

INSTRUCTION MANUAL
FOR
REVERSIBLE REGULATOR
MODEL NO. 2419

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.

For Safety Use

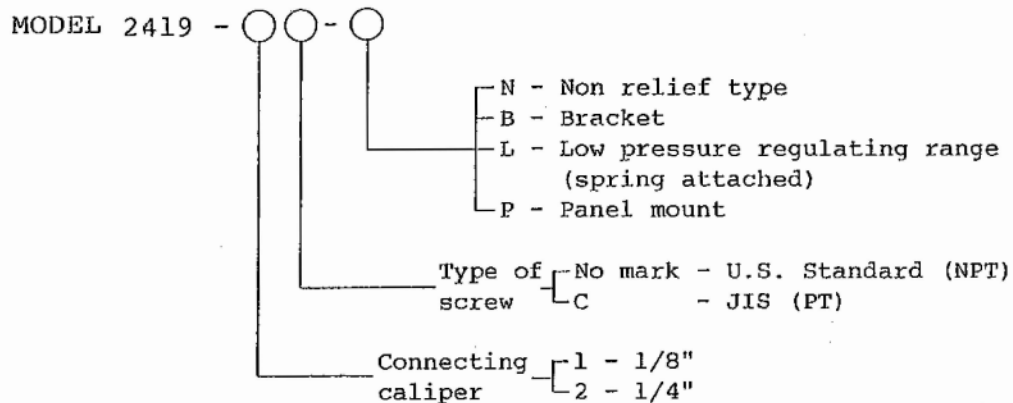
To use this product safely, basic knowledge of pneumatic equipment, including materials, piping, electrical system and mechanism, is required (to the level pursuant to JIS B 8370 Pneumatic System Rules).

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 2419-1, 2C
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 thoroughly 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 flowing direction and the arrow direction on the air inlet port conform.
- 1-2) Avoid the use the pipes whose connecting caliper is smaller than the regulator.
- 1-3) Install a regulator to a position easily visible. A hole on the opposite side shall be blocked with a plug.
- 1-4) 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.
- 1-5) Be sure to attach a filter before the regulator so that a dust, water, etc. may not get in.
- 1-6) Use the regulator as close as possible to a pneumatic device to be used together.
- 1-7) Never try to use the regulator under the ambient temperature more than 65 °C.

1-8) The adjusting knob may be locked and becomes unable to turn further, when it is turned.
When setting the pressure, pull up the adjusting knob to check that it is not locked first. Then turn the adjusting knob.

1-9) In case of fitting a panel, drill holes of 31 dia. ones.

2 Cautions for maintenance

2-1) Disassembling procedure

- a) Stop the air supply to the regulator.
- b) Release the locked adjusting knob and turn it counter-clockwise fully to discharge the air.
- c) Unscrew and remove four screws ② and take the bonnet assembly ①.
- d) Remove the spring ③ and the diaphragm assembly ⑤.
- e) After removed the valve seat ⑨, also remove the valve assembly ⑪ and the spring ⑬.

2-2) Either the pressure can not be made or the pressure drop becomes peculiar, clean the gasket ⑩, O-ring ⑫ and valve assembly ⑪ and check them for damage.

2-3) If the air leaks from the relief port, clean the diaphragm assembly ⑤ and disc seal and check them for damage.

2-4) When reassembling, give due consideration to the following items.

- a) Tighten the valve seat ⑨ upto the $0.8 \text{ N}\cdot\text{cm}$ torque. Also the screw shall be tightened to the $2.2 \sim 2.8 \text{ N}\cdot\text{cm}$ torque.
- b) Apply Daphnie grease MP No1 to the gasket ⑩ and O-ring ⑫.
- c) The bonnet assembly ① is not able to disassemble.

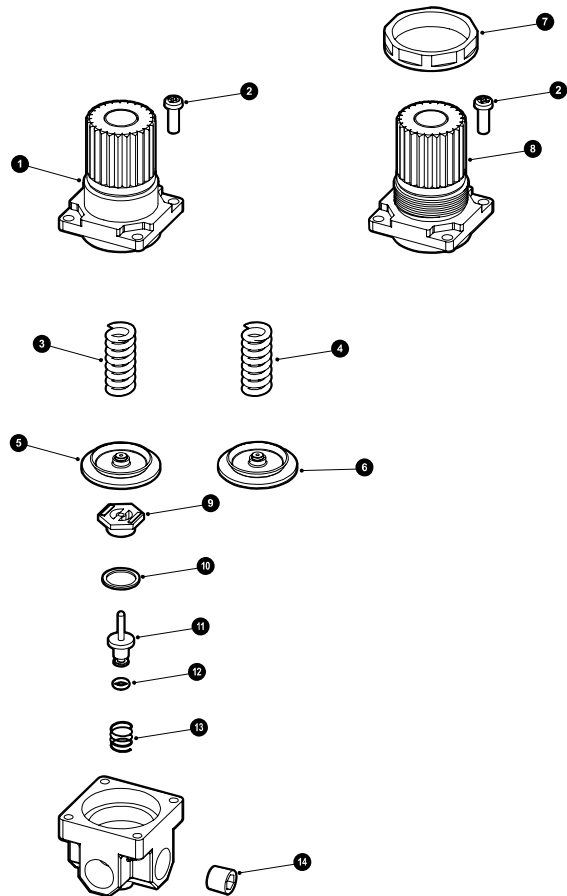


Reverse regulator (check valve integrated)

2419 Series

2419 Series

2419 Series Parts Expanded View



Part name	Part model No.	No.	Quantity
Consumable parts kit For standard	2419-KIT	5 9 10 11 12 13	1 each
Consumable parts kit (N) For non-relief	2419-KIT-N	6 9 10 11 12 13	1 each
Knob cover kit	2419-KNOB	1 2	1 4
Knob/cover kit (P) For panel mount	2419-KNOB-P	2 7 8	4 1 1
Pressure adjustment spring For standard	B2019-SPRING	3	1
Pressure adjustment spring (L) For low pressure	B2019-SPRING-L	4	1
Diaphragm assembly For standard	B2019-DIAPHRAGM-ASSY	5	1
Diaphragm assembly (N) For non-relief	B2019-DIAPHRAGM-ASSY-N	6	1
Valve assembly	2419-VALVE-ASSY	11 12	1 each
Metal plug (with sealant) R 1/8 * 1 set includes 10 pcs.	FRL-PLUG-R1/8	14	10
Packing box/label	B2019-PAC-BOX-KIT	-	1

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.

