

D
Valve Products

Valve Products

Direct Acting Valves

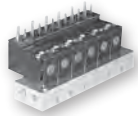
XM Series - Direct Acting



D4

- Inline or stacking
- 1/8 inch ports
- Pressures 0 to 125 PSIG
- Temperatures 32°F to 125°F
- Flow - .15 Cv

15mm Series - Direct Acting



D8

- Subbase or manifold
- 1/8 inch ports
- Pressures VAC to 145 PSIG
- Temperatures 5°F to 140°F
- Flow - .033 to .05 Cv

Inline Valves

Viking Lite Series - Inline



D11

- Inline or bar manifold
- 1/8 through 3/8 inch ports
- Pressures 22 to 145 PSIG
- Temperatures 14°F to 122°F
- Flow - .6 to 2.5 Cv

Viking Xtreme Series - Inline



D19

- Inline or bar manifold
- 1/8 through 1/2 inch ports
- Pressures VAC to 232 PSIG
- Temperatures -40°F to 140°F
- Flow - .7 to 2.7 Cv

B Series - Inline



D43

- Inline, subbase or bar manifold
- 1/8 through 3/4 inch ports
- Pressures VAC to 145 PSIG
- Temperatures 5°F to 120°F
- Flow - .75 to 7.0 Cv

ADEX Series - Inline



D68

- Inline, subbase or bar manifold
- M3, M5, 1/8 inch ports
- Pressures VAC to 100 PSIG
- Temperatures 32°F to 122°F
- Flow - .1 to .47 Cv

Inline – continued

N Series - Inline Poppet



D78

- Inline mounted
- 3/8 through 1-1/2 inch ports
- Pressures 30 to 250 PSIG
- Temperatures 0°F to 200°F
- Flow - 3.6 to 29.9 Cv

Subbase & Manifold Valves

Moduflex Series Valves



D89

- Inline or stacking
- 4mm tube, 1/4, 3/8 inch ports
- Pressures VAC to 120 PSIG
- Temperatures 5°F to 140°F
- Flow - .18 to .80 Cv

Isys Micro Series



D113

- Subbase or manifold
- 4mm through 1/4 tube
- Pressures VAC to 145 PSIG
- Temperatures 5°F to 120°F
- Flow - .35 Cv

Isys ISO Series



D124

- Subbase or manifold
- 1/8 through 3/4 inch ports
- Pressures VAC to 145 PSIG
- Temperatures 5°F to 120°F
- Flow - .55 to 6.0 Cv

Fieldbus Series



D166

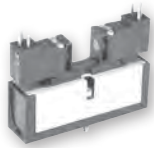
- Fieldbus interface for Isys and Moduflex valves
- Up to 256 inputs
- Up to 256 outputs
- Digital or analog

D

Pictorial Index
 Valve Products

Subbase & Manifold – continued

DX ISOMAX Series



D185

- Subbase or manifold
- 1/8 through 3/4 inch ports
- Pressures VAC to 145 PSIG
- Temperatures 14°F to 140°F
- Flow - .55 to 4.15 Cv

Valvair II Series

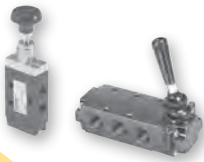


D198

- Subbase or manifold
- 3/8 through 1-1/2 inch ports
- Pressures VAC to 225 PSIG
- Temperatures 0°F to 200°F
- Flow - 1.9 to 12.0 Cv

Manual / Mechanical Valves

Directair 2 & 4



D208

- Manual / mechanical
- 1/8 and 1/4 inch ports
- Pressures VAC to 150 PSIG
- Temperatures 32°F to 175°F
- Flow - .20 to .84 Cv

Viking Xtreme



D218

- Manual / mechanical
- 1/8, 1/4 and 3/8 inch ports
- Pressures:
Type A & B - VAC to 232 PSIG
Type C & D - VAC to 174 Psig
- Temperatures -40°F to 140°F
- Flow - .5 to 2.7 Cv

42 Series



D225

- Manual / mechanical
- 1/4 and 3/8 inch ports
- Pressures VAC to 150 PSIG
- Temperatures 0°F to 140°F
- Flow - 1.3 to 2.9 Cv

Manual / Mechanical – continued

M0 Series



D227

- Air Pilot, Manual / mechanical
- 1/4 and 1 inch ports
- Pressures VAC to 225 PSIG
- Temperatures -15°F to 200°F
- Flow - .5 to 1.25 Cv

LV / EZ Lockout Valves



D231

- Port sizes 3/8 through 1-1/4 inch
- Max. supply pressure 300 PSIG
- Max. operating temperature 175°F
- Cv from 3.7 to 14

Brass Poppet, Sliding Seal



D233

- 4-way, 3-position rotary disc, direct air operated valves
- Pressures 0 to 150 PSIG
- Temperatures 18°F to 200°F
- Flow - 2.5 to 6.2 Cv

Valve Accessories

Control Panel Products



D236

- A wide variety of push buttons and selector switches
- Visual indicators
- Foot pedal switches
- Modular pneumatic / electric push buttons

Sensing / Limit Switches



D240

- Limit switches in a variety of sizes and configurations
- Pressure switches with many adjustable ranges
- Components designed specifically for pneumatic technology using pressure variation, air bleen or blocking for detection

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

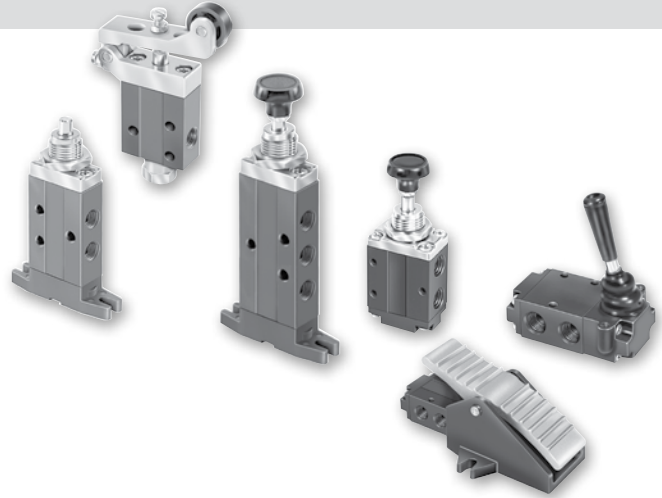
Packed bore style – .20 Cv

- 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
Button Actuator	13.0	2.0	13.0	N/A
Roller Actuator	13.0	N/A	N/A	N/A
Lever Actuator	4.0	2.0	4.0	2.5


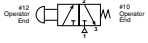
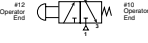
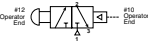
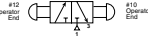
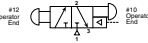

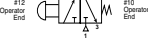

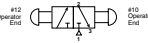

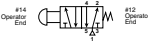
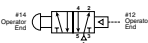

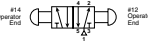
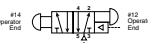

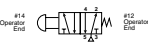
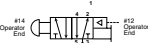



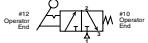
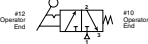



Notes: N/A = Not Applicable

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	
		1/8"	.17	3-way, spring return	Poppet	404411000	
		1/8"	.20	3-way, spring return	Spool	414411000	
		1/8"	.20	3-way, spring return, foot mounted	Spool	414421000	
		1/8"	.20	3-way, pilot return	Spool	414451000	
		1/8"	.20	3-way, manual return	Spool	414931000	
		1/8"	.20	3-way, manual return, foot mounted	Spool	414941000	
		1/8"	.20	3-way, manual or pilot return	Spool	414951000	
		1/4"	.83	3-way, spring return	Spool	524411000	
		1/4"	.83	3-way, pilot return	Spool	524451000	
		1/4"	.83	3-way, manual return	Spool	524431000	
			1/8"	.20	4-way, spring return	Spool	410411000
			1/8"	.20	4-way, spring return, foot mounted	Spool	410421000
		1/8"	.20	4-way, pilot return	Spool	410451000	
		1/8"	.20	4-way, manual return	Spool	410931000	
		1/8"	.20	4-way, manual return, foot mounted	Spool	410941000	
		1/8"	.20	4-way, manual or pilot return	Spool	410951000	
		1/4"	.83	4-way, spring return	Spool	520411000	
		1/4"	.83	4-way, pilot return	Spool	520451000	
		1/4"	.83	4-way, manual return	Spool	520431000	
 			1/8"	.17	3-way, spring return	Poppet	404811000
			1/8"	.20	3-way, spring return	Spool	414811000
			1/8"	.20	3-way, spring return, foot mounted	Spool	414821000
		1/8"	.20	4-way, spring return	Spool	410811000	
		1/8"	.20	4-way, spring return, foot mounted	Spool	410821000	

Directair 2,
Directair 4

Viking Xtreme
Lever Series

42 Lever/
Pedal Series

M0
Series

LV-EZ Series
Lockout Valves

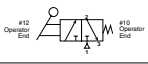
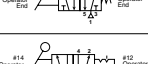

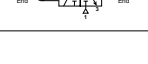
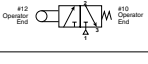

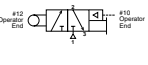
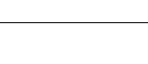
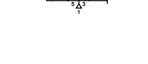


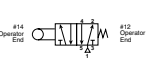


Brass Poppet/
Sliding Seal

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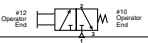
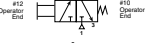
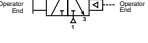
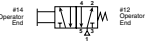
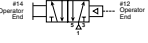


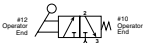
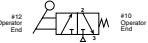
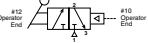

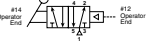


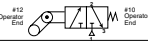
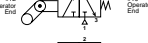
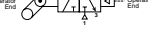



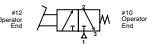
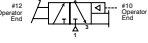
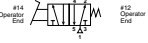
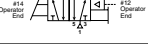

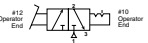
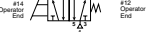
Manual / Mechanical
Valve Products



3-way & 4-way Valves

	Symbol	Port size	Cv	Description	Valve type	Part number	
Lever operated 		1/4"	.83	3-way, spring return	Spool	524811000	
		1/4"	.83	3-way, manual return	Spool	524831000	
		1/4"	.83	3-way, 3-Position detented, all ports blocked	Spool	523831000	
		1/4"	.83	4-way, spring return	Spool	520811000	
		1/4"	.83	4-way, manual return	Spool	520831000	
		1/4"	.83	4-way, spring centered, closed center	Spool	521811000	
		1/4"	.83	4-way, spring centered, pressure center	Spool	522811000	
		1/4"	.83	4-way, spring centered, exhaust center	Spool	529811000	
		1/4"	.83	4-way, detented, closed center	Spool	521831000	
		1/4"	.83	4-way, detented, pressure center	Spool	522831000	
		1/4"	.83	4-way, detented, exhaust center	Spool	529831000	
	Roller operated 		1/8"	.20	3-way, spring return	Poppet	404211000
		1/8"	.20	3-way, spring return	Spool	414211000	
		1/8"	.20	3-way, spring return, foot mounted	Spool	414221000	
		1/8"	.20	3-way, pilot return	Spool	414251000	
		1/8"	.20	4-way, spring return	Spool	410211000	
		1/8"	.20	4-way, spring return, foot mounted	Spool	410221000	
		1/8"	.20	4-way, pilot return	Spool	410251000	
Roller operated 			1/4"	.83	3-way, spring return, delrin roller	Spool	524211000
			1/4"	.83	3-way, pilot return, delrin roller	Spool	524251000
			1/4"	.83	3-way, spring return, steel roller	Spool	524A11000
		1/4"	.83	3-way, pilot return, steel roller	Spool	524A51000	
		1/4"	.83	4-way, spring return, delrin roller	Spool	520211000	
		1/4"	.83	4-way pilot return, delrin roller	Spool	520251000	
		1/4"	.83	4-way, spring return, steel roller	Spool	520A11000	
		1/4"	.83	4-way, pilot return, steel roller	Spool	520A51000	

3-way & 4-way Valves

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

Directair 2,
Directair 4

Viking Xtreme
Lever Series

42 Lever/
Pedal Series

M0
Series

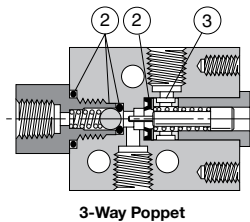
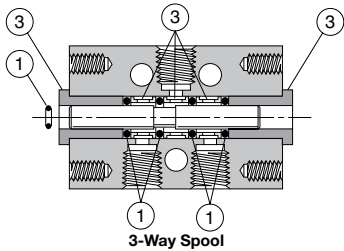
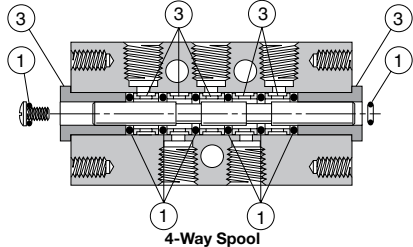
LV-EZ Series
Lockout Valves

Brass Poppet/
Sliding Seal

D
Manual / Mechanical
Valve Products

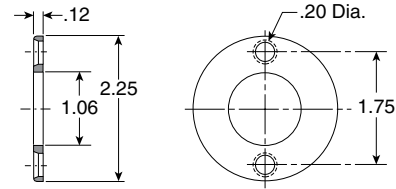
Service kits – 1/8 port size valves (DA2)

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



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.

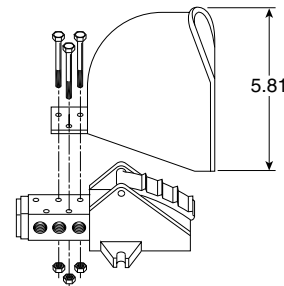


Pedal Guard Kit – No. 520718001

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.

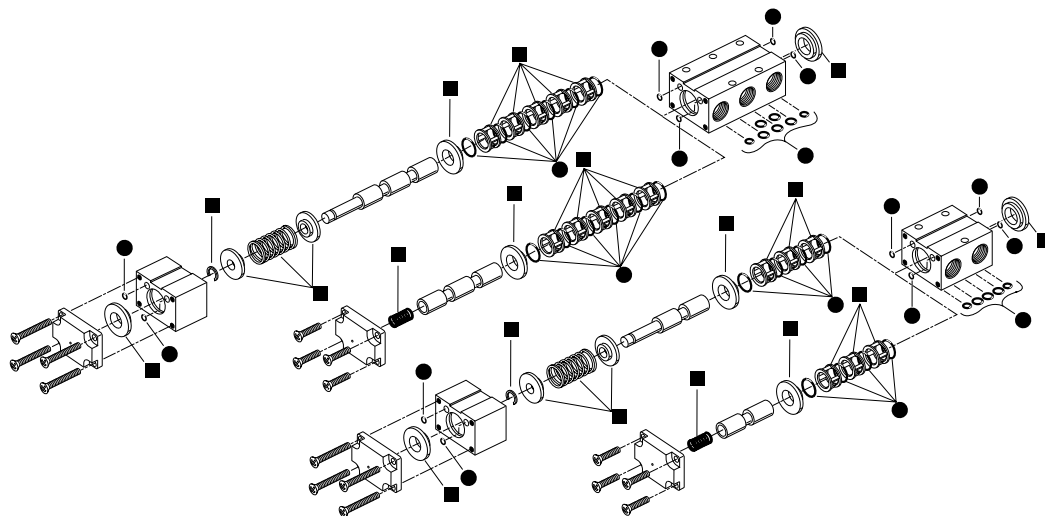
⚠ CAUTION:

*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)

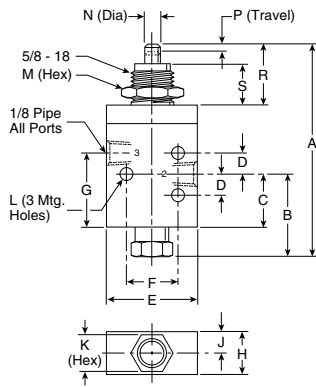
●	Valve seal kit (Contains all soft seals found in 3 & 4-way bodies and all actuator styles.) All fluorocarbon	520008050
■	Body service kit (Contains bushing, springs, retainers and shell from 2 & 3-position, 3 & 4-way bodies.)	520018005



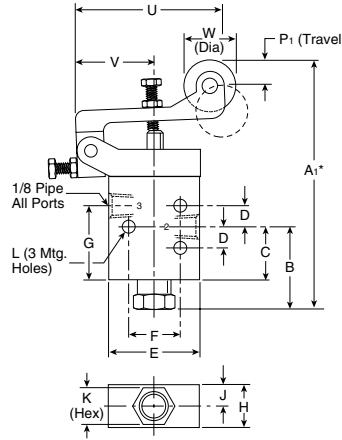
Directair 2, Directair 4
 Viking Xtreme Lever Series
 42 Lever / Pedal Series
 M0 Series
 LV-EZ Series Lockout Valves
 Brass Poppet / Sliding Seal
D
 Manual / Mechanical Valve Products

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

Plunger Operated



Roller Operated



3-Way, 3-Port, 2-Position

A	A1*	A2*	A3	B
3.37 (86)	4.21 (107)	4.46 (113)	3.99 (101)	1.03 (26)

C	D	E	F	G
.55 (14)	.31 (8)	1.31 (33)	.75 (19)	.90 (23)

H	J	K	L	M
.62 (16)	.31 (8)	.56 (14)	.19 (5)	.88 (22)

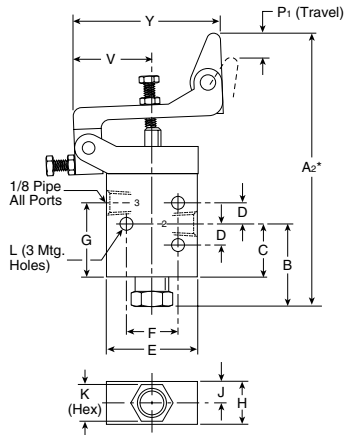
N	P	P1	R	R1
.25 (6)	.17 (4)	.38 (10)	.91 (23)	1.53 (39)

S	S1	U	V	W
.62 (16)	.78 (20)	2.28 (58)	1.19 (30)	.75 (19)

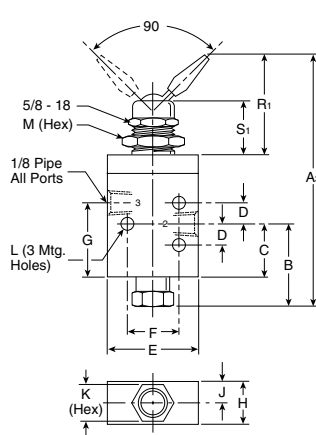
X	Y
.19 (5)	2.19 (56)

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

One-Way Tripper Operated

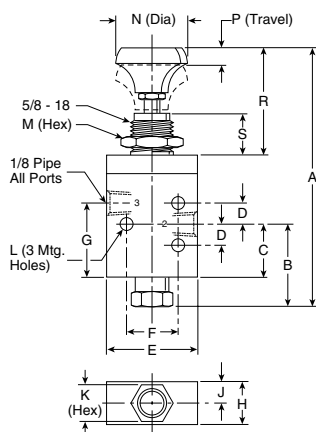


Toggle Operated

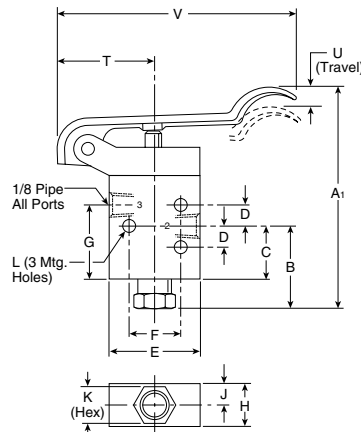


Button & Hand Lever Operated — 3-Way, 3-Port, 2-Position – 1/8" Ports

Button Operated



Hand Lever Operated



3-Way, 3-Port, 2-Position

A	A1	B	C	D
4.13 (105)	3.34 (85)	1.03 (26)	.55 (14)	.31 (8)

E	F	G	H	J
1.31 (33)	.75 (19)	.90 (23)	.62 (16)	.31 (8)

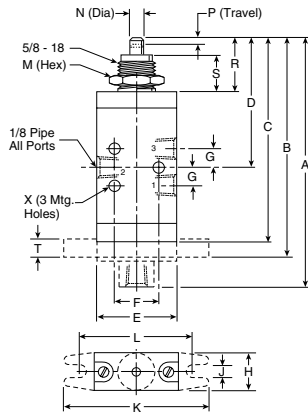
K	L	M	N	P
.56 (14)	.19 (5)	.88 (22)	1.06 (27)	.17 (4)

R	S	T	U	V
1.67 (42)	.63 (16)	1.19 (30)	.53 (13)	3.38 (86)

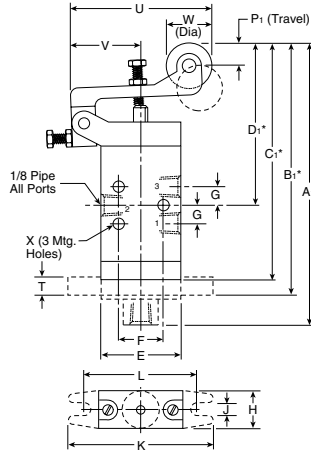
Inches (mm)

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

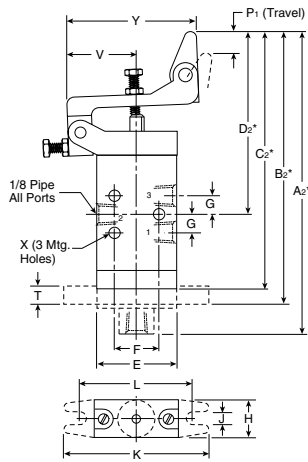
Plunger Operated



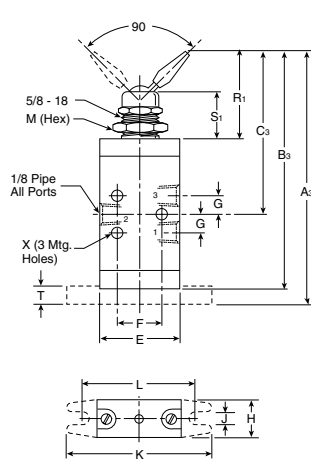
Roller Operated



One-Way Tripper Operated



Toggle Operated



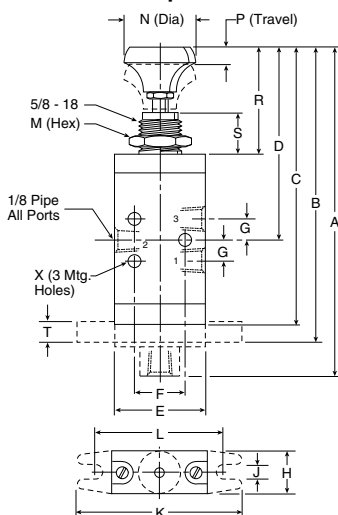
3-Way, 3-Port, 2-Position

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

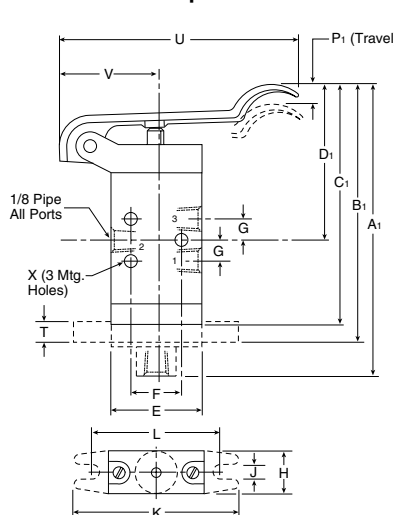
* Dimensions may be reduced .44" using adjusting screw.
 Inches (mm)

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

Button Operated



Hand Lever Operated



3-Way, 3-Port, 2-Position

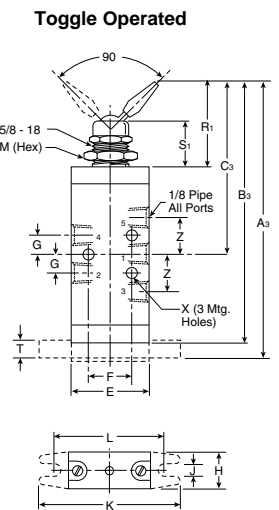
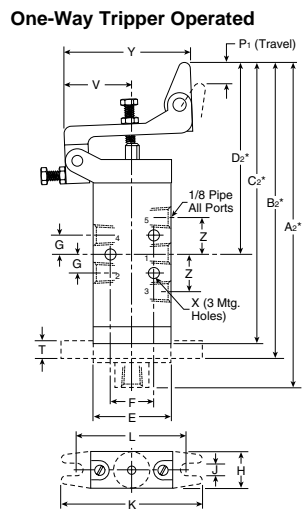
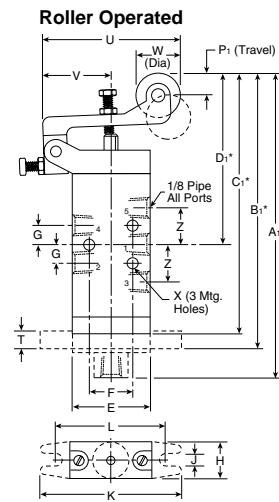
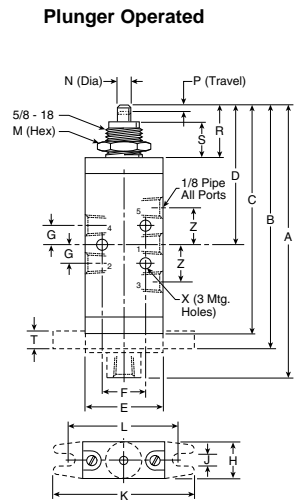
A	A1	B	B1	C
5.08 (129)	4.29 (109)	4.55 (115)	3.77 (96)	4.31 (109)
C1	D	D1	E	F
3.53 (90)	3.08 (78)	2.29 (58)	1.31 (33)	.75 (19)
G	H	J	K	L
.31 (8)	.62 (16)	.20 (5)	2.38 (60)	1.88 (48)
M	N	P	P1	R
.88 (22)	1.06 (27)	.17 (4)	.53 (13)	1.67 (42)
S	T	U	V	X
.63 (16)	.25 (6)	3.38 (86)	1.19 (30)	.19 (5)
Y				
.59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

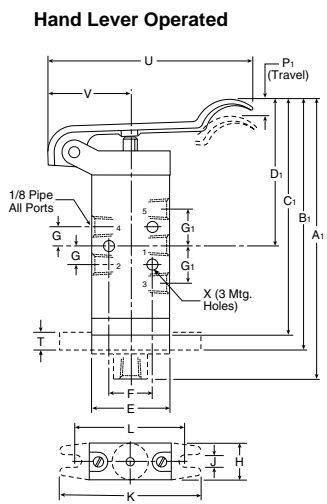
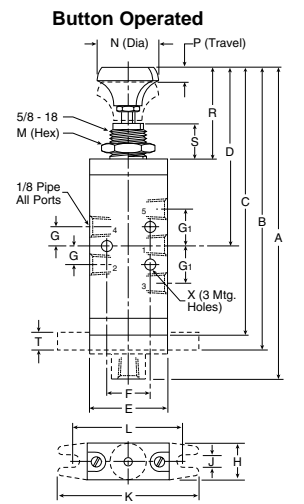


4-Way, 5-Port, 2-Position

A 4.75 (121)	A1* 5.59 (142)	A2* 5.84 (148)	A3 4.84 (123)	B 4.22 (107)
B1* 5.06 (128)	B2* 5.31 (135)	B3 4.61 (117)	C 3.99 (102)	C1* 4.83 (123)
C2* 5.08 (129)	C3 3.06 (78)	D 2.44 (62)	D1* 3.28 (83)	D2* 3.53 (90)
E 1.31 (33)	F .75 (19)	G .31 (8)	H .62 (16)	J .20 (5)
K 2.38 (60)	L 1.88 (48)	M .88 (22)	N .25 (6)	P .17 (4)
P1 .38 (10)	R .91 (23)	R1 1.53 (39)	S .62 (16)	S1 .78 (20)
T .25 (6)	U 2.28 (58)	V 1.19 (30)	W .75 (19)	X .19 (5)
Y 2.19 (56)	Z .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



4-Way, 5-Port, 2-Position

A 5.69 (144)	A1 4.90 (124)	B 5.16 (131)	B1 4.38 (111)	C 4.92 (125)
C1 4.14 (105)	D 3.67 (93)	D1 2.90 (74)	E 1.31 (33)	F .75 (19)
G .31 (8)	G1 .63 (16)	H .62 (16)	J .20 (5)	K 2.38 (60)
L 1.88 (48)	M .88 (22)	N 1.06 (27)	P .17 (4)	P1 .53 (13)
R 1.67 (42)	S .63 (16)	T .25 (6)	U 3.38 (86)	V 1.19 (30)
X .19 (5)	Y .59 (15)			

Inches (mm)



Directair 2,
 Directair 4

Viking Xtreme
 Lever Series

42 Lever/
 Pedal Series

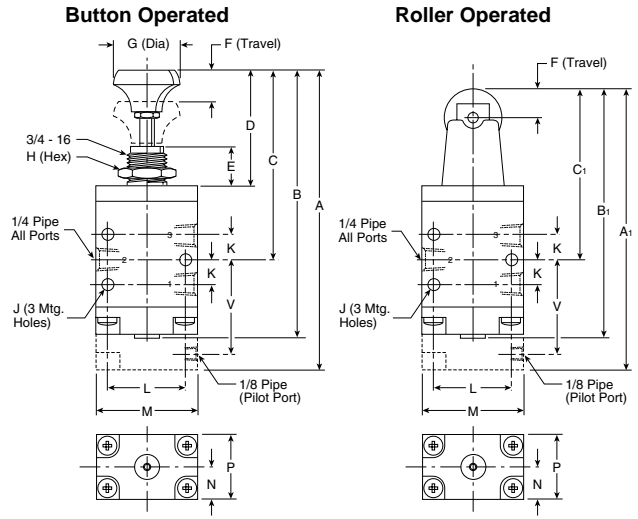
M0
 Series

LV-EZ Series
 Lockout Valves

Brass Poppet/
 Sliding Seal

D
 Manual / Mechanical
 Valve Products

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

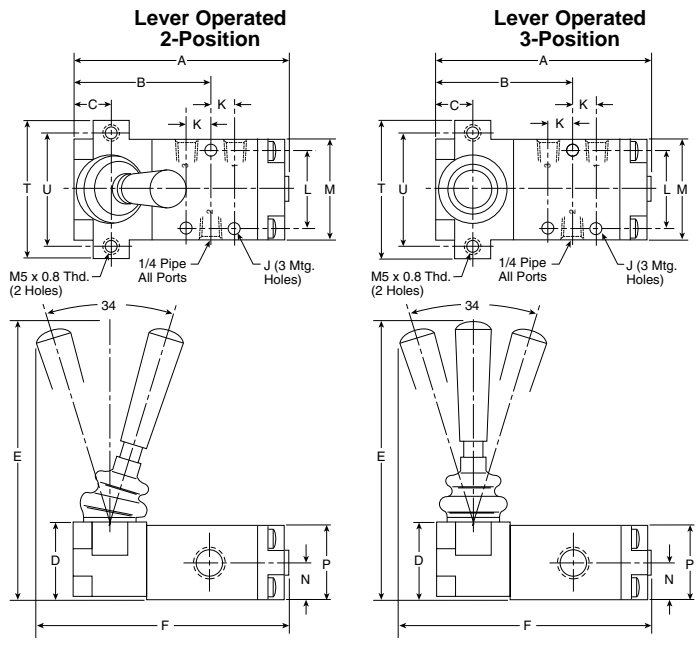


3-Way, 3-Port, 2-Position

A	A ₁	B	B ₁	C
4.91 (125)	4.25 (108)	4.44 (113)	3.78 (96)	3.10 (79)
C ₁	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)

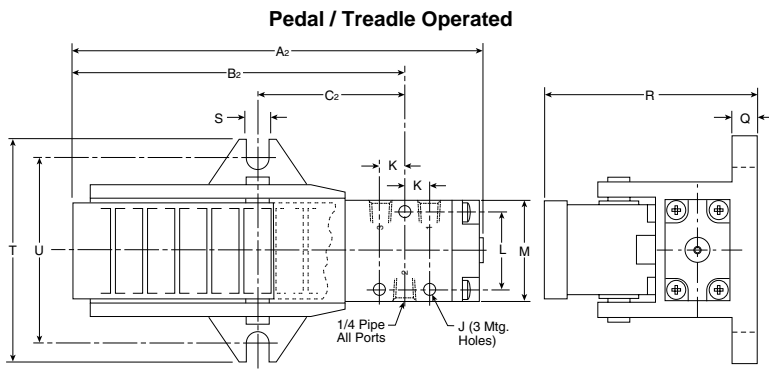
Lever & Pedal Operated — 3-Way, 3-Port, 2 & 3-Position



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

A	A ₁	B	B ₁	C
3.31 (84)	6.55 (166)	1.97 (50)	5.20 (132)	.53 (14)
C ₁	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 ₁
.37 (10)	2.40 (61)	.34 (9)	2.13 (54)	3.50 (89)
U	U ₁			
1.75 (44)	3.00 (76)			

Inches (mm)

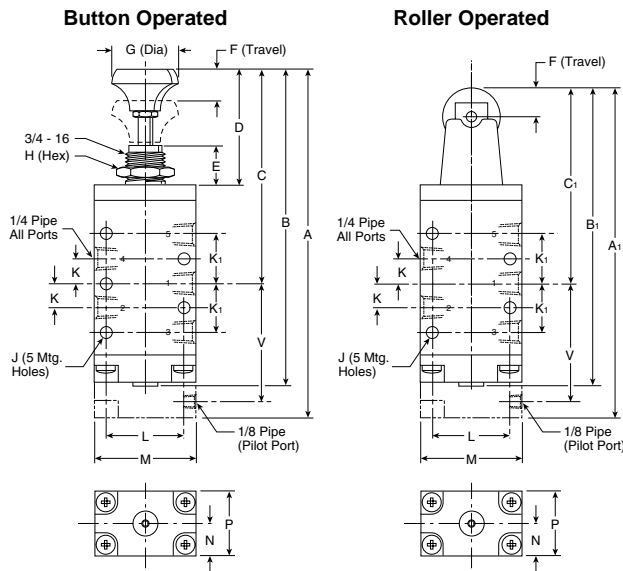


CAUTION:

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.

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

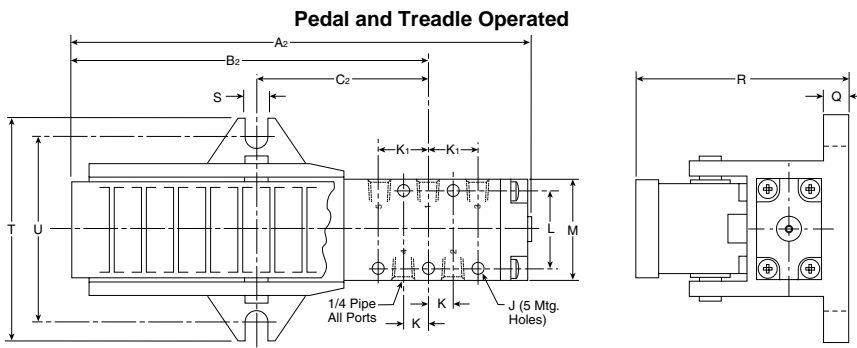
Button, Roller, Pedal & Treadle, Lever Operated — 4-Way, 5-Port, 2-Position



4-Way, 5-Port, 2-Position

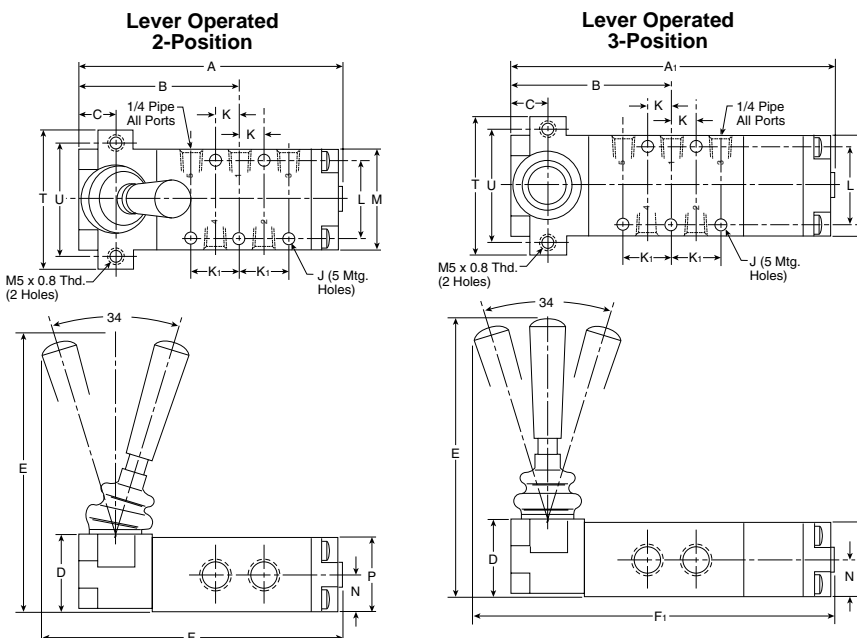
A	A₁	A₂	B	B₁
5.75 (146)	5.13 (130)	7.41 (189)	5.28 (134)	4.66 (118)
B₂	C	C₁	C₂	D
5.63 (143)	3.50 (89)	2.88 (73)	2.64 (67)	2.00 (51)
E	F	G	H	J
.63 (16)	.32 (8)	1.05 (27)	1.00 (25)	.19 (5)
K	K₁	L	M	N
.44 (11)	.84 (21)	1.25 (32)	1.63 (41)	.53 (14)
P	Q	R	S	T
1.06 (27)	.37 (10)	2.40 (61)	.34 (9)	3.50 (89)
U	V			
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

A	A₁	B	C	D
4.19 (106)	5.09 (129)	2.41 (61)	.53 (14)	1.12 (28)
E	F	F₁	J	K
4.06 (103)	4.78 (121)	5.78 (147)	.19 (5)	.44 (11)
K₁	L	M	N	P
.84 (21)	1.25 (32)	1.63 (42)	.53 (14)	1.06 (27)
T	U			
2.13 (54)	1.75 (44)			

Inches (mm)

Viking Xtreme Lever Operated Series

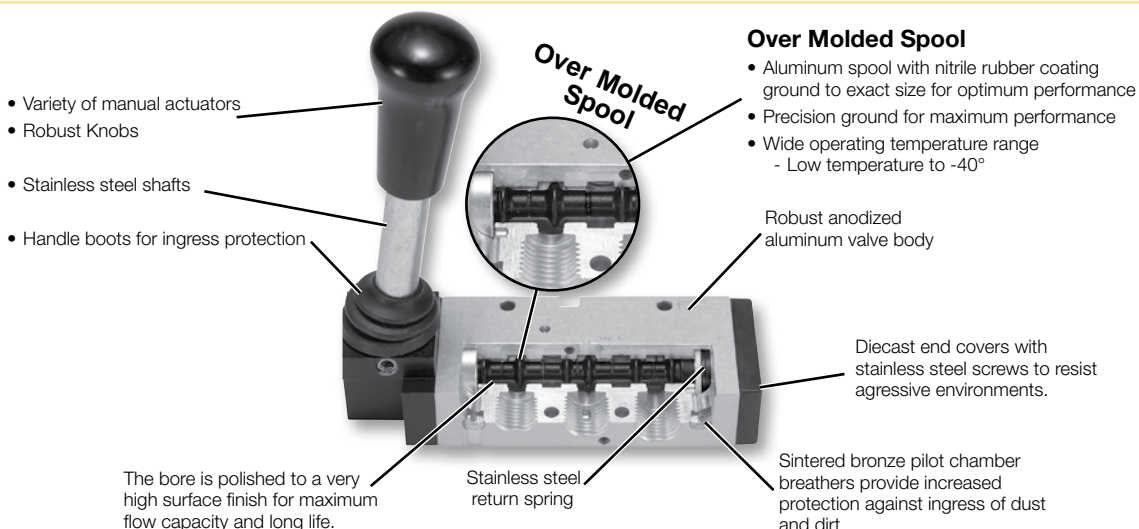
The Viking Xtreme Manual valve range is robust, versatile and combines high performance with compact installation dimensions. The valves rugged lever actuator has been specifically designed for gloved hands to suit mobile applications in the most arduous of environments. Available in 3/2, 5/2 and 5/3 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**


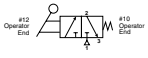

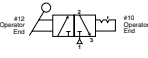

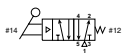

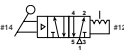

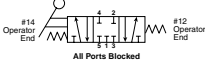

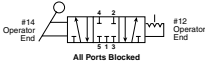






**Twist Handle –
 1/4" valve sizes**



**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)	P2LAX391VS	P2LAX311VS
			1/4	1.5	0.73 (0.33)	P2LBX392VS	P2LBX312VS
			3/8	2.5	0.88 (0.40)	P2LCX393VS	P2LCX313VS
			1/2	2.7	1.32 (0.60)	P2LDX394VS	P2LDX314VS
		Lever detent	1/8	0.7	0.73 (0.33)	P2LAX391VV	P2LAX311VV
			1/4	1.3	0.73 (0.33)	P2LBX392VV	P2LBX312VV
			3/8	2.5	0.88 (0.40)	P2LCX393VV	P2LCX313VV
			1/2	2.7	1.32 (0.60)	P2LDX394VV	P2LDX314VV
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)	P2LAX591VS	P2LAX511VS
			1/4	1.5	0.73 (0.33)	P2LBX592VS	P2LBX512VS
			3/8	2.5	0.88 (0.40)	P2LCX593VS	P2LCX513VS
			1/2	2.7	1.32 (0.60)	P2LDX594VS	P2LDX514VS
		Lever detent	1/8	0.7	0.40 (0.18)	P2LAX591VV	P2LAX511VV
			1/4	1.3	0.73 (0.33)	P2LBX592VV	P2LBX512VV
			3/8	2.5	0.88 (0.40)	P2LCX593VV	P2LCX513VV
			1/2	2.7	1.32 (0.60)	P2LDX594VV	P2LDX514VV
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)	P2LAX69111	P2LAX61111
			1/4	1.5	0.73 (0.33)	P2LBX69211	P2LBX61211
			3/8	2.5	1.56 (0.71)	P2LCX69311	P2LCX61311
			1/2	2.7	1.61 (0.73)	P2LDX69411	P2LDX61411
		Lever detent	1/8	0.7	0.40 (0.18)	P2LAX69122	P2LAX61122
			1/4	1.3	0.73 (0.33)	P2LBX69222	P2LBX61222
			3/8	2.5	1.56 (0.71)	P2LCX69322	P2LCX61322
			1/2	2.7	1.61 (0.73)	P2LDX69422	P2LDX61422
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)	P2LAX79111	P2LAX71111
			1/4	1.5	0.73 (0.33)	P2LBX79211	P2LBX71211
			3/8	2.5	1.56 (0.71)	P2LCX79311	P2LCX71311
			1/2	2.7	1.61 (0.73)	P2LDX79411	P2LDX71411
		Lever detent	1/8	0.7	0.40 (0.18)	P2LAX79122	P2LAX71122
			1/4	1.3	0.73 (0.33)	P2LBX79222	P2LBX71222
			3/8	2.5	1.56 (0.71)	P2LCX79322	P2LCX71322
			1/2	2.7	1.61 (0.73)	P2LDX79422	P2LDX71422

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

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. Available Size B only.

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

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	P6M-PAC5
1/8" NPT	EM12
1/4" NPT	EM25
3/8" NPT	EM37
1/2" NPT	EM50

P6M - Plastic; EM - Sintered bronze

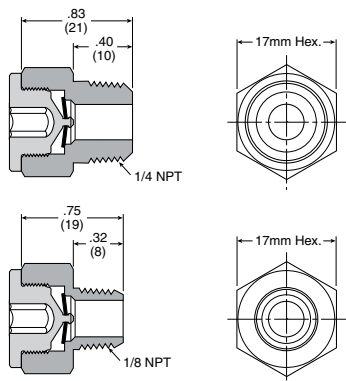


Plastic Silencers

Thread size	Part number		A (mm)	B (mm)
	NPT	BSPT		
M5	AS-5		.43 (11)	.32 (8)
1/8"	ASN-6	AS-6	1.57 (40)	.63 (16)
1/4"	ASN-8	AS-8	2.56 (65)	.83 (21)
3/8"	ASN-10	AS-10	3.35 (85)	.98 (25)
1/2"	ASN-15	AS-15	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
E90016	1/8"	40.1	56.5	75.5
E90017	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

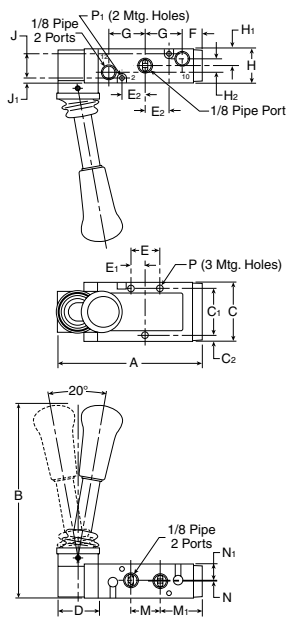
D

Manual / Mechanical
 Valve Products

P2LAX 3/2 Hand Lever Operated

P2LAX 5/2 & 5/3 Hand Lever Operated

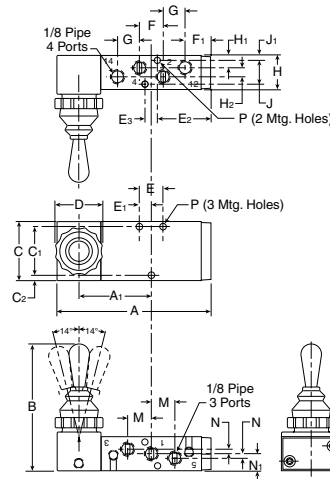
Directair 2,
 Directair 4
 Viking Xtreme
 Lever Series
 42 Lever /
 Pedal Series
 Series M0
 LV-EZ Series
 Lockout Valves
 Brass Poppet /
 Sliding Seal
D
 Manual / Mechanical
 Valve Products



**P2LAX 3/2
 (hand lever)**

A	B	C
3.88 (99)	5.23 (133)	1.57 (40)
C1	C2	D
1.26 (32)	.16 (4)	1.06 (27)
E	E1	E2
.79 (20)	.39 (10)	.63 (16)
F	G	H
.55 (14)	.98 (25)	.87 (22)
H1	H2	J
.42 (10.6)	.02 (0.5)	.65 (16.5)
J1	M	M1
.11 (2.9)	.79 (20)	1.14 (29)
N	N1	P
.18 (4.5)	.26 (6.6)	Ø .17 Ø (4.3)
P1	Ø .12 Ø (3.1)	

Inches (mm)



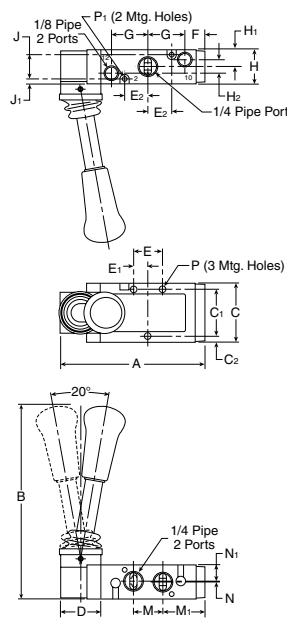
**P2LAX 5/2 & 5/3
 (hand lever)**

A	A1	B
4.02 (102)	1.89 (48)	3.23 (82)
C	C1	C2
1.57 (40)	1.30 (33)	.14 (3.5)
D	E2	E3
1.18 (30)	1.42 (36)	.33 (8.5)
F	F1	G
.63 (16)	.67 (17)	.59 (15)
H	H1	H2
.87 (22)	.31 (8)	.24 (6)
J	J1	M
.63 (16)	.12 (3)	.63 (16)
N	N1	P
.12 (3)	.43 (11)	Ø .16 Ø (4.1)

Inches (mm)

P2LBX 3/2 Hand Lever Operated

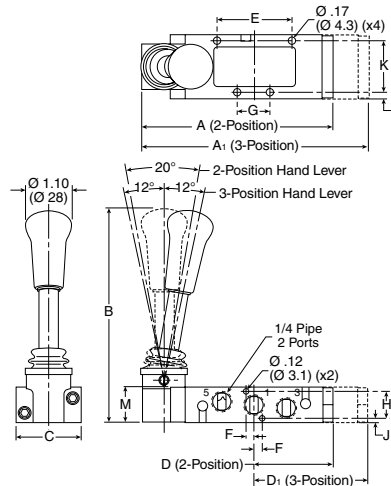
P2LBX 5/2 & 5/3 Hand Lever Operated



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

A	B	C
3.88 (99)	5.23 (133)	1.57 (40)
C1	C2	D
1.26 (32)	.16 (4)	1.06 (27)
E	E1	E2
.79 (20)	.39 (10)	.63 (16)
F	G	H
.55 (14)	.98 (25)	.87 (22)
H1	H2	J
.42 (10.6)	.02 (0.5)	.65 (16.5)
J1	M	M1
.11 (2.9)	.79 (20)	1.14 (29)
N	N1	P
.18 (4.5)	.26 (6.6)	Ø .17 Ø (4.3)
P1	Ø .12 Ø (3.1)	

Inches (mm)

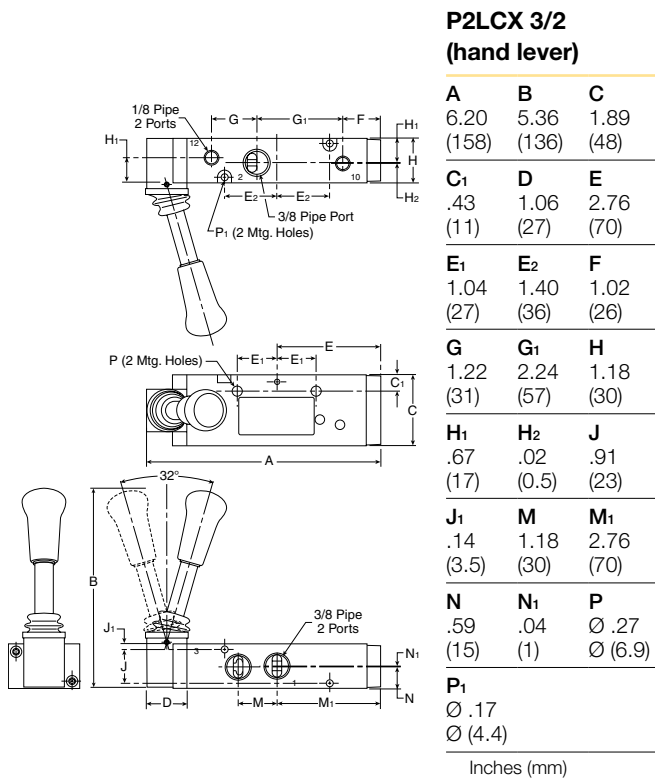


**P2LBX 5/2 & 5/3
 (hand lever)**

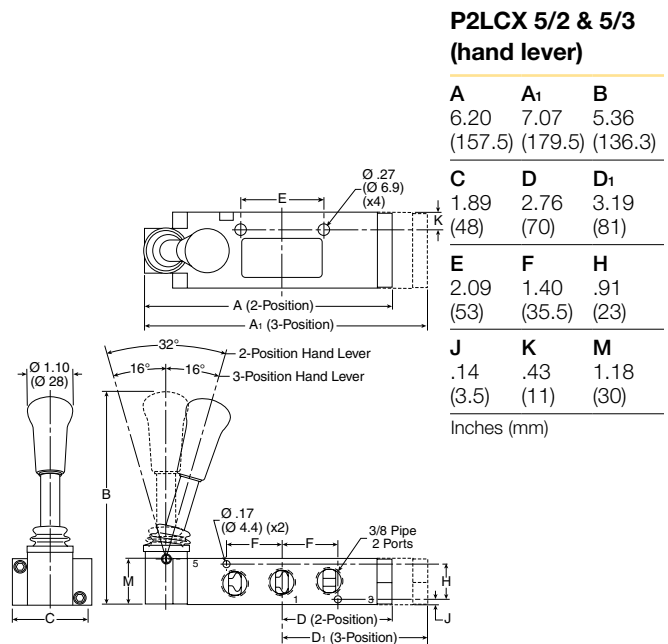
A	A1	B
4.67 (118.5)	5.51 (140)	5.19 (131.8)
C	D	D1
1.57 (40)	1.93 (49)	2.35 (59.8)
E	F	G
1.81 (46)	.20 (5)	.79 (20)
H	J	K
.65 (16.5)	.11 (2.85)	1.26 (32)
L	M	
.16 (4)	.87 (22.2)	

Inches (mm)

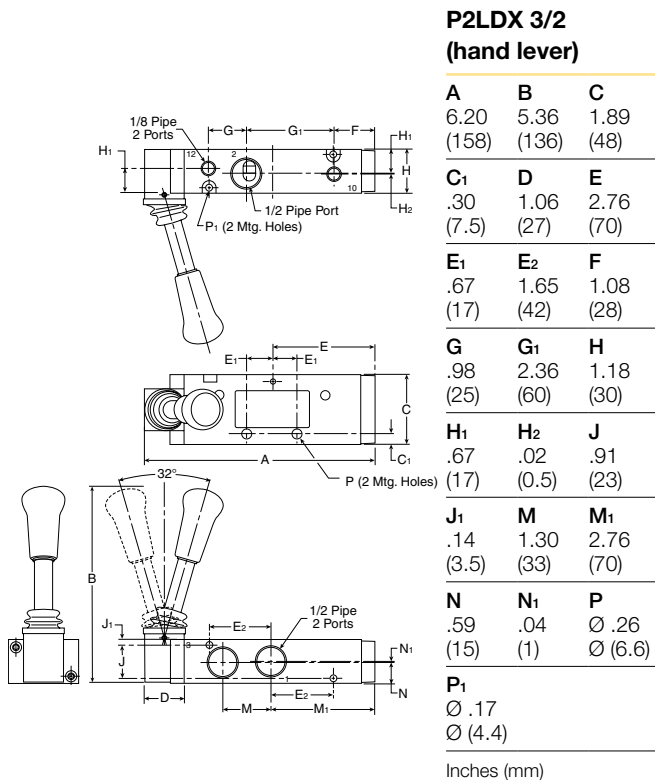
P2LCX 3/2 Hand Lever Operated



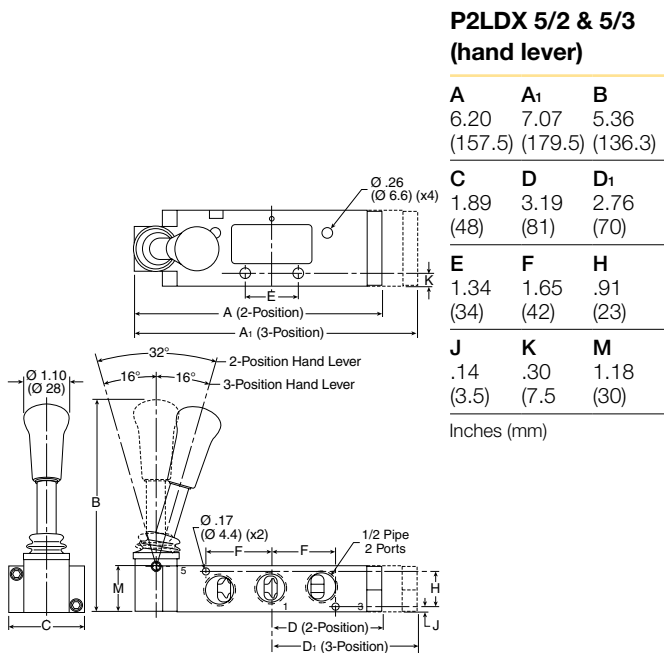
P2LCX 5/2 & 5/3 Hand Lever Operated



P2LDX 3/2 Hand Lever Operated



P2LDX 5/2 & 5/3 Hand Lever Operated



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

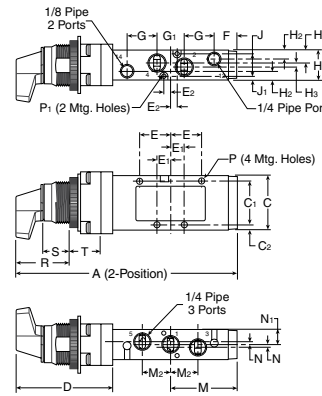
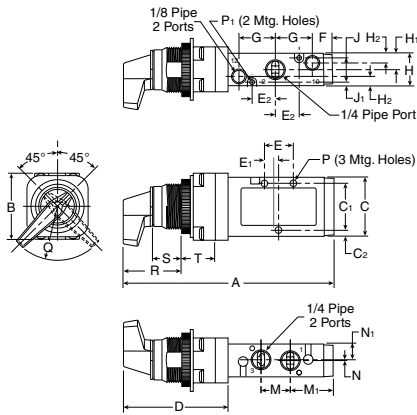
P2LBX 3/2 Twist Lever Operated

P2LBX 5/2 Twist Lever Operated

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

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

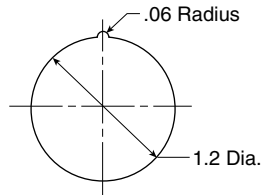
**P2LBX 5/2
 (hand lever)**



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

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

Panel Cutout Detail (All Port Sizes)



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	422CS011K
		3/8"	2.9	Inline, parallel	2-position, spring return	422CS021K
		1/4"	2.2	Inline, parallel	2-position, detent	422CS011W
		3/8"	2.9	Inline, parallel	2-position, detent	422CS021W
		1/4"	2.2	Inline, perpendicular	2-position, spring return	422CR011K
		3/8"	2.9	Inline, perpendicular	2-position, spring return	422CR021K
		1/4"	2.2	Inline, perpendicular	2-position, detent	422CR011W
		3/8"	2.9	Inline, perpendicular	2-position, detent	422CR021W

Lever Valve - 3-Position

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

Foot Pedal Valve - 2-Position

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



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	PS2038P
3-position valve	PS2041P

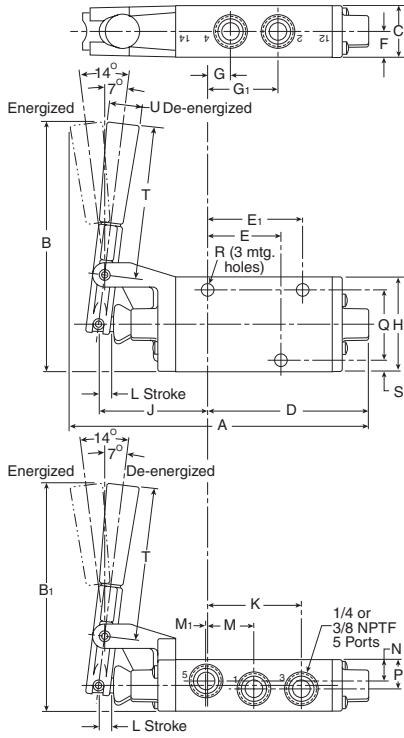
Kit includes: all soft seals and spool.

Most popular.

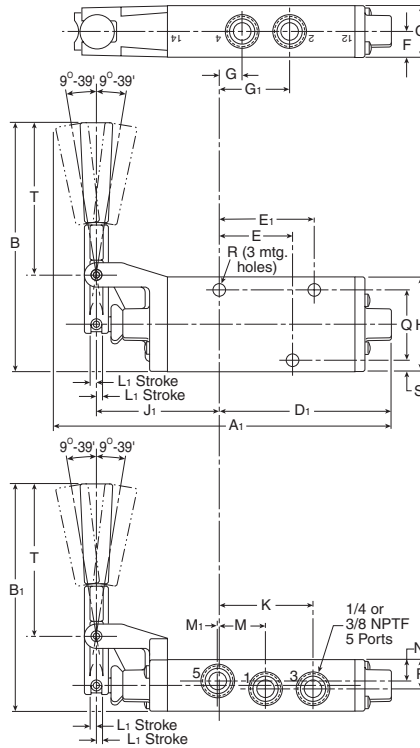


Directair 2,
 Directair 4
 Viking Xtreme
 Lever Series
 42 Lever /
 Pedal Series
 M0 Series
 LV-EZ Series
 Lockout Valves
 Brass Poppet /
 Sliding Seal
D
 Manual / Mechanical
 Valve Products

2-Position



3-Position



Lever Valve

A	A ₁	B	B ₁	C
6.70 (170)	7.58 (193)	5.55 (141)	5.05 (128)	1.15 (29)

D	D ₁	E	E ₁	F
3.59 (91)	3.83 (97)	1.58 (40)	2.06 (52)	.57 (14)

G NPT	G ₁ NPT	H
1/4" .51 (13)	1/4" 1.56 (40)	2.13
3/8" .55 (14)	3/8" 1.51 (38)	(54)

J	J ₁	K NPT	L
2.44 (62)	2.80 (71)	1/4" 2.08 (53)	.25 (6)
		3/8" 2.13 (54)	

L ₁	M	M ₁ 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 ₁	C	D
8.64 (220)	2.18 (55)	1.03 (26)	1.15 (29)	3.59 (91)

E	E ₁	F	G NPT
1.58 (40)	2.06 (52)	.57 (14)	1/4" .51 (13)
			3/8" .55 (14)

G ₁ NPT	H	H ₁	J
1/4" 1.56 (40)	2.13	2.50	2.32
3/8" 1.51 (38)	(54)	(64)	(59)

K NPT	L	M
1/4" 2.08 (53)	.60	1.03
3/8" 2.13 (54)	(15)	(26)

M ₁ NPT	N	P	Q
1/4" .02 (.5)	.50	.65	1.58
3/8" .06 (2)	(13)	(17)	(40)

R	S	T	U
.33 (8)	.27 (7)	3.00 (76)	.48 (11)

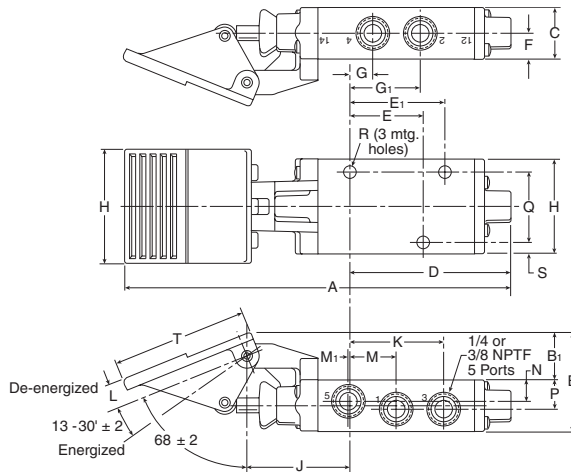
Inches (mm)

Foot Valve Guard: PS2043P

A	A ₁	B	B ₁	C
4.50 (114)	.75 (19)	10.50 (267)	1.25 (32)	.48 (11)

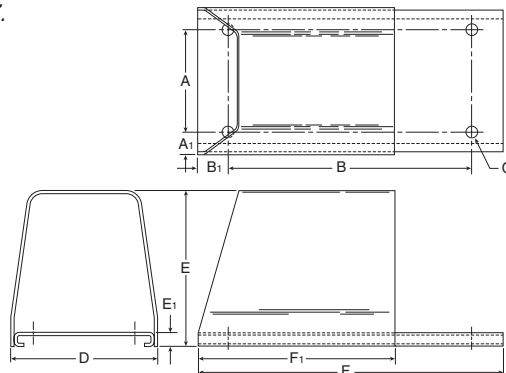
D	E	E ₁	F	F ₁
6.00 (152)	7.13 (181)	.50 (13)	13.00 (330)	8.38 (213)

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

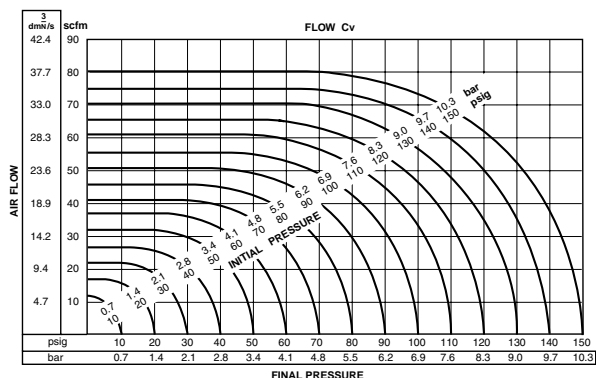
Features

- 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

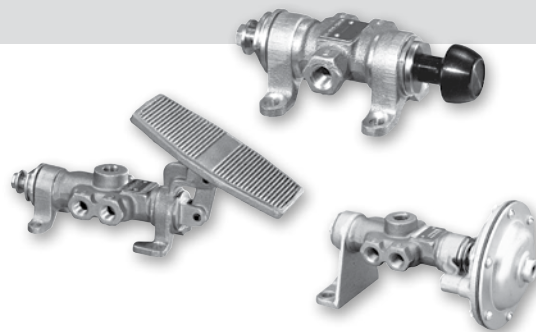
Flow Cv



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

 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

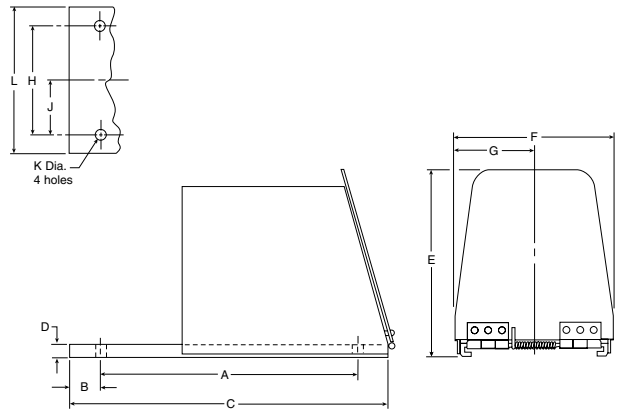
Pedal Guard
(Fits all pedal operated valves)

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

* 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	M242001	M242002	M242003	M242004
Cylinder (single, double & double-acting)	M242006	M242007	M242008	M242009
Diaphragm (single & double)	M242011	M242012	M242013	M242014

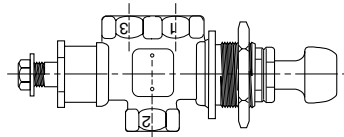
M0 valve 9 digit part number dissection

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

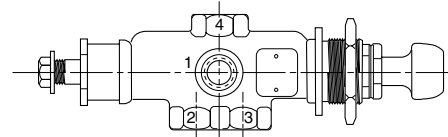
Series name	Left end	Port size	Body function	Right end
M0	XX	X	XX	XX



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
M0	XX	X	XX	XX



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.

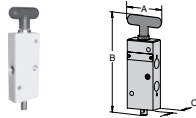
- Used for compliance with OSHA 29 CFR part 1910
- 1/4" to 2" pipe sizes. NPT or BSPP
- Yellow cast aluminum body with red handle or stainless steel (NACE MR0175 / ISO 15156)
- Inline or surface mountable
- Built in port for pressure verification to meet ANSI B11 and PMMI B155 requirements

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 [†]	Magnalube G [†]

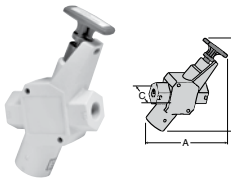
[†] Trademark Magnalube

Compact



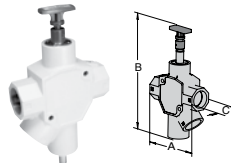
Port in / out	Port exhaust	A (in)	B (in)	C (in)	Wt (lb)	Part number *
1/4	3/8	2.3	6.5	1.0	0.9	LV2N3B
3/8	3/8	2.3	6.5	1.0	0.9	LV3N3B

Standard



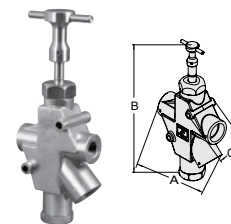
Port in / out	Port exhaust	A (in)	B (in)	C (in)	Wt (lb)	Part number *
3/8	3/4	6.4	8.8	2.0	2.0	LV3N6B
1/2	3/4	6.4	8.8	2.0	2.0	LV4N6B
3/4	3/4	6.4	8.8	2.0	2.0	LV6N6B
3/4	1-1/4	7.6	10.6	2.3	3.2	LV6NAB
1	1-1/4	7.6	10.6	2.3	3.2	LV8NAB
1-1/4	1-1/4	7.6	10.6	2.3	3.2	LVANAB

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	LVBNCB
2	2	8.2	14.9	3.0	8.2	LVCNCB

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	LV2N2BSS
3/8	1/2	4.3	10.5	1.8	6.0	LV3N4BSS
1/2	1/2	4.3	10.5	1.8	6.0	LV4N4BSS
3/4	1	6.0	14.1	2.5	13	LV6N8BSS
1	1	6.0	14.1	2.5	13	LV8N8BSS
1-1/2	2	8.2	18.5	4.0	35	LVBNCBSS
2	2	8.2	18.5	4.0	35	LVCNCBSS

* 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	EZ03NB6
1/2	3/4	6.4	8.8	2.0	2.1	EZ04NB6
3/4	3/4	6.4	8.8	2.0	2.1	EZ06NB6
3/4	1-1/4	7.7	10.8	2.3	3.2	EZ06NBA
1	1-1/4	7.7	10.8	2.3	3.2	EZ08NBA
1-1/4	1-1/4	7.7	10.8	2.3	3.2	EZ0ANBA

* 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	ES37MC	ESB37MC
3/4	ES75MC	ESB75MC
1-1/4	ES125MC	ESB125MC
2	ES200MC	ESB200MC

Stainless Steel Mufflers

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

** 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)

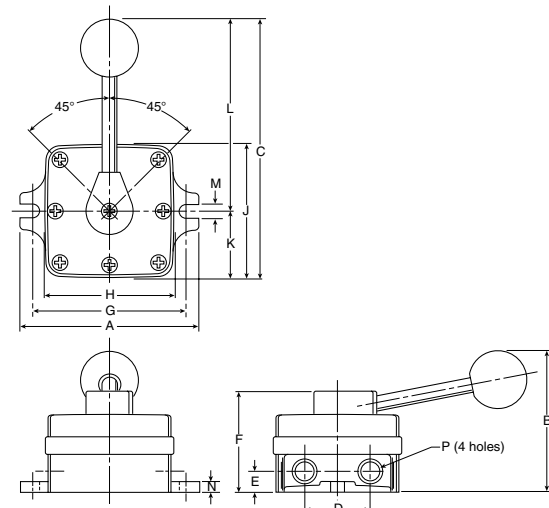
Lubrication: Filtered and lubricated air recommended for maximum valve life and minimum maintenance.

PL-VL Series Valves

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

Service kits

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



PL-VL Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P
PL-25	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
VL-25	(121)	(97)	(173)	(43)	(14)	(70)	(105)	(89)	(89)	(43)	(129)	(9)	(7)	NPT
PL-37	4.75	3.81	6.81	1.69	.56	.56	4.12	3.50	3.50	1.69	5.06	.34	.28	3/8
VL-37	(121)	(97)	(173)	(43)	(14)	(14)	(105)	(89)	(89)	(43)	(129)	(9)	(7)	NPT
PL-50	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
VL-50	(143)	(113)	(227)	(54)	(17)	(83)	(127)	(111)	(111)	(54)	(171)	(9)	(9)	NPT

inches (mm)

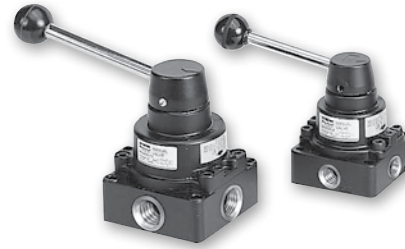
Most popular.



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)

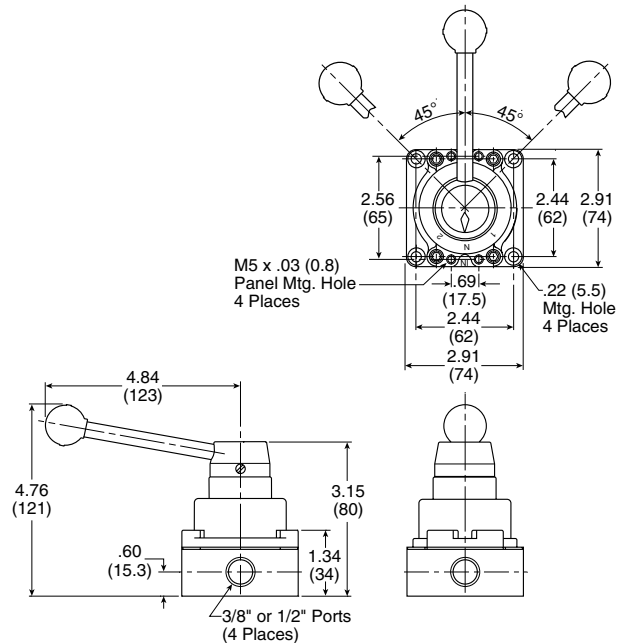
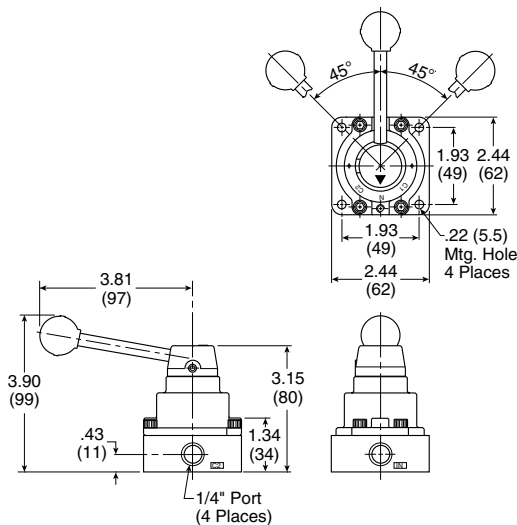
Lubrication: Filtered and lubricated air recommended for maximum valve life and minimum maintenance.

HV Valve Series

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

Service kits

Description	Valve size	Part number
Disk & seal service kits	HV4200	HVRK420001
	HV4400	HVRK440001



HVN4200-8

Most popular.

HVN4400-10, 15

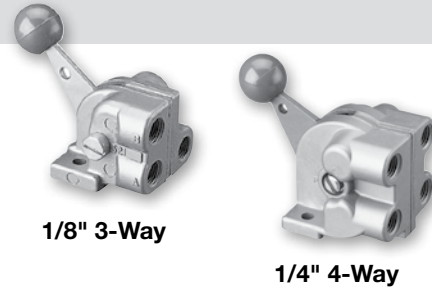
Hand Operated Sliding Seal Valves

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

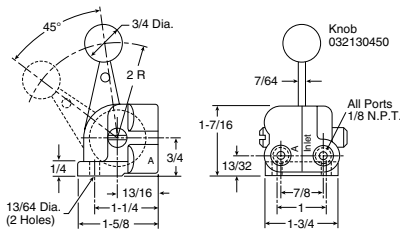
Temperature range: -40°F to 212°F (-40°C to 100°C)
 (If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior.)

Hand Operated Sliding Seal Valve

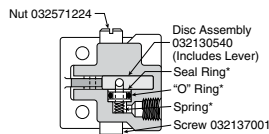
Symbol	Port size	Function	Cv (Avg)	Service kit*	Part number
	1/8"	3-way, 2-position, detented	0.54	032130899	032130599
	1/8"	4-way, 2-position, detented	0.54	032130899	032140299
	1/4"	3-way, 2-position, detented	1.25	008230299	008230109
	1/4"	4-way, 3-position, detented, center blocked	1.25	008230299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

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

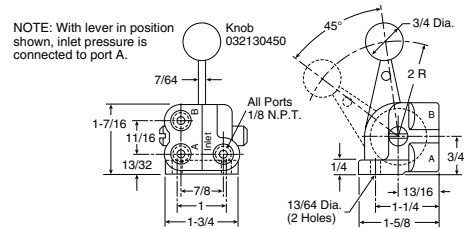
1/8" 3-Way 032130599



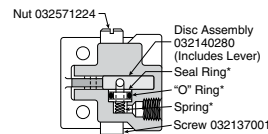
Service Kit 032130899*



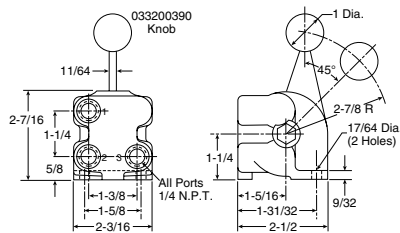
1/8" 4-Way 032140299



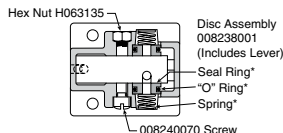
Service Kit 032130899*



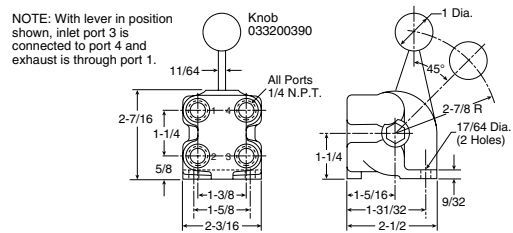
1/4" 3-Way 008230109



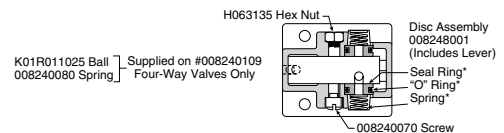
Service Kit 032130899*



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