

Pressure Independent Control Series 2-Way Flanged Valves and Electromotoric Valve Actuators



Description

The 2-1/2-inch and 3-inch Pressure Independent Control Valves have a 3/4-inch (20 mm) stroke, and work with the SAX and SQV Series Electromotoric Actuators. The 4-, 5-, and 6-inch valves have a 1-1/2-inch (40 mm) stroke, and work with the SAV and SQV Series Electromotoric Actuators. The actuators require a 24 Vac/dc operating voltage and accept floating, 0 to 10 Vdc, or 4 to 20 mA control signals.

Typical applications include control of hot or chilled water or water-glycol solutions up to 50% in closed loop systems.

Product Numbers

Use the product numbers in the tables to order the valve and the actuator assembled together. The product number consists of a 3-digit prefix code, a hyphen, and a 5-digit code. The prefix specifies an actuator. The 5-digit code specifies the valve body. See Table 2.

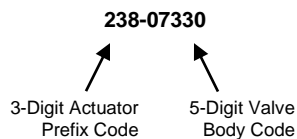


Table 1. Reference: Valve Body Maximum Flow Range.

Valve Body	Line Size Inch (mm)	Maximum GPM Flow Range
599-07330	2-1/2 (65)	21 to 132
599-07335		
599-07331	3 (80)	31 to 195
599-07336		
599-07322	4 (100) Low Flow	55 to 300
599-07332	4 (100) New	63 to 370
599-07317	4 (100) High Flow	65 to 395
599-07327	5 (125) Low Flow	85 to 485
599-07313	5 (125) High Flow	105 to 595
599-07323	6 (150) Low Flow	115 to 650
599-07318	6 (150) High Flow	140 to 860
599-07324	6 (150) High Flow	
599-07319		
599-07329		

Features

The Pressure Independent Control Valves include a pressure regulator, a flow limiter, and a control valve in a single device.

SAX, SAV, and SQV Actuators have a direct-coupled installation, manual override and visual position indication.

Technical Data

Valve Specifications

Body material:	Cast iron
Stem:	Stainless steel
Line size:	2-1/2-inch (65 mm) to 6-inch (150 mm)
Action:	2-way
Valve body rating:	ANSI 125/ANSI 250
Close-off:	100 psi (700 kPa) Δp
Leakage rate:	< ANSI Class IV (0.01%)
Media temperature range:	34°F to 250°F (1°C to 121°C)
Flow characteristic:	Linear
Connection:	ANSI flanged

Actuator Specifications

Operating voltage:	SAX, SAV, SQV	24 Vac/dc
Frequency:		50/60 Hz
Power consumption (normal operation):	SAX81.03U/SAV81.00U	5 VA (3.75W)/7 VA (4.5W)
	SAX61.03U/SAV61.00U	8 VA (3.75W)/9.5 VA (4.5W)
	SQV	20 VA/7.5W
Control Signal:	SAX81.03U/SAV81.00U	Floating
	SAX61.03U/SAV61.00U	0 to 10 Vdc, 4 to 20 mA
	SQV	Selectable (Floating, 0 to 10 Vdc, 4 to 20 mA)
Run time:	SAX	30 seconds
	SAV	120 seconds
	SQV	40 to 240 seconds (adjustable)
Force:	SAX	180 lb (800 N)
	SAV	360 lb (1600 N)
	SQV	250 lb (1100 N)
Weight:	SAX	4.1 lbs (1.85 kg)
	SAV	4.23 lbs (1.92 kg)
	SQV	14 lbs (6.2 kg)

Additional References:




Technical Instructions	
PICV Valves	155-522
SAX Actuators	155-506, 155-507
SAV Actuators	155-547, 155-548
SQV Actuators	155-521
Agency Certifications:	
UL	UL 873
cUL	Canadian Standard C22.2 No. 24

Typical Specifications

Flow shall be varied by actuator position. At any given position, flow through the valve shall not vary more than ±5% due to system pressure fluctuations across the valve in the selected operating range.

Valves shall be pressure independent between a differential pressure of ≤5 to 90 psi for low-flow valves and new 599-0733X valves, or ≤10 to 90 psi for high-flow valves. Length of stroke shall be consistent and independent of flow setting.

Table 2. 2-1/2-Inch to 6-Inch 2-Way Valve and Actuator Assemblies.

Valve Body	ANSI Class	Line Size, Inch (mm)	Maximum Flow	Non-Spring Return				Spring Return					
				SAX61.03U 0 to 10V	SAX81.03U Floating	SAV61.00U 0 to 10V	SAV81.00U Floating	SQV91P30U Normally Open	SQV91P40U Normally Closed				
													
				Actuator Prefix Code						Floating, 0 to 10V, 4 to 20 mA			
		371		373		378		379		238		239	
599-07330	125	2.5 (65)	132	371-07330	373-07330	-	-	238-07330	239-07330				
599-07335	250			371-07335	373-07335	-	-	238-07335	239-07335				
599-07331	125	3 (80)	195	371-07331	373-07331	-	-	238-07331	239-07331				
599-07336	250			371-07336	373-07336	-	-	238-07336	239-07336				
599-07322	250	4 (100)	300	-	-	378-07322	379-07322	238-07322	239-07322				
599-07332	125		370	-	-	378-07332	379-07332	238-07332	239-07332				
599-07337	250			-	-	378-07337	379-07337	238-07337	239-07337				
599-07317	125		395	-	-	378-07317	379-07317	238-07317	239-07317				
599-07327	250			-	-	378-07327	379-07327	238-07327	239-07327				
599-07313	125		5 (125)	485	-	-	378-07313	379-07313	238-07313	239-07313			
599-07323	250	-			-	378-07323	379-07323	238-07323	239-07323				
599-07318	125	595		-	-	378-07318	379-07318	238-07318	239-07318				
599-07328	250			-	-	378-07328	379-07328	238-07328	239-07328				
599-07314	125	6 (150)	650	-	-	378-07314	379-07314	238-07314	239-07314				
599-07324	250			-	-	378-07324	379-07324	238-07324	239-07324				
599-07319	125		860	-	-	378-07319	379-07319	238-07319	239-07319				
599-07329	250			-	-	378-07329	379-07329	238-07329	239-07329				

Information in this publication is based on current specifications. The company reserves the right to make changes in specifications and models as design improvements are introduced. Products or company names mentioned herein may be the trademarks of their respective owners. © 2022 Siemens Industry, Inc.