

PV panels cleaning robot Kwun

Maintenance Manual

Read this manual carefully before using this product and store it properly for future reference.

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1. Kwun Body

1.1 Body

1. After use, turn the power off, and then take out the battery. Put the robot on a flat platform to prevent the shading brush and central suction cup from damaging by pressing. Do not leave the robot in high temperature, humidity, or sun exposure environment for a long time.
 2. After each completion of work, put the dust cover in the brush socket, on the front left and back right of the Kwun body, to prevent dust and water from entering the socket.
 3. Check whether the screw is loose or there is abnormal sound.
 4. Clean the surface with a soft cloth.
- ★ Check carefully before and after each operation.

Push the dust cover in
the brush socket



1. Kwun Body

1.2 Exposure Box

1. Before and after operation, make sure there are no stains or water on the inside of the exposure box and the camera lens. Clean them with clean and soft towel.
 2. When using, pay attention to avoid hard objects damaging the exposure box.
- ★Clean carefully before and after each operation.

The inside of the exposure box and camera lens are stained



Clean the inside of the exposure box and the camera lens



1. Kwun Body

1.3 Shading Brush

1. When the shading brush is deformed because of incorrectly placing or operating the robot, comb the bristles out in time.
 2. If the shading brush is seriously deformed and cannot be reset, replace new shading brush in time.
- ★ Check carefully before and after each operation, and follow the operation instructions.

Shading brush bristles
severely deformed



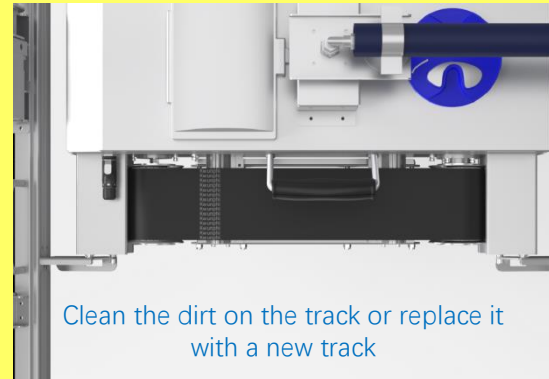
Comb to reset the Brushes /
Replace with a new brush



1. Kwun Body

1.4 Track

1. When cleaning the BIPV project, no special maintenance is needed for the tracks, just keep the surface clean, not seriously worn, and not cracked.
 2. When working on components with 10-15° tilt angle, if the word "kwunphi" on the track is seriously worn, it indicates that the surface becomes smooth and the friction is lost. Before working, use a 1000-grit sandpaper or file to sand the track surface along the 45° angle to increase friction or replace the track with a new track.
 3. When working on components with tilt angle of more than 15°, if the word "kwunphi" on the track is severely worn, replace new tracks immediately (it is recommended to purchase a set of spare tracks just in case).
- ★ Check before and after each operation.



1. Kwun Body

1.5 Anti-Fall Sensor

1. Before operation, make sure there are no stains or water on the anti-fall sensors. Clean them with clean and soft towel.

2. place the equipment flat when storing, the position should be free of foreign objects, and pay attention to the anti-fall sensor is not scratched by sharp objects, so as not to affect the normal use of the edge anti-fall function.

★ It is recommended to clean before and after each operation

Anti-fall sensor stained



Anti-fall sensor clean



1. Kwun Body

1.6 Desiccant

1. The desiccant of E33H、E32H/L and E22H/L series models is stored in the side of the battery position in the body of the equipment (open the battery cover on the host to see the indicator label), do not discard for daily use.

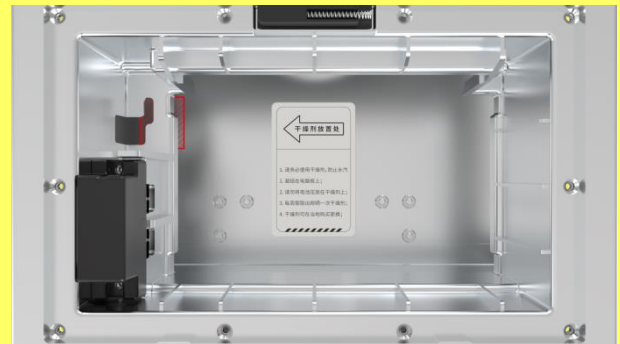
2. If the desiccant turns from orange to dark green, replace the desiccant.

3. Place inside the machine, do not eat.

4. The desiccant turned dark green can be placed under the sun for 3 hours in clear weather to restore its performance (can be reused 3-4 times).

★ It is recommended to check the color of desiccant once a week

Desiccant placement
(red area on left)



2. Roller brush

2.1 Roller brush

1.If there are foreign objects such as rope and plastic bag on the component, during cleaning operation, the rotation of the brush may wrap it on the brush, resulting in deformation of the brush. During daily cleaning operation, we should observe whether the brush is wrapped by foreign objects such as rope, and if so, it needs to be cleaned in time.

2. After daily cleaning, check whether the fixing screws at both ends of the brush body are loose. If yes, tighten them in time.

3. The rolling brush should be placed upright to avoid irreversible deformation of the bristles under pressure.

★It is recommended to check before and after each job

A rope or foreign body is wrapped around the shaft of the brush



Clean any string or foreign matter from the shaft of the brush



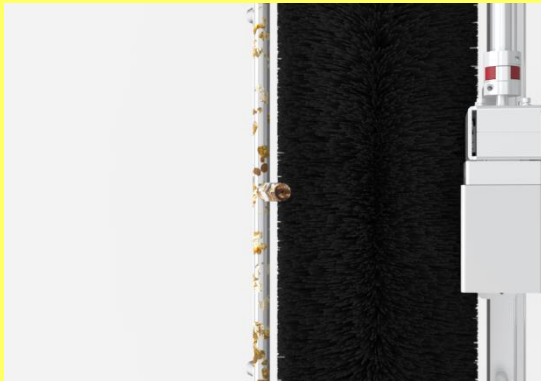
3. Water Cube

3.1 Sprinkler head of water distributor

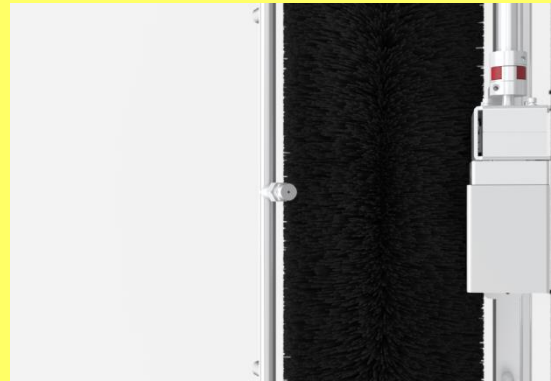
1. After a certain period of use, the water cube sprinkler on the rolling brush is easy to block the spray nozzle due to water quality or stain pollution. After plugging, the spray nozzle should be cleaned and dredged in time to prevent the blockage of the spray nozzle from affecting the cleaning effect.

★ It is recommended to clean it once a week

A spout blocked by a stain



Clean the water spout after dredging

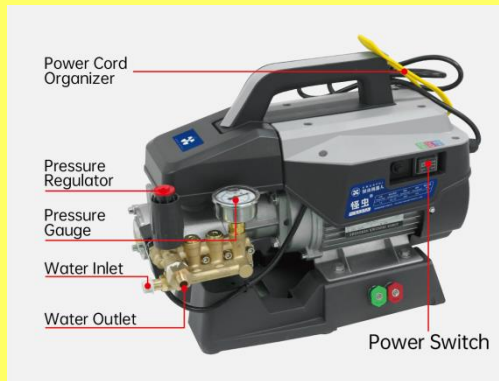


4. Pressure Washer

4.1 Pressure Washer T1

1. When the oil level is lower than the red mark, the oil should be filled or replaced in time. The oil amount is just in the red mark of the oil mirror. The new SAE 15W-40 or equivalent 4-stroke motorcycle oil can be used.
 2. It is recommended to change the oil once every 100 hours of work, which can extend the service life of the pump.
 3. When the machine is not used for a long time, the suction pipe and outlet pipe should be removed and the remaining water in the pump should be properly placed.
- ★ It is recommended to check once before each use

Pressure washer T1



Oil viewing window



If you have any doubts or questions about this product, please contact our customer service hotline

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www.kwunphi.com