

## Directair 2 & 4 Series

### Features

**Directair 2, 1/8" valves**

**Poppet style – .17 Cv**

- Economical
- 3-way normally closed function

**Directair 2, 1/8" valves**

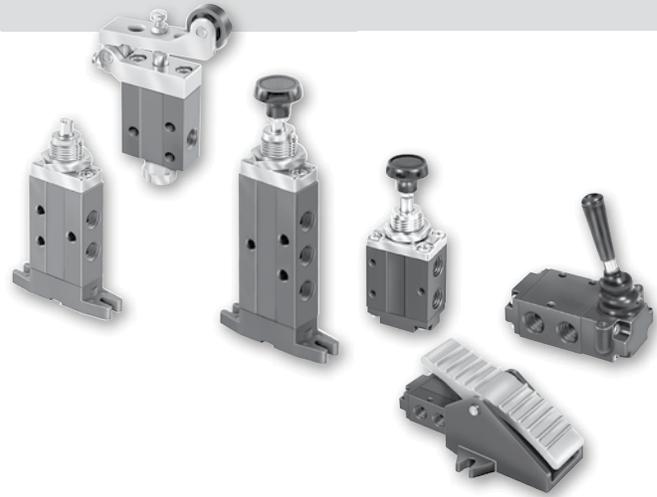
**Packed bore style – .20 Cv**

- Stainless steel spool
- Fluorocarbon o-rings
- 3-way & 4-way

**Directair 4, 1/4" valves**

**Packed bore style – .83 Cv**

- Stainless steel spool
- Fluorocarbon o-rings
- 3-way & 4-way



### Material specifications

Body and operator housings	Aluminum extrusion
Bushings and pilot piston	Brass
Dynamic seals	Fluorocarbon
O-rings	Buna (nitrile)
Poppet ball	Nylon
Spacers - Directair 2	Aluminum
Spacers - Directair 4	Zinc die cast
Spool	Stainless steel

### Lubrication

For maximum service life use clean, lubricated air. Valves are shipped pre-lubricated and can be operated without additional lubrication with reduced service life.

### Suggested Lubricant

F442 Oil

### Operating information

Operating pressure	Vacuum to 150 PSI (28 inHg to 1035 kPa)*
Temperature range	32°F to 175°F (0°C to 80°C)

\* Poppet valves cannot be used for vacuum.  
 Minimum operating pressure = 0 PSIG.



#### **CAUTION:**

*If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior.*

### Mechanically operated actuating forces in lbs. 1/4" Directair 4 valves

	2-Position Spring Return	2-Position Manual Return	3-Position Spring Return	3-Position Manual Return
<b>Button Actuator</b>	13.0	2.0	13.0	N/A
<b>Roller Actuator</b>	13.0	N/A	N/A	N/A
<b>Lever Actuator</b>	4.0	2.0	4.0	2.5

**Notes:** N/A = Not Applicable

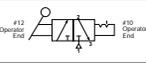
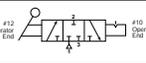
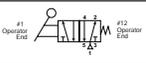
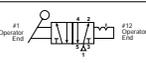
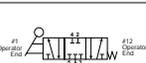
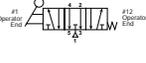
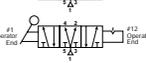
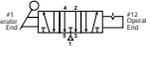
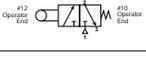
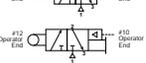
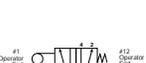
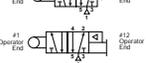
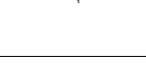
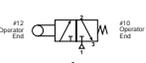
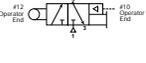
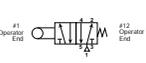
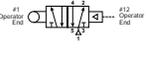
All valves are at 100 PSIG inlet pressure to the valve.

Most popular.

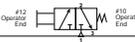
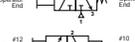
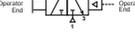
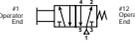
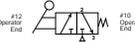
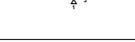
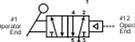
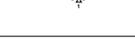
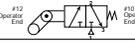
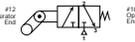
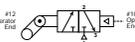
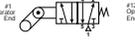
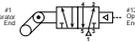
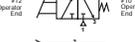
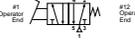
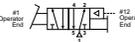
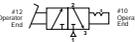
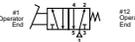
Directair 2, Directair 4  
 Viking Xtreme Lever Series  
 42 Lever / Pedal Series  
 M0 Series  
 LV-EZ Series Lockout Valves  
 Brass Poppet / Sliding Seal  
 D Manual / Mechanical Valve Products



**3-way & 4-way Valves**

	Symbol	Port size	Cv	Description	Valve type	Part number
<b>Lever operated</b>  		1/4"	.83	3-way, spring return	Spool	<b>524811000</b>
		1/4"	.83	3-way, manual return	Spool	<b>524831000</b>
		1/4"	.83	3-way, 3-Position detented, all ports blocked	Spool	<b>523831000</b>
		1/4"	.83	4-way, spring return	Spool	<b>520811000</b>
		1/4"	.83	4-way, manual return	Spool	<b>520831000</b>
		1/4"	.83	4-way, spring centered, closed center	Spool	<b>521811000</b>
		1/4"	.83	4-way, spring centered, pressure center	Spool	<b>522811000</b>
		1/4"	.83	4-way, spring centered, exhaust center	Spool	<b>529811000</b>
		1/4"	.83	4-way, detented, closed center	Spool	<b>521831000</b>
		1/4"	.83	4-way, detented, pressure center	Spool	<b>522831000</b>
		1/4"	.83	4-way, detented, exhaust center	Spool	<b>529831000</b>
	<b>Roller operated</b>  		1/8"	.20	3-way, spring return	Poppet
		1/8"	.20	3-way, spring return	Spool	<b>414211000</b>
		1/8"	.20	3-way, spring return, foot mounted	Spool	<b>414221000</b>
		1/8"	.20	3-way, pilot return	Spool	<b>414251000</b>
		1/8"	.20	4-way, spring return	Spool	<b>410211000</b>
		1/8"	.20	4-way, spring return, foot mounted	Spool	<b>410221000</b>
		1/8"	.20	4-way, pilot return	Spool	<b>410251000</b>
		1/4"	.83	3-way, spring return, delrin roller	Spool	<b>524211000</b>
		1/4"	.83	3-way, pilot return, delrin roller	Spool	<b>524251000</b>
		1/4"	.83	3-way, spring return, steel roller	Spool	<b>524A11000</b>
	1/4"	.83	3-way, pilot return, steel roller	Spool	<b>524A51000</b>	
	1/4"	.83	4-way, spring return, delrin roller	Spool	<b>520211000</b>	
	1/4"	.83	4-way pilot return, delrin roller	Spool	<b>520251000</b>	
	1/4"	.83	4-way, spring return, steel roller	Spool	<b>520A11000</b>	
	1/4"	.83	4-way, pilot return, steel roller	Spool	<b>520A51000</b>	

**3-way & 4-way Valves**

	Symbol	Port size	Cv	Description	Valve type	Part number	
<b>Plunger operated</b>  		1/8"	.17	3-way, spring return	Poppet	<b>404111000</b>	
		1/8"	.20	3-way, spring return	Spool	<b>414111000</b>	
		1/8"	.20	3-way, spring return, foot mounted	Spool	<b>414121000</b>	
		1/8"	.20	3-way, pilot return	Spool	<b>414151000</b>	
		1/8"	.17	4-way, spring return	Spool	<b>410111000</b>	
		1/8"	.20	4-way, spring return, foot mounted	Spool	<b>410121000</b>	
		1/8"	.20	4-way, pilot return	Spool	<b>410151000</b>	
	<b>Hand lever operated</b>  		1/8"	.17	3-way, spring return	Poppet	<b>404711000</b>
			1/8"	.20	3-way, spring return	Spool	<b>414711000</b>
			1/8"	.20	3-way, spring return, foot mounted	Spool	<b>414721000</b>
		1/8"	.20	3-way, pilot return	Spool	<b>414751000</b>	
		1/8"	.20	4-way, spring return	Spool	<b>410711000</b>	
		1/8"	.20	4-way, spring return, foot mounted	Spool	<b>410721000</b>	
		1/8"	.20	4-way, pilot return	Spool	<b>410751000</b>	
<b>One way tripper operated</b>  			1/8"	.17	3-way, spring return	Poppet	<b>404311000</b>
			1/8"	.20	3-way, spring return	Spool	<b>414311000</b>
			1/8"	.20	3-way, spring return, foot mounted	Spool	<b>414321000</b>
		1/8"	.20	3-way, pilot return	Spool	<b>414351000</b>	
		1/8"	.20	4-way, spring return	Spool	<b>414311000</b>	
		1/8"	.20	4-way, spring return, foot mounted	Spool	<b>414321000</b>	
		1/8"	.20	4-way, pilot return	Spool	<b>414351000</b>	
	<b>Pedal operated</b> 		1/4"	.83	3-way, spring return	Spool	<b>524711000</b>
			1/4"	.83	3-way, pilot return	Spool	<b>524751000</b>
			1/4"	.83	4-way, spring return	Spool	<b>520711000</b>
		1/4"	.83	4-way, pilot return	Spool	<b>520751000</b>	
<b>Treadle operated</b> 			1/4"	.83	3-way, treadle operated, detented	Spool	<b>524931000</b>
			1/4"	.83	4-way, treadle operated, detented	Spool	<b>520931000</b>

**CAUTION:**  
*This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.*

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*This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.*

Directair 2,  
Directair 4

Viking Xtreme  
Lever Series

42 Lever/  
Pedal Series

M0  
Series

LV-EZ Series  
Lockout Valves

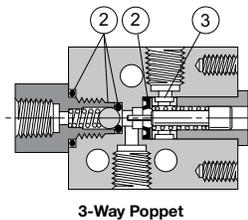
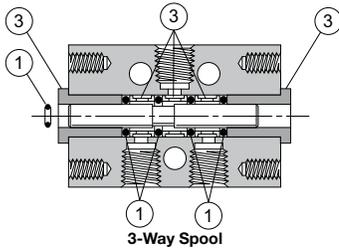
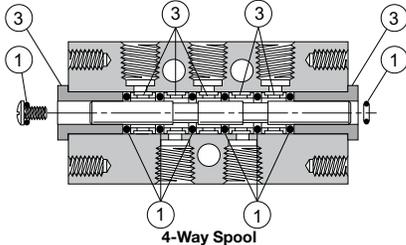
Brass Poppet/  
Sliding Seal

**D**

Manual / Mechanical  
Valve Products

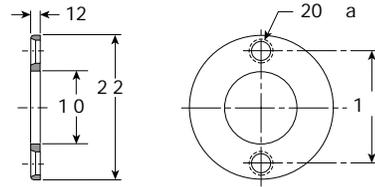
**Service kits – 1/8 port size valves (DA2)**

①	Spool valve seal kit (3 & 4-way, direct pipe ported)	<b>410008000</b>
②	Poppet valve seal kit	<b>404118000</b>
③	Body service kit	<b>410008005</b>



**Panel Mounting Kit – No. 520838004**

Available for panel mounting direct pipe ported, lever operated 1/4" Directair 4 Series valves only. Kit includes a flange and two screws.

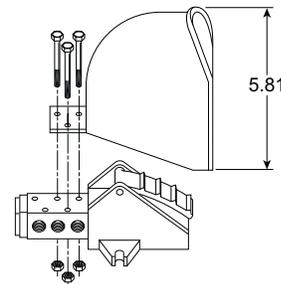


**Pedal Guard Kit – No. 520718001**

Pedal guard meets safety requirements for foot operated valves by protecting pedal from accidental tripping from all angles. Guard is constructed of lightweight aluminum casting for strength and durability. Bolts quickly into place with only three screws without special valve mounting. One model fits any pedal (not treadle) operated 1/4" Directair 4 Series valve.

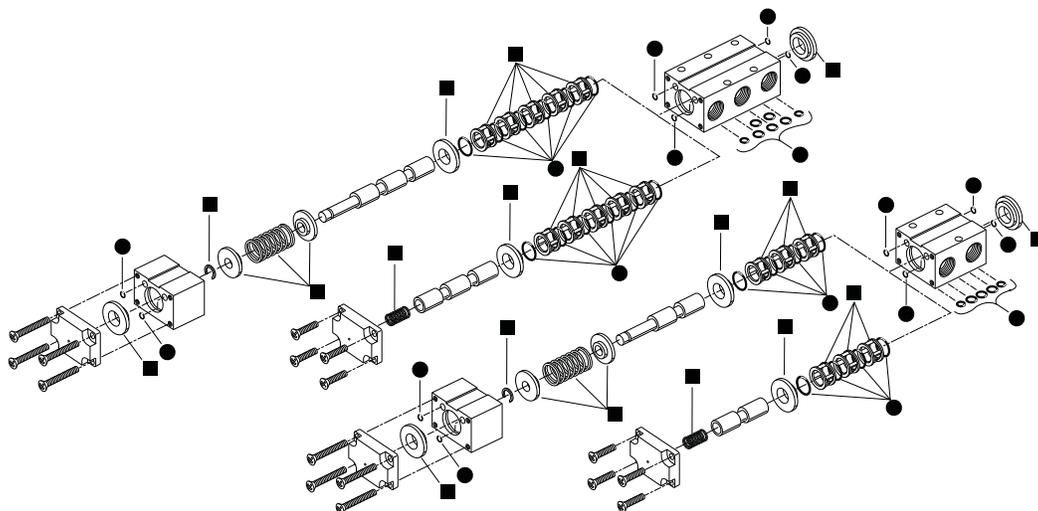
**⚠ CAUTION:**

*This valve shall not be used to actuate a punch press.  
 Do not use this valve on punch presses or press brakes.  
 See OSHA 1910.217.*



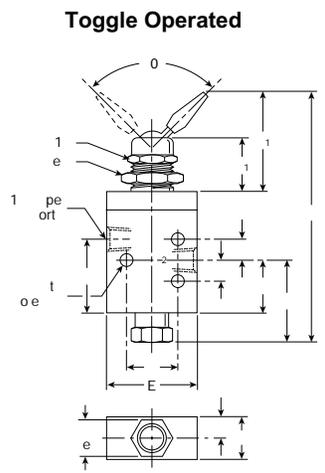
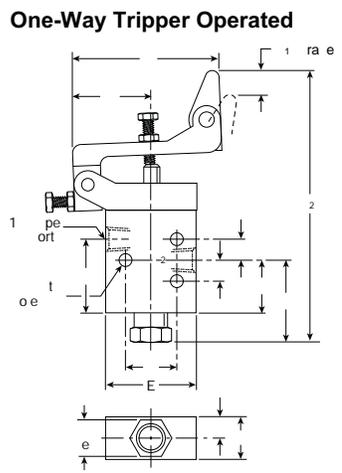
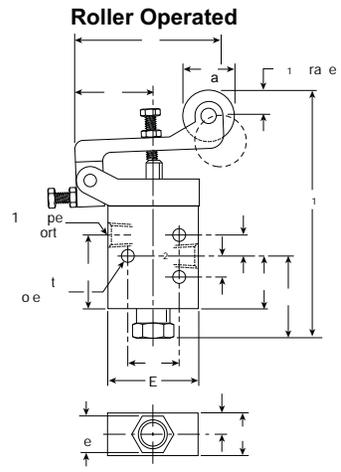
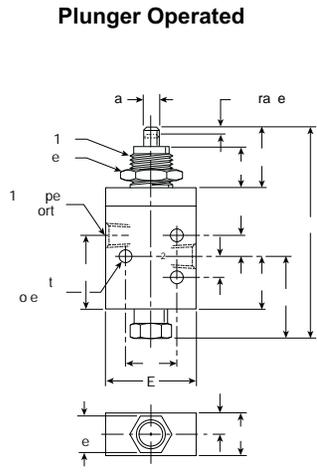
**Service kits – 1/4 port size valves (DA4)**

●	<b>Valve seal kit</b> (Contains all soft seals found in 3 & 4-way bodies and all actuator styles.) All fluorocarbon	<b>520008050</b>
■	<b>Body service kit</b> (Contains bushing, springs, retainers and shell from 2 & 3-position, 3 & 4-way bodies.)	<b>520018005</b>



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 Viking Xtreme Lever Series  
 42 Lever / Pedal Series  
 M0 Series  
 LV-EZ Series Lockout Valves  
 Brass Poppet / Sliding Seal  
**D**  
 Manual / Mechanical Valve Products

**Plunger, Roller, One-way Tripper & Toggle Operated — 3-Way, 3-Port, 2-Position – 1/8" Ports**

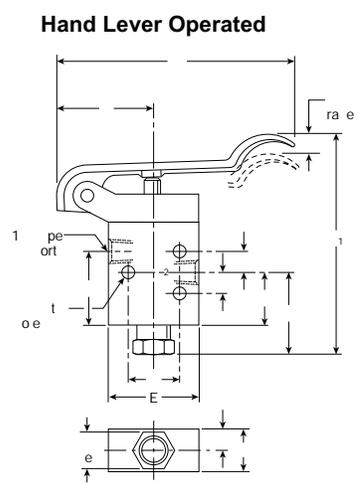
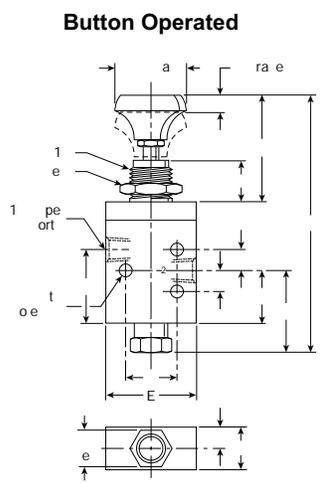


**3-Way, 3-Port, 2-Position**

<b>A</b>	<b>A<sub>1</sub>*</b>	<b>A<sub>2</sub>*</b>	<b>A<sub>3</sub></b>	<b>B</b>
3.37 (86)	4.21 (107)	4.46 (113)	3.99 (101)	1.03 (26)
<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>
.55 (14)	.31 (8)	1.31 (33)	.75 (19)	.90 (23)
<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>
.62 (16)	.31 (8)	.56 (14)	.19 (5)	.88 (22)
<b>N</b>	<b>P</b>	<b>P<sub>1</sub></b>	<b>R</b>	<b>R<sub>1</sub></b>
.25 (6)	.17 (4)	.38 (10)	.91 (23)	1.53 (39)
<b>S</b>	<b>S<sub>1</sub></b>	<b>U</b>	<b>V</b>	<b>W</b>
.62 (16)	.78 (20)	2.28 (58)	1.19 (30)	.75 (19)
<b>X</b>	<b>Y</b>			
.19 (5)	2.19 (56)			

\* Dimensions may be reduced .44" using adjusting screw.  
 Inches (mm)

**Button & Hand Lever Operated — 3-Way, 3-Port, 2-Position – 1/8" Ports**



**3-Way, 3-Port, 2-Position**

<b>A</b>	<b>A<sub>1</sub></b>	<b>B</b>	<b>C</b>	<b>D</b>
4.13 (105)	3.34 (85)	1.03 (26)	.55 (14)	.31 (8)
<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>
1.31 (33)	.75 (19)	.90 (23)	.62 (16)	.31 (8)
<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>
.56 (14)	.19 (5)	.88 (22)	1.06 (27)	.17 (4)
<b>R</b>	<b>S</b>	<b>T</b>	<b>U</b>	<b>V</b>
1.67 (42)	.63 (16)	1.19 (30)	.53 (13)	3.38 (86)

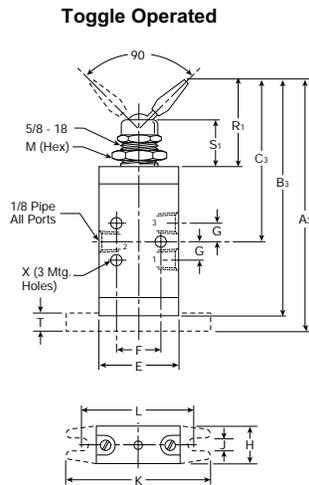
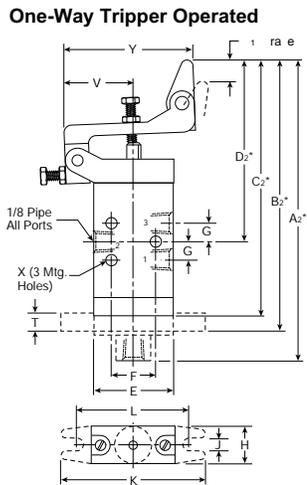
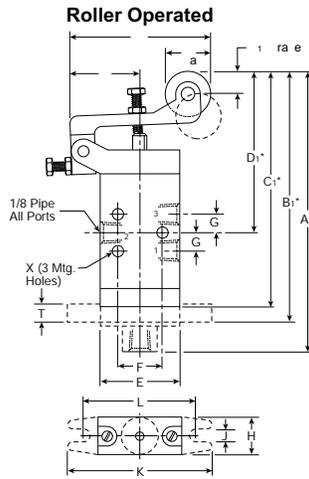
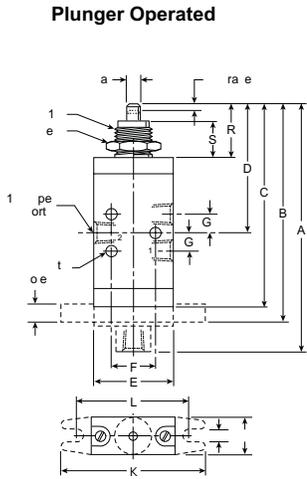
Inches (mm)

Directair 2,  
 Directair 4  
 Viking Xtreme  
 Lever Series  
 42 Lever/  
 Pedal Series  
 M0  
 Series  
 LV-EZ Series  
 Lockout Valves  
 Brass Poppet/  
 Sliding Seal

**D**  
 Manual / Mechanical  
 Valve Products



**Plunger, Roller, One-way Tripper & Toggle Operated — 3-Way, 3-Port, 2-Position – 1/8" Ports**

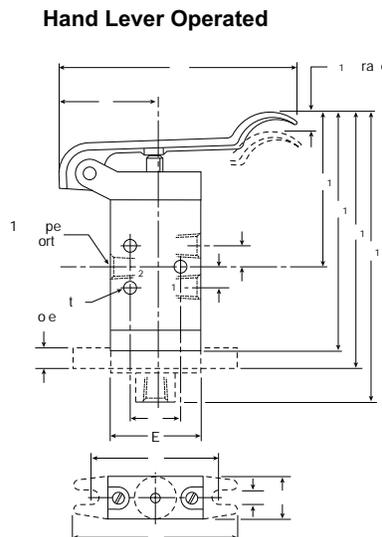
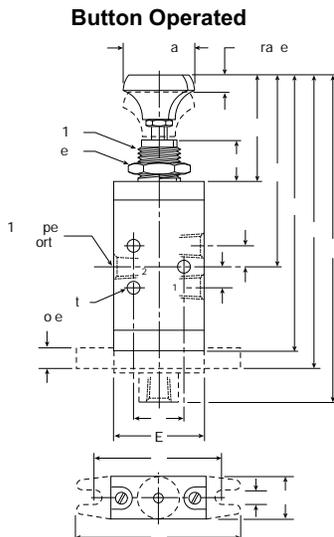


**3-Way, 3-Port, 2-Position**

<b>A</b> 4.14 (105)	<b>A1*</b> 4.98 (126)	<b>A2*</b> 5.23 (133)	<b>A3</b> 4.23 (107)	<b>B</b> 3.61 (92)
<b>B1</b> 4.45 (113)	<b>B2</b> 4.70 (119)	<b>B3</b> 4.00 (102)	<b>C</b> 3.38 (86)	<b>C1</b> 4.22 (107)
<b>C2</b> 4.47 (113)	<b>C3</b> 2.75 (70)	<b>D</b> 2.05 (52)	<b>D1</b> 2.98 (76)	<b>D2</b> 3.22 (82)
<b>E</b> 1.31 (33)	<b>F</b> .75 (19)	<b>G</b> .31 (8)	<b>H</b> .62 (16)	<b>J</b> .20 (5)
<b>K</b> 2.38 (60)	<b>L</b> 1.88 (48)	<b>M</b> .88 (22)	<b>N</b> .25 (6)	<b>P</b> .17 (4)
<b>P1</b> .38 (10)	<b>R</b> .91 (23)	<b>R1</b> 1.53 (39)	<b>S</b> .62 (16)	<b>S1</b> .78 (20)
<b>T</b> .25 (6)	<b>U</b> 2.28 (58)	<b>V</b> 1.19 (30)	<b>W</b> .75 (19)	<b>X</b> .19 (5)
<b>Y</b> 2.19 (56)				

\* Dimensions may be reduced .44" using adjusting screw.  
 Inches (mm)

**Button, Hand Lever Operated — 3-Way, 3-Port, 2-Position – 1/8" Ports**



**3-Way, 3-Port, 2-Position**

<b>A</b> 5.08 (129)	<b>A1</b> 4.29 (109)	<b>B</b> 4.55 (115)	<b>B1</b> 3.77 (96)	<b>C</b> 4.31 (109)
<b>C1</b> 3.53 (90)	<b>D</b> 3.08 (78)	<b>D1</b> 2.29 (58)	<b>E</b> 1.31 (33)	<b>F</b> .75 (19)
<b>G</b> .31 (8)	<b>H</b> .62 (16)	<b>J</b> .20 (5)	<b>K</b> 2.38 (60)	<b>L</b> 1.88 (48)
<b>M</b> .88 (22)	<b>N</b> 1.06 (27)	<b>P</b> .17 (4)	<b>P1</b> .53 (13)	<b>R</b> 1.67 (42)
<b>S</b> .63 (16)	<b>T</b> .25 (6)	<b>U</b> 3.38 (86)	<b>V</b> 1.19 (30)	<b>X</b> .19 (5)
<b>Y</b> .59 (15)				

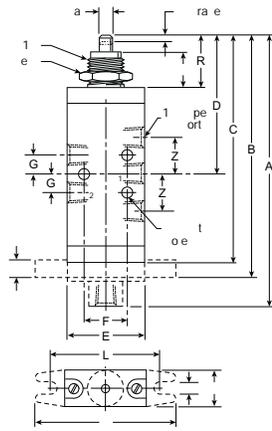
Inches (mm)



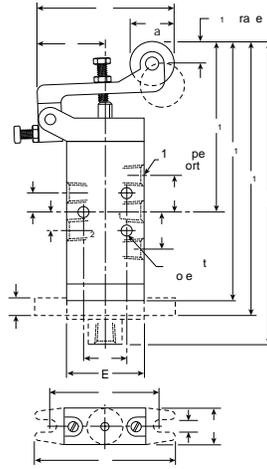
Directair 2, Directair 4  
 Viking Xtreme Lever Series  
 42 Lever / Pedal Series  
 M0 Series  
 LV-EZ Series Lockout Valves  
 Brass Poppet / Sliding Seal  
**D** Manual / Mechanical Valve Products

**Plunger, Roller, One-way Tripper & Toggle Operated — 4-Way, 5-Port, 2-Position – 1/8" Ports**

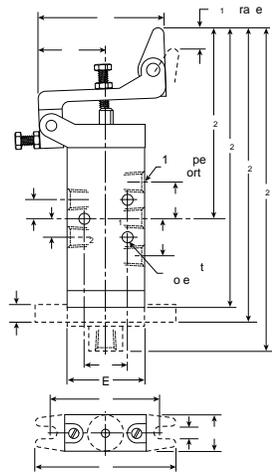
**Plunger Operated**



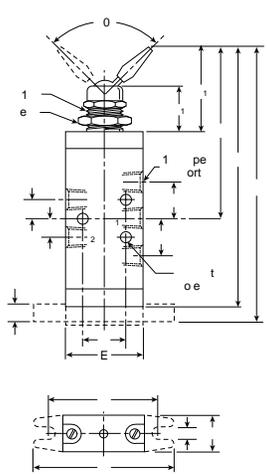
**Roller Operated**



**One-Way Tripper Operated**



**Toggle Operated**



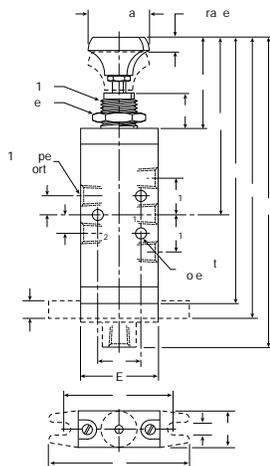
**4-Way, 5-Port, 2-Position**

<b>A</b> 4.75 (121)	<b>A<sub>1</sub>*</b> 5.59 (142)	<b>A<sub>2</sub>*</b> 5.84 (148)	<b>A<sub>3</sub></b> 4.84 (123)	<b>B</b> 4.22 (107)
<b>B<sub>1</sub>*</b> 5.06 (128)	<b>B<sub>2</sub>*</b> 5.31 (135)	<b>B<sub>3</sub></b> 4.61 (117)	<b>C</b> 3.99 (102)	<b>C<sub>1</sub>*</b> 4.83 (123)
<b>C<sub>2</sub>*</b> 5.08 (129)	<b>C<sub>3</sub></b> 3.06 (78)	<b>D</b> 2.44 (62)	<b>D<sub>1</sub>*</b> 3.28 (83)	<b>D<sub>2</sub>*</b> 3.53 (90)
<b>E</b> 1.31 (33)	<b>F</b> .75 (19)	<b>G</b> .31 (8)	<b>H</b> .62 (16)	<b>J</b> .20 (5)
<b>K</b> 2.38 (60)	<b>L</b> 1.88 (48)	<b>M</b> .88 (22)	<b>N</b> .25 (6)	<b>P</b> .17 (4)
<b>P<sub>1</sub></b> .38 (10)	<b>R</b> .91 (23)	<b>R<sub>1</sub></b> 1.53 (39)	<b>S</b> .62 (16)	<b>S<sub>1</sub></b> .78 (20)
<b>T</b> .25 (6)	<b>U</b> 2.28 (58)	<b>V</b> 1.19 (30)	<b>W</b> .75 (19)	<b>X</b> .19 (5)
<b>Y</b> 2.19 (56)	<b>Z</b> .62 (16)			

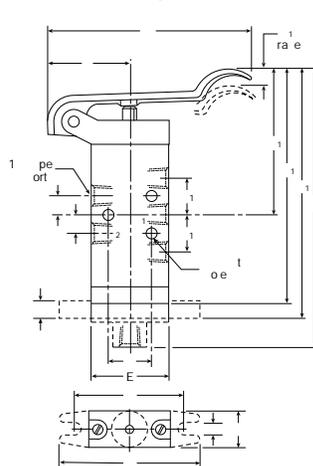
\* Dimensions may be reduced .44" using adjusting screw.  
 Inches (mm)

**Button & Hand Lever Operated — 4-Way, 5-Port, 2-Position – 1/8" Ports**

**Button Operated**



**Hand Lever Operated**



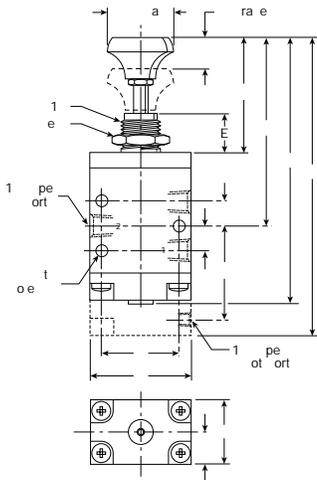
**4-Way, 5-Port, 2-Position**

<b>A</b> 5.69 (144)	<b>A<sub>1</sub></b> 4.90 (124)	<b>B</b> 5.16 (131)	<b>B<sub>1</sub></b> 4.38 (111)	<b>C</b> 4.92 (125)
<b>C<sub>1</sub></b> 4.14 (105)	<b>D</b> 3.67 (93)	<b>D<sub>1</sub></b> 2.90 (74)	<b>E</b> 1.31 (33)	<b>F</b> .75 (19)
<b>G</b> .31 (8)	<b>G<sub>1</sub></b> .63 (16)	<b>H</b> .62 (16)	<b>J</b> .20 (5)	<b>K</b> 2.38 (60)
<b>L</b> 1.88 (48)	<b>M</b> .88 (22)	<b>N</b> 1.06 (27)	<b>P</b> .17 (4)	<b>P<sub>1</sub></b> .53 (13)
<b>R</b> 1.67 (42)	<b>S</b> .63 (16)	<b>T</b> .25 (6)	<b>U</b> 3.38 (86)	<b>V</b> 1.19 (30)
<b>X</b> .19 (5)	<b>Y</b> .59 (15)			

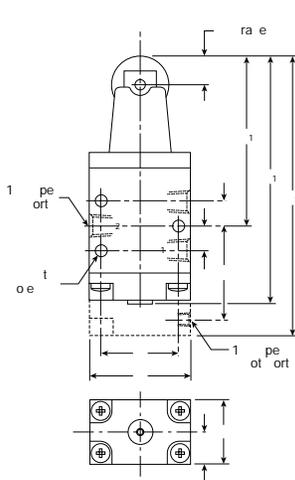
Inches (mm)

**Button & Roller Operated — 3-Way, 3-Port, 2-Position**

**Button Operated**



**Roller Operated**



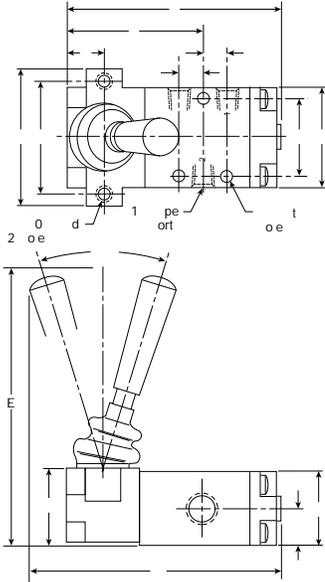
**3-Way, 3-Port, 2-Position**

A	A <sub>1</sub>	B	B <sub>1</sub>	C
4.91 (125)	4.25 (108)	4.44 (113)	3.78 (96)	3.10 (79)
C <sub>1</sub>	D	E	F	G
2.44 (62)	2.00 (51)	.63 (16)	.32 (8)	1.05 (27)
H	J	K	L	M
1.00 (25)	.19 (5)	.41 (10)	1.25 (32)	1.63 (42)
N	P	V		
.53 (14)	1.06 (27)	1.52 (39)		

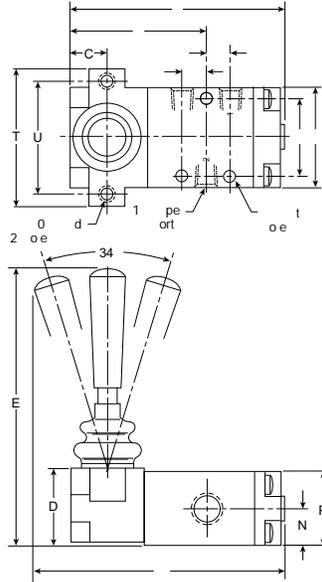
Inches (mm)

**Lever & Pedal Operated — 3-Way, 3-Port, 2 & 3-Position**

**Lever Operated  
2-Position**



**Lever Operated  
3-Position**

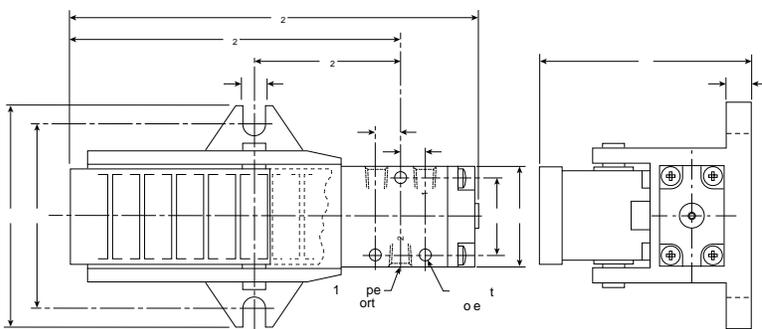


**3-Way, 3-Port, 2 & 3-Position**

A	A <sub>1</sub>	B	B <sub>1</sub>	C
3.31 (84)	6.55 (166)	1.97 (50)	5.20 (132)	.53 (14)
C <sub>1</sub>	D	E	F	J
2.19 (56)	1.12 (28)	4.06 (103)	3.90 (99)	.19 (5)
K	L	M	N	P
.41 (10)	1.25 (32)	1.63 (42)	.53 (14)	1.06 (27)
Q	R	S	T	T <sub>1</sub>
.37 (10)	2.40 (61)	.34 (9)	2.13 (54)	3.50 (89)
U	U <sub>1</sub>			
1.75 (44)	3.00 (76)			

Inches (mm)

**Pedal / Treadle Operated**

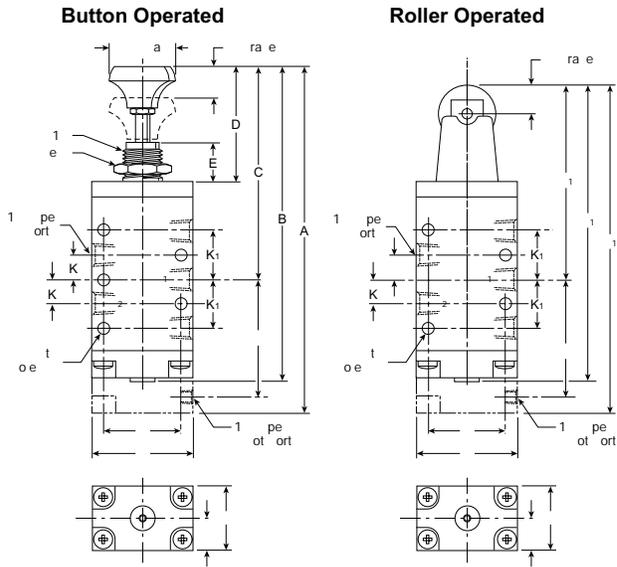


**CAUTION:**

*This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.*

Directair 2,  
Directair 4  
Viking Xtreme  
Lever Series  
42 Lever /  
Pedal Series  
M0  
LV-EZ Series  
Lockout Valves  
Brass Poppet /  
Sliding Seal  
Manual / Mechanical  
Valve Products

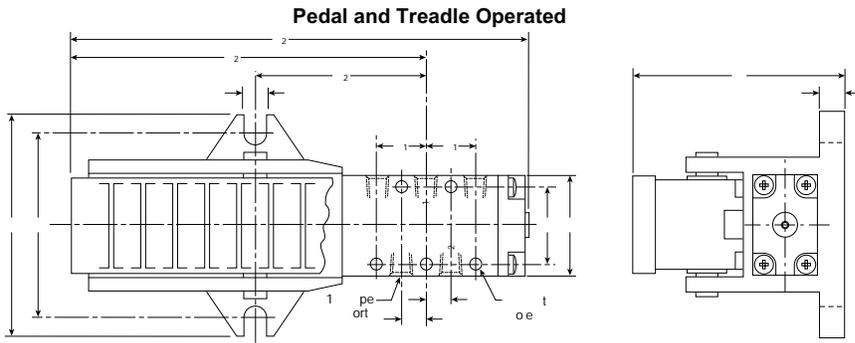
**Button, Roller, Pedal & Treadle, Lever Operated — 4-Way, 5-Port, 2-Position**



**4-Way, 5-Port, 2-Position**

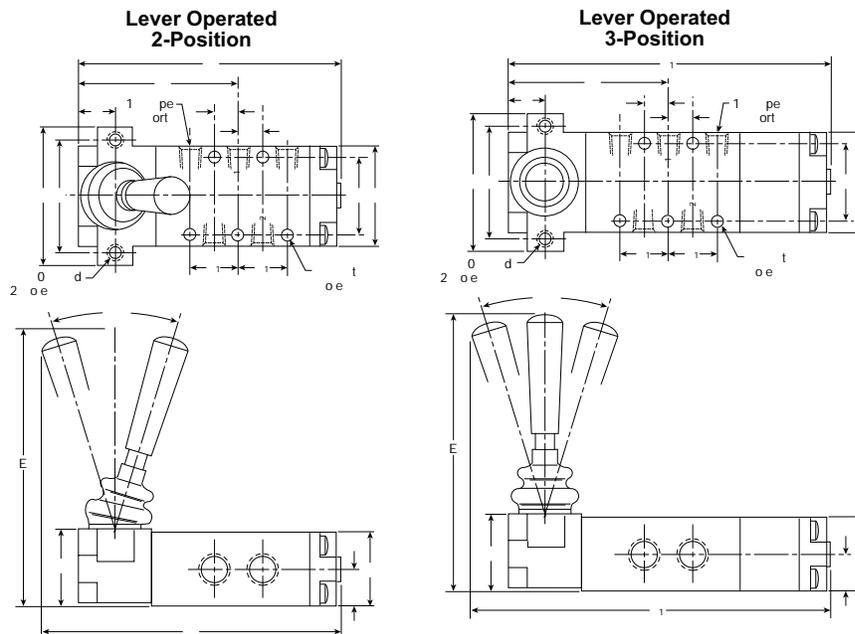
<b>A</b>	<b>A<sub>1</sub></b>	<b>A<sub>2</sub></b>	<b>B</b>	<b>B<sub>1</sub></b>
5.75 (146)	5.13 (130)	7.41 (189)	5.28 (134)	4.66 (118)
<b>B<sub>2</sub></b>	<b>C</b>	<b>C<sub>1</sub></b>	<b>C<sub>2</sub></b>	<b>D</b>
5.63 (143)	3.50 (89)	2.88 (73)	2.64 (67)	2.00 (51)
<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>
.63 (16)	.32 (8)	1.05 (27)	1.00 (25)	.19 (5)
<b>K</b>	<b>K<sub>1</sub></b>	<b>L</b>	<b>M</b>	<b>N</b>
.44 (11)	.84 (21)	1.25 (32)	1.63 (41)	.53 (14)
<b>P</b>	<b>Q</b>	<b>R</b>	<b>S</b>	<b>T</b>
1.06 (27)	.37 (10)	2.40 (61)	.34 (9)	3.50 (89)
<b>U</b>	<b>V</b>			
3.00 (76)	1.96 (50)			

Inches (mm)



**! CAUTION:**  
 This valve shall not be used to actuate a punch press.  
 Do not use this valve on punch presses or press brakes.  
 See OSHA 1910.217.

**Lever Operated — 4-Way, 5-Port, 2 & 3-Position**



**4-Way, 5-Port, 2 & 3-Position**

<b>A</b>	<b>A<sub>1</sub></b>	<b>B</b>	<b>C</b>	<b>D</b>
4.19 (106)	5.09 (129)	2.41 (61)	.53 (14)	1.12 (28)
<b>E</b>	<b>F</b>	<b>F<sub>1</sub></b>	<b>J</b>	<b>K</b>
4.06 (103)	4.78 (121)	5.78 (147)	.19 (5)	.44 (11)
<b>K<sub>1</sub></b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>
.84 (21)	1.25 (32)	1.63 (42)	.53 (14)	1.06 (27)
<b>T</b>	<b>U</b>			
2.13 (54)	1.75 (44)			

Inches (mm)

## Viking Xtreme Lever Operated Series

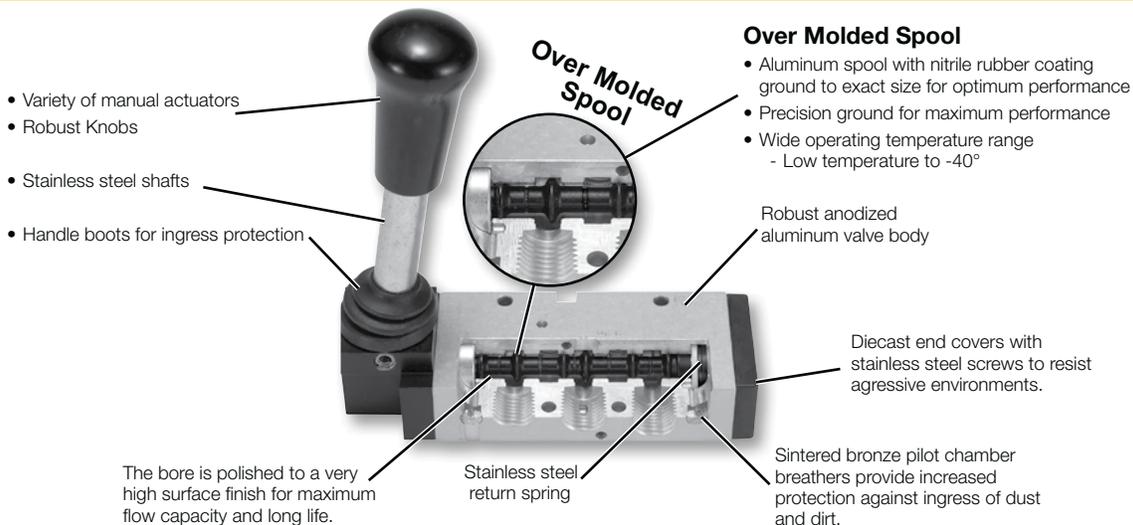
The Viking Xtreme Manual valve range is robust, versatile and combines high performance with compact installation dimensions. The valves rugged lever actuator has been specifically designed for gloved hands to suit mobile applications in the most arduous of environments. Available in 3/2, 5/2 and 5/3 functions with either spring return or detented lever. The lever actuated versions are available across the entire range from 1/8 to 1/2 port sizes.

- **Heavy duty lever**
- **Inline valve**
  - 1/8", 1/4", 3/8", 1/2" NPT & BSPP
- **2-position models**
  - 4-way & 3-way
- **3-position models**
  - all ports blocked
  - pressure center
  - center exhaust
- **Over-moulded single piece aluminium spool**
  - Reduced product complexity
  - Increased flow
  - Wide operating temperature range
  - Stable seal performance even with high flow / pressure drop across spool.

### Material specifications

End covers	Anodized aluminum
Lever	Reinforced polyamide plastic
Lever housing	Acetal plastic
Piston	Acetal plastic / anodized aluminum
Seals	Nitrile rubber
Screws	Stainless steel
Spool	Aluminum & nitrile rubber
Springs	Stainless steel
Valve body	Anodized aluminum

### Features



### Operating information

Operating pressure: Type A & B: Vacuum to 232 PSIG (Vacuum to 16 bar Max.)  
 Type C & D: Vacuum to 174 PSIG (Vacuum to 12 bar Max.)  
 Temperature range: Xtreme: -40°F to 140°F (-40°C to 60°C)

**Lever Handle –  
 1/8" valve size,  
 5/2 & 5/3 only**

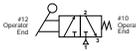
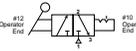
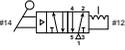
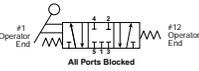
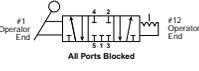
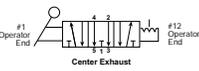


**Twist Handle –  
 1/4" valve sizes**



**Lever Handle –  
 All other valve  
 sizes**



3/2 - 2-position	Symbol	Valve type	Port size	Cv	Weight lb (kg)	Part number NPT	Part number BSPP
		Lever spring return	1/8	0.6	0.73 (0.33)	<b>P2LAX391VS</b>	<b>P2LAX311VS</b>
			1/4	1.5	0.73 (0.33)	<b>P2LBX392VS</b>	<b>P2LBX312VS</b>
			3/8	2.5	0.88 (0.40)	<b>P2LCX393VS</b>	<b>P2LCX313VS</b>
			1/2	2.7	1.32 (0.60)	<b>P2LDX394VS</b>	<b>P2LDX314VS</b>
		Lever detent	1/8	0.7	0.73 (0.33)	<b>P2LAX391VV</b>	<b>P2LAX311VV</b>
			1/4	1.3	0.73 (0.33)	<b>P2LBX392VV</b>	<b>P2LBX312VV</b>
			3/8	2.5	0.88 (0.40)	<b>P2LCX393VV</b>	<b>P2LCX313VV</b>
			1/2	2.7	1.32 (0.60)	<b>P2LDX394VV</b>	<b>P2LDX314VV</b>
5/2 - 2-position	Symbol	Valve type	Port size	Cv	Weight lb (kg)	Part number NPT	Part number BSPP
		Lever spring return	1/8	0.6	0.40 (0.18)	<b>P2LAX591VS</b>	<b>P2LAX511VS</b>
			1/4	1.5	0.73 (0.33)	<b>P2LBX592VS</b>	<b>P2LBX512VS</b>
			3/8	2.5	0.88 (0.40)	<b>P2LCX593VS</b>	<b>P2LCX513VS</b>
			1/2	2.7	1.32 (0.60)	<b>P2LDX594VS</b>	<b>P2LDX514VS</b>
		Lever detent	1/8	0.7	0.40 (0.18)	<b>P2LAX591VV</b>	<b>P2LAX511VV</b>
			1/4	1.3	0.73 (0.33)	<b>P2LBX592VV</b>	<b>P2LBX512VV</b>
			3/8	2.5	0.88 (0.40)	<b>P2LCX593VV</b>	<b>P2LCX513VV</b>
			1/2	2.7	1.32 (0.60)	<b>P2LDX594VV</b>	<b>P2LDX514VV</b>
5/3 - 3-position, all ports blocked	Symbol	Valve type	Port size	Cv	Weight lb (kg)	Part number NPT	Part number BSPP
		Lever spring center	1/8	0.6	0.40 (0.18)	<b>P2LAX69111</b>	<b>P2LAX61111</b>
			1/4	1.5	0.73 (0.33)	<b>P2LBX69211</b>	<b>P2LBX61211</b>
			3/8	2.5	1.56 (0.71)	<b>P2LCX69311</b>	<b>P2LCX61311</b>
			1/2	2.7	1.61 (0.73)	<b>P2LDX69411</b>	<b>P2LDX61411</b>
		Lever detent	1/8	0.7	0.40 (0.18)	<b>P2LAX69122</b>	<b>P2LAX61122</b>
			1/4	1.3	0.73 (0.33)	<b>P2LBX69222</b>	<b>P2LBX61222</b>
			3/8	2.5	1.56 (0.71)	<b>P2LCX69322</b>	<b>P2LCX61322</b>
			1/2	2.7	1.61 (0.73)	<b>P2LDX69422</b>	<b>P2LDX61422</b>
5/3 - 3-position, pressure center	Symbol	Valve type	Port size	Cv	Weight lb (kg)	Part number NPT	Part number BSPP
		Lever spring center	1/8	0.6	0.40 (0.18)	<b>P2LAX79111</b>	<b>P2LAX71111</b>
			1/4	1.5	0.73 (0.33)	<b>P2LBX79211</b>	<b>P2LBX71211</b>
			3/8	2.5	1.56 (0.71)	<b>P2LCX79311</b>	<b>P2LCX71311</b>
			1/2	2.7	1.61 (0.73)	<b>P2LDX79411</b>	<b>P2LDX71411</b>
		Lever detent	1/8	0.7	0.40 (0.18)	<b>P2LAX79122</b>	<b>P2LAX71122</b>
			1/4	1.3	0.73 (0.33)	<b>P2LBX79222</b>	<b>P2LBX71222</b>
			3/8	2.5	1.56 (0.71)	<b>P2LCX79322</b>	<b>P2LCX71322</b>
			1/2	2.7	1.61 (0.73)	<b>P2LDX79422</b>	<b>P2LDX71422</b>

Directair 2,  
Directair 4

Viking Xtreme  
Lever Series

42 Lever /  
Pedal Series

M0  
Series

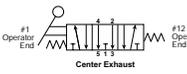
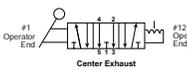
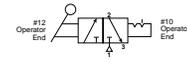
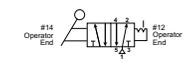
LV-EZ Series  
Lockout Valves

Brass Poppet /  
Sliding Seal

**D**  
Manual / Mechanical  
Valve Products

 Most popular.



5/3 - 3-position, center exhaust		Symbol	Valve type	Port size	Cv	Weight lb (kg)	Part number NPT	Part number BSPP
Directair 2, Directair 4			Lever spring center	1/8	0.6	0.40 (0.18)	<b>P2LAX89111</b>	<b>P2LAX81111</b>
			1/4	1.5	0.73 (0.33)	<b>P2LBX89211</b>	<b>P2LBX81211</b>	
			3/8	2.5	1.56 (0.71)	<b>P2LCX89311</b>	<b>P2LCX81311</b>	
			1/2	2.7	1.61 (0.73)	<b>P2LDX89411</b>	<b>P2LDX81411</b>	
Viking Xtreme Lever Series			Lever detent	1/8	0.7	0.40 (0.18)	<b>P2LAX89122</b>	<b>P2LAX81122</b>
			1/4	1.3	0.73 (0.33)	<b>P2LBX89222</b>	<b>P2LBX81222</b>	
			3/8	2.5	1.56 (0.71)	<b>P2LCX89322</b>	<b>P2LCX81322</b>	
			1/2	2.7	1.61 (0.73)	<b>P2LDX89422</b>	<b>P2LDX81422</b>	
3/2 - 2-position		Symbol	Valve type	Port size	Cv		Part number NPT	Part number BSPP
4/2 Lever / Pedal Series			Twist handle detent	1/4	1.3	0.73 (0.33)	<b>P2LBX392JJ</b>	<b>P2LBX312JJ</b>
5/2 - 2-position		Symbol	Valve type	Port size	Cv		Part number NPT	Part number BSPP
Series M0			Twist handle detent	1/4	0.7	0.73 (0.33)	<b>P2LBX592JJ</b>	<b>P2LBX512JJ</b>

**Manual Operated Valves**

Vacuum to 232 PSIG (Vacuum to 16 bar) -40°F to 158°F (-40°C to 70°C)

**P2L A X 5 91 VS**

Valve size	
1/8"	A
1/4"	B
3/8"	C
1/2"	D

Valve type / function	
3/2 NC - 2-position	3
5/2 2-position	5
5/3 3-position, APB	6
5/3 3-position, PC	7
5/3 3-position, CE	8

Actuator / return	
JJ*	Twist handle detent, 2-position
VS	Spring return lever, 2-position, 90° to ports
VV	Lever, detent, 2-position, 90° to ports
11	Spring centered lever, 3-position, 90° to ports
22	Lever, detent, 3-position, 90° to ports

\* Not available with 3-position valves, size B only.

Main port thread	
11	G1/8 (P2LA)
12	G1/4 (P2LB)
13	G3/8 (P2LC)
14	G1/2 (P2LD)
<b>91</b>	<b>1/8" NPT (P2LA)</b>
<b>92</b>	<b>1/4" NPT (P2LB)</b>
<b>93</b>	<b>3/8" NPT (P2LC)</b>
<b>94</b>	<b>1/2" NPT (P2LD)</b>

**NOTE:** For ATEX certified remote air pilot valves, build the valve part number from the model number index for remote pilot and add "-EX" following the number.

Example: P2LAX591PS-EX

 Most popular.



**Exhaust Mufflers**

Pipe thread	Part number
M5	<b>P6M-PAC5</b>
1/8" NPT	<b>EM12</b>
1/4" NPT	<b>EM25</b>
3/8" NPT	<b>EM37</b>
1/2" NPT	<b>EM50</b>

P6M - Plastic; EM - Sintered bronze

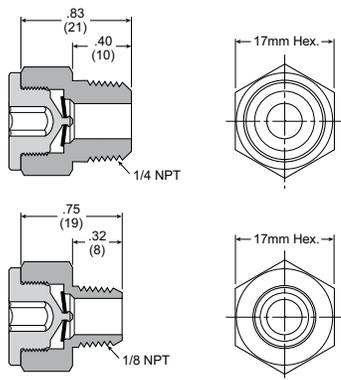


**Plastic Silencers**

Thread size	Part number		A (mm)	B (mm)
	NPT	BSPT		
M5	<b>AS-5</b>		.43 (11)	.32 (8)
1/8"	<b>ASN-6</b>	<b>AS-6</b>	1.57 (40)	.63 (16)
1/4"	<b>ASN-8</b>	<b>AS-8</b>	2.56 (65)	.83 (21)
3/8"	<b>ASN-10</b>	<b>AS-10</b>	3.35 (85)	.98 (25)
1/2"	<b>ASN-15</b>	<b>AS-15</b>	3.74 (95)	1.18 (30)



**Exhaust Protector**



**Features**

- 1/8 and 1/4 NPT male sizes
- Fitted with a brass pipe adapter and a fluorocarbon membrane
- Resistant to rust, clog, wash down and contamination

**Applications**

These protectors are intended for mobile applications, quick venting applications and alternative exhaust port breathers that require protection against clogging.

Ideal for valves exposed to harsh environmental conditions (which can cause a "caking up" in the exhaust pipe ports where the bronze mufflers or breather vents are installed).

Particularly suitable for time-sensitive applications such as axle-lift suspensions or pushers or tag axles.

**Specifications**

**Operating pressure** ..... 0 – 150 PSIG  
 (0 to 10 bar, 0 to 1034 kPa)

**Operating temperature** ..... -40°F to 158°F (-40°C to 70°C)

**Material:**

Body and pipe adapter ..... Brass  
 Membrane ..... Fluorocarbon

**Flow Data (SCFM)**

Part number	Size	60 PSIG inlet	90 PSIG inlet	125 PSIG inlet
<b>E90016</b>	1/8"	40.1	56.5	75.5
<b>E90017</b>	1/4"	44.6	62.7	83.5

Directair 2,  
 Directair 4

Viking Xtreme  
 Lever Series

42 Lever /  
 Pedal Series

M0  
 Series

LV-EZ Series  
 Lockout Valves

Brass Poppet /  
 Sliding Seal

**D**

Manual / Mechanical  
 Valve Products





**P2LBX 3/2 Twist Lever Operated**

**P2LBX 5/2 Twist Lever Operated**

**P2LBX 3/2  
(hand lever)**

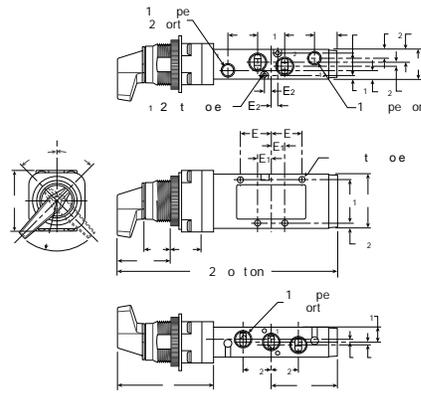
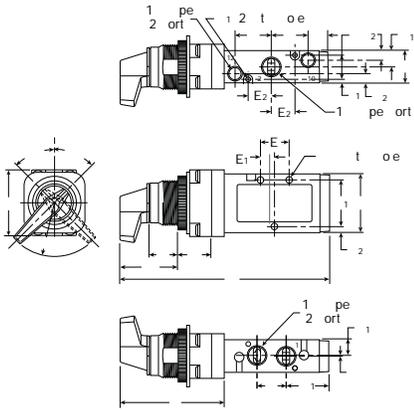
**P2LBX 5/2  
(hand lever)**

A	B	C
5.67 (144)	1.79 (45.5)	1.57 (40)
C <sub>1</sub>	C <sub>2</sub>	D
1.26 (32)	.16 (4)	2.87 (73)
E	E <sub>1</sub>	E <sub>2</sub>
.79 (20)	.39 (10)	.63 (16)
F	G	H
.55 (14)	.98 (25)	.87 (22.2)
H <sub>1</sub>	H <sub>2</sub>	J
.44 (11.1)	.26 (6.6)	.65 (16.5)
J <sub>1</sub>	M	M <sub>1</sub>
.11 (2.9)	.79 (20)	1.14 (29)
N	N <sub>1</sub>	P
.02 (0.5)	.42 (10.6)	Ø .17 (4.3)
P <sub>1</sub>	Q	R
Ø .12 (3.1)	1.5R (38.1)R	1.85 (47)
S	T	
1.10 (28)	.67 (17)	

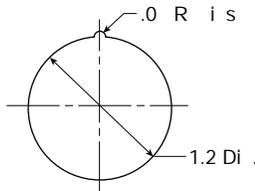
Inches (mm)

A	B	C
6.46 (164)	1.79 (45.5)	1.57 (40)
C <sub>1</sub>	C <sub>2</sub>	D
1.26 (32)	.15 (4)	2.87 (73)
E	E <sub>1</sub>	E <sub>2</sub>
.91 (23)	.39 (10)	.20 (5)
F	G	G <sub>1</sub>
.67 (17)	.87 (22)	.79 (20)
H	H <sub>1</sub>	H <sub>2</sub>
.87 (22.2)	.44 (11.1)	.26 (6.6)
H <sub>3</sub>	J	J <sub>1</sub>
.12 (3)	.65 (16.5)	.11 (2.9)
M	N	N <sub>1</sub>
1.93 (49)	.08 (0.2)	.44 (11.1)
P	P <sub>1</sub>	Q
Ø .17 (4.3)	Ø .12 (3.1)	1.5R (38.1)R
R	S	T
1.85 (47)	1.10 (28)	.67 (17)

Inches (mm)



**Panel Cutout Detail (All Port Sizes)**



Directair 2,  
Directair 4

Viking Xtreme  
Lever Series

42 Lever /  
Pedal Series

M0  
Series

LV-EZ Series  
Lockout Valves

Brass Poppet /  
Sliding Seal

**D**

Manual / Mechanical  
Valve Products

## 42 Lever / Pedal Series

### Features

#### Heavy duty lever

- Parallel mount handle
- Perpendicular mount handle

#### Heavy duty foot pedal

#### 2 port sizes

- 1/4" port – 1.3 to 2.2 Cv
- 3/8" port – 1.3 to 2.9 Cv

#### 2-position and 3-position valves



### Operating information

Operating pressure: Vacuum to 150 PSI (710 mmHg to 1035 kPa)  
 Temperature range: 0°F to 140°F (-18°C to 60°C)

### Lever Valve - 2-Position

	Symbol	Port size	Cv	Description	Valve type	Part number
		1/4"	2.2	Inline, parallel	2-position, spring return	<b>422CS011K</b>
		3/8"	2.9	Inline, parallel	2-position, spring return	<b>422CS021K</b>
		1/4"	2.2	Inline, parallel	2-position, detent	<b>422CS011W</b>
		3/8"	2.9	Inline, parallel	2-position, detent	<b>422CS021W</b>
		1/4"	2.2	Inline, perpendicular	2-position, spring return	<b>422CR011K</b>
		3/8"	2.9	Inline, perpendicular	2-position, spring return	<b>422CR021K</b>
		1/4"	2.2	Inline, perpendicular	2-position, detent	<b>422CR011W</b>
		3/8"	2.9	Inline, perpendicular	2-position, detent	<b>422CR021W</b>

### Lever Valve - 3-Position

	Symbol	Port size	Cv	Description	Valve type	Part number
		1/4"	1.3	Inline, parallel	3-position APB	<b>422CS013W</b>
		3/8"	1.3	Inline, parallel	3-position, APB	<b>422CS023W</b>
		1/4"	1.3	Inline, parallel	3-position, CE	<b>422CS014W</b>
		3/8"	1.3	Inline, parallel	3-position, CE	<b>422CS024W</b>
		1/4"	1.3	Inline, perpendicular	3-position, APB	<b>422CR013W</b>
		3/8"	1.3	Inline, perpendicular	3-position, APB	<b>422CR023W</b>
		1/4"	1.3	Inline, perpendicular	3-position, CE	<b>422CR014W</b>
		3/8"	1.3	Inline, perpendicular	3-position, CE	<b>422CR024W</b>

### Foot Pedal Valve - 2-Position

	Symbol	Port size	Cv	Description	Valve type	Part number
		1/4"	2.2	Foot pedal	2-position, spring return	<b>422CT011K</b>
		3/8"	2.9	Foot pedal	2-position, spring return	<b>422CT021K</b>
				Foot pedal guard		<b>PS2043P</b>



#### CAUTION:

*This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.*

### Valve body service kits, single pressure

2-position valve	<b>PS2038P</b>
3-position valve	<b>PS2041P</b>

Kit includes: all soft seals and spool.

Most popular.



Directair 2,  
 Directair 4

Viking Xtreme  
 Lever Series

42 Lever /  
 Pedal Series

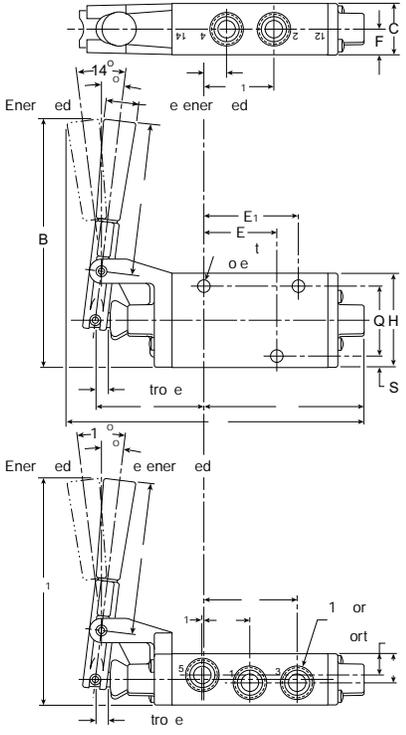
M0  
 Series

LV-EZ Series  
 Lockout Valves

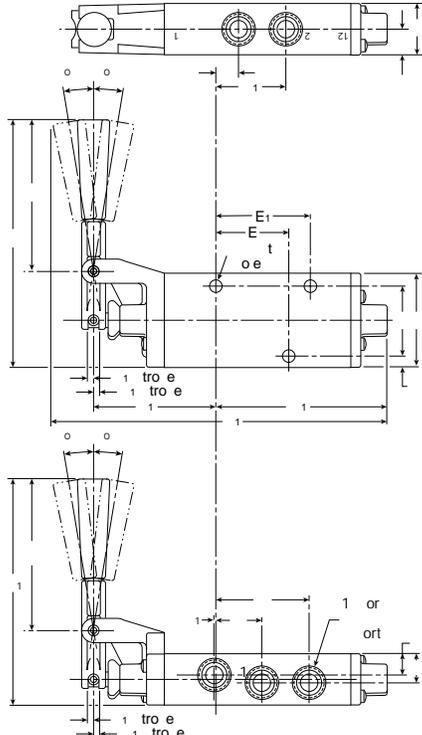
Brass Poppet /  
 Sliding Seal

**D**  
 Manual / Mechanical  
 Valve Products

**2-Position**



**3-Position**



**Lever Valve**

A	A <sub>1</sub>	B	B <sub>1</sub>	C		
6.70 (170)	7.58 (193)	5.55 (141)	5.05 (128)	1.15 (29)		
D	D <sub>1</sub>	E	E <sub>1</sub>	F		
3.59 (91)	3.83 (97)	1.58 (40)	2.06 (52)	.57 (14)		
G NPT	G <sub>1</sub> NPT	H				
1/4" .51 (13)	1/4" 1.56 (40)	2.13 (54)				
3/8" .55 (14)	3/8" 1.51 (38)					
J	J <sub>1</sub>	K NPT	L			
2.44 (62)	2.80 (71)	1/4" 2.08 (53)	.25 (6)			
3/8" 2.13 (54)						
L <sub>1</sub>	M	M <sub>1</sub> NPT	N			
.18 (5)	1.03 (36)	1/4" .02 (.5)	.50 (13)			
3/8" .06 (2)						
P	Q	R	S	T		
.65 (17)	1.58 (40)	.33 (8)	.27 (7)	3.42 (87)		
U Dia						
.75 (19)						

Inches (mm)

**Foot Pedal Valve**

A	B	B <sub>1</sub>	C	D	
8.64 (220)	2.18 (55)	1.03 (26)	1.15 (29)	3.59 (91)	
E	E <sub>1</sub>	F	G NPT		
1.58 (40)	2.06 (52)	.57 (14)	1/4" .51 (13)		
3/8" .55 (14)					
G <sub>1</sub> NPT	H	H <sub>1</sub>	J		
1/4" 1.56 (40)	2.13 (54)	2.50 (64)	2.32 (59)		
3/8" 1.51 (38)					
K NPT	L	M			
1/4" 2.08 (53)	.60 (15)	1.03 (26)			
3/8" 2.13 (54)					
M <sub>1</sub> NPT	N	P	Q		
1/4" .02 (.5)	.50 (13)	.65 (17)	1.58 (40)		
3/8" .06 (2)					
R	S	T	U		
.33 (8)	.27 (7)	3.00 (76)	.48 (11)		

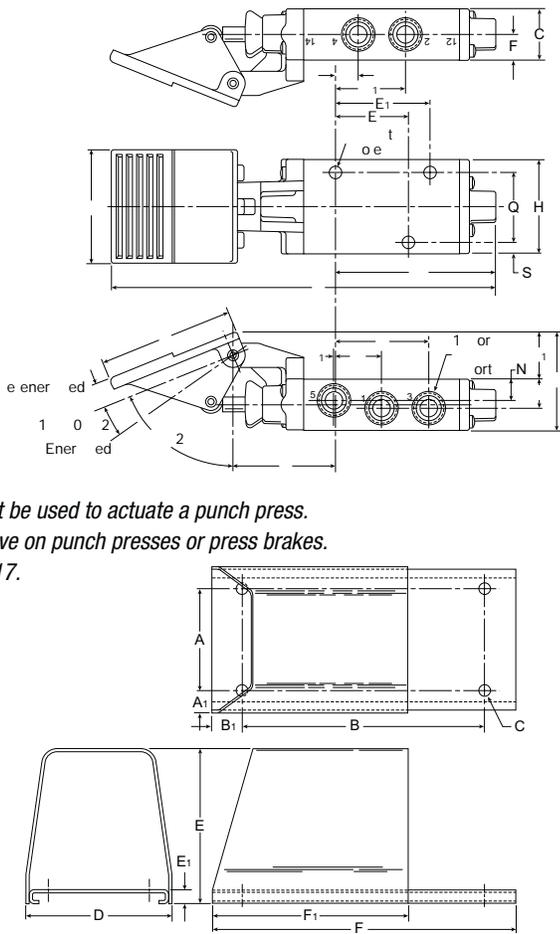
Inches (mm)

**Foot Valve Guard: FS043P**

A	A <sub>1</sub>	B	B <sub>1</sub>	C
4.50 (114)	.75 (19)	10.50 (267)	1.25 (32)	.48 (11)
D	E	E <sub>1</sub>	F	F <sub>1</sub>
6.00 (152)	7.13 (181)	.50 (13)	13.00 (330)	8.38 (213)

Inches (mm)

**CAUTION:**  
 This valve shall not be used to actuate a punch press.  
 Do not use this valve on punch presses or press brakes.  
 See OSHA 1910.217.



## M0 Series

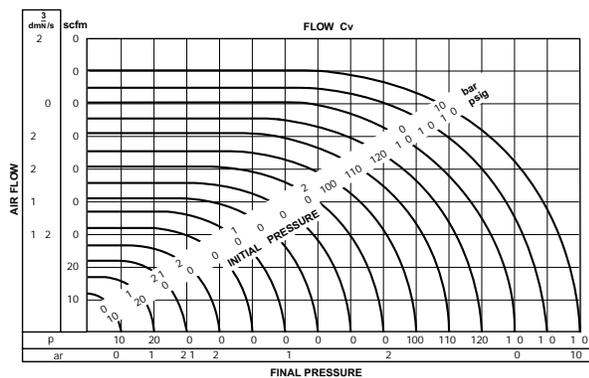
### Features

- 1/4" to 3/4" NPTF ports
- Standard operators listed. Consult factor for variations in orientation
- Standard 2 position 3-way and 4-way valves listed. Consult factory for 2-way and 3 position valves
- Corrosion resistant bronze body
- High flow brass spacers position o-ring, permit reverse piping and vacuum service
- Specially compounded o-rings suitable for non-lube air service and low pressure oil service
- Floating stem of hard chrome plated stainless steel; no metal to metal contact
- Closed at crossover design for air savings
- Piped exhaust convenient for muffling
- Interchangeable operators
- Interchangeable end sections
- Service without disturbing plumbing
- Dual mounting brackets on most models

### Flow Cv ratings

Valve type	Port size	Port 1 to 2	Port 1 to 3	Port 2 to 3	Port 2 to 4	Port 3 to 4
3-way 2-position	1/4	2.4	—	2.4	—	—
	3/8	3.2	—	3.4	—	—
	1/2	5.0	—	5.1	—	—
	3/4	9.5	—	9.8	—	—
4-way 2-position	1/4	2.4	2.4	—	2.0	2.2
	3/8	3.4	3.2	—	3.0	3.1
	1/2	5.2	5.3	—	4.7	4.7
	3/4	8.7	9.2	—	7.9	8.0

### Flow Cv



### Flow capacities

The capacity curves shown in the chart are for a theoretical valve having a Cv = 1.0 for air at standard conditions.

Flow rating determined in accordance with NFPA recommended standard NFPA/T3.21.3 - 1974.



### Operating information

**Pressure limitations**  
**knob (manual and spring return) and palm operators (manual and spring return)**

Media	Port size	PSI (kPa)	
		3-way	4-way
Air and Hydraulic	1/4	200 (1380)	180 (1240)
	3/8	175 (1210)	170 (1170)
	1/2	160 (1100)	150 (1030)
	3/4	150 (1030)	150 (1030)
Vacuum	All	Within 1" Hg of perfect	
Other	Consult factory		

**Pressure limitations**  
**knob (detent), lever, pedal, treadle, clevis, cam air operated diaphragm and cylinder**

Media	Port size	PSI (kPa)	
		3-way	4-way
Air and Hydraulic	1/4	225 (1550)	225 (1550)
	3/8	225 (1550)	225 (1550)
	1/2	215 (1480)	215 (1480)
	3/4	200 (1380)	200 (1380)
Vacuum	All	Within 1" Hg of perfect	
Other	Consult factory		

Temperature range: -15°F to 200°F (-26° to 93°C)

Lubrication: For best results and service life use clean, moisture free lubricated air.

### Material specifications

Body	High pressure valve bronze
Knobs and palm buttons	Anodized aluminum
Operators	Iron castings; steel rod, bar and tube, and plated for corrosion resistance
O-rings	Buna-N and impregnated with Molybdenum Disulfide
Spacers and end bearings	Brass bar stock
Springs	high quality steel and plated for corrosion resistance
Stem	Stainless steel and hard chrome plated

### Warnings

- ⚠ Install guards on all hand operated valves if accidental operation can cause personal injury.
- ⚠ Foot operated valves must be protected against inadvertent operation that can cause serious bodily injury. Use of a guard is strongly recommended as it will reduce the likelihood of inadvertent operation.

**M0 Series Air Pilot, Manual & Mechanically Actuated Valves**

	3-way and 4-way knob operated	Description	Part number 1/4 NPT	Part number 3/8 NPT	Part number 1/2 NPT	Part number 3/4 NPT
Directair 2, Directair 4		 3-way, detent ball, foot bracket	<b>M05422448</b>	<b>M05432448</b>	<b>M05442448</b>	<b>M05462448</b>
		 3-way, detent ball, panel mount with nut	<b>M05822451</b>	<b>M05832451</b>	<b>M05842451</b>	<b>M05862451</b>
		 3-way, N.C., manual, foot bracket	<b>M08521848</b>	<b>M08531848</b>	<b>M08541848</b>	<b>M08561848</b>
		 3-way, N.C., manual, panel nut	<b>M08521851</b>	<b>M08531851</b>	<b>M08541851</b>	<b>M08561851</b>
		 3-way, N.C., pull to operate, spring return, foot bracket	<b>M09721848</b>	<b>M09731848</b>	<b>M09741848</b>	<b>M09761848</b>
		 3-way, N.C., pull to operate, spring return, panel mount with nut	<b>M06421851</b>	<b>M06431851</b>	<b>M06441851</b>	<b>M06461851</b>
Viking Xtreme Lever Series		 3-way, N.C., push to operate, spring return, foot bracket	<b>M09821848</b>	<b>M09831848</b>	<b>M09841848</b>	<b>M09861848</b>
		 3-way, N.C., push to operate, spring return, panel mount with nut	<b>M06521851</b>	<b>M06531851</b>	<b>M06541851</b>	<b>M06561851</b>
4/2 Lever / Pedal Series		 4-way, detent ball, foot bracket	<b>M05425448</b>	<b>M05435448</b>	<b>M05445448</b>	<b>M05465448</b>
		 4-way, detent ball, panel mount with nut	<b>M05825451</b>	<b>M05835451</b>	<b>M05845451</b>	<b>M05865451</b>
		 4-way, manual, foot bracket	<b>M08524648</b>	<b>M08534648</b>	<b>M08544648</b>	<b>M08564648</b>
		 4-way, manual, panel nut	<b>M08524651</b>	<b>M08534651</b>	<b>M08544651</b>	<b>M08564651</b>
		 4-way, pull to operate, spring return, foot bracket	<b>M09724648</b>	<b>M09734648</b>	<b>M09744648</b>	<b>M09764648</b>
		 4-way, pull to operate, spring return, panel mount with nut	<b>M06424651</b>	<b>M06434651</b>	<b>M06444651</b>	<b>M06464651</b>
M0 Series		 4-way, push to operate, spring return, foot bracket	<b>M09824648</b>	<b>M09834648</b>	<b>M09844648</b>	<b>M09864648</b>
		 4-way, push to operate, spring return, panel mount with nut	<b>M06524651</b>	<b>M06534651</b>	<b>M06544651</b>	<b>M06564651</b>
LV-EZ Series Lockout Valves		 3-way, N.C., pull palm button to operate, spring return, panel mount with nut	<b>M06421859</b>	<b>M06431859</b>	<b>M06441859</b>	<b>M06461859</b>
		 3-way, N.C., push palm button to operate, spring return, panel mount with nut	<b>M06521859</b>	<b>M06531859</b>	<b>M06541859</b>	<b>M06561859</b>
Brass Poppet / Sliding Seal		 4-way, pull palm button to operate, spring return panel mount with nut	<b>M06424659</b>	<b>M06434659</b>	<b>M06444659</b>	<b>M06464659</b>
		 4-way, push palm button to operate, spring return, panel mount with nut	<b>M06524659</b>	<b>M06534659</b>	<b>M06544659</b>	<b>M06564659</b>
Manual / Mechanical Valve Products		 3-way, detent ball, foot bracket	<b>M05422443</b>	<b>M05432443</b>	<b>M05442443</b>	<b>M05462443</b>
		 3-way, manual, foot bracket	<b>M08521843</b>	<b>M08531843</b>	<b>M08541843</b>	<b>M08561843</b>
		 3-way, N.C., pull lever to operate, spring return, foot bracket	<b>M09621843</b>	<b>M09631843</b>	<b>M09641843</b>	<b>M09661843</b>
		 3-way, N.C., push lever to operate, spring return, foot bracket	<b>M09521843</b>	<b>M09531843</b>	<b>M09541843</b>	<b>M09561843</b>
		 4-way, detent ball, foot bracket	<b>M05425443</b>	<b>M05435443</b>	<b>M05445443</b>	<b>M05465443</b>
		 4-way, manual, foot bracket	<b>M08524643</b>	<b>M08534643</b>	<b>M08544643</b>	<b>M08564643</b>
		 4-way, pull lever to operate, spring return, foot bracket	<b>M09624643</b>	<b>M09634643</b>	<b>M09644643</b>	<b>M09664643</b>
		 4-way, push lever to operate, spring return, foot bracket	<b>M09524643</b>	<b>M09534643</b>	<b>M09544643</b>	<b>M09564643</b>

 Most popular.



**M0 Series Air Pilot, Manual & Mechanically Actuated Valves**

3-way and 4-way, foot operated: treadle / pedal type	Description	Part number 1/4 NPT	Part number 3/8 NPT	Part number 1/2 NPT	Part number 3/4 NPT
	 3-way, treadle operated, detent ball, foot bracket	M05422488	M05432488	M05442488	—
	 3-way, treadle operated, manual return, foot bracket	M08521888	M08531888	M08541888	—
	 3-way, N.C., spring return, pedel operated, foot bracket	M06221840	M06231840	M06241840	—
	 4-way, treadle operated, denent ball, foot bracket	M05425488	M05435488	M05445488	—
	 4-way, treadle operated, manual return, foot bracket	M08524688	M08534688	M08544688	—
	 4-way, spring return, pedel operated, foot bracket	M06224640	M06234640	M06244640	—

**CAUTION:** This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.

**3-way and 4-way air operated : diaphragm or cylinder**

	 3-way, N.C., single air diaphragm, air signal to actuate, spring return foot bracket	M08421830	M08431830	M08441830	—
	 3-way, single air cylinder signal to actuate, spring return foot bracket	M08521826	M08531826	M08541826	M08561826
	 3-way, double air diaphragm	M03321833	M03331833	M03341833	—
	 3-way, double air cylinder foot bracket	M01921819	M01931819	M01941819	M01961819
	 4-way, single air diaphragm, air signal to actuate, spring return foot bracket	M08424630	M08434630	M08444630	—
	 4-way, single air cylinder signal to actuate, spring return foot bracket	M08524626	M08534626	M08544626	M08564626
	 4-way, double air diaphragm	M03324633	M03334633	M03344633	—
	 4-way, double air cylinder foot bracket	M01924619	M01934619	M01944619	M01964619

**Note:** diaphragm operators : pilot signal pressures from 20 to 60 psi. Cylinder operators : pilot signal pressures from 20 to 250 psi.

**3-way and 4-way clevis operated**

	 3-way, manual, foot bracket	M08521805	M08531805	M08541805	M08561805
	 3-way, N.C., pull to operate, spring return foot bracket	M09621805	M09631805	M09641805	M09661805
	 3-way, N.C., push to operate, spring return, foot bracket	M09521805	M09531805	M09541805	M09561805
	 4-way, manual, foot bracket	M08524605	M08534605	M08544605	M08564605
	 4-way, pull clevis to operate, spring return, foot bracket	M09624605	M09634605	M09644605	M09664605
	 4-way, push clevis to operate, spring return, foot bracket	M09524605	M09534605	M09544605	M09564605

**3-way and 4-way cam operated**

	 3-way, N.C., spring return, cam operated, foot bracket	M09521803	M09531803	M09541803	M09561803
	 4-way, spring return, cam operated, foot bracket	M09524603	M09534603	M09544603	M09564603

Directair 2,  
Directair 4

Viking Xtreme  
Lever Series

42 Lever/  
Pedal Series

M0  
Series

LV-EZ Series  
Lockout Valves

Brass Poppet/  
Sliding Seal

**D**

Manual / Mechanical  
Valve Products

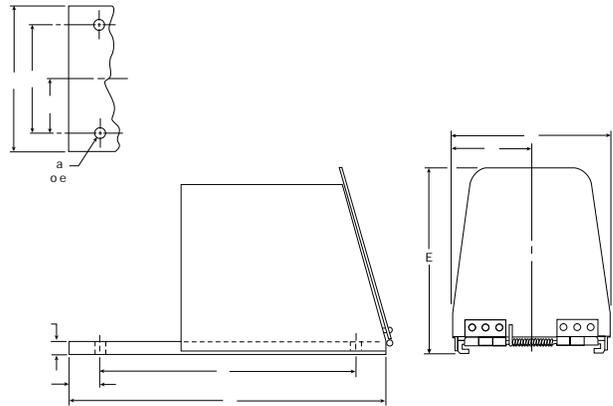
**Pedal Guard**  
**(Fits all pedal operated valves)**

Description	Model number
Guard with door	<b>M232001</b>
Guard without door	<b>M232002</b>
Guard with door for 1/4 and 3/8 valve	<b>M232003*</b>
Guard without door for 1/4 and 3/8 valve	<b>M232004*</b>
Guard with door for 1/2 and 3/4	<b>M232005*</b>
Guard without door for 1/2 and 3/4	<b>M232006*</b>

\* Includes mounting hardware.

**CAUTION:**

*Foot valves utilizing this guard shall not be used to actuate a punch press.  
 Do not use this valve on punch presses or press brakes.  
 See OSHA 1910.217.*



**Dimensions**

A	B	C	D	E	F	G
10.50	1.25	13.00	.50	7.38	6.36	3.18
266.7	31.8	330.2	12.7	187.4	161.5	80.8
H	J	K	L			
4.50	2.25	.44	6.00			
114.3	57.2	11.2	152.4			

**Service Kits**

(Field service instructions)

Description (For all 3 & 4-way valves)	1/4	3/8	1/2	3/4
Manual & mechanical operators	<b>M242001</b>	<b>M242002</b>	<b>M242003</b>	<b>M242004</b>
Cylinder (single, double & double-acting)	<b>M242006</b>	<b>M242007</b>	<b>M242008</b>	<b>M242009</b>
Diaphragm (single & double)	<b>M242011</b>	<b>M242012</b>	<b>M242013</b>	<b>M242014</b>

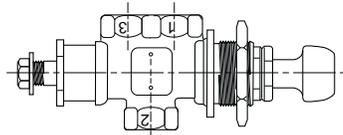
**M0 valve 9 digit part number dissection**

The M0 Valve Series has with wide variety of operating and return ends which can be ordered either on the left or right hand side of the valve body. Common part numbers on the previous pages can be ordered with the left and right hand ends swapped. Swapping operator and return end sections does not change the spool function, but can reverse the

expected function of the valve. For example, a 3-way, normally closed, "NC", spring return valve will become a 3-way normally open, "NO", valve when the operator and return section is swapped. There are other non-cataloged options available and this part number dissection will enable you to discuss your valve part number with the factory for options.

**3-way**

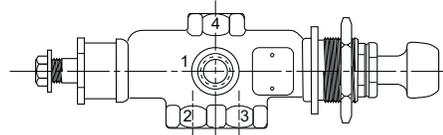
Series name	Left end	Port size	Body function	Right end
<b>M0</b>	<b>XX</b>	<b>X</b>	<b>XX</b>	<b>XX</b>



Left End Section in relation to port #2 ← → Right End Section in relation to port #2

**4-way**

Series name	Left end	Port size	Body function	Right end
<b>M0</b>	<b>XX</b>	<b>X</b>	<b>XX</b>	<b>XX</b>



Left End Section in relation to port #2 ← → Right End Section in relation to port #3

Directair 2, Directair 4  
 Viking Xtreme Lever Series  
 42 Lever / Pedal Series  
 M0 Series  
 LV-EZ Series Lockout Valves  
 Brass Poppet / Sliding Seal  
 Manual / Mechanical Valve Products

## LV / LVSS Series

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines. In accordance with OSHA procedures, lockout valves are used during maintenance and service procedures of pneumatically (air) operated equipment.

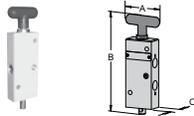
- Used for compliance with OSHA 29 CFR part 1910
- 1/4" to 2" pipe sizes. NPT or BSPP
- Yellow cast aluminum body with red handle or stainless steel (NACE MR0175 / ISO 15156)
- Inline or surface mountable
- Built in port for pressure verification to meet ANSI B11 and PMMI B155 requirements

### Material specifications

Description	LV / EZ	LVSS
Body:	Cast aluminum alloy	Stainless steel
Handle:	Plastic	Stainless steel
Spool:	Aluminum	Stainless steel
Seals:	Carboxylated nitrile	Carboxylated nitrile
Detent spring:	Stainless steel	Stainless steel
Grease:	Magnalube G <sup>†</sup>	Magnalube G <sup>†</sup>

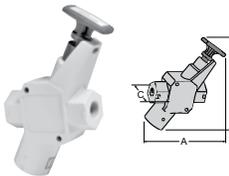
<sup>†</sup> Trademark Magnalube

### Compact



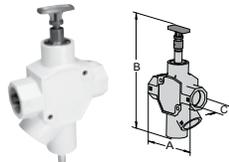
Port in / out	Port exhaust	A (in)	B (in)	C (in)	Wt (lb)	Part number *
1/4	3/8	2.3	6.5	1.0	0.9	<b>LV2N3B</b>
3/8	3/8	2.3	6.5	1.0	0.9	<b>LV3N3B</b>

### Standard



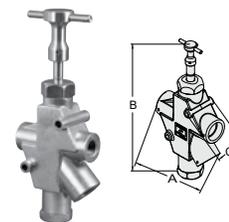
Port in / out	Port exhaust	A (in)	B (in)	C (in)	Wt (lb)	Part number *
3/8	3/4	6.4	8.8	2.0	2.0	<b>LV3N6B</b>
1/2	3/4	6.4	8.8	2.0	2.0	<b>LV4N6B</b>
3/4	3/4	6.4	8.8	2.0	2.0	<b>LV6N6B</b>
3/4	1-1/4	7.6	10.6	2.3	3.2	<b>LV6NAB</b>
1	1-1/4	7.6	10.6	2.3	3.2	<b>LV8NAB</b>
1-1/4	1-1/4	7.6	10.6	2.3	3.2	<b>LVANAB</b>

### High Flow



Port in / out	Port exhaust	A (in)	B (in)	C (in)	Wt (lb)	Part number *
1-1/2	2	8.2	14.9	3.0	8.2	<b>LVBNCB</b>
2	2	8.2	14.9	3.0	8.2	<b>LVCNCB</b>

### Stainless Steel



Port in / out	Port exh.	A (in)	B (in)	C (in)	Wt (lb)	Part number *
1/4	1/4	3.5	8.6	2.1	3.8	<b>LV2N2BSS</b>
3/8	1/2	4.3	10.5	1.8	6.0	<b>LV3N4BSS</b>
1/2	1/2	4.3	10.5	1.8	6.0	<b>LV4N4BSS</b>
3/4	1	6.0	14.1	2.5	13	<b>LV6N8BSS</b>
1	1	6.0	14.1	2.5	13	<b>LV8N8BSS</b>
1-1/2	2	8.2	18.5	4.0	35	<b>LVBNCBSS</b>
2	2	8.2	18.5	4.0	35	<b>LVCNCBSS</b>

\* For BSPP ports, change 4th digit from "N" to "B"

Most popular.



### Operating information

Operating pressure:	LV	EZ	LVSS
Compact	15 to 145 PSIG	–	–
Standard	15 to 300 PSIG	15 to 300 PSIG	15 to 300 PSIG
High flow	15 to 300 PSIG	–	–
Operating temperature:	40°F to 175°F	40°F to 175°F	30°F to 175°F
Operating media:	Clean, dry, compressed air (5 micron)		

Directair 2,  
Directair 4

Viking Xtreme  
Lever Series

42 Lever/  
Pedal Series

M0  
Series

LV-EZ Series  
Lockout Valves

Brass Poppet/  
Sliding Seal

**D**

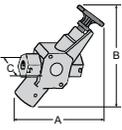
Manual / Mechanical  
Valve Products

## EZ Series

The EZ series meets all the same standards as the LV series with the added feature of a soft start when opened. There are still 2 detented positions for the handle (push close, pull to open), but when pulled open, an adjustable needle valve controls the rate of pressure build-up. This can protect equipment during start up after maintenance. The EZ is distinguishable from the LV series by the blue dot on the label.



### EZ Series

	Port in / out	Port exhaust	A (in)	B (in)	C (in)	Wt (lb)	Part Number *
	3/8	3/4	6.4	8.8	2.0	2.1	<b>EZ03NB6</b>
	1/2	3/4	6.4	8.8	2.0	2.1	<b>EZ04NB6</b>
	3/4	3/4	6.4	8.8	2.0	2.1	<b>EZ06NB6</b>
	3/4	1-1/4	7.7	10.8	2.3	3.2	<b>EZ06NBA</b>
	1	1-1/4	7.7	10.8	2.3	3.2	<b>EZ08NBA</b>
	1-1/4	1-1/4	7.7	10.8	2.3	3.2	<b>EZ0ANBA</b>

\* For BSPP ports, change 5th digit from "N" to "B"

### LV / EZ Accessories

#### High Flow Silencers

Pipe size	Part number NPT	Part number BSPT
3/8	<b>ES37MC</b>	<b>ESB37MC</b>
3/4	<b>ES75MC</b>	<b>ESB75MC</b>
1-1/4	<b>ES125MC</b>	<b>ESB125MC</b>
2	<b>ES200MC</b>	<b>ESB200MC</b>

#### Stainless Steel Mufflers

Pipe size	Part number NPT
1/4	<b>5500A2004</b>
1/2	<b>5500A4004</b>
1	<b>5500A6004</b>
2	<b>5500A9004 **</b>

\*\* Nickel Plated

#### Pop-up Pressure Indicator



**Brass** – Part # 988A30 – Can be used on all LV or EZ series to provide visual verification of line exhaust



**Stainless** – Part# 1155H30 – Can be used on SS LV series to provide visual verification of line exhaust

#### Pressure Switch



- Part # PPS1-2C3-RHM (DIN 9.4mm connector)
- Part # PPS1-2C3-RWL (18" leads)
- Signal verification of line exhaust
- Field adjustable set point

Most popular.

Directair 2,  
 Directair 4  
 Viking Xtreme  
 Lever Series  
 42 Lever /  
 Pedal Series  
 M0  
 Series  
 LV-EZ Series  
 Lockout Valves  
 Brass Poppet /  
 Sliding Seal  
**D**  
 Manual / Mechanical  
 Valve Products

## PL / VL Series

These are 4-Way, 3-Position, rotary disc, direct-operated air valves. Two different types of control are offered. The forged bronze disc and the cast iron surface upon which the disc works are ground and lapped to provide a leak-proof seal. Air pressure from the inlet port is confined beneath the disc, making the seal tighter as the pressure increases, yet friction between the lapped surfaces is so low that only 15 pounds of force is required to move the lever at 100 PSI line pressure. The need for packing to seal around the stem is eliminated.

Valve can be furnished for gasketing to a manifold on customer's machine or with an adaptor for tapped bottom porting.

Valves are detented.

Operating handles may be installed in any of four positions.



### Operating information

Operating pressure: 0 to 150 PSI (0 to 1035 kPa)

Temperature range: 18°F to 200°F (-8°C to 93°C)

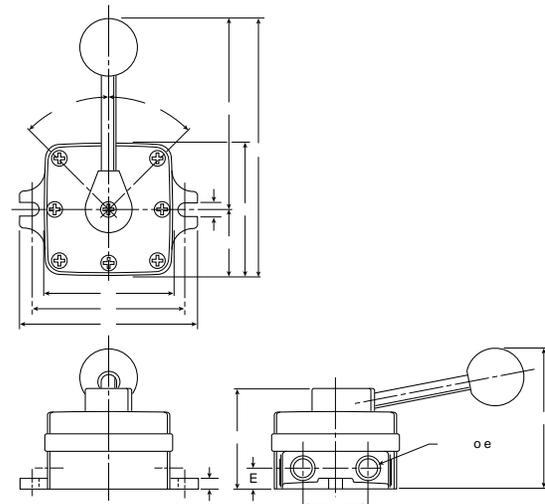
Lubrication: Filtered and lubricated air recommended for maximum valve life and minimum maintenance.

### PL-VL Series Valves

Symbol	Port Size	Description	Cv	Part number
	1/4" NPT	4-way, 3-position, detent, closed center	2.5	<b>PL25</b>
	3/8" NPT	4-way, 3-position, detent, closed center	3.0	<b>PL37</b>
	1/2" NPT	4-way, 3-position, detent, closed center	6.2	<b>PL50</b>
	1/4" NPT	4-way, 3-position, detent, exhaust center	2.5	<b>VL25</b>
	3/8" NPT	4-way, 3-position, detent, exhaust center	3.0	<b>VL37</b>
	1/2" NPT	4-way, 3-position, detent, exhaust center	6.2	<b>VL50</b>

### Service kits

Description	Valve size	Part number
Lever assembly service kits	PL25, PL25HP, PL37, PL37HP, VL25, & VL37	<b>PL2425BP</b>
	PL50, PL50HP & VL50	<b>PL2424BP</b>
Body gasket	PL25, PL25HP, PL37, PL37HP, VL25, & VL37	<b>P66837</b>
	PL50, PL50HP & VL50	<b>P66829</b>



### PL-VL Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P
<b>PL-25</b>	4.75	3.81	6.81	1.69	.56	2.75	4.12	3.50	3.50	1.69	5.06	.34	.28	1/4
<b>VL-25</b>	(121)	(97)	(173)	(43)	(14)	(70)	(105)	(89)	(89)	(43)	(129)	(9)	(7)	NPT
<b>PL-37</b>	4.75	3.81	6.81	1.69	.56	.56	4.12	3.50	3.50	1.69	5.06	.34	.28	3/8
<b>VL-37</b>	(121)	(97)	(173)	(43)	(14)	(14)	(105)	(89)	(89)	(43)	(129)	(9)	(7)	NPT
<b>PL-50</b>	5.62	4.44	8.94	2.12	.66	3.25	5.00	4.38	4.38	2.12	6.75	.34	.34	1/2
<b>VL-50</b>	(143)	(113)	(227)	(54)	(17)	(83)	(127)	(111)	(111)	(54)	(171)	(9)	(9)	NPT

inches (mm)

Most popular.



## HV Valve Series

### Features

- Compact and simple design
- Rotary disc, direct operated valves
- Side porting
- Detent action smooth lever actuation
- General pneumatic applications



### Lubrication

Filtered and lubricated air recommended for maximum valve life and minimum maintenance.

### Material specifications

Cover	Zinc
Body	Aluminum
Seals	Polyurethane

### Operating information

Operating pressure: 0 to 150 PSI (0 to 10 bar)

Temperature range: 32°F to 166°F (0°C to 60°C)

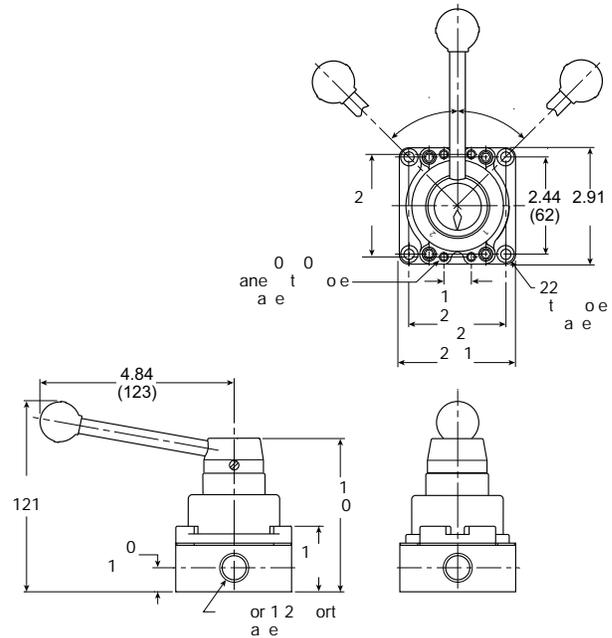
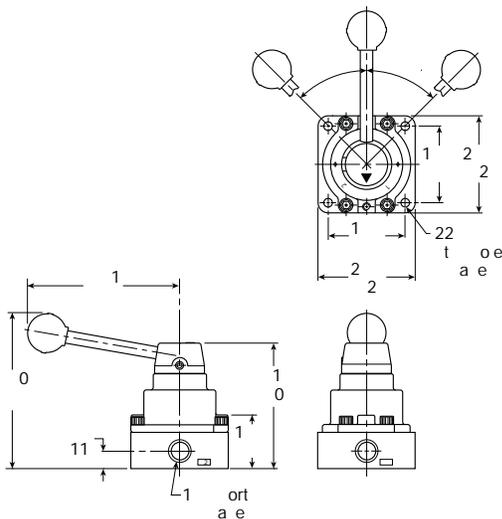
Lubrication: Filtered and lubricated air recommended for maximum valve life and minimum maintenance.

### HV Valve Series

Symbol	Port size	Description	Cv (ANSI)	Cv (JIS)	Part number
	1/4" NPT	4-way, 3-position	0.5	0.4	<b>HVN4200-8</b>
	3/8" NPT	4-way, 3-position	1.4	2.72	<b>HVN4400-10</b>
	1/2" NPT	4-way, 3-position	1.5	3.26	<b>HVN4400-15</b>

### Service kits

Description	Valve size	Part number
Disk & seal service kits	HV4200	<b>HVRK420001</b>
	HV4400	<b>HVRK440001</b>



**HVN4200-8**

Most popular.

**HVN4400-10, 15**



## Hand Operated Sliding Seal Valves

Sliding seal valves provide 3 or 4-Way directional control in a compact body size. Comfortable hand lever is easy to operate and maintains set position. Disc type valve has minimum number of moving parts. Valves should be used with filtered and lubricated air.

**CAUTION:**  
 Install guards on all hand operated valves.  
 Accidental operation can cause personal injury.

### Material specifications

Internal components	Brass, stainless steel
Body	Die cast zinc
Seals	Buna N



1/8" 3-Way



1/4" 4-Way

### Operating information

Operating pressure: Max. 200 PSIG air only  
 Min. 26" Hg vacuum

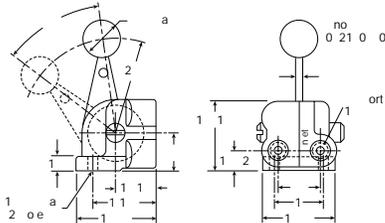
Temperature range: -40°F to 212°F (-40°C to 100°C)  
 (If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior.)

### Hand Operated Sliding Seal Valve

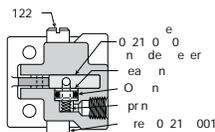
Symbol	Port size	Function	Cv (Avg)	Service kit*	Part number
	1/8"	3-way, 2-position, detented	0.54	<b>032130899</b>	<b>032130599</b>
	1/8"	4-way, 2-position, detented	0.54	<b>032130899</b>	<b>032140299</b>
	1/4"	3-way, 2-position, detented	1.25	<b>008230299</b>	<b>008230109</b>
	1/4"	4-way, 3-position, detented, center blocked	1.25	<b>008230299</b>	<b>008240109</b>

Note: 3-Way exhaust passage is through an untapped hole in bottom side of valve.

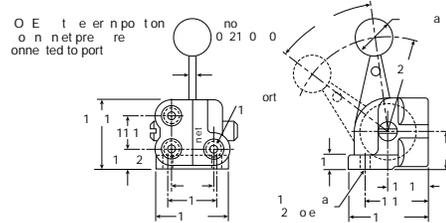
1/8" 3-Way 032130599



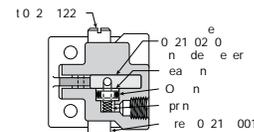
Service Kit  
**032130899\***



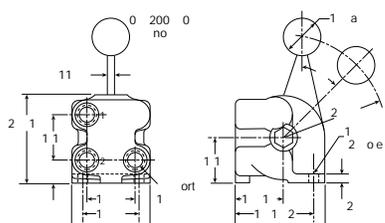
1/8" 4-Way 032140299



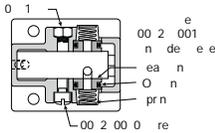
Service Kit  
**032130899\***



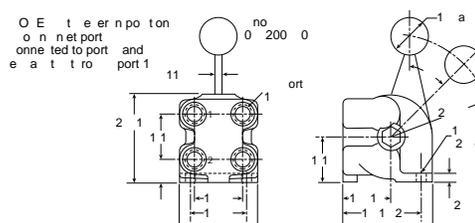
1/4" 3-Way 008230109



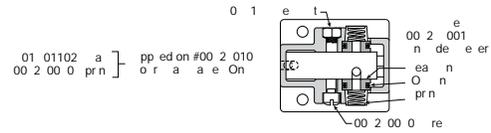
Service Kit  
**032130899\***



1/4" 4-Way 008240109



Service Kit  
**032130899\***



Most popular.

\* Service kits contain asterisk items



Directair 2,  
 Directair 4

Viking Xtreme  
 Lever Series

42 Lever/  
 Pedal Series

M0  
 Series

LV-EZ Series  
 Lockout Valves

Brass Poppet/  
 Sliding Seal

**D**

Manual / Mechanical  
 Valve Products