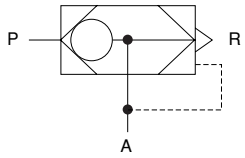
QUICK EXHAUST VALVES

SQE, SQE1, SQE2, QE2, QE3, QE4, QE5

Symbol



Specifications

Item \ Model		SQE	SQE1	SQE2	QE2	QE3	QE4	QE5
Port size	P, A	M5× 0.8	Rc1/8	Rc1/4	Rc1/4	Rc3/8	Rc1/2	Rc3/4
	R		Rc1/4		Rc3/8		Rc3/4	
Effective area mm²	P→A	2.5	21	30	50	60	120	140
	A→R	2.5	28	37	50	60	140	160
Flow coefficient Cv	P→A	0.12	0.91	1.32	2.5	2.8	5.8	6.8
	A→R	0.12	1.23	1.66	2.5	2.8	6.8	7.8
Media		Air						
Operating pressure range MPa {kgf/cm²} [psi.]		0.03～0.9 {0.3～9.2} [4～131]	0.07～0.9 {0.7～9.2} [10～132]					
Proof pressure MPa {kgf/cm²} [psi.]		1.35 {13.8} [196]						
Operating temperature range (atmosphere and media) °C [°F]		5～60 [41～140]						
Maximum operating frequency Hz		10						
Lubrication		Not required						
Mass g [oz.]		10 [0.35]	80 [2.82]		120 [4.23]		430 [15.17]	

Order Codes

SQE □

Port size
- **Blank** : M5×0.8
- **1** : Rc1/8
- **2** : Rc1/4

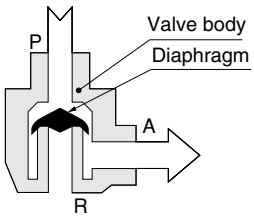
QE □

Port size
- **2** : Rc1/4
- **3** : Rc3/8
- **4** : Rc1/2
- **5** : Rc3/4

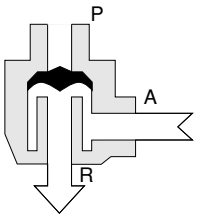
Operating Principles, Major Parts and Materials

When used as a quick exhaust valve

●Air supply condition

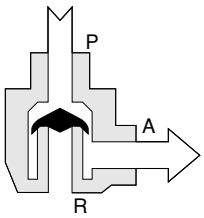


●Exhaust condition

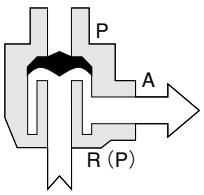


When used as a shuttle valve

●Air supply condition (A)



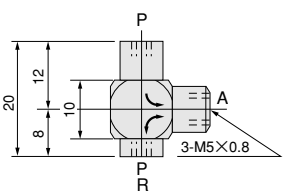
●Air supply condition (B)



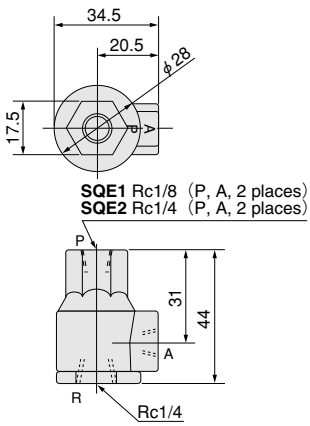
Parts	Materials	
	SQE, SQE1, SQE2	QE2, QE3, QE4, QE5
Body	Zinc die-casting (SQE is brass)	Aluminum alloy
Diaphragm	Synthetic rubber	Urethane rubber
Port cover	—	Aluminum alloy
O-ring	—	Nitril rubber

Dimensions (mm)

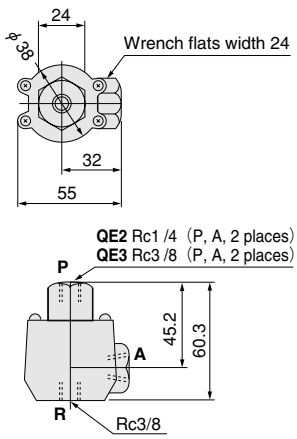
●SQE



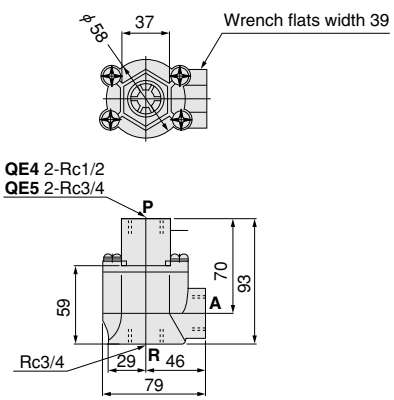
●SQE1
●SQE2



●QE2
●QE3

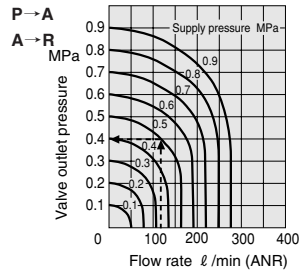


●QE4
●QE5



Flow Rate

SQE

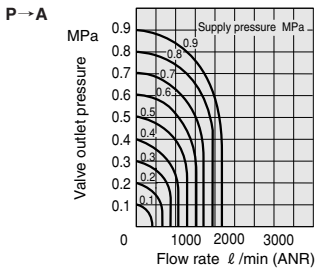


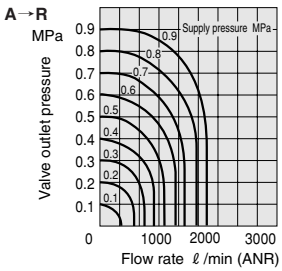
1MPa = 145psi., 1 ℓ /min = 0.0353ft³/min.

How to read the graph

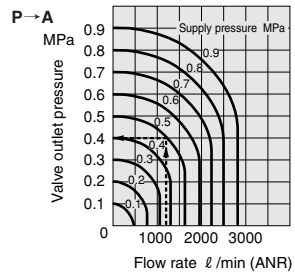
When the supply pressure is 0.5MPa [73psi.] and the flow rate is 125 ℓ /min [4.41ft.³/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

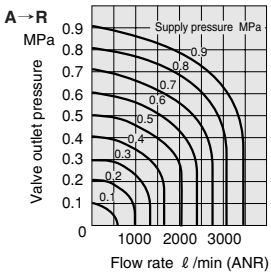
SQE1



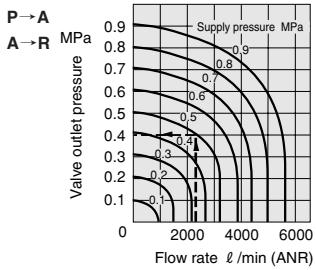


SQE2

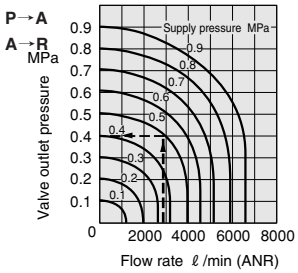




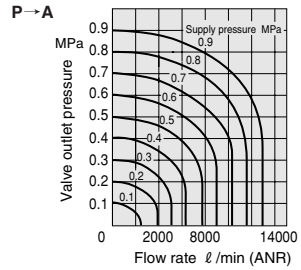
QE2

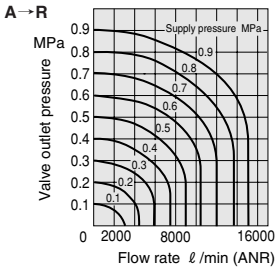


QE3

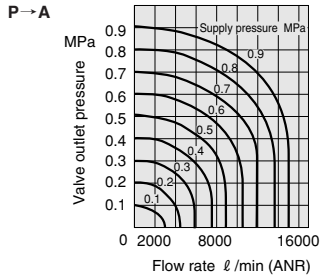


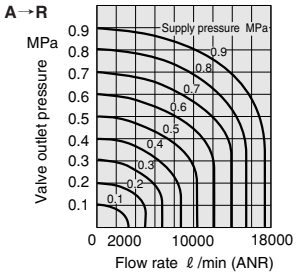
QE4





QE5





Time Required for Air Supply and Exhaust

S

Tank volume ℓ [ft³]	Air supply and exhaust pressure MPa {kgf/cm²} [psi.]	SQE1	SQE2	QE2	QE3	QE4	QE5
1.64 [0.0579]	0→0.55 {5.6} [80]	0.35	0.33	0.17	0.13	—	—
	0.7 {7.1} [102]→0.14 {1.4} [20]	0.32	0.22	0.16	0.10	—	—
16.4 [0.579]	0→0.55 {5.6} [80]	3.5	2.3	1.80	1.50	0.537	0.508
	0.7 {7.1} [102]→0.14 {1.4} [20]	3.2	2.2	1.50	0.90	0.440	0.417

Note: Air supply time is the time required to fill a tank with 0.7MPa [102psi.] air from a pressure level of 0 to 0.55MPa [80psi.].
Exhaust time is the time required to reduce a tank pressure of 0.7MPa [102psi.] down to 0.14MPa [20psi.].