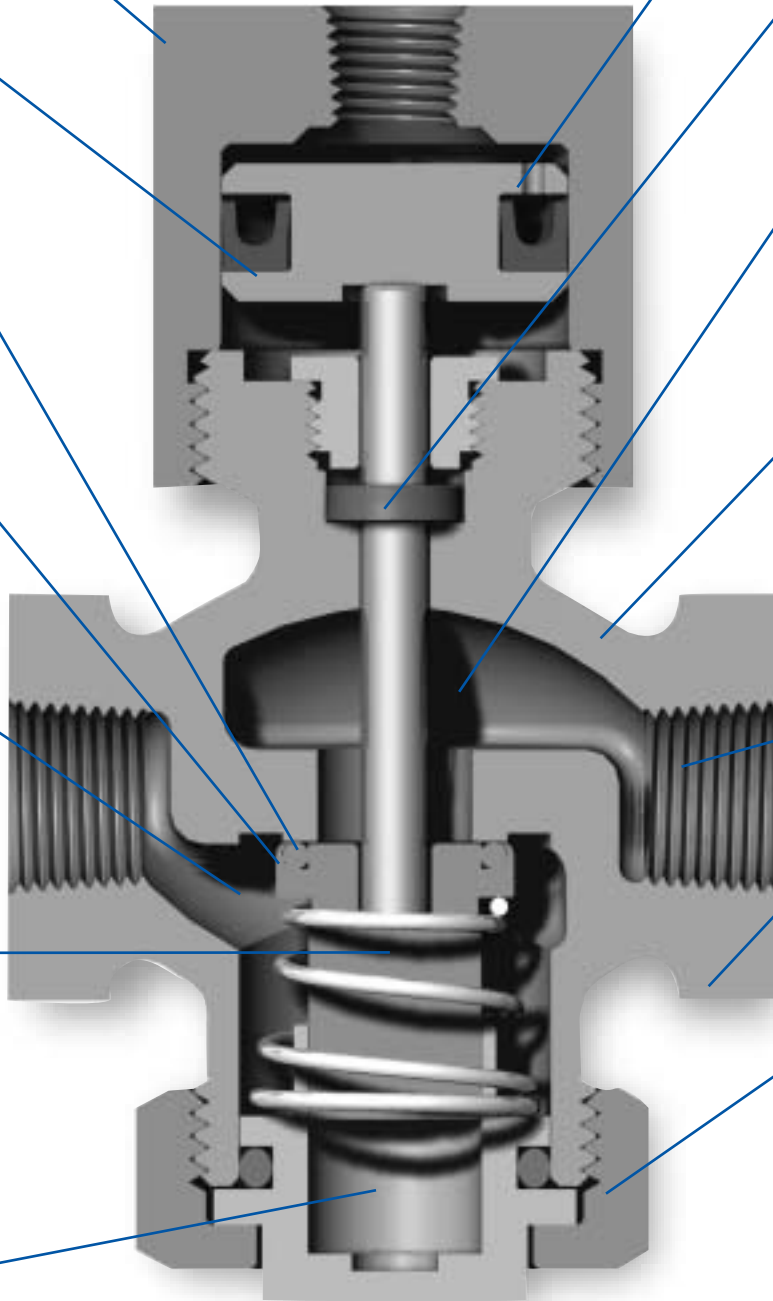
Thick-walled bronze bodies resist hammering, cracking—add outstanding corrosion resistance.

Wide Range of Port Sizes. 1/4" to 2" pipe sizes.

Big Husky Body Hexes for heavy-duty piping ease.

Easy Service and Repair.

All models have ready accessibility to internal parts without removing piping. One-piece poppet assembly on smaller sizes is replaced in seconds.



Direct Pilot Operated

Normally Open

Air, Oil, Water or Vacuum

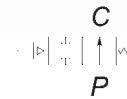
These direct pilot operated valves can be used with a variety of media where quick, positive control is required. With optional seals, they require no lubrication, making them ideal for non-lube air service.

Valves feature a large resilient poppet that provides bubble-tight closure, even under low pressure conditions. Bronze, brass and stainless steel construction and choice of seal materials provide excellent compatibility with a wide range of media.

Pilot cap is easily removed for quick access to valve's one-piece poppet assembly. Buna N o-ring on poppet and U-cup pilot piston seal prevent controlled media from entering pilot chamber, permitting use of different media for pilot control. All sizes incorporate a single, direct operated poppet design.

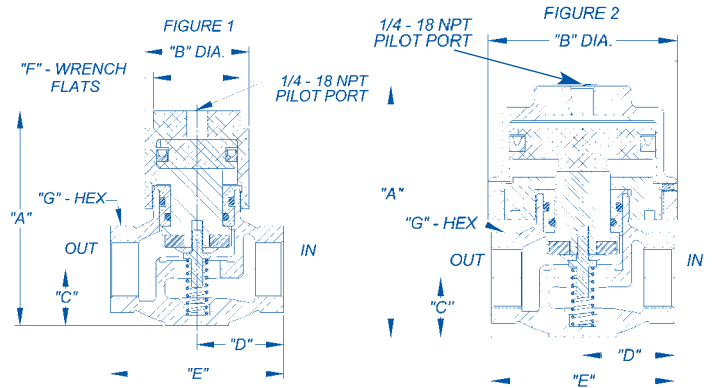


ANSI SYMBOL



Specifications

Body:	Cast Bronze (ASTM B-61)
Pilot Cap:	Aluminum
Internal Parts:	Brass and Stainless Steel
Seals:	Buna-N Standard (Optional Seals pg. 15)
Temperature Range:	-30° F to +225° F with Standard Seals (300° F with optional seals)
Pressure Rating:	0-500 PSI Higher pressure ratings available, consult factory
Pilot Ratio:	See Model Number Chart



Model Numbers

NPT Pipe Size (Inches)	CV Factor	Pilot Ratio*	Wgt. (Lbs.)	Model No.
1/4	2.56	1:1	2.0	321304
		8:1	4.2	325104
3/8	2.90	1:1	2.0	321306
		8:1	4.2	325106
1/2	3.19	1:1	2.0	321308
		8:1	4.2	325108
3/4	6.85	1:1	4.0	321312
		8:1	7.0	325112
1	12.10	1:1	5.50	321316
		3:1	6.00	325116
1 1/4	21.00	1:1	6.50	321320
		3:1	6.80	325120
1 1/2	25.80	1:1	8.00	324624
		4:1	8.40	325124
2	50.00	1:1	12.00	324632
		2:1	13.00	325132

Dimension (inches)

For Figure 1 (Standard Pilot Ratios)

Pipe Size	1/4" to 1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	3.44	4.19	4.75	5.41	5.75	6.88
B	1.75	2.00	2.25	2.75	3.00	3.88
C	.81	.97	1.22	1.53	1.53	2.00
D	1.38	1.62	1.88	2.19	2.56	2.91
E	2.75	3.25	3.75	4.38	4.88	5.81
F	1.50	1.62	1.88	2.00	2.00	2.00
G	1.25	1.50	1.88	2.25	2.50	3.25

Dimension (inches)

For Figure 2 (High Pilot Ratios)

Pipe Size	1/4" to 1/2"	3/4"	1"	1 1/4"	1 1/2"
A	5.06	5.31	5.16	5.62	6.50
B	3.38	3.38	3.88	3.88	5.00
C	.88	.97	1.00	1.12	1.75
D	1.38	1.62	1.88	2.15	2.44
E	2.75	3.25	3.75	4.31	4.88
G	1.25	1.50	2.00	2.25	2.50

Direct Pilot Operated

Normally Closed

Air, Oil, Water or Vacuum*

These direct pilot operated valves can be used with a variety of media where quick, positive control is required from an extremely low pilot signal. With optional seals, they require no lubrication, making them ideal for non-lube air service.

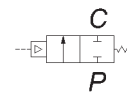
Valves feature a large resilient poppet that provides bubble-tight closure, even under low pressure conditions. Bronze, brass and stainless steel construction and choice of seal materials provide excellent compatibility with a wide range of media. Available with a variety of pilot-to-line-pressure ratios.

Bottom hex nut is easily removed for quick access to valve's poppet assembly. Buna-N U-cup seal on stem and U-cup pilot piston seal prevent controlled media from entering pilot chamber, permitting use of different media for pilot control.

Valve sizes from 1/4" to 3/4" have a threaded cap; valve models in larger sizes (as well as valve models with 8:1 line pressure versus pilot pressure) have bolted pilot cap.

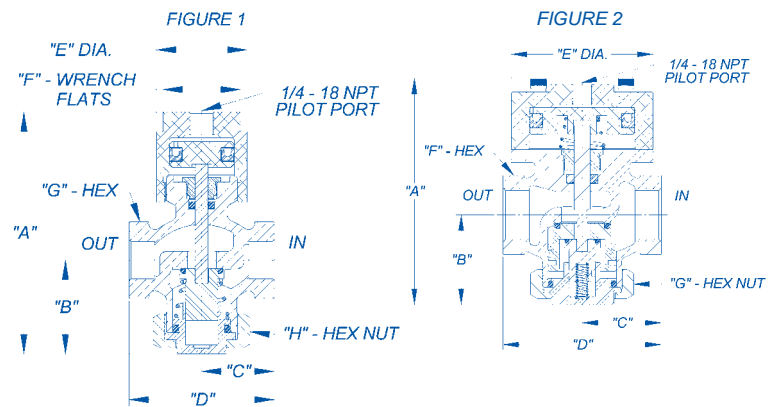


ANSI SYMBOL



Specifications

Body:	Cast Bronze (ASTM B-61)
Pilot Cap:	Aluminum
Internal Parts:	Brass and Stainless Steel
Seals:	Buna-N Standard (Optional Seals pg. 15)
Temperature Range:	-30° F to +225° F with Standard Seals (300° F with optional seals)
Pressure Rating:	0-500 PSI *Vacuum (use -31 suffix) Higher pressure ratings available, consult factory
Pilot Ratio:	See Model Number Chart



Model Numbers

NPT Pipe Size (Inches)	CV Factor	Pilot Ratio*	Wgt. (Lbs.)	Model No.
1/4	1.9	3:1	2.75	331404
		8:1	5.0	324504
3/8	3.8	3:1	2.75	331406
		8:1	5.0	324506
1/2	4.0	3:1	2.75	331408
		8:1	5.0	324508
3/4	5.32	2:1	4.0	331412
	3.87	10:1		324512
1	10.2	4:1	6.0	331416
	8.06	10:1		324516
1 1/4	18.4	3:1	8.5	331420
	17.1	10:1		324520
1 1/2	27.4	2:1	9.0	334724
	23.6	10:1		334524
2	48.0	1:1	13.5	334732
	38.0	10:1		324532

*Internal Line Pressure vs. Minimum Pilot Pressure.

Dimension (inches)

Figure 1

Pipe Size	1/4" to 1/2"	3/4"
A	4.66	5.28
B	1.78	1.97
C	1.38	1.62
D	2.75	3.25
E	1.75	2.00
F	1.50	1.62
G	1.25	1.50
H	1.62	1.88

1/4" to 3/4"
Pipe Size Valves
Standard Pilot
Ratio

Dimension (inches)

Figure 2

Pipe Size	1/4" to 1/2"	1"	1 1/4"	1 1/2"	2"
A	5.00	5.62	6.72	6.88	7.94
B	1.75	2.12	2.81	2.94	3.44
C	1.38	1.88	2.19	2.44	2.91
D	2.75	3.75	4.38	4.88	5.81
E	3.38	3.38	3.38	3.38	3.38
F	1.25	1.88	2.25	2.50	3.25
G	1.62	2.12	2.75	3.06	3.75

1/4" to 1/2"
Pipe Size
Models with
an 8:1
Pilot Ratio and
1" thru 2" Pipe
Size Valves

Direct Pilot Operated

STAINLESS STEEL

Normally Closed

Air, Oil, Water or Vacuum*

These direct pilot operated valves can be used with a variety of media where quick positive control is required from a low pilot signal.

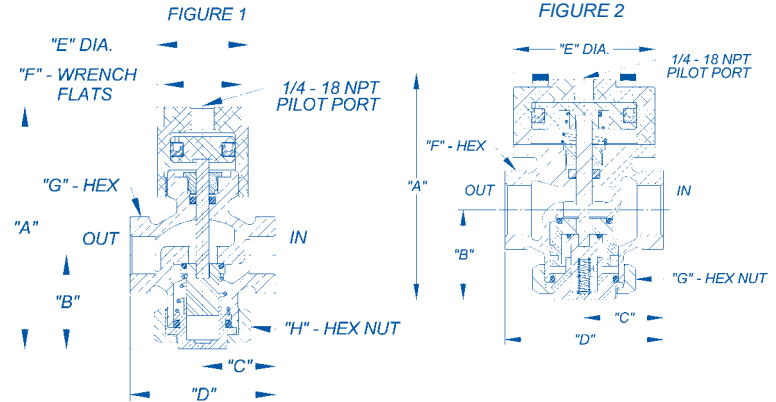
Designed for pressure applications with highly corrosive or ultra-pure liquid systems these direct pilot operated valves can be used where quick positive control is required. The valve is ideal for a broad range of industrial applications, from electronics to petro-chemical plants, commercial laundries, car wash operations, etc.

Valves feature a large resilient poppet that provides bubble-tight closure, even under low pressure conditions. Bottom hex nut is easily removed for quick access to valve's poppet assembly. U-Cup seal on operating stem and U-cup pilot piston seal prevent controlled media from entering pilot chamber, permitting use of different media for pilot control.



Specifications

Body:	Stainless Steel (304)
Pilot Cap:	Brass/Nickel Plated
Internal Parts:	Stainless Steel
Seals:	Viton- A
Temperature Range:	-30° F to +300°
Pressure Rating:	0-500 PSI * Vacuum (use -31 suffix)
Pilot Ratio:	See Model Number Chart



Model Numbers

NPT Pipe Size (Inches)	CV Factor	Pilot Ratio*	Wgt. (Lbs.)	Model No.
3/4	5.32	2:1	4.0	337412
	5.32	6:1		338512
1	10.2	4:1	6.0	337416
	8.06	10:1		338516

*Internal Line Pressure vs. Minimum Pilot Pressure.

Dimension (inches)

Pipe Size	3/4"
A	5.28
B	1.97
C	1.62
D	3.25
E	2.00
F	1.62
G	1.50
H	1.88

Figure 1

Dimension (inches)

Pipe Size	1"
A	5.62
B	2.12
C	1.88
D	3.75
E	3.38
F	1.88
G	2.12

Figure 2

3-Way Direct Pilot Operated

Normally Closed Air, Oil, and Water

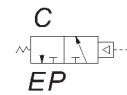
These direct pilot operated valves can be used with a variety of media where quick positive control is required from an extremely low pilot signal. With optional seals, they require no lubrication, making them ideal for non-lube air service.

Valves feature large resilient poppets that provide bubble-tight closure, even under low pressure conditions. Bronze, brass and stainless steel construction and choice of seal materials provide excellent compatibility with a wide range of media.

Bottom hex nut is easily removed for quick access to valve's poppet assembly.



ANSI SYMBOL



Specifications

Body:	Cast Bronze (ASTM B-61)
Pilot Cap:	Bronze
Internal Parts:	Brass and Stainless Steel
Seals:	Buna-N Standard (Optional Seals pg. 15)
Temperature Range:	-30° F to +225° F with Standard Seals (300° F with optional seals)
Pressure Rating:	0-500 PSI

Model Numbers

NPT Pipe Size (Inches)	CV Factor	Pilot Ratio *	Wgt. (Lbs.)	Model Number
1/2	4.0	10:1	8.0	333408
3/4	6.5	5:1	12.1	333412
1	8.0	5:1	12.1	333416

*Internal Line Pressure vs. Minimum Pilot Pressure

Dimensions (inches)

Pipe Size	1/2"	3/4"	1"
A	6.09	7.50	7.50
B	1.81	2.16	2.16
C	1.50	1.84	1.84
D	3.00	3.68	3.68
E	3.00	3.88	3.88
F	1.25	1.88	1.88
G	1.62	2.12	2.12
H	1.81	1.25	1.25

