

### Description:

The Becker SLV-30 Signal Lock Valve is designed to prevent any instrument signal loss from affecting actuator positioning. In the event of instrument signal failure, the SLV-30 will maintain the last position of the control valve and positioner. The Becker SLV-30 can be factory installed or easily retrofit to most existing pneumatic actuator/positioner models, and is compatible with all pneumatic controllers and I/P transducers.



**Figure 1.0— SLV-30 Signal Lock Valve**

The SLV-30 Signal Lock Valve provides protection against failure of pneumatic controllers and I/P transducers

### Features:

- Provides protection in the event of pneumatic instrument signal loss caused by failure of RTU, I/P transducer, pneumatic controller, or other signal generating devices
- Can be easily retrofit to most pneumatic positioners
- Comes factory set and ready to install
- Requires minimal maintenance

### Benefits:

- Rugged anodized aircraft aluminum and stainless steel construction provides ultimate reliability and setpoint accuracy without affecting normal operation of the pneumatic positioner
- Setpoint can be set anywhere within the control range of the unit. Four control springs are available for varying control ranges (see Table 2.0)

### Usage:

- The SLV-30 may cause delays. It is not intended for use with positioners in systems that require quick response.

### Figure 2.0 – SLV-30 Instrumentation Schematic

The SLV-30 is installed between the input of the pneumatic positioner and the output of the instrument signal generating device (pneumatic controller or I/P transducer). If the instrument signal is lost, the pneumatic valve positioner will maintain last position.

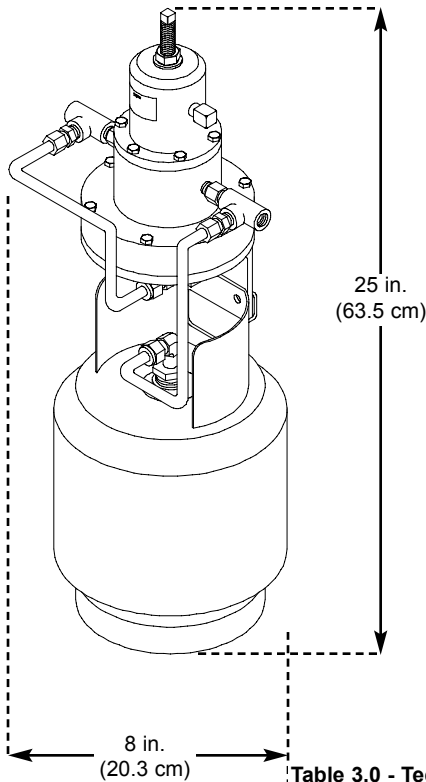
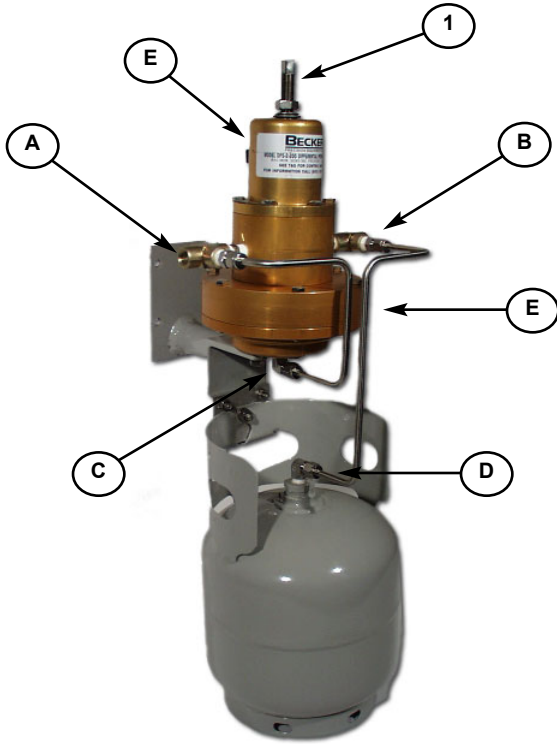


Table 3.0 - Technical Specifications - Dimensions of SLV-30

SLV-30 Port Definitions	Port Size	Item
Input	1/4" FNPT	A
Output	1/4" FNPT	B
Signal Sensing	1/4" FNPT	C
Tank Supply	1/4" FNPT	D
Atmospheric Vent	1/4" FNPT	E

SLV-30 Adjustments	Item
Setpoint Adjustment	1

**Repair or Rebuild?**

Becker Instrumentation rebuild kits are available from stock for regular maintenance or emergency needs. To order repair kits for your Becker products call us at (800) 323-8844, or contact your local Becker sales Representative.

**SLV-30 Rebuild Kit**

Becker Part Number 25-1500

Table 1.0 - Technical Specifications

Technical Specifications	
Maximum Supply Pressure	35 psig (4137 kPa)
Maximum Setpoint Pressure	600 psig (4137 kPa)
Operative Ambient	
Temperature Range:	-20°F to 160°F
(-29°C to 71°C)	
Inlet Port Size	1/4" FNPT
Outlet Port Size	1/4" FNPT
Sensing Port Size	1/4" FNPT
Tank Connection	1/4" FNPT
Cv (Flow Capacity)	0.991
Approximate Weight:	20 pounds (9.1 kg)
Installation Orientation	Vertical Position Recommended

Materials of Construction	
External Parts	Anodized AL 2024 (316 SS available for marine environments)
Internal Parts	316 SS and anodized AL 2024
Springs	Plated Steel
Diaphragms	buna-n reinforced by nylon fabric
Seats and O-rings	buna-n
Tubing & Tubing Fittings	316 SS

# SLV-30 Signal Lock Valve

### How It Works:

The SLV-30 Signal Lock Valve is a 2-way, normally-closed pressure sensor which is installed between the output of the instrument signal generating device (I/P transducer or pneumatic controller) and the input of the pneumatic positioner.

During normal operation, the instrument signal is above the SLV-30 set-point. The instrument signal overcomes the spring pressure pushing the seat upwards and away from the nozzle. Flow passes through the SLV-30 to the input signal port of the pneumatic positioner (figure 4.0). The reference tank (not shown) maintains a pressure equivalent to the instrument signal on a "delayed-basis".

An abnormally rapid decrease of instrument signal below the SLV-30 set-point will be interpreted as failure. The spring pressure will push the seat downward closing the nozzle and interrupt the gas flow through the SLV-30 (figure 4.1). The SLV-30 will isolate the pneumatic positioner signal input with the pressure trapped in the SLV-30 reference tank. This will keep the control valve in its last position.

### Schematic Legend

- ? Atmospheric Pressure
- ? Instrument Signature

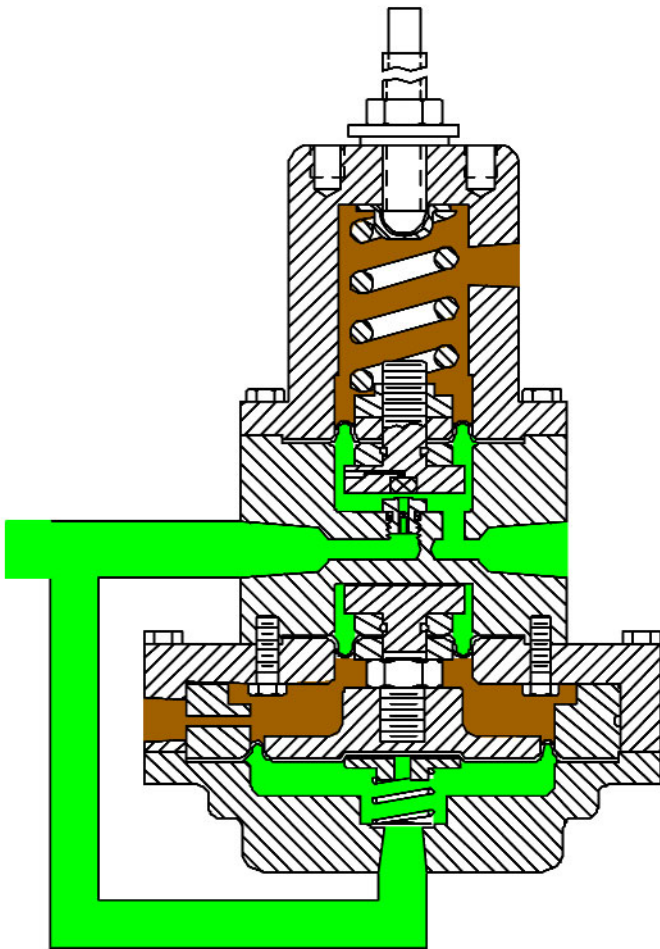


Figure x.0

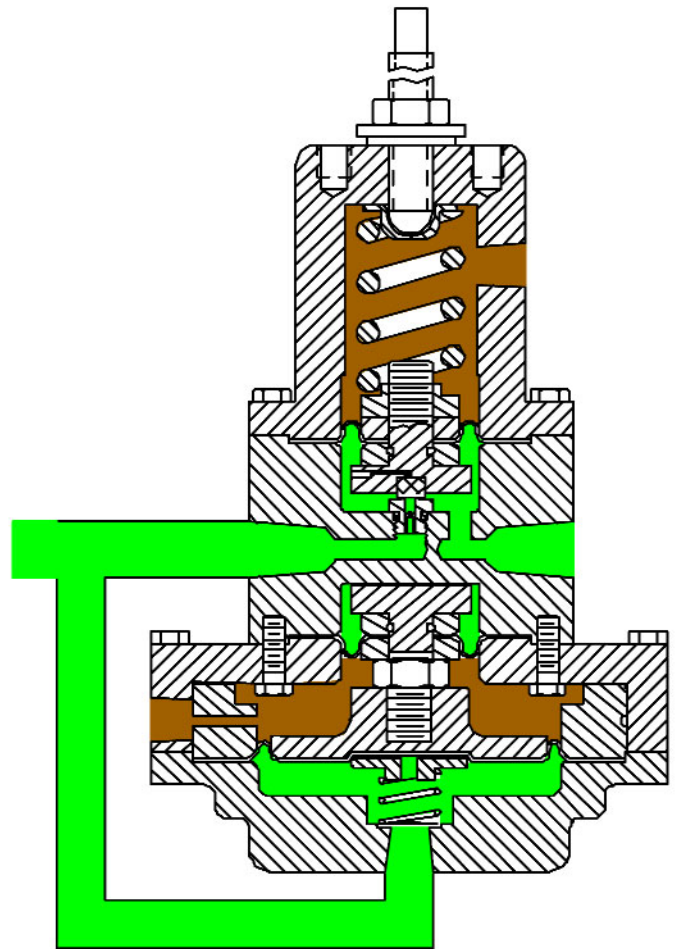


Figure x.1

Table 2.0 - Application Guidelines for AB Series Atmospheric Bleed Control	VRP-CH Series Pilot	VRP-B-CH Series Pilot	VRP-SB-CH Series Pilot	VRP-SB-PID Series Controller	HPP-4 Series Positioner	HPP-5 Series Positioner	HPP-SB Series Positioner	EFP Positioner	Notes
<b>Instrumentation Options</b>									
Bleed to Pressure System BPS™	•	•	•		•	•	•	•	1
AB Series Atmospheric Bleed Control	•	•	•	•	•	•	•	•	
NBV Series No-Bleed Valve	•	•			•	•			2
DPS-2 Series Non-Bleed Sensor		•				•			3
PS-2 Series Non-Bleed Sensor	•				•				3
SP Series Setpoint Pump	•	•	•	•					
RSM Series Remote Setpoint Module	•	•	•	•					
Panel Mounting	•	•	•	•				•	
Stainless Steel Option	•	•	•	•	•	•	•	•	
VB Series Volume Booster	•			•	•				4
QEV Series Quick Exhaust Valve	•		•	•	•		•		
I/P Transducer					•	•	•		

1. BPSa is limited to pressure systems below 300 psig. Consult Becker for application assistance. NBV No-Bleed Valves may only be utilized when PDischarge[60 psig (414 kPa) and/or PSupply [150 psig (1034 kPa).
2. PS-2 & DPS-2 Non-Bleed Sensors must be utilized when PDischarge>60 psig (414 kPa) and/or PSupply>150 psig (1034kPa).
3. VB Series Volume Boosters are necessary for Power Plant Regulation, Surge Control Applications, or when Large Model RPDA & LPDA Series Actuators are utilized.

**\*CAUTION:** This information is intended as a guideline for application of Becker Precision Equipment products. Becker strongly recommends consulting Becker Engineering prior to application of any product.



Additional Resources are available on our website. Sales literature, sizing software, and technical manuals are available for download at [www.bpe950.com](http://www.bpe950.com)

Table 3.0 - Control Spring Selection Chart for SLV-30 Signal Lock Valve

Range psig (kPa)	Spring Color	Part Number
1-6 (6.9-41.4)	Green	20-2592
2-11 (13.8-75.9)	Silver	25-1038
4-20 (27.6-137.9)	Blue	25-1036
8-30 (55.2-206.9)	Red	25-1037



Figure x.0 - SLV-30 Signal Lock Valve post mounted inside of an enclosure complete with I/P Transducer, filtration, regulation, and heat provided by a catalytic heater. The complete assembly is for remote installation next to the actuator. An HPP Series Positioner is mounted directly on the actuator. The SLV senses the signal from the I/P and will keep the actuator in last position upon loss of that signal.

**Toll-Free Assistance!**

**(800) 323-8844**  
USA & Canada

**DRESSER**  
Flow Control

**BECKER**  
PRECISION EQUIPMENT

Dresser Flow Control, Becker Operations  
1550 Greenleaf Avenue  
Elk Grove Village, Illinois 60007 USA  
Phone: 847-437-5940  
Fax: 847-437-2549  
Toll Free: 800-323-8844

E-mail: [becker@flowcontrol.dresser.com](mailto:becker@flowcontrol.dresser.com)  
Website: [www.bpe950.com](http://www.bpe950.com)