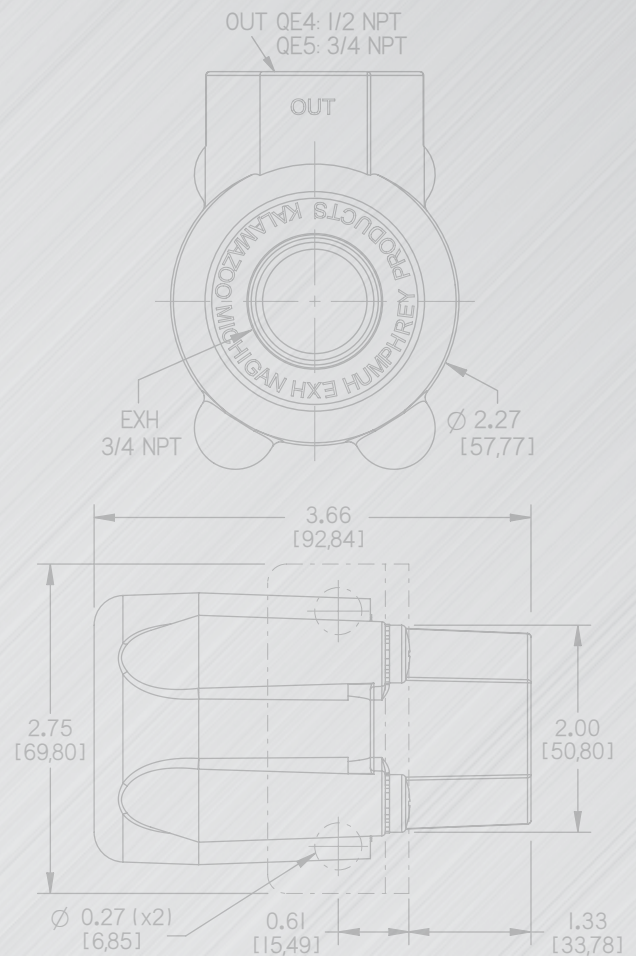


# Super Quick Exhaust Valves

Outperforms, Outlasts All Others



Humphrey Super Quick Exhaust valves enhance performance of corresponding pneumatic valves and cylinders. They are world-renowned for responsiveness, extremely high flow and long service life.

MADE IN USA



# Humphrey Super Quick Exhaust Valves

Humphrey Super Quick Exhaust Valves feature a specially molded rubber shuttle designed for extremely fast response when sensing an upstream pressure differential, instantaneously redirecting downstream pressure to its third port.

The rubber shuttle prevents rupture, providing long life, tight sealing and greater flow capacity from its full-formed seating surface, outperforming flat-disk (sheet stock) diaphragms and flow restricting support webbing found in competitive valve designs.

## FUNCTIONS

**Quick Exhaust Valves** are used primarily to enhance performance of air cylinders and air actuators, quickly dumping the volume of compressed air and its back pressure, when venting. This can increase cylinder acceleration and cycling speeds, enhancing the overall efficiency of equipment.

Humphrey Super Quick Exhaust Valves can perform other common functions. Consider the Humphrey Quick Exhaust for a rugged **Shuttle Valve** solution. Plug or restrict flow at the exhaust port and perform a **Check Valve** or **Speed Control** function.

Available in seven sizes from miniature 10-32 UNF to 3/4 NPT ported models.



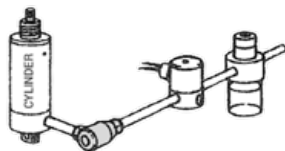
## OTHER QUICK EXHAUST SOLUTIONS TO ENHANCE EQUIPMENT PERFORMANCE

### LUBRICATION PROBLEM

Small-bore pneumatic cylinders and actuators are often poorly lubricated due to the small displacement of air per cycle.

Airline lubricant back-flows through the control valve on each exhaust cycle without reaching the cylinder. Oil traces at the control valve's exhaust port does not prove proper cylinder lubrication.

To solve the lubrication problem, close nipple Quick Exhaust at the cylinder port. This redirects back-flow and allows progressive oil to flow to the cylinder.

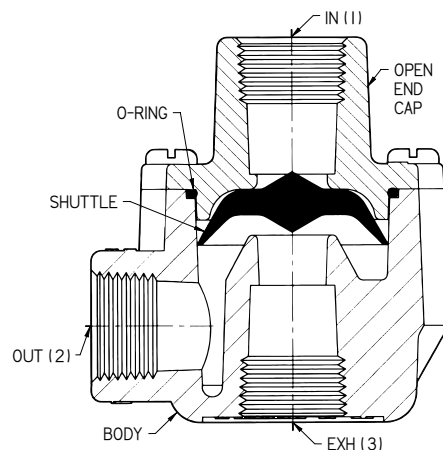
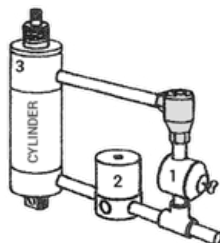


### AIR SPRING

Super Quick Exhaust can provide controlled "air spring" return, a potential advantage over mechanical spring return cylinders.

"Air spring" return force can be controlled by a regulator (1) while providing a method of extending cylinder with a more economical 3-way valve (2).

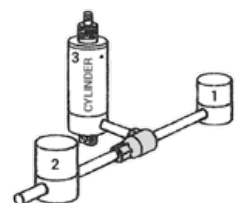
Here, cylinder rod (1) extends with high pressure for impact, and rod returns "home" with less costly low pressure.



### HIGH-LOW PRESSURE SHUTTLE

Air from 3-way valves (1 or 2) always directed to cylinder (3).

Reduce noise, shock, and stress on the air cylinder. Extend cylinder rod with low pressure (1) to position with workpiece. Switch to high pressure (2) to lock, bend, or reposition the workpiece, etc.

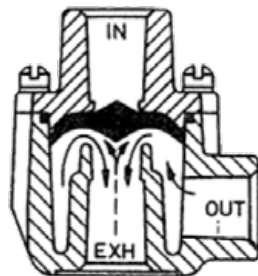
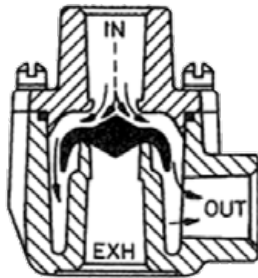
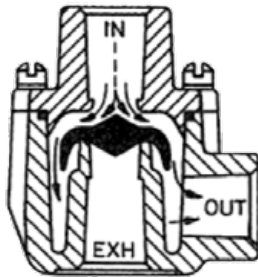


## FEATURES

- Rugged, simple design;  
Long cycle life
- Unique, molded rubber shuttle responds instantaneously.
- Extremely high flow capacity.  
Quickly dumps exhausting air for highspeed cycling.
- Versatile; Functions as a Quick Exhaust, Shuttle, Check or Speed Controller.

## HOW IT WORKS

Quick Exhaust = Solid Line  
Shuttle Valve = Broken Lines

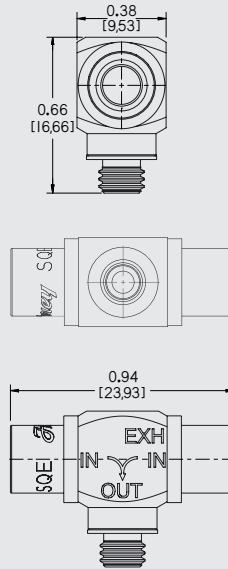


### EXH PORT

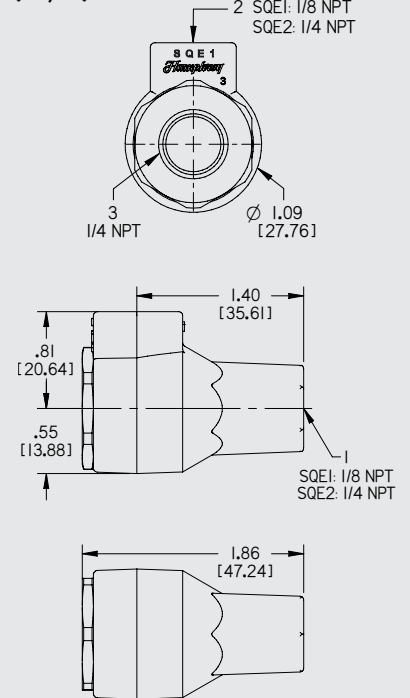
- Always exhausts out this port.
- Consider muffler to reduce exhaust noise.
- Plug for use as check valve.
- Restrict for speed control.

## DIMENSIONAL DRAWINGS

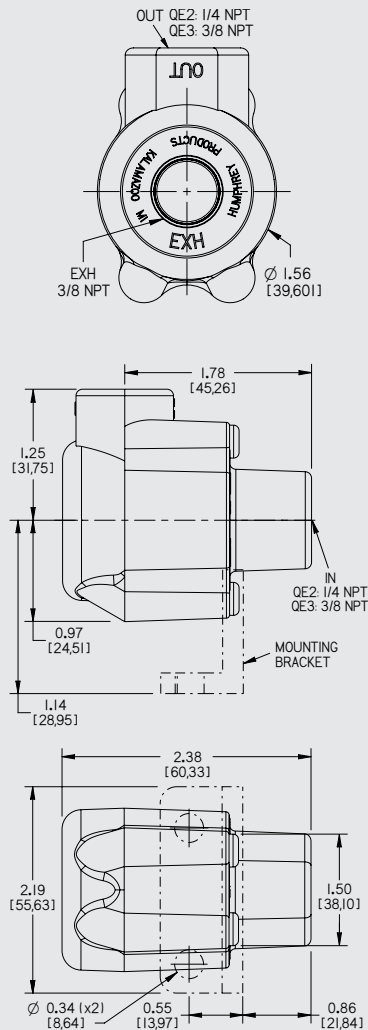
### SQE



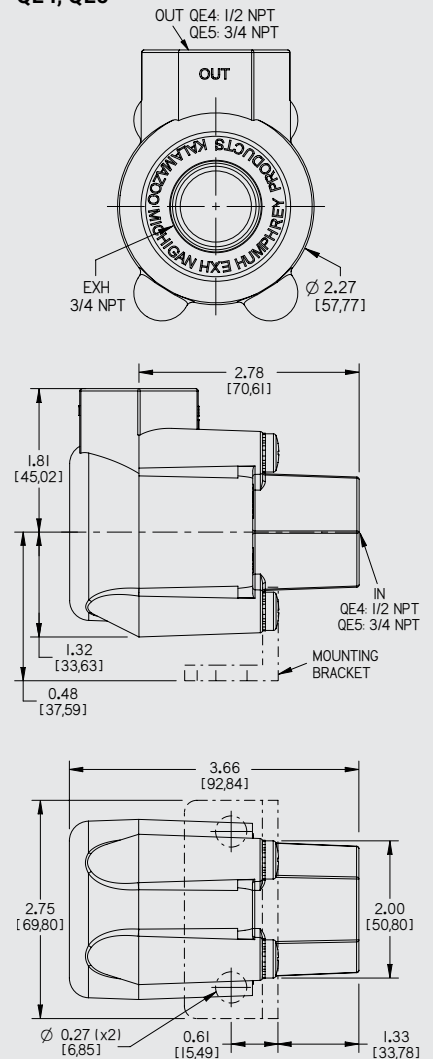
### SQE1, SQE2



### QE2, QE3



### QE4, QE5



# Specifications, Accessories

SPECIFICATIONS	SQE	SQE1	SQE2	QE2	QE3	QE4	QE5
PORT SIZE	10-32 UNF	1/8 NPT	1/4 NPT	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT
EXHAUST PORT SIZE	10-32 UNF	1/4 NPT		3/8 NPT		3/4 NPT	
MEDIA	Air and Inert Gases						
PIPING TYPE	Inline, Direct Piping						
PRESSURE RANGE (PSI)	3-125	4-150		3-150	2-150	1-150	
FLOW (SCFM)	7	63	85	120	155	373	395
FLOW (Cv)	0.1	1.1	1.4	2.0	2.6	6.2	6.6
LUBRICATION	Not Required						
TEMPERATURE RANGE	-25° to 180°F (-31.7° to 82° C)						
WEIGHT (OZ)	0.4	2.7		5		15	
WETTED MATERIALS	Brass, NBR	Aluminum, Zinc diecast, Polyurethane (Optional FKM)		Zinc diecast, NBR (Optional FKM)		Aluminum diecast, Polyurethane (Optional FKM)	

ACCESSORIES	SQE	SQE1	SQE2	QE2	QE3	QE4	QE5
MOUNTING BRACKET	–	–		8-1A		8-12A	
EXHAUST PORT PIPE PLUG	PFBAGOF10	130-15		130-25		130-24	
SEALS REPAIR KIT	–	SRKSQE		SRKQE		SRKQE45	

## How to Order Super Quick Exhaust Valves

### STANDARD MODEL

Order Code	Description
<b>SQE</b>	Miniature Quick Exhaust 10-32 UNF
<b>SQE1</b>	Small Quick Exhaust 1/8 NPT
<b>SQE2</b>	Small Quick Exhaust 1/4 NPT
<b>QE2</b>	Quick Exhaust 1/4 NPT
<b>QE3</b>	Quick Exhaust 3/8 NPT
<b>QE4</b>	Quick Exhaust 1/2 NPT
<b>QE5</b>	Quick Exhaust 3/4 NPT

### MODEL WITH FKM SHUTTLE

Order Code	Description
–	–
<b>SQE1VAI</b>	Small Quick Exhaust 1/8 NPT with Viton™ (FKM)
<b>SQE2VAI</b>	Small Quick Exhaust 1/4 NPT with Viton™ (FKM)
<b>QE2VAI</b>	Quick Exhaust 1/4 NPT with Viton™ (FKM)
<b>QE3VAI</b>	Quick Exhaust 3/8 NPT with Viton™ (FKM)
<b>QE4VAI</b>	Quick Exhaust 1/2 NPT with Viton™ (FKM)
<b>QE5VAI</b>	Quick Exhaust 3/4 NPT with Viton™ (FKM)

Certified to the ISO 9001:2015 Standard.