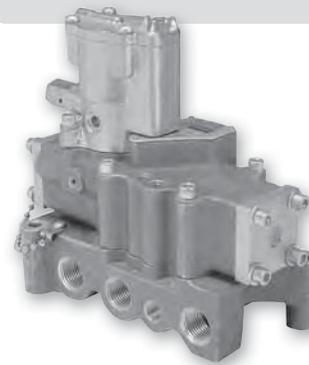


## Valvair II Series

### Features

- Full air operation for fastest response
- “Plug-In” option simplifies maintenance and installation  
Reduces downtime. No wiring or plumbing to disturb
- “Direct pipe” design for economy and performance
- Variety of operators available; direct conduit, (JIC) junction box, NEMA 4, hazardous duty, (UL, CSA), and remote air pilot
- Field convertible to external pilot supply for vacuum or other services
- Synthetic rubber o-ring seals are specially compounded for minimum compression and friction for superior wear and abrasion resistance
- Precision ground spool “floats” on o-ring seals. Closed center cross-over design saves air
- General Purpose Approvals
  - CSA - Canadian Standards Association  
File number 42024
- Hazardous Duty Approvals
  - UL - Underwriters Laboratories, Inc.  
File number E42542 Category Y107
  - CSA - Canadian Standards Association  
File number 24349



### Operating information

Pressure range for solenoid operated valves

Media	Internal pilot supply			External pilot supply			
	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1"
Air	35-140* PSIG			N.A.	Main 0-250 PSIG	Pilot 35-140* PSIG	
Vacuum	do not use			N.A.	Main within 1 Hg of perfect	Pilot 35-140* PSIG	
Other	Consult supplier						

\* 200 PSIG solenoid is optional (consult supplier).

Pressure range for remote pilot operated valves

Media	Valve type		
		Single	Double & 3-position
Air	Main	35-250 PSIG	0-250 PSIG
	Pilot	35-200 PSIG	35-200 PSIG
Vacuum	Main	Do not use	Within 1" Hg of perfect
	Pilot	Do not use	35-200 PSIG
Other	Consult supplier		

Ambient temperature – standard service solenoid operator

Minimum	Maximum	
	Intermittent duty	Continuous duty
0°F	125°F	100°F

Special service (continuous duty) solenoid operator

0°F	125°F	125°F
-----	-------	-------

Ambient temperature – remote pilot operated valves

0°F	200°F
-----	-------

### Material specifications

Manifolds & subbases	Aluminum alloy	
Other seals	Nitrile	
Resilient seals: in valve body		
Dynamic	Polyurethane base on 3/8" basic valves*	
Static / dynamic	Nitrile base w / 12% Molybdenum Disulphide on 1/4" & 1/2" basic valves	
Shock pads	Polyurethane	
Solenoid bodies	Plated zinc alloy	
Internal components	Corrosion resistant steel	
Resilient seals	Standard service	Nitrile
	Special service (continuous duty)	Fluorocarbon & Silicone
Other seals	Nitrile	
Coil	Class “B” epoxy encapsulated (Class “H” also available on some models, consult supplier)	
Valve bodies	Aluminum alloy	
Valve spacers	Brass	
Valve spool	Aluminum alloy with special coating on 3/8" basic valves*.	
	Hard chrome plated AISI type 416 stainless steel on 1/4" & 1/2" basic valves.	

\* These materials are specially designed for valves used on non-lubricated service

As the above chart indicates, Standard Duty Solenoids may be used on continuous duty but ambient temperature is de-rated.

In some cases, Special Service Solenoids may be rated for higher ambient temperatures (consult supplier).



#### Caution:

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

Most popular.



**4-way, 5-port, 2-position, Plug-in**

L675 (3/8" basic valve) Single solenoid	L655 (3/8" basic valve) Double solenoid	Nominal Cv	Port size (NPT)	Subbase (Side ports)	Manifold† (End & bottom ports)	Voltage	Valve only						
							Single solenoid	Double solenoid					
		4.8	3/8"	K022090	K142230	120V 60Hz	L6753910253	L6553910253					
							4.8	1/2"	K022091	K142231	110V 50Hz	L6753910253	L6553910253
							4.8	3/4"	K022101	K142270	24VDC	L6753310249	L6553310249

L675 (1" basic valve) Single solenoid	L655 (1" basic valve) Double solenoid	Nominal Cv	Port size (NPT)	Subbase (Side ports)	Manifold† (End & bottom ports)	Voltage	Valve only		
							Single solenoid	Double solenoid	
		11.3	1"	K022095		120V 60Hz	L6758910253	L6558910253	
							110V 50Hz	L6758910253	L6558910253
							24VDC	L6758310249	L6558310249

**4-way, 5-port, 3-position, Plug-in**

L665 (3/8" basic valve) Double solenoid	Nominal Cv	Port size (NPT)	Subbase (side ports)	Manifold † (end & bottom ports)	Voltage	Valve only					
						Double solenoid					
	4.8	3/8"	K022090	K142230	120V 60Hz	L6653921153					
						1/2"	K022091	K142231	110V 50Hz	L6653921153	
						3/4"	K022101	K142270	24VDC	L6653321149	

L665 (1" basic valve) Double solenoid	Nominal Cv	Port size (NPT)	Subbase (side ports)	Manifold (end & bottom ports)	Voltage	Valve only		
						Double solenoid		
	11.3	1"	K022095		120V 60Hz	L6658921153		
						110V 50Hz	L6658921153	
						24VDC	L6658321149	

**4-way, 5-port, 2-position, Direct Pipe Ported**

L705 (3/8" basic valve) single solenoid	L685 (3/8" basic valve) double solenoid	Port size (NPT)		Nominal Cv	Voltage	Operator type	Valve	
		P, A & B	EA & EB				Single solenoid	Double solenoid
		3/8"	1/2"	4.8	120V 60Hz	Junction box	L7053910253	L6853910253
							110V 50Hz	L7054910253
		3/8"	1/2"	4.8	24VDC	Junction box	L7053610249	L6853610249
							L7054610249	L6854610249
		3/8"	1/2"	4.8	120V 60Hz	Basic	L7053310253	L6853310253
							110V 50Hz	L7054310253

L705 (1" basic valve) single solenoid	L685 (1" basic valve) double solenoid	Port size (NPT)		Nominal Cv	Voltage	Operator type	Valve	
		P, A & B	EA & EB				Single solenoid	Double solenoid
		1"	1-1/4"	12.0	120V 60Hz	Junction box	L7058910253	L6858910253
							110V 50Hz	L7059910253
		1"	1-1/4"	12.0	24VDC	Junction box	L7058610249	L6858610249
							L7059610249	L6859610249

**4-way, 5-port, 3-position, Direct Pipe Ported**

L695 (3/8" basic valve) double solenoid	L695 (1" basic valve) double solenoid	Port size (NPT)		Nominal Cv	Voltage	Operator type	Valve	
		P, A & B	EA & EB				3/8" basic size	1" basic size
		3/8"	1/2"	4.5	120V 60Hz	Junction box	L6953921153	—
							L6954921153	—
		1"	1-1/4"	12.0	110V 50Hz	Junction box	—	L6958921153
							—	L6959921153

† Manifolds include mounting hardware, except for port adapters.

Modulflex  
Series

Isys Micro  
Series

Isys ISO  
Series

Fieldbus

DX ISOMAX  
Series

Valvair II  
Series

**D**

Subbase & Manifold  
Valve Products

**Lubricated Non-Lubricated Service**  
**2-position, Plug-In, 3/8" & 1" Basic Size**

- Modulflex Series
- Isys Micro Series
- Isys ISO Series
- Fieldbus
- DX ISOMAX Series
- Valvair II Series
- D** Subbase & Manifold Valve Products

**L 67 5 3 9 10 2 53**

Type	
Double	65
Single	67

Operator	
Remote	4
Solenoid	5

Size	
3/8" Basic	3
1" Basic	8

Operator options	
Solenoid (basic) or remote	1
Solenoid with locking override	3
Solenoid w/light (120VAC, 24VDC) & non-locking override	8
Solenoid w/light (120VAC, 24VDC) & locking override	9

Voltage & frequency			
	60Hz	50Hz	DC
45			12
49			24
53	120	110	
57	240	220	

Duty Cycle	
2	Standard service, solenoid or remote
4	Continuous service solenoid

Enclosure "Class"	
10	Standard (NEMA 1 & 12) or remote

**Lubricated or Non-Lubricated Service**  
**3-position, Plug-In, 3/8" & 1" Basic Size**

**L 66 5 3 9 21 1 53**

Type	
Double	66

Operator	
Remote	4
Solenoid	5

Size	
3/8" Basic	3
1" Basic	8

Operator options	
Solenoid (basic) or remote	1
Solenoid with locking override	3
Solenoid w/light (120VAC, 24VDC) & non-locking override	8
Solenoid w/light (120VAC, 24VDC) & locking override	9

Voltage & frequency			
	60Hz	50Hz	DC
45			12
49			24
53	120	110	
57	240	220	

Duty cycle	
1	Standard service, solenoid or remote
5	Continuous service solenoid

Enclosure "class"	
21	All ports blocked in neutral (NEMA 1 & 12 enclosure) or remote
22	Cyl. Ports open to exhaust in neutral (NEMA 1 & 12 enclosure) or remote
23	Cyl. Ports open to inlet in neutral (NEMA 1 & 12 enclosure) or remote

**Lubricated or Non-Lubricated Service**  
**2-position, Direct Pipe Ported, 3/8" & 1" Basic Size**

**L 70 5 3 9 10 2 53 —**

Type	
Double	68
Single	70

Operator	
Remote	4
Solenoid	5

Size	
3/8" NPT inlet & cylinder 1/2" NPT exhaust	3
1/2" NPT inlet, cylinder & exhaust	4
1" NPT inlet & cylinder 1-1/4" NPT exhaust	8
1-1/4" NPT inlet cylinder & exhaust	9*

\* Not available operator option 4 - Remote pilot.

Operator options	
Solenoid (basic) or remote	1
Solenoid with locking override	3
Solenoid w/ junction box & locking override	6
Solenoid w/ junction box & light (120VAC, 24VDC) & non-locking override	8
Solenoid w/ junction box & light (120VAC, 24VDC) & locking override	9

Lead length	
Blank	19" (Standard)

Voltage & frequency			
	60Hz	50Hz	DC
45			12
49			24
53	120	110	
57	240	220	

Duty cycle	
2	Standard service, solenoid or remote
4	Continuous service solenoid

Enclosure "Class"	
10	Standard (NEMA 1 & 12) or remote
60*†	Hazardous duty (NEMA 7 & 9)
80*†	NEMA 4

\* Voltage 49 / 53 only.  
 † Use with operator options 1, 2 & 3 only, voltage 53 only.

**Lubricated or Non-Lubricated Service**  
**3-position, Direct Pipe Ported, 3/8" & 1" Basic Size**

**L 69 5 3 9 21 1 53 —**

Type	
Double	69

Operator	
Remote	4
Solenoid	5

Size	
3/8" NPT inlet & cylinder 1/2" NPT exhaust	3
1/2" NPT inlet, cylinder & exhaust	4
1" NPT inlet & cylinder 1-1/4" NPT exhaust	8
1-1/4" NPT inlet cylinder & exhaust	9*

\* Not available operator option 4 - Remote pilot.

Operator options	
Solenoid (basic) or remote	1
Solenoid with locking override	3
Solenoid w/ junction box & locking override	6
Solenoid w/ junction box & light (120VAC, 24VDC) & non-locking override	8
Solenoid w/ junction box & light (120VAC, 24VDC) & locking override	9

Lead length	
Blank	19" (Standard)

Voltage & frequency			
	60Hz	50Hz	DC
45			12
49			24
53	120	110	
57	240	220	

Duty cycle	
1	Standard service, solenoid or remote
5	Continuous service solenoid

Enclosure "Class"	
All ports blocked in neutral	
21	Standard (NEMA 1 & 12) or remote
71*†	Hazardous duty (NEMA 7 & 9)
91*†	NEMA 4
Cylinder ports open to exhaust in neutral	
22	Standard (NEMA 1 & 12) or remote
72*†	Hazardous duty (NEMA 7 & 9)
92*†	NEMA 4
Cylinder ports open to inlet in neutral	
23	Standard (NEMA 1 & 12) or remote
73*†	Hazardous duty (NEMA 7 & 9)
93*†	NEMA 4

\* Voltage 49 / 53 only.  
 † Use with operator options 1, 2 & 3 only, voltage 53 only.

Modulflex Series
Isys Micro Series
Isys ISO Series
Fieldbus
DX ISOMAX Series
Valvair II Series
<b>D</b>
Subbase & Manifold Valve Products

**Plug-in Pilot**

	Description	Standard service		Special service	
	Override type	Locking	Non-locking	Locking	Non-locking
	With override (120VAC)	<b>K175903553</b>	<b>K175803553</b>	<b>K185902553</b>	<b>K185802553</b>
With override (Other than 120VAC)	<b>K1753035**</b>	—	<b>K1853025**</b>	—	

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

**NEMA 1 & 12**

	Description	Standard service		Special service	
	Override type	Locking	Non-locking	Locking	Non-locking
	Basic with override	<b>K0653035**</b>	—	<b>K0853025**</b>	—

	JIC with junction box & override	<b>K0656035**</b>	<b>K0655035**</b>	<b>K0856025**</b>	<b>K0855025**</b>
	JIC pilot with junction box & override & indicator lights (120VAC Only)	<b>K0659035**</b>	<b>K0658035**</b>	<b>K0859025**</b>	<b>K0858025**</b>

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

**NEMA 4, 7 & 9**

	Description	Standard service		Special service	
	Override type	Locking	Non-locking	Locking	Non-locking
	Hazardous duty pilot - UL & CSA	<b>K0251035***</b>	—	<b>K0451025***</b>	—
NEMA 4 pilot	<b>K2351035***</b>	—	—	—	
	Hazardous duty with override	<b>K0253035***</b>	<b>K0252035***</b>	<b>K0453025***</b>	<b>K0452025***</b>
	NEMA 4 with override	—	<b>K2353035***</b>	<b>K2352035***</b>	—

† 49 / 53 only      \*\* Voltage code - (reference model index for availability)

**Service Kits**

Basic valve	Solenoid operated *						Remote pilot operated	
	Size	Series (prefix)	Standard service (intermittent duty)		Special service ** (continuous duty)		Single	Double 2 & 3-position
			Single	Double 2 & 3-position	Single	Double 2 & 3-position		
3/8"	L65	—	<b>K352126</b>	—	<b>K352127</b>	—	<b>K352355</b>	
	L66	—	<b>K352126</b>	—	<b>K352127</b>	—	<b>K352355</b>	
	L67	<b>K352124</b>	—	<b>K352125</b>	—	<b>K352362</b>	—	
	L68	—	<b>K352126</b>	—	<b>K352127</b>	—	<b>K352355</b>	
	L69	—	<b>K352126</b>	—	<b>K352127</b>	—	<b>K352355</b>	
	L70	<b>K352124</b>	—	<b>K352125</b>	—	<b>K352362</b>	—	
	L65	—	<b>K352130</b>	—	<b>K352131</b>	—	<b>K352360</b>	
1"	L66	—	<b>K352130</b>	—	<b>K352131</b>	—	<b>K352360</b>	
	L67	<b>K352128</b>	—	<b>K352129</b>	—	<b>K352359</b>	—	
	L68	—	<b>K352130</b>	—	<b>K352131</b>	—	<b>K352360</b>	
	L69	—	<b>K352130</b>	—	<b>K352131</b>	—	<b>K352360</b>	
	L70	<b>K352128</b>	—	<b>K352129</b>	—	<b>K352359</b>	—	

**Notes:**

\* Kits for solenoid operated valves include solenoid service kits.

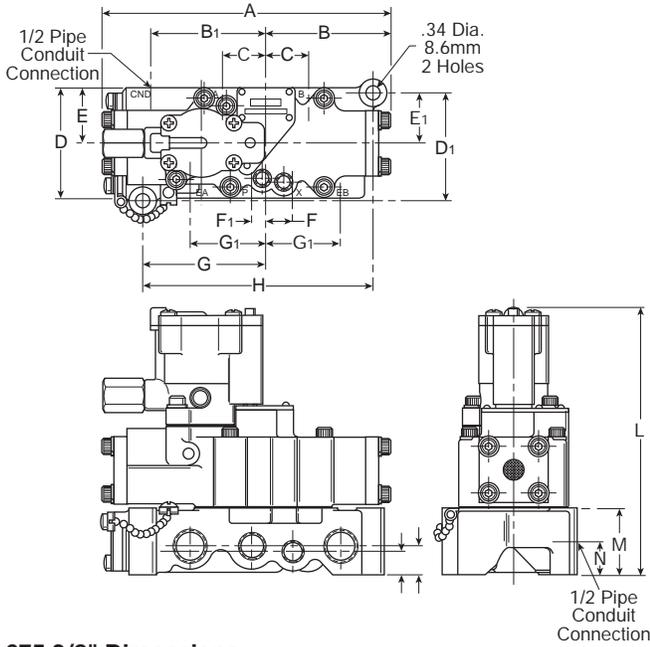
\*\* Special service (continuous duty) solenoids may be identified as having gold colored solenoid tops.



Modulflex Series  
 Isys Micro Series  
 Isys ISO Series  
 Fieldbus Series  
 DX ISOMAX Series  
 Valvair II Series  
**D**  
 Subbase & Manifold Valve Products



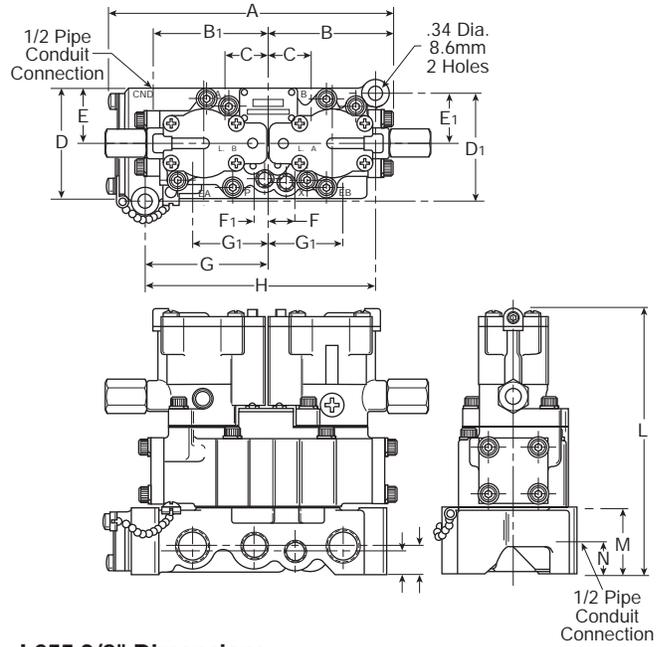
Modulflex Series  
 Isys Micro Series  
 Isys ISO Series  
 Fieldbus  
 DX ISOMAX Series  
 Valvair II Series  
**D**  
 Subbase & Manifold Valve Products



**L675 3/8" Dimensions**

A	B	B <sub>1</sub>	C	D	D <sub>1</sub>	E	E <sub>1</sub>	F
7.56 (192)	3.32 (84.3)	2.94 (74.7)	1.12 (28.4)	2.88 (73.2)	2.84 (72.1)	1.44 (36.6)	1.34 (34)	.75 (19.1)
F <sub>1</sub>	G	G <sub>1</sub>	H	J	K	L	M	N
.38 (9.7)	3.16 (80.3)	2.00 (50.8)	6.03 (153.2)	.75 (19.1)	.62 (15.7)	6.93 (176)	1.75 (44.5)	1.00 (25.4)

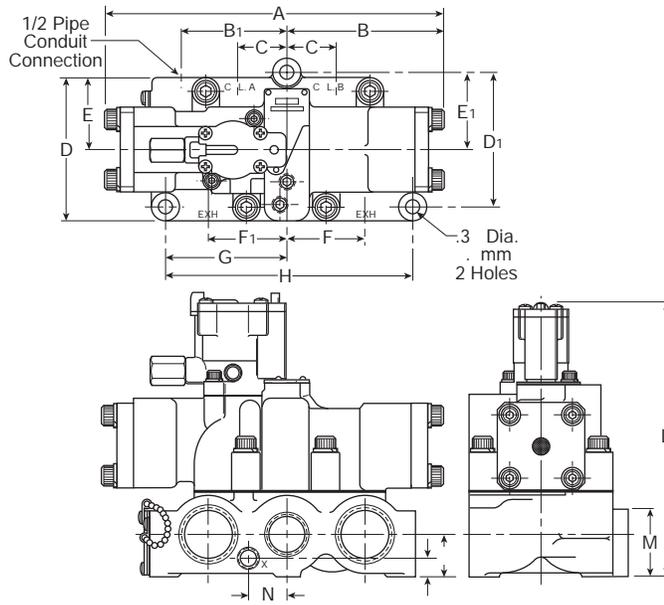
Inches (mm)



**L655 3/8" Dimensions**

A	B	B <sub>1</sub>	C	D	D <sub>1</sub>	E	E <sub>1</sub>	F
7.38 (187.5)	3.32 (84.3)	2.94 (74.7)	1.12 (28.4)	2.88 (73.2)	2.84 (72.1)	1.44 (36.6)	1.34 (34)	.75 (19.1)
F <sub>1</sub>	G	G <sub>1</sub>	H	J	K	L	M	N
.38 (9.7)	3.16 (80.3)	2.00 (50.8)	6.03 (153.2)	.75 (19.1)	.62 (15.7)	6.93 (176)	1.75 (44.5)	1.00 (25.4)

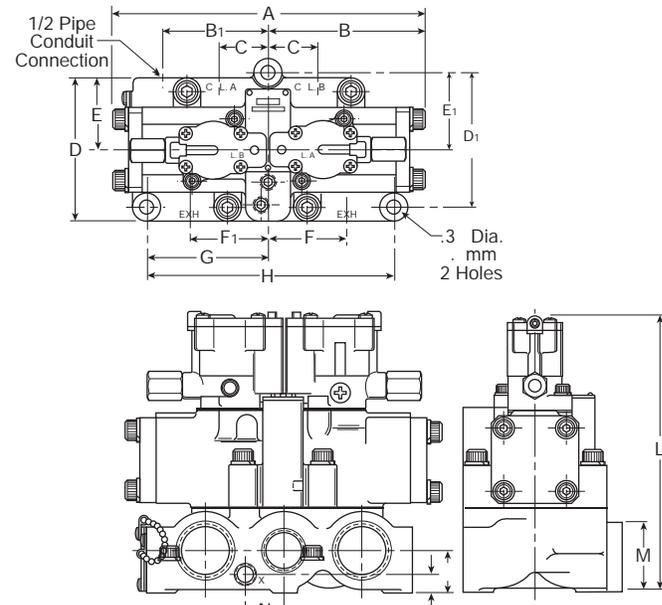
Inches (mm)



**L675 1" Dimensions**

A	B	B <sub>1</sub>	C	D	D <sub>1</sub>	E	E <sub>1</sub>	F
10.46 (265.7)	4.75 (120.6)	2.94 (74.7)	3.38 (85.8)	4.56 (115.8)	4.28 (108.7)	2.28 (57.9)	2.44 (62)	2.45 (62.2)
F <sub>1</sub>	G	H	J	K	L	M	N	
2.46 (62.5)	3.81 (96.8)	7.62 (193.5)	1.31 (33.3)	.59 (15)	8.74 (222)	2.09 (53.1)	1.22 (31)	

Inches (mm)

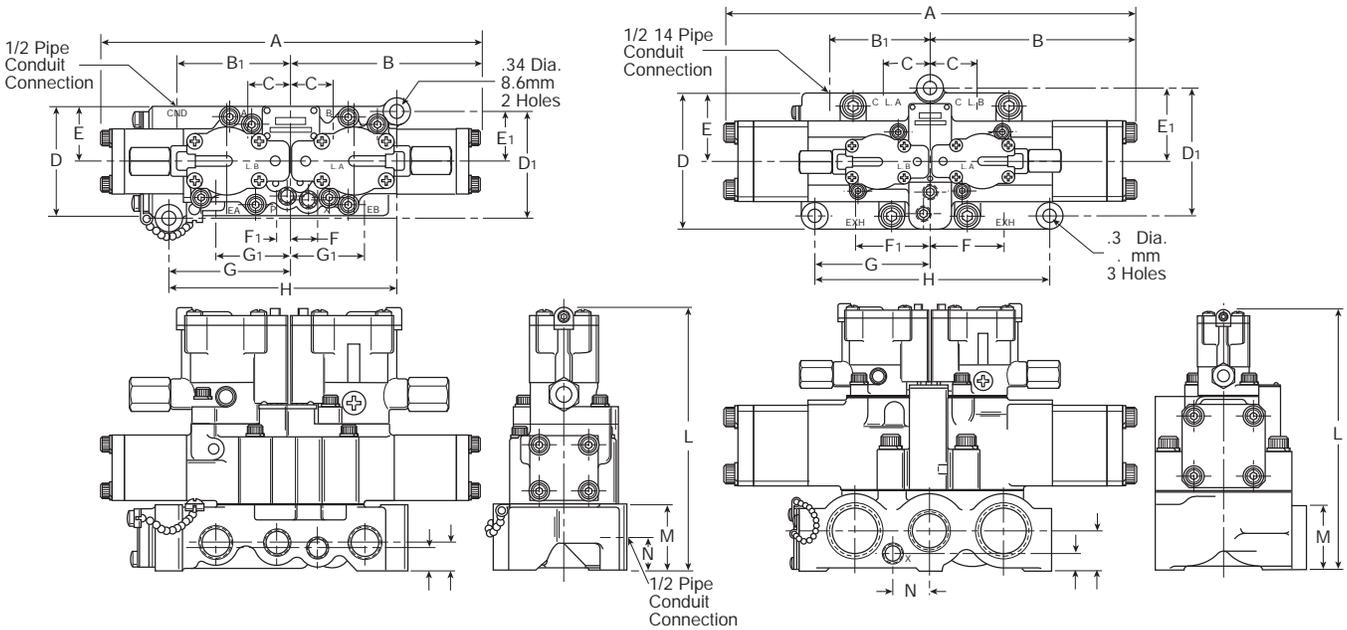


**L655 1" Dimensions**

A	B	B <sub>1</sub>	C	D	D <sub>1</sub>	E	E <sub>1</sub>	F
9.50 (241.3)	4.75 (120.6)	3.38 (85.8)	1.53 (38.9)	4.56 (115.8)	4.28 (108.7)	2.28 (57.9)	2.44 (62)	2.45 (62.2)
F <sub>1</sub>	G	H	J	K	L	M	N	
2.46 (62.5)	3.81 (96.8)	7.62 (193.5)	1.31 (33.3)	.59 (15)	8.74 (222)	2.09 (53.1)	1.22 (31)	

Inches (mm)





**L665 3/8" Dimensions**

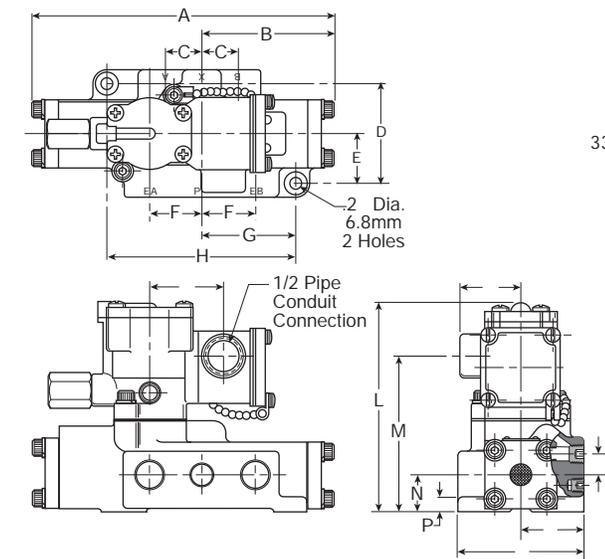
A	B	B <sub>1</sub>	C	D	D <sub>1</sub>	E	E <sub>1</sub>	F
9.64	4.82	2.94	1.12	2.88	2.84	1.44	1.34	.75
(244.8)	(122.4)	(74.7)	(28.4)	(73.2)	(72.1)	(36.6)	(34)	(19.1)
F <sub>1</sub>	G	G <sub>1</sub>	H	J	K	L	M	
.38	3.16	2.00	6.03	.75	.62	6.93	1.00	
(9.7)	(80.3)	(50.8)	(153.2)	(19.1)	(15.7)	176	(25.4)	

Inches (mm)

**L665 1" Dimensions**

A	B	B <sub>1</sub>	C	D	D <sub>1</sub>	E	E <sub>1</sub>	F
13.62	6.81	3.38	1.53	4.56	4.28	2.28	2.44	2.45
(345.9)	(173)	(85.8)	(38.9)	(115.8)	(108.7)	(57.9)	(62)	(62.2)
F <sub>1</sub>	G	H	J	K	L	M	N	
2.46	3.81	7.62	1.31	.59	8.74	2.09	1.22	
(62.5)	(96.8)	(193.5)	(33.3)	(15)	(222)	(53.1)	(31)	

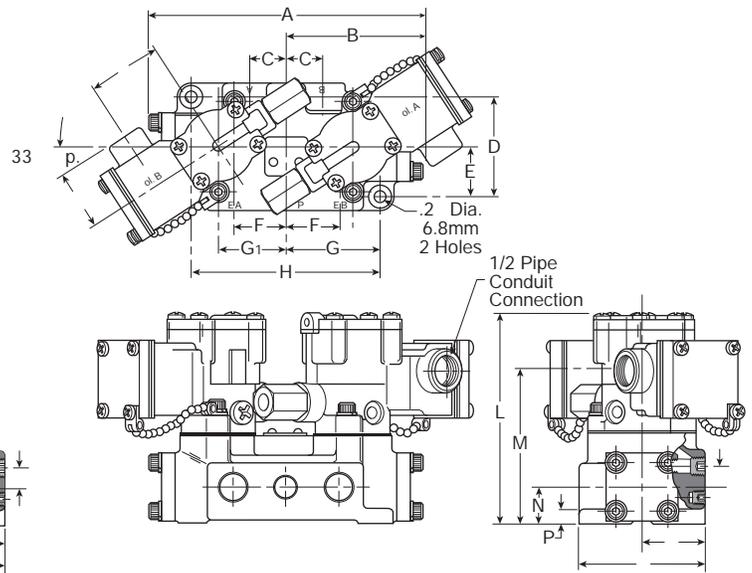
Inches (mm)



**L705 3/8" Dimensions**

A	B	C	D	E	F	G	H	J
7.56	3.32	.90	2.56	1.28	1.33	2.34	4.69	1.82
(192)	(84.3)	(22.9)	(65)	(32.5)	(33.8)	(59.4)	(119.1)	(46.2)
K	L	M	N	P	Q	R	S	
1.50	5.35	3.91	.94	.38	.53	1.62	3.25	
(38.1)	(135.9)	(99.3)	(23.9)	(9.7)	(13.5)	(41.1)	(82.6)	

Inches (mm)



**L685 3/8" Dimensions**

A	B	C	D	E	F	G	G <sub>1</sub>	H
7.56	3.32	.90	2.56	1.28	1.33	2.34	1.66	4.69
(192)	(84.3)	(22.9)	(65)	(32.5)	(33.8)	(59.4)	(42.4)	(119.1)
J	K	L	M	N	P	Q	R	S
1.82	1.50	5.35	3.91	.94	.38	.53	1.62	3.25
(46.2)	(38.1)	(135.9)	(99.3)	(23.9)	(9.7)	(13.5)	(41.1)	(82.6)

Inches (mm)

Modulflex Series

Isys Micro Series

Isys ISO Series

Fieldbus

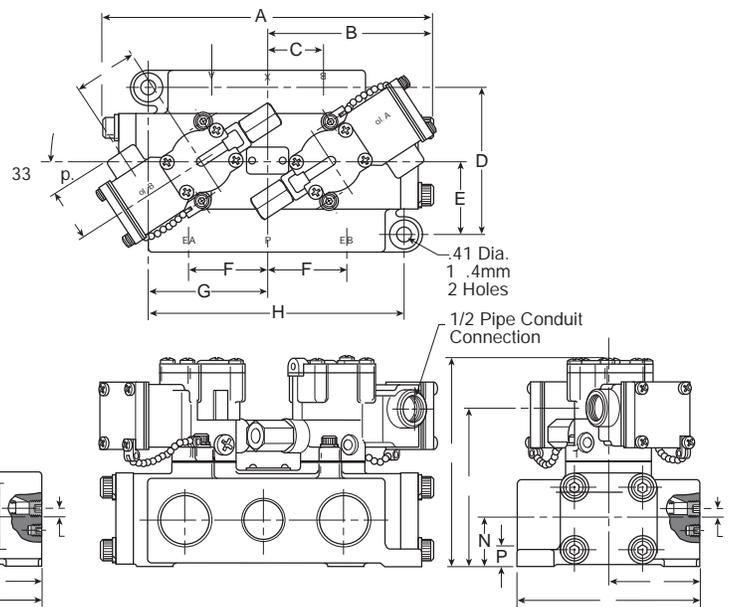
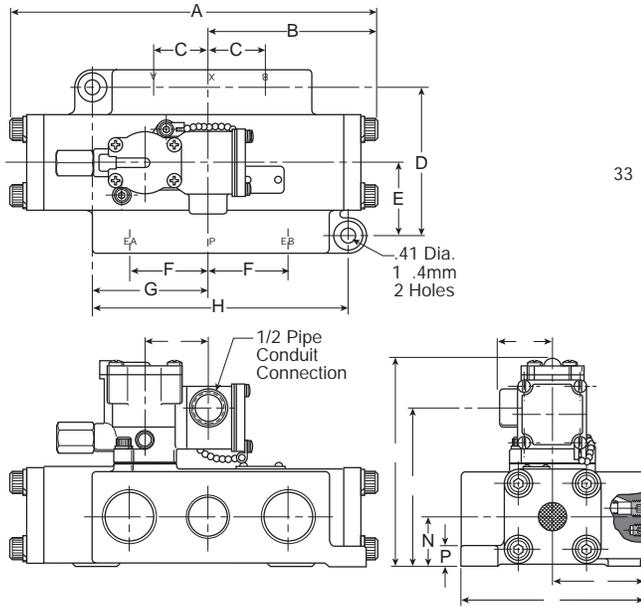
DX ISOMAX Series

Valvair II Series

**D**

Subbase & Manifold Valve Products





**L705 1" Dimensions**

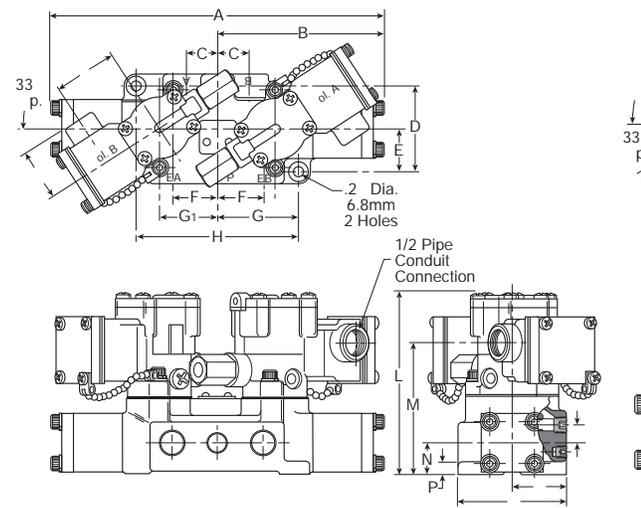
A	B	C	D	E	F	G	H	J
10.46	4.75	1.62	4.25	2.12	2.19	3.44	7.44	1.82
(265.7)	(120.6)	(41.1)	(108)	(53.8)	(55.6)	(87.4)	(189)	(46.2)
K	L	M	N	P	Q	R	S	
1.50	6.44	4.95	1.50	.69	.20	2.62	5.25	
(38.1)	(163.6)	(125.7)	(38.1)	(17.5)	(5.1)	(66.5)	(133.4)	

Inches (mm)

**L685 1" Dimensions**

A	B	C	D	E	F	G	H	J
9.50	4.75	1.62	4.25	2.12	2.19	3.44	7.44	1.82
(241.3)	(120.6)	(41.1)	(108)	(53.8)	(55.6)	(87.4)	(189)	(46.2)
K	L	M	N	P	Q	R	S	
1.50	6.44	4.95	1.50	.69	.20	2.62	5.25	
(38.1)	(163.6)	(125.7)	(38.1)	(17.5)	(5.1)	(66.5)	(133.4)	

Inches (mm)



**L695 3/8" Dimensions**

A	B	C	D	E	F	G	G1	H
9.64	4.82	.90	2.56	1.28	1.33	2.34	1.66	4.69
(244.8)	(122.4)	(22.9)	(65)	(32.5)	(33.8)	(59.4)	(42.4)	(119.1)
J	K	L	M	N	P	Q	R	S
1.82	1.50	5.35	3.91	.94	.38	.53	1.62	3.25
(46.2)	(38.1)	(135.9)	(99.3)	(23.9)	(9.7)	(13.5)	(41.1)	(82.6)

Inches (mm)

**L695 1" Dimensions**

A	B	C	D	E	F	G	H	J
13.63	6.81	1.62	4.25	2.12	2.19	3.44	7.44	1.82
(346.2)	(173)	(41.1)	(108)	(53.8)	(55.6)	(87.4)	(189)	(46.2)
K	L	M	N	P	Q	R	S	
1.50	6.44	4.95	1.50	.69	.20	2.62	5.25	
(38.1)	(163.6)	(125.7)	(38.1)	(17.5)	(5.1)	(66.5)	(133.4)	

Inches (mm)



**Plug-in Manifold, 3/8" Basic**

- K142230 .....Cylinder ports 3/8" NPTF
- K142231 .....Cylinder ports 1/2" NPTF
- K142270 .....Cylinder ports 3/4" NPTF
  - Exhaust port..... 1" NPTF
  - Inlet port..... 1" NPTF
  - Conduit port..... 1-1/4" NPTF

**Note:** Manifold assemblies include mounting hardware.

Modulflex Series
Isys Micro Series
Isys ISO Series
Fieldbus
DX ISOMAX Series
Valvair II Series
<b>D</b>
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