Discontinue

CSM-0031-A

SM-2400

INSTRUCTION MANUAL

FOR

REVERSIBLE REGULATOR

MODEL NO. 2400

Please read this operation manual carefully before using this product, particularly the section describing safety.

Retain this operation manual with the product for further consultation whenever necessary.

CKD Corporation

Discontinue

For Safety Use

To use this product safely, basic knowledge of pneumatic equipment, including materials, piping, electrical system and mechanism, is required (to the level pursuant to JIS B 8370 Pneumatic System Rules).

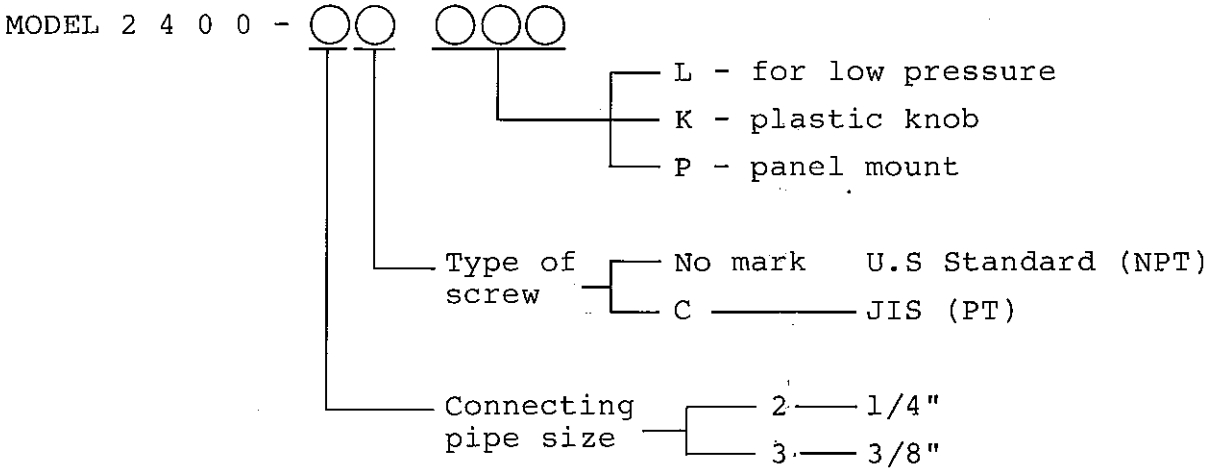
We do not bear any responsibility for accidents caused by any person without such knowledge or arising from improper operation.

Our customers use this product for a very wide range of applications, and we cannot keep track of all of them. Depending on operating conditions, the product may fail to operate to maximum performance, or cause an accident. Thus, before placing an order, examine whether the product meets your application, requirements, and how to use it.

This product incorporates many functions and mechanisms to ensure safety. However, improper operation could result in an accident. To prevent such accidents, read this operation manual carefully for proper operation.

INSTRUCTION MANUAL FOR REVERSE REGULATOR MODEL 2400-2,3C

HOW TO READ MODEL NUMBER



Thank you very much for purchasing the CKD's products.
This REGULATOR is a fruit of our long years of accumulated experience.
This INSTRUCTION MANUAL deals with the basic items regarding the installation, operation, maintenance, etc. required for bringing the efficiency of the REGULATOR into full play.
Our products are produced under severe quality control.
You are requested to throughly read through this INSTRUCTION MANUAL before using the regulator, and to perform correct operation and maintenance.

1 CAUTIONS FOR INSTALLATION

1-1) Install the regulator so that the air flows to an arrow direction marked on the air inlet.

1-2) Avoid use the pipes whose connecting pipe size is smaller than that of the regulator.

1-3) Keep space of 1.50 mm and over so that the bottom plug can be removed in the case of overhauling.

1-4) Install a pressure gauge at a position easily visible. A hole on the opposite side shall be blocked with a plug.

1-5) Be careful that the primary side pressure does not exceed 1.0 MPa.

Clockwise turning of the adjusting screw makes the secondary side pressure high and counterclockwise turning of it makes the secondary side pressure low.

1-6) Be sure to attach a filter before the regulator so that dust and water may not enter.

1-7) Install the regulator as close as possible to a device to be used together.

1-8) Avoid use of the regulator at such a place as that ambient temperature becomes 65°C or over.

2 PRINCIPLE OF OPERATION

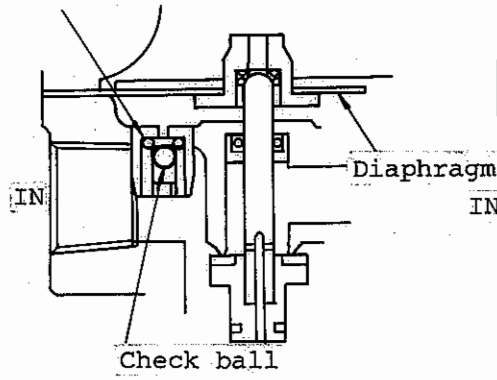


Fig. 1

When a primary pressure is applied to the IN side, the check ball is pushed against the O-ring to block the passage and act as a regulator.

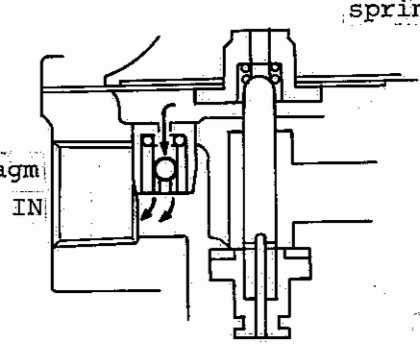


Fig. 2

When the primary pressure is discharged, the pressure in the diaphragm chamber flows out to the IN side through the check valve.

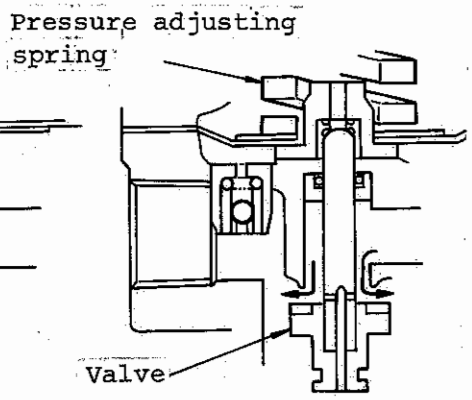


Fig. 3

As the pressure in the diaphragm chamber is discharged, the valve opens by means of the pressure adjusting spring through the diaphragm assembly, and thus the compressed air at the OUT side is discharged.

3 CAUTIONS FOR MAINTENANCE

3-1) Disassembling procedure

a. Stop air supply to the regulator.

b. Remove the adjusting screw ⑦ by turning it counterclockwise fully to discharge the air.

c. Remove the screw ⑰ , cover ② , spring disc ① , spring 18 and diaphragm ③ - ⑥ .

d. Remove the bottom plug (22), and separate the spring (19) and valve assembly (8), (9).

3-2) In case the pressure adjustment can not be made or the pressure drop becomes peculiar.

a. Remove the bottom plug (22), spring (19) and valve assembly (8), (9).

b. Clean the O-ring (20), and valve assembly (8), (9) and check them for damage.

3-3) In care large quantity of air leaks from the relief port.

a. The cause in this case may be assembly failure or damage of valve assembly (8), (9), O-ring (20) or diaphragm assembly (3) - (6).

4. Cautions for Use

When the pressure is applied from behind to the secondary side, air does not always relief to the primary side.

Use within a range of the oblique line of the graph as shown below.