

VIPER

Pat. Pend.

SMC is a world leader in valve and valve operator design with 42 years of experience, not a plastics company trying to make valves and connections. The **VIPER** (Pat. Pend.) Series provides up to 5 times the life of our competitors, with a high-purity connection up to 10 times the performance of the "Industry Standard".

LVO

Viper rated to 200°C

Diaphragm support bushing prevents micro-cracking, extending life up to five times our competitors

Conical Valve Seat provides high linearity in flow control (Option 1)

High conductivity & swept flow path

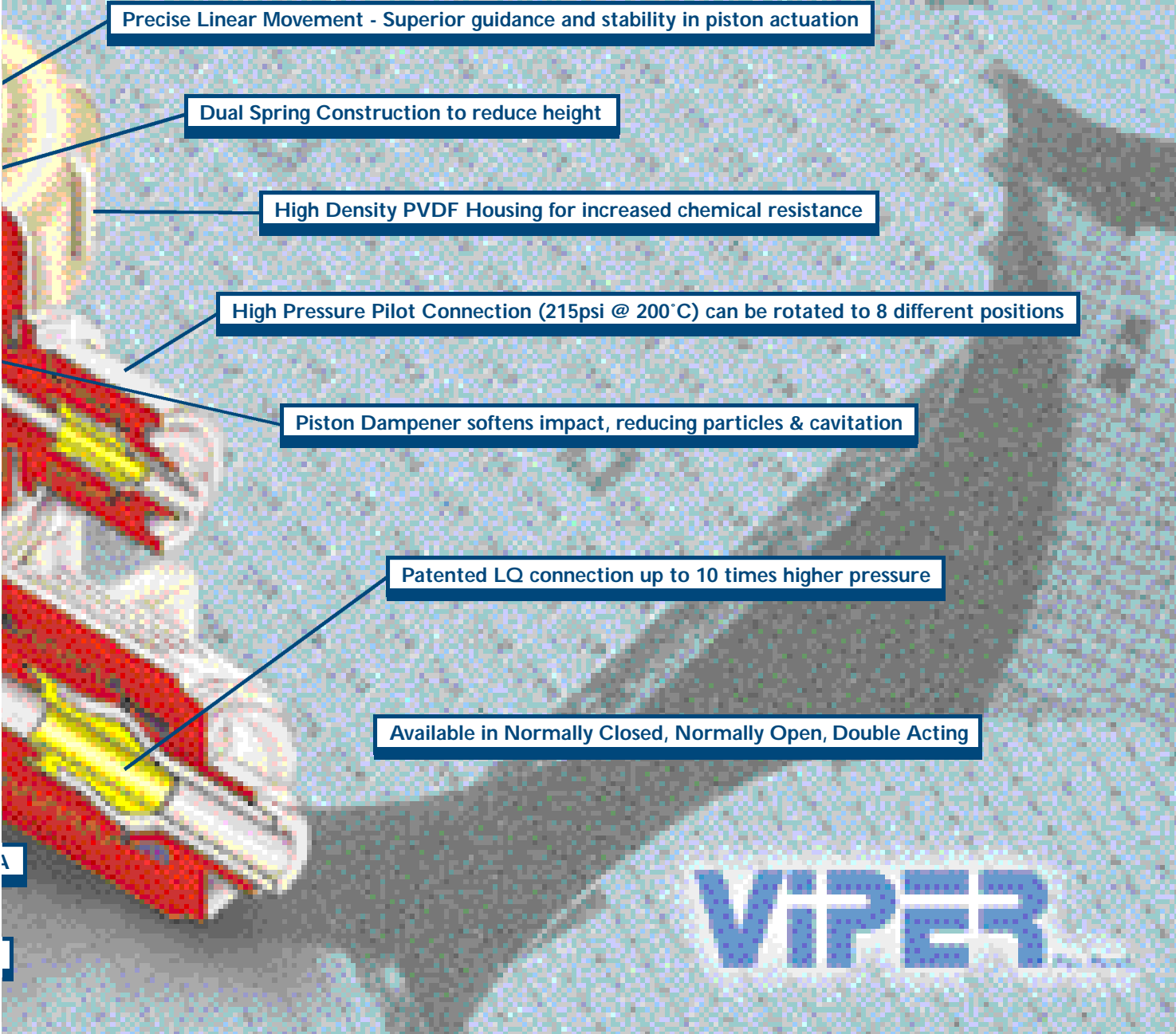
"High-purity"

"Drop-in" replacement for "Bra"





SPACE-SAVING Configuration (Optional)



Precise Linear Movement - Superior guidance and stability in piston actuation

Dual Spring Construction to reduce height

High Density PVDF Housing for increased chemical resistance

High Pressure Pilot Connection (215psi @ 200°C) can be rotated to 8 different positions

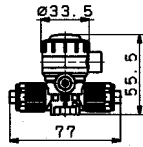
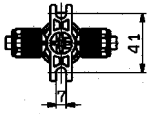
Piston Dampener softens impact, reducing particles & cavitation

Patented LQ connection up to 10 times higher pressure

Available in Normally Closed, Normally Open, Double Acting

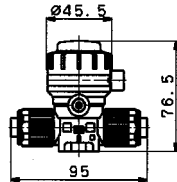
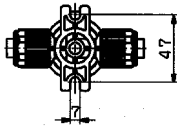


The **VIPER** Pat. Pend. Series



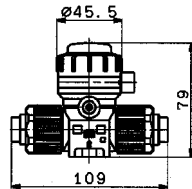
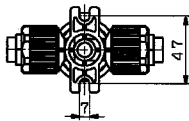
1/4"
LVQ20

Manufacturer	SMC	Brand X
Orifice Size	ø4	ø6.35
Cv Factor	0.35	0.24
Operating Press. Range	-750mmHg~72.5psi	-737mmHg~71psi
Operating Temp. Range	0~100°C	2~65°C
Back Pressure	45psi (60psi)	0~40psi
Outside Dimension	Height	55.5
	Width	77
	Operator Dia.	ø33.5



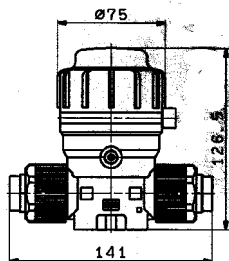
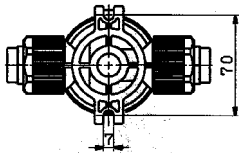
3/8"
LVQ30

Manufacturer	SMC	Brand X
Orifice Size	ø8	ø6.35
Cv Factor	1.3	0.9
Operating Press. Range	-750mmHg~72.5psi	-737mmHg~71psi
Operating Temp. Range	0~100°C	2~65°C
Back Pressure	0~45psi (60psi)	0~40psi
Outside Dimension	Height	76.5
	Width	95
	Operator Dia.	ø45.5



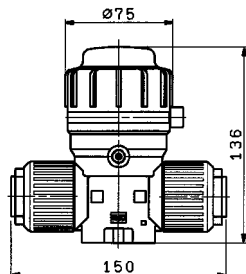
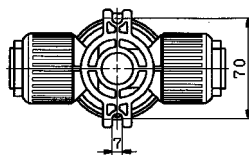
1/2"
LVQ40

Manufacturer	SMC	Brand X
Orifice Size	ø10	ø12.7
Cv Factor	1.9	3.0
Operating Press. Range	-750mmHg~72.5psi	-737mmHg~71psi
Operating Temp. Range	0~100°C	2~65°C
Back Pressure	0~45psi (60psi)	0~40psi
Outside Dimension	Height	79
	Width	109
	Operator Dia.	ø45.5



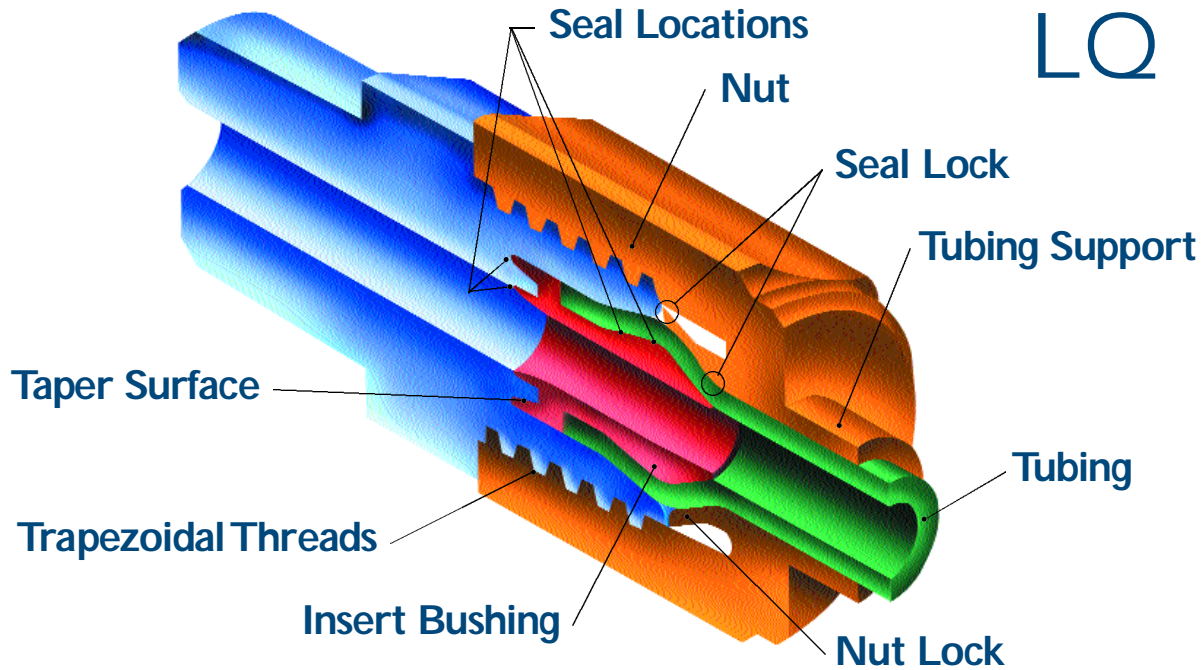
3/4"
LVQ50

Manufacturer	SMC	Brand X
Orifice Size	ø16	ø12.7
Cv Factor	5.0	3.0
Operating Press. Range	-750mmHg~72.5psi	-737mmHg~71psi
Operating Temp. Range	0~100°C	2~65°C
Back Pressure	0~45psi (60psi)	0~40psi
Outside Dimension	Height	126.5
	Width	141
	Operator Dia.	ø75



1"
LVQ60

Manufacturer	SMC	Brand X
Orifice Size	ø22	—
Cv Factor	8.0	—
Operating Press. Range	-750mmHg~58psi	—
Operating Temp. Range	0~100°C	—
Back Pressure	0~30psi (60psi)	—
Outside Dimension	Height	136
	Width	150
	Operator Dia.	ø75



- U.S. Patent #5,996,636
- **Quadruple Seal** - Maximum leak protection. Up to 215psi @ 200°C.
- **NO Cold-Flow Loosening of Compression Nuts** - Unique locking mechanism and tapered mounting surfaces.
- **Swept Flow Path** - No reduction in i.d., and high conductivity.
- **High Side-Loading** - Trapezoidal thread and tubing strain relief coupled for high-resistance.
- **Changing Tube Diameters Fast & Easy** - Within each body size, a range of tube sizes available.
- **No Gauges Needed For Installation** - Just hand-tighten.
- **Available in 1/8" ~ 1" Tube Diameters, For All Body Series**
- "Class 100" Cleaning & Packaging

Series LVQ

How To Order

LVQ **20** — S **07** —

Body Class

Symbol	Body Class	Orifice Dia.
2	2	ø4
3	3	ø8
4	4	ø10
5	5	ø16
6	6	ø22

Valve Type

0	N.C.
1	N.O.
2	Double acting

Space Saving Option

S	Space saving connection
---	-------------------------

Diff. Dia. Tube Size (Out)

Symbol	Application
Nil	Ports In/Out same size

Refer to the applicable tube table below.

Different diameter tubes can be selected within the same body class.

Pilot Connection

Nil	LQ	1/8" diameter
M	LQ	5/32" (4mm)
N	Thread type	NPT1/8

Option

Nil	None
1	With flow control
2	With micro by-pass
3	With flow control & micro by-pass
4	With "pop-up indicator"
5	With indicator light
6	High back pressure (60psi)(.42MPa)

Applicable Tubing Size

Symbol	Connecting Tube Outside Diameter	Body Class						Symbol	Connecting Tube Outside Diameter	Body Class							
		2	3	4	5	6	2			3	4	5	6				
Metric Sizes												Inch Sizes					
04	ø4	●					03	1/8	●								
06	ø6	○	●				05	3/16	●								
08	ø8		●				07	1/4	○	●							
10	ø10		○	●			11	3/8		○	●						
12	ø12			○	●		13	1/2			○	●					
19	ø19				○	●	19	3/4				○	●				
25	ø25					○	25	1					○	●			
00	W/O nuts and bushings						00	W/O nuts and bushings									

○ Standard Size
● With Reducer

Tubing Insertion Tools

LQ-GJ

Smaller Diameter Tubing

How To Order

LQ — GJ —

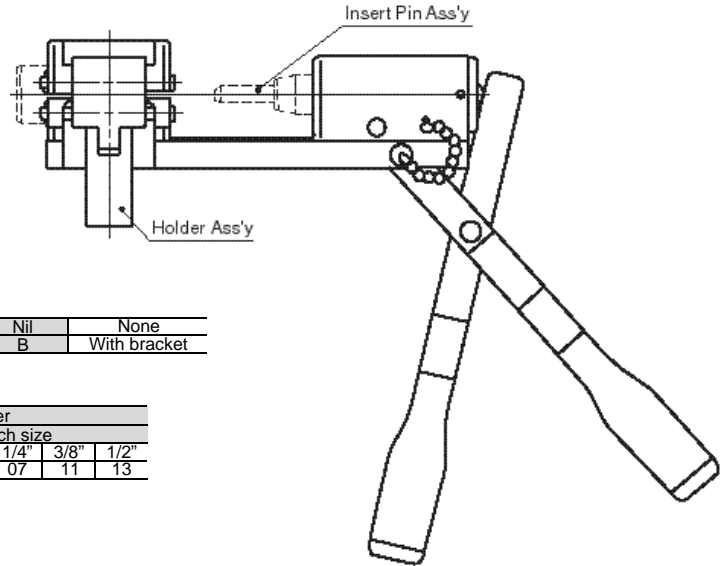


Table 1. Tubing Size Symbol

Type	Body Class	Tubing outside diameter								
		Metric size				Inch size				
J	3	ø4	ø6	ø8	ø10	1/8"	3/16"	1/4"	3/8"	1/2"
		04	06	08	10	03	05	07	11	13

Table 2. AC

Model Number	Insert Pin, Holder Ass'y
LQ-GJ-□	LQ-GPJ
LQ-GJ-N-□	LQ-GPJ-N
LQ-GJS-□	LQ-GPJS
LQ-GJS-N-□	LQ-GPJS-N



LQ-GC

Larger Diameter Tubing

How To Order

LQ — GC —

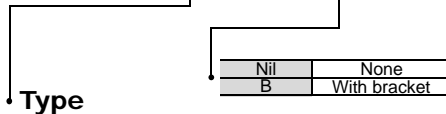
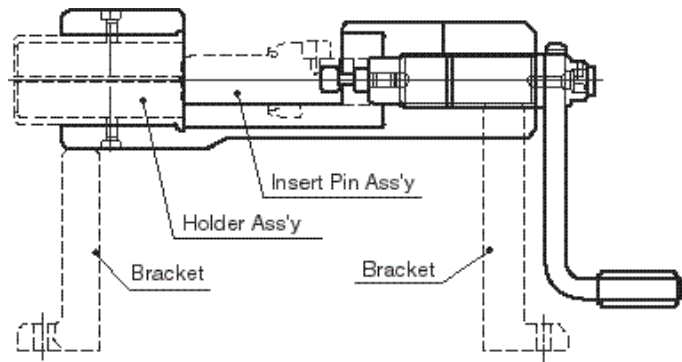


Table 1. Tubing Size Normal

Type	Body Class	Tubing outside diameter			
		Metric size	Inch size		
C	6	ø19	ø25	3/4"	1"
		19	25	19	25

Table 2. AC

Model Number	Insert Pin, Holder Ass'y
LQ-GC-□	LQ-GPC



www.smcusa.com

SMC PNEUMATICS INC. U.S. HEADQUARTERS 3011 N. FRANKLIN ROAD INDIANAPOLIS INDIANA 46226
PHONE: 317-899-4440 FAX: 317-899-3102 TOLL FREE: 1-800-SMC-SMC1