



DIRECTIONAL CONTROL INLINE POPPET VALVES 27 SERIES

PRODUCT CATALOG



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Inline Poppet Valves 27 Series

Product Overview

Directional Control Function

Directional control valves function is to control the direction of flow in the pneumatic circuit. Directional control valves are able to control the way the air passes. These valves can regulate the airflow being capable to stop fluid flow, allow fluid flow, and change the direction of fluid flow. These three functions usually operate in combination.

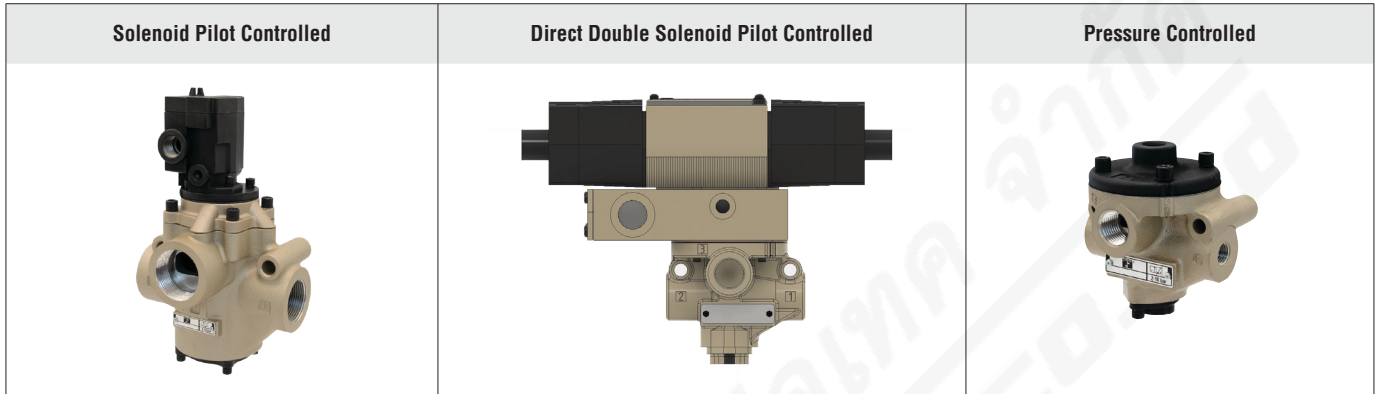


Illustration examples.

VALVE FEATURES

Poppet Design	Poppet construction for high dirt tolerance
Mounting Options	Can be mounted close to actuator, reducing length of pipe to be pressurized/exhausted on each cycle
Pilot Supply	Internal or external
High Velocity	Near zero leakage
Positive Sealing	No sliding action to prevent damage and wear
Reliability	Consistent response times over the life of the valve

Explosion-Proof solenoid pilot valves available, see valves for Hazardous Locations.



Actuation	Available Inlet Port Sizes									Functions			Maximum Flow C _v (NI/min)	Page
	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	2/2	3/2	4/2		
Solenoid Pilot Controlled	●	●	●	●	●	●	●	●	●	●	●		71 (70000)	3 – 9
Direct Double Solenoid Controlled	●	●	●	●	●	●	●	●				●	34 (33000)	10 – 13
Pressure Controlled	●	●	●	●	●	●	●				●	●	71 (70000)	14 – 19
Accessories														20 – 21

STANDARD SPECIFICATIONS

GENERAL	Function	2/2 Valve	Normally Closed	
			Normally Open	
		3/2 Valve	Normally Closed	
			Normally Open	
	4/2 Valve			
	Construction Design		Poppet	
	Actuation	Electrical	Solenoid Pilot Controlled	
			Direct Double Solenoid Pilot Controlled	
		Pneumatic	Pressure Controlled	
Mounting	Type	Inline		
	Orientation	Any, preferably vertical		
Connection	Threaded Port	NPT		
		G		
Manual Override (Solenoid Controlled valves)		Flush; rubber, non-locking		

OPERATING CONDITIONS	Temperature	Solenoid Pilot Controlled	Ambient	40° to 120°F (4° to 50°C)	
			Media	40° to 175°F (4° to 80°C)	
	Pressure Controlled	Ambient	40° to 175°F (4° to 80°C)		
		Media			
	Flow Media		Filtered air		
	Operating Pressure	Body Size	3/8 through 1-1/4	15 to 150 psig (1 to 10 bar)	
2			30 to 150 psig (2 to 10 bar)		
Pilot Supply Pressure	Internal	Must meet minimum operating pressure			
	External	Must be equal to or greater than inlet pressure, and meet minimum operating pressure			

ELECTRICAL DATA FOR SOLENOID PILOT VALVES	Solenoids	Current Flow	Operating Voltage	Power Consumption (each solenoid)
		DC	24 volts	14 watts
		AC	110-120 volts, 50/60 Hz	87 VA inrush, 30 VA holding
			230-240 volts, 60 Hz	
Rated for continuous duty				

CONSTRUCTION MATERIAL	Valve Body	Cast Aluminum
	Poppet	Acetal and Stainless Steel
	Seals	Buna-N

SAFETY DATA	Safety Integrity Level (SIL)	Certified by TÜV Rheinland in accordance to IEC 61508 and IEC 61511 safety integrity level 2 (SIL 2) and EN ISO 13849-1, PL c (with application specific diagnosis) in singular application with HFT = 0 and SIL 3 and PL e in redundant application with HFT≥1, for details see certificate.
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IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

PRODUCT CREDENTIALS

<p>Safety Integrity Level Per IEC 2061:2001</p>	<p>Declaration of Conformity</p>	<p>Certificate of Compliance</p>
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Ordering Information

2/2 Solenoid Pilot Controlled Valves

MODEL NUMBER CONFIGURATOR

2-Way 2-Position Valves

27 7 1 B 2001 W

Port Thread	
NPT <i>Leave Blank</i>	
G	D

Series

Actuation
Solenoid Pilot

Valve Function	
2/2 Normally Closed	1
2/2 Normally Open	2

Revision Level

Body Size	Port Size	Internal Pilot Supply	External Pilot Supply
	In-Out		
3/8	1/4	2001	2051
	3/8	3001	3051
	1/2	4011	4061
3/4	1/2	4001	4051
	3/4	5001	5051
	1	6011	6061
1-1/4	1	6001	6051
	1-1/4	7001	7051
	1-1/2	8011	8061
2	1-1/2	8001	8051
	2	9001	9051
	2-1/2	9011	9061

Current	Voltage*	
DC	24 V	W
AC	110-120 V, 50/60 Hz	Z
	230-250 V, 60 Hz	Y

* For other voltages consult ROSS.

Model Number examples: 2771B2001W, D2771B9061Z.

Size		Flow C _v (NI/min)		Average Response Constants*			≈ Weight lb (kg)
Body	Port 1, 2	Normally Closed (NC)	Normally Open (NO)	M	F		
		1-2	1-2		NC	NO	
3/8	1/4	1.8 (1800)	1.8 (1800)	10	0.91	0.91	2.5 (1.2)
	3/8	3.2 (3100)	2.9 (2800)	10	0.70	0.76	
	1/2	3.9 (3800)	3.4 (3300)	10	0.64	0.72	
3/4	1/2	7.2 (7100)	6.5 (6400)	14	0.37	0.43	3.3 (1.5)
	3/4	9.1 (9000)	8.2 (8100)	14	0.34	0.39	
	1	9.9 (9700)	8.2 (8100)	14	0.34	0.37	
1-1/4	1	21 (21000)	21 (21000)	26	0.17	0.17	7.0 (3.2)
	1-1/4	30 (31000)	22 (22000)	26	0.15	0.19	
	1-1/2	32 (31000)	24 (24000)	26	0.15	0.18	
2	1-1/2	46 (45000)	46 (45000)	41	0.09	0.09	15.5 (6.9)
	2	59 (58000)	58 (57000)	41	0.07	0.07	
	2-1/2	66 (65000)	60 (59000)	41	0.07	0.06	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

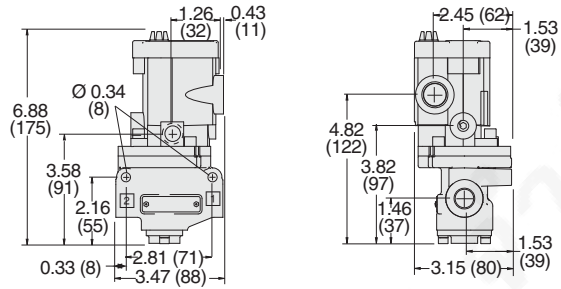
Valve Schematic		Valve Diagrams	
Normally Closed	Normally Open	Solenoid Pilot	Manual Override

2/2 Solenoid Pilot Controlled Valves

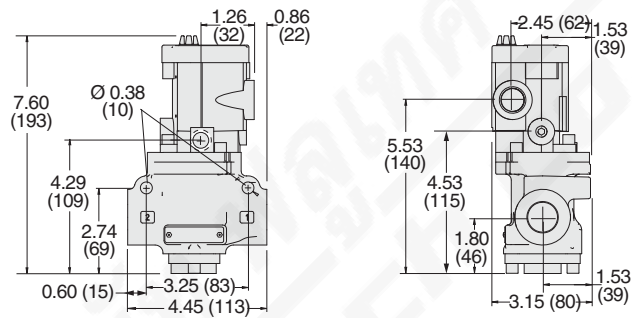
DIMENSIONS

Inches (mm)

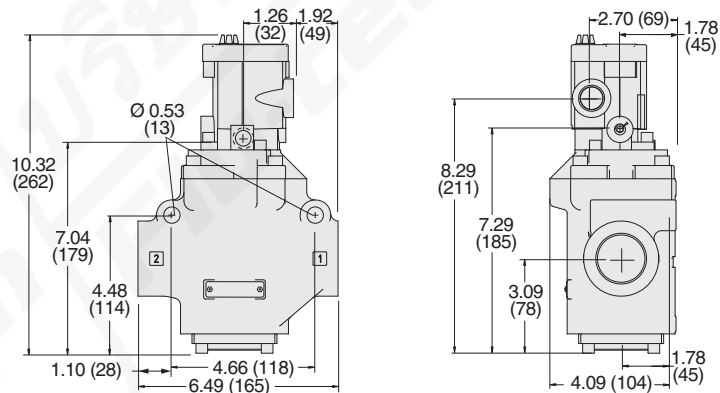
Body Size 3/8



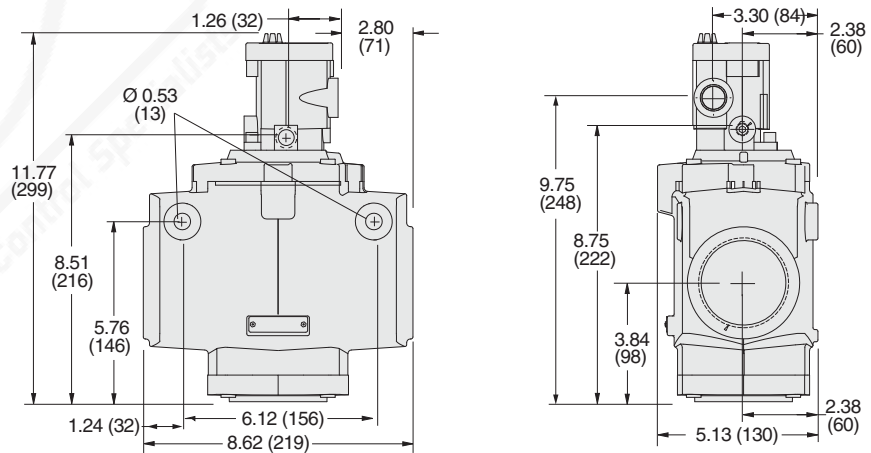
Body Size 3/4



Body Size 1-1/4



Body Size 2



Downloadable CAD models available.

Ordering Information

3/2 Solenoid Pilot Controlled Valves

MODEL NUMBER CONFIGURATOR

3-Way 2-Position Valves

27 7 3 B 2001 W

Port Thread	
NPT	
Leave Blank	
G	D

Series

Actuation
Solenoid Pilot

Valve Function	
3/2 Normally Closed	3
3/2 Normally Open	4

Revision Level

Body Size	Port Size		Internal Pilot Supply	External Pilot Supply
	In-Out	Exhaust		
3/8	1/4	1/2	2001	2051
	3/8	1/2	3001	3051
	1/2	1/2	4011	4061
3/4	1/2	1	4001	4051
	3/4	1	5001	5051
	1	1	6011	6061
1-1/4	1	1-1/2	6001	6051
	1-1/4	1-1/2	7001	7051
	1-1/2	1-1/2	8011	8061
2	1-1/2	2-1/2	8001	8051
	2	2-1/2	9001	9051
	2-1/2	2-1/2	9011	9061

Current	Voltage*	
DC	24 V	W
AC	110-120 V, 50/60 Hz	Z
	230-250 V, 60 Hz	Y

* For other voltages consult ROSS.

Model Number examples: 2773B2001W, D2773B6061Z.

Size			Flow C _v (NI/min)				Average Response Constants*				≈ Weight lb (kg)	
Body	Port 1, 2	Port 3	Normally Closed (NC)		Normally Open (NO)		M	F				
								NC		NO		
			1-2	2-3	1-2	2-3		1-2	2-3	1-2		2-3
3/8	1/4	1/2	1.9 (1900)	3.3 (3200)	1.7 (1700)	3.0 (3000)	10	0.90	0.80	0.99	0.88	2.5 (1.2)
	3/8	1/2	2.9 (2800)	4.4 (4300)	2.8 (2800)	3.0 (3000)	10	0.70	0.50	0.90	0.77	
	1/2	1/2	3.8 (3800)	5.0 (4900)	3.0 (3000)	3.0 (3000)	10	0.75	0.50	0.90	0.76	
3/4	1/2	1	6.2 (6100)	9.4 (9300)	6.1 (6000)	8.0 (7900)	11	0.43	0.27	0.46	0.60	3.3 (1.5)
	3/4	1	8.2 (8100)	10 (9800)	7.7 (7600)	8.0 (7900)	11	0.36	0.26	0.45	0.60	
	1	1	9.1 (9000)	12 (12000)	8.3 (8200)	8.0 (7900)	11	0.34	0.25	0.40	0.59	
1-1/4	1	1-1/2	21 (21000)	27 (27000)	18 (18000)	20 (20000)	28	0.17	0.14	0.20	0.17	7.0 (3.2)
	1-1/4	1-1/2	29 (29000)	29 (29000)	21 (21000)	22 (22000)	28	0.15	0.15	0.19	0.17	
	1-1/2	1-1/2	30 (30000)	30 (30000)	21 (21000)	25 (25000)	28	0.15	0.15	0.19	0.16	
2	1-1/2	2-1/2	45 (44000)	75 (74000)	45 (44000)	53 (52000)	76	0.05	0.04	0.07	0.04	16.5 (7.4)
	2	2-1/2	57 (56000)	78 (77000)	55 (54000)	61 (60000)	76	0.05	0.04	0.05	0.04	
	2-1/2	2-1/2	66 (65000)	82 (81000)	61 (60000)	71 (70000)	76	0.05	0.04	0.50	0.04	

* Valve Response Time – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

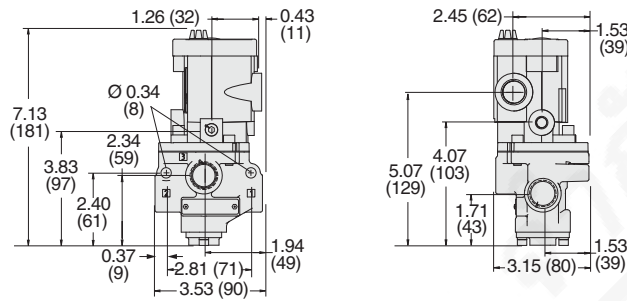
Valve Schematic		Solenoid Pilot		Manual Override	
Normally Closed	Normally Open	1/8" Pilot Exhaust Port	Y-3	1/2" Electrical Conduit Port	X-1
		Port 3 (Exhaust)		1/8" External Pilot Supply Port	
		Port 2 (Outlet)	Port 1 (Inlet)		

3/2 Solenoid Pilot Controlled Valves

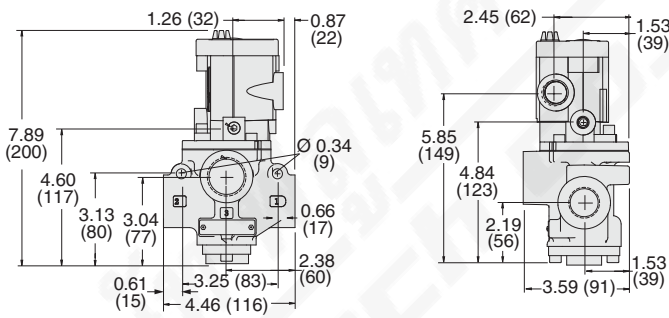
DIMENSIONS

Inches (mm)

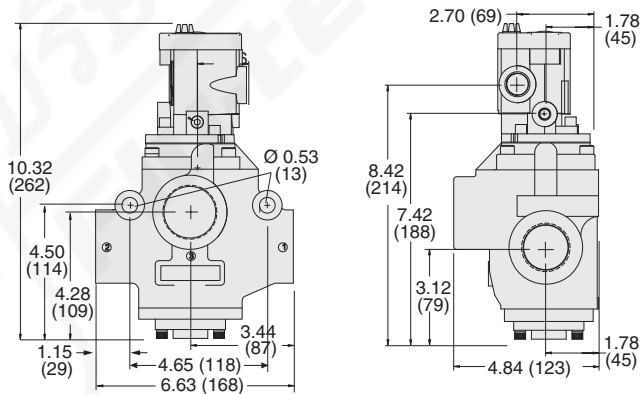
Body Size 3/8



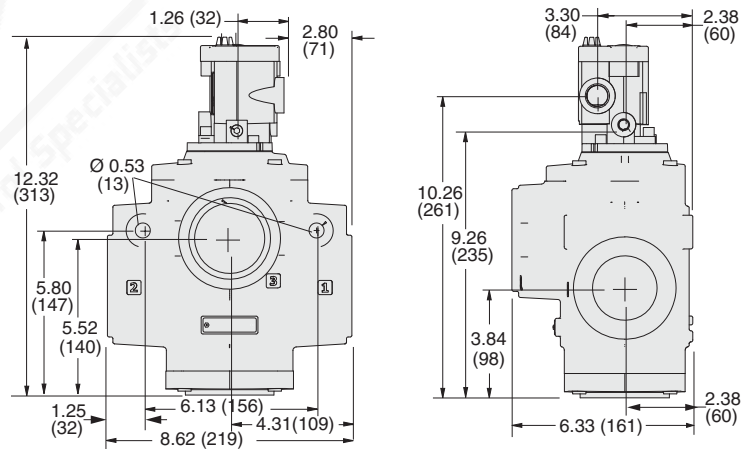
Body Size 3/4



Body Size 1-1/4



Body Size 2



Downloadable CAD models available.

Ordering Information

4/2 Solenoid Pilot Controlled Valves

MODEL NUMBER CONFIGURATOR

4-Way 2-Position Valves

27
7
6
B
2001
W

Port Thread	
NPT	
Leave Blank	
G	D

Series

Actuation
Solenoid Pilot

Valve Function
4/2

Revision Level

Current	Voltage*	
	DC	24 V
AC	110-120 V, 50/60 Hz	Z
	230-250 V, 60 Hz	Y

* For other voltages consult ROSS.

Body Size	Port Size		Internal Pilot Supply	External Pilot Supply
	In-Out	Exhaust		
3/8	1/4	1/2	2001	2051
	3/8	1/2	3001	3051
	1/2	1/2	4011	4061
3/4	1/2	1	4001	4051
	3/4	1	5001	5051
	1	1	6011	6061
1-1/4	1	1-1/2	6001	6051
	1-1/4	1-1/2	7001	7051
	1-1/2	1-1/2	8011	8061

Model Number examples: 2776B2001W, D2776B92051Z.

Size			Flow C _v (NI/min)				Average Response Constants*			≈ Weight lb (kg)
Body	Port 1, 2, 4	Port 3	1-2	2-3	1-4	4-3	M	F		
								1-2, 1-4	4-3, 2-3	
3/8	1/4	1/2	1.7 (1700)	2.3 (2300)	1.8 (1800)	2.8 (2800)	10	0.92	0.92	3.0 (1.4)
	3/8	1/2	2.6 (2600)	3.3 (3200)	2.9 (2900)	3.9 (3800)	10	0.90	0.90	
	1/2	1/2	3.1 (3100)	4.2 (4100)	4.2 (4100)	5.2 (5100)	10	0.89	0.73	
3/4	1/2	1	5.7 (5600)	7.0 (6900)	5.5 (5400)	7.3 (7200)	26	0.50	0.66	5.3 (2.4)
	3/4	1	7.4 (7300)	7.0 (6900)	7.3 (7200)	9.5 (9300)	26	0.36	0.55	
	1	1	7.9 (7800)	8.0 (7900)	8.0 (7900)	11 (11000)	26	0.35	0.50	
1-1/4	1	1-1/2	13 (13000)	21 (21000)	18 (18000)	22 (22000)	79	0.17	0.22	11.3 (5.1)
	1-1/4	1-1/2	16 (16000)	22 (22000)	25 (25000)	26 (26000)	79	0.16	0.18	
	1-1/2	1-1/2	16 (16000)	22 (22000)	26 (26000)	27 (27000)	79	0.15	0.15	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

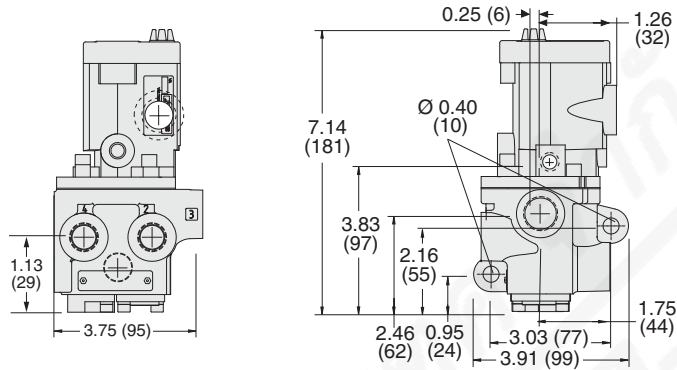
Valve Schematic

4/2 Solenoid Pilot Controlled Valves

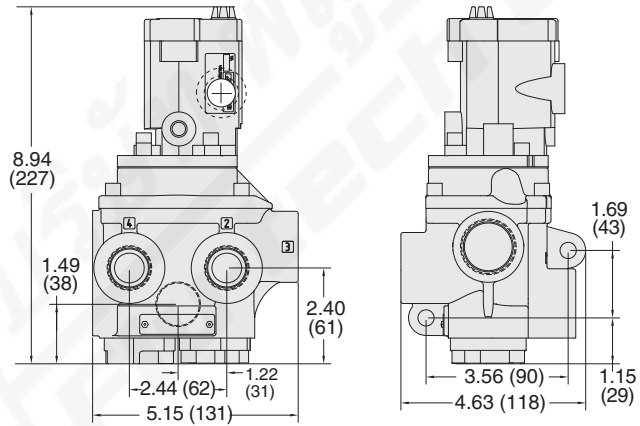
DIMENSIONS

Inches (mm)

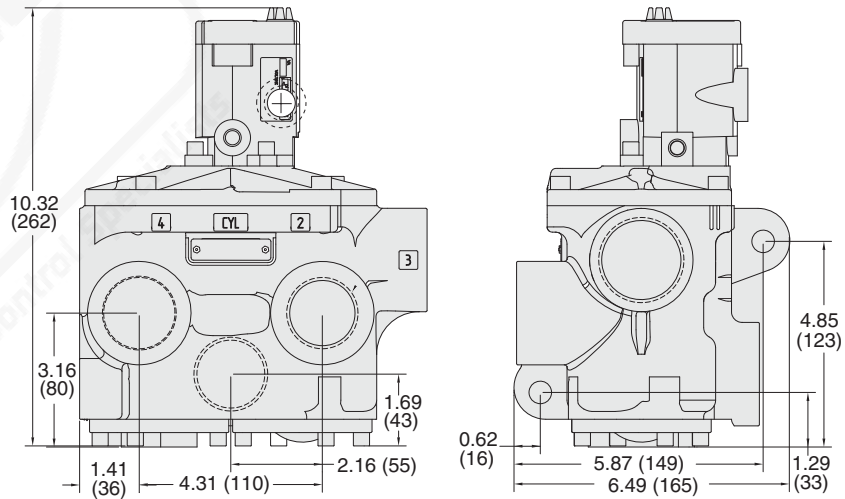
Body Size 3/8



Body Size 3/4



Body Size 1-1/4



Downloadable CAD models available.

Ordering Information

3/2 Direct Double Solenoid Pilot Controlled Valves

MODEL NUMBER CONFIGURATOR

3-Way 2-Position Valves

27 7 3 B 2003 W

Port Thread	
NPT	
Leave Blank	
G	D

Series

Actuation

Direct Solenoid Controlled

Valve Function	
3/2 Normally Closed	3
3/2 Normally Open	4

Revision Level

Body Size	Port Size		Internal Pilot Supply*
	In-Out	Exhaust	
3/8	1/4	1/2	2003
	3/8	1/2	3003
	1/2	1/2	4013
3/4	1/2	1	4003
	3/4	1	5003
	1	1	6013
1-1/4	1	1-1/2	6003
	1-1/4	1-1/2	7003
	1-1/2	1-1/2	8013

Current	Voltage*	
DC	24 V	W
AC	110-120 V, 50/60 Hz	Z
	230-250 V, 60 Hz	Y

* For other voltages consult ROSS.

* For models with external pilot supply consult ROSS.

Model Number examples: 2773B2003W, D2773B8003Z.

Size			Flow C _v (NI/min)				Average Response Constants*				≈ Weight lb (kg)	
Body	Port 1, 2	Port 3	Normally Closed (NC)		Normally Open (NO)		M	F				
								NC		NO		
			1-2	2-3	1-2	2-3		1-2	2-3	1-2	2-3	
3/8	1/4	1/2	2.5 (2500)	3.1 (3100)	2.3 (2300)	2.7 (2700)	10	0.90	0.80	0.99	0.88	2.5 (1.2)
	3/8	1/2	3.6 (3500)	5.3 (5200)	2.8 (2800)	3.2 (3100)	10	0.70	0.50	0.90	0.77	
	1/2	1/2	3.3 (3200)	5.3 (5200)	2.8 (2800)	3.2 (3100)	10	0.75	0.50	0.90	0.76	
3/4	1/2	1	6.3 (6200)	9.2 (9100)	6.3 (6200)	8.0 (7900)	11	0.43	0.27	0.46	0.60	3.3 (1.5)
	3/4	1	7.7 (7600)	11 (11000)	6.9 (6800)	7.4 (7300)	11	0.36	0.26	0.45	0.60	
	1	1	8.0 (7900)	12 (12000)	6.8 (6700)	7.5 (7400)	11	0.34	0.25	0.40	0.59	
1-1/4	1	1-1/2	23 (23000)	34 (33000)	17 (17000)	24 (24000)	28	0.17	0.14	0.20	0.17	7.0 (3.2)
	1-1/4	1-1/2	30 (30000)	32 (31000)	19 (19000)	24 (24000)	28	0.15	0.15	0.19	0.17	
	1-1/2	1-1/2	30 (30000)	31 (31000)	19 (19000)	23 (23000)	28	0.15	0.15	0.19	0.16	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Schematic

Normally Closed

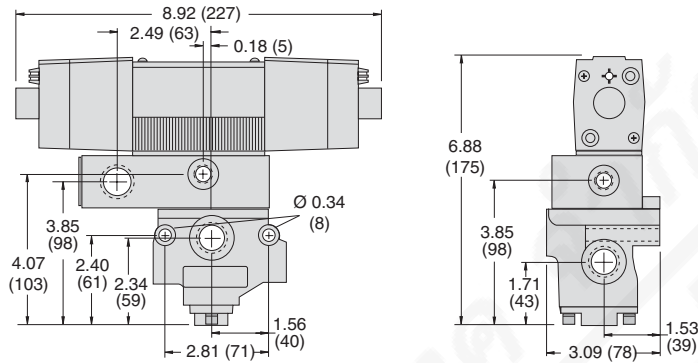
Normally Open

3/2 Direct Double Solenoid Controlled Valves

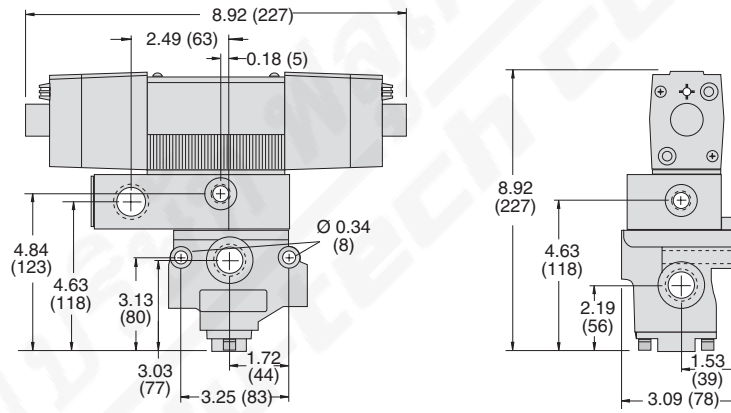
DIMENSIONS

Inches (mm)

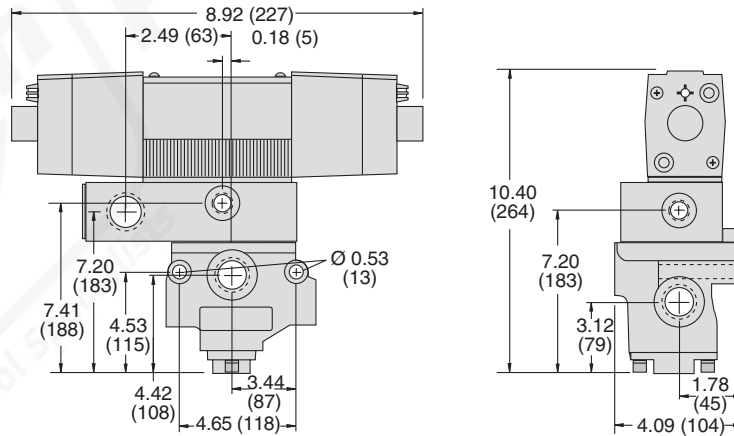
Body Size 3/8



Body Size 3/4



Body Size 1-1/4



Downloadable CAD models available.

Ordering Information

4/2 Direct Double Solenoid Pilot Controlled Valves

MODEL NUMBER CONFIGURATOR

4-Way 2-Position Valves

27
7
6
B
2003
W

Port Thread	
NPT	
Leave Blank	
G	D

Series:

Actuation: Direct Solenoid Controlled

Valve Function: 4/2

Revision Level:

Current	Voltage*	
	DC	24 V
AC	110-120 V, 50/60 Hz	Z
	230-250 V, 60 Hz	Y

* For other voltages consult ROSS.

Body Size	Port Size		Internal Pilot Supply*
	In-Out	Exhaust	
3/8	1/4	1/2	2003
	3/8	1/2	3003
	1/2	1/2	4013
3/4	1/2	1	4003
	3/4	1	5003
	1	1	6013
1-1/4	1	1-1/2	6003
	1-1/4	1-1/2	7003
	1-1/2	1-1/2	8013

* For models with external pilot supply consult ROSS.

Model Number examples: 2776B2003W, D2776B8003Z.

Body	Size		Flow C _v (NI/min)		Average Response Constants*			≈ Weight lb (kg)
	Port 1, 2, 4	Port 3	1-2, 1-4	4-3, 2-3	M	F		
						1-2, 1-4	4-3, 2-3	
3/8	1/4	1/2	2.1 (2100)	2.9 (2900)	10	0.92	0.92	3.0 (1.4)
	3/8	1/2	2.9 (2900)	4.2 (4100)	10	0.90	0.90	
	1/2	1/2	3.1 (3100)	4.3 (4200)	10	0.89	0.73	
3/4	1/2	1	5.6 (5500)	8.1 (8000)	26	0.50	0.66	5.3 (2.4)
	3/4	1	7.0 (6900)	9.3 (9200)	26	0.36	0.55	
	1	1	7.8 (7700)	10 (9900)	26	0.35	0.50	
1-1/4	1	1-1/2	19 (19000)	26 (26000)	79	0.17	0.22	11.3 (5.1)
	1-1/4	1-1/2	21 (21000)	27 (27000)	79	0.16	0.18	
	1-1/2	1-1/2	22 (22000)	27 (27000)	79	0.15	0.15	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

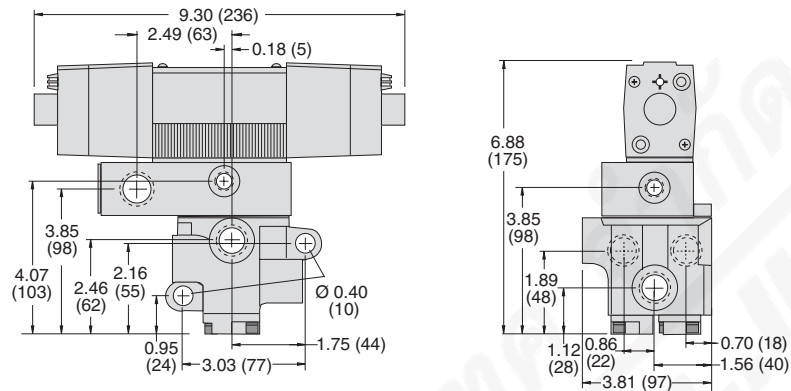
Valve Schematic

4/2 Direct Double Solenoid Pilot Controlled Valves

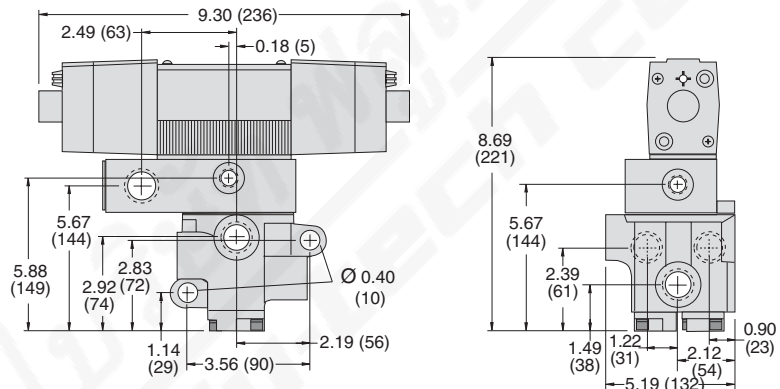
DIMENSIONS

Inches (mm)

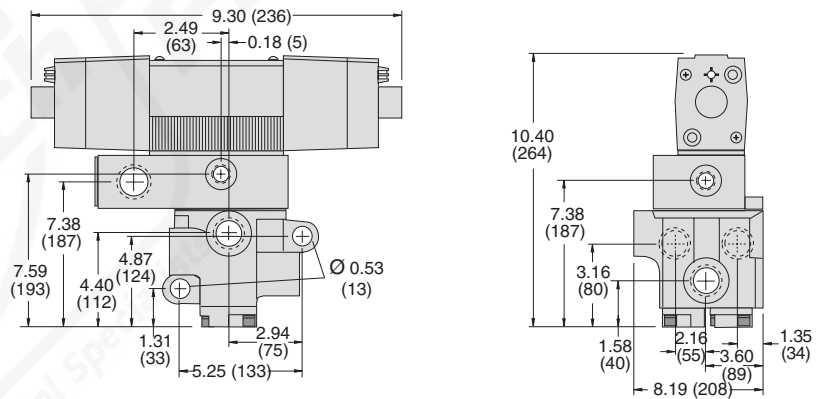
Body Size 3/8



Body Size 3/4



Body Size 1-1/4



Downloadable CAD models available.

Ordering Information

2/2 Pressure Controlled Valves

MODEL NUMBER CONFIGURATOR

2-Way 2-Position Valves

27 5 1 A 2001

Port Thread	
NPT	
Leave Blank	
G	D

Series

Actuation
Pressure Controlled

Valve Function	
2/2 Normally Closed	1
2/2 Normally Open	2

Revision Level

Body Size	Port Size	
	In	Out
3/8	1/4	2001
	3/8	3001
	1/2	4011
3/4	1/2	4001
	3/4	5001
	1	6011
1-1/4	1	6001
	1-1/4	7001
	1-1/2	8011
2	1-1/2	8001
	2	9001
	2-1/2	9011

Model Number examples: 2751A2001, D2751A6001.

Size		Flow C _v (NI/min)		Average Response Constants*			≈ Weight lb (kg)
Body	Port 1, 2	Normally Closed (NC)	Normally Open (NO)	M	F		
		1-2	1-2		NC	NO	
3/8	1/4	1.8 (1800)	1.8 (1800)	10	0.91	0.91	2.5 (1.2)
	3/8	3.2 (3100)	2.9 (2800)	10	0.70	0.76	
	1/2	3.9 (3800)	3.4 (3300)	10	0.64	0.72	
3/4	1/2	7.2 (7100)	6.5 (6400)	14	0.37	0.43	3.3 (1.5)
	3/4	9.1 (9000)	8.2 (8100)	14	0.34	0.39	
	1	9.9 (9700)	8.2 (8100)	14	0.34	0.37	
1-1/4	1	21 (21000)	21 (21000)	26	0.17	0.17	7.0 (3.2)
	1-1/4	30 (31000)	22 (22000)	26	0.15	0.19	
	1-1/2	32 (31000)	24 (24000)	26	0.15	0.18	
2	1-1/2	46 (45000)	46 (45000)	41	0.09	0.09	15.5 (6.9)
	2	59 (58000)	58 (57000)	41	0.07	0.07	
	2-1/2	66 (65000)	60 (59000)	41	0.07	0.06	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Schematic

Normally Closed	Normally Open

1/4" Signal Port

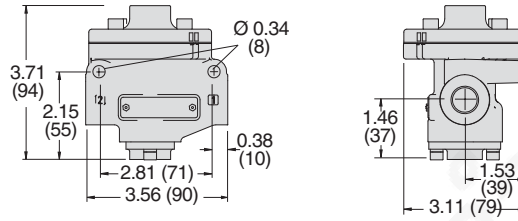
Port 2 (Outlet) Port 1 (Inlet)

2/2 Pressure Controlled Valves

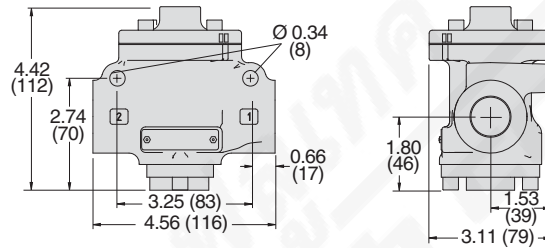
DIMENSIONS

Inches (mm)

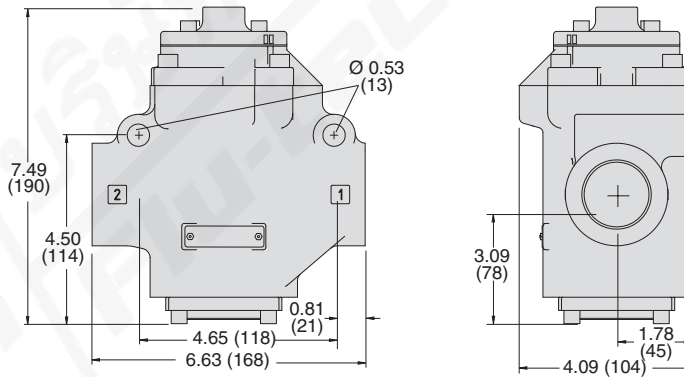
Body Size 3/8



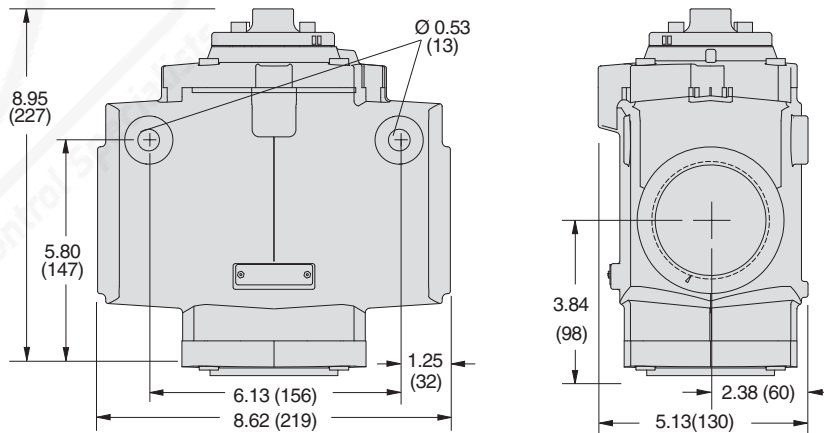
Body Size 3/4



Body Size 1-1/4



Body Size 2



Downloadable CAD models available.

Ordering Information

3/2 Pressure Controlled Valves

MODEL NUMBER CONFIGURATOR

3-Way 2-Position Valves

27 5 3 A 2001

Port Thread	
NPT	
Leave Blank	
G	D

Series

Actuation
Pressure Controlled

Valve Function	
3/2 Normally Closed	3
3/2 Normally Open	4

Revision Level

Body Size	Port Size		
	In-Out	Exhaust	
3/8	1/4	1/2	2001
	3/8	1/2	3001
	1/2	1/2	4011
3/4	1/2	1	4001
	3/4	1	5001
	1	1	6011
1-1/4	1	1-1/2	6001
	1-1/4	1-1/2	7001
	1-1/2	1-1/2	8011
2	1-1/2	2-1/2	8001
	2	2-1/2	9001
	2-1/2	2-1/2	9011

Model Number examples: 2753A2001, D2753A6001.

Size			Flow C _v (NI/min)				Average Response Constants*				≈ Weight lb (kg)	
Body	Port 1, 2	Port 3	Normally Closed (NC)		Normally Open (NO)		M	F				
								NC		NO		
			1-2	2-3	1-2	2-3		1-2	2-3	1-2		2-3
3/8	1/4	1/2	1.9 (1900)	3.3 (3200)	1.7 (1700)	3.0 (3000)	10	0.90	0.80	0.99	0.88	1.3 (0.6)
	3/8	1/2	2.9 (2800)	4.4 (4300)	2.8 (2800)	3.0 (3000)	10	0.70	0.50	0.90	0.77	
	1/2	1/2	3.8 (3800)	5.0 (4900)	3.0 (3000)	3.0 (3000)	10	0.75	0.50	0.90	0.76	
3/4	1/2	1	6.2 (6100)	9.4 (9300)	6.1 (6000)	8.0 (7900)	12	0.43	0.17	0.46	0.60	2.0 (0.9)
	3/4	1	8.2 (8100)	10 (9800)	7.7 (7600)	8.0 (7900)	12	0.36	0.26	0.45	0.60	
	1	1	9.1 (9000)	12 (12000)	8.3 (8200)	8.0 (7900)	12	0.34	0.25	0.40	0.59	
1-1/4	1	1-1/2	21 (21000)	27 (27000)	18 (18000)	20 (20000)	32	0.17	0.14	0.20	0.17	6.0 (2.7)
	1-1/4	1-1/2	29 (29000)	29 (29000)	21 (21000)	22 (22000)	32	0.15	0.15	0.19	0.17	
	1-1/2	1-1/2	30 (30000)	30 (30000)	21 (21000)	25 (25000)	32	0.15	0.15	0.19	0.16	
2	1-1/2	2-1/2	45 (44000)	75 (74000)	45 (44000)	53 (52000)	76	0.05	0.04	0.07	0.04	15.3 (6.9)
	2	2-1/2	57 (56000)	78 (77000)	55 (54000)	61 (60000)	76	0.05	0.04	0.05	0.04	
	2-1/2	2-1/2	66 (65000)	82 (81000)	61 (60000)	71 (70000)	76	0.05	0.04	0.05	0.04	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

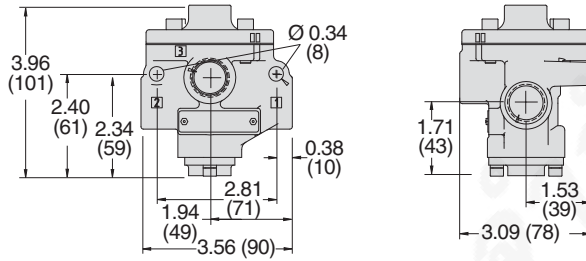
Valve Schematic		
Normally Closed	Normally Open	

3/2 Pressure Controlled Valves

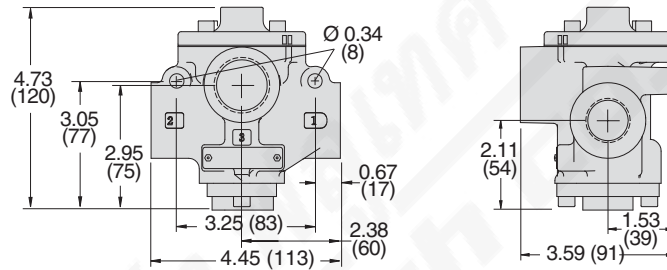
DIMENSIONS

Inches (mm)

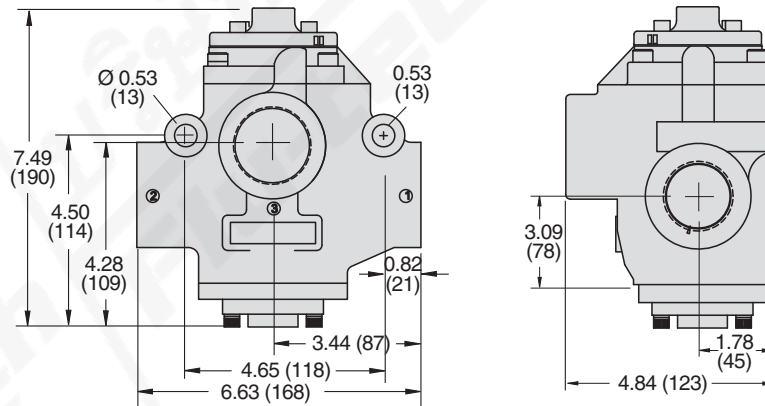
Body Size 3/8



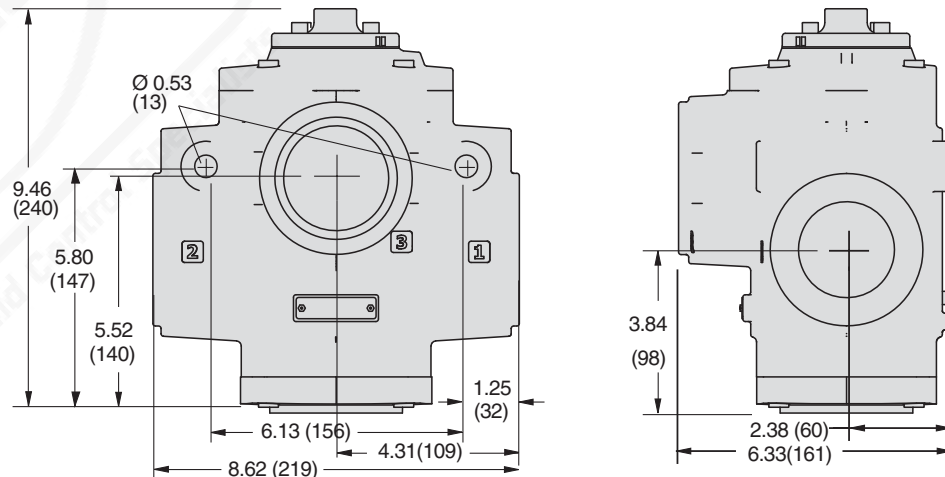
Body Size 3/4



Body Size 1-1/4



Body Size 2



Downloadable CAD models available.

Ordering Information

4/2 Pressure Controlled Valves

MODEL NUMBER CONFIGURATOR

4-Way 2-Position Valves

27
5
6
A
2001

Port Thread	
NPT	
Leave Blank	
G	D

Series 27

Actuation
Pressure Controlled

Valve Function
4/2

Revision Level 5

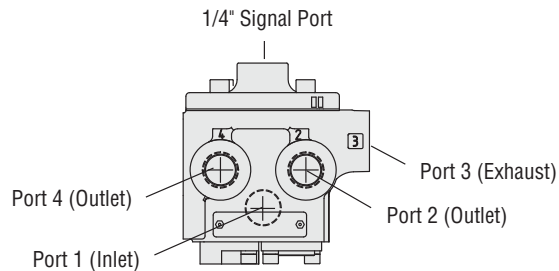
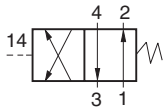
Body Size	Port Size		
	In-Out	Exhaust	
3/8	1/4	1/2	2001
	3/8	1/2	3001
	1/2	1/2	4011
3/4	1/2	1	4001
	3/4	1	5001
	1	1	6011
1-1/4	1	1-1/2	6001
	1-1/4	1-1/2	7001
	1-1/2	1-1/2	8011

Model Number examples: 2756A2001, D2756A2001.

Size			Flow C _v (NI/min)		Average Response Constants*			≈ Weight lb (kg)
Body	Port 1, 2, 4	Port 3			M	F		
			1-2, 1-4	4-3, 2-3		1-2, 1-4	4-3, 2-3	
3/8	1/4	1/2	2.1 (2100)	2.9 (2900)	10	0.92	0.92	1.8 (0.8)
	3/8	1/2	2.9 (2900)	4.2 (4100)	10	0.90	0.90	
	1/2	1/2	3.1 (3100)	4.3 (4200)	10	0.89	0.73	
3/4	1/2	1	5.6 (5500)	8.1 (8000)	26	0.50	0.66	4.3 (1.9)
	3/4	1	7.0 (6900)	9.3 (9200)	26	0.36	0.55	
	1	1	7.8 (7700)	10 (9800)	26	0.35	0.50	
1-1/4	1	1-1/2	19 (19000)	26 (26000)	79	0.22	0.22	10.3 (4.6)
	1-1/4	1-1/2	21 (21000)	27 (27000)	79	0.18	0.18	
	1-1/2	1-1/2	22 (22000)	27 (27000)	79	0.15	0.15	

* **Valve Response Time** – Response Time (msec) = M + (F • V). This is the average time required to fill a volume V (cubic inches) to 90% of supply pressure or to exhaust it to 10% of supply pressure. M and F values are shown above.

Valve Schematic

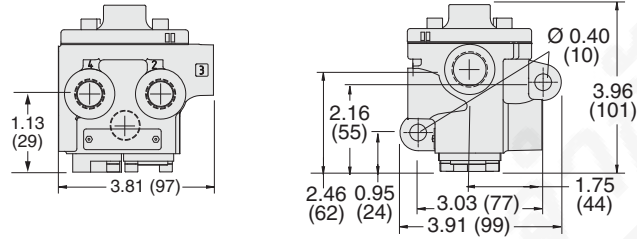


4/2 Pressure Controlled Valves

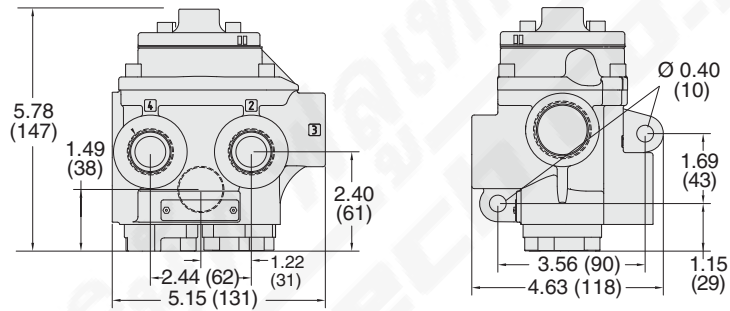
DIMENSIONS

Inches (mm)

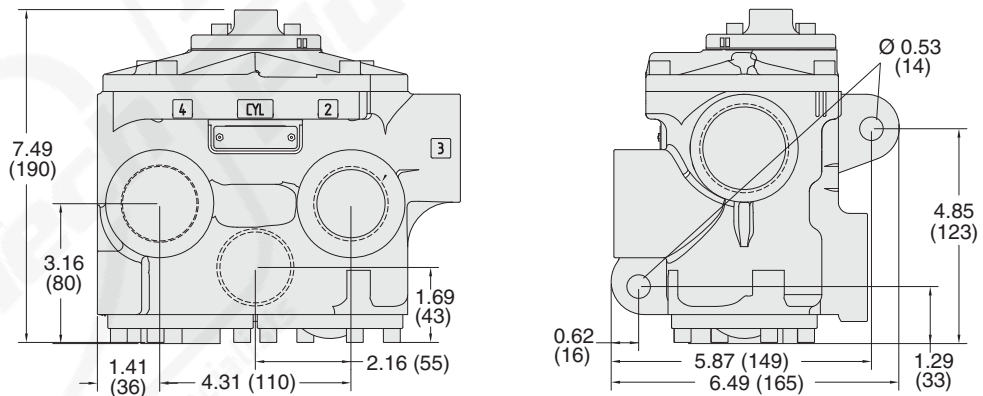
Body Size 3/8



Body Size 3/4



Body Size 1-1/4



Downloadable CAD models available.

Accessories

EXHAUST SILENCERS

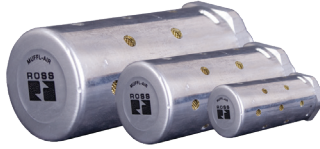


Illustration example.

Silencers	SPECIFICATIONS		Silencer Material	Pressure Range psig (bar)	Schematic			
			Aluminum	0-290 (0-20) maximum				
	Port Size	Thread Type	Flow C _v (NI/min)	Model Number		Dimensions inches (mm)		≈ Weight lb (kg)
			NPT Thread	R/Rp Thread	Length	Hex Size (D)		
	1/2	Male	6.8 (6700)	5500A4003	D5500A4003	3.6 (9)	1.25 (32)	0.2 (0.1)
	1	Male	18 (18000)	5500A6003	D5500A6003	5.4 (14)	2.0 (51)	0.9 (0.4)
	1-1/2	Female	39 (38000)	5500A8001	D5500A8001	5.7 (14)	2.5 (64)	1.3 (0.6)
	2-1/2	Female	104 (100000)	5500A9002	D5500A9002	4.0 (102)	5.7 (145)	2.9 (1.4)

FEMALE SILENCER CONNECTORS

Hex Nipples	Material	Fitting Pipe Size	Thread Type	Model Number		
				NPT Thread	BSPT Thread	
	Steel	1-1/2	Male - Male	488J27	122J39	
	2-1/2	Male - Male	490J27	123J39		

SOLENOID PILOT INDICATOR LIGHT KITS

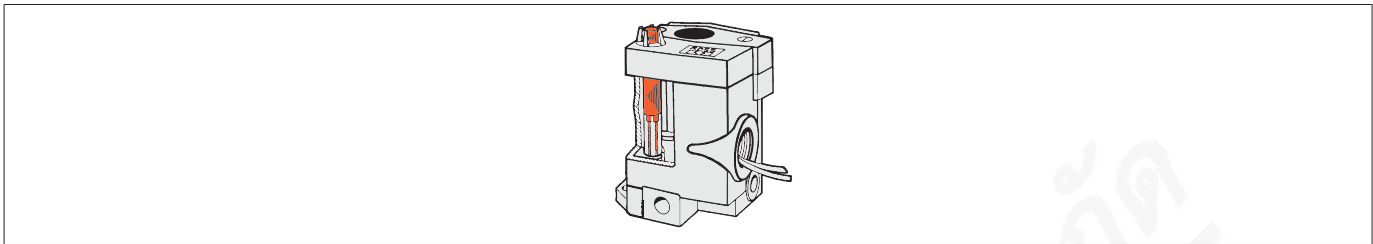


Illustration example.

Indicator Light Kits	Kit Number		
	24 V DC	110-120 V AC, 50-60 Hz	230 V AC, 50-60 Hz
	862K87-W	862K87-Z	862K87-Y

To visually verify valve operation, indicator light kits are available for single solenoid models. Indicator lights are standard on double solenoid valves. The indicator light is illuminated when the solenoid is energized.

SOLENOID PILOT MANUAL OVERRIDE KITS



Illustration examples.

Manual Override Kits	Manual Override Type	Kit Number	
		Locking Type	Non-Locking Type
	Flush Button	792K87	–
Extended Button	–	791K87	
Extended Button with Palm	–	984H87	

Flush rubber button, non-locking manual override is standard on single solenoid models.
 Flush metal-button, non-locking manual overrides are standard on direct double solenoid models.
 Each of the buttons in the override kits is made of metal and is spring-returned. The locking type button, however, can be kept in the actuated position by turning the slot in the top of the button with a screwdriver.