

New Products

Water regulator WR1/WR2 Series

WATER REGULATOR SERIES



Easy-to-use and compact regulator for water Port size Rc1/8 to 1/2 are available

Features

•Knob shape is designed to control pressure easily.

- Pressure adjustment knob is locked by one push.
- Mesh filter is provided as standard.
- RoHS directive compliant

Applications

- Pressure control...Able to set to optional pressure even if flow is fluctuated.
- Flow control...Flow is adjustable by using metering valve together.
- Protection of device...Device can be protected from the pressure fluctuation of primary side.
- Applications on device...Laser processor, welding machine, dental medical equipment, etc.

Specifications

Descriptions		WR1	WR2	
Working fluid		General industrial clean water, compressed air		
Max. working pressure	MPa	1.0		
Withstanding pressure	MPa	1.75		
Ambient temperature range	°C	5 to 60		
Cat and a second	MPa	Standard: 0.05 to 0.70		
Set pressure range		Low pressure	re: 0.02 to 0.35	
Relief		Non-reli	Non-relief type	
Port size (IN/OUT)		Rc1/8, Rc1/4	Rc3/8, Rc1/2	
Pressure gauge port size		Rc1/8		
Product weight	g	220	410 (Rc3/8), 440 (Rc1/2)	
Standard specifications		With me	With mesh filter	



Refer to the safety precautions on the back of this catalog and in "Pneumatic, vacuum and auxiliary components, No. CB-024SA" and "General purpose valves, No. CB-03-1SA" before operating.

CKD Corporation

Water Regulator Series

How to order (A) Model no. **WR1** 8 Ν (L G WR2 WR1 Symbol Descriptions (A) Model no. (B) Port size (B) Port size 6 Rc1/8 • 8 Rc1/4 10 Rc3/8 • Rc1/2 • 15 (C) Option (C) Option Blank 0.05 to 0.7 MPa Pressure range 0.02 to 0.35 MPa (D) Attachment (D) Attachment Blank Not attached Pressure gauge (G49D-6-P10) G Note 1 Note 1: The G49D-6-P04 for 0.4 MPa is attached if "L" is selected in the pressure

range section.

Note 2: A pipe plug (R1/8) is included in the product.

Note 3: A panel mount nut is also available, consult with CKD.

Flow characteristics (water) Primary pressure 0.7 MPa



Water Regulator Series

Internal structure and parts list, dimensions

Internal structure and parts list



No.	Parts name	Material	No.	Parts name	Material
1	Knob	Polyacetal resin	8	Mesh filter	Stainless steel
2	Guard	PBT resin	9	Bottom spring	Stainless steel
3	Pressure adjusting screw assembly	Steel, polyacetal resin, nitrile rubber	10	O-ring	Nitrile rubber
4	Spring	Steel	11	Plate	Stainless steel
5	Diaphragm assembly	Nitrile rubber, polyacetal resin	12	Screw	Steel (nickel plating)
6	Valve assembly	Brass, stainless steel, nitrile rubber	13	Bottom cap	Brass
7	Body assembly	Brass, nitrile rubber, polyacetal resin *			* Only WR1

Dimensions



Water Regulator Series

Safety precautions

WARNING

When designing & selecting

- Use this product in accordance with the specified range.
- This product is for industry. Don't use for device or circuit affecting human life such as medical equipment.
- Install a safety device if the pressure that reaches the set pressure of regulator will result in damages or malfunctions of the equipment on the secondary side.
 Piping load torque

Do not apply piping load and/or torque on the body and piping section.

Max. torque	Rc1/8, Rc1/4	Rc3/8,Rc1/2	
N∙m	15	50	



When designing & selecting

- Service life could be shorten depending on the working fluid (water quality). Use this product with general industry clean water. Do not use fluids containing with foreign matter, water deposit, etc., nor fluids leading to corrosion or expand of packing seal.
- Mesh filter is equipped to remove initial foreign matters such as seal-tape. Install the strainer before regulator if foreign matters are possibly flowing in. Also mind the clogging of mesh filter or strainer.
- Pulsation could be occurred depending on operating or piping conditions. Lower the primary side pressure if pulsation occurs during use.
- The secondary pressure could flow to the primary side as depressurizing on the primary side. Install a pressure holding circuit if the other equipment could malfunction by flowing fluid on the secondary side to the primary side.
- Pressure setting range on secondary side must be 85% or less of primary's. Pressure could be extremely dropped.

When installing & adjusting

- Product must be kept away from direct sunshine.
- Take the appropriate freeze prevent countermeasures for cold district use.
- Pipes must be flushed or washed before using. The performance of product could drop by dust or foreign matter inside the pipe.
- Avoid entering foreign matters when twisting pipe or jointing in. Keep pipe screw swarf or seal material away from pipe. Product's performance could drop if dust or foreign matters stay in pipes.
- Check the flow direction by arrow and correctly connect it. The product will not operate if installed in the opposite direction.
- Secure sufficient space for maintenance and inspection.
- Do not install the product in locations subject to vibration or impact.
- Connect pipes with adequate torque. (Recommended torque is in the table below.)

Max. torque	M5	Rc1/8	Rc1/4	Rc3/8	Rc1/2
N∙m	0.2 to 0.3	18 to 20	23 to 25	31 to 33	41 to 43

- Plug the pressure gauge connection port with a pressure gauge or a pipe plug.
- Connecting pipe to bleed port is recommended when operating this product. This enables safely discharge of water in case occurring crack on diaphragm by the pressure out of specified range, the fluctuating pressure or freezing.

During use & maintenance

- Do not modify the product.
- Stop supplying the fluid and confirm that the residual pressure is released before maintaining.
- Do not keep this product in high temperature and humid or out of specified environment. This would cause resin or rubber parts to be deteriorated.
- Adjust the pressure after unlocking the pressure control knob. Damage could occur if operated forcibly without unlocking the knob.
- Adjust the pressure with increasing pressure. Pressure would not be set correctly if pressure is adjusted with reducing pressure.
- This product can not reduce pressure if the water does not flow to the secondary side.

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本社・丁場
営業本部
Overseas Sales dep
東京支店
名古屋支店
大阪支店

〒485-8551愛知県小牧市応時2-250 〒485-8551愛知県小牧市応時2-250 t. 2-250 Ouji Komaki, Aichi 485-8551, Japan 〒105-0013 東京都港区浜松町1-31-1(文化放送メディアプラス4階) 〒485-851愛知県小牧市応時2-250 〒550-0001大阪市西区土佐畑1-3-20

TEL(0568)77-1111 FAX(0568)77-1123 TEL(0568)74-1303 FAX(0568)77-3410 TEL(0568)74-1338 FAX(0568)77-3461 TEL(03)5402-0520 FAX(03)5402-0120 TEL(0568)74-1356 FAX(0568)77-3317 TEL(06)6459-5770 FAX(06)6446-1945

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