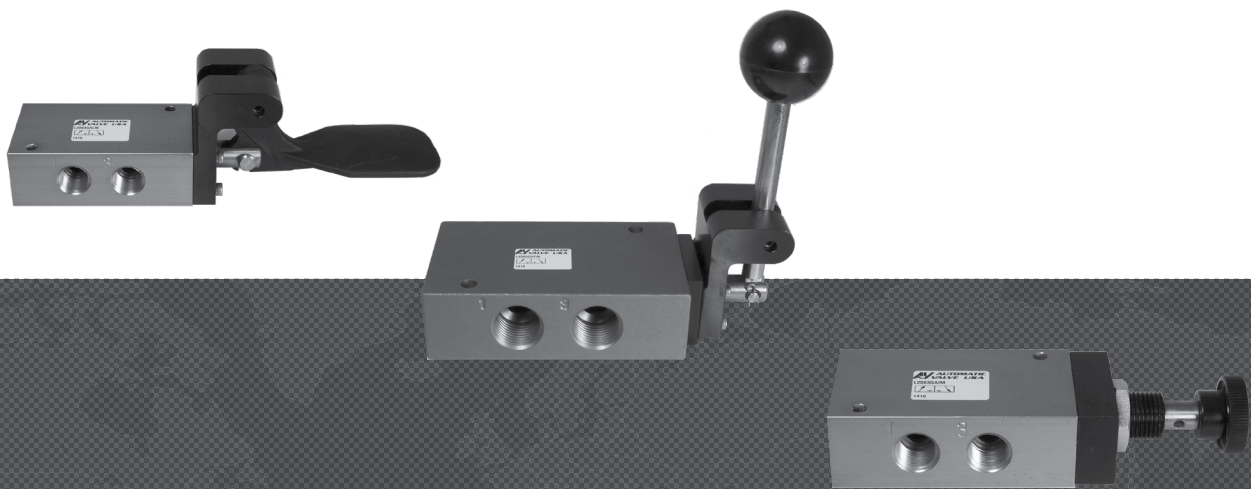


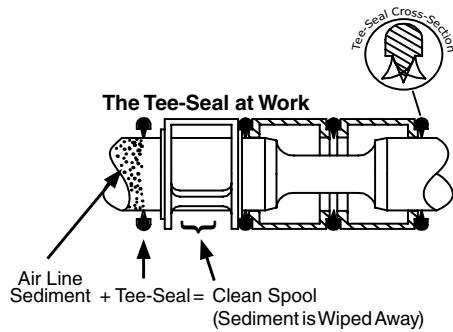
AV Automatic Valve
A ROSS CONTROLS Company

MANUAL AND MECHANICAL VALVES



AUTOMATIC VALVE INDUSTRIAL

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Valves

- Proven design with over 25 years OEM experience
- Many options available to meet your requirements including:
 - Stainless Steel
 - Fluoroelastomer Seals
- Easily converted from 4-way to 3-way operation
- Specific application needs? Consult AVI.

We will build it for you.



Tapered Tee-Seal Eats Dirt

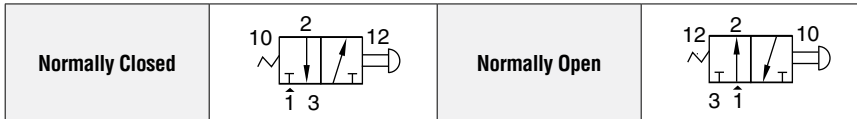
- Bidirectional tapered Tee-Seal eliminates sticking problems
 - Flexes to clean spool
 - Mechanically Locked
 - No Spiral Twist
 - No Extrusion
 - Air Line Sediment is Wiped Away.
- Tested tough and proven reliable according to SAE specifications: Rust and water injected every 864,000 cycles for 20-million cycles.

3-Way Compact Manual Valves Palm Button

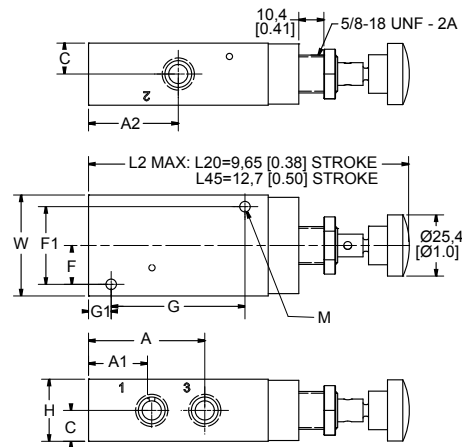
L20, L45 Series

3-Way 2-Position Valves

Port Size	Operator Type	Series Size	Valve Model Number*		Flow l/min (Cv)	Weight kg (lb)
			Normally Closed	Normally Open		
1/4	Spring Return	L20	L2003GAIR	L2003HAIR	1770 (1.8)	0.4 (0.9)
3/8	Spring Return	L20	L2004GAIR	L2004HAIR		
1/2	Spring Return	L45	L4505GAIR	L4505HAIR	3940 (4.0)	0.9 (1.9)



Valve Dimensions



Dimensions - mm (inches)

Series	A	A1	A2	C	F	F1	G	G1	H	M	W
L20	48.2 (1.90)	26.2 (1.03)	37.3 (1.47)	12.7 (0.50)	16.1 (0.64)	32.3 (1.27)	55.6 (2.19)	9.7 (0.38)	25.4 (1.00)	4.3 (0.17)	41.9 (1.65)
L45	69.1 (2.72)	39.3 (1.47)	53.1 (2.09)	16.0 (0.63)	23.9 (0.94)	47.8 (1.88)	69.8 (2.75)	18.3 (0.72)	31.8 (1.25)	6.6 (0.26)	63.5 (2.50)

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads	l/min (Cv)	Length	Hex Size mm (in)	
	1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
3/8	Male	84D-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)	
1/2	Male	84D-5	6080 (6.8)	69.0 (2.72)	22.2 (7/8)	0.11 (0.25)	

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		Seals: Buna-N
Flow Media	Filtered air		

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



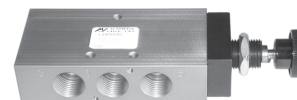
5-Way Compact Manual Valves

Palm Button

L20 Series

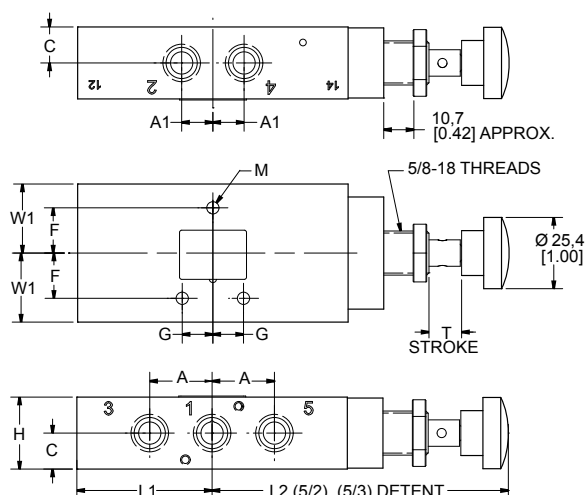
5-Way 2-Position Valves

Port Size		Operator Type	Series	Valve Model Number*	Flow l/min (Cv)	Weight kg (lb)
1, 2, 4	3, 5					
1/4	1/4	Spring Return	L20	L2003AAIR	1770 (1.8)	0.41 (0.9)
		Detented	L20	L2003BAIM		
3/8	3/8	Spring Return	L20	L2004AAIR		
		Detented	L20	L2004BAIM		



Spring Return		Detented	
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Valve Dimensions



Dimensions - mm (inches)

A	A1	C	F	G	H	H1	H2	L1	L2	L3	M	T	W1
22.2 (0.88)	11.1 (0.44)	12.7 (0.50)	16.1 (0.64)	10.9 (0.43)	25.4 (1.00)	136 (5.35)	140 (5.50)	48.2 (1.90)	105 (4.14)	105 (4.14)	4.4 (0.17)	9.5 (0.38)	24.6 (0.97)

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
3/8	Male	84D-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)	

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		Seals: Buna-N
Flow Media	Filtered air		

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way Top Mount Manual Valves

Palm Button

L05, L21, L45 Series

5-Way 2-Position Valves

Port Size		Operator Type	Series	Valve Model Number*	Flow l/min (Cv)	Weight kg (lb)
1, 2, 4	3, 5					
1/8	M5	Spring Return	L05	L0502AAIR	390 (0.4)	12.0 (0.4)
1/4	1/4	Detented	L21	L2103BAIM	1770 (1.8)	0.5 (1.1)
		Spring Return	L21	L2103AAIR		
1/2	1/2	Detented	L45	L4505BAIM	4755 (4.8)	0.96 (2.1)
		Spring Return	L45	L4505BAIR		

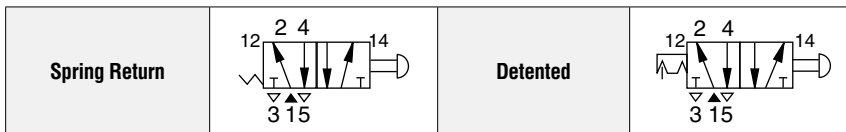
L05 Series



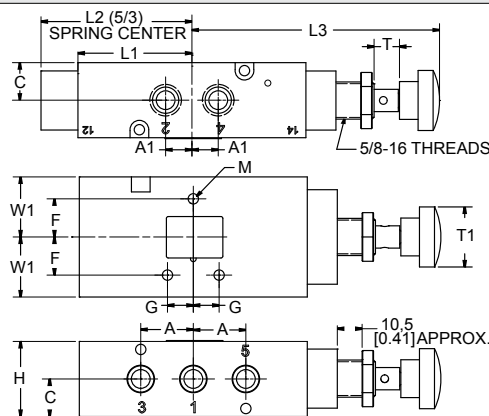
L21 Series



L45 Series



Valve Dimensions



Dimensions - mm (inches)

Series	A	A1	C	F	G	H	L1	L2	L3	L4	L5	L5	M	T	T1	W1
L05	11.1 (0.44)	7.3 (0.29)	9.6 (0.38)	9.6 (0.38)	33.2 (1.31)	19.1 (0.75)	28.2 (1.11)	-	42.2 (1.66)	-	-	-	4.5 (0.18)	4.8 (0.19)	16.0 (0.63)	19.1 (0.75)
L21	22.2 (0.88)	11.1 (0.44)	16.0 (0.63)	16.1 (0.64)	10.9 (0.43)	31.7 (1.25)	48.2 (1.90)	64.0 (2.52)	106 (4.16)	105 (4.14)	137 (5.39)	138 (5.41)	4.4 (0.17)	9.5 (0.38)	25.4 (1.00)	25.4 (1.00)
L45	34.5 (1.36)	34.5 (1.36)	21.0 (0.83)	19.0 (0.75)	17.3 (0.68)	42.2 (1.66)	69.0 (2.72)	99.3 (3.91)	127 (5.00)	126 (4.96)	143 (5.64)	143 (5.63)	6.7 (0.27)	12.7 (0.50)	25.4 (1.00)	31.8 (1.25)

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
1/2	Male	84D-5	6080 (6.8)	69.0 (2.72)	22.2 (7/8)	0.11 (0.25)	

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	Top mount	Construction Material	Valve Body: Bar Stock Aluminum
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		Seals: Buna-N
Flow Media	Filtered air		

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



3-Way Compact Manual Valves Hand Lever

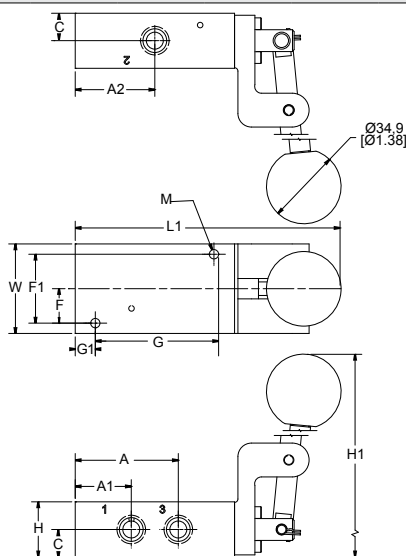
L20, L45 Series

3-Way 2-Position Valves

Port Size	Operator Type	Series	Valve Model Number*		Flow l/min (Cv)	Weight kg (lb)
			Normally Closed	Normally Open		
1/4	Spring Return	L20	L2003GAFR	L2003HAFR	1770 (1.8)	0.4 (0.9)
3/8	Spring Return	L20	L2004GAFR	L2004HAFR		
1/2	Spring Return	L45	L4505GAFR	L4505HAFR	3940 (4.0)	0.9 (1.9)



Valve Dimensions



Dimensions - mm (inches)

Series	A	A1	A2	C	F	F1	G	G1	H	H1	H2	L1	L3	M	W
L20	48.2 (1.90)	26.2 (1.03)	37.3 (1.47)	12.7 (0.50)	16.1 (0.64)	32.3 (1.27)	55.6 (2.19)	9.7 (0.38)	25.4 (1.00)	136 (5.35)	53.3 (2.10)	129 (5.09)	182 (7.16)	4.3 (0.17)	41.9 (1.65)
L45	69.1 (2.72)	39.3 (1.47)	53.1 (2.09)	16.0 (0.63)	23.9 (0.94)	47.8 (1.88)	69.8 (2.75)	18.3 (0.72)	31.8 (1.25)	139 (5.47)	56.3 (2.22)	168 (6.62)	214 (8.42)	6.6 (0.26)	63.5 (2.50)

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	14	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
3/8	Male	84D-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)	
1/2	Male	84D-5	6080 (6.8)	69.0 (2.72)	22.2 (7/8)	0.11 (0.25)	

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum Seals: Buna-N
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		
Flow Media	Filtered air		

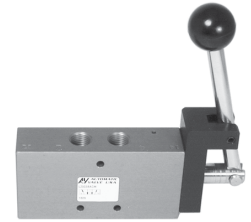
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way Compact Manual Valves Hand Lever

L20 Series

5-Way 2-Position Valves

Port Size		Mounting	Series	Valve Model Number		Flow l/min (Cv)	Weight lb (kg)
1, 2, 4	3, 5			Spring Return	Detented		
1/4	1/4	In-line	L20	L2003AAFR	L2003BAFM	1770 (1.8)	0.7 (1.1)
		Manifold	L20	L2003AAGR	L2003BAGM		
3/8	3/8	In-line	L20	L2004AAFR	L2004BAFM	1770 (1.8)	0.7 (1.1)
		Manifold	L20	L2004AAGR	L2004BAGM		



L20 Series Manifold Mounting

Spring Return		Detented	
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Valve dimensions, see page 8.

5-Way 3-Position Valves

Port Size		Mounting	Operator Type	Series	Valve Model Number		
1, 2, 4	3, 5				Closed Center	Open Center	Power Center
1/4	1/4	In-line	Spring Center	L20	L2003CBFC	L2003DBFC	L2003EBFC
			Detented	L20	L2003CAFN	L2003DAFN	L2003EAFN
		Manifold	Spring Center	L20	L2003CBGC	L2003DBGC	L2003EBGC
			Detented	L20	L2003CAGN	L2003DAGN	L2003EAGN
3/8	3/8	In-line	Spring Center	L20	L2004CBFC	L2004DBFC	L2004EBFC
			Detented	L20	L2004CAFN	L2004DAFN	L2004EAFN
		Manifold	Spring Center	L20	L2004CBGC	L2004DBGC	L2004EBGC
			Detented	L20	L2004CAGN	L2004DAGN	L2004EAGN



L20 Series In-line Mounting

Actuator	Closed Center	Open Center	Power Center
Spring Return			
Detented			

Port Size		Flow l/min (Cv)	Weight kg (lb)
1, 2, 4	3, 5		
1/4	1/4	1381 (1.4)	0.7 (1.1)
3/8	3/8		

Valve dimensions, see page 8.

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads	l/min (Cv)	Length	Hex Size mm (in)	
	1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
	3/8	Male	84D-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



Manifolds and Manifold Accessories, see page 15.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum Seals: Buna-N
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		
Flow Media	Filtered air		

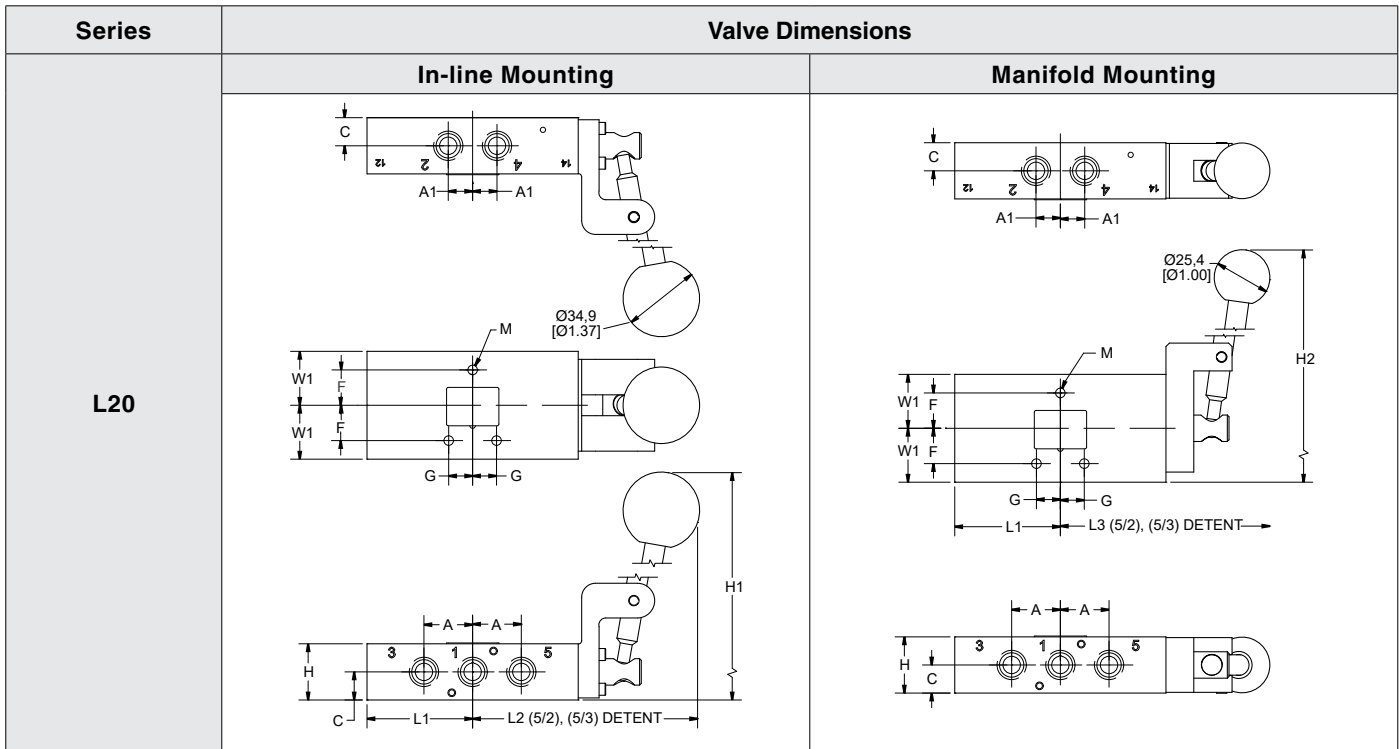
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



5-Way Compact Manual Valves

Hand Lever – Technical Data

L20 Series



Dimensions - mm (inches)

Series	A	A1	C	F	G	H	H1	H2	L1	L2	L3	M	T	T1	W1
L20	22.2 (0.88)	11.1 (0.44)	12.7 (0.50)	16.1 (0.64)	10.9 (0.43)	25.4 (1.00)	136 (5.35)	140 (5.50)	48.2 (1.90)	105 (4.14)	105 (4.14)	4.4 (0.17)	9.5 (0.38)	-	24.6 (0.97)

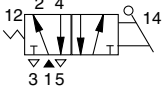
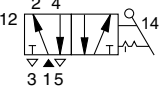
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way Top Mount Manual Valves Hand Lever

L21, L45 Series

5-Way 2-Position Valves

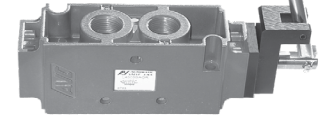
Port Size		Mounting	Series	Valve Model Number		Flow l/min (Cv)	Weight lb (kg)
1, 2, 4	3, 5			Spring Return	Detented		
1/4	1/4	Top	L21	L2103AAFR	L2103AAFM	1770 (1.8)	0.50 (1.1)
		Manifold		L2103AAGR	L2103BAGM		
1/2	1/2	Top	L45	L4505BAFR	L4505BAFM	4755 (4.8)	0.96 (2.1)
		Manifold		L4505BAGR	L4505BAGM		

Spring Return		Detented	
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Valve dimensions, see page 10.



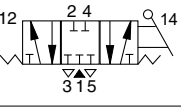
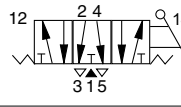
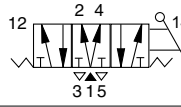
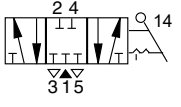
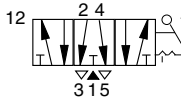
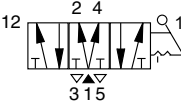
L21 Series Top Mounting



L45 Series Manifold Mounting

5-Way 3-Position Valves

Port Size		Mounting	Operator Type	Series	Valve Model Number			Flow l/min (Cv)	Weight kg (lb)
1, 2, 4	3, 5				Closed Center	Open Center	Power Center		
1/4	1/4	Top	Spring Center	L21	L2103CBFC	L2103DBFC	L2103EBFC	1381 (1.4)	0.5 (1.1)
			Detented	L21	L2103CAFN	L2103DAFN	L2103EAFN		
		Manifold	Spring Center	L21	L2103CBGC	L2103DBGC	L2103EBGC	1381 (1.4)	0.5 (1.1)
			Detented	L21	L2103CAGN	L2103DAGN	L2103EAGN		
1/2	1/2	Top	Spring Center	L45	L4505CBFC	L4505DBFC	L4505EBFC	3709 (3.7)	1.00 (2.1)
			Detented	L45	L4505CAFN	L4505DAFN	L4505EAFN		
		Manifold	Spring Center	L45	L4505CBGC	L4505DBGC	L4505EBGC	3709 (3.7)	1.00 (2.1)
			Detented	L45	L4505CAGN	L4505DAGN	L4505EAGN		

Actuator	Closed Center	Open Center	Power Center
Spring Center			
Detented			

Valve dimensions, see page 10.



L21 Series Manifold Mounting



L45 Series Top Mounting

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
	1/2	Male	84D-5	6080 (6.8)	69.0 (2.72)	22.2 (7/8)	0.11 (0.25)

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. Flow Media: Filtered air.

Additional options available, see page 16.



Manifolds and Manifold Accessories, see page 15.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	Top mount	Construction Material	Valve Body: Bar Stock Aluminum Seals: Buna-N
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		
Flow Media	Filtered air		

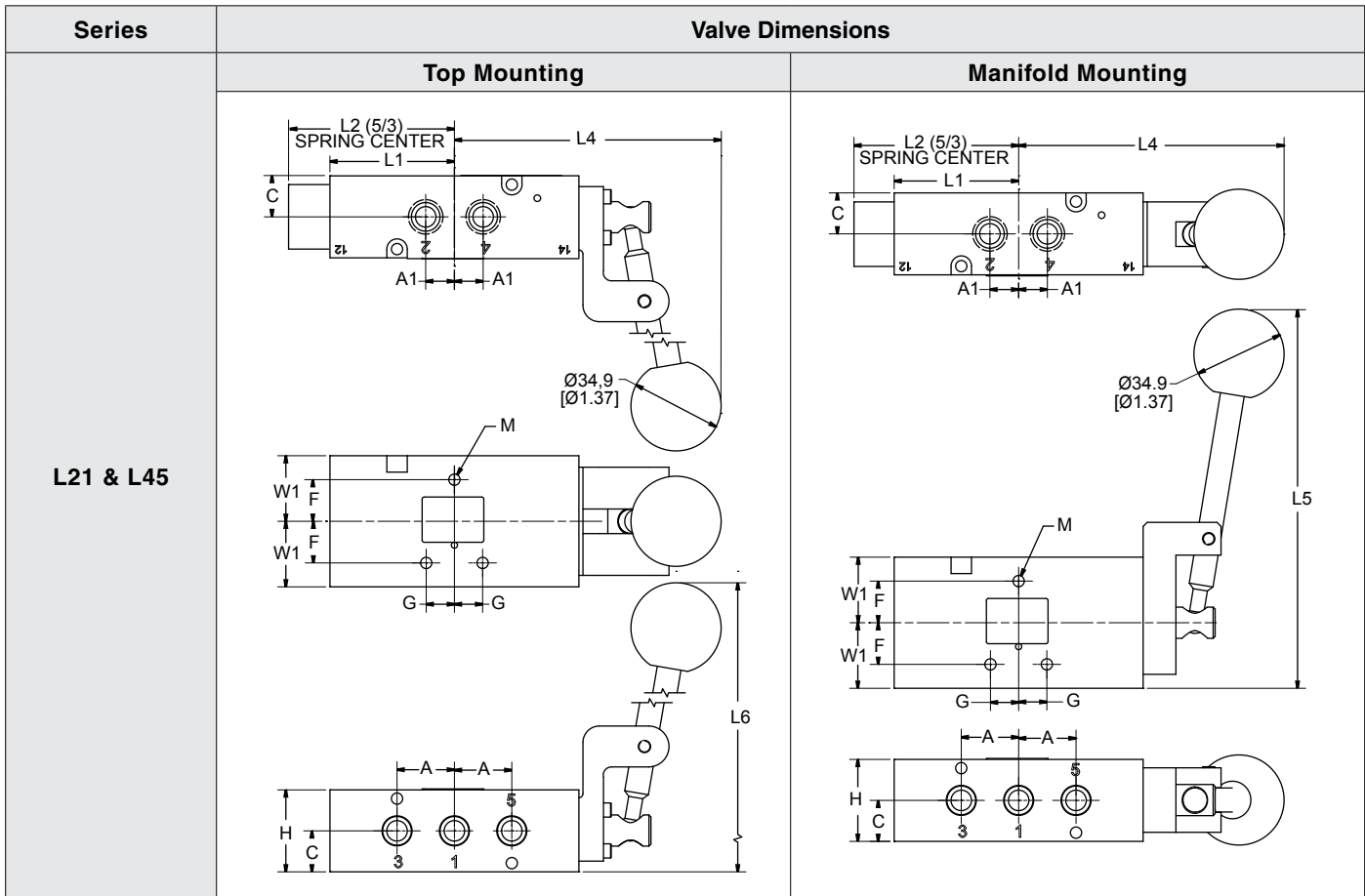
IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



5-Way Top Mount Manual Valves

Hand Lever – Technical Data

L21, L45 Series



Dimensions - mm (inches)

Series	A	A1	C	F	G	H	L1	L2	L3	L4	L5	L6	M	T	T1	W1
L21	22.2 (0.88)	11.1 (0.44)	16.0 (0.63)	16.1 (0.64)	10.9 (0.43)	31.7 (1.25)	48.2 (1.90)	64.0 (2.52)	106 (4.16)	105 (4.14)	137 (5.39)	138 (5.41)	4.4 (0.17)	9.5 (0.38)	25.4 (1.00)	25.4 (1.00)
L45	34.5 (1.36)	34.5 (1.36)	21.0 (0.83)	19.0 (0.75)	17.3 (0.68)	42.2 (1.66)	69.0 (2.72)	99.3 (3.91)	127 (5.00)	126 (4.96)	143 (5.64)	143 (5.63)	6.7 (0.27)	12.7 (0.50)	25.4 (1.00)	31.8 (1.25)

3-Way Compact Manual Valves Foot Pedal

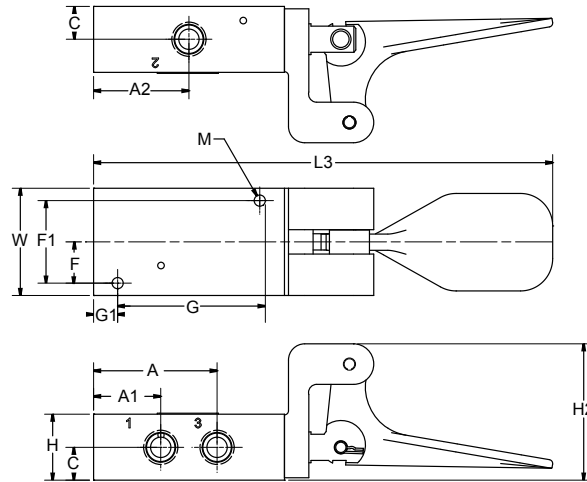
L20, L45 Series

3-Way 2-Position Valves

Port Size	Operator Type	Series	Valve Model Number*		Flow l/min (Cv)	Weight kg (lb)
			Normally Closed	Normally Open		
1/4	Spring Return	L20	L2003GAKR	L2003HAKR	1770 (1.8)	0.4 (0.9)
3/8	Spring Return	20	L2004GAKR	L2004HAKR		
1/2	Spring Return	45	L4505GAKR	L4505HAKR	3940 (4.0)	0.9 (1.9)



Valve Dimensions



Dimensions - mm (inches)

Series	A	A1	A2	C	F	F1	G	G1	H	H1	H2	L1	L3	M	W
L20	48.2 (1.90)	26.2 (1.03)	37.3 (1.47)	12.7 (0.50)	16.1 (0.64)	32.3 (1.27)	55.6 (2.19)	9.7 (0.38)	25.4 (1.00)	136 (5.35)	53.3 (2.10)	129 (5.09)	182 (7.16)	4.3 (0.17)	41.9 (1.65)
L45	69.1 (2.72)	39.3 (1.47)	53.1 (2.09)	16.0 (0.63)	23.9 (0.94)	47.8 (1.88)	69.8 (2.75)	18.3 (0.72)	31.8 (1.25)	139 (5.47)	56.3 (2.22)	168 (6.62)	214 (8.42)	6.6 (0.26)	63.5 (2.50)

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	1/8	Male	84D-1	1160 (1.3)	34.9 (1.38)	11.1 (7/16)	0.05 (0.10)
1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)	
1/2	Male	84D-5	6080 (6.8)	69.0 (2.72)	22.2 (7/8)	0.11 (0.25)	

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum Seals: Buna-N
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		
Flow Media	Filtered air		

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



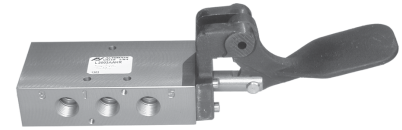
5-Way Compact Manual Valves

Foot Pedal & Foot Treadle

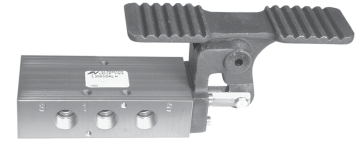
L20 Series

5-Way 2-Position Valves

Port Size		Actuator Type	Series	Valve Model Number		Flow l/min (Cv)	Weight lb (kg)
1, 2, 4	3, 5			Spring Return	Detented		
1/4	1/4	Foot Pedal	L20	L2003AAKR	–	1770 (1.8)	0.7 (1.1)
		Foot Treadle		L2003AALR	L2003BALM		
3/8	3/8	Foot Pedal	L20	L2004AAKR	–	1770 (1.8)	0.7 (1.1)
		Foot Treadle		L2004AALR	L2004BALM		



L20 Series Foot Pedal



L20 Series Foot Treadle

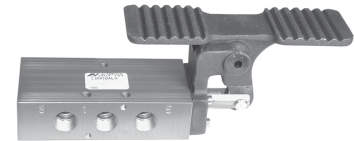
Spring Return	Detented

Valve dimensions, see page 13.

5-Way 3-Position Valves

Port Size		Actuator Type	Operator Type	Series	Valve Model Number			Flow l/min (Cv)	Weight kg (lb)
1, 2, 4	3, 5				Closed Center	Open Center	Power Center		
1/4	1/4	Foot Treadle	Spring Center	20	L2003CBLC	L2003DBLC	L2003EBLC	1381 (1.4)	0.7 (1.5)
			Detented	20	L2003CALN	L2003DALN	L2003EALN		
			Spring Center	20	L2003CBLC	L2003DBLC	L2003EBLC		
			Detented	20	L2003CALN	L2003DALN	L2003EALN		

Actuator	Closed Center	Open Center	Power Center
Spring Return			
Detented			



Valve dimensions, see page 13.

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	14	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
3/8	Male	84D-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)	

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

Additional options available, see page 16.



STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum Seals: Buna-N
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		
Flow Media	Filtered air		

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way Compact Manual Valves

Foot Pedal & Foot Treadle – Technical Data

L20 Series

Valve Type	Valve Dimensions
Foot Pedal	
Foot Treadle	

Dimensions - mm (inches)												
A	A1	C	F	G	H	H1	H2	L1	L2	L3	M	W1
22.2 (0.88)	11.1 (0.44)	12.7 (0.50)	16.1 (0.64)	10.9 (0.43)	25.4 (1.00)	52.4 (2.06)	85.7 (3.38)	48.2 (1.90)	161.0 (6.34)	137.2 (5.40)	4.4 (0.17)	24.6 (0.97)

IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

5-Way Mechanical Valves Cam Roller

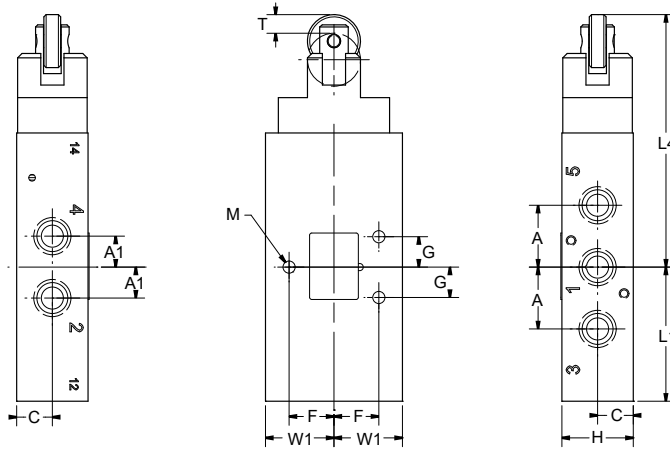
L20 Series

5-Way 2-Position Valves, In-line Mount

Port Size		Actuator Type	Series	Valve Model Number	Flow l/min (Cv)	Weight lb (kg)
1, 2, 4	3, 5					
1/4	1/4	Spring Return	L20	L2003AAJR	1770 (1.8)	0.3 (0.7)
3/8	3/8	Spring Return	L20	L2004AAJR		



Valve Dimensions



Dimensions - mm (inches)										
A	A1	C	F	G	H	L1	L4	M	T	W1
22.2 (0.88)	11.1 (0.44)	12.7 (0.50)	16.1 (0.64)	10.9 (0.43)	25.4 (1.00)	48.2 (1.90)	90.4 (3.56)	4.4 (0.17)	7.6 (0.30)	24.6 (0.97)

ACCESSORIES

Silencers	Port Size	Thread Type	Model Number	Flow l/min (Cv)	Dimensions inches (mm)		Weight lb (kg)
			NPT Threads		Length	Hex Size mm (in)	
	1/4	Male	84D-2	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	0.05 (0.10)
	3/8	Male	84D-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.


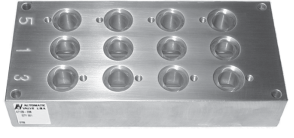

Additional options available, see page 16.

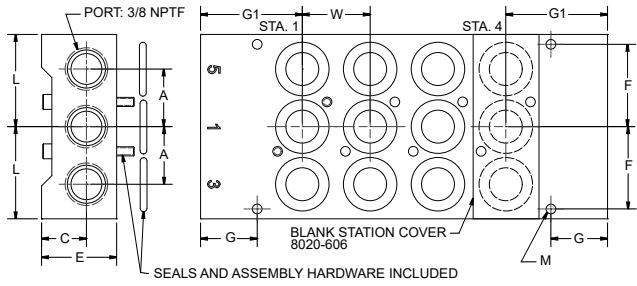
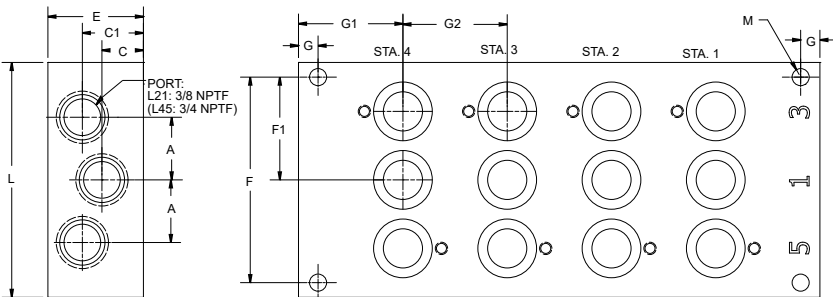


STANDARD SPECIFICATIONS (for valves on this page):

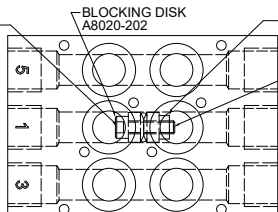
Construction Design	Spool	Operating Pressure	0 to 10.3 bar (0 to 150 psig)
Mounting Type	In-line	Construction Material	Valve Body: Bar Stock Aluminum
Temperature	Ambient/Media: -18° to 50°C (0° to 123°F)		Seals: Buna-N
Flow Media	Filtered air		




IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

Mounting	Valve Series	Port 3, 1, & 5	Manifold			Accessories		
			Number of Stations	Model Number	Weight kg (lb)	Blocking Disk	Blank Station Cover	
In-line	L20	3/8	2	A8020-002	0.4 (0.9)		A8020-202	A7204-027
			4	A8020-004	0.9 (2.0)			
			6	A8020-006	1.3 (3.0)			
			8	A8020-008	1.8 (3.9)			
			10	A8020-010	2.2 (4.9)			
Top	L21	3/8	2	A8023-012	0.4 (0.9)		A8020-202	A7206-603
			4	A8023-014	0.9 (2.0)			
			6	A8023-016	1.3 (3.0)			
			8	A8023-018	1.8 (3.9)			
			10	A8023-010	2.2 (4.9)			
	L45	3/4	2	A7128-232	1.1 (2.5)		-	A7128-229
			4	A7128-234	1.8 (4.0)			
			6	A7128-236	2.7 (5.9)			
			8	A7128-238	3.3 (7.8)			
			10	A7128-240	4.3 (9.6)			

Mounting	Series	Manifold Dimensions
Inline	L20	 <p>PORT: 3/8 NPTF</p> <p>SEALS AND ASSEMBLY HARDWARE INCLUDED</p> <p>BLANK STATION COVER 8020-606</p>
Top	L21 & L45	 <p>PORT: L21: 3/8 NPTF L45: 3/4 NPTF</p>

Dimensions - mm (inches)													
Mounting	Series	A	C	C1	E	F	F1	G	G1	G2	L	M	W
In-line	20	22.2 (0.88)	17.3 (0.68)	-	31.8 (1.25)	31.8 (1.25)	-	21.8 (0.86)	39.3 (1.55)	-	35.6 (1.40)	3.7 (0.15)	26.2 (1.03)
Top	21	20.3 (0.80)	13.4 (0.53)	19.8 (0.78)	30.9 (1.22)	66.5 (2.62)	33.3 (1.31)	6.4 (0.25)	33.8 (1.33)	33.8 (1.33)	76.2 (3.00)	5.6 (0.22)	-
	45	40.1 (1.58)	19.3 (0.76)	30.0 (1.18)	50.8 (2.00)	38.1 (1.50)	19.1 (0.75)	13.9 (0.55)	43.4 (1.71)	43.4 (1.71)	117 (4.60)	8.6 (0.34)	-

Blocking Disk
 <p>USE "T" HANDLE WRENCH ON SCREW (M5) END</p> <p>BLOCKING DISK A8020-202</p> <p>USE TORQUE WRENCH ON HEX NUT END</p> <p>TORQUE 6.21-7.34 N-M (55-65 IN-LBS) ±10%</p>

EXHAUST SILENCERS								
Type	Port Size	Model Number	Flow l/min (Cv)	Dimensions mm (inches)		Weight kg (lb)	Description	
				Length	Hex Size			
Aluminum	1/4	84C-2	2060 (2.3)	2060 (2.3)	44.5 (1.75)	14.3 (9/16)	<ul style="list-style-type: none"> Reduces exhaust noise level in air systems Maintains full volume air flow with minimum back pressure Threads into exhaust port 	
	3/8	84C-3	4380 (4.9)	57.3 (2.25)	17.5 (11/16)	0.09 (0.20)		
	1/2	84C-5	6080 (6.8)	69.0 (2.72)	22.2 (7/8)	0.11 (0.25)		
Sintered	1/4	84D-2	600 (0.7)	600 (0.7)	33.3 (1.31)	14.3 (9/16)	<ul style="list-style-type: none"> Reduces exhaust noise level in air systems Sintered bronze bonded to a copper plated male pipe fitting. Corrosion resistant Cleanable 40-micron filter element 	
	3/8	84D-3	660 (0.8)	38,1 (1.50)	17,5 (11/16)	0,03 (0.06)		
	1/2	84D-5	1600 (1.9)	47,6 (1.88)	22,2 (7/8)	0,05 (0.10)		
EXHAUST RESTRICTOR SILENCER								
Sintered	1/4	266B-2	1160 (1.3)	1160 (1.3)	55.9 (2.2)	14.3 (11/16)	<ul style="list-style-type: none"> Reduces exhaust noise level in air systems Allows adjustment of exhaust air flow to accurately control cylinder speeds Corrosion resistant Cleanable 40-micron filter element 	
	3/8	266B-3	1790 (2.0)	42,7 (1.68)	17,5 (11/16)	0,04 (0.09)		
	1/2	266B-5	3310 (3.7)	50,8 (2.00)	22,2 (7/8)	0,07 (0.16)		



IMPORTANT NOTE: Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

CAUTIONS, WARNINGS and STANDARD WARRANTY

ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the "ROSS Group".

PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure all sources of energy are turned off, the entire pneumatic system is shut down and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).
2. All ROSS Group Products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any product can be tampered with and/or need servicing after installation, persons responsible for the safety of others or the care of equipment must check ROSS Group Products on a regular basis and perform all necessary maintenance to ensure safe operating conditions.
3. All applicable instructions should be read and complied with before using any fluid power system to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS Group location.
4. Each ROSS Group Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Group Products.

WARNINGS: *Failure to follow these instructions can result in personal injury and/or property damage.*

FILTRATION and LUBRICATION

1. Dirt, scale, moisture, etc., are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. The ROSS Group recommends a filter with a 5-micron rating for normal applications.
2. All standard ROSS Group filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition and hazardous leakage. Immediately replace crazed, cracked, or deteriorated bowls.
3. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum base oils with oxidation inhibitors, an aniline

point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks personal injury, and/or damage to property.

WARNINGS: *Failure to follow these instructions can result in personal injury and/or property damage.*

AVOID INTAKE/EXHAUST RESTRICTION

1. Do not restrict air flow in the supply line. To do so could reduce the pressure of the supply air below minimum requirements for the valve and thereby causing erratic action.
2. Do not restrict a valve's exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

WARNINGS: *Failure to follow these instructions can result in personal injury and/or property damage.*

SAFETY APPLICATIONS

1. Mechanical Power Presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.
2. Safety exhaust (dump) valves without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All safety exhaust valve installations should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.
3. Per specifications and regulations, the ROSS L-O-X® and L-O-X® with EEZ-ON®, N06 and N16 Series operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

WARNINGS: *Failure to follow these instructions can result in personal injury and/or property damage.*

STANDARD WARRANTY

All products sold by the ROSS Group are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators ("FRLs") which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods, warranted to be free of defects in material and workmanship. The ROSS Group's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Group freight prepaid.

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