ROSS®

FACTOCOMPONENTS
INDUSTRIAL SUPPLIES AND MANUFACTURING EQUIPMENT

Manual Button Valves
11 & 12 Series

Product Catalog

บริษัท แฟ็คโต คอมโพเนนส์ จำกัด | FACTO COMPONENTS CO., LTD.

845/3-4 ชั้น 3 ถ.เทพารักษ์ ต.เทพารักษ์ อ.เมือง จ.สมุทรปราการ 10270

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Button Valves
Product Overview

Mechanical Valves Function

ROSS mechanical valves are especially suited to serve as remote pilots to pass operating signals to other pressure actuated valves. Valves are widely used in automation for harnessing a mechanical action automatically to open or close and air circuit.

Heavy-Duty Valves		Medium-Duty Valves	
Side and Bottom Mounting	Bottom Mounting	Flush Pushbutton	Mushroom Button

Illustration examples.

VALVE FEATURES	
Design	Reliable poppet or spool and sleeve construction
Heavy Duty	Provides quiet operation
Dual Mounting Flanges	Offer flexible and easy installation options
Rugged Construction	Made with corrosion-resistant materials

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Specifications

STANDARD SPECIFICATIONS				
GENERAL	Function	2/2 and 3/2 Valves, Normally Closed		
	Construction Design	Heavy-Duty Valves	Poppet	
		Medium-Duty Valves	Spool & Sleeve	
	Actuation	Pneumatic	Manual	
	Mounting	Heavy-Duty Valves	Side and bottom mounting	
		Medium-Duty Valves	Inline	
	Connection	Threaded	NPT, G	
OPERATING CONDITIONS	Temperature	Heavy-Duty Valves	Ambient	-10° to 175°F (-23° to 80°C)
			Media	
			For temperatures below -10°F (-23°C), consult ROSS.	
		Medium-Duty Valves	Ambient	40° to 175°F (4° to 80°C)
			Media	
			For temperatures below 40°F (4°C) air must be free of water vapor to prevent formation of ice.	
	Flow Media	Filtered air		
	Operating Pressure	5 to 150 psi (0.3 to 10 bar)		
	Operating Distance	Medium-Duty Valves	Valid	0.22 inches (5.5 mm)
			Invalid	0.04 inches (1.0 mm)
	Pressure for Valid/Invalid Operation	Medium-Duty Valves	7.7 lb (3.5 Kg)	
CONSTRUCTION MATERIAL	Valve Body	Heavy-Duty Valves	Cast Aluminum	
		Medium-Duty Valves		
	Button	Heavy-Duty Valves	Aluminum, High-Strength Polymer	
		Medium-Duty Valves	Polyoxymethylene	
	Seals	Heavy-Duty Valves	Buna-N	
		Medium-Duty Valves	Nitrile Rubber	

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

PRODUCT CREDENTIALS

EAC Conformity Declaration

EAC

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Ordering Information

2/2 Heavy Duty Button Valves

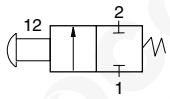
PALM BUTTON VALVES — **2-Way 2-Position Valves**

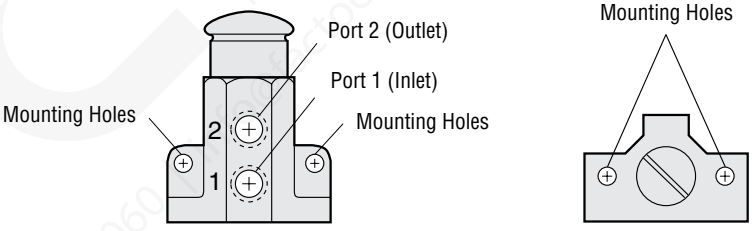
Button Style	Button Color	Mounting Type	Port Size	Valve Model Number	
				NPT Thread	G Thread
Stainless Steel Button	**Silver**	Side and Bottom	1/4	1121A2001	D1121A2001
High-strength Polymer	**Green Button**	Bottom	1/4	1221B2001	D1221B2001
	Red Button	Bottom	1/4	1221B2003	D1221B2003

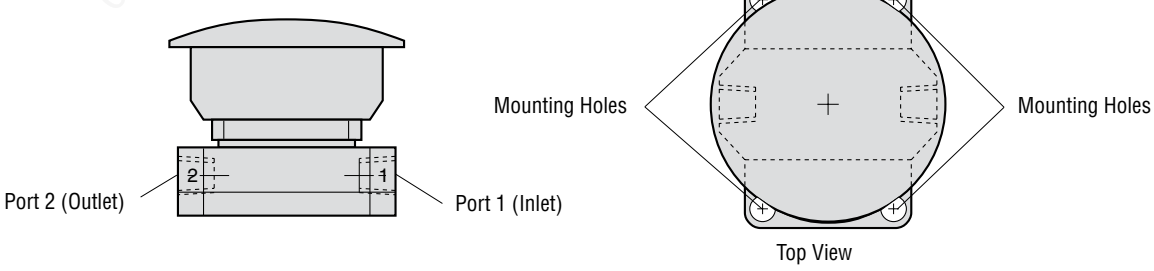
Button Style	Port Size	Flow C_v (Nl/min)	Average Response Constants*	Weight lb (kg)
			F	
			1-2	
Side and Bottom	1/4	0.5 (490)	2.5	1.0 (0.5)
Bottom	1/4	0.8 (790)	2.0	1.8 (0.8)

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. F values are given in the chart above. M values for manually operated valves depend on the speed of actuation, and may be taken as zero for most practical applications.

Valve Schematic



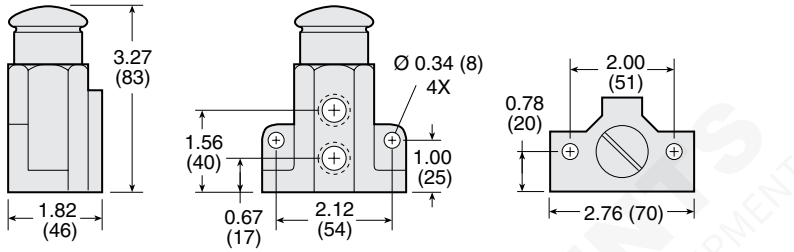




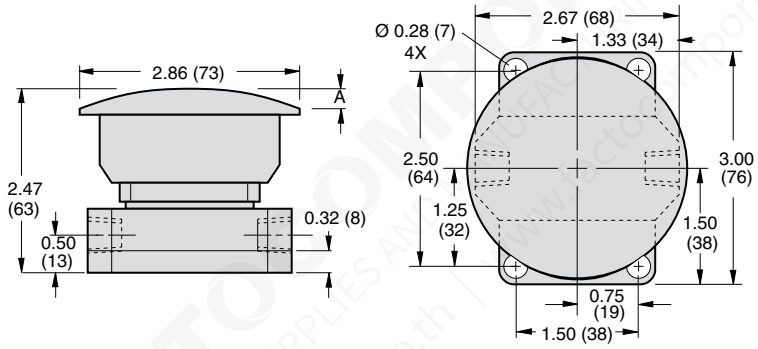
2/2 Heavy Duty Button Valves

DIMENSIONS	Inches (mm)

Side and Bottom Mounting



Bottom Mounting



A = Travel 0.18 (0.5)

Downloadable CAD models available.

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Ordering Information

3/2 Heavy Duty Button Valves

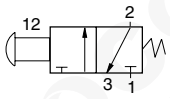
PALM BUTTON VALVES — 2-Way 2-Position Valves

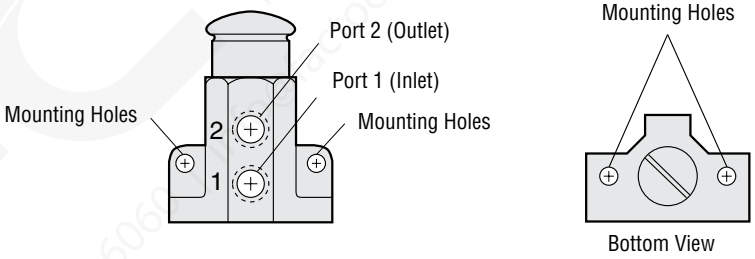
Valve Style	Button Color	Mounting Type	Port Size	Valve Model Number	
				NPT Thread	G Thread
Stainless Steel Button	**Silver**	Side and Bottom	1/4	1123A2001	D1123A2001
High-strength Polymer	**Green Button**	Bottom	1/4	1223B2001	D1223B2001
	Red Button	Bottom	1/4	1223B2003	D1223B2003

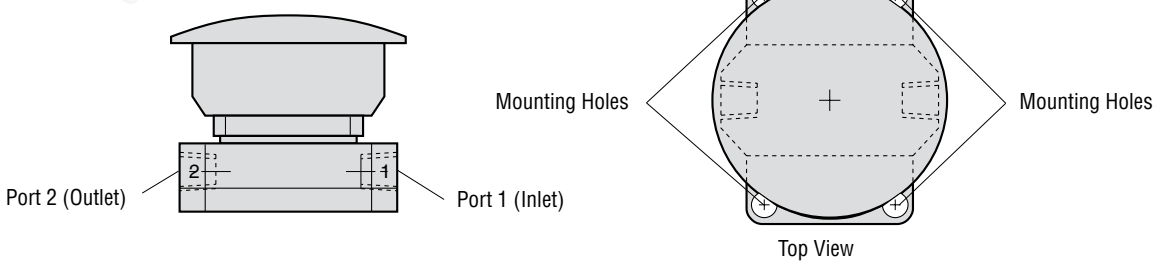
Mounting Type	Port Size	Flow C_V (Nl/min)	Average Response Constants*		Weight lb (kg)
			F		
			1-2	3-2	
Side and Bottom	1/4	0.5 (490)	2.5	3.2	1.0 (0.5)
Bottom	1/4	0.8 (790)	2.0	2.3	1.8 (0.8)

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. F values are given in the chart above. M values for manually operated valves depend on the speed of actuation, and may be taken as zero for most practical applications.

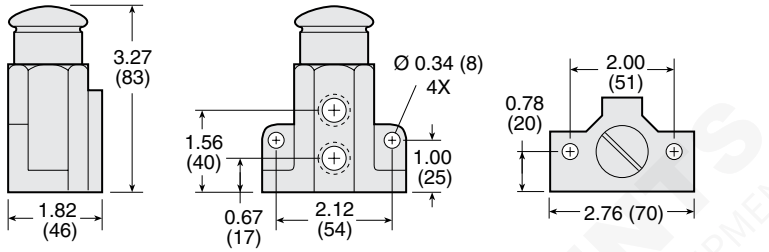
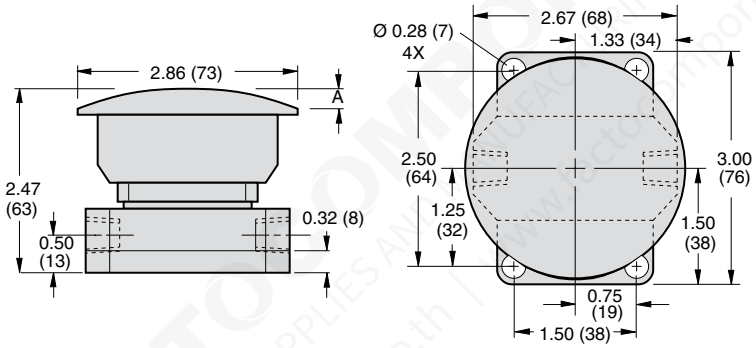
Valve Schematic







3/2 Heavy Button Valves

DIMENSIONS	Inches (mm)
Side and Bottom Mounting	
Bottom Mounting	 A = Travel 0.18 (0.5)

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Ordering Information

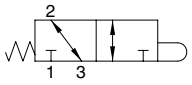
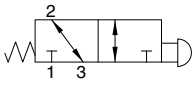
3/2 Medium Duty Palm Button Valves

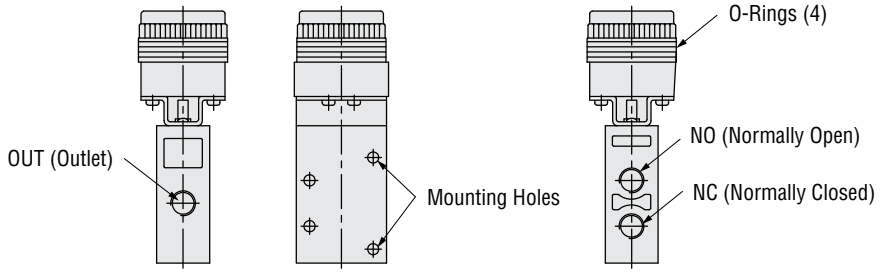
PALM BUTTON VALVES — **3-Way 2-Position Valves**

Valve Style	Port Size	Button Color	Valve Model Number	
			NPT Thread	G Thread
Flush Pushbutton	1/8	Green Button	1223B1FPG	D1223B1FPG
		Red Button	1223B1FPR	D1223B1FPR
	1/4	Green Button	1223B2FPG	D1223B2FPG
		Red Button	1223B2FPR	D1223B2FPR
Mushroom Button	1/8	Green Button	1223B1MPG	D1223B1MPG
		Red Button	1223B1MPR	D1223B1MPR
	1/4	Green Button	1223B2MPG	D1223B2MPG
		Red Button	1223B2MPR	D1223B2MPR

Button Type	Port Size	Flow C_v (Nl/min)	Weight lb (kg)
Flush Pushbutton	1/8	0.6 (590)	0.28 (.013)
	1/4	0.9 (890)	0.34 (0.15)
Mushroom Button	1/8	0.6 (590)	0.29 (.013)
	1/4	0.9 (890)	0.35 (0.16)

Valve Schematic

Flush Pushbutton	Mushroom Button
	



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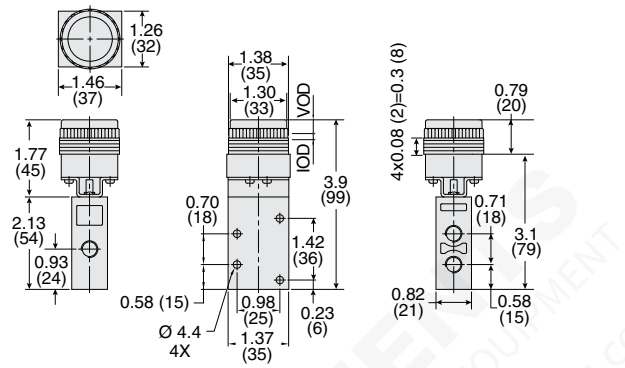
3/2 Medium Duty Palm Button Valves

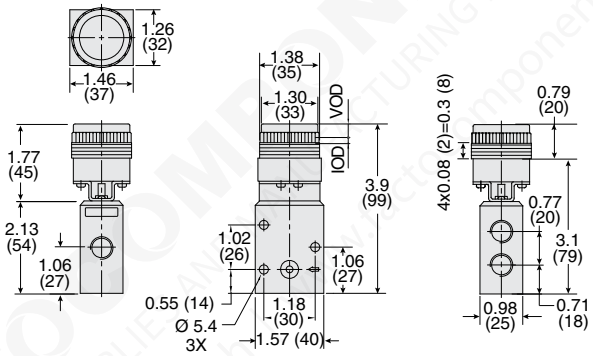
DIMENSIONS — Inches (mm)

Flush Pushbutton

Port Size 1/8

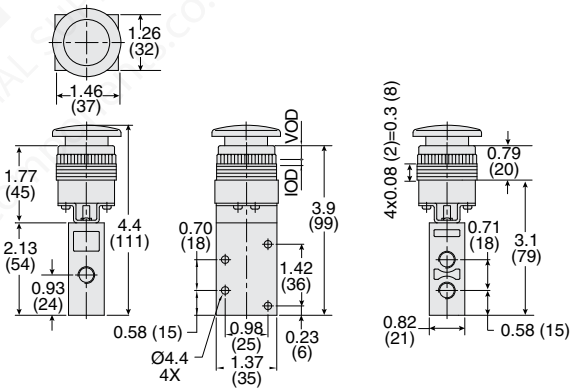


Port Size 1/4

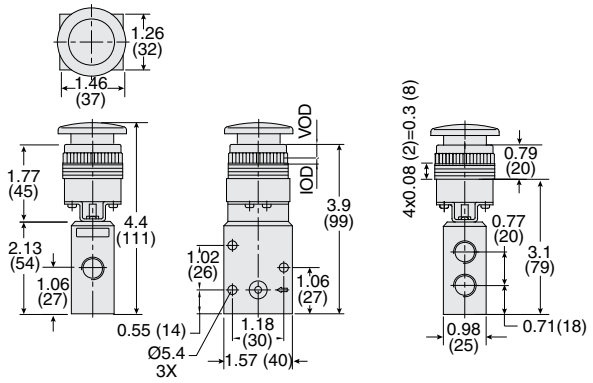


Mushroom Button

Port Size 1/8



Port Size 1/4



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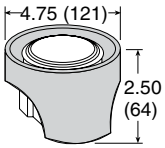
RING GUARD
for Heavy-Duty High-Strength Polymer Palm Button

Model Number	Dimensions Inches (mm)	Features
278B30		Helps to protect against accidental valve actuation.

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