



D7020 TOUCHLESS FLUSH MECHANISM

Installation instruction manual



Xiamen R&T Plumbing Technology Co.,Ltd.

Add:NO.18 ,Houxiang Road,Haicang District,Xiamen,China

Tel:86-592-6539788

Fax:86-592-6539723

Email:rt@rtplumbing.com

Http://www.rtplumbing.com

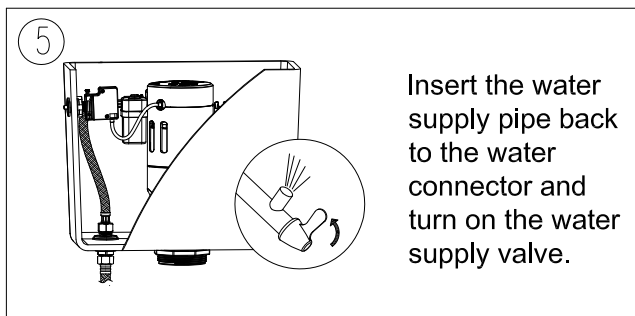


Content

Product Features	1
Components Name	2
Specification Parameter	3
Usage Instruction	4
Installation Instruction	5
Water level adjustment	13
Daily Maintenance & Usage Caution	15
Troubleshooting Guide	17

8.Troubleshooting

	Issue	Cause	Resolution
1	Water not shut off when used for the first time	The solenoid valve inside the valve body is automatically opened due to large shaking or impact during transportation or installation.	Please operate flushing by sensing once
2	Water line is too high or too low	Inlet valve is not adjusted to a suitable position	Adjust the water level to the appropriate water level
3	Inlet valve does not shut off	1.The valve body float is blocked and does not float in place 2.The valve body leakage 3.The valve body water level is higher than over flow pipe	1.Check if the float is stuck and up and down freely 2.Make sure there is no leakage from the body valve 3.Adjust valve body water level and installation height
4	Inlet valve does not turn on	1.Water supply valve is off 2.The inlet valve float is blocked and does not float in place 3.Filter screen is dirty 4.The tube wasn't installed properly	1.Turn on the water supply valve 2.Check if the float is stuck and up and down freely 3.Clean the filter screen 4.Re-install the tube correctly
5	Little or no flush	1.The piston or lift rod is stuck 2.Battery with low power 3.Filter screen is dirty 4.Wrong flush volume adjustment 5.The tube wasn't installed properly	1.Check if the piston and lift rod move freely 2.Change battery 3.Clean the filter screen 4.Use the matched remote control to choose the appropriate flush volume level 5.Re-install the tube correctly
6	Valve Body leakage	1.Debris in water is affecting the valve 2.The refill tube wasn't installed properly 3.The valve and base do not fit properly 4.The wire rope twisted badly	1.Remove, clean and reassemble the valve body 2.Adjust refill tube, make sure tube is above the water surface. 3.Reassemble 4.Adjust the position of the wire rope so that it does not twist seriously.
7	The sensor module can light up by sensing, but does not flush	1.The control module is not connected properly 2.The codes of sensor module and control module are not matched	1.Check connection and connect sensor module properly. 2.Re-match codes between sensor module and control module.



3. Low voltage battery determination and replacement

Sensor module is undervoltage



During the use of the product, wave to sense, the indicator light of the sensor module quick flashes 5 times, indicating that the battery is undervoltage and needs to be replaced.



Step I Step II Step III

Unscrew the screws on the back cover and remove back cover from the sensor module, replace batteries and tighten the screws again.

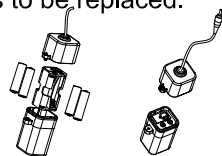
Note:

1. Battery must be 1.5 V "AAA" size alkaline battery.
2. Different brands, different used and new batteries can not be mixed.
3. Battery life will be significantly reduced when using non-alkaline batteries.

Control module is undervoltage



During the use of the product, wave to sense, the indicator light of the sensor module slow flashes 12 times, indicating that the battery is undervoltage and needs to be replaced.



Step I Step II

Unscrew the screws on the back cover and remove back cover from the control module, replace batteries and tighten the screws again. Pay attention to inner box direction when installing.

Notes:

1. Must be 1.5V "AA" alkaline battery;
2. Different brands, different used and new batteries cannot be mixed.
3. Battery life will be significantly reduced when using non-alkaline batteries;
4. When installing the inner box components, follow the installation direction shown in the label.

1. Product Features

■ Integrated design

Integrated design combining fill valve and flush valve, easy installation, concise and aesthetic appearance.

■ Touchless Flush

No touch induction flush, flush just after waving your hand, prevent bacterial infection, easy to use.

■ Back-up mechanical push button

It can be used when the battery is dead or electronically faulty with mechanical push buttons; And it is also hydraulic drive flushing, short button travel, light press.

■ Energy Saving

Low power consumption: 3pcs 1.5 V "AAA" size alkaline batteries can be used for sensor module for 8 to 10 months and 4pcs 1.5V "AA" alkaline batteries can be used for control module for 1 year based on 3000 cycles per month (Laboratory data, actual time varies slightly in different environments).

■ Water Saving

Patented delayed filling design to save water consumption.

■ Wide water pressure application range

It can work normally under the dynamic pressure of 0.07Mpa to static pressure of 0.8Mpa with stable water consumption.

■ Convenient water level adjustment

By adjusting valve body and shut-off cup height to adjust water level, applicable for a wide range of different tanks.

■ Anti-siphon function

Prevent water from returning to the water supply system and prevent the water supply system from being contaminated.

■ Fast drainage and strong flushing effect

With a 3" base, the drainage speed is about 4L/S in a 0.7L/cm standard water tank. (Optional 2" base).

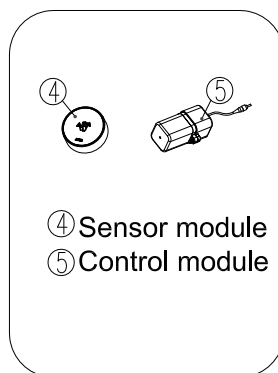
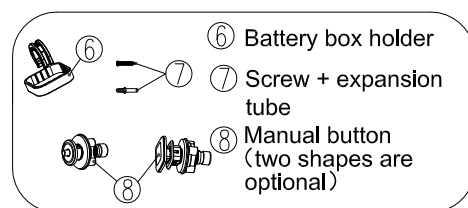
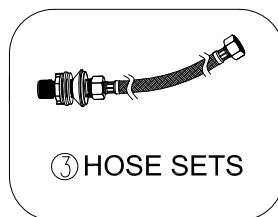
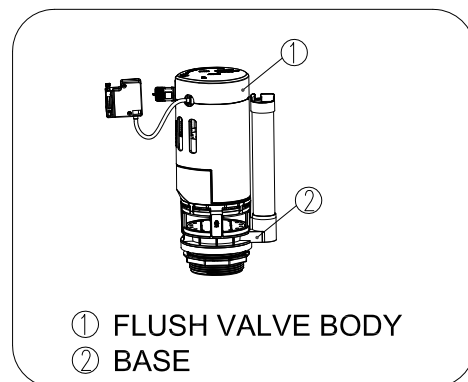
■ Stable and reliable

It adopts advanced production technology to reliably seal the control circuit. The plug-in adopts waterproof connectors to ensure long-term stable and reliable operation.

■ Easy maintenance

It adopts easy-to-clean built-in filter to block dirty water from entering the inlet valve, and the filter is detachable, easy to operate and easy to clean.

2. Components Name



If the product is updated, it will be compiled into the new manual without prior notice; the appearance, color and accessories of the product are different according to the actual needs; the factory does not supply the battery, you need to buy it yourself.

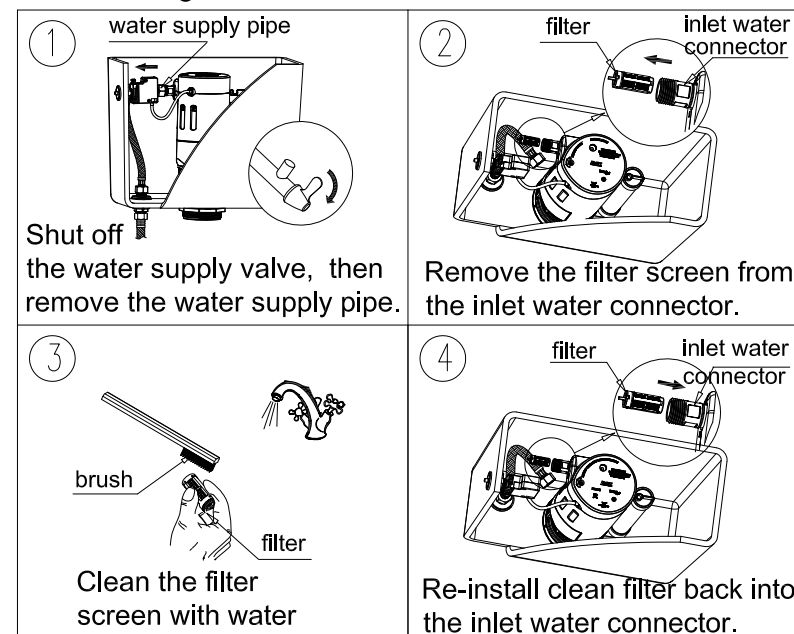
Note: Two options of manual buttons: round shape and square shape.

7. Daily Maintenance & Usage Caution

1. Daily usage caution

- Do not place items or do irrelevant actions in the sensing area to avoid false induction.
- Please do not use corrosive solvents or any related chemical ingredients in the water tank. Solvents containing chlorine or hypochlorite will seriously damage the tank fittings, resulting in water leakage.
- Try not to get close to high-power electronic devices, so as not to affect the use of products.
- Do not let the DC plug touch the water when disassembling or cleaning the product. If you accidentally touch the water, please dry it to avoid the electronic components burning out.
- Recommend to check the filter regularly for blockage. If it is clogged, please clean the filter to avoid affecting normal use.
- If the battery is with low voltage, Please replace the battery to avoid affecting normal use.

2. Cleaning filter



3.Remaining water level adjustment

This product can adjust the remaining water level through the remote control. The higher the remote control adjusting level is the lower the water level will be.

The product does not include remote control. If you need to adjust the water volume with the remote control, please contact the supplier. For details, please refer to the "Remote Control Instructions".

3. Specification Parameter

Working temperature	2℃-45℃
Working Pressure	Dynamic pressure of 0.07Mpa - Static pressure of 0.8Mpa
Power	Sensor module: DC 4.5V (3pcs "AAA" size alkaline batteries) Control module: DC 6V (4PCS "AA" size alkaline batteries)
Water inlet	Bottom-in and Back-in
water inlet thread	External thread G1/2" or 15/16-14UNS-1A
Applicable tank height	The height between flush valve installation base to the inside top of tank is more than 260MM
Sensing distance	25-40MM

Control module

FCC ID: 2AW23-D7020-03

Sensor module

FCC ID: 2AW23-D7020-04

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

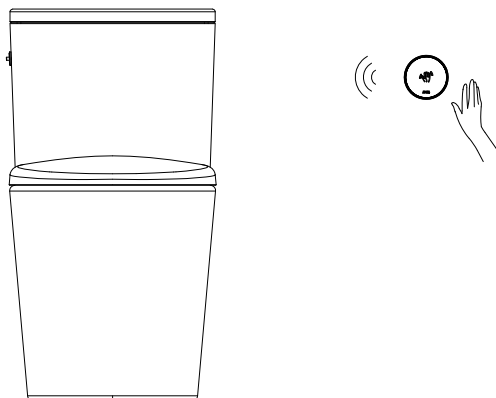
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

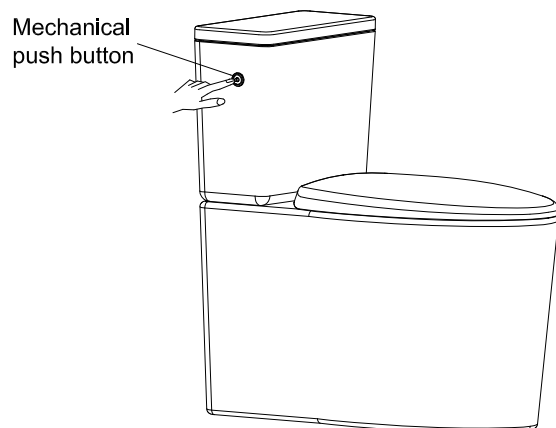
4. Usage Instruction

Wave-sensing flush



Mechanical push button flush

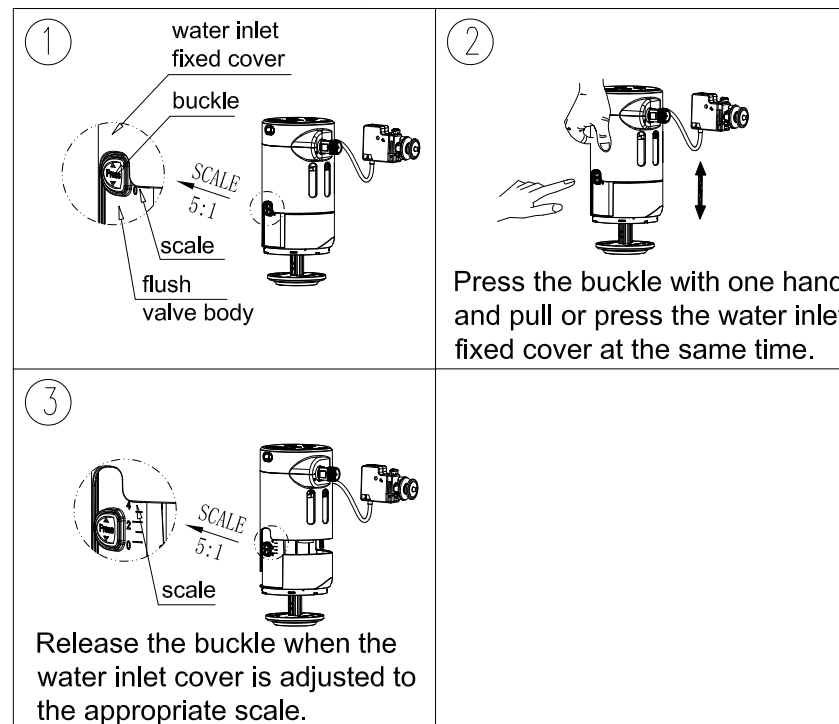
(If the battery is with low voltage or electronically faulty)



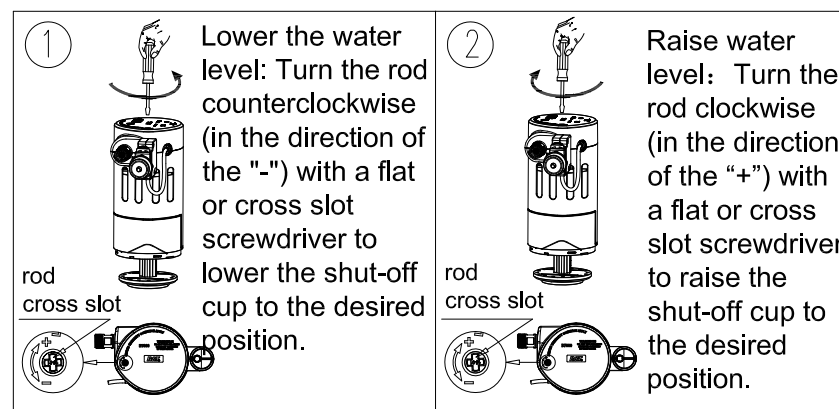
※Note: This product is driven by water pressure. Before using, make sure to fully open the angle valve of the water supply pipe and ensure that the water supply pressure is within the range of use. In the case of suspension of water supply, it can't be flushed even if there's water in the tank.

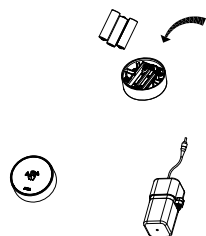
6. Water level adjustment

1.Valve height adjustment (Major Water level adjustment)



2.Shut-off cup height adjustment (Minor Water level adjustment)

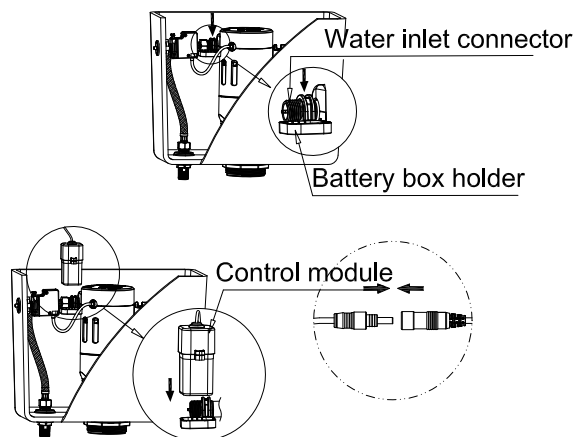




Step III
Install sensor module batteries within three minutes after installing control module batteries. After installation, perform sensing once and finish the code matching.

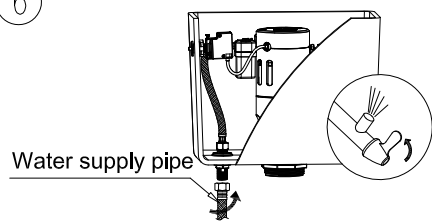
※Note: When using more than one products, the code matching must be done one by one separately.

⑤



Install the battery box holder on the water inlet connector; then install the control module into the battery box holder; and connect the control module with the DC connector on the valve body.

⑥



Connect to water supply pipe and fully turn on water supply switch.

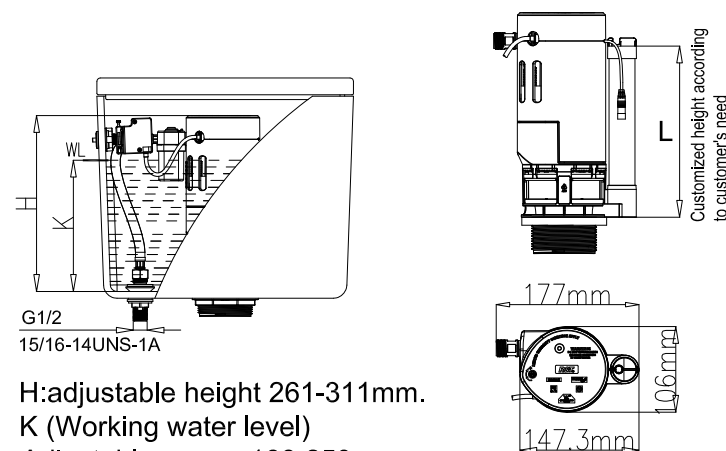
Note: Make sure the water supply switch is fully open.

5. Installation Instruction

NOTES:

1. Pls read the installation instructions carefully and follow the steps to install them step by step to avoid damage to the product or damage caused by bad operation.
2. Please do not use parts not supplied by the company, such as glass glue, for the installation of our accessories.
3. Please remove the old parts and clean the water tank before installing this accessory. There may be a lot of sundries for the newly renovated pipes. Please clean up before installing the water tank parts.

General Installation Drawing

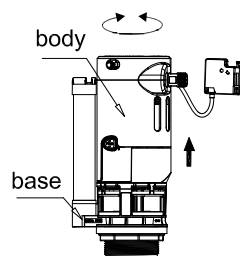


H: adjustable height 261-311mm.
K (Working water level)
Adjustable range: 166-250mm
L (Overflow height)

Note: Including the height of 8MM rubber gasket.

1. Installation of flush body and base

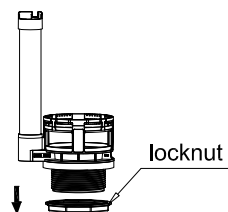
①



Remove the base from the body

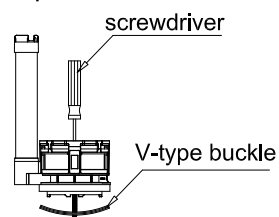
②

Two piece base



Remove the locknut from the base.

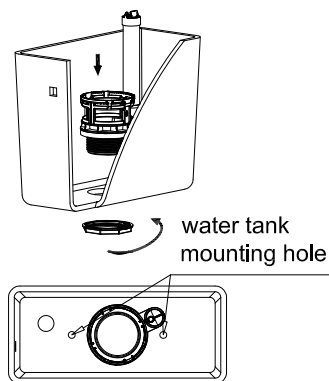
One piece base



Screw the V-type buckle to the end of the bolt.

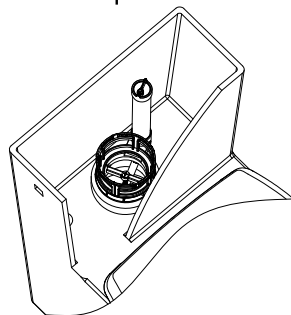
③

Two piece base



Install the base set into the water tank hole, adjust the position, tighten the locknut with the torque $M \leq 16N.m$ (For reference only).
Note: The base must not block the tank mounting holes.

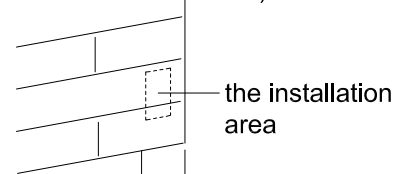
One piece base



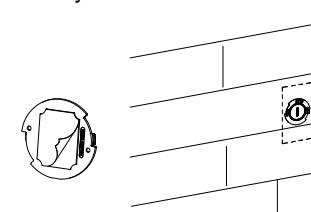
Install the base set into the water tank hole, adjust the position, tighten the locknut with the torque $M \leq 2.5N.m$ (For reference only) Make sure the base will not sway.

Method B: Adhesive fixing

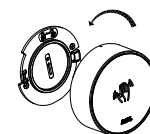
B-1: Clean and dry the pre-installation area of sensor module holder (when deciding the installation position, it should be noted that when a person sits on the seat, ensure that the hand can touch the sensor module).



B-2: Tear off the double-sided adhesive sticker on the back of the sensor module holder and paste it vertically on the wall.



B-3: Align sensor module slot with mounting bracket, and then rotate it counterclockwise to lock it.

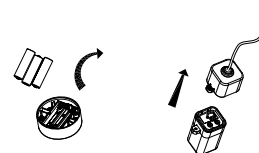


Note: Do not install and use the product in a wet place such as a bathroom, and prohibit it from being exposed to water.

④

Modules code matching

If the sensor module lights up after installation, but the product cannot be sensed to flush, please reset batteries and match codes.



Step I
Remove batteries from both control module and sensor module, Wait for 1 minute;



Step II
Put batteries into control module, Pay attention to the direction of battery when installing.

③

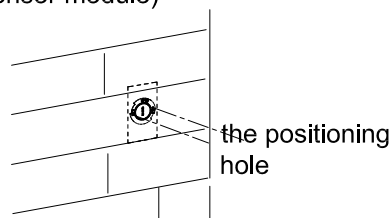
The installation method of control module holder can be selected according to the installation wall.

Method A: Screw fixing - Suitable for installation on rough gray walls and other rough walls

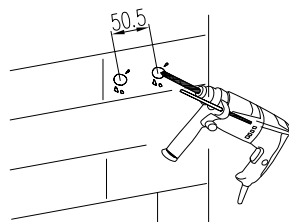
Method B: Adhesive fixing - Suitable for installation on tiles and other smooth walls.

Method A: Screw fixing

A-1: Put control module holder on the pre-installation position and mark the positioning hole on the wall with a pen (when deciding the installation position, it should be noted that when a person sits on the seat, ensure that the hand can touch the sensor module)



A-2: Drill two holes with diameter 6mm in the vertical direction of the wall, the center distance between the two holes is about 50.5mm, and the depth is 30mm.

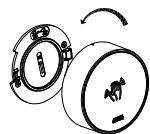


A-3: Put the expansion tubes into the holes on the wall, place sensor module holder against the wall, align the holes of the holder with the expansion tubes and put screw into expansion tubes to lock it.

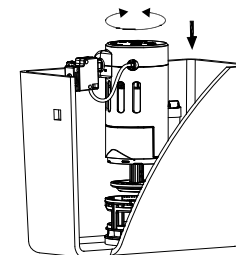


Note: Do not install and use the product in a wet place such as a bathroom, and prohibit it from being exposed to water.

A-4: Align sensor module slot with sensor module holder, and then rotate it counterclockwise to lock it.



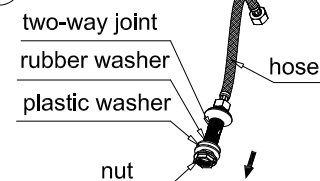
④



Installation of valve body

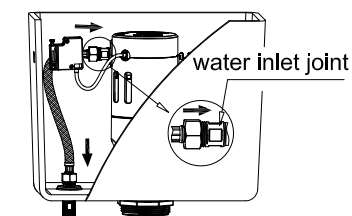
2. Hose installation

①



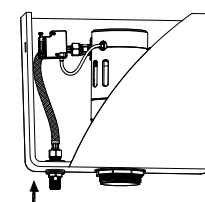
Take the locknut, plastic washer(white),rubber washer(black) from the two-way joint.

②



One end of the hose is screwed into the water inlet joint; The other end is inserted into the water tank installation hole.

③



Install the rubber washer, plastic washer onto the two-way joint in turn, and then screw the water inlet locknut.

Recommended torque for locking the nut:

1. The water inlet nut directly contacts with the tank bottom, the recommended torque is 4 ~ 6N · m.
2. The water inlet nut not directly contacts with the tank bottom, the recommended torque is 7 ~ 10N · m.

Note:

1. Check whether the water supply pipe and the two-way joint are loose after installing the water supply pipe. If it is loose, tighten it.
2. Since the deformation of the ceramic mounting hole may cause water leakage after locking, check the water supply pipe for leaks after installation.

3. Push button installation

①

key-press plastic washer
key-press rubber washer
key-press nut
key-press body

Remove the nut, plastic washer, rubber washer from the key-press body.

②

Install the button body sets from outside of the water tank into the tank;
Install the rubber washer, plastic washer from the inside of the water tank onto the push button body and lock it with the nut.

③

buckle
button box

Press the buckle and load the button box into the push button sets.

4. Refill hose installation

refill hose
water level

Insert the refill tube into the overflow pipe. Make sure the refill hose is above water level.

5. Install a two-piece water tank on the two-piece toilet (the one-piece toilet does not have this installation procedure)

①

Screw the plastic gasket on the base

②

bolts
mounting hole
water tank
toilet

The bolts pass through the water tank mounting hole and locks the water tank to the toilet.

6. Installation of control module and sensor module

①

Put batteries (4pcs 1.5V "AA" alkaline batteries) into the control module and tighten the screws. (The product doesn't come with batteries)
Note: Pay attention to installation direction when installing inner box components.

②

And then put batteries (3pcs 1.5V "AAA" alkaline batteries) into the sensor module and tighten the screws. (The product doesn't come with batteries)
※Note: The batteries should be installed to sensor module within three minutes after batteries are installed to control module, the codes will be automatically matched between the modules.