



AR\*-010 0029

**OPERATION MANUAL**

**PRESSURE CONTROL  
VALVE**

**MODEL**

**AP100-01~02**

**SMC CORPORATION**

**PRESSURE CONTROL VALVE**  
**PRECAUTIONS TO HANDLE & TROUBLE AND REMEDY**  
**AP100-01~02**

**Precautions to handle.**

**I. How to install.**

1. Pipes to connect should be air-flashed prior to connection to this device. Presenting dirt, sand, or scale in pipes may cause to malfunction or trouble.
2. Port inscribed by arrow mark is for air supply.  
Piping works should be carried out rightly. Pipe connected inversely doesn't work properly.

**II. How to adjust pressure.**

1. Rotate adjusting handle clockwise to increase pressure at secondary side, and anti-clockwise to decrease.
2. Manipulation of the handle should be carried out manually.  
Applying tools may casue to trouble.
3. Upon completing , fasten the lock-nut. This can prevent fluctuation of adjusted pressure due to vibration.

**III. Other precautions.**

1. This device should be used under working pressure less than its Max. working pressure 9.9 kgf/cm<sup>2</sup>.
2. Adjusting range of setting pressure is 0.5~7 kgf/cm<sup>2</sup>.

**Trouble and remedy.**

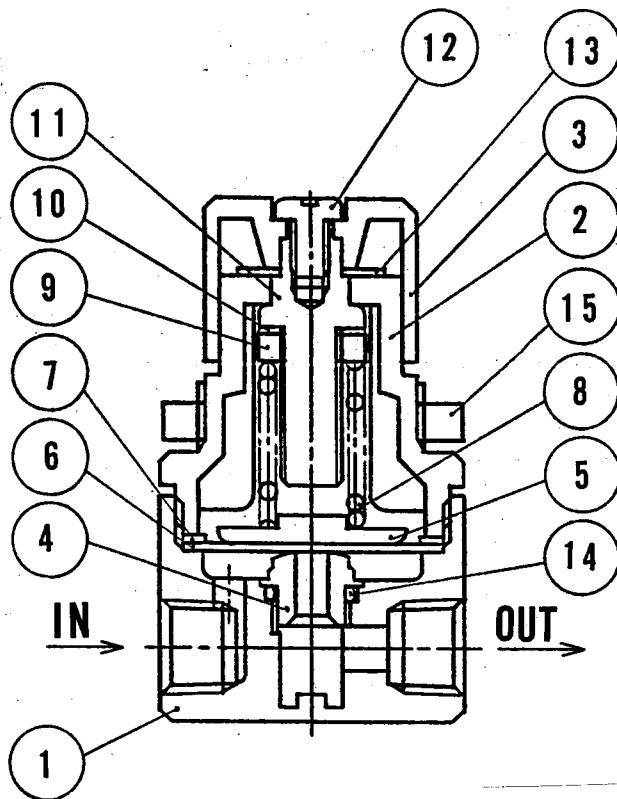
TROUBLE	POSSIBLE CAUSE	REMEDY
Pressure cannot be adjusted.	<ol style="list-style-type: none"> <li>1. Flow direction is inversed, installed inversely.</li> <li>2. Adjusting spring is broken.</li> <li>3. Dirt is stuck at valve seat.</li> <li>4. Sealing surface of valve seat is damaged.</li> <li>5. Diaphragm is broken.</li> <li>6. Dirt is stuck at valve seat.</li> <li>7. Rubber lining surface of the valve is damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Check flow direction and if it's inversed, re-install it.</li> <li>2. Replace the adjusting spring.</li> <li>3. Remove bonnet and wash diaphragm and valve seat.</li> <li>4. Replace the valve seat.</li> <li>5. Replace the diaphragm.</li> <li>6. Wash valve and valve seat.</li> <li>7. Replace the valve.</li> </ol>

TROUBLE	POSSIBLE CAUSE	REMEDY
	8. Valve spring is broken.	8. Replace the valve spring.
Air is leaking from a small hole on bonnet.	Diaphragm is broken.	Replace the diaphragm.
Air is leaking from between bonnet and body.	1. Fitted bonnet is loosene. 2. Diaphragm is broken.	1. Re-fit the bonnet tightly. 2. Replace the diaphragm.

#### IV. Specification.

Proof pressure	15 kgf/cm <sup>2</sup> (1500 kPa)
Max. working pressure	9.9 kgf/cm <sup>2</sup> (990 kPa)
Setting pressure	0.5 ~ 7 kgf/cm <sup>2</sup> (50 ~ 700 kPa)
Fluid to be used.	Air.
Ambient temperature and temperature of using fluid	5 ~ 60 °C
Pipe connecting port size	2 - Rc (PT) 1/8 ~ 1/4
Bleeding port size	2 - Rc (PT) 1/4

MODEL AP100



ITEM	PART NAME
1	BODY
2	BONNET
3	HANDLE
4	VALVE SEAT
5	DIAPHRAGM SHEEL
6	DIAPHRAGM
7	PACKING
8	ADJUST SPRING
9	SPRING HOLDER
10	PACKING
11	ADJUST SCREW
12	SCREW
13	WASHER
14	"O"RING
15	SET NUT

CONTACT ADDRESS: SMC CORPORATION

AKIHABARAUDX 15F, 4-14-1, SOTOKANDA, CHIYODA-KU, TOKYO  
101-0021, JAPAN

TEL: 03-5207-8271