

Discontinue



SM-9414-A

INSTRUCTION MANUAL

Water regulator

B2519

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

Retain this instruction 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 instruction manual carefully for proper operation.

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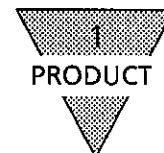
B2519

Water regulator

Manual No. SM-9414-A

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NOTE: Letters & figures enclosed within Gothic style bracket
(examples such as [C2-4PP07] · [V2-503-B] etc.) are editorial
symbols being unrelated with contents of the book.



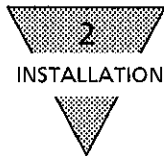
1. PRODUCT

1.1 Specifications

Model code	B2519-1C·2C-N	
Item		
Max. working pressure MPa {kgf/cm ² }	2.06 {21}	
Withstanding pressure MPa {kgf/cm ² }	3.09 {31.5}	
Temperature °C	5~65	
Set pressure range MPa {kgf/cm ² }	Standard	0.04~0.83 {0.4~8.5}
	For low pressure	0.02~0.34 {0.2~3.5}
Max. flow ℓ/min	5.0	
Port size Rc	1/8, 1/4	
Product mass kg	0.42	

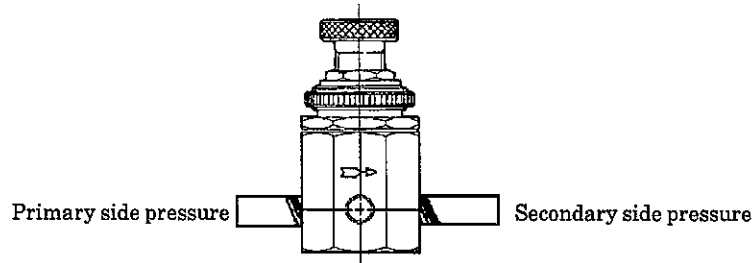
Note1 : The pressure unit is 1.0 MPa \doteq 10.2 kgf/cm².

Note2 : The maximum flow is the value at a primary pressure of 0.7 MPa {7.1 kgf/cm²}, a set pressure of 0.5 MPa {5.1 kgf/cm²}, and a pressure drop of 0.1 MPa {1.02 kgf/cm²}.



2. INSTALLATION

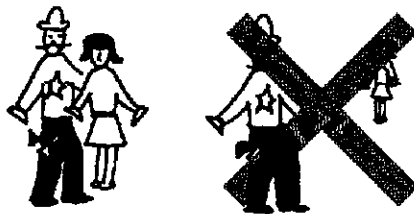
- 1) Install the regulator so that air will flow in the direction of the arrow indicated on the body.



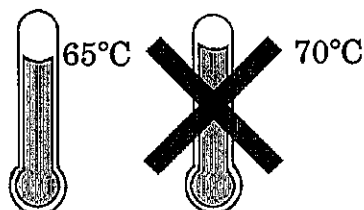
- 2) A pipe with a diameter much smaller than the port diameter should not be connected to the IN port of the regulator.
- 3) Keep sufficient space so that the parts can be removed in the case of overhauling.
- 4) Install a pressure gauge to a position easily visible. A hole on the opposite side shall be blocked with a plug.
- 5) Flush the piping before connection.
- 6) Be careful that the primary side pressure does not exceed 2.1MPa {21kgf/cm²}.

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

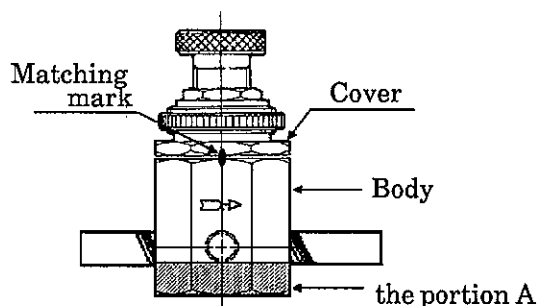
- 7) After setting the pressure, clamp the seal packing and tighten the nut.
- 8) Be sure to attach a filter before the regulator so that dust may not enter.
- 9) Install the regulator as close to the intended pneumatic unit as possible.



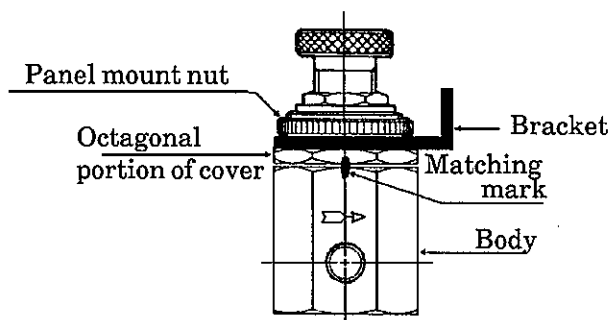
- 10) Avoid the use of regulator under the ambient temperature of more than 65°C.



- 11) Keeping the matching mark on the body and that on the cover in alignment, and connect the piping by holding the portion A with a vice. Do not hold any other portion.

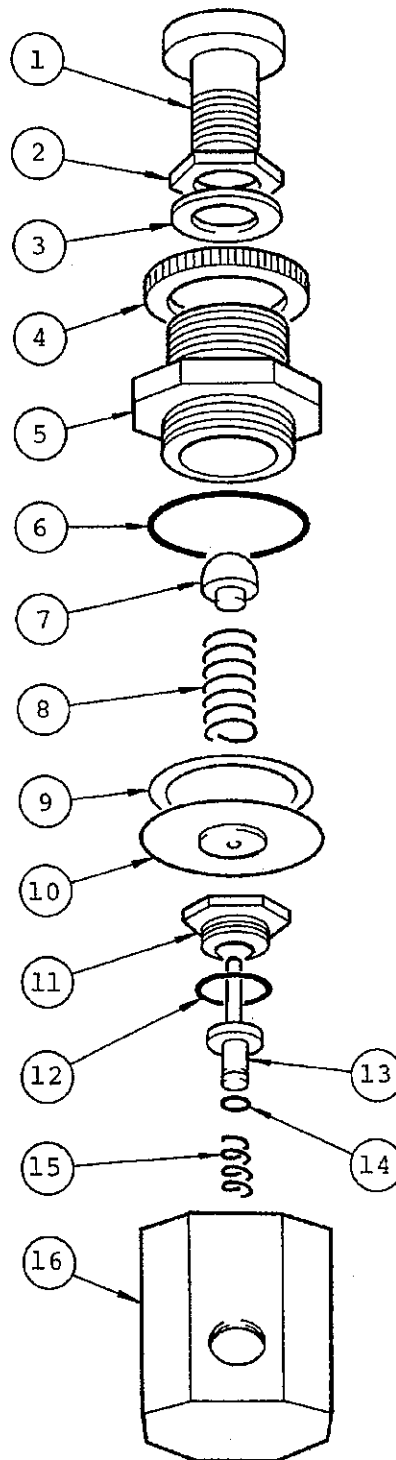


- 12) To mount or remove the bracket, hold the octagonal portion of the cover with a spanner or other tool to keep the alignment between the matching marks on the body and the cover. Then, firmly tighten or loosen the panel mount nut. To change the position of the bracket, lock the octagonal portion of the cover and loosen the panel mount nut.



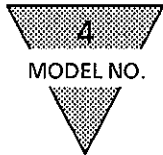


3. MAINTENANCE

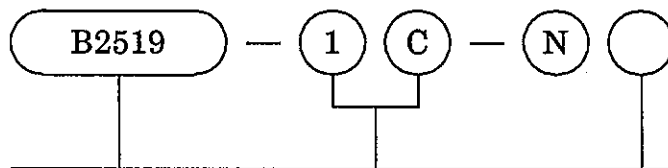


- 1) Disassembly procedure
 - a) Stop the supply of air or water to the regulator.
 - b) Loosen the adjusting screw ① by turning it all the way counterclockwise.
 - c) Loosen the cover ⑤ with a spanner (wrench) and remove it
 - d) Remove the slip ring (9) and the diaphragm assembly ⑩.
 - e) Loosen the valve sheet ⑪ with a spanner (wrench) and remove it. Then, detach the spring ⑮ and the valve assembly
- 2) If the pressure cannot be adjusted or falls significantly
 - a) Remove the cover ⑤, the diaphragm assembly ⑩, the valve sheet ⑪, and the valve assembly ⑬.
 - b) Wash the O-rings ⑥ and ⑭ and the valve assembly ⑬, and check them for damage.
- 3) When assembling the regulator, follow the instructions below:
 - a) Tighten the valve sheet to a torque of approximately 7.8 N.cm {8 kgf.cm} and the bonnet to 12.7 N.cm {130 kgf.cm}.

No.	Part Name	Part No.	Qty	Note
1	Adjusting screw	30-5361	1	
2	Nut	30-5159	1	
3	Seal washer	41-5018	1	
4	Panel mount nut	30-655	1	
5	Cover	30-5355	1	
6	O-ring	78-5068	1	Consumable part
7	Rivet	44-523	1	
8	Spring	70-042	1	
8	Spring	70-042L	1	For low pressure
9	Slip ring	11-5044	1	
10	Diaphragm assembly	15-447	1	Consumable part
11	Valve sheet	16-118	1	
12	Gasket	76-066	1	Consumable part
13	Valve assembly	15-445	1	Consumable part
14	O-ring	78-000	1	Consumable part
15	Spring	70-078	1	
16	Body	30-5364	1	



4. HOW TO ORDER



Model name		Port size		Option			Applicable model	
							B2819-N	
B2519	Water regulator	1C	Rc 1/8	Regulator	N	Non-relief	N	
		2C	Rc1/4		L	Low pressure	○	
					Attached parts	G	Pressure gauge	○
						B	Bracket	○

Note : The options “L”, “G”, and “B” are available in combinations.

Note1 : If a regulator with an NPT threaded connection port is required, do not add “C” to the port size.

(Example) B2519-1