



## Vent Kits for Liquid Cylinders (VK Series)

### SPECIFICATION

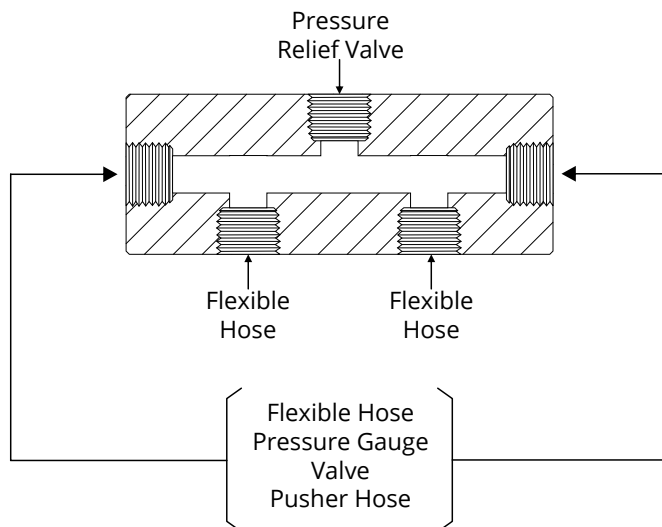
#### Purpose

When more than one liquid cylinder is connected together and feeding a manifold simultaneously, only the liquid cylinder having the highest pressure is feeding the manifold, whereas the other liquid cylinder sits in stand-by, even if both liquid cylinders have their valves open. The flow of gas is therefore limited to the vaporizing capacity of only one liquid cylinder and not both. When the application demands more gas than the vaporizing capacity of the liquid cylinder, cryogenic liquid may come out of the liquid cylinder instead of withdrawing gas, which can cause manifold damage and failure.

The VK Series Vent Kit equalizes the vapor (gas) head space of all liquid cylinders when they are manifolded together. In other words, all liquid cylinders are all at the same pressure. This is achieved by connecting one (1) hose of the vent kit to the vent valve of each liquid cylinder. This allows each liquid cylinder to withdraw gas equally and operate at maximum flow capacity.

#### Simple Design

The vent kit main component is the central mounting block. This 5-port block allows for multiple configurations. It is available in either brass or stainless steel. The vent kit is suitable for liquid cylinders of either argon, carbon dioxide, nitrogen or oxygen.

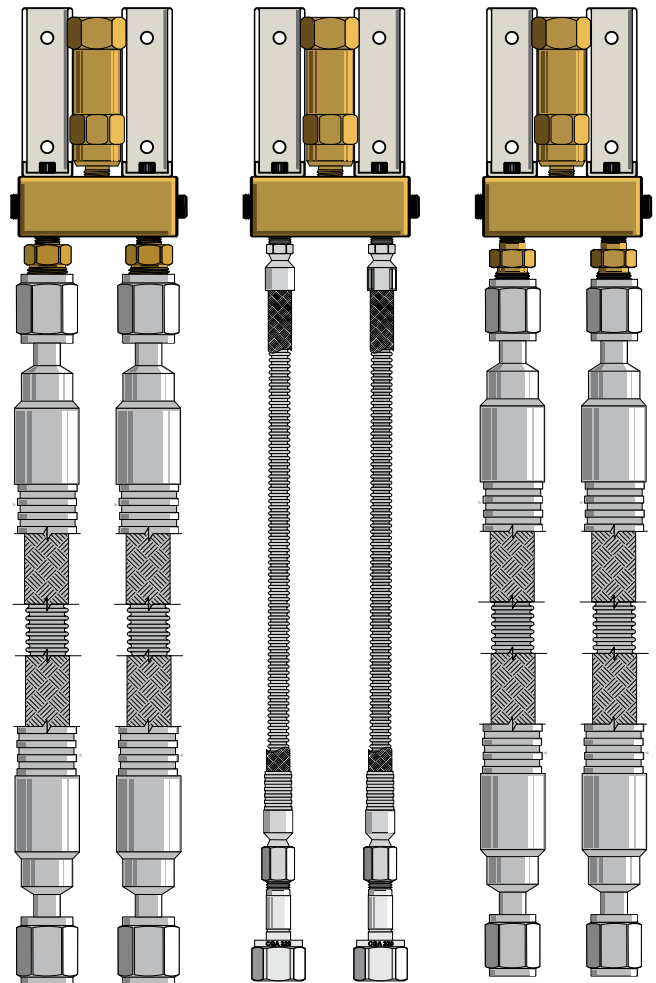


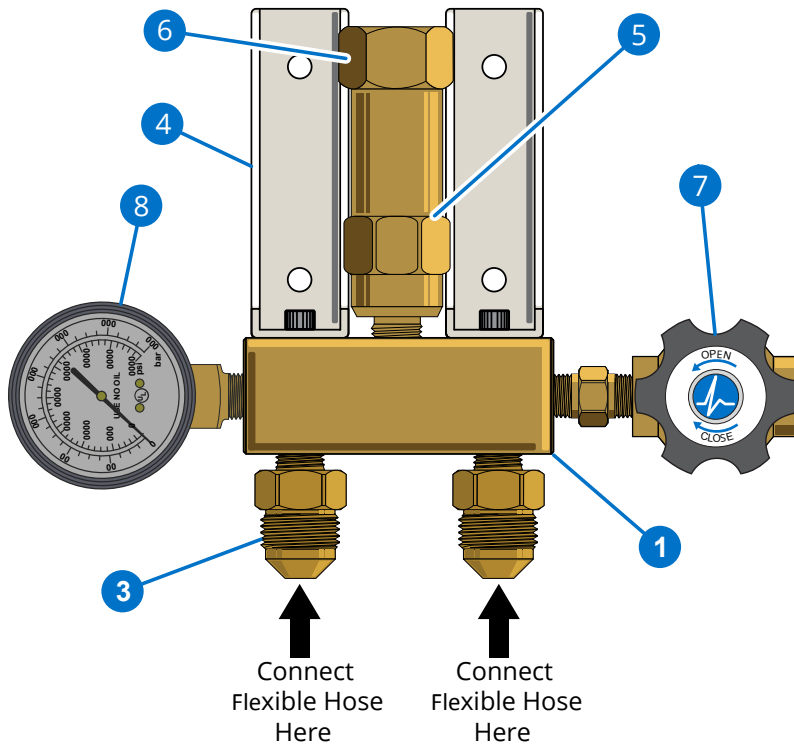
#### Fluids & Related Liquid Cylinder Connections

CGA 440  
Liquid Oxygen

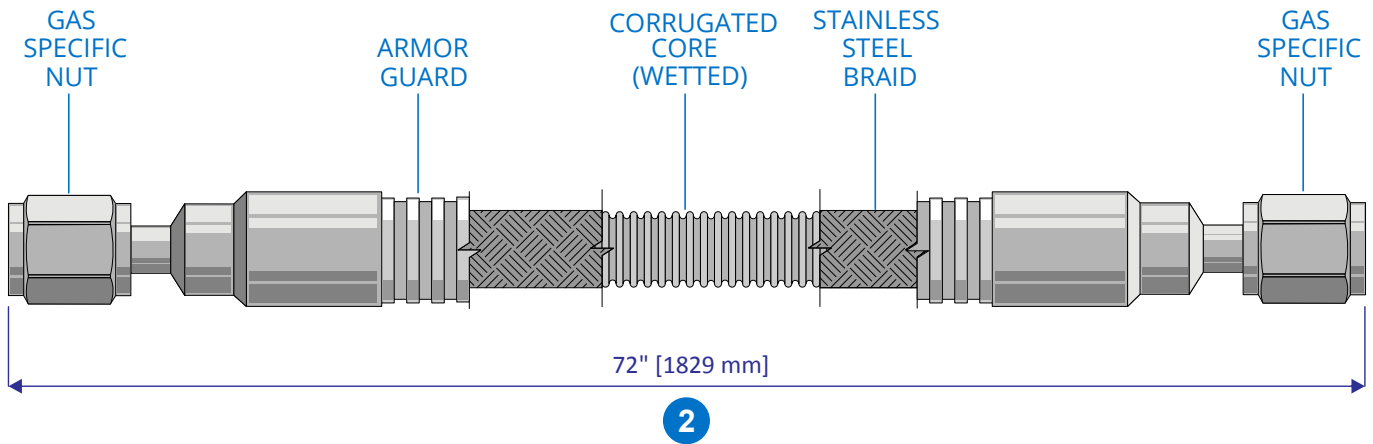
CGA 622  
Liquid  
Carbon Dioxide

CGA 295  
Liquid Argon  
Liquid Nitrogen



**Standard Components**


- 1** Vent Kit Mounting Block
  - 2** Flexible Hose (Minimum 2)
  - 3** Gas Specific Hose Adaptor
  - 4** Mounting Bracket
  - 5** Pressure Relief Valve (Standard Setting: 350 psi)
  - 6** Pipe Away Adaptor (1/2" F.NPT)
- Options**
- 7** Diaphragm Valve
  - 8** Pressure Gauge (Standard Range: 0-400 psi)



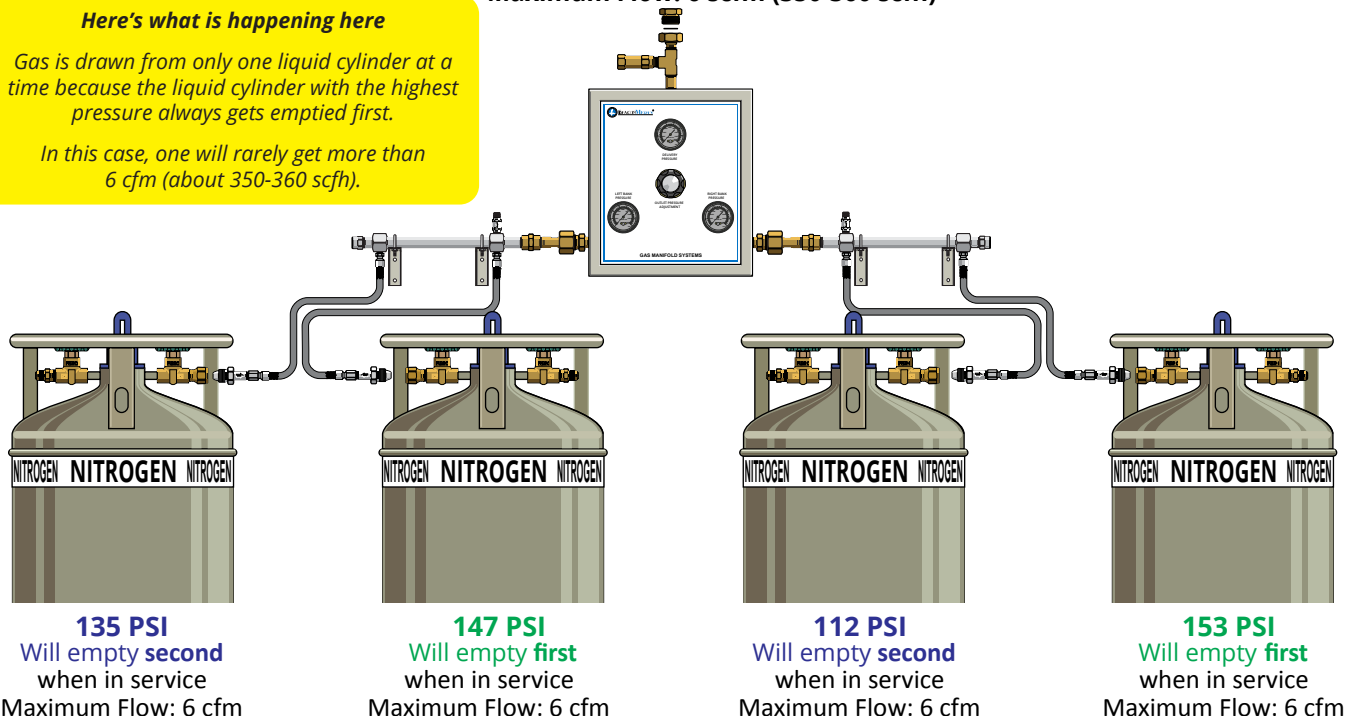
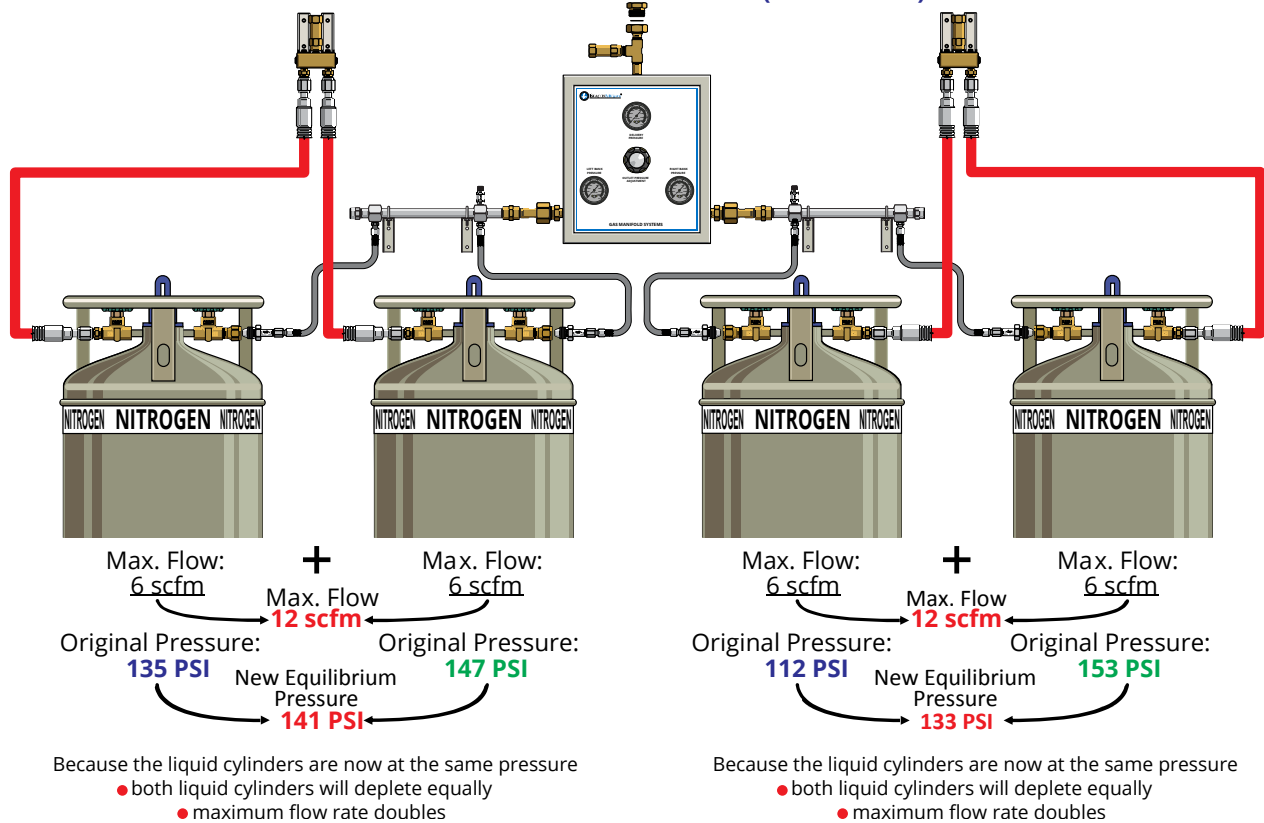
**2**  
Flexible Hose  
Quantity=2

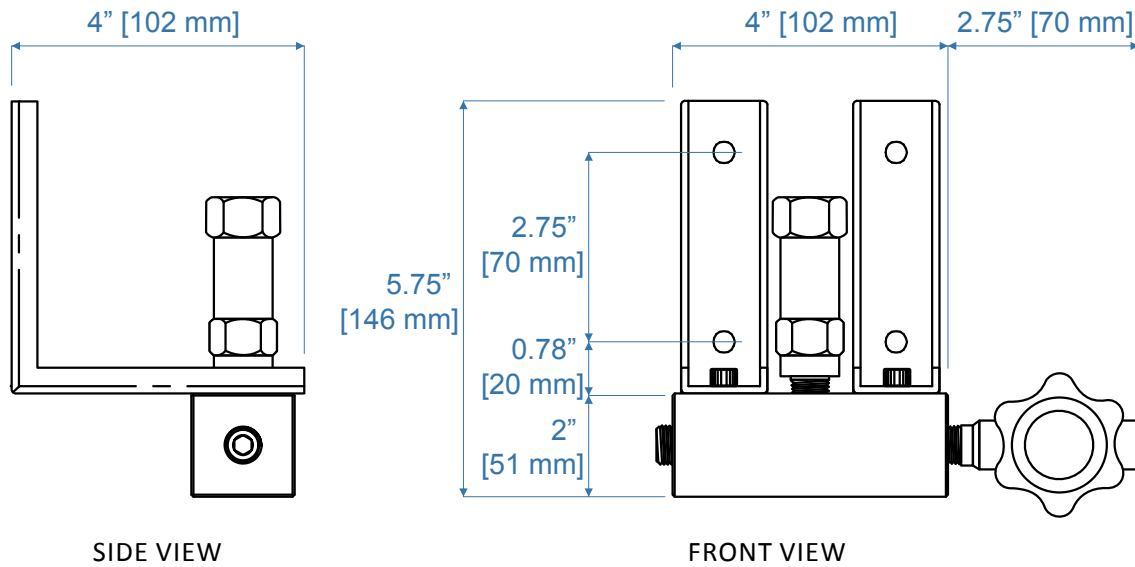
Materials	Brass Models	Stainless Steel Models
<b>Mounting Block</b>	ASTM B16 Brass	Type 316 Stainless Steel
<b>Pressure Relief Valve</b>	Brass Body, SS Spring, Teflon Seat	Stainless Steel & Spring, Teflon Seat
<b>Diaphragm Valve</b>	Brass Body, SS Diaphragm, Teflon Seat	Stainless Steel Body & Diaphragm, Teflon Seat
<b>Wall Brackets</b>	Epoxy Coated Steel	
<b>Hoses</b>		
<b>Liquid Nitrogen</b>	Type 321 Inner Core, Type 304 Braid and Armor Guard, Type 316 Stainless Steel End Fittings	
<b>Liquid Argon</b>		
<b>Liquid Oxygen</b>		
<b>Liquid Carbon Dioxide</b>	Teflon Core Hose, Stainless Steel Braid, Brass End Fittings (Including CGA Nut & Nipple)	

**How it Works**
**Liquid Cylinder Pressure Without Vent Kits (Inefficient & Traditional Way)**
**Here's what is happening here**

Gas is drawn from only one liquid cylinder at a time because the liquid cylinder with the highest pressure always gets emptied first.

In this case, one will rarely get more than 6 cfm (about 350-360 scfh).

**Maximum Flow: 6 scfm (350-360 scfh)**

**Liquid Cylinder Pressure With Vent Kits**
**Maximum Flow: 12 scfm (700-720 scfh)**


**Ordering Information**
**Dimensions**


VK -      -      -      -     

A                  B                  C                  D

BeaconMedaes VK Series Model Number Chart			
Variable	Definition	Allowable Value	Description
A	Fluid CGA Connection	622	Liquid Carbon Dioxide
		295A	Liquid Argon
		295N	Liquid Nitrogen
		440	Liquid Oxygen
B	Material	B	Brass
		SS	Stainless Steel
C	No. of Cylinders (Hoses)	2	Minimum 2  Maximum 4
		3	
		4	
D	Options	350	350 PSI Pressure Relief Valve (Standard Setting)
		DV	Diaphragm Valve
		PG	Pressure Gauge
		22	22 PSI Relief Valve
		230	230 PSI Relief Valve
	PH	Pusher Hose	