

# INSTRUCTION MANUAL

FOR

MASTER VALVE

AFS  $\frac{2}{3}$  -  $\frac{01}{02}$  - 4  
03  
04



CKD Corporation

## OPERATING INSTRUCTIONS

Model

AFS  $\frac{2}{3}$  -  $\frac{01}{04}$  - 4

Thank you very much for adoption of the CKD products.

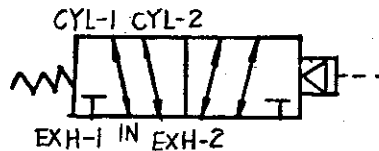
All the CKD products are produced under the severe quality control.

In order to use CKD products more effectively and to prolong its service life, read through the manual carefully.

## Operating Theory

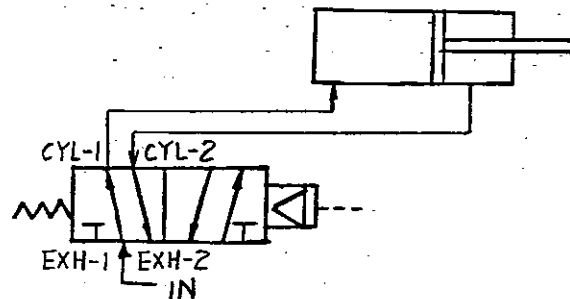
Pilot signal OFF:	IN $\nrightarrow$ CYL-1	CYL-2 $\nrightarrow$ EXH-2	EXH-1...Stop
Pilot signal ON:	IN $\nrightarrow$ CYL-2	CYL-1 $\nrightarrow$ EXH-1	EXH-2...Stop

JIS Mark

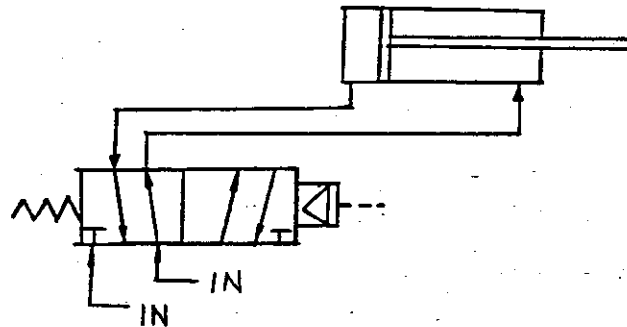


## Example

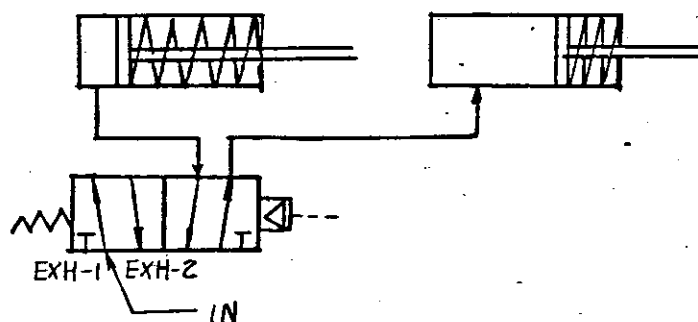
1. When operating the pressure cylinder at both side.



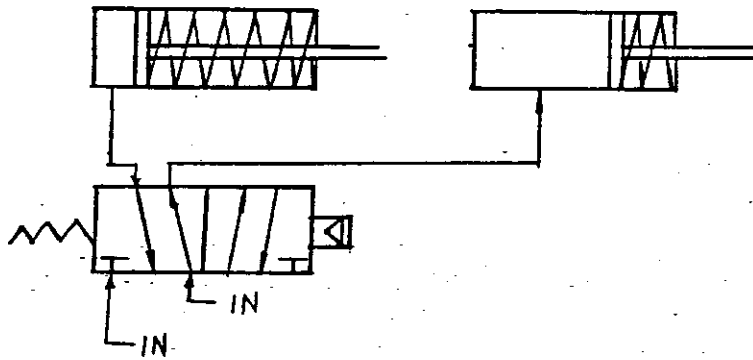
2. Two different pressures are applied from two different exhaust port, it is possible to change the outlets during the stroke by the pressure cylinder at both side.



3. In case of operating the cylinder alternately or operating only one cylinder, as 3-way valve.



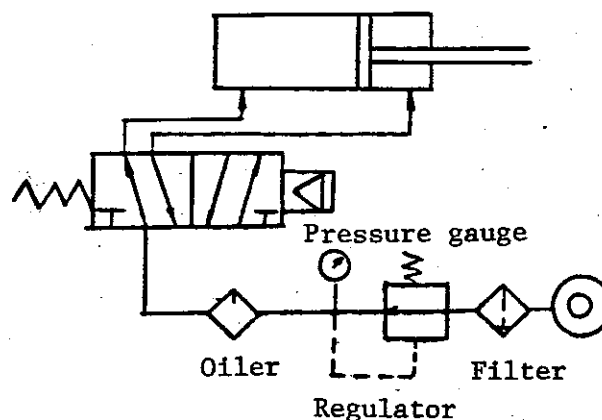
4. Two different pressures from two different exhaust ports are applied to operate one of two cylinders alternately and change pressure of each cylinder.



## 5. Others

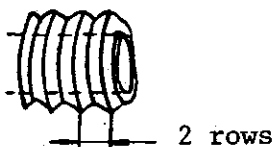
- (1) Because of this is a 2-position valve, there is no neutral position.
- (2) If the speed control of this cylinder is required, connect a metalling valve (Needle type) to exhaust side.
- (3) Besides the air signal operation, it is possible to operate manually by pushing with a rod from above the rubber bushings.

## Piping and Installation



1. Before installing the valve, inside the pipe should be cleaned as much as possible.
  - (a) Remove dust, burr, etc. well. (Perform flushing before installing it.)

(b) Apply sealant up to the second row of the thread.



2. Install a filter and an oiler at the valve front. If air quality is poor, when using a reciprocal compressor, install a filter for far removal.
3. The valve should be installed as to become parallel to the spool (piston related).
4. When installing, never apply any excessive force.
5. The valve should be installed where there is less vibration and shock.
6. After piping, check to see if there is any leakage from each part.
7. Provide an enough space for maintenance work.
8. Be sure to drain out excessive moisture.

## Maintenance Control

### (A) Disassembling

1. Disassembling of valve body.
  - (1) Remove the pilot valve body.
  - (2) Remove a cap to take out a spring.
  - (3) Pull out a spool.
  - (4) Pull out a sleeve.

Refer to the drawing (CD-583758, CD-583759)

### 2. Cautions

- (1) Never leave a sleeve in the air so long after being pulled out.
- (2) When pulling out the sleeve and spool, do not touch them with bare hands. You should always wear rubber gloves. (A part where touched is easy to corrode.)
- (3) The sleeve may not be taken out so often. (O-ring may be damaged.)
- (4) When assembling, be sure to clean outer surface of piston, spring hole, inner surface of sleeve, etc.

- (5) Tighten cap and pilot valve body firmly. (It is easy to slip off when used so frequently.)
- (6) Though this is a waterproof mechanism, special care should be taken to prevent water from getting in, when using outdoor.
- (7) Rustproofing shall be provided when using the valve under the bad atmosphere.
- (8) When the valve is left unused for a long period of time, manually start to operate at the beginning. (Manual device is option.)
- (9) When the operation is finished, be sure to stop air source and drain air and water out.