

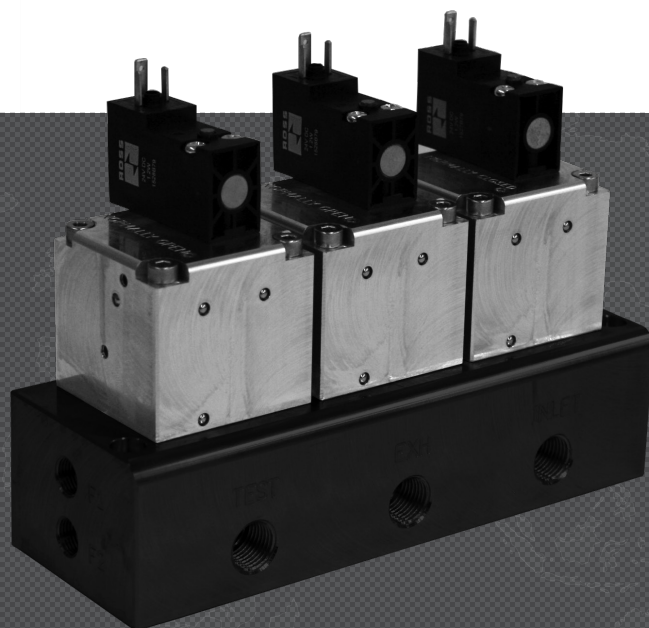


บริษัท ฟลูเทค จำกัด
Flu-tech co.,ltd

Authorized Distributor

POPPET VALVES DALE SERIES

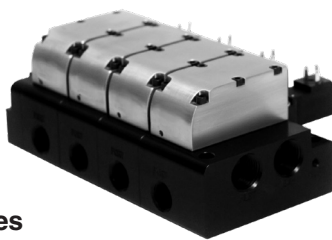
POPPET VALVES & MANIFOLDS
LEAK TIGHT VALVES & MANIFOLDS



ROSS CONTROLS



CP Series

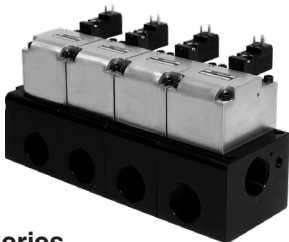


LF Series

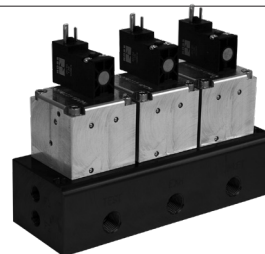
Internally or externally piloted series for use in standard pressure applications with 30 psi (2 bar) minimum operating pressure.



CX Series



LX Series



LT Series

Externally piloted only series for use in leak tight, low pressure, vacuum, and process applications.

For use in leak test applications.

Accessories



VALVE TYPE/FUNCTION	SOLENOID	PRESSURE	AVAILABLE INLET PORT SIZES										MAXIMUM FLOW Cv	MOUNTING		Page
														IN-LINE	MANIFOLD	
			1/4	3/8	1/2	3/4	1	1¼	1½	2	2½					
CP SERIES Valves & Manifolds																
2/2												108			D1.3 - D1.8	
3/2												12.3			D1.5 - D1.10	
LF SERIES																
2/2												62.7			D1.11 - D1.12	
CX SERIES for Leak Test Applications																
2/2												108			D1.13 - D1.14	
3/2												12.3			D1.15 - D1.16	
2/2												108			D1.17 - D1.18	
3/2												12.3			D1.19 - D1.20	
CX SERIES MANIFOLDS for Leak Test Applications																
2/2												108			D1.21 - D1.22	
3/2												12.3			D1.23 - D1.24	
2/2												108			D1.25 - D1.26	
3/2												12.3			D1.23 - D1.24	
LX SERIES for Leak Test Applications																
2/2												62.7			D1.25 - D1.26	
2/2												62.7			D1.27	
LT SERIES																
3/4												2.2			D1.28	
Valve Manifold Configurator															D1.29	

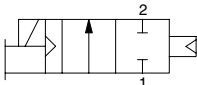
Solenoid Pilot Controlled Valves

Dale CP Series

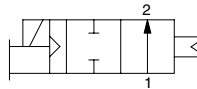
2-Way 2-Position Valves, Spring Assisted Air Return									
Port Size		Internal Pilot Supply				Pilot Port Thread		Avg. C _v	Weight lb (kg)
		Normally Closed		Normally Open					
		Model Number#		Model Number#					
1	2	NPT Threads	G Threads	NPT Threads	G Threads	NPT	G		
1/2	3/8	CP14NB37101W	CP14DB37101W	CP24NB37101W	CP24DB37101W	10-32 UNF	M5	3.5	1.4 (0.6)
1/2	1/2	CP14NB47101W	CP14DB47101W	CP24NB47101W	CP24DB47101W	10-32 UNF	M5	3.5	1.4 (0.6)
1	3/4	CP16NB57101W	CP16DB57101W	CP26NB57101W	CP26DB57101W	1/8-27 NPT	G1/8	12.3	3.5 (1.6)
1	1	CP16NB67101W	CP16DB67101W	CP26NB67101W	CP26DB67101W	1/8-27 NPT	G1/8	12.3	3.5 (1.6)
1½	1¼	CP18NB77101W	CP18DB77101W	CP28NB77101W	CP28DB77101W	1/8-27 NPT	G1/8	44.9	10.0 (4.6)
1½	1½	CP18NB87101W	CP18DB87101W	CP28NB87101W	CP28DB87101W	1/8-27 NPT	G1/8	44.9	10.0 (4.6)
2½	2	CP10NB97101W	CP10DB97101W	CP20NB97101W	CP20DB97101W	1/8-27 NPT	G1/8	108	19.5 (8.9)
2½	2½	CP10NB07101W	CP10DB07101W	CP20NB07101W	CP20DB07101W	1/8-27 NPT	G1/8	108	19.5 (8.9)

Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., CP14NB37101Z.

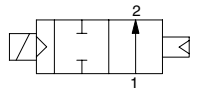
1/2 thru 2½
Normally Closed



1/2 & 1
Normally Open



1½ & 2½
Normally Open





Port Sizes
3/8 & 1/2



Port Sizes
3/4 thru 2½

EXTERNAL PILOT SUPPLY CONVERSION:

The CP Series valves can be easily field converted to external pilot supply by simply removing existing pipe plug from port X-1, and installing air supply to the X-1 port.

ACCESSORIES

Electrical Connectors						
Valve Type	Port Size	Electrical Connector Form	Electrical Connectors Model Number			
			Lighted Connector Only		Lighted Connector Pre-wired*	
			24 Volts DC	120 Volts AC	24 Volts DC	120 Volts AC
2/2	1/4 - 1	EN 175301-803 Form C	2453K77-W	2453K77-Z	2476K77-W	2476K77-Z
	1½-2½	EN 175301-803 Form A	936K87-W	936K87-Z	720K77-W	720K77-Z

*Pre-wired connectors include a 2 meter (6½ ft.) cord.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Poppet	Flow Media	Filtered air <i>For liquid applications, consult ROSS.</i>
Mounting Type	In-line	Pilot Supply	Internal or External
Solenoids	Rated for continuous duty	Operating Pressure	30 to 145 psig (2 to 10 bar) Pilot Supply - Internal or External: 30 to 145 psig (2 to 10 bar) <i>When external pilot supply, pressure must be equal to or greater than inlet pressure.</i>
Voltage/Power Consumption (each solenoid)	Port Size 1/2 & 1: 24 volts DC; 1.5 watts on DC 110 volts AC; 50 Hz: 5.4 VA 120 volts AC; 60 Hz: 5.0 VA Port Size 1½ & 2½: 24 volts DC; 110 volts AC; 50 Hz; 120 volts AC, 50/60 Hz 5.8 watts nominal on AC and DC, 6.5 watts maximum on AC and DC	Construction Material	Valve Body: Cast Aluminum Poppet: Acetal & Stainless Steel Seals: Buna-N
Enclosure Rating	IP65, IEC 60529	Manual Override	Normally Closed Valves: All Sizes; Non-locking Normally Open Valves: Port Size 1/2 & 1: Non-locking Port Size 1½ & 2½: Locking, turn-to-lock
Electrical Connection	EN 175301-803 Form A or Form C connector		
Temperature	Ambient: 40° to 120°F (4° to 50°C) Media: 40° to 175°F (4° to 80°C)		



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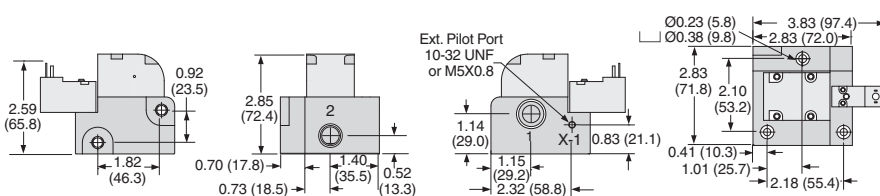
845/3-4 หมู่ 3 ถ.เทพารักษ์ ต.เทพารักษ์ อ.เมือง จ.สมุทรปราการ 102070

845/3-4 Thepharak RD., T. Thepharak, A. Muang, Samutprakan 10270 THAILAND

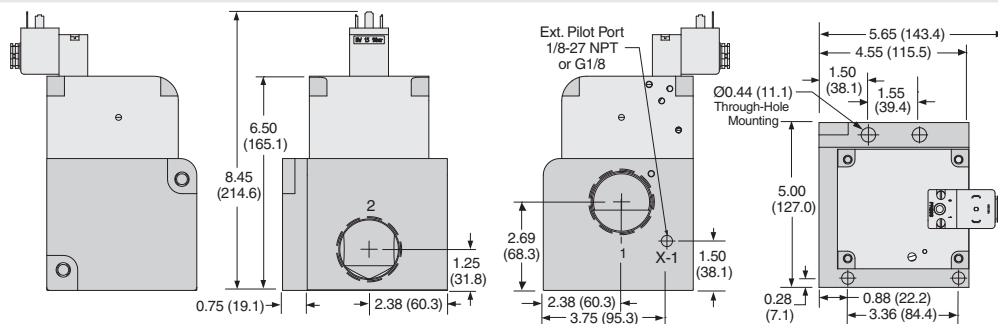
Tel. 0 2384 6060, Fax 0 2384 5701, Email : pneumatic@flutech.co.th, www.flutech.co.th

Dale CP Series

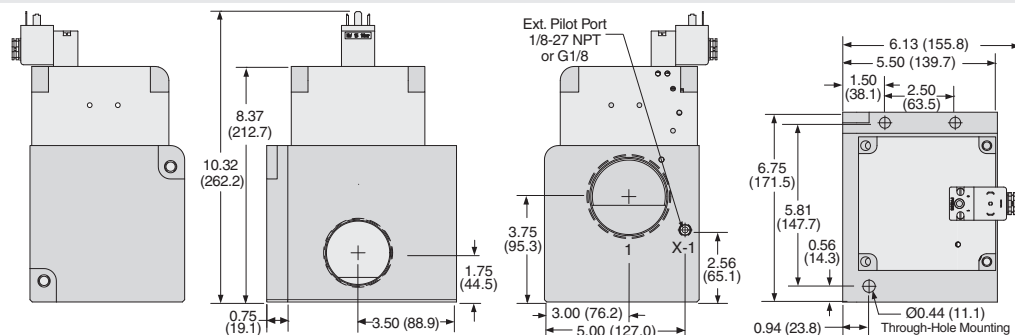
Port Size 3/8 & 1/2



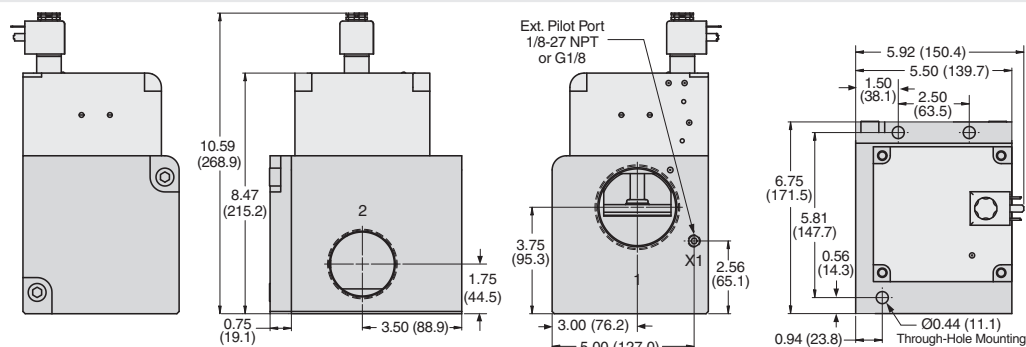
Normally Closed

[illegible]

Normally Closed



Normally Open



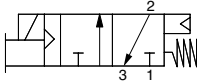
Solenoid Pilot Controlled Valves

Dale CP Series

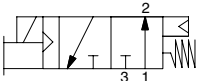
3-Way 2-Position Valves, Spring Assisted Air Return									
Port Size		Internal Pilot Supply				Pilot Port Thread		Avg. C _v	Weight lb (kg)
		Normally Closed		Normally Open					
		Model Number#		Model Number#					
1, 3	2	NPT Threads	G Threads	NPT Threads	G Threads	NPT	BSPP		
1/2	3/8	CP34NB37101W	CP34DB37101W	CP44NB37101W	CP44DB37101W	10-32 UNF	M5	3.5	1.8 (0.8)
1/2	1/2	CP34NB47101W	CP34DB47101W	CP44NB47101W	CP44DB47101W	10-32 UNF	M5	3.5	1.8 (0.8)
1	3/4	CP36NB57101W	CP36DB57101W	CP46NB57101W	CP46DB57101W	1/8-27 NPT	G1/8	12.3	5.3 (2.4)
1	1	CP36NB67101W	CP36DB67101W	CP46NB67101W	CP46DB67101W	1/8-27 NPT	G1/8	12.3	5.3 (2.4)

Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., CP34NB37101Z.

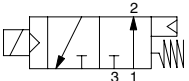
1/2" & 1"
Normally Closed



1/2"
Normally Open

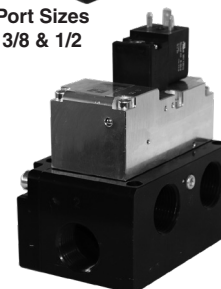


1"
Normally Open





Port Sizes
3/8 & 1/2



Port Sizes
3/4 & 1

EXTERNAL PILOT SUPPLY CONVERSION:

The CP Series valves can be easily field converted to external pilot supply by simply removing existing pipe plug from port X-1, and installing air supply to the X-1 port.

ACCESSORIES

Electrical Connectors

Valve Type	Port Size	Electrical Connector Form	Electrical Connectors Model Number			
			Lighted Connector Only		Lighted Connector Pre-wired*	
			24 Volts DC	120 Volts AC	24 Volts DC	120 Volts AC
3/2	1/2	EN 175301-803 Form C	2453K77-W	2453K77-Z	2476K77-W	2476K77-Z
	1	EN 175301-803 Form A	936K87-W	936K87-Z	720K77-W	720K77-Z

*Pre-wired connectors include a 2 meter (6½ ft.) cord.

Silencers

Port Size	Thread Type	Model Number		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	R/Rp Threads		Width	Length	
1/2	Male	5500A4003	D5500A4003	4.7	1.3 (32)	3.6 (91)	0.2 (0.1)
1	Male	5500A6003	D5500A6003	14.6	2.0 (51)	5.4 (138)	0.6 (0.3)

Pressure Range: 0 to 290 psig (0 to 20 bar) maximum. **Flow Media:** Filtered air.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Poppet	Flow Media	Filtered air <i>For liquid applications, consult ROSS.</i>
Mounting Type	In-line	Pilot Supply	Internal or External
Solenoids	Rated for continuous duty	Operating Pressure	30 to 145 psig (2 to 10 bar) Pilot Supply - Internal or External: 30 to 145 psig (2 to 10 bar) <i>When external pilot supply, pressure must be equal to or greater than inlet pressure.</i>
Voltage/Power Consumption (each solenoid)	Port Size 1/2: 24 volts DC; 1.5 watts on DC 110 volts AC, 50 Hz: 5.4 VA; 120 volts AC, 60 Hz: 5.0 VA Port Size 1: 24 volts DC; 110 volts AC, 50 Hz; 120 volts AC, 50/60 Hz 5.8 watts nominal on AC and DC, 6.5 watts maximum on AC and DC	Construction Material	Valve Body: Cast Aluminum Poppet: Acetal & Stainless Steel Seals: Buna-N
Enclosure Rating	IP65, IEC 60529	Manual Override	Normally Closed Valves: All Sizes; Non-locking Normally Open Valves: Port Size 1/2: Non-locking Port Size 1: Locking, turn-to-lock
Electrical Connection	EN 175301-803 Form A or Form C connector		
Temperature	Ambient: 40° to 120°F (4° to 50°C) Media: 40° to 175°F (4° to 80°C)		



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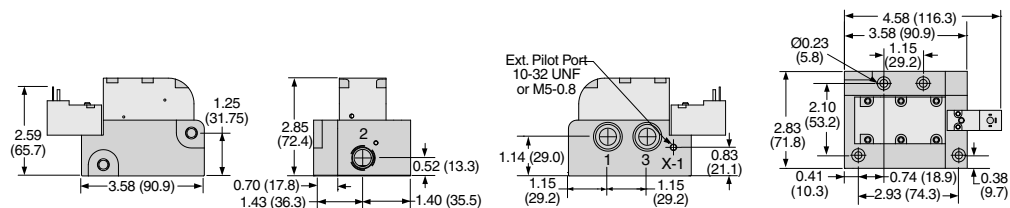
845/3-4 Thepharak RD., T. Thepharak, A. Muang, Samutprakan 10270 THAILAND

Tel. 0 2384 6060, Fax 0 2384 5701, Email : pneumatic@flutech.co.th, www.flutech.co.th

Dale CP Series

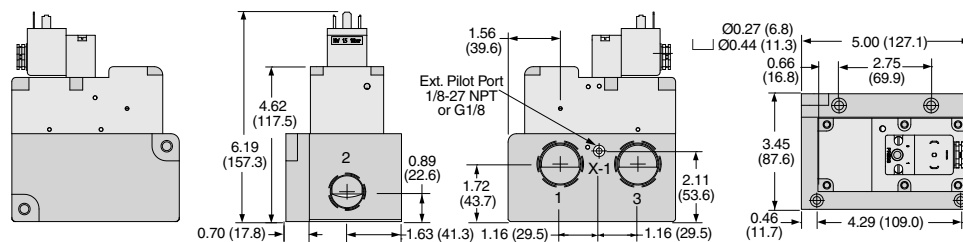
Valve Dimensions – inches (mm)

Port Size 3/8 & 1/2

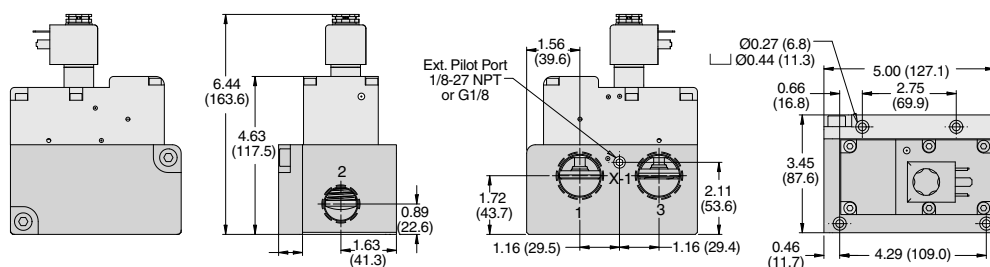


Port Size 3/4 & 1

Normally Closed



Normally Open



ROSS/FLEX® Looking for a different solution?

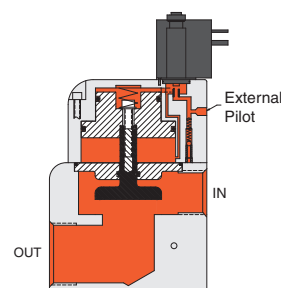
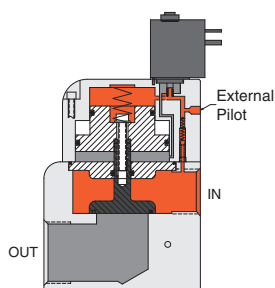
ROSS/FLEX® Customer defined application specific solutions that reduce cost, improve productivity and provide a perfect fit.

Valve Operation Overview

1 - Valve Not Actuated

2 - Valve Actuated

2/2 Normally Closed

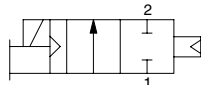


Solenoid Pilot Controlled Valve Manifolds

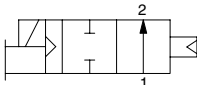
Dale CP Series

Manifolds can be ordered from two to ten stations. Complete valves-on-manifold assemblies can be ordered to fit your precise requirements. For preassembled manifold valves with the same model number, select the model number from the table below. For ordering the Dale CP Series manifold valves with different valve functions, please see page B1.24 for manifold configurator.

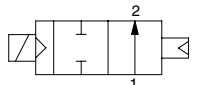
2-Way 2-Position Valves, Spring Assisted Air Return								
Port Size		Internal Pilot Supply				Pilot Port Thread		Avg. C _v
		Normally Closed		Normally Open				
		Model Number#*		Model Number#*				
1	2	NPT Threads	G Threads	NPT Threads	G Threads	NPT	G	
1/2	3/8	CP14NB3711XW	CP14DB3711XW	CP24NB3711XW	CP24DB3711XW	10-32 UNF	M5	3.7
1/2	1/2	CP14NB4711XW	CP14DB4711XW	CP24NB4711XW	CP24DB4711XW	10-32 UNF	M5	3.7
1	3/4	CP16NB5711XW	CP16DB5711XW	CP26NB5711XW	CP26DB5711XW	1/8-27 NPT	G1/8	13.7
1	1	CP16NB6711XW	CP16DB6711XW	CP26NB6711XW	CP26DB6711XW	1/8-27 NPT	G1/8	13.7
1½	1¼	CP18NB7711XW	CP18DB7711XW	CP28NB7711XW	CP28DB7711XW	1/8-27 NPT	G1/8	44.9
1½	1½	CP18NB8711XW	CP18DB8711XW	CP28NB8711XW	CP28DB8711XW	1/8-27 NPT	G1/8	44.9
2½	2	CP10NB9711XW	CP10DB9711XW	CP20NB9711XW	CP20DB9711XW	1/8-27 NPT	G1/8	108
2½	2½	CP10NB0711XW	CP10DB0711XW	CP20NB0711XW	CP20DB0711XW	1/8-27 NPT	G1/8	108



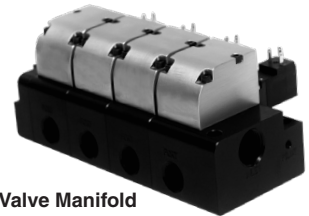
1/2" thru 2½" Normally Closed



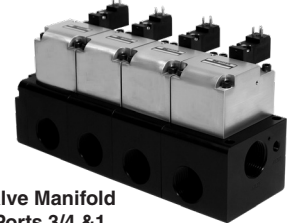
1/2" & 1" Normally Open



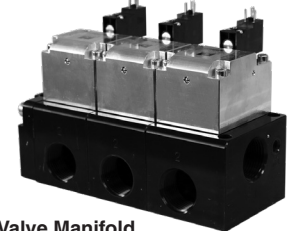
1½" & 2½" Normally Open



Valve Manifold Ports 3/8 & 1/2



Valve Manifold Ports 3/4 & 1



Valve Manifold Ports 1¼ thru 2½

Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., CP14NB3711XZ.

***X Number of Stations** – To indicate the number of stations desired, for 2 to 9 stations, replace X in the model number with the specific number of stations, for 10 stations replace X with 0, e.g., CP14NB37114W (4 = 4 Stations), CP14NB37110W, (0 = 10 Stations).

Contact ROSS for 1 station valve manifolds or refer to single CX Valve product page.

EXTERNAL PILOT SUPPLY CONVERSION:

The CP Series valves can be easily field converted to external pilot supply by simply removing existing pipe plug from port X-1, and installing air supply to the X-1 port.

ACCESSORIES - Electrical Connectors

Valve Type	Port Size	Electrical Connector Form	Electrical Connectors Model Number			
			Lighted Connector Only		Lighted Connector Pre-wired*	
			24 Volts DC	120 Volts AC	24 Volts DC	120 Volts AC
2/2	1/4 - 1	EN 175301-803 Form C	2453K77-W	2453K77-Z	2476K77-W	2476K77-Z
	1½-2½	EN 175301-803 Form A	936K87-W	936K87-Z	720K77-W	720K77-Z

*Pre-wired connectors include a 2 meter (6½ ft.) cord.

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Poppet	Flow Media	Filtered air <i>For liquid applications, consult ROSS.</i>
Mounting Type	In-line	Pilot Supply	Internal or External
Solenoids	Rated for continuous duty	Operating Pressure	30 to 145 psig (2 to 10 bar) Pilot Supply - Internal or External: 30 to 145 psig (2 to 10 bar) <i>When external pilot supply, pressure must be equal to or greater than inlet pressure.</i>
Voltage/Power Consumption (each solenoid)	Port Size 1/2 & 1: 24 volts DC; 1.5 watts on DC 110 volts AC, 50 Hz: 5.4 VA 120 volts AC, 60 Hz: 5.0 VA Port Size 1½ & 2½: 24 volts DC; 110 volts AC, 50 Hz; 120 volts AC, 50/60 Hz 5.8 watts nominal on AC and DC, 6.5 watts maximum on AC and DC	Construction Material	Valve Body: Cast Aluminum Poppet: Acetal & Stainless Steel Seals: Buna-N
Enclosure Rating	IP65, IEC 60529	Manual Override	Normally Closed Valves: All Sizes; Non-locking Normally Open Valves: Port Size 1/2 & 1: Non-locking Port Size 1½ & 2½: Locking, turn-to-lock
Electrical Connection	EN 175301-803 Form A or Form C connector		
Temperature	Ambient: 40° to 120°F (4° to 50°C) Media: 40° to 175°F (4° to 80°C)		



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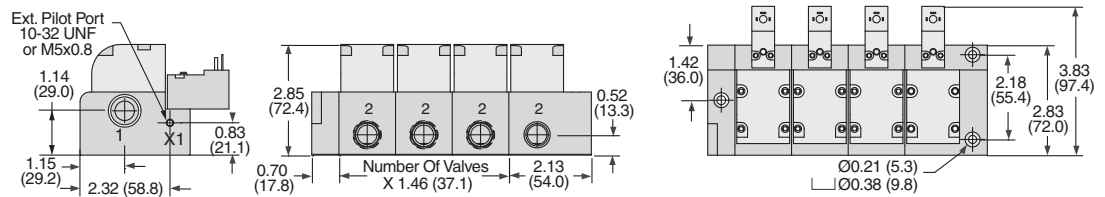
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Solenoid Pilot Controlled Valve Manifolds

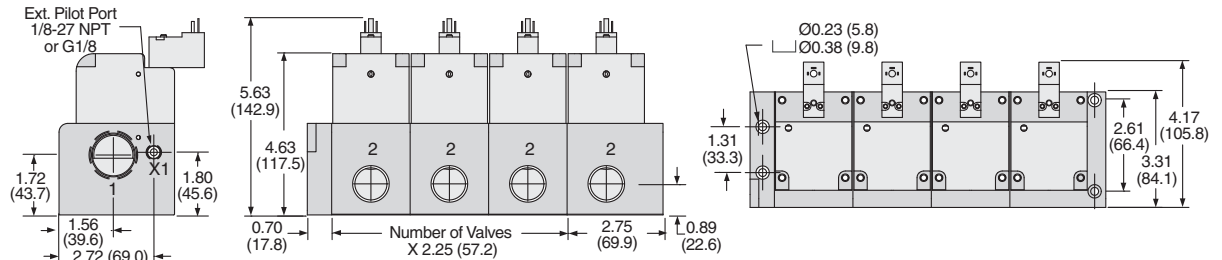
Dale CP Series

Dimensions – inches (mm)

Port Size 3/8 & 1/2

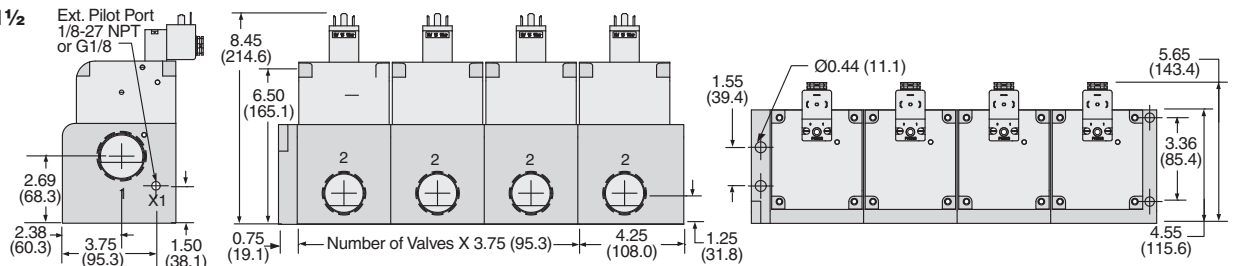


Port Size 3/4 & 1

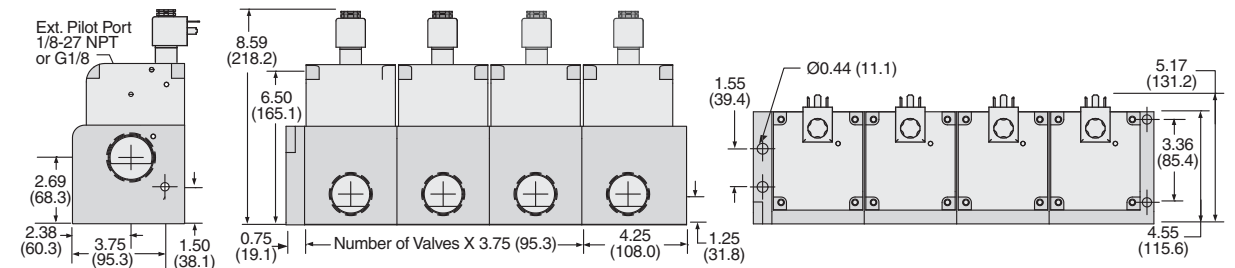


Port Size 1 1/4 & 1 1/2

Normally Closed

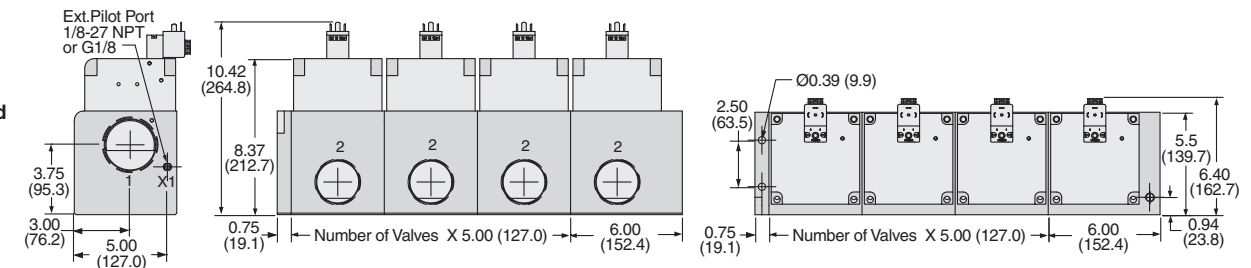


Normally Open

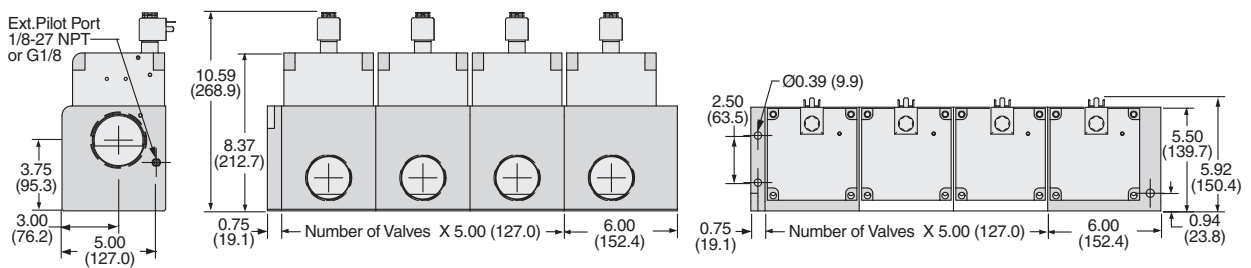


Port Size 2 & 2 1/2

Normally Closed



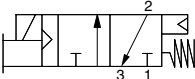
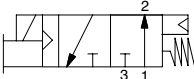
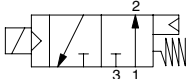
Normally Open

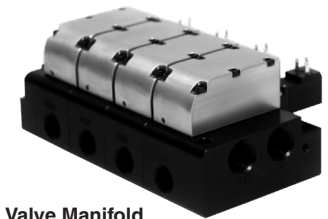


Solenoid Pilot Controlled Valve Manifolds

Dale CP Series

Manifolds can be ordered from two to ten stations. Complete valves-on-manifold assemblies can be ordered to fit your precise requirements. For preassembled manifold valves with the same model number, select the model number from the table below. For ordering the Dale CP Series manifold valves with different valve functions, please see page B1.24 for manifold configurator.

3-Way 2-Position Valves, Spring Assisted Air Return								
Port Size		Internal Pilot Supply				Pilot Port Thread		Avg. C _v
		Normally Closed		Normally Open				
		Model Number#*		Model Number#**				
1, 3	2	NPT Threads	G Threads	NPT Threads	G Threads	NPT	G	
1/2	3/8	CP34NB3711XW	CP34DB3711XW	CP44NB3711XW	CP44DB3711XW	10-32 UNF	M5	3.6
1/2	1/2	CP34NB4711XW	CP34DB4711XW	CP44NB4711XW	CP44DB4711XW	10-32 UNF	M5	3.6
1	3/4	CP36NB5711XW	CP36DB5711XW	CP46NB5711XW	CP46DB5711XW	1/8-27 NPT	G1/8	12.3
1	1	CP36NB6711XW	CP36DB6711XW	CP46NB6711XW	CP46DB6711XW	1/8-27 NPT	G1/8	12.3
# Voltage: W=24 VDC; Z=110-120 VAC, 50/60 Hz, e.g., CP14NB3711XZ.								
*X Number of Stations – To indicate the number of stations desired, for 2 to 9 stations, replace X in the model number with the specific number of stations, for 10 stations replace X with 0, e.g., CP14NB37114W (4 = 4 Stations), CP14NB37110W, (0 = 10 Stations).								
Contact ROSS for 1 station valve manifolds or refer to single CX Valve product page.								
  								
1/2" & 1" Normally Closed 1/2" Normally Open 1" Normally Open								



Valve Manifold Ports 3/8 & 1/2



Valve Manifold Ports 3/4 & 1

EXTERNAL PILOT SUPPLY CONVERSION:

The CP Series valves can be easily field converted to external pilot supply by simply removing existing pipe plug from port X-1, and installing air supply to the X-1 port.

ACCESSORIES

Electrical Connectors							
Valve Type	Port Size	Electrical Connector Form	Electrical Connectors Model Number				
			Lighted Connector Only		Lighted Connector Pre-wired*		
			24 Volts DC	120 Volts AC	24 Volts DC	120 Volts AC	
3/2	1/2	EN 175301-803 Form C	2453K77-W	2453K77-Z	2476K77-W	2476K77-Z	
	1	EN 175301-803 Form A	936K87-W	936K87-Z	720K77-W	720K77-Z	
*Pre-wired connectors include a 2 meter (6½ ft.) cord.							
Silencers							
Port Size	Thread Type	Model Number		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	G Threads		Width	Length	
1/2	Male	5500A4003	D5500A4003	4.7	1.3 (32)	3.6 (91)	0.2 (0.1)
1	Male	5500A6003	D5500A6003	14.6	2.0 (51)	5.4 (138)	0.6 (0.3)
Pressure Range: 0 to 290 psig (0 to 20 bar) maximum. Flow Media: Filtered air.							

STANDARD SPECIFICATIONS (for valves on this page):

Construction Design	Poppet	Flow Media	Filtered air For liquid applications, consult ROSS.
Mounting Type	In-line	Pilot Supply	Internal or External
Solenoids	Rated for continuous duty	Operating Pressure	30 to 145 psig (2 to 10 bar) Pilot Supply - Internal or External: 30 to 145 psig (2 to 10 bar) When external pilot supply, pressure must be equal to or greater than inlet pressure.
Voltage/Power Consumption (each solenoid)	Port Size 1/2: 24 volts DC; 1.5 watts on DC 110 volts AC, 50 Hz: 5.4 VA; 120 volts AC, 60 Hz: 5.0 VA Port Size 1: 24 volts DC; 110 volts AC, 50 Hz; 120 volts AC, 50/60 Hz 5.8 watts nominal on AC and DC, 6.5 watts maximum on AC and DC	Construction Material	Valve Body: Cast Aluminum Poppet: Acetal & Stainless Steel Seals: Buna-N
Enclosure Rating	IP65, IEC 60529	Manual Override	Normally Closed Valves: All Sizes; Non-locking Normally Open Valves: Port Size 1/2: Non-locking Port Size 1: Locking, turn-to-lock
Electrical Connection	EN 175301-803 Form A or Form C connector		
Temperature	Ambient: 40° to 120°F (4° to 50°C) Media: 40° to 175°F (4° to 80°C)		



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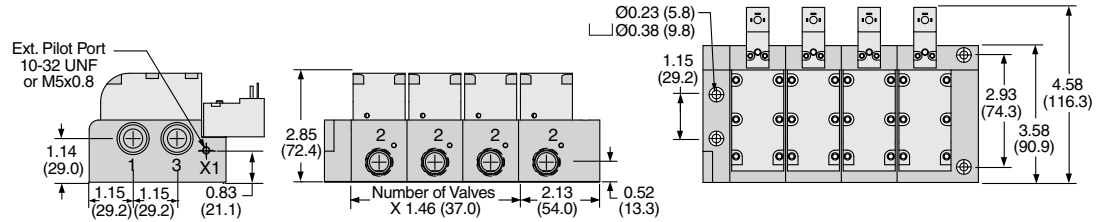
845/3-4 หมู่ 3 ถ.เทพารักษ์ ต.เทพารักษ์ อ.เมือง จ.สมุทรปราการ 102070
845/3-4 Thepharak RD., T. Thepharak, A. Muang, Samutprakan 10270 THAILAND
Tel. 0 2384 6060, Fax 0 2384 5701, Email : pneumatic@flutech.co.th, www.flutech.co.th

Solenoid Pilot Controlled Valve Manifolds

Dale CP Series

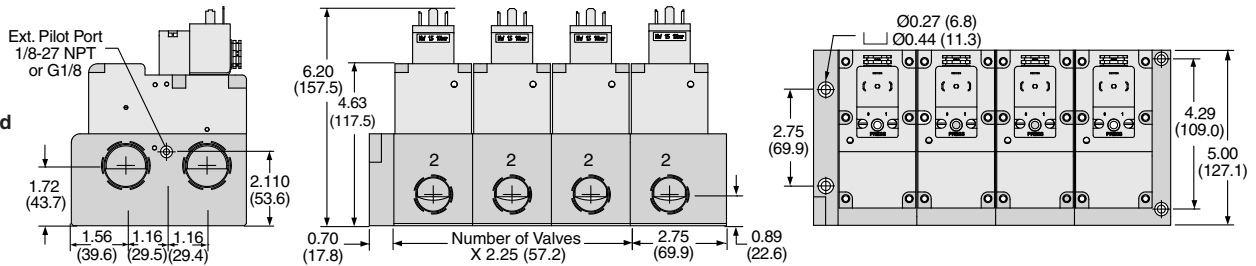
Dimensions – inches (mm)

Port Size 3/8 & 1/2

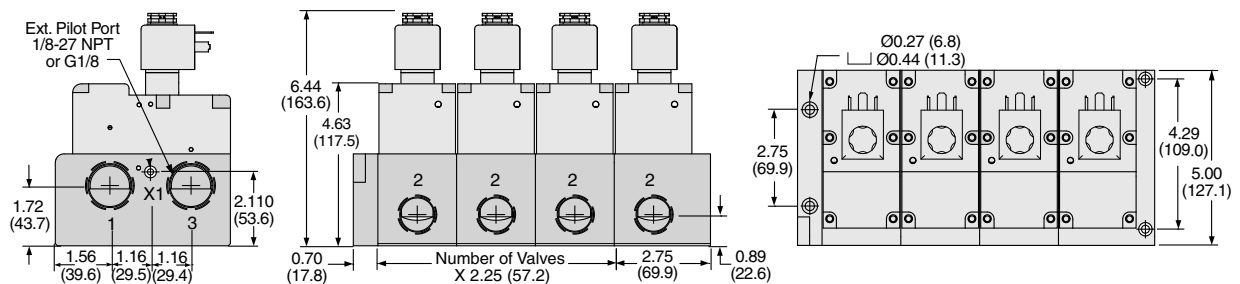


Port Size 3/4 & 1

Normally Closed



Normally Open

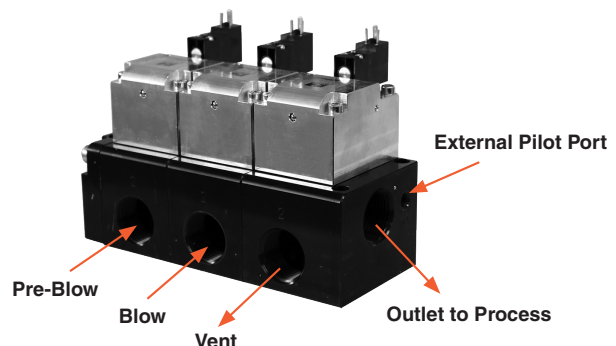


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ROSS/FLEX® Customer defined application specific solutions that reduce cost, improve productivity and provide a perfect fit.

Blow Molding Application Example

The CP & CX compact flexible manifold design eliminates piping, reduces system volume, provides fast consistent actuation and delivers an amazing flow rate up to 100 Cv.



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FLU - TECH CO., TD

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