



**Service Pressure:** Up to 175 PSIG

**Temperature Range:** 40°F to 120°F (4.5°C to 49°C)

**Purge Valve:** 1/2" NPT inlet

Brass Construction

**Automatic Valve and Control:** NEMA 4 enclosure

**Power Requirements:** 10 mA at 120 VAC 60 HZ, 6' grounded power cord

**Ordering Information:**

**Stock No. Model/Description**

1119799 NGP-SPV AUTO - Automatic Self Purge Valve

*Replacement Equipment:*

**Stock No. Model/Description**

1119801 NGP-AVK - Auto-Close Valve Kit

**General Description**

The Automatic Self Purge Valve (NGP-SPV AUTO) is designed to work with Potter Nitrogen Generator Systems to effectively purge corrosive oxygen from a fire sprinkler system while maintaining adequate system pressure. Potter's NGP-SPV AUTO ensures high purity nitrogen is equally distributed throughout the fire sprinkler system. The automatic valve and control provide the ability to automatically close when the purging process is completed. Closing the system helps extend the life of the nitrogen generator by limiting run time, while still providing corrosion protection.

Simply install the NGP-SPV AUTO off a tee connection at the end of the sprinkler system and plug in the 6' grounded power cord (120V). When the nitrogen generator is in operation, the purge orifice automatically bleeds out the oxygen as well as residual moisture in the system. When the purging cycle ends (Factory set at 14 days), the solenoid valve automatically closes, leaving the system full of high purity nitrogen.

The automatic valve and control offers the ability to program different purging time lengths for any nitrogen application requirement. The control can also do cyclic purging (rotating between open and close).

In the event of an alarm condition, the NGP-SPV AUTO has a built in high pressure shut-off valve that automatically closes when the water reaches the vent. A ball valve allows isolation of assembly when not purging. This allows maintenance of the strainer screen or maintenance of the purge orifice.

**Installation and Servicing (See Figure 2 & 3)**

1. Read and understand the instructions provided before you proceed with installation. The NGP-SPV AUTO shall be installed in accordance with local ordinances and the applicable NFPA 13, NFPA 13D, or NFPA 13R standard.
2. The Engineer of Record should select the installation location for the Model NGP-SPV AUTO. This is usually located at the end point of the system.
3. The location of the NGP-SPV AUTO must not interfere with the spray pattern of any sprinkler head.
4. The piping must be level and arranged in such a manner that water will not become trapped.
5. After installation, close ball valve prior to initiating test or purging process.
6. Purging process operation instructions are located in the Potter Nitrogen Generator manual.
7. The unit should be inspected periodically. Thereafter, the manufacturer recommends yearly or more frequently.

**WARNING**

Shock hazard. Disconnect power source before servicing.  
Serious injury or death could result.

**Installation and Setup of Automatic Valve and Control (See Figure 2)**

1. Wire controller to appropriate power supply (120V).
2. After double checking that the power supply corresponds with the voltage (120V), turn on the power supply.
3. The Red LED light on the power supply should be on.
4. The digital display should read "14". Both "Hr" and "Mins" lights should be illuminated. This indicates the timer is in days.
5. The Amber "on" light should also be illuminated.
6. The automatic solenoid valve is now open.

7. The controller is now counting down from 14 days. After 14 days, the solenoid will automatically close.

8. The timer can be reset to 14 days by simply pressing the "TEST" button at any time. The "TEST" button will only open the solenoid when the solenoid is in the closed position. If the valve is already open, it will not close it.

9. To alter the ON time or to change to cyclic purging, please follow programming instructions in this bulletin.

10. For the purging process instructions, refer to the Potter Nitrogen Generator manual.

**Programming Instructions**

**Time Setting Procedure:** (See Fig. 1)

1. To change the ON time, simply press the right "on/arrow up" button and "on" will appear briefly on the display.
2. You can now press the left "off/arrow down" button for decreasing the time or the right "on/arrow up" button to increase the time.
3. If the desired ON time is set, then simply don't press any buttons and after a few seconds the display will start flashing, thus illustrating that the new time is being saved.

Once the new time is saved, the unit will start operating with the new time setting.

Lights indicate measurement of time:

Both "hrs" and "min" lights	-Time in Days
Single "hrs" light	Time in Hours
Single "min" light	Time in Minutes
Single "sec" light	Time in Seconds
Both "min" and "sec" lights	-Time in milliseconds

4. Your NGP-SPV AUTO timer is ready for operation.

For Optional **Cyclic Purging**, you can select the OFF time:

1. To change the OFF time, simply press the left "off/arrow down" button and "off" will appear briefly on the display.
2. You can now press the left "off/arrow down" button for decreasing the time or the right "on/arrow up" button to increase the time.

**Fig. 1 Timer Diagram:**



3. If the desired OFF time is set, then simply don't press any buttons and after a few seconds the display will start flashing, thus illustrating that the new time is being saved. Once the new time is saved, the unit will start operating with the new time settings.

4. The unit is now fully programmed to your desired time settings and will work fully automatically.

5. Your NGP-SPV AUTO timer is ready for operation.

**Changing Timer Function:**

The NGP-SPV AUTO is able to perform the following functions:

- Function "A" **Cyclic Purging**, starts with the ON time and then the OFF time, etc.
- Function "B" **Single Shot**, starts with the ON time and then switches OFF indefinitely.

The controller is factory set to the function "B". However, should you need a different function you can always change it.

To do so please follow these easy steps:

1. Disconnect the unit from the power supply.
2. Press and hold down the "TEST" button.
3. Connect the unit to the power supply.
4. Release the "TEST" button. A "b" appears on display if the unit is being programmed for the first time. If the function has already been changed, then the last set function will appear on display.
5. Use "off/arrow down" and "on/arrow up" to select the function (Select only A or B, other modes are not recommended for this application).
6. When the function is selected, do not press anything and after a few seconds the unit will resume operation with the new function setting.
7. Change the pre-set ON and/or OFF times if required (see Time Setting Procedure in this bulletin).

**Fig. 2 NGP-SPV Auto Assembly**

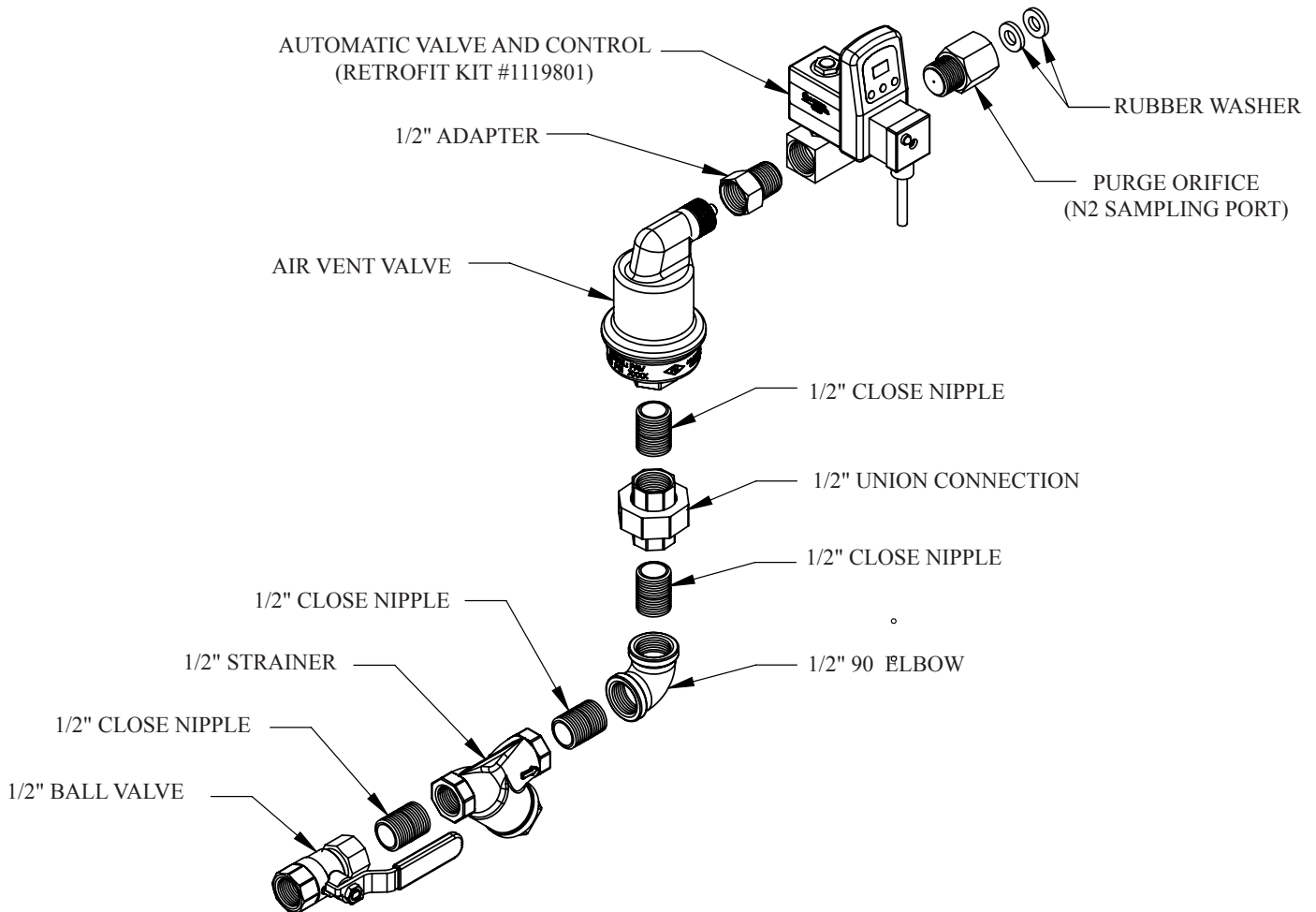


Fig. 3 NGP-SPV Auto Typical Installation

