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LV1 Lockout and Vent Valve

The LV1 Lockout and vent valve is a NAMUR mounted module for the Automax SuperNova actuator, with two primary uses. The LV1 may be used as a compact bypass valve for use with a manual override to shut off supply air and vent actuator ports. The LV1 may also be used as a lockout valve which, when properly implemented, will satisfy OSHA Standard 1910.47, "The Control of Hazardous Energy." The LV1 may be sandwich mounted with other Automax NAMUR accessories or may be used with the NPT adapter.

Installation Instructions

Automax sandwich NAMUR mount accessories are easily installed to the SuperNova actuator, simply by stacking one on top of the other and bolting the entire stack to the actuator NAMUR mounting surface.

Orientation of LV1:
The LV1 should be mounted to the actuator with NAMUR O-ring grooves toward the actuator. The spool shift lockout knob may be oriented either left or right. Standard mounting is to the left, with the exhaust port facing down. Automax recommends orientation such that water or other contaminants cannot drip into exhaust port.

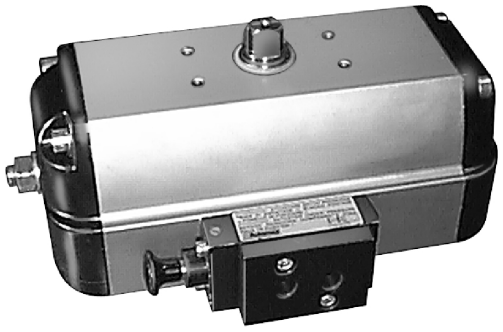
To Install:

1. Follow order of installation below in stacking accessories. If an accessory is not required, skip it and proceed to the next accessory.

   Order of Installation:
   a. LV1 Lockout and vent valve
   b. FC1, FCDA, or FCSR flow control
   c. APS1 or APS2* air purge system or NPT1* NAMUR-NPT adapter block
   d. A25N* solenoid valve

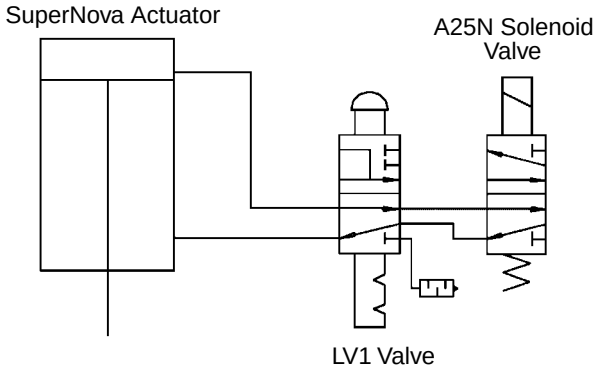
   *One of these accessories should be the last accessory in the stack. The NPT1 block provides 1/4' NPT ports in cases where FC1, FCDA, FCSR or LV1 would be last accessory in stack.

2. Properly orient NAMUR accessory (see appropriate IOM.)
3. Insert O-rings into O-ring grooves on back face of accessory.
4. Mount entire stack to SuperNova NAMUR mounting face, using appropriate bolt kit shown in chart on back page of IOM. Apply Locktite Threadlocker 222 or equal to screws prior to assembly.



Operation

The LV1 functions as a lockable block and bleed valve for use as a manual override bypass valve or as a air supply lockout valve. Under normal operation, air flows freely to the actuator. The spool is shifted to block pressure ports and exhaust actuator air pressure. A lock may be inserted into the spool in the block and bleed position.



LV1 Lockout and Vent Valve in Automatic Operation

Used with manual override, the LV1 exhausts internal actuator pressure to atmosphere, while blocking supply pressure. Without internal pressure on the pistons, the actuator may be freely manually operated. The single exhaust port on the LV1 allows the piston chambers to draw clean air from each other, rather than drawing outside air as the actuator is being manually cycled back and forth. This feature keeps possible corrosive atmospheres from entering the actuator.

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LV1 Lockout and Vent Valve

Operation (cont.)

Locking spool shaft in block and bleed position prevents air pressure from operating the actuator. The intent of this application is to satisfy OSHA requirements for control of hazardous energy. With air supply to actuator blocked, the actuator cannot be operated. The valve mounted to the actuator is effectively "locked out" from automatic operation.

Temperature: -20 F to 180°

Pressure: 20 psig to 120 psig

Media: Dry or lubricated non-corrosive gas compatible with nitrile/viton seals.

Estimated c_v: 1.75

Maintenance

The LV1 module is factory lubricated for long life. Should any problems arise with the LV1, consult factory. If the valve is to be stored for extended periods of time, periodically operate the spool to keep seals from taking a set.

How to Order

Order part number LV1 with appropriate NAMUR mount bolt kit from chart at right.
Example: To order LV1 to be sandwich NAMUR mounted with A25N solenoid valve, order

LV1 and **NBK55.**

Bill of Material

Item	Material
Body	Aluminum, Anodized
Spool	Aluminum, Anodized
Endcap	Aluminum, Anodized
Seals	Nitrile, viton
Knob	Plastic

NAMUR Accessory Bolt Chart

							FC1 / FCDA	FCSR
LV1	FC#	APS1	APS2	NPT1	A25N	Bolt Kit	Bolt Kit	Bolt Kit
√				√		NBK40	NBK25	NBK40
√	√			√			NBK50	NBK65
√			√			NBK60	NBK50	NBK60
√					√	NBK55	NBK45	NBK55
√	√				√		NBK70	NBK80
√		√			√	NBK65	NBK55	NBK65
√	√	√			√		NBK80	NBK90
√	√		√				NBK75	NBK85

Other NAMUR accessories:

- EC1 - Sandwich mount flow control-one direction.
- FCDA - Sandwich mount flow control-dual direction for DA actuators.
- FCSR - Sandwich mount flow control-dual direction for SR actuators.
- APS1 - Air purge system for spring return actuators sandwich mount with A25N solenoid valve.
- APS2 - Air purge system for spring return actuators Namur mount for remote/line mount solenoid valves.
- NPT1 - 1/4" NPT adapter plate.
- A25N - NAMUR mount solenoid valve.

Note: see appropriate IOM's for additional information on above NAMUR accessories.

How to Specify

The lockable block and bleed valve shall be an Automax LV1 module, capable of being sandwich NAMUR mounted with other NAMUR mount accessories. The body shall be anodized aluminum. Spool shall have extension shaft with knob and hole capable of accepting a standard lock. In normal position, valve shall allow free air flow. In locked position, valve shall block external pressure, and vent actuator pressure with internal air purging of the cylinder bore during manual gear operation.