Differential Pressure Operation
Solenoid Operation
In order to achieve the best performance and trouble free operation of the Komet 850 End-Gun control valve, carefully follow the installation instructions below.

**WARNING**
Follow this installation instructions and all safety instructions of the center-pivot manufacturer’s installation instructions. Non observation of the center-pivot manufacturer’s warnings could result in serious injury or death. Only certified personnel are allowed to install the Komet 850 valve.

**Ports used on the Komet 850 Valve**

"Port A" is used to connect the pressure line to the membrane chamber that controls the opening and closing of the valve.

"Port B" is used as a drain port to prevent priming problems of the booster pump due to air-locking.

"Port C" is used to drain the water remaining in the end-gun at shutdown of the system to prevent damage due to freezing.

"Port D" is used to install an additional drain device to further reduce the risk of clogging.

**Available drain devices**

**Automatic Drain Valve**
Is used to automatically vent air while the system is turned on and to drain water when the system is shutdown.

**Standard Drain Plug**
Produces a continuous water stream during the operation of the system and is used where potential clogging may be an issue. Approx. discharge: 3.8 gpm @ 30 psi / 0.24 l/s @ 2 bar

**1/4” Hose Barb Adapter**
Produces a continuous water stream during the operation of the system and is used where clogging is a problem throughout the system. Approx. discharge: 15.3 gpm @ 30 psi / 0.97 l/s @ 2 bar
Installing the Komet 850 - 2” Valve for operation with “Differential Pressure”

Trouble Shooting

The valve design is very simplistic and reliable. If the valve is not opening or closing properly, the problem is almost always found within the connections, mostly plugging of the filter or pressure line to the valve or plugging of the drain device.

### VALVE DOES NOT OPEN:

1. Depending on the drain device used, check the following:
   - **Automatic drain valve:**
     remove the automatic drain valve from the Komet 850 valve and check its operation.
   - **Standard drain plug or 1/4” hose barb adapter:**
     while the center-pivot system is running, visually check that the standard drain plug or the 1/4” hose barb adapter mounted in “Port B” and/or “Port D” of the valve is spraying out water. If not, clean the drain devices. A plugged drain device can be the cause of air-locking of the valve, which prevents the booster pump from proper priming and therefore the end-gun from operating.

### VALVE DOES NOT CLOSE:

1. Check that the strainer filter mounted on “Port E”, which is located on the up-stream side of the booster pump, is not clogged. If clogged, clean it.
2. Check that the tubing to the membrane chamber is not plugged or kinked. Clean / replace it.
3. Check the membrane chamber for debris or damage to the membrane by removing the valve’s cover. Clean or replace the membrane.
In order to achieve the best performance and trouble free operation of the Komet 850 End-Gun control valve, carefully follow the installation instructions below.

**WARNING** Follow this installation instructions and all safety instructions of the center-pivot manufacturer’s installation instructions. Non observation of the center-pivot manufacturer’s warnings could result in serious injury or death. Only certified personnel are allowed to install the Komet 850 valve.

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**Ports used on the Komet 850 Valve**

**“Port A”** is used to connect a solenoid to the membrane chamber that controls the opening and closing of the valve.

**“Port B”** is used as a drain port to prevent priming problems of the booster pump due to air-locking.

**“Port C”** is used to drain the water remaining in the end-gun at shutdown of the system to prevent damage due to freezing.

**“Port D”** is used as a pressure port for the solenoid valve.

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**Available drain devices**

**Automatic Drain Valve**

Is used to automatically vent air while the system is turned on and to drain water when the system is shutdown.

**Standard Drain Plug**

Produces a continuous water stream during the operation of the system and is used where potential clogging may be an issue.

Approx. discharge:
3.8 gpm @ 30 psi / 0.24 l/s @ 2 bar

**1/4” Hose Barb Adapter**

Produces a continuous water stream during the operation of the system and is used where clogging is a problem throughout the system.

Approx. discharge:
15.3 gpm @ 30 psi / 0.97 l/s @ 2 bar
1. Install the Komet 850 valve as specified by the pivot manufacturer. Apply sealant and/or anti-seize material to the threads, then tighten the threads. **Important:** direct “Port B” away from the center-pivot or any electrical components.

2. In “Port A” on the valve’s membrane chamber, mount the solenoid valve or connect the line from the solenoid if it is mounted further away.

3. In “Port B” make sure a drain device is installed. The drain device is essential to allow air-venting from the booster pump at the start-up of the pivot. This is the most efficient method to avoid air-locking of the valve in order to keep the booster pump primed at all times.

   The optional drain devices are as follows:
   - automatic drain valve: vents the air and drains water
   - standard drain plug: produces a continuous spray and is used where clogging situations may occur.
   - 1/4” hose barb adapter: produces a continuous spray and is used where the standard drain plug clogs due to water with a high content of solids.

4. In “Port C” if necessary, install a drain device to prevent damage to the end-gun and the valve in freezing conditions.

5. In “Port D” connect the pressure line to the solenoid valve. A strainer filter is mandatory to prevent the solenoid from clogging. In case the solenoid is mounted further away, take the pivot pressure at a convenient place, best place is on top of the pivot pipe.

**Trouble Shooting**

The valve design is very simplistic and reliable. If the valve is not opening or closing properly, the problem is almost always found within the connections, mostly plugging of the filter or pressure line to the valve or plugging of the drain device.

<p>| VALVE DOES NOT OPEN:                          | 1. Check the solenoid valve, the strainer filter and the hose from the filter to the solenoid valve for clogging or electrical fault. |
|                                              | 2. Depending on the drain device used, check the following: |
|                                              | <strong>Automatic drain valve:</strong> remove the automatic drain valve from the Komet 850 valve and check its operation. |
|                                              | <strong>Standard drain plug or 1/4” hose barb adapter:</strong> while the center-pivot system is running, visually check that the standard drain plug or the 1/4” hose barb adapter mounted in “Port B” and/or “Port D” of the valve is spraying out water. If not, clean the drain devices. A plugged drain device can be the cause of air-locking of the valve, which prevents the booster pump from proper priming and therefore the end-gun from operating. |
| VALVE DOES NOT CLOSE:                         | 1. Check the solenoid valve for clogging or electrical fault. Clean or replace it. |
|                                              | 2. Check that the strainer filter is not clogged. If clogged, clean it. |
|                                              | 3. Check that the tubing to the solenoid valve and eventually the tubing from the solenoid valve to “Port A” is not plugged or kinked. Clean or replace it. |
|                                              | 4. Check the membrane chamber for debris or damage to the membrane by removing the valve’s cover. Clean or replace the membrane. |</p>
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