

INFORMATION *New!*

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 1-800-SMC-SMC1 (762-7621) www.smcusa.com US99-E452 7/00

Interface Regulator for VQ4000 5 Port Solenoid Valve Series ARBQ4000

Reduced piping

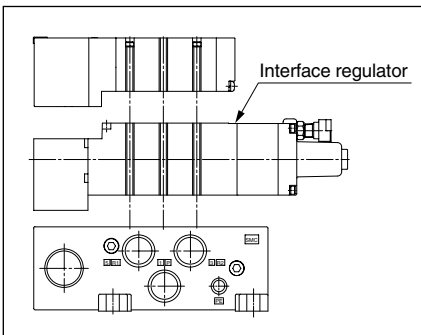
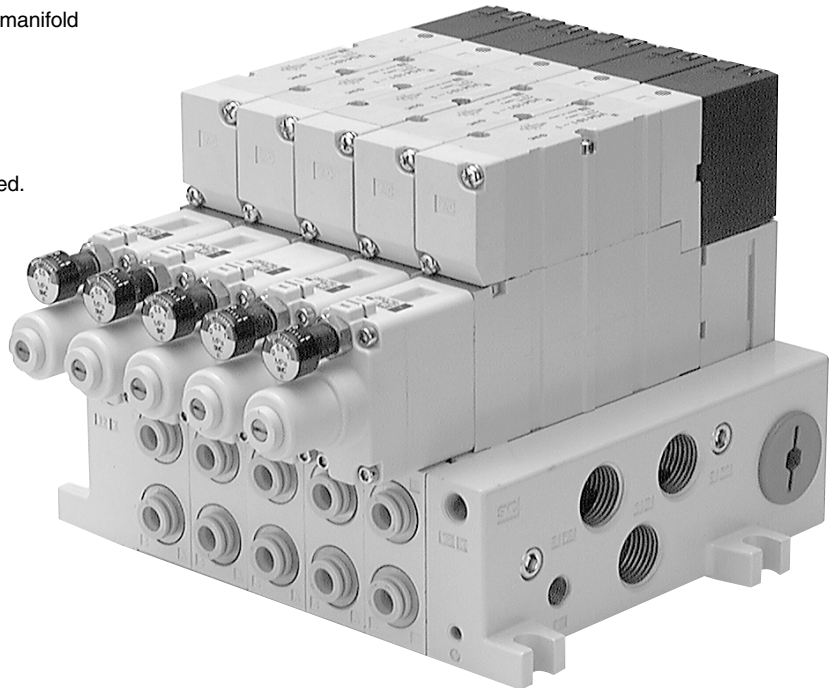
Interface regulators mount directly between valve and manifold base and require no extra piping.

Space savings

Physical space required by traditional circuits is reduced.

Dual pressure control

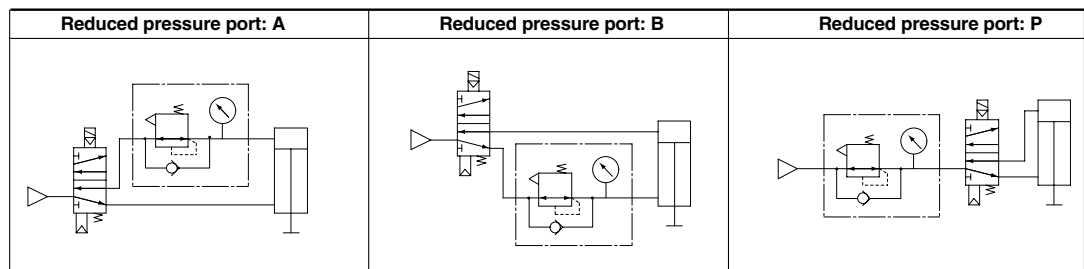
Two different pressures can now easily be supplied to the same actuator.



How to Order

Solenoid valve model	Applicable interface regulator model	Reduced pressure port
VQ4□0□ (plug-in type)	ARBQ4000-00-A-1	A
	ARBQ4000-00-B-1	B
	ARBQ4000-00-P-1	P
VQ4□5□ (plug lead type)	ARBQ4000-00-A-5	A
	ARBQ4000-00-B-5	B
	ARBQ4000-00-P-5	P

Circuit Diagrams



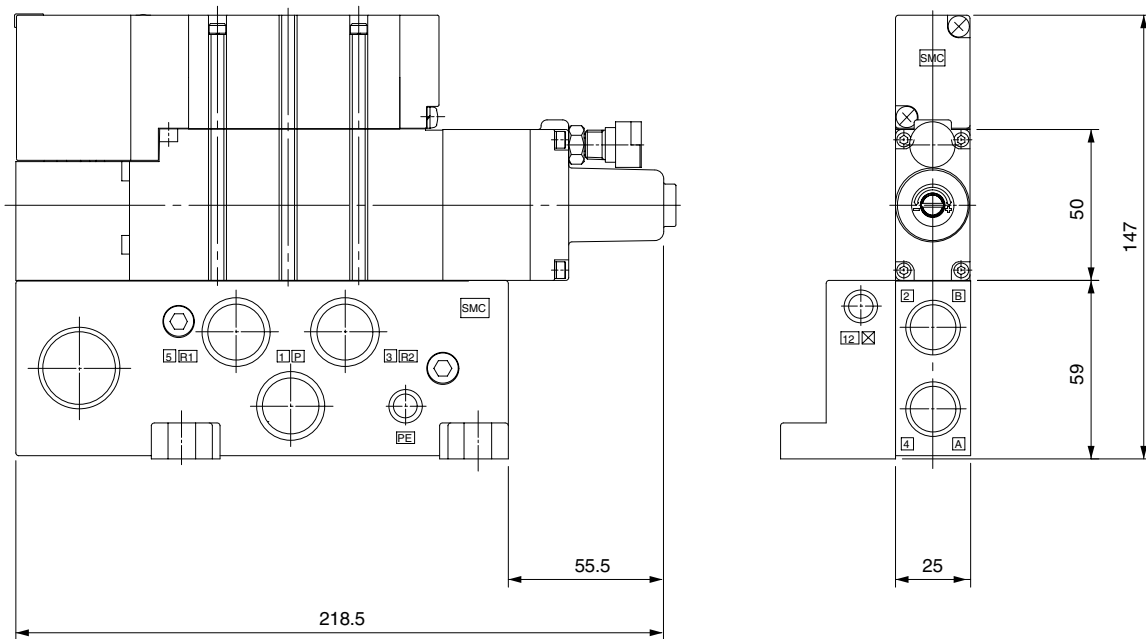
Series ARBQ4000

Specifications

Interface regulator model		ARBQ4000					
Reduced pressure port		A		B		P	
Applicable solenoid valve		Plug-in	Plug lead	Plug-in	Plug lead	Plug-in	Plug lead
Maximum operating pressure		1.0MPa (145 psi)					
Regulating pressure range		0.05 to 0.85MPa (7 to 123 psi)					
Fluid		Air					
Proof pressure		1.5MPa (217 psi)					
Ambient and fluid temperature		-5 to 60°C (23 to 140°F) (with no freezing)					
Pressure gauge port size		M5 x 0.8 (10-32 nominal)					
Weight kg (lb)		0.33 (0.73)	0.30 (0.66)	0.33 (0.73)	0.30 (0.66)	0.33 (0.73)	0.30 (0.66)
(Cv)	Supply side effective area (mm ²) when P ₁ = 0.7MPa, P ₂ = 0.5MPa	P→A		31 (1.72)		14 (0.78)	
		P→B		16 (0.89)		15 (0.83)	
(Cv)	Exhaust side effective area (mm ²) when P ₂ = 0.5MPa	A→EA		40 (2.22)		40 (2.22)	
		B→EB		19 (1.06)		37 (2.06)	

Dimensions (mm)

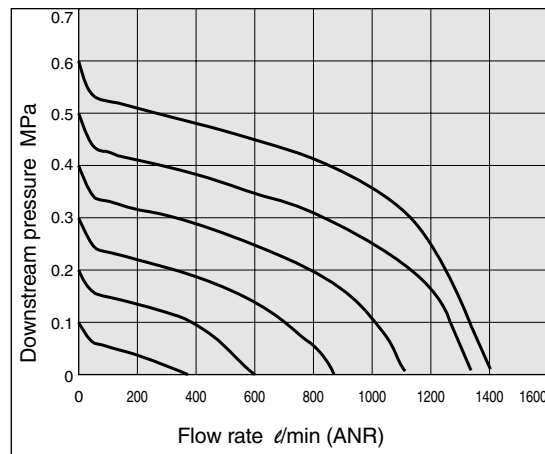
1in = 25.4mm



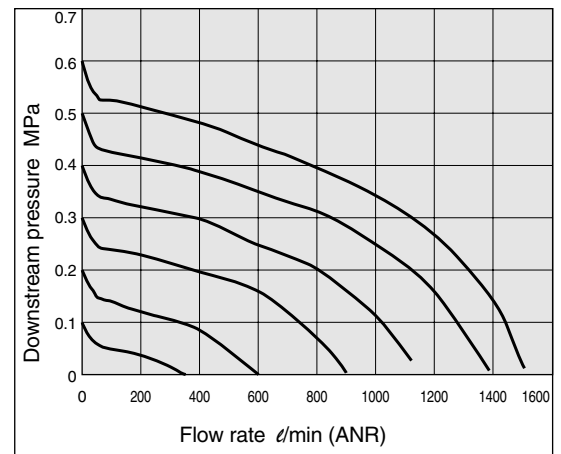
Flow Rate Characteristics

Conditions Upstream pressure: 0.7MPa (101 psi)

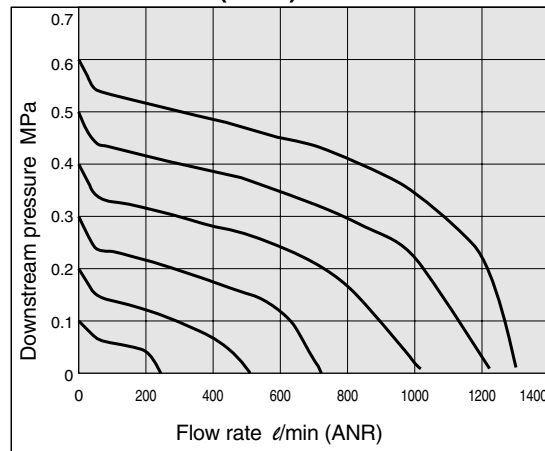
ARBQ4000-00-A



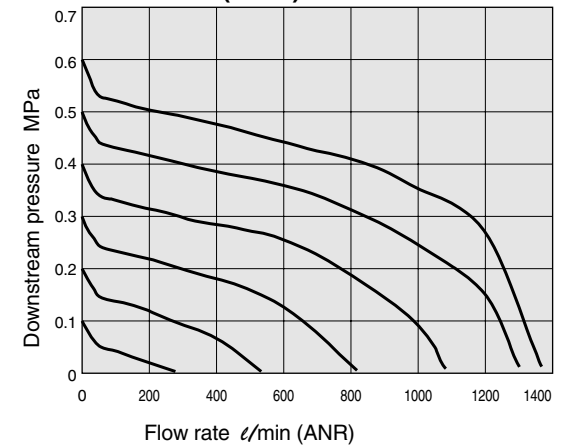
ARBQ4000-00-B



ARBQ4000-00-P (P→A)



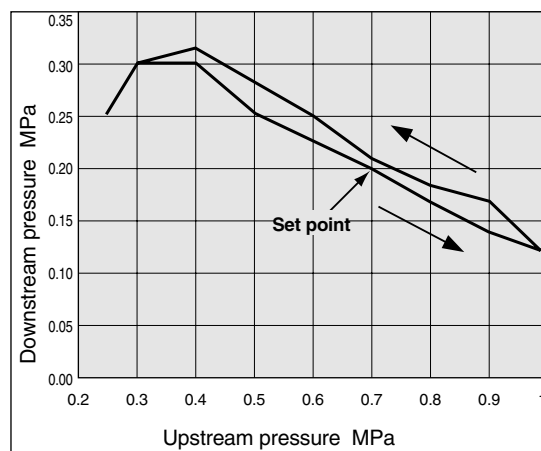
ARBQ4000-00-P (P→B)



1MPa = 145 psi
 N ℓ /min X 0.035 = SCFM

Pressure Characteristics

Conditions Upstream pressure: 0.7MPa (101 psi)
 Downstream pressure: 0.2MPa (29 psi)
 Flow rate: 20 ℓ /min (ANR) (0.7 SCFM)



⚠ Specific Product Precautions

Be sure to read before handling. Consult SMC when outside the specifications.

Operating Precautions

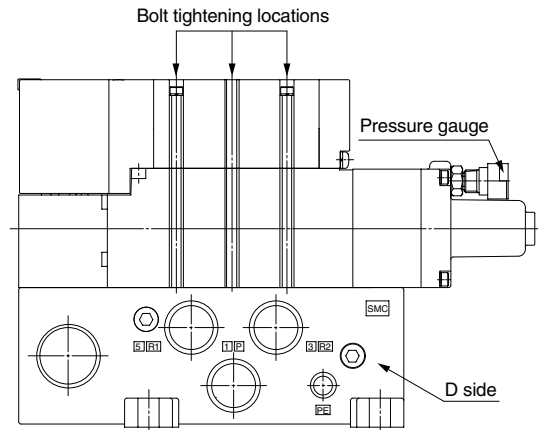
⚠ Caution

1. The effective area is the composite effective area for a 2 position single solenoid valve with rubber seals.
2. Use an interface regulator with pressure from the base's P port only, except when using it with a reverse pressure valve. Furthermore, a P port regulator cannot be used.
3. When using a double check spacer, assemble and operate the valve, interface regulator and double check spacer in that order.
4. Consult SMC regarding operational problems which occur when using a closed center with reduced pressure at port A or port B.
5. Interface regulators cannot be used where a dusttight and splash proof enclosure equivalent to IP65 is required.

Mounting

⚠ Caution

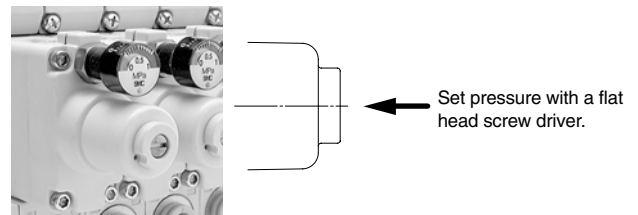
1. With the P port on the manifold's D side in front, mount the interface regulator so that the position of its pressure gauge is as shown in the figure to the right.
2. When mounting an interface regulator, tighten the bolts with a torque of 0.9N·m.



Pressure Setting

⚠ Caution

1. Set the pressure of an interface regulator using a flat head screw driver.
2. The pressure adjustment is increased by turning clockwise and decreased by turning counter clockwise. Perform pressure setting by increasing from low pressure to the desired setting.
3. Perform the setting after carefully confirming the upstream pressure.
4. Set the downstream pressure to no more than 85% of the upstream pressure.



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