

# **Differential Pressure Control Valve**

### Features

- This model is a high-performing differential pressure control valve installed in the supply or return piping line of loaded equipment and regulates both differential pressure and flow rate.
- The valve construction integrated with the Equal % Cone provides additional wide range of control of differential pressure and flow.
- Being diaphragm split-system, there is no influence by temperature and being perfect balance type, solid set pressure-differential value is ensured.
- Strong construction guarantees high durability.
- Being diaphragm type, installation in the horizontal and the vertical position is possible.
- Maintenance time will be referred in acc, with whether leaking water visually.
- Valve lifting can checked thru the installed indicator.

### How to Install Valve & Caution to Take

- Make sure that you install strainer in front of differential pressure control valve to prevent contaminant from getting into the valve.
- Maintain sufficient distance between valves to avoid water turbulence.
- Install By-Pass Line for maintenance and management.
- Check the arrow direction of valve body so that is installed the same direction as water flow.
- Install pressure pipe in the front side (return pipe) or the back side (supply pipe) of differential pressure control valve with more than 5 times of distance of pipe diameter.
- Attach ball valve to connection of pressure pipe and lock it.
- Install supply pressure pipe at the top of diaphragm case and return pressure pipe at the bottom.
- Close manual valve at the front and back of differential pressure control valve and open bypass valve. Conduct freshing several times.
- After freshing, close bypass valve and slowly open manual valve.
- Slowly open ball valve of supply and return pressure pipe at the same time. Open drain valve attached to the top and the bottom of diaphragm case, and close the top valve first and then the bottom valve when water is drained out.
- Check operation and differential pressure. Start to use if they're fine.
- Caution: If you supply water with only one valve of pressure pipe open, it can impose heavy load in diaphragm and other parts. So make sure you can open both return ball valve and supply ball valve of pressure pipe.

# **Cautions in Handling the Product**

Make sure to fully comprehend the following cautions in handling the product so that the product may display it performance.

- Do not apply impact on it.
- Avoid any place with dust or humidity when storing it.
- A special attention should be paid so that any impurities are not inserted into the product.
- When attaching it onto a pipe, the location should be free of sand or debris while a point of gasket should be also cleaned up.
- It should be installed on a place easy to access for repair.

\* The structure, dimensions and materials may be changed without any prior notice for the improvement of performance.

### **How to Adjust Differential Pressure**

- If not requested otherwise, differential pressure set at 0,7kgf/cm<sup>3</sup> when delivered.
  - If you want to adjust differential pressure to respond to changed conditions, follow the steps illustrated bellow.
  - a. Open all valves inside circulation piping and operate pump. Read the differential pressure of supply and return.
  - b. Loosen the bolt (5mm) placed on piping head.
  - c. Spin the nut clockwise while looking at supply and return pressure to set the differential pressure you want.
  - d. Lock the bolt (5mm) after setting the differential pressure to prevent arbitrary adjustment by others.



### **Piping Diagram of the Diffenrential Pressure Contol Valve**



## **Installed Piping Diagram**



