

New Product Information

Solenoid Pilot Controlled

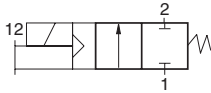
Explosion-Proof Solenoid Pilot Poppet Valves for Line Mounting

2/2, 3/2 & 4/2

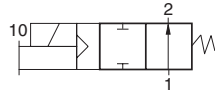
Normally Closed & Normally Open Series 27

2/2 Valves

Normally Closed (NC)

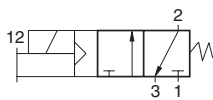


Normally Open (NO)

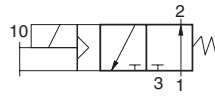


3/2 Valves

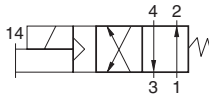
Normally Closed (NC)



Normally Open (NO)



4/2 Valves



STANDARD SPECIFICATIONS:

Solenoids: AC or DC power.

Standard Voltages: 24 volts DC.

Power Consumption: 4.6 watts.

Ambient Temperature: 40° to 120°F (4° to 50°C).

Media Temperature: 40° to 175°F (4° to 80°C).

Solenoid Temperature: -4° to 140°F (-20° to 60°C).

Flow Media: Filtered air.

Inlet Pressure:

1/4 to 1 1/2 Port Sizes: 15 to 150 psig (1 to 10 bar);

1 1/2 to 2 1/2 Port Sizes: 30 to 150 psig (2 to 10 bar).

Threads: NPT, BSPP port threads.

CSA APPROVED, for use in the following hazardous locations:

CLASS I, Zone 1

CLASS I, Div. 1, Group A, B, C and D

CLASS I, Div. 2, Group A, B, C and D

CLASS II, Group E, F and G

CLASS III

Ex m II, T4

GENERAL:

Explosion-proof solenoid pilot controlled valves are ideal for applications in a wide range of industries and environments where safety from electrical ignition of flammable gases, vapors, flammable liquids, combustible dust, or easily ignitable fibers is a concern.

FEATURES:

- Solenoid pilot controlled
- Poppet construction for near zero leakage & high dirt tolerance
- Self-cleaning
- Wear compensating
- Repeatability throughout the life of the valve

External pilot supply option available, consult ROSS.

Explosion-Proof solenoid pilot valves for use in High Temperature and Low Temperature Service also available, consult ROSS.



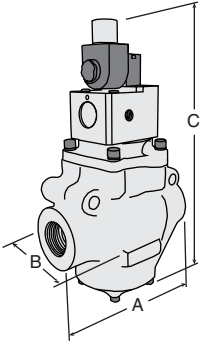
For additional information consult your ROSS distributor or call ROSS Technical Services in the U.S.A. at 1-888-TEK-ROSS (835-7677).

www.rosscontrols.com



Single Solenoid Pilot Controlled

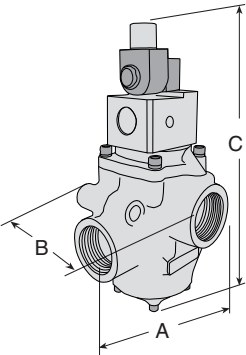
2/2 Valves



Port Size	Valve Model Number*		Avg. C _v		Dimensions inches (mm)			Weight lb (kg)
	NC	NO	NC	NO	A	B	C	
1/4	2771B2002	2772B2002	2.3	2.3	3.6 (91)	3.2 (79)	9.0 (229)	3.0 (1.4)
3/8	2771B3002	2772B3002	3.8	3.3	3.6 (91)	3.2 (79)	9.0 (229)	3.0 (1.4)
1/2	2771B4012	2772B4012	4.0	3.5	3.6 (91)	3.2 (79)	9.0 (229)	3.0 (1.4)
1/2	2771B4002	2772B4002	7.7	6.5	4.6 (116)	3.2 (79)	9.0 (229)	3.6 (1.6)
3/4	2771B5002	2772B5002	9.0	7.3	4.6 (116)	3.2 (79)	9.0 (229)	3.6 (1.6)
1	2771B6012	2772B6012	9.0	7.9	4.6 (116)	3.2 (79)	9.0 (229)	3.6 (1.6)
1	2771B6002	2772B6002	24	21	6.7 (169)	4.1 (104)	12.0 (305)	7.5 (3.4)
1¼	2771B7002	2772B7002	29	20	6.7 (169)	4.1 (104)	12.0 (305)	7.5 (3.4)
1½	2771B8012	2772B8012	29	21	6.7 (169)	4.1 (104)	12.0 (305)	7.5 (3.4)
1½	2771B8002	2772B8002	49	49	8.7 (219)	5.2 (131)	13.0 (330)	16.0 (7.3)
2	2771B9002	2772B9002	57	57	8.7 (219)	5.2 (131)	13.0 (330)	16.0 (7.3)
2½	2771B9012	2772B9012	64	72	8.7 (219)	5.2 (131)	13.0 (330)	16.0 (7.3)

* NPT pressure port threads, for BSPP threads add a "D" prefix to the model number e.g., D2771B2002.

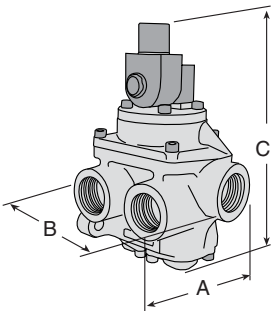
3/2 Valves



Port Sizes In-Out Exh.		Valve Model Number		Avg. C _v		Dimensions inches (mm)			Weight lb (kg)
		NC	NO	NC	NO	A	B	C	
1/4	1/2	2773B2002	2774B2002	2.8	2.5	3.6 (91)	3.2 (79)	9.0 (229)	2.5 (1.2)
3/8	1/2	2773B3002	2774B3002	4.0	3.0	3.6 (91)	3.2 (79)	9.0 (229)	2.5 (1.2)
1/2	1/2	2773B4012	2774B4012	3.8	3.0	3.6 (91)	3.2 (79)	9.0 (229)	2.5 (1.2)
1/2	1	2773B4002	2774B4002	7.8	7.2	4.6 (116)	3.6 (92)	9.0 (229)	3.3 (1.5)
3/4	1	2773B5002	2774B5002	9.4	7.2	4.6 (116)	3.6 (92)	9.0 (229)	3.3 (1.5)
1	1	2773B6012	2774B6012	10	7.2	4.6 (116)	3.6 (92)	9.0 (229)	3.3 (1.5)
1	1½	2773B6002	2774B6002	29	21	6.7 (169)	4.9 (123)	12.0 (305)	7.0 (3.2)
1¼	1½	2773B7002	2774B7002	31	22	6.7 (169)	4.9 (123)	12.0 (305)	7.0 (3.2)
1½	1½	2773B8012	2774B8012	31	21	6.7 (169)	4.9 (123)	12.0 (305)	7.0 (3.2)
1½	2½	2773B8002	2774B8002	69	58	8.7 (219)	6.4 (161)	13.0 (330)	16.5 (7.4)
2	2½	2773B9002	2774B9002	70	60	8.7 (219)	6.4 (161)	13.0 (330)	16.5 (7.4)
2½	2½	2773B9012	2774B9012	71	55	8.7 (219)	6.4 (161)	13.0 (330)	16.5 (7.4)

* NPT pressure port threads, for BSPP threads add a "D" prefix to the model number e.g., D2773B2002.

4/2 Valves



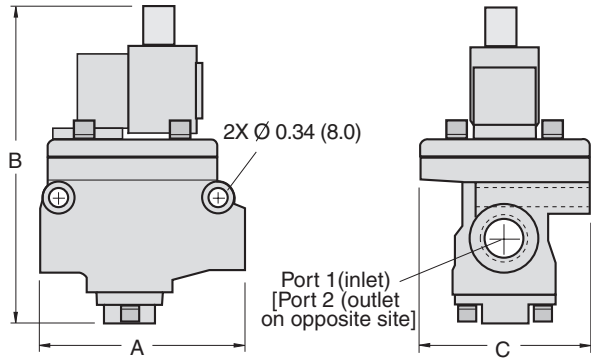
Port Sizes In-Out Exh.		Valve Model Number	Avg. C _v	Dimensions inches (mm)			Weight lb (kg)
				A	B	C	
1/4	1/2	2776B2002	2.5	4.0 (100)	3.9 (97)	8.0 (203)	1.9 (0.9)
3/8	1/2	2776B3002	3.6	4.0 (100)	3.9 (97)	8.0 (203)	1.9 (0.9)
1/2	1/2	2776B4002	3.7	4.0 (100)	3.9 (97)	8.0 (203)	1.9 (0.9)
1/2	1	2776B4002	6.9	4.7 (118)	5.3 (135)	10.0 (254)	4.2 (1.9)
3/4	1	2776B5002	8.2	4.7 (118)	5.3 (135)	10.0 (254)	4.2 (1.9)
1	1	2776B6012	8.9	4.7 (118)	5.3 (135)	10.0 (254)	4.2 (1.9)
1	1½	2776B6002	23	6.5 (166)	8.3 (211)	12.0 (305)	11.0 (5.0)
1¼	1½	2776B7002	24	6.5 (166)	8.3 (211)	12.0 (305)	11.0 (5.0)
1½	1½	2776B8012	25	6.5 (166)	8.3 (211)	12.0 (305)	11.0 (5.0)

* NPT pressure port threads, for BSPP threads add a "D" prefix to the model number e.g., D2771B2002.

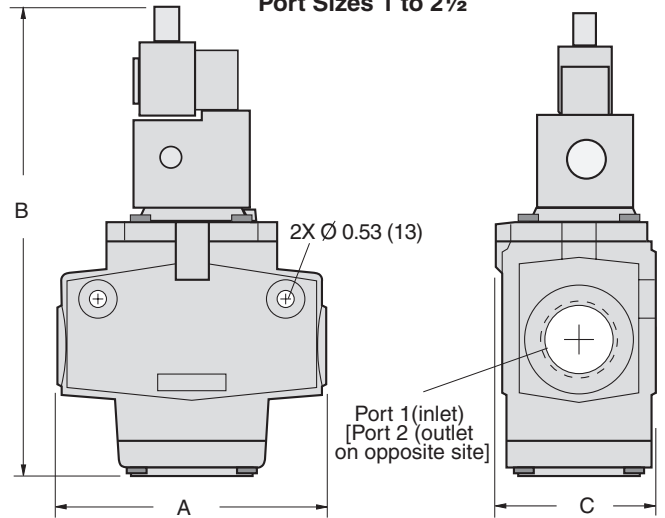
Technical Drawings Specifications

2/2 Solenoid Pilot Controlled Models

Port Sizes 1/4 to 1 OT (Overtap)

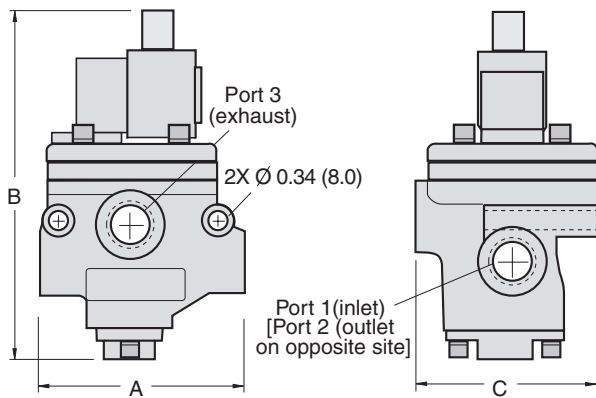


Port Sizes 1 to 2 1/2

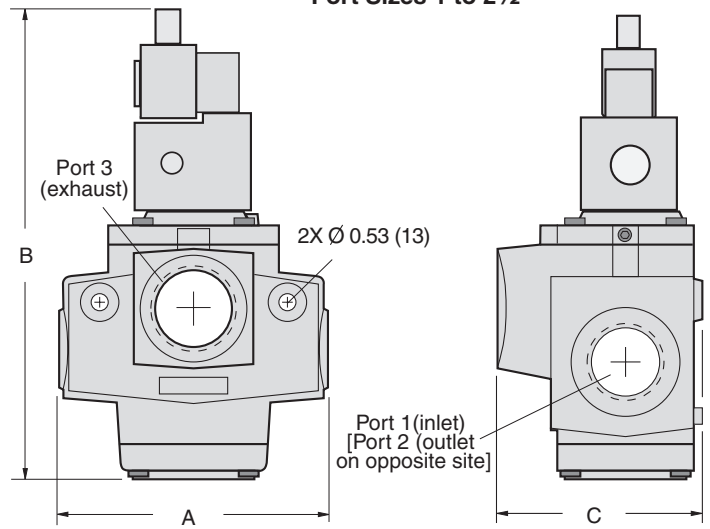


3/2 Solenoid Pilot Controlled Models

Port Sizes 1/4 to 1 OT (Overtap)

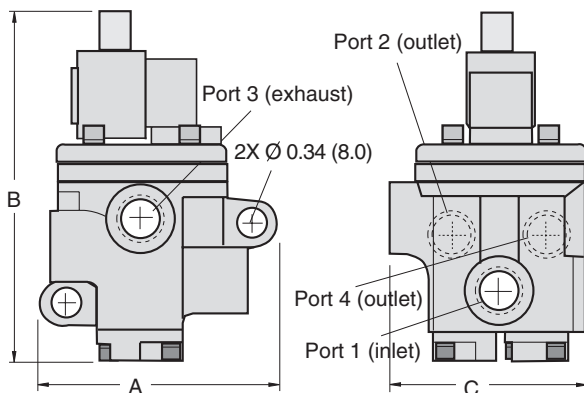


Port Sizes 1 to 2 1/2

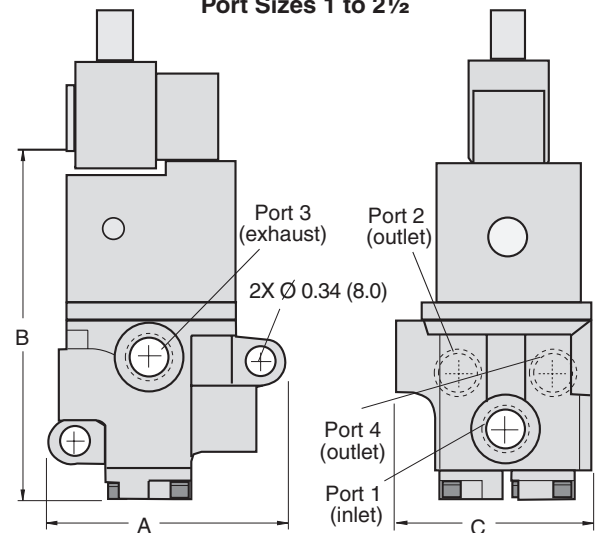


4/2 Solenoid Pilot Controlled Model

Port Sizes 1/4 to 1 OT (Overtap)



Port Sizes 1 to 2 1/2



Conversion Kit

ROSS Controls standard poppet solenoid pilot controlled valves for line mounting can be easily field-converted into an explosion-proof solenoid pilot poppet valve.

Listed on the right are the conversion kit part numbers to replace the obsolete ROSS explosion proof pilot, or to convert a standard in-line valve to an explosion-proof valve.

	<u>Part Number</u>
1/4" - 1" OT (Overtap)	2370K77W
1" - 2½"	2371K77W

Applicable Requirements

C22.2 No. 0-10 - General Requirements - Canadian Electrical Code, Part II

CSA C22.2 No. 25-1966 - Enclosures for use in Class II Groups E, F and G Hazardous Locations

CSA C22.2 No. 142-M1987 - Process Control Equipment

C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

CAN/CSA E79-0-95 - Electrical apparatus for explosive atmospheres, Part 0: General requirements

CAN/CSA E79-18-95 - Electrical apparatus for explosive atmospheres, Part 18: Encapsulation "m"

Referenced Standards

All standards are subject to revision. Parties are encouraged to investigate and apply the most recent editions of the standards indicated below.

Various Safety-related Standards that Apply to Air Systems:

ANSI/ASSE Z244.1-2003 (R2008) – **Lockout/Tagout Control of Hazardous Energy**

OSHA 29 CFR 1910.147, ANSI B11.0-2010, RIA 15.06, ISO13849 – **Machine Safeguarding**

ANSI/PMMI B155.1-2010 – **Safety Requirements for Packaging Machinery**

ANSI B11.1 – **Safety Requirements for Mechanical Power Presses**

ANSI B11.2 – **Safety Requirements for Hydraulic Power Presses**

ANSI B11.3 – **Safety Requirements for Power Press Brakes**

ANSI B11.19-2010 – **Performance Requirements for Safeguarding (Stop Time)**

ANSI B11.TR6-2010 – **Safety Control Systems for Machine Tools**

OSHA 29 CFR 1910.211-219 – **Safeguarding Mechanical Power Presses**



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