

## QUICK EXHAUST VALVES

### INTRODUCTION

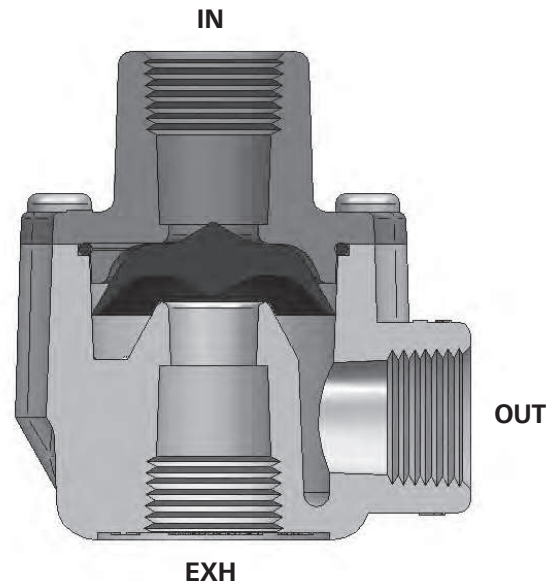
*Quick Exhaust Valves accelerate the speed of pneumatic functions. The valves release pneumatic pressure to atmosphere at a point close to the functioning device (such as linear cylinders, rotary actuators, and volume chambers) versus at the remotely placed control valve.*

### THE ADVANTAGES OF HUMPHREY'S SUPER QUICK EXHAUSTS ARE THE FOLLOWING:

- Special molded shuttle designed especially for quick exhaust valve service.
- Shuttle's full-formed seating surface provides:
  - Long cycle life.
  - Outperforms flat-disk (sheet stock) diaphragms found in competitive designs.
- Shuttle's reinforced center section eliminates flow restricting metal body webbing of flat-disk designs.

### QUICK EXHAUST VALVES CAN ALSO BE USED AS:

- Shuttle valves.
- Check valves.
- Flow/speed control valves.



### How Super Quick Exhaust Valves are used to enhance the performance of air cylinders

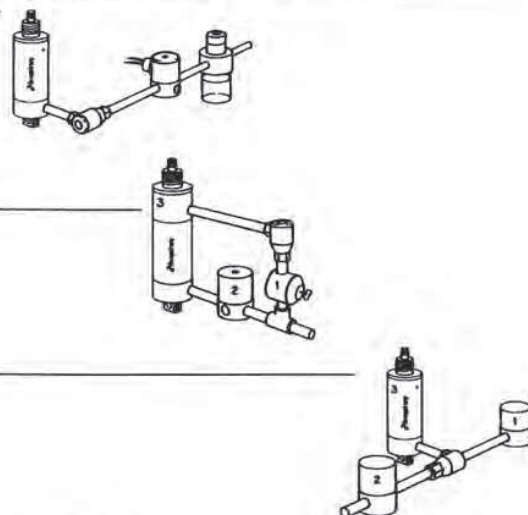
**Lubrication Problem.** Small bore cylinders are often poorly lubricated due to the small displacement of air per cycle. Lubricant back-flows through control valve on the exhaust cycle without reaching cylinder. Oil traces at the valve exhaust port does not prove proper cylinder lubrication.

**Solution:** Close nipple Super Quick Exhaust to cylinder. This stops back-flow and allows progressive oil flow to cylinder. Oil traces at the Super QE exhaust port prove cylinder lubrication.

**"Air Spring" Return.** Provides controlled "air spring" return, a potential advantage over standard spring return cylinders in that the "air spring" return force can be adjusted by a regulator. Also provides a method of controlling double acting cylinders with a 3-way valve. Return-regulator (1) set at selected pressure. (2) Normally closed 3-way valve. (3) Double acting cylinder. Example of use: Cylinder rod extends with high pressure for impact. Rod retracts under low pressure.

**Super Quick Exhaust used as a shuttle valve.** Air from 3-way valves (1 or 2) always directed to cylinder (3).

**High-Low Pressure.** Reduce noise, shock, and stress on cylinder. Extend rod with low pressure (2) to position, hold, etc. Switch to high pressure (1) to lock, bend, reposition, etc. Return to low pressure by closing (1), or retract rod by closing (1) and (2).



	<b>QUICK EXHAUST VALVES</b>	<b>Ports</b>	<b>CFM*</b>	<b>Page</b>
<b>SMALL</b>	SQE	10-32	7	80-81
	SQE1	1/8	63	80-81
	SQE2	1/4	85	80-81
<b>LARGE</b>	QE2	1/4	120	80-81
	QE3	3/8	155	80-81
	QE4	1/2	373	80-81
	QE5	3/4	395	80-81

*\*Nominal flow @100 PSI*



## Super Quick Exhaust Valves

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

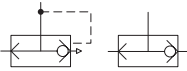
The Humphrey family of Super Quick Exhaust valves are world renowned for service life and high flow. Available in seven sizes from 10-32 porting to 3/4 PIPE port, Humphrey Quick Exhaust valves have a bat wing, molded shuttle that totally outperforms competitive flat-disc, sheet stock diaphragm types.

### Features

- Mount close cylinder port. Quick dumps exhausting air for high speed cycling.
- Compact size, very high flow.
- Outperforms all others.
- Outlasts all others.
- Use as shuttle valve. Plug exhaust port for check valve function.

### Order Codes and Descriptions:

- SQE:** 10-32 UNF Miniature Quick Exhaust  
**SQE1:** 1/8 PIPE Small Quick Exhaust  
**SQE2:** 1/4 PIPE Small quick exhaust  
**QE2:** 1/4 PIPE Quick Exhaust  
**QE3:** 3/8 PIPE Quick Exhaust  
**QE4:** 1/2 PIPE Large Quick Exhaust  
**QE5:** 3/4 PIPE Large Quick Exhaust

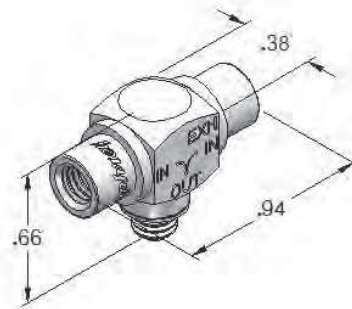


FOR ADDITIONAL INFORMATION AND SPECIFICATIONS, VISIT [WWW.HUMPHREY-PRODUCTS.COM](http://WWW.HUMPHREY-PRODUCTS.COM) TO ACCESS:

- Non-Catalog Options & Product Configuration Utility
- CAD Viewer & Model Downloads
- Additional Specifications & Data Sheets
- General Information & Handling Instructions



SQE



### HOW TO ORDER

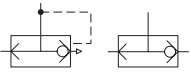
To order Super Quick Exhaust Valves, specify: **SQE**  
**SQE1**  
**SQE2**  
**QE2**  
**QE3**  
**QE4**  
**QE5**

### SPECIFICATIONS

Design Principle:	Quick Exhaust	Flow @100 PSI:	SQE: 7 CFM (Cv=0.1)
Port Size:	10-32 UNF, 1/8, 1/4, 3/8, 1/2, 3/4 PIPE		SQE1: 63 CFM (Cv=1.1)
Media:	Air, Inert Gases		SQE2: 85 CFM (Cv=1.4)
Pressure Range:	0-150 PSI		QE2: 120 CFM (Cv=2.0)
Temperature Range:	-25° to 180°F		QE3: 155 CFM (Cv=2.6)
			QE4: 373 CFM (Cv=6.2)
			QE5: 395 CFM (Cv=6.6)

# Super Quick Exhaust Valves

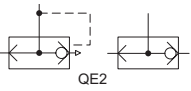
SQE, SQE1, SQE2, QE2, QE3, QE4, QE5



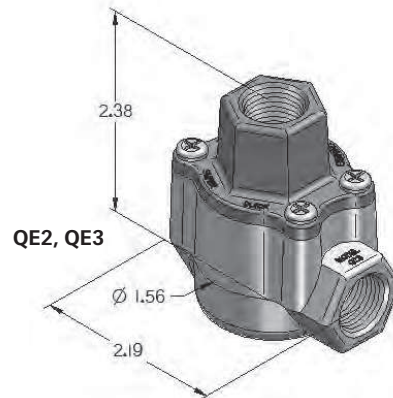
**SQE1, SQE2**



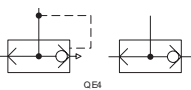
**SQE1, SQE2**



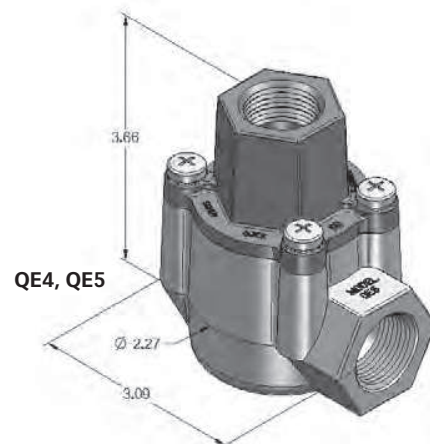
**QE2, QE3**



**QE2, QE3**



**QE4, QE5**



**QE4, QE5**

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