

# Automatic Drain Valves ADV

The ADV is a timed electrical device that, when properly adjusted, automatically removes condensed water and oil from an air receiver tank. It is a low cost, simple device that will keep your compressed air system running efficiently while greatly reducing system maintenance costs.

Remove the ADV from the packaging and inspect for any damage. Also, check the voltage rating on the coil to confirm the correct voltage for your application.

### Isolation

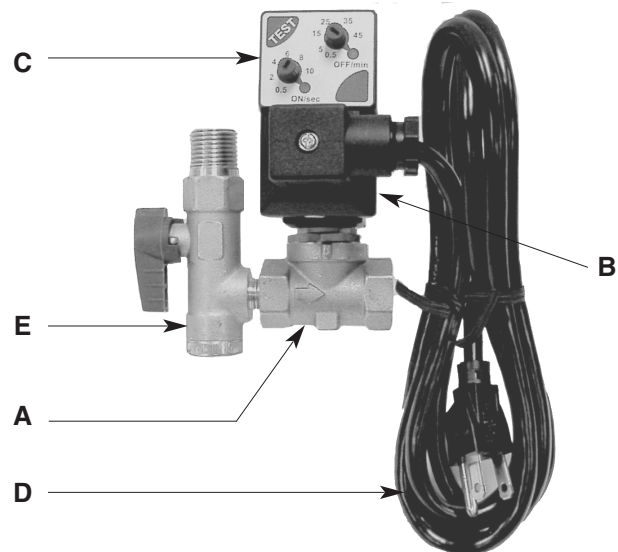
**NOTE:** If pipe thread lubricant/sealer is used on the connections, use care in applying, as to avoid any lubricant/sealer from entering the internals of the ADV system.

1. Warning: Be sure the tank, has been de-pressurized or isolated before starting.
2. Assemble the Strainer Ball Valve to the piping eggressing from under the tank (1/2" NPT connection required.)
3. Assemble the ADV to the Strainer Ball Valve. Note the direction of flow on the valve body. It should be pointing away from the tank.
4. Be sure to attach a drain line from the ADV to control and direct the high-pressure discharge to a safe location.
5. Plug powercord into 120V AC power supply (Other voltages, will have a powercord with stripped and tinned ends for assembly to their power supply.)
6. Push "test" (3) button on timer to check operation. You are now ready to adjust system.
7. Observe all Federal, State and Local laws and regulations when installing and operating the ADV.

### The Product

The ADV consists of the following parts:

- A) Valve
- B) Coil
- C) Timer
- D) 6' Powercord
- E) Strainer Ball Valve.



### Operation

**Caution:** Do not operate the ADV outside of the following pressure and temperature ranges:

Maximum Operating Pressure:	300 psig
Fluid temperature:	32 to 266°F (0 to 130°C)
Ambient temperature:	-4 to 122°F (-20 to 50°C)

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## Adjusting

This procedure may take a number of trials to set up correctly. The system will be functioning correctly when the ADV opens long enough to drain almost all the condensate from the system. Do not drain completely, as this will drain costly compressed air.

1. Pressurize the system.
2. Set the "ON" button (1) to 10 seconds and note when the condensate fully dispensed. Then back off by approximately one-half second.
3. Set the "OFF" button (2) to 5 minutes, to start. When the ADV energizes, watch the discharge for air escaping following the condensate discharge. Repeat the steps outlined in 2 and 3, by adjusting the "ON/OFF" buttons until the proper time is achieved to effectively remove the condensate without losing costly air pressure.

**NOTE:** Changes in seasons and humidity may have an affect on the "ON/OFF" time settings. If so readjust the settings.

## Maintenance

It is necessary to periodically clean the screen located in the Strainer Ball Valve. Failure to do this may cause damage to the compressed air system resulting in costly shutdown. To do this maintenance procedure, perform the following steps:

1. Isolate the strainer screen by rotating the blue ball valve handle (4) 90° clockwise to the closed position.
2. Unscrew the knurled end cap and remove it along with the stainless steel screen.
3. Clean debris from end cap and screen.
4. Place screen into end cap and screw the assembly into Strainer Ball Valve.
5. Rotate blue handle 90° counter-clockwise to reopen and pressurize the system.

## Trouble Shooting

**Caution:** Whenever servicing the ADV, be sure to remove system pressure from the immediate system.

1. **Valve will not close:** Typically caused by particulates and debris in the valve causing the seals not to properly close.

**Action:** **ADV25 series and up:** Remove top nut and remove the coil-timer assembly. Unscrew guide assembly by large hex nut and remove. Use care as not to lose plunger and spring assembly. Carefully remove diaphragm assembly. Clean internal and parts. Reassemble in reverse order and pressurize.

**Action:** **ADV10 series:** Remove top nut and remove the coil-timer assembly. Unscrew stainless steel stop from atop brass guide with pliers. Carefully remove plunger and return spring using care as to not lose plunger or spring. Clean valve internals and plunger. Reassemble in reverse order and pressurize.

2. **Valve will not open:**

**Action:** Check supply to insure presence of electrical power.

**Action:** Disassemble valve per the instructions above (Item 1) and check for debris interfering with the movement of the plunger. Clean and reassemble.

## Spare Parts

Spare parts are available. Consult your supplier for price and availability.

## Warranty

The manufacturer warrants its products to be free of defects in material and workmanship for a period of one year from the date of delivery.

**NOTE:** If the product fails within the warranty and is to be returned, call Spirax Sarco for a "Return Authorization Number". This procedure **must be followed** to insure proper action and closure.

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