

INSTRUCTION MANUAL
FOR
SOLENOID VALVE
Model DSG

Prior to using the Product, it is essential to read this INSTRUCTION MANUAL, especially the description of safety-use issue.

For quick reference whenever necessary, keep this INSTRUCTION MANUAL in a good manner.



CKD Corporation

FOR SAFETY USE

The Product is to be used by those who has a basic knowledge about meterial, fluid, piping electricity regarding Control Valves (solenoid valves, motor valves, air operated valves and so on.) or other products.

Never use this Product by those who have no knowledge or are not well training.

Should be any trouble or accident caused by a wrong selection and/or wrong use of the Product even by a person of basic knowledge about the product, we are not responsible therefore.

Since any customer of the Product have a variety of its application, we are not in a position to get all the information on how and where the Product is used. There may be the cases where that the Product may not meet customers' requirement or may cause any trouble or accident, by fluid, piping or other condition that are not within the specifications of the Product.

Under such a circumstance, select with their responsibility the most suitable application and use of the Product according to the customers' requirements.

The Product incorporates a various safety arrangement, however miss-handling of the product may lead to any trouble or accident on customers side. To avoid any possible trouble, read this INSTRUCTION MANUAL carefully and understand it fully.

Pay your attention to the items described in this Text, as well as the items indicated below:

CAUTIONS

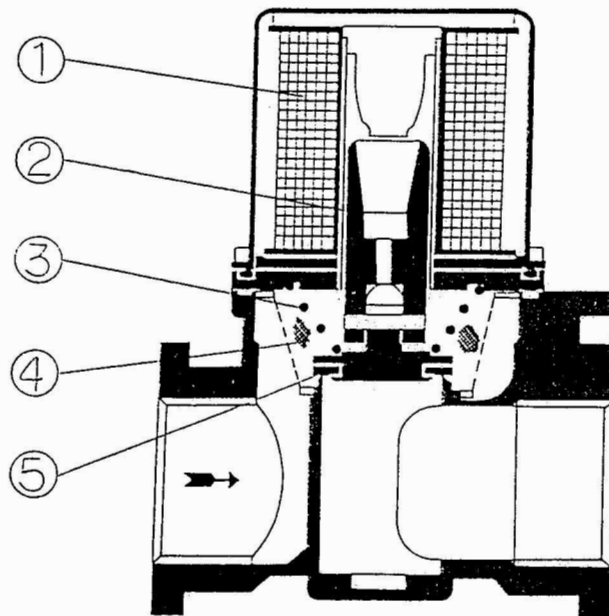
- When energized, heat is generated at coil portion of solenoid valves and motor valves particularly "Class H" coil where may have a high temperature.
- There may have electric shock when wire connecting portion of solenoid valves or motor valves are touched. In case of inspection, turn off power supply beforehand.
Don't touch live portion by wet hands.
- Make piping so as not to have leakage and check for no leakage before use, because in case of control valves for high temperature fluid like steam, leakage may cause heat injury.

Operation Methods

With open electrical circuit, the valve closes the gas passage, by means of valve disc (5). The prevailing gas supply pressure acts in the direction of closure and hence assists the closing force generated by the spring (3).

With the electrical circuit closed (a protected rectifier converts the A . C . supply into D . C .) the magnetic field produced, pulls the plunger (2) into the solenoid coil and, against the force of the closing spring (3), lifts the valve disc (5) off the valve seat.

The valve opens rapidly. A strainer (4) is fitted into the valve in order to protect the valve seat and the gas appliances installed downstream.

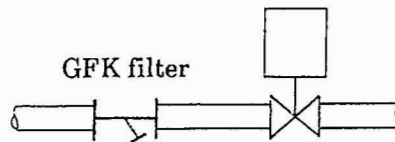


Part number	Part
①	Coil
②	Plunger
③	Closing spring
④	Strainer
⑤	Valve disc

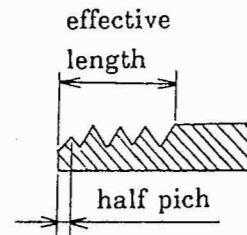
Application

This valve is designed for use as the protection, regulation and control of atmospheric burners, of fan and industrial burners on the main or pilot lines through town gas, natural gas, petroleum gas.

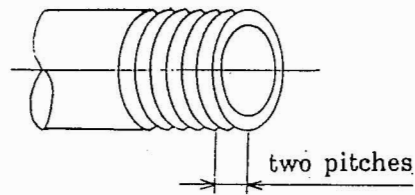
Piping



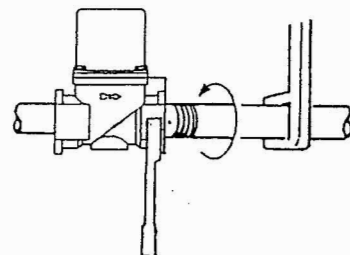
1. Pay attention to keep the effective length of the taper pipe thread when cutting the thread.
You may file first half pitch of screws.



2. Thoroughly clean up inside pipes before installation of the electromagnetic valve.
 - (1) Remove dust and rust.
 - (2) Do not apply the sealing agent to first two pitches of the screws.

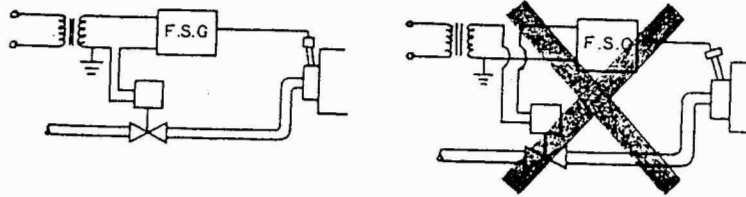


3. The direction of the gas flow and the arrow on the valve housing must correspond.
4. The valve can be fitted to horizontal or vertical pipework.
5. When fitting the valve into pipework, do not use the solenoid as a lever; use a suitable spanner.

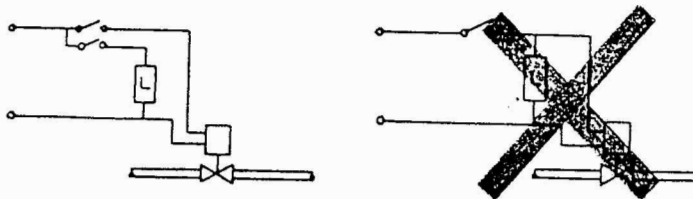


Wiring

1. Check the electrical supply is the same as stated on the label.
2. Wires of more than 0.75mm^2 at cross sectional area of core should be connected to the electrical terminals.
3. Connect the electromagnetic valve with the earthed leads as shown in the following figure, because it prevents mis-operation of the valve from leakage current.



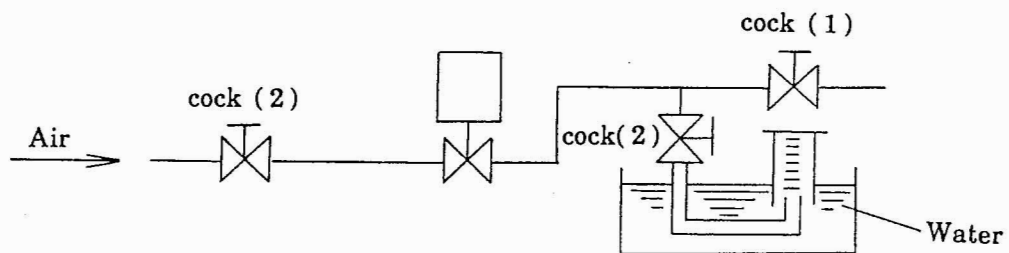
4. Try to protect the coil from the surge voltages in case of wiring the electromagnetic valve with inductive loads in parallel, as shown in the following figure.



5. Insert fuses of capacity 3A for protection of the electrical circuits.

Test Requirement

1. Check the electrical supply and the gas pressure are the same as stated on the label.
2. After completion of the piping, thoroughly check every part for leakage.
3. Connect the hose to outlet port, the head of which is introduced into water in the vessel as shown in the following figure. Shut the cock (1), open the cock (2) and check whether blowholes exhaust from the hose head for leakage, or not.



4. Check the valve movements with open or closed electrical circuit.