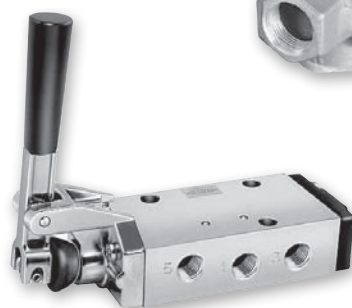
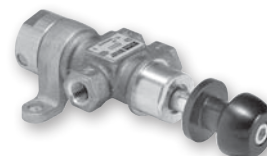
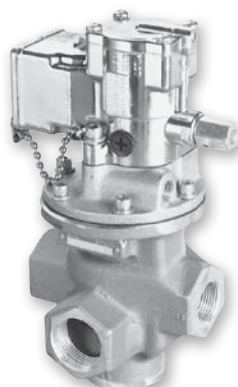
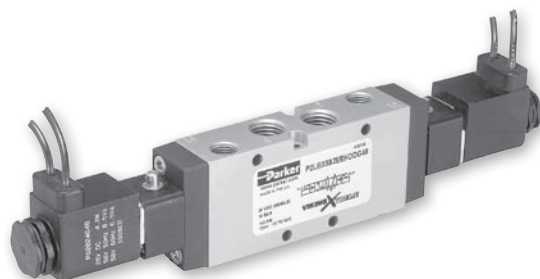
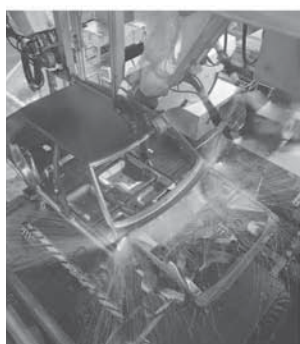
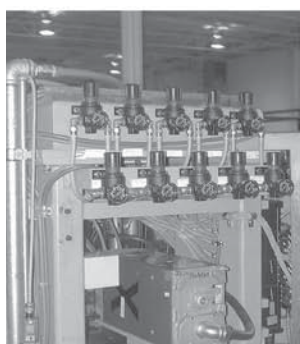
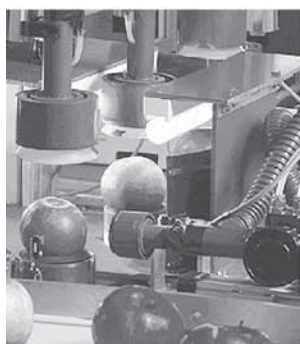
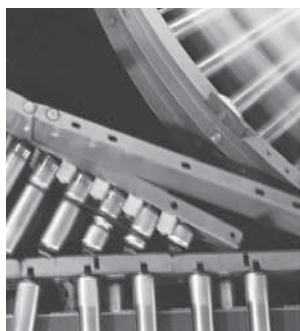




Valve Products

The Viking Xtreme valve range is robust, versatile and combines high performance with compact installation dimensions. Large flow capacity, short change-over times and low change-over pressure are important characteristics of this valve range.

Ports

- P2LAX: 1/8 inch NPT & BSPP
- P2LBX: 1/4 inch NPT & BSPP
- P2LCX: 3/8 inch NPT & BSPP
- P2LDX: 1/2 inch NPT & BSPP

Mounting

- Inline
- IEM aluminum bar

Solenoids

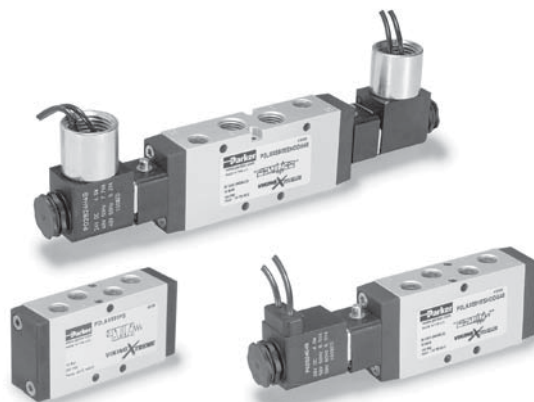
- 2.5 W to 7.3 watts
 - Conduit
 - Grommet
 - 22mm & 30mm 3-pin (DIN 43650)
- 12VDC to 240VAC W Option Available

Certification / Approval

- IP65 Rated
- ATEX option available

Mobile Applications

- Viking Xtreme tested to +5g shock and vibration
- Solenoids operate with wide voltage tolerance bands
- Corrosion resistant design



Operating information

Operating pressure:

Normal
Xtreme

Vacuum to 145 PSIG (Vacuum to 10 bar)
Vacuum to 232 PSIG (Vacuum to 16 bar)
Minimum: See chart

Operating temperature:

Normal
Xtreme

14°F to 122°F (-10°C to 50°C)
-40°F to 158°F (-40°C to 70°C)

Materials

Body	Anodized aluminum
End caps	Anodized aluminum
Coils	Thermoplastic
Fasteners	Stainless Steel
Spool	Aluminum and nitrile rubber

Minimum Operating Pressure

Valve type - Internal pilot	Minimum PSIG (bar)			
	P2LAX	P2LBX	P2LCX	P2LDX
Single solenoid - spring return	46 (3.2)	51 (3.5)	51 (3.5)	51 (3.5)
Single remote pilot - spring return	46 (3.2)	51 (3.5)	51 (3.5)	51 (3.5)
Double solenoid - 2-position	22 (1.5)	22 (1.5)	22 (1.5)	22 (1.5)
Double remote pilot - 2-position	22 (1.5)	22 (1.5)	22 (1.5)	22 (1.5)
Double solenoid - 3-position (APB, PC, CE)	55 (3.8)	55 (3.8)	55 (3.8)	55 (3.8)
Double remote pilot - 3-position (APB, PC, CE)	55 (3.8)	55 (3.8)	55 (3.8)	55 (3.8)

 Most popular.

Single Solenoid, 2-Position, Extreme Operating Pressure / Temperature

Symbol	Port size	Cv	Voltage	Valve type	Part number
 	1/8"	0.7 Cv	12VDC	P2LAX	P2LAX591ESHDDDB47 P2LAX591ESHDDDG47
	1/8"	0.7 Cv	24VDC	P2LAX	P2LAX591ESHDDDB48 P2LAX591ESHDDDG48
	1/4"	1.3 Cv	12VDC	P2LBX	P2LBX592ESHDDDB47 P2LBX592ESHDDDG47
	1/4"	1.3 Cv	24VDC	P2LBX	P2LBX592ESHDDDB48 P2LBX592ESHDDDG48
	3/8"	2.5 Cv	12VDC	P2LCX	P2LCX593ESHDDDB47 P2LCX593ESHDDDG47
	3/8"	2.5 Cv	24VDC	P2LCX	P2LCX593ESHDDDB48 P2LCX593ESHDDDG48
	1/2"	2.7 Cv	12VDC	P2LDX	P2LDX594ESHDDDB47 P2LDX594ESHDDDG47
	1/2"	2.7 Cv	24VDC	P2LDX	P2LDX594ESHDDDB48 P2LDX594ESHDDDG48

P2LAX Shown

Double Solenoid, 2-Position, Extreme Operating Pressure / Temperature

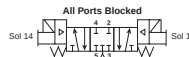
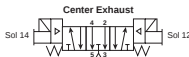
Symbol	Port size	Cv	Voltage	Valve type	Part number
 	1/8"	0.7 Cv	12VDC	P2LAX	P2LAX591EEHDDDB47 P2LAX591EEHDDDG47
	1/8"	0.7 Cv	24VDC	P2LAX	P2LAX591EEHDDDB48 P2LAX591EEHDDDG48
	1/4"	1.3 Cv	12VDC	P2LBX	P2LBX592EEHDDDB47 P2LBX592EEHDDDG47
	1/4"	1.3 Cv	24VDC	P2LBX	P2LBX592EEHDDDB48 P2LBX592EEHDDDG48
	3/8"	2.5 Cv	12VDC	P2LCX	P2LCX593EEHDDDB47 P2LCX593EEHDDDG47
	3/8"	2.5 Cv	24VDC	P2LCX	P2LCX593EEHDDDB48 P2LCX593EEHDDDG48
	1/2"	2.7 Cv	12VDC	P2LDX	P2LDX594EEHDDDB47 P2LDX594EEHDDDG47
	1/2"	2.7 Cv	24VDC	P2LDX	P2LDX594EEHDDDB48 P2LDX594EEHDDDG48

P2LBX Shown

Double Solenoid, 3-Position All Ports Blocked, 3-Position Center Exhaust, Extreme Operating Pressure / Temperature



P2LBX Shown

				Part number	
					
Port size	Cv	Voltage	Valve type	All ports blocked	Center exhaust
1/8"	0.5 Cv	12VDC	P2LAX	P2LAX691EEHDDG47 P2LAX691EEHDDG48	P2LAX891EEHDDG47 P2LAX891EEHDDG48
1/4"	0.9 Cv	12VDC	P2LBX	P2LBX692EEHDDG47 P2LBX692EEHDDG48	P2LBX892EEHDDG47 P2LBX892EEHDDG48
3/8"	1.8 Cv	12VDC	P2LCX	P2LCX693EEHDDG47 P2LCX693EEHDDG48	P2LCX893EEHDDG47 P2LCX893EEHDDG48
1/2"	1.9 Cv	24VDC	P2LDX	P2LDX694EEHDDG47 P2LDX694EEHDDG48	P2LDX894EEHDDG47 P2LDX894EEHDDG48

P2LBX Shown

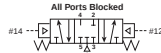
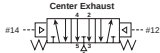
Single Remote Pilot, 2-Position, Extreme Operating Pressure / Temperature

 P2LAX Shown	Symbol	Port size	Cv	Valve type	Part number
		1/8"	0.7 Cv	P2LAX	P2LAX591PS
		1/4"	1.3 Cv	P2LBX	P2LBX592PS
		3/8"	2.5 Cv	P2LCX	P2LCX593PS
		1/2"	2.7 Cv	P2LDX	P2LDX594PS

Double Remote Pilot, 2-Position, Extreme Operating Pressure / Temperature

 P2LBX Shown	Symbol	Port size	Cv	Valve type	Part number
		1/8"	0.7 Cv	P2LAX	P2LAX591PP
		1/4"	1.3 Cv	P2LBX	P2LBX592PP
		3/8"	2.5 Cv	P2LCX	P2LCX593PP
		1/2"	2.7 Cv	P2LDX	P2LDX594PP

Double Remote Pilot, 3-Position All Ports Blocked, 3-Position Center Exhaust, Extreme Operating Pressure / Temperature

 P2LBX Shown	Part number				
					
	Port size	Cv	Valve type	All ports blocked	Center exhaust
	1/8"	0.5 Cv	P2LAX	P2LAX691PP	P2LAX891PP
	1/4"	0.9 Cv	P2LBX	P2LBX692PP	P2LBX892PP
	3/8"	1.8 Cv	P2LCX	P2LCX693PP	P2LCX893PP
	1/2"	1.9 Cv	P2LDX	P2LDX694PP	P2LDX894PP

Single Solenoid, 2-Position, Normal Operating Pressure / Temperature

Symbol	Port size	Cv	Voltage	Valve type	Part number
 	1/8"	0.7 Cv	24VDC	P2LAX	P2LAX591ESNDDDB49 P2LAX591ESNDDDG49
	1/8"	0.7 Cv	120VAC	P2LAX	P2LAX591ESNDDDB53 P2LAX591ESNDDDG53
	1/4"	1.3 Cv	24VDC	P2LBX	P2LBX592ESNDDDB49 P2LBX592ESNDDDG49
	1/4"	1.3 Cv	120VAC	P2LBX	P2LBX592ESNDDDB53 P2LBX592ESNDDDG53
	3/8"	2.5 Cv	24VDC	P2LCX	P2LCX593ESNDDDB49 P2LCX593ESNDDDG49
	3/8"	2.5 Cv	120VAC	P2LCX	P2LCX593ESNDDDB53 P2LCX593ESNDDDG53
	1/2"	2.7 Cv	24VDC	P2LDX	P2LDX594ESNDDDB49 P2LDX594ESNDDDG49
	1/2"	2.7 Cv	120VAC	P2LDX	P2LDX594ESNDDDB53 P2LDX594ESNDDDG53

P2LAX Shown

Double Solenoid, 2-Position, Normal Operating Pressure / Temperature

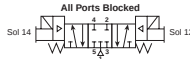
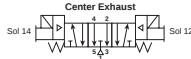
Symbol	Port size	Cv	Voltage	Valve type	Part number
 	1/8"	0.7 Cv	24VDC	P2LAX	P2LAX591EENDDDB49 P2LAX591EENDDDG49
	1/8"	0.7 Cv	120VAC	P2LAX	P2LAX591EENDDDB53 P2LAX591EENDDDG53
	1/4"	1.3 Cv	24VDC	P2LBX	P2LBX592EENDDDB49 P2LBX592EENDDDG49
	1/4"	1.3 Cv	120VAC	P2LBX	P2LBX592EENDDDB53 P2LBX592EENDDDG53
	3/8"	2.5 Cv	24VDC	P2LCX	P2LCX593EENDDDB49 P2LCX593EENDDDG49
	3/8"	2.5 Cv	120VAC	P2LCX	P2LCX593EENDDDB53 P2LCX593EENDDDG53
	1/2"	2.7 Cv	24VDC	P2LDX	P2LDX594EENDDDB49 P2LDX594EENDDDG49
	1/2"	2.7 Cv	120VAC	P2LDX	P2LDX594EENDDDB53 P2LDX594EENDDDG53

P2LBX Shown

Double Solenoid, 3-Position All Ports Blocked, 3-Position Center Exhaust, Normal Operating Pressure / Temperature



P2LBX Shown

				Part number	
				 	
Port size	Cv	Voltage	Valve type	All ports blocked	Center exhaust
1/8"	0.5 Cv	24VDC 120VAC	P2LAX	P2LAX691EENDDG49 P2LAX691EENDDG53	P2LAX891EENDDG49 P2LAX891EENDDG53
1/4"	0.9 Cv	24VDC 120VAC	P2LBX	P2LBX692EENDDG49 P2LBX692EENDDG53	P2LBX892EENDDG49 P2LBX892EENDDG53
3/8"	1.8 Cv	24VDC 120VAC	P2LCX	P2LCX693EENDDG49 P2LCX693EENDDG53	P2LCX893EENDDG49 P2LCX893EENDDG53
1/2"	1.9 Cv	24VDC 120VAC	P2LDX	P2LDX694EENDDG49 P2LDX694EENDDG53	P2LDX894EENDDG49 P2LDX894EENDDG53

P2LBX Shown

IEM Bar Manifolds

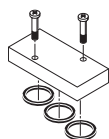


Valve type	## – Stations	Manifold only	Manifold assembly
P2LAX	02 to 12	P2LAXMAXN##NP	AAP2LAXMAXN##NP
P2LBX	02 to 12	P2LBXMAXN##NP	AAP2LBXMAXN##NP
P2LCX	02 to 12	P2LCXMAXN##NP	AAP2LCXMAXN##NP

- Utilizes Inline mount Viking Xtreme Series valves.
- Kits include:** (1) Manifold, (2) Valve Hold Down Bolts per Station, (3) O-rings per Station.

Note: All IEM bar manifolds are 4-way only with internal pilot air supply. External pilot supply thru a common "X" port not available.

Blanking Plate



Type	Kit number
P2LAX	P2LAXK20P
P2LBX	P2LBXK20P
P2LCX	P2LCXK20P

Kit includes: (1) Plate, (2) Screws, (3) O-rings

Manifold Bolts

Type	Qty.	Kit number
P2LAX	12	P2LAXK87P
P2LBX	12	P2LBXK87P
P2LCX	12	P2LCXK87P

Manifold O-rings

Type	Qty.	Kit number
P2LAX	30	P2LAXK84P
P2LBX	18	P2LBXK84P
P2LCX	12	P2LCXK84P

22mm Rectangular 3-Pin – Type B Industrial
(Use with Enclosure "B")

Description	Connector with 6' (2m) cord	Connector
Unlighted	PS2429JBP	PS2429BP
Light – 24V/60Hz. 24VDC	PS2430J79BP*	PS243079BP
Light – 120V/60Hz	PS2430J83BP*	PS243083BP
Light – 240V/60Hz	N/A	PS243087BP

* LED with surge suppression.

Note: Max ø6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

Engineering Data:

Conductors: 2 Poles Plus Ground; Cable Range (Connector Only): 6 to 8mm (0.24 to 0.31 Inch); Contact Spacing: 11mm

30mm Square 3-Pin – ISO 4400, DIN 43650A
(Use with Enclosure "A")

Description	Connector with 6' (2m) cord	Connector
Unlighted	PS2028JCP	PS2028BP
Light – 6-48V. 50/60Hz. 6-48VDC	PS2032J79CP*	PS203279BP
Light – 120V/60Hz	PS2032J83CP*	PS203283BP
Light – 240V/60Hz	N/A	PS203283BP

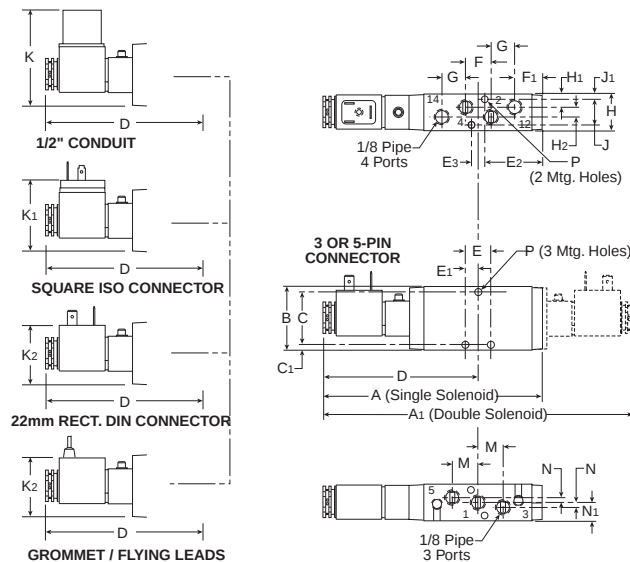
* LED with surge suppression.

Note: Max ø6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

Engineering data:

Conductors: 2 poles plus ground; cable range (connector only): 8 to 10mm (0.31 To 0.39 Inch); contact spacing: 18mm

P2LAX Single & Double Operators – Solenoid

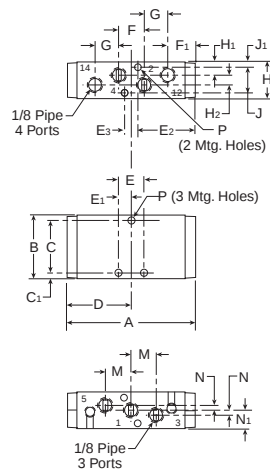


P2LAX (Solenoid)

A	A ₁	B	C	C ₁
5.31 (135)	7.72 (196)	1.57 (40)	1.30 (33)	.14 (3.5)
D	E	E ₁	E ₂	E ₃
3.86 (98)	.63 (16)	.31 (8)	1.42 (36)	.33 (8.5)
F	G	H	H ₁	H ₂
.63 (16)	.59 (15)	.87 (22)	.31 (8)	.24 (6)
J	J ₁	K	K ₁	K ₂
.63 (16)	.12 (3)	2.36 (60)	1.61 (41)	1.50 (38)
M	N	N ₁	P	
.63 (16)	.12 (3)	.43 (11)	Ø .16 Ø (4.1)	

Inches (mm)

P2LAX Single & Double Operators – Remote Pilot

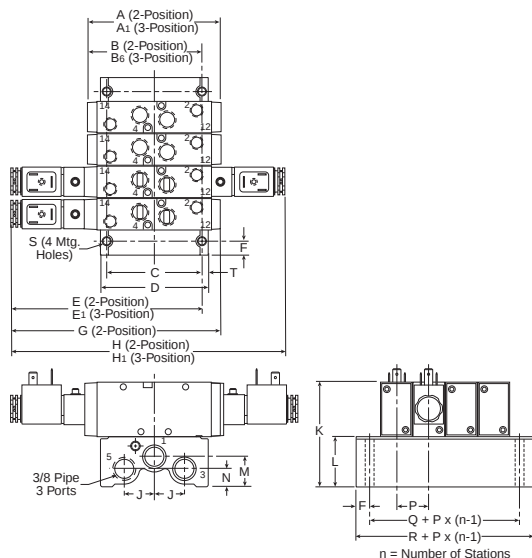


P2LAX (Remote)

A	B	C	C ₁	D
3.19 (81)	1.57 (40)	1.30 (33)	.14 (3.5)	1.57 (40)
E	E ₁	E ₂	E ₃	E ₃
1.47 (16)	.31 (8)	1.42 (36)	.33 (8.5)	.33 (8.5)
F	F ₁	G	H	H ₁
.63 (16)	.67 (17)	.59 (15)	.87 (22)	.31 (8)
H ₂	J	J ₁	M	N
.24 (6)	.63 (16)	.12 (3)	.63 (16)	.12 (3)
N ₁	P			
.43 (11)	Ø .16 Ø (4.1)			

Inches (mm)

P2LAX Single & Double Operators – IEM Aluminum Bar Manifold

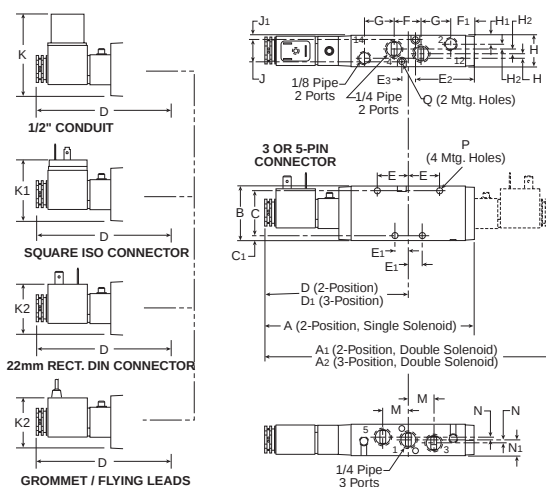


IEM Aluminum Bar Manifold

A	B	C	D	E
3.19 (81)	2.95 (75)	2.76 (70)	3.12 (79)	5.24 (133)
F	G	H	J	K
41 (10.5)	5.31 (135)	7.72 (196)	.87 (22)	3.11 (79)
L	N	P	Q	R
1.54 (39)	.52 (13.2)	.93 (23.5)	1.56 (39.5)	2.36 (60)
S	T			
Ø .22 Ø (5.5)	.18 (4.6)			

Inches (mm)

P2LBX Single & Double Operators – Solenoid

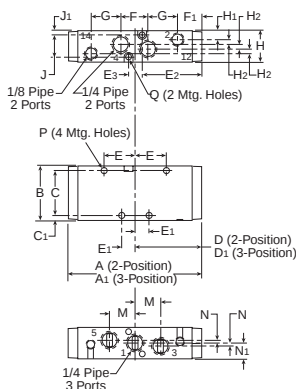


P2LBX (Solenoid)

A	A₁	A₂	B	C
6.14 (156)	8.39 (213)	9.06 (230)	1.57 (40)	1.26 (32)
C₁	D	D₁	E	E₁
.16 (4)	4.21 (107)	4.55 (116)	.91 (23)	.39 (10)
E₂	E₃	F	F₁	G
1.73 (44)	.39 (10)	.79 (20)	.67 (17)	.87 (22)
H	H₁	H₂	J	J₁
.87 (22)	.26 (6.6)	.12 (3)	.65 (16.5)	.11 (2.8)
K	K₁	K₂	M	N
2.36 (60)	1.61 (41)	1.50 (38)	.79 (20)	.08 (2)
N₁	P	Q		
.43 (11)	Ø .17 Ø (4.3)	Ø .12 Ø (3.1)		

Inches (mm)

P2LBX Single & Double Operators – Remote Pilot



P2LBX (Remote)

A	A₁	B	C	C₁
3.95 (100)	4.61 (117)	1.57 (40)	1.26 (32)	.16 (4)
D	D₁	E	E₁	E₂
1.93 (49)	2.28 (58)	91 (23)	.39 (10)	1.73 (44)
E₃	F	F₁	G	H
.39 (10)	.79 (20)	.67 (17)	.87 (22)	.87 (22)
H₁	H₂	J	J₁	K
.26 (6.6)	.12 (3)	.65 (16.5)	.11 (2.8)	2.90 (74)
M	N	N₁	P	
.79 (20)	.08 (2)	.43 (11)	Ø .17 Ø (4.3)	

Inches (mm)

P2LBX Single & Double Operators – IEM Aluminum Bar Manifold

IEM Aluminum Bar Manifold

A	A ₁	B	B ₁	C
3.95 (100)	4.61 (117)	3.42 (87)	3.76 (96)	2.76 (70)

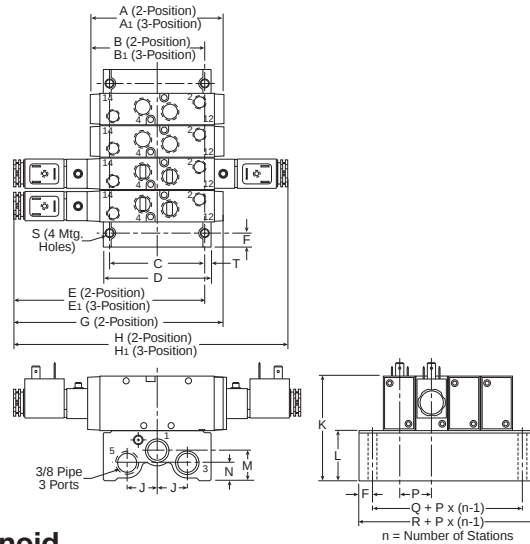
D	E	E ₁	F	G
3.12 (79)	5.47 (139)	5.81 (148)	.40 (10.2)	6.10 (155)

H	H ₁	J	K	L
8.39 (213)	9.06 (230)	.87 (22)	3.11 (79)	1.47 (37)

M	N	P	Q	R
.87 (22)	.52 (13.2)	.93 (23.5)	1.56 (39.5)	2.36 (60)

S	T
Ø .22 Ø (5.5)	.18 (4.6)

Inches (mm)



P2LCX Single & Double Operators – Solenoid

P2LCX (Solenoid)

A	A ₁	A ₂	B	C
7.64 (194)	9.84 (250)	10.71 (272)	1.89 (48)	.44 (11.2)

D	D ₁	E	E ₁	F
4.92 (125)	5.35 (136)	1.04 (26.5)	1.39 (35.4)	1.06 (27)

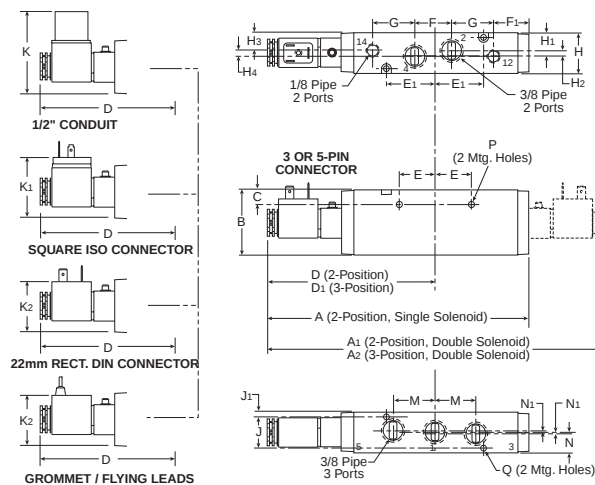
F ₁	G	H	H ₁	H ₂
1.02 (26)	1.22 (31)	1.18 (30)	.53 (13.5)	.12 (3)

H ₃	H ₄	J	J ₁	K
.51 (13)	.16 (4)	.91 (23)	.14 (3.5)	2.52 (64)

K ₁	K ₂	M	N	N ₁
1.77 (45)	1.65 (42)	1.18 (30)	.59 (15)	.04 (1)

P	Q
Ø .27 Ø (6.9)	Ø .17 Ø (4.4)

Inches (mm)



Single & Double Operators – Remote Pilot

P2LCX (Remote)

A	A ₁	B	C	D
5.51 (140)	6.38 (162)	1.89 (48)	.44 (11.2)	2.76 (70)

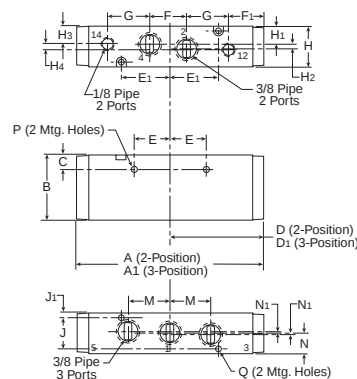
D ₁	E	E ₁	F	F ₁
3.18 (81)	1.04 (26.5)	1.39 (35.4)	1.06 (27)	1.02 (26)

G	H	H ₁	H ₂	H ₃
1.22 (31)	1.18 (30)	.53 (13.5)	.12 (3)	.51 (13)

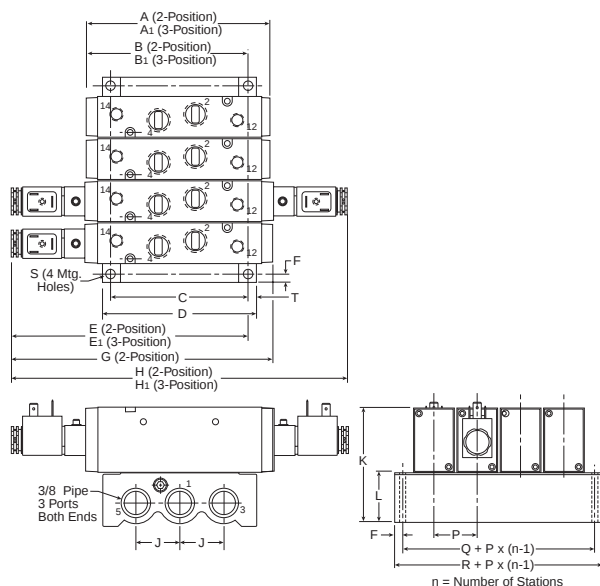
H ₄	J	J ₁	K	M
.16 (4)	.91 (23)	.14 (3.5)	2.47 (62.8)	1.18 (30)

N	N ₁	P	Q
.59 (15)	.04 (1)	Ø .27 Ø (6.9)	Ø .17 Ø (4.4)

Inches (mm)



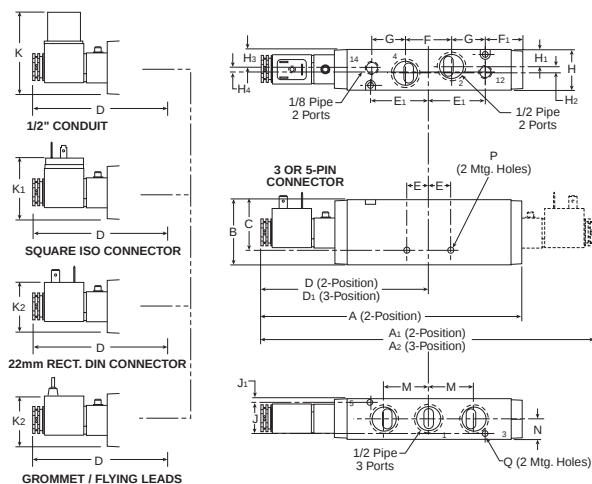
P2LCX Single & Double Operators – IEM Aluminum Bar Manifold



IEM Aluminum Bar Manifold

A	A1	B	B1	C
5.51 (140)	6.38 (162)	4.72 (120)	5.16 (131)	3.94 (100)
D	E	E1	F	G
4.41 (112)	6.89 (170)	7.13 (181)	.24 (6)	7.68 (195)
H	H1	J	K	L
9.84 (250)	10.71 (272)	1.26 (32)	3.43 (87)	1.54 (39)
P	R	S		
1.24 (31.5)	2.24 (57)	Ø .26 Ø (6.5)		
Inches (mm)				

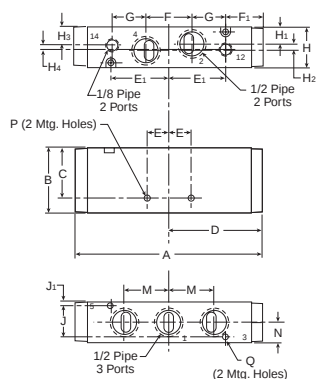
P2LDX Single & Double Operators – Solenoid



P2LDX (Solenoid)

A	A ₁	A ₂	B	C
7.64 (194)	9.84 (250)	10.70 (273)	1.89 (48)	1.59 (40.5)
D	D ₁	E	E ₁	F
4.92 (125)	5.83 (148)	.67 (17)	1.65 (42)	1.34 (34)
F ₁	G	H	H ₁	H ₂
1.08 (27.5)	.98 (25)	1.18 (30)	.49 (12.5)	.20 (5)
H ₃	H ₄	J	J ₁	K
.51 (13)	.16 (4)	.91 (23)	.14 (3.5)	2.52 (64)
K ₁	K ₂	M	N	P
1.77 (45)	1.65 (42)	1.29 (32.7)	.59 (15)	Ø .26 Ø (6.6)
Q	Ø .17 Ø (4.4)			
Inches (mm)				

P2LDX Single & Double Operators – Remote Pilot



P2LDX (Remote)

A 5.47 (139)	B 1.89 (48)	C 1.59 (40.5)	D 2.63 (67)	E .67 (17)
E1 1.65 (42)	F 1.34 (34)	F1 1.08 (27.5)	G .98 (25)	H 1.18 (30)
H1 .49 (12.5)	H2 .20 (5)	H3 .51 (13)	H4 .16 (4)	J .91 (23)
J1 .14 (3.5)	P Ø .26 Ø (6.6)	M 1.29 (32.7)	N .59 (15)	Q Ø .17 Ø (4.4)
Inches (mm)				

Features

- Heavy duty lever
- Inline valve
 - 1/8", 1/4", 3/8", 1/2" NPT
- 2-Position models
- 3-Position models
 - all ports blocked
 - pressure center
 - center exhaust



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.)

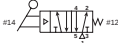
Temperature range: Extreme: -40°F to 140°F (-40°C to 60°C)

NOTE: P2LCX and P2LDX Manual & Remote Air Pilot Valves have a maximum pressure rating of 175 PSIG (12 bar).

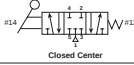
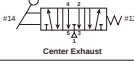
Materials

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

Lever Valve - 2-Position

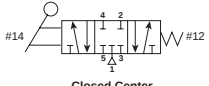
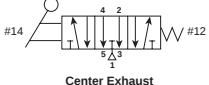
	Symbol	Port size	Cv	Description	Valve type	Part number
		1/8"	0.7	P2LAX Inline	2-Position, Spring return	P2LAX591VS
		1/8"	0.7	P2LAX Inline	2-Position, Detent	P2LAX591VV

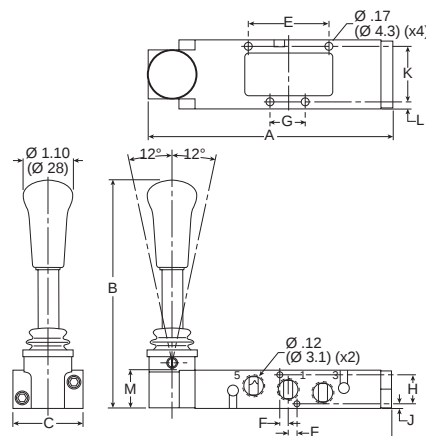
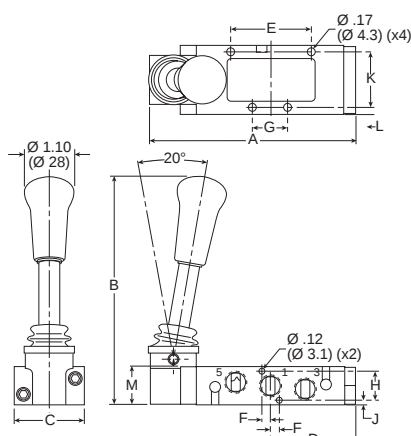
Lever Valve - 3-Position

	Symbol	Port size	Cv	Description	Valve type	Part number
		1/8"	0.5	P2LAX Inline	APB, Spring centered	P2LAX69111
		1/8"	0.5	P2LAX Inline	APB, Detent	P2LAX69122
		1/8"	0.5	P2LAX Inline	CE, Spring centered	P2LAX89111
		1/8"	0.5	P2LAX Inline	CE, Detent	P2LAX89122

 Most popular.

Lever Valve - 3-Position

Symbol	Port size	Cv	Description	Valve type	Part number
 Closed Center	1/4"	1.3	P2LBX Inline	Lever - APB	P2LBX69222
	1/4"	1.3	P2LBX Inline	Spring - APB	P2LBX69211
	3/8"	2.5	P2LCX Inline	Lever - APB	P2LCX69322
	3/8"	2.5	P2LCX Inline	Spring - APB	P2LCX69311
	1/2"	2.7	P2LDX Inline	Lever - APB	P2LDX69422
	1/2"	2.7	P2LDX Inline	Spring - APB	P2LDX69411
 Pressure Center	1/4"	1.3	P2LBX Inline	Lever - PC	P2LBX79222
	1/4"	1.3	P2LBX Inline	Spring - PC	P2LBX79211
	3/8"	2.5	P2LCX Inline	Lever - PC	P2LCX79322
	3/8"	2.5	P2LCX Inline	Spring - PC	P2LCX79311
	1/2"	2.7	P2LDX Inline	Lever - PC	P2LDX79422
	1/2"	2.7	P2LDX Inline	Spring - PC	P2LDX79411
 Center Exhaust	1/4"	1.3	P2LBX Inline	Lever - CE	P2LBX89222
	1/4"	1.3	P2LBX Inline	Spring - CE	P2LBX89211
	3/8"	2.5	P2LCX Inline	Lever - CE	P2LCX89322
	3/8"	2.5	P2LCX Inline	Spring - CE	P2LCX89311
	1/2"	2.7	P2LDX Inline	Lever - CE	P2LDX89422
	1/2"	2.7	P2LDX Inline	Spring - CE	P2LDX89411



P2LBX 2-Position Hand Lever

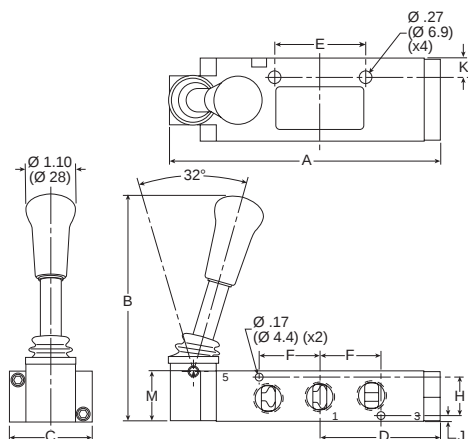
A	B	C	D	E	F
4.67 (118.5)	5.19 (131.8)	1.57 (40)	1.93 (49)	1.81 (46)	.20 (5)
G	H	J	K	L	M
.79 (20)	.65 (16.5)	.11 (2.85)	1.26 (32)	.16 (4)	.87 (22.2)

Inches (mm)

P2LBX 3-Position Hand Lever

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

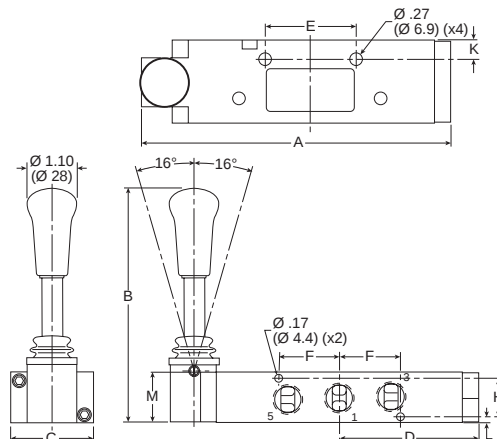
Inches (mm)



P2LCX 2-Position Hand Lever

A	B	C	D	E	F
6.20 (157.5)	5.24 (133)	1.89 (48)	2.76 (70)	2.09 (53)	1.40 (35.5)
H	J	K	M		
.91 (23)	.14 (3.5)	.43 (11)	1.18 (30)		

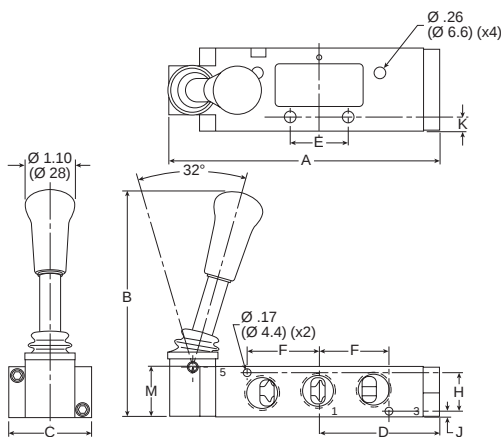
Inches (mm)



P2LCX 3-Position Hand Lever

A	B	C	D	E	F
7.07 (179.5)	5.36 (136.3)	1.89 (48)	3.19 (81)	2.09 (53)	1.40 (35.5)
H	J	K	M		
.91 (23)	.14 (3.5)	.43 (11)	1.18 (30)		

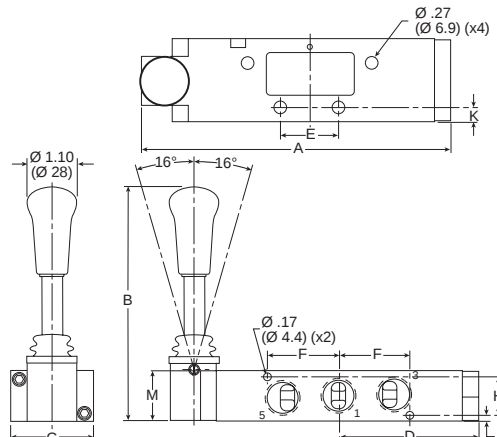
Inches (mm)



P2LDX 2-Position Hand Lever

A	B	C	D	E	F
6.20 (157.5)	5.24 (133)	1.89 (48)	2.76 (70)	1.34 (34)	1.65 (42)
H	J	K	M		
.91 (23)	.14 (3.5)	.30 (7.5)	1.18 (30)		

Inches (mm)

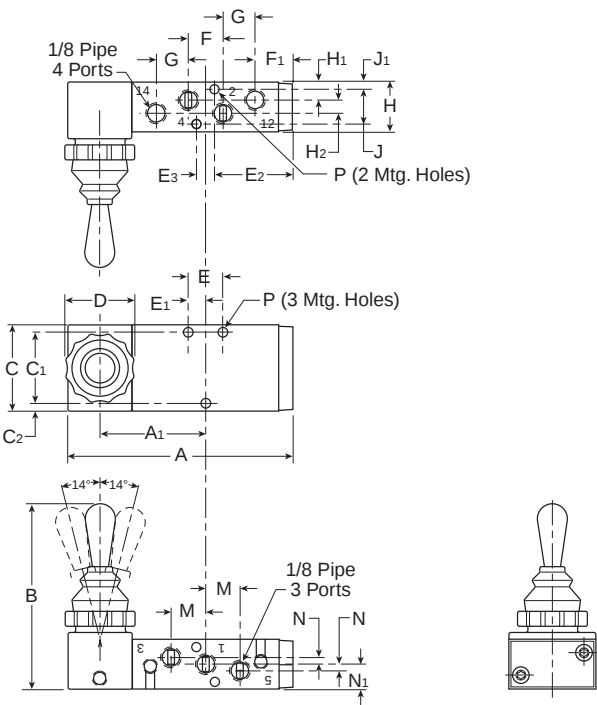


P2LDX 3-Position Hand Lever

A	B	C	D	E	F
7.07 (179.5)	5.36 (136.3)	1.89 (48)	3.19 (81)	1.34 (34)	1.65 (42)
H	J	K	M		
.91 (23)	.14 (3.5)	.30 (7.5)	1.18 (30)		

Inches (mm)

P2LAX Hand Lever Operated



P2LAX Hand Lever

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



Valve Products
Viking Xtreme Series

Features

Direct Air 2, 1/8" valves

Poppet style – .17 Cv

- Economical
- 3-way normally closed function

Direct Air 2, 1/8" valves

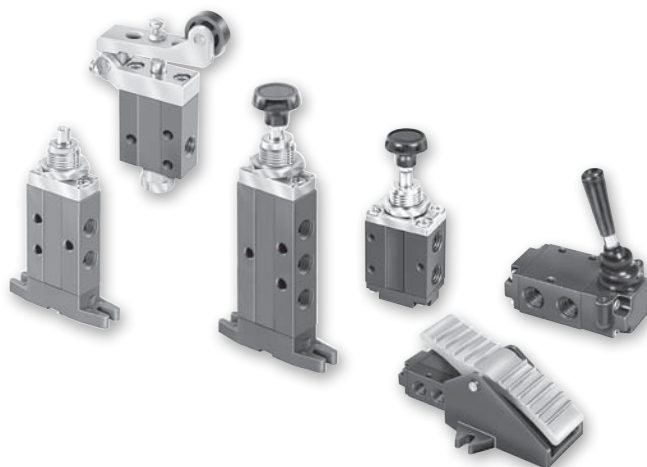
Packed bore style – .20 Cv

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

Direct Air 4, 1/4" valves

Packed bore style – .83 Cv

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



Operating information

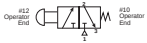
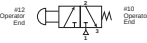
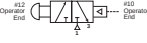
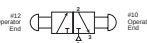
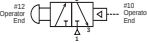
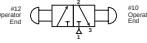
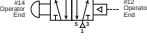
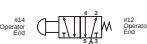
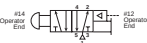
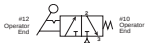
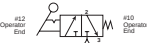
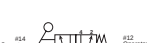
Operating pressure	150 PSI (28 inHg to 1035 kPa)*
Temperature range	32°F to 175°F (0°C to 80°C)

Materials

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

 Most popular.

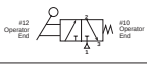
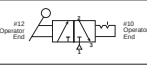
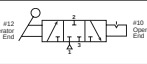
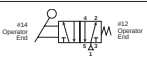
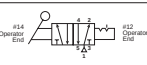
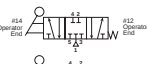
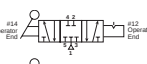
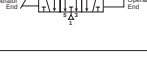
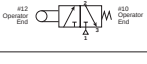
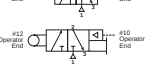
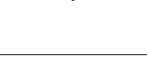
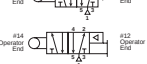
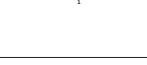
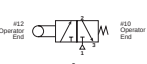
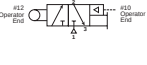
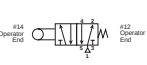
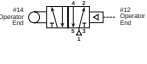
3-way & 4-way Valves

	Symbol	Port size	Cv	Description	Valve type	Part number
            	Button operated	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
   	Toggle operated, detented	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

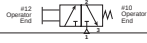
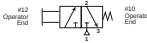
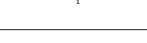
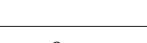
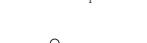
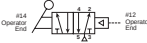
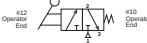
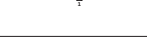
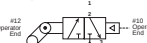
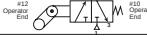
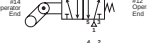
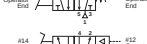
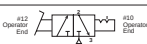
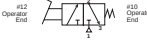
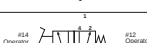
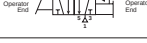
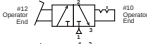
C

Valve Products
Directair 2 & 4 Series

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
		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
		1/8"	.17	3-way, spring return	Poppet	404711000
		1/8"	.20	3-way, spring return	Spool	414711000
Hand lever operated         		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
		1/4"	.83	3-way, treadle operated, detented	Spool	524931000
Treadle operated  		1/4"	.83	4-way, treadle operated, detented	Spool	520931000

CAUTION:

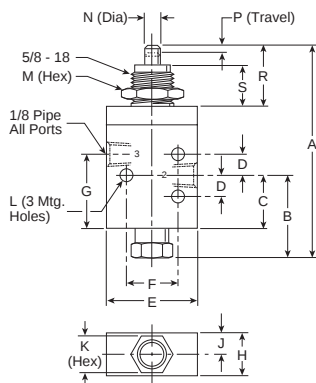
This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.

CAUTION:

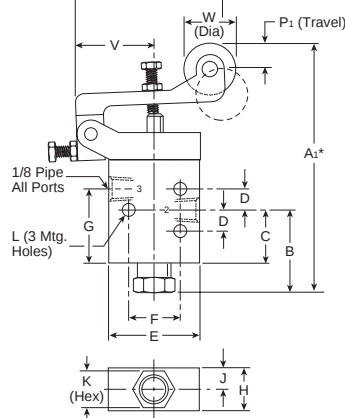
This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.

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

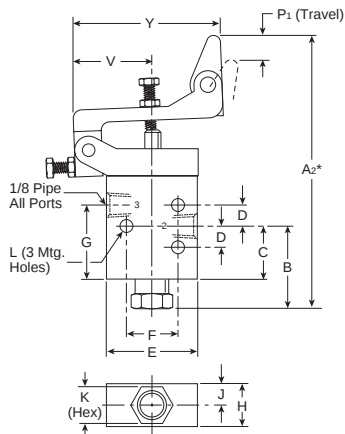
Plunger Operated



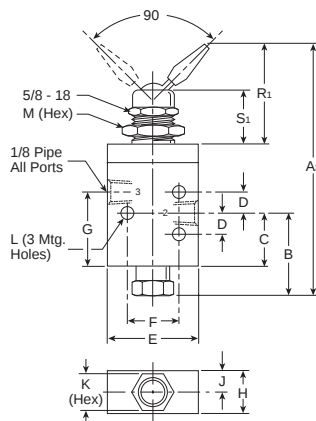
Roller Operated



One-Way Tripper Operated



Toggle Operated



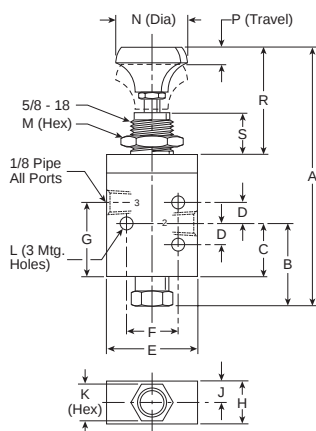
3-Way, 3-Port, 2-Position

A	A ₁ *	A ₂ *	A ₃	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	P ₁	R	R ₁
.25 (6)	.17 (4)	.38 (10)	.91 (23)	1.53 (39)
S	S ₁	U	V	W
.62 (16)	.78 (20)	2.28 (58)	1.19 (30)	.75 (19)
X	Y			
.19 (5)	2.19 (56)			

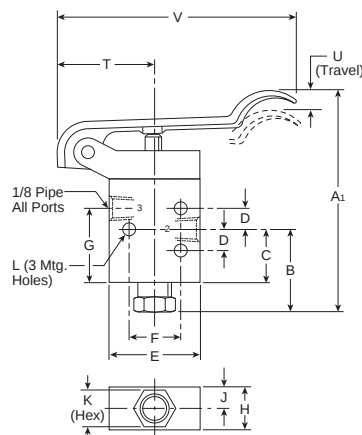
* Dimensions may be reduced .44" using adjusting screw.
Inches (mm)

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	A ₁	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

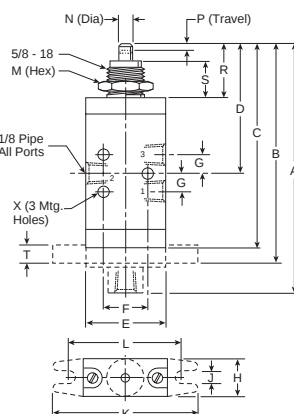
3-Way, 3-Port, 2-Position

A	A ₁ *	A ₂ *	A ₃	B
4.14 (105)	4.98 (126)	5.23 (133)	4.23 (107)	3.61 (92)
B ₁	B ₂	B ₃	C	C ₁
4.45 (113)	4.70 (119)	4.00 (102)	3.38 (86)	4.22 (107)
C ₂	C ₃	D	D ₁	D ₂
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)
P ₁	R	R ₁	S	S ₁
.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)			

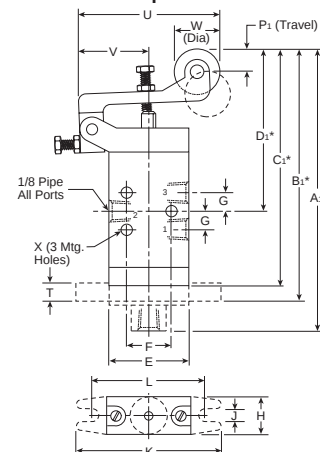
* Dimensions may be reduced .44" using adjusting screw.

Inches (mm)

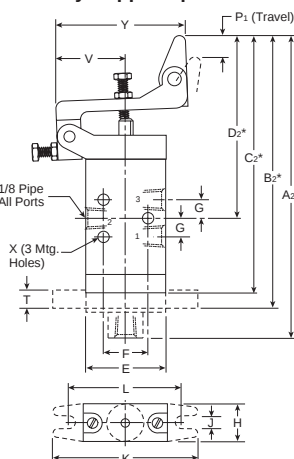
Plunger Operated



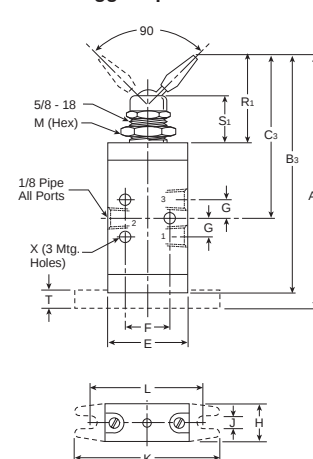
Roller Operated



One-Way Tripper Operated



Toggle Operated



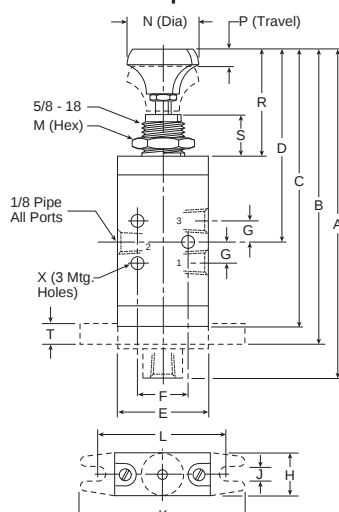
Button, Hand Lever Operated — 3-Way, 3-Port, 2-Position – 1/8" Ports

3-Way, 3-Port, 2-Position

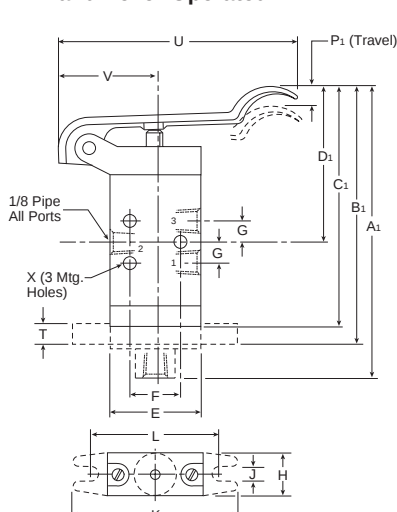
A	A ₁	B	B ₁	C
5.08 (129)	4.29 (109)	4.55 (115)	3.77 (96)	4.31 (109)
C ₁	D	D ₁	E	F
3.53 (90)	3.08 (78)	2.29 (58)	1.31 (33)	.75 (19)
G	H	J	K	L
.31 (8)	.62 (16)	.20 (5)	2.38 (60)	1.88 (48)
M	N	P	P ₁	R
.88 (22)	1.06 (27)	.17 (4)	.53 (13)	1.67 (42)
S	T	U	V	X
.63 (16)	.25 (6)	3.38 (86)	1.19 (30)	.19 (5)
Y	.59 (15)			

Inches (mm)

Button Operated

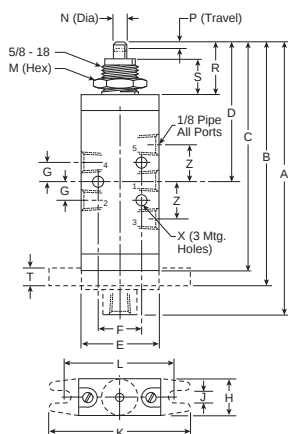


Hand Lever Operated

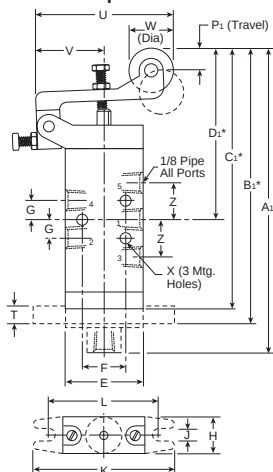


Plunger, Roller, One-way Tripper & Toggle Operated — 4-Way, 5-Port, 2-Position – 1/8" Ports

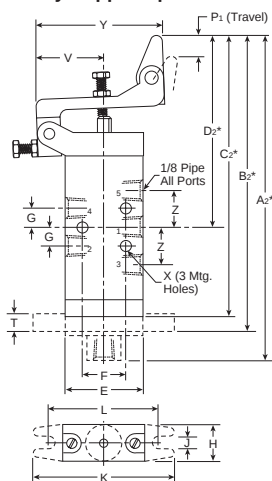
Plunger Operated



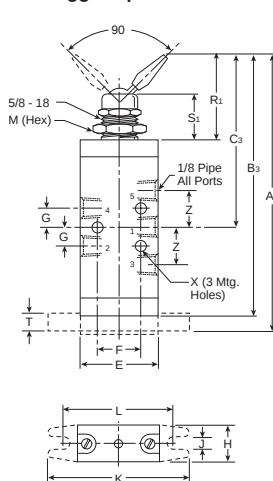
Roller Operated



One-Way Tripper Operated



Toggle Operated



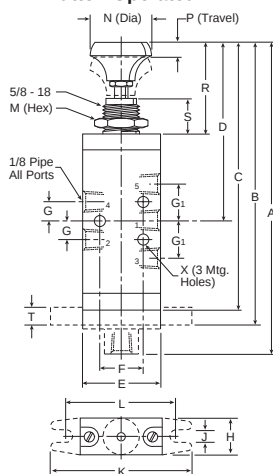
4-Way, 5-Port, 2-Position

A	A1*	A2*	A3	B
4.75 (121)	5.59 (142)	5.84 (148)	4.84 (123)	4.22 (107)
B1*	B2*	B3	C	C1*
5.06 (128)	5.31 (135)	4.61 (117)	3.99 (102)	4.83 (123)
C2*	C3	D	D1*	D2*
5.08 (129)	3.06 (78)	2.44 (62)	3.28 (83)	3.53 (90)
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	Z			
2.19 (56)	.62 (16)			

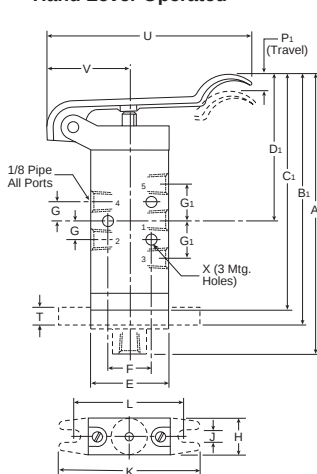
* Dimensions may be reduced .44" using adjusting screw.
Inches (mm)

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

Button Operated



Hand Lever Operated



4-Way, 5-Port, 2-Position

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

Inches (mm)

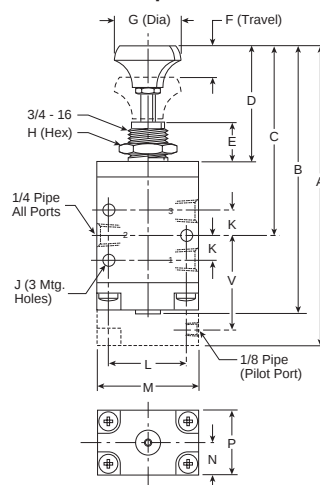
Button & Roller Operated — 3-Way, 3-Port, 2-Position

3-Way, 3-Port, 2-Position

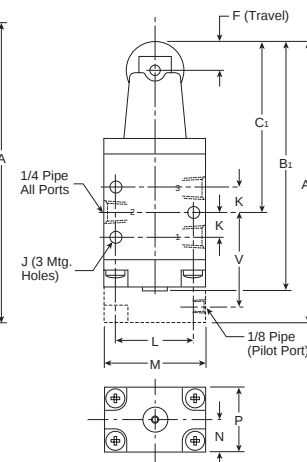
A	A ₁	B	B ₁	C
4.91 (125)	4.25 (108)	4.44 (113)	3.78 (96)	3.10 (79)
C ₁	D	E	F	G
2.44 (62)	2.00 (51)	.63 (16)	.32 (8)	1.05 (27)
H	J	K	L	M
1.00 (25)	.19 (5)	.41 (10)	1.25 (32)	1.63 (42)
N	P	V		
.53 (14)	1.06 (27)	1.52 (39)		

Inches (mm)

Button Operated



Roller Operated

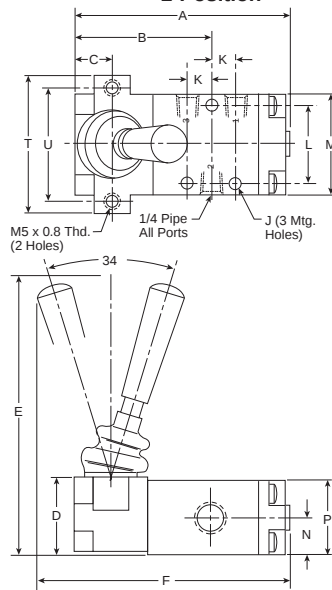
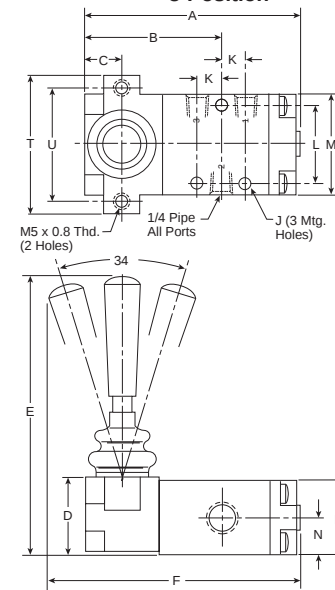


Lever & Pedal Operated — 3-Way, 3-Port, 2 & 3-Position

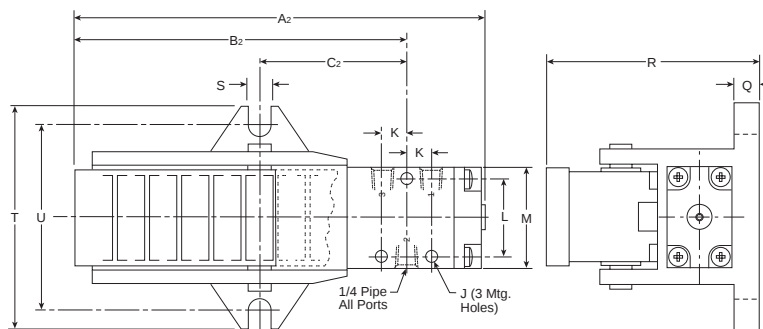
3-Way, 3-Port, 2 & 3-Position

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)

Lever Operated
2-PositionLever Operated
3-Position

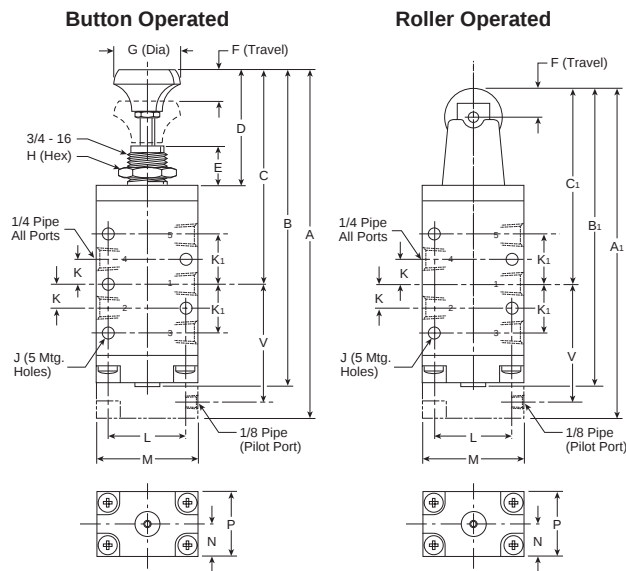
Pedal / Treadle Operated



⚠ 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.

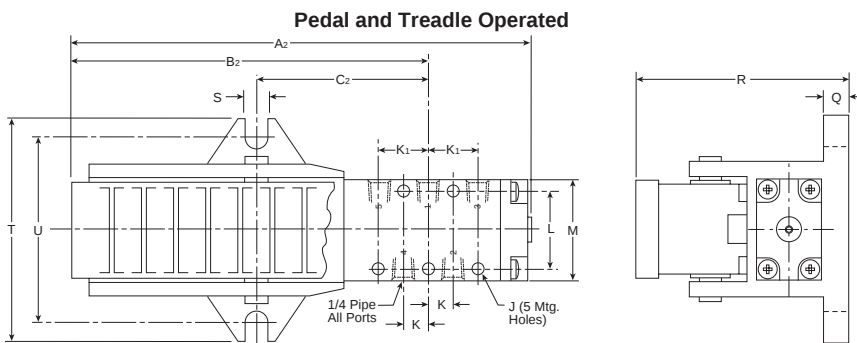
Button, Roller, Pedal & Treadle, Lever Operated — 4-Way, 5-Port, 2-Position



4-Way, 5-Port, 2-Position

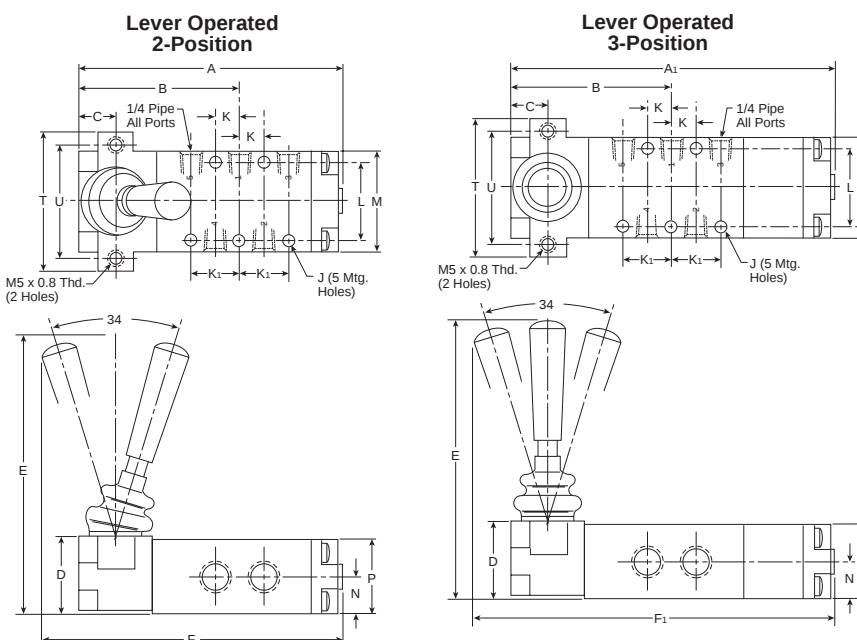
A	A ₁	A ₂	B	B ₁
5.75 (146)	5.13 (130)	7.41 (189)	5.28 (134)	4.66 (118)
B ₂	C	C ₁	C ₂	D
5.63 (143)	3.50 (89)	2.88 (73)	2.64 (67)	2.00 (51)
E	F	G	H	J
.63 (16)	.32 (8)	1.05 (27)	1.00 (25)	.19 (5)
K	K ₁	L	M	N
.44 (11)	.84 (21)	1.25 (32)	1.63 (41)	.53 (14)
P	Q	R	S	T
1.06 (27)	.37 (10)	2.40 (61)	.34 (9)	3.50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



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

A	A ₁	B	C	D
4.19 (106)	5.09 (129)	2.41 (61)	.53 (14)	1.12 (28)
E	F	F ₁	J	K
4.06 (103)	4.78 (121)	5.78 (147)	.19 (5)	.44 (11)
K ₁	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)

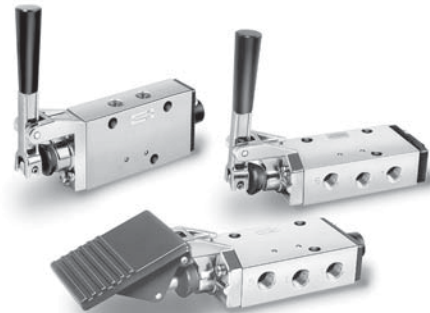
Features

Heavy Duty Lever

- Parallel Mount
- Perpendicular Mount

Heavy Duty Foot Pedal

- Inline Valve
 - 1/4" Port – 1.3 to 2.2 Cv
 - 3/8" Port – 1.3 to 2.9 Cv
- 2-Position
- 3-Position
 - All Ports Blocked
 - Center Exhaust



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

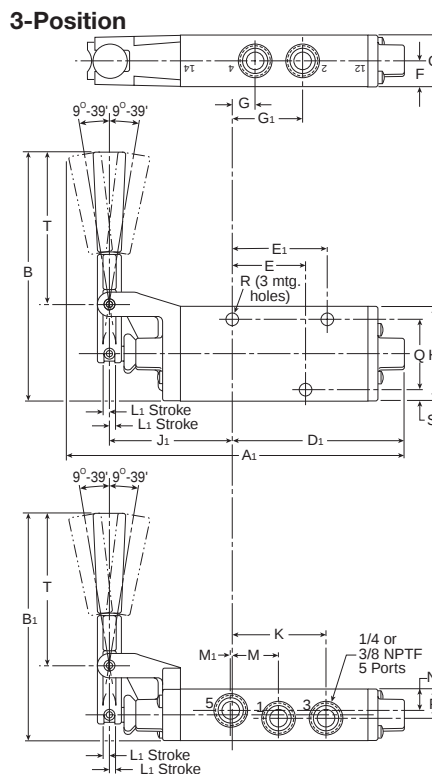
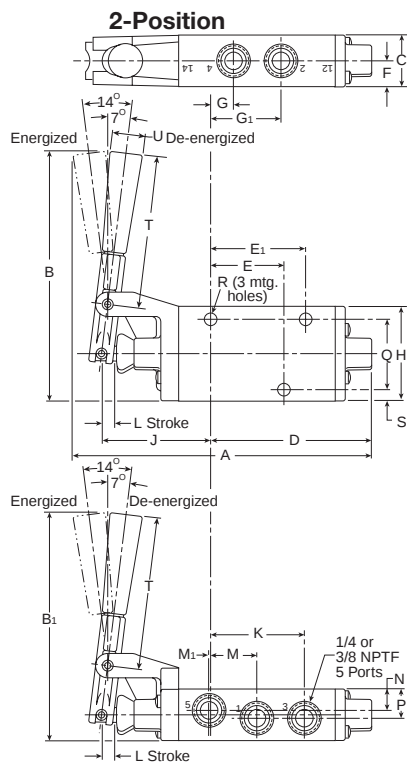
	Symbol	Port size	Cv	Description	Valve type	Part number
		1/4"	1.3	Inline, parallel	3-Position APB	422CS013W
		3/8"	1.3	Inline, parallel	3-Position, APB	422CS023W
		1/4"	1.3	Inline, parallel	3-Position, CE	422CS014W
		3/8"	1.3	Inline, parallel	3-Position, CE	422CS024W
		1/4"	1.3	Inline, perpendicular	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		FS043P

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.

Most popular.



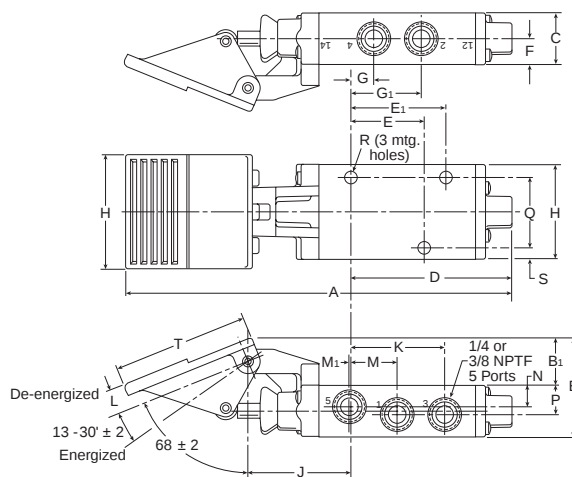
Lever Valve

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
		3/8" 2.13 (54)		(6)
L ₁	M	M ₁ NPT		N
.18 (5)	1.03 (36)	1/4" .02 (.5)		.50
		3/8" .06 (2)		(13)
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

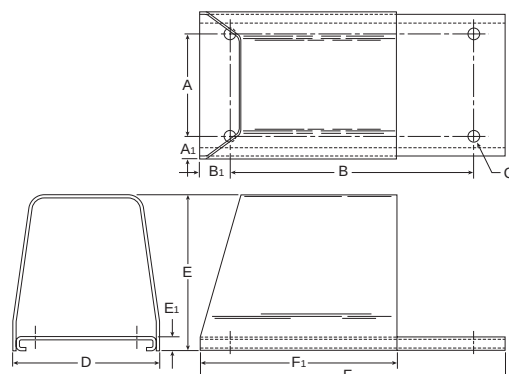
A	B	B ₁	C	D
8.64 (220)	2.18 (55)	1.03 (26)	1.15 (29)	3.59 (91)
E	E ₁	F	G NPT	
1.58 (40)	2.06 (52)	.57 (14)	1/4" .51 (13) 3/8" .55 (14)	
G ₁ NPT	H	H ₁	J	
1/4" 1.56 (40) 3/8" 1.51 (38)	2.13 (54)	2.50 (64)	2.32 (59)	
K NPT	L	M		
1/4" 2.08 (53) 3/8" 2.13 (54)	.60 (15)	1.03 (26)		
M ₁ NPT	N	P	Q	
1/4" .02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

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.



Foot Valve Guard

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)

Features

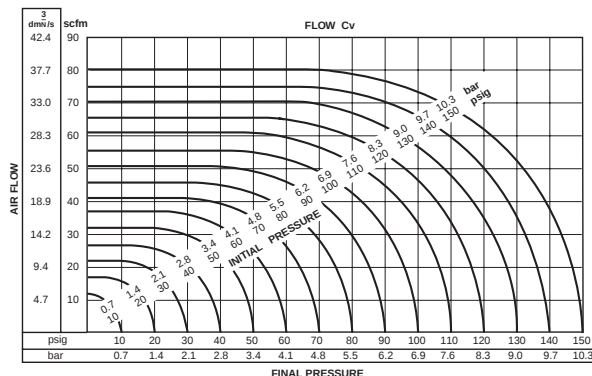
- 1/4" to 3/4" NPTF ports
- Standard operators listed. Consult factor for variations in orientation
- Standard 2 position 3-way and 4-way valves listed. Consult factory for 2-way and 3 position valves
- Corrosion resistant bronze body
- High flow brass spacers position o-ring, permit reverse piping and 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.

‡ For technical information see CD

Materials

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
	 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
	 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-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
	 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
3-way and 4-way palm button operated					
	 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
3-way and 4-way lever operated					
	 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, pedal operated, foot bracket	M06221840	M06231840	M06241840	—
		4-way, treadle operated, detent ball, foot bracket	M05425488	M05435488	M05445488	—
		4-way, treadle operated, manual return, foot bracket	M08524688	M08534688	M08544688	—
		4-way, spring return, pedal 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

C

Valve Products
M0 Series

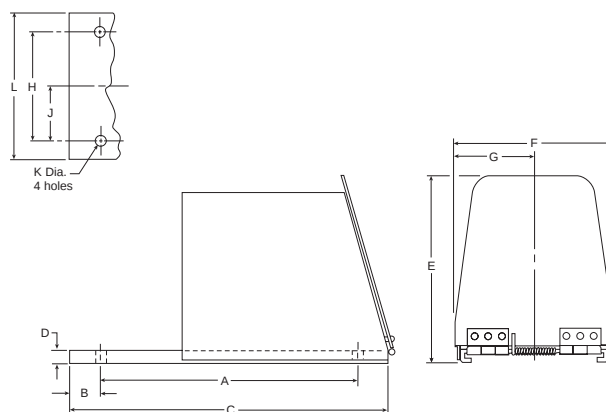
Pedal Guard
(Fits all pedal operated valves)

Description	Model number
Guard with door	M232 001
Guard without door	M232 002
Guard with door for 1/4 and 3/8 valve	M232 003*
Guard without door for 1/4 and 3/8 valve	M232 004*
Guard with door for 1/2 and 3/4	M232 005*
Guard without door for 1/2 and 3/4	M232 006*

* Includes mounting hardware.

CAUTION:

Foot valves utilizing this guard shall not be used to actuate a punch presse. 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

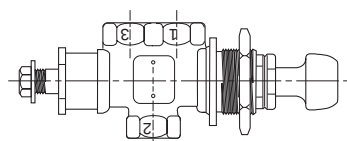
M0 valve 9 digit part number dissection

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

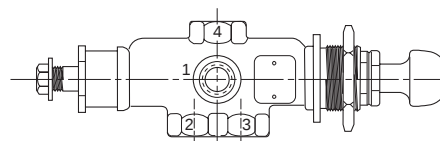
Series name	Left end	Port size	Body function	Right end
M0	XX	X	XX	XX



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

For decades Parker Pneumatics and Heavy Industrial have been synonymous with durability and long life. High flow-speed N Series poppet valves have been operating in foundries, steel mills, and automotive casting & stamping plants without fail.

Features

- Continuous Duty Rated Option
- Non-Lube Service
- Hi-Flow, Short Stroke Poppet
- Indicator Lights Available

Specifications

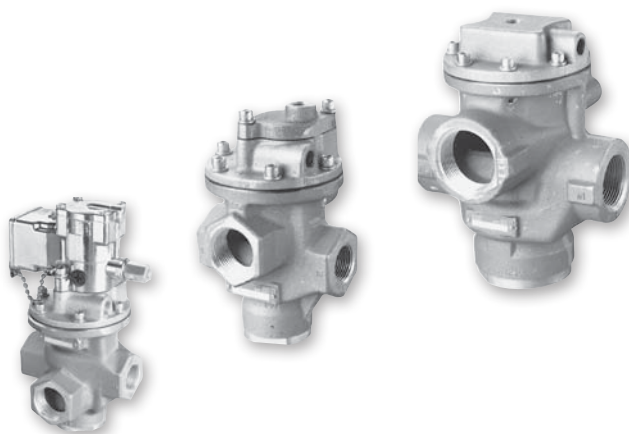
- 2-way NC
- 3-way NO & NC
- Selector Function

Ports

- 3/8" Body – 3/8", 1/2" NPT
- 3/4" Body – 1/2", 3/4", 1" NPT
- 1-1/4" Body – 1", 1-1/4", 1-1/2" NPT
- BSPP "G" Threads Available

Certification / Approval

- Approved to be CE Marked (Standard L-Pilot & P-Pilot)
- NEMA 4 Option
- Hazardous Duty Option IP 65 Rating / NEMA 4

**Materials**

Body	Cast Aluminum
Poppet assembly	Aluminum and Stainless Steel
Pilot Valve	Zinc, Stainless Steel, Brass, Copper, Zinc Plated Steel
Seals	Nitrile

Operating information

Operating pressure:

Solenoid valves - internal pilot

3/8" Basic	3/4" Basic
20 to 140 PSIG (standard)	25 to 140 PSIG (200 PSIG option available)

Solenoid valves - external supply

Air pressure thru valve (PSI)	External pilot pressure required (PSI)*	
	3/8" Basic	3/4" Basic
25 PSI	35-200	35-200
50 PSI	45-200	40-200
75 PSI	55-200	50-200
100 PSI	65-200	65-200

Vacuum up to 1" HG, less than a perfect vacuum.

* With 200 PSI option. Do not exceed 140 PSI with standard pilots.

Internal pilot - remote pilot valve

Air pressure thru valve (PSI)	Remote pilot pressure (PSI)		
	3/8" Basic	3/4" Basic	1-1/4" Basic
25 PSI	30-250	30-250	30-250
50 PSI	50-250	50-250	50-250
75 PSI	70-250	75-250	70-250
100 PSI	95-250	95-250	90-250
150 PSI	140-250	145-250	130-250
200 PSI	175-250	185-250	175-250
250 PSI	215-250	230-250	205-250

Operating temperature:

Operator type	Duty cycle*	Minimum ambient temperature	Maximum ambient temperature
Standard service	Intermittent	0°F (-18°C)	125°F (52°C)
Solenoid	Continuous	0°F (-18°C)	100°F (38°C)
Special service	Intermittent	0°F (-18°C)	125°F (52°C)
Solenoid	Continuous	0°F (-18°C)	125°F (52°C)
Remote pilot	Not applicable	0°F (-18°C)	200°F (93°C)

* Applications with pilot valves energized for ten (10) minutes or longer with a duty cycle greater than 70% are considered to be continuously energized.

$$\text{Duty cycle} = \frac{\text{Time energized}}{\text{Time energized} + \text{time off}} \times 100\% = \% \text{ Duty Cycle}$$

Most popular.

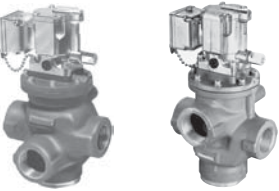


Single Solenoid

	Body Size	Cv	In / Cyl Ports	Exh. Port	2-way, 2-Position Normally Closed	3-way, 2-Position Normally Closed	3-way, 2-Position Normally Open
 Normally Closed Normally Open	3/8"	3.0 to 4.4	3/8"	1/2"	N315 39 045 53	N355 39 045 53	N375 39 045 53
			1/2"	1/2"	N315 49 045 53	N355 49 045 53	N375 49 045 53
			1/2"	3/4"	N315 59 045 53	N355 59 045 53	N375 59 045 53
	3/4"	9.0 to 11.0	3/4"	1"	N315 69 045 53	N355 69 045 53	N375 69 045 53
			1"	1"	N315 79 045 53	N355 79 045 53	N375 79 045 53

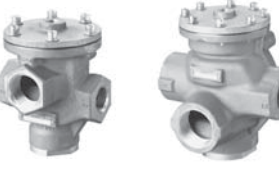
Locking Manual Override, Internal "P" Pilot 140 PSI, Standard Service, Junction Box w/ Light, 120VAC.

Single Solenoid

	Body Size	Cv	In / Cyl Ports	Exh. Port	2-way, 2-Position Normally Closed	3-way, 2-Position Normally Closed	3-way, 2-Position Normally Open
 Normally Closed Normally Open	1-1/4"	20.0 to 30.0	1"	1-1/4"	N325 79 047 53	N365 79 047 53	N385 79 047 53
			1-1/4"	1-1/2"	N325 89 047 53	N365 89 047 53	N385 89 047 53
			1-1/2"	1-1/2"	N325 99 047 53	N365 99 047 53	N385 99 047 53

Locking Manual Override, Internal "P" Pilot 125 PSI, Standard Service, P-Pilot Junction Box w/ Light, 120VAC.

Single Remote Pilot

	Body Size	Cv	In / Cyl Ports	Exh. Port	2-way, 2-Position Normally Closed	3-way, 2-Position Normally Closed	3-way, 2-Position Normally Open
 Normally Closed Normally Open	3/8"	3.0 to 4.4	3/8"	1/2"	N314 31 091	N354 31 091	N374 31 091
			1/2"	1/2"	N314 41 091	N354 41 091	N374 41 091
			1/2"	3/4"	N314 51 091	N354 51 091	N374 51 091
	3/4"	9.0 to 11.0	3/4"	1"	N314 61 091	N354 61 091	N374 61 091
			1"	1"	N314 71 091	N354 71 091	N374 71 091

1/4" NPT Remote Pilot Port with Internal Pilot Return.

Single Remote Pilot

	Body Size	Cv	In / Cyl Ports	Exh. Port	2-way, 2-Position Normally Closed	3-way, 2-Position Normally Closed	3-way, 2-Position Normally Open
 Normally Closed Normally Open	1-1/4"	20.0 to 30.0	1"	1-1/4"	N324 71 091	N364 71 091	N384 71 091
			1-1/4"	1-1/2"	N324 81 091	N364 81 091	N384 81 091
			1-1/2"	1-1/2"	N324 91 091	N364 91 091	N384 91 091

1/4" NPT Remote Pilot Port with Internal Pilot Return.

"N" Series 3/8", 3/4" & 1-1/4" Body Sizes - Solenoid 'L' Pilot

N 315 3 9 0 45 53

Valve function - solenoid	
3/8" & 3/4" Body	
2-way, normally closed	315
3-way, normally closed	355
3-way, normally open	375
1-1/4" Body	
2-way, normally closed	325
3-way, normally closed	365
3-way, normally open	385

Port size / thread type	
3/8" Body size	
3/8" Inlet & cyl - 1/2" exhaust - NPT	3
1/2" inlet & cyl - 1/2" exhaust - NPT	4
1/2" inlet & cyl - 1/2" exhaust - BSPP	N
3/4" body size	
1/2" inlet & cyl - 3/4" exhaust - NPT	5
3/4" inlet & cyl - 1" exhaust - NPT	6
3/4" inlet & cyl - 1" exhaust - BSPP	Q
1" inlet & cyl - 1" exhaust - NPT	7
1-1/4" body size	
1" inlet & cyl - 1 1/4" exhaust - NPT	7
1-1/4" inlet & cyl - 1-1/2" exhaust - NPT	8
1-1/4" inlet & cyl - 1-1/2" exhaust - BSPP	S*
1-1/2" inlet & cyl - 1-1/2" exhaust - NPT	9
1-1/2" inlet & cyl - 1-1/2" exhaust - BSPP	T*

* Not available with valve function 325.

Note: BSPP is to the ISO 228 standard, and requires an R-BSPT male fitting.

"L" pilot code						
Code	Voltage			Solenoid enclosure options		
	AC 60hz	AC 50hz	DC	Standard duty (01, 45)	Cont. duty (04, 48)	200 PSI (46)
49			24	1, 2, 3, 5, 6, 8, 9, W	6, 8, 9	9
53	120	110		1, 2, 3, 5, 6, 8, 9, E, N, W	1, 6, 8, 9, N	8, 9, E
57	240	220		1, 3, W		

"L" pilot configuration	
01*	External pilot, std service, 140 PSI
04*	External pilot, cont duty, 140 PSI
45	Internal pilot, std service, 140 PSI
48	Internal pilot, cont duty, 140 PSI

* Not available with valve function 325, 365, and 385 (1-1/4" body).

Solenoid type	
0	Standard

Solenoid enclosure	
1	Basic pilot
2	Basic pilot NLMO
3	Basic pilot LMO
5	Junction box NLMO
6	Junction box LMO
8	Junction box NLMO w/ light
9	Junction box LMO w/ light
W	Basic pilot ext. LMO

"N" Series 1-1/4" Body Sizes - Solenoid Hi-Flow 'P' Pilot

N 365 8 9 0 47 53

Valve function - solenoid	
1-1/4" body	
2-Way, normally closed	325
3-Way, normally closed	365
3-Way, normally open	385

Port size / thread type	
1-1/4" body size	
1" inlet & cyl - 1 1/4" exhaust - NPT	7
1-1/4" inlet & cyl - 1-1/2" exhaust - NPT	8
1-1/4" inlet & cyl - 1-1/2" exhaust - BSPP	S
1-1/2" inlet & cyl - 1-1/2" exhaust - NPT	9
1-1/2" inlet & cyl - 1-1/2" exhaust - BSPP	T

Note: BSPP is to the ISO 228 standard, and requires an R-BSPT male fitting.

"P" pilot code				
Code	Voltage			Enclosure options
	AC 60hz	AC 50hz	DC	Standard duty
49			24	5, 6
53	120	110		5, 6, 8, 9

"P" pilot configuration	
02	External pilot, std service, 125 PSI
47	Internal pilot, std service, 125 PSI

Solenoid type	
0	Standard

Solenoid enclosure	
5	Junction box NLMO
6	Junction box LMO
8	Junction box NLMO w/ light
9	Junction box LMO w/ light

Replacement Pilots



Description	Standard L-pilot		Continuous duty L-pilot	
	Locking	Non-locking	Locking	Non-locking
Override type				
Basic with override	K065 3035**	K065 2035**	K085 3025**	K085 2025**
JIC with junction box & override	K065 6035**	K065 5035**	K085 6025**	K085 5025**
JIC pilot with junction box & override & indicator lights (120VAC only)	K065 9035**	K065 8035**	K085 9025**	K085 8025**

** Voltage code - (reference model index for availability)

Replacement Pilots



Description	Hazardous duty L-pilot		NEMA 4 L-pilot	
	Locking	Non-Locking		
Hazardous duty L-pilot - UL & CSA	K045 1025**	—		
Override type	Locking	Non-Locking		
Hazardous duty with override	K045 3025**	K045 2025**		
NEMA 4 with override			K255 3025**	K255 202549

** Voltage code - 49 & 53

Replacement Pilots



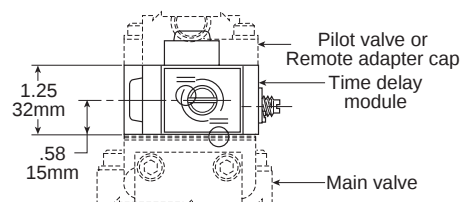
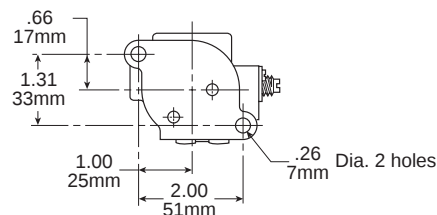
Description	Heavy duty P-Pilot		
	No override	Non-locking	Locking
Override type			
Basic with Override	K135 1045**	N/A	N/A
JIC with Junction Box & Override	N/A	K135 5045**	K135 6045**
JIC Pilot with Junction Box & Override & Indicator Lights (120VAC Only)	N/A	K135 804553	K135 904553

** Voltage code - 49 & 53

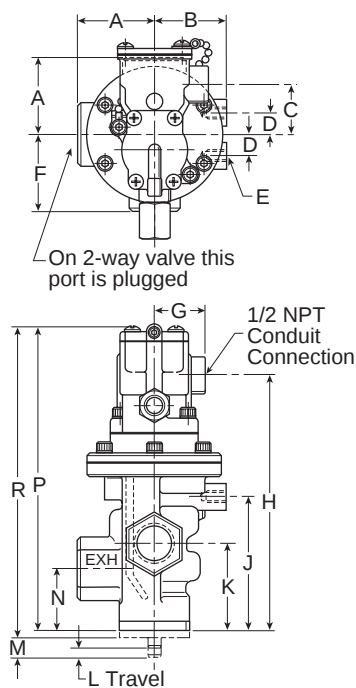
Time Delay Modules

- Delay of valve action upon application of control signal, removal of control signal or both application and removal of control signal.
- Delay intervals from 0-6, 5-12 or 10-30 seconds . . . up to several minutes with the addition of a small external reservoir.
- Repeatability within 10%, using clean filtered air.
- Change of function without disassembly . . . with line pressure on the valve.

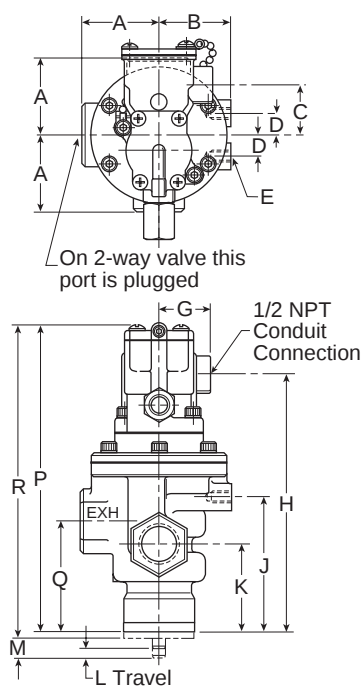
	Delay interval	Module kit number
	0-6 Seconds	K705 1001
	5-12 Seconds	K705 1002
	10-30 Seconds	K705 1003



Internal Pilot - 3/8" & 3/4" Basic Body



Normally Closed



Normally Open

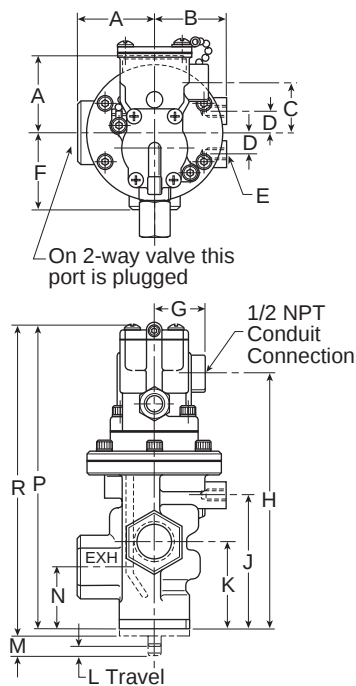
Internal Pilot -
3/8" & 3/4" Basic Body

Key	3/8" Body		3/4" Body	
	Inch	mm	Inch	mm
A	1.56	40	2.13	54
B	1.50	38	1.94	49
C	1.81	46	1.34	34
D	.56	14	.56	14
E	3/8-16UNC 7/16" deep		3/8-16UNC 9/16" deep	
F	1.75	44	2.25	57
G	1.50	38	1.50	38
H	5.92	150	7.14	181
J	3.19	81	3.75	95
K	1.88	47	2.44	62
L	.11	3	.16	4
M	.50	13	.50	13
N	1.44	37	1.78	45
P	7.36	196	8.58	218
Q	2.31	59	3.09	84
R	7.92	201	8.83	224

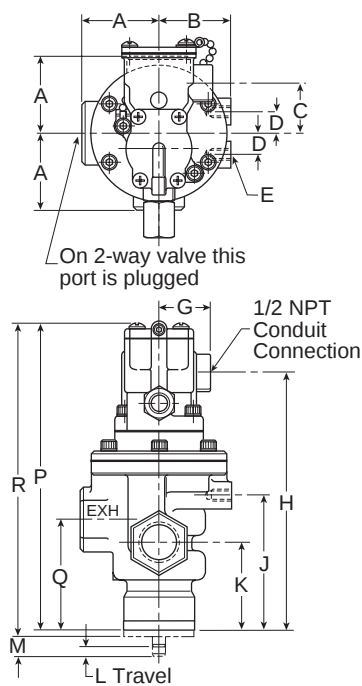
C

Valve Products
N Series

External Pilot - 3/8" & 3/4" Basic Body



Normally Closed

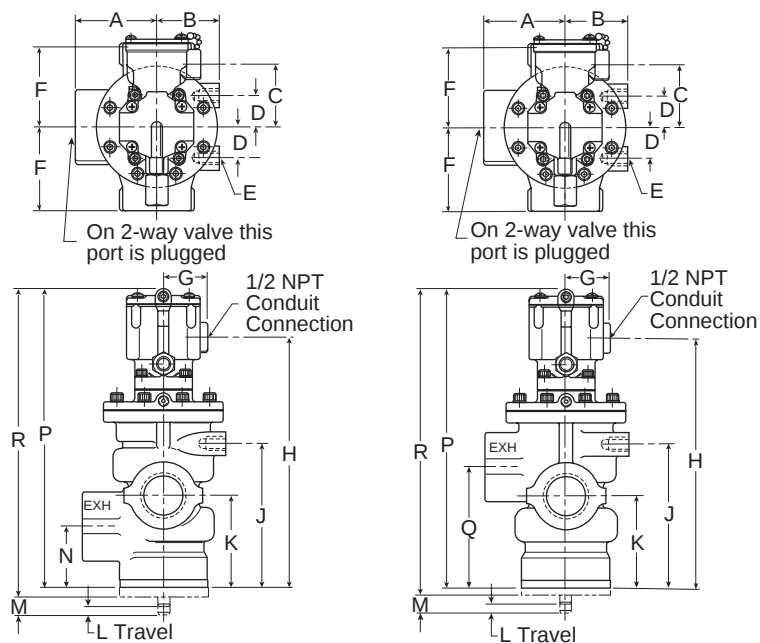


Normally Open

External Pilot -
3/8" & 3/4" Basic Body

Key	3/8" Body		3/4" Body	
	Inch	mm	Inch	mm
A	1.56	40	2.13	54
B	1.50	38	1.94	49
C	1.81	46	1.34	34
D	.56	14	.56	14
E	3/8-16UNC 7/16" deep		3/8-16UNC 9/16" deep	
F	1.75	44	2.25	57
G	1.50	38	1.50	38
H	6.42	163	7.45	189
J	3.19	81	3.75	95
K	1.88	47	2.44	62
N	1.44	37	1.78	45
P	7.86	200	8.89	226
Q	2.31	59	3.09	84
R	4.34	110	5.38	137

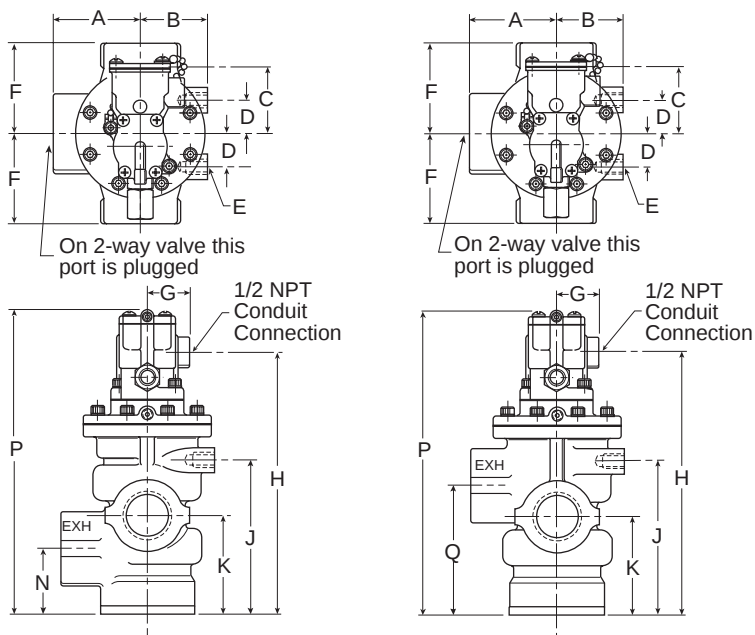
Internal Pilot - 1-1/4" Basic Body



Internal Pilot - 1-1/4" Basic Body

Key	1-1/4" Body	
	Inch	mm
A	3.00	76
B	2.25	57
C	1.34	34
D	1.19	30
E	1/2-13 UNC 3/4 Deep	
F	3.13	80
G	1.50	38
H	9.30	236
J	5.34	136
K	3.44	87
L	.25	6
M	.50	13
N	2.31	59
P	11.14	283
Q	4.56	116
R	11.48	292

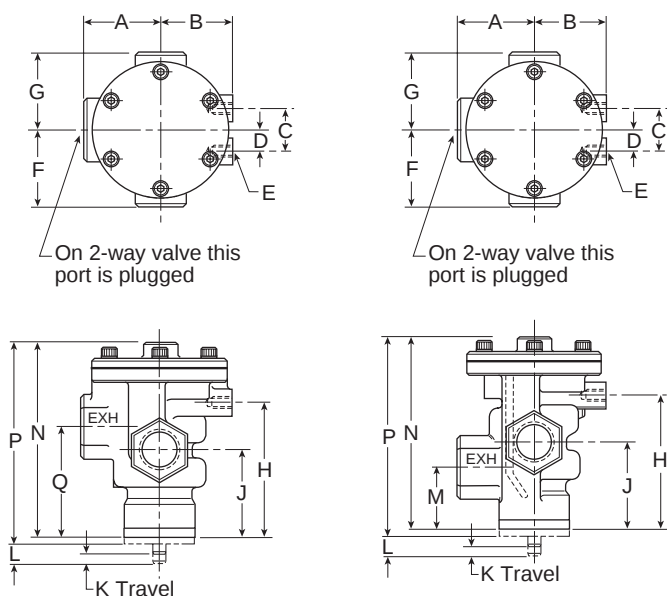
Continuous Duty Pilot - 1-1/4" Basic Body



Continuous Duty Pilot - 1-1/4" Basic Body

Key	1-1/4" Body	
	Inch	mm
A	3.00	76
B	2.25	57
C	1.34	34
D	1.19	30
E	1/2-13 UNC 3/4 Deep	
F	3.13	80
G	1.50	38
H	9.02	229
J	5.34	136
K	3.44	87
N	2.31	59
P	10.45	265
Q	4.56	116

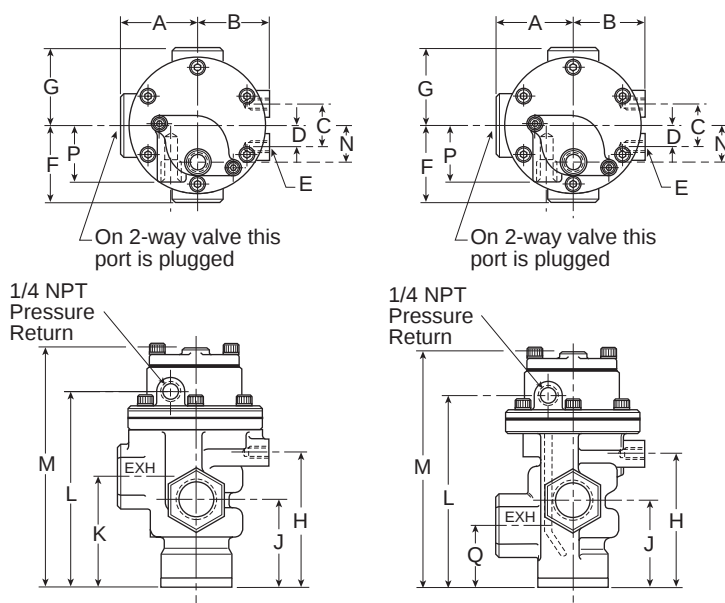
Internal Return - 3/8" & 3/4" Basic Body



Internal Return - 3/8" & 3/4" Basic Body

Key	3/8" Body		3/4" Body		1-1/4" Body	
	Inch	mm	Inch	mm	Inch	mm
A	1.56	40	2.13	54	3.00	76
B	1.50	38	1.94	49	2.25	57
C	1.13	29	1.13	29	2.38	60
D	.56	14	.56	14	1.19	30
E	3/8-16UNC 7/16" deep		3/8-16UNC 9/16" deep		1/2-13UNC 3/4" deep	
F	1.75	44	2.25	57	3.13	79
G	1.56	40	2.13	54	3.13	79
H	3.19	81	3.75	95	5.34	136
J	1.88	48	2.44	62	3.44	87
K	.50	13	.50	13	.50	13
L	.11	3	.16	4	.25	6
M	1.44	37	1.78	45	2.66	67
N	4.22	107	5.31	135	7.19	183
P	4.78	121	5.56	141	7.53	191
Q	2.31	59	3.09	78	4.56	116

External Return - 3/8" & 3/4" Basic Body



Internal Return - 3/8" & 3/4" Basic Body

Key	3/8" Body		3/4" Body		1-1/4" Body	
	Inch	mm	Inch	mm	Inch	mm
A	1.56	40	2.13	54	3.00	76
B	1.50	38	1.94	49	2.25	57
C	1.13	29	1.13	29	2.38	60
D	.56	14	.56	14	1.19	30
E	3/8-16UNC 7/16" deep		3/8-16UNC 9/16" deep		1/2-13UNC 3/4" deep	
F	1.75	44	2.25	57	3.13	79
G	1.56	40	2.13	54	3.13	79
H	3.19	81	3.75	95	5.34	136
J	1.88	48	2.44	62	3.44	87
K	2.31	59	3.09	78	4.56	116
L	4.34	110	5.38	137	7.31	186
M	5.31	135	6.34	161	7.88	200
N	Left of center .53 13		On center 1.00 25			
Q	1.44	37	1.78	45	2.31	59

C

Valve Products
N Series